

SULG 23 – RSR Policy Update Paper

OSPAR - Reporting of Discharges from Non-nuclear Industry Sectors

The UK leads on the reporting of discharges from non-nuclear industries for OSPAR, two supplementary papers on reporting of discharges from non-nuclear industry sectors have been prepared by NNC Ltd and the Environment Agency. One is entirely dedicated to the reporting of NORM discharges from the off-shore oil/gas sector. The other is of more general interest, as it refines the reporting process agreed at the OSPAR Radioactive Substances Committee held in January 2004 (and consulted on by NNC during 2003). OSPAR RSC agreed the principle that Contracting Parties should report on the radioactive discharges from non-nuclear industry sectors in 2004, but certain points of clarification were requested. With the exception of the oil/gas sector the reporting of discharges for non-nuclear industries in England and Wales will be based on data provided to the Pollution Inventory. Both papers will be discussed at the RSC meeting in January 2005.

The proposal is that I-131 and Tc-99 should be reported for the medical sector (this is unchanged), and that for the university and research centres sector the following radionuclides should be reported: H-3, C-14, P-32, S-35, I-125 and Cr-51. For NORM industries the reporting requirements vary slightly, but the range of radionuclides includes; Pb-210, Po-210, Ra-226, Ra-228 and Th-228.

HASS Directive

Defra have provided their lawyers with draft Policy Instructions to enable the lawyers to draft regulations under the European Communities Act 1972 which will amend RSA 93 and implement the Directive. Defra lawyers have commenced the drafting process, and Defra intend to consult on the draft ECA regulations in the spring of next year. The intention is that the regulations will be laid before Parliament in August 2005.

Defra have engaged Deloitte and Touche, financial consultants, to prepare guidance for the regulators on suitable means of providing the financial provision (for source disposal) required by the Directive. Deloitte's are supported in this process by an Intelligent Client Group drawn from UK regulators, manufacturers/suppliers and users. It is intended that this guidance will be available at the start of the consultation on the draft regulations.

The RSR Process Group, in the Agency, is working on the practical matters necessary to put in place a HASS regulatory regime.

Surplus Source Disposal Programme

The Environment Agency has established a dedicated and full-time project team to manage this UK-wide programme. The team is led by Philip Burns an Agency executive manager, previously Area Manager for the Agency's Upper Trent Area. Funding of up to £9m over a 3 year period has been provided by the Government. A contract has just been let with Solutions-NNC to carry out a survey and produce a list of surplus sources. A questionnaire is being prepared that will shortly be sent to registered holders of radioactive sources in the medical, education/research and industrial sectors, requesting information on surplus radioactive sources. The information

obtained from these questionnaires will be used to inform the SSDP planning process and enable the level of subsidy to be determined.

Import/export controls

The IAEA and the G8 group of industrialised States are leading on the establishment of system of import/export controls on high (and some medium) activity radioactive sources. The USA is pressing for early implementation of such controls, and work is underway to scope the requirements as a preliminary to the establishment of a statutory regime. The Cabinet Office is currently leading on this topic.

UN Codex Alimentarius Guidelines on radioactivity limits in food.

FSA are consulting on the UN's proposed draft of revised Codex Guideline Levels for Radionuclides in Foods for Use in International Trade. There are some concerns over the proposals, in particular, that some of the values are overly cautious and could have important consequences for the shellfish industry in the UK.

Proposed Radioactively Contaminated Land Regulations

Defra have stated their intention to introduce Radioactively Contaminated Land Regulations, akin to Part IIA (EPA 90/EA 95). Whilst these regulations will not apply on licensed nuclear sites, they will potentially apply to all other land contaminated by radioactivity, where the doses resulting from that activity are above some yet to be determined threshold. Defra are expected to consult on draft regulations at some point during 2005.

Review of VLLW

It is nearly ten years since the last generic review and radiological assessment of the disposal of VLLW (NRPB M602). SNIFFER (Scottish & Northern Ireland Forum for Environmental Research) and the Environment Agency are to commission a project to review the disposal of VLLW from the non-nuclear sector in the UK. The project will include radiological assessments and review the continued suitability of the current authorisation conditions applied to the disposal of VLLW. The review will take into account changes in waste disposal practices including: sorting, segregation and recycling of wastes; and, reduction in landfill volumes. The project specification is being prepared with a view to tendering in January 2005.

CERRIE

In July 2001 Michael Meacher, announced the establishment of the Committee Examining Radiation Risks of Internal Emitters (CERRIE) with the remit "to consider present risk models for radiation and health that apply to exposure to radiation from internal radionuclides in the light of recent studies and to identify any further research that may be needed." CERRIE was set up under the auspices of the Committee on the Medical Aspects of Radiation in the Environment (COMARE), which monitored its progress.

CERRIE was established to be widely representative, containing members with a range of views, from universities and research establishments, from anti-nuclear groups such as Green Audit and the Low Level Radiation Campaign (LLRC), from the nuclear industry and from the National Radiological Protection Board (NRPB). As recognised from the outset, the key issue for CERRIE

was the assertion, by Green Audit and LLRC, that the risks were up to 100 or more times higher than those published by ICRP.

The CERRIE final report was published on 20 October 2004 together with a commentary from COMARE in the form of COMARE's 9th report. It concludes that, with internal emitters, more uncertainties need to be added to those affecting external radiation. CERRIE's view is that the risk estimates for external radiation have uncertainties of about a factor of 3 up and down from the central figure for all cancers. For dose coefficients applicable to internal emitters, the CERRIE report notes that ranges for equivalent doses to organs and tissues may vary from factors of 2 to 3 above and below the central estimate for radionuclides for which good data were available to well over a factor of 10 for other radionuclides. These uncertainties are additional to those applying to risk estimates.

The CERRIE final report recommends that more work should be undertaken to quantify uncertainties for a range of internal emitters and to identify the major sources of these uncertainties. The report does not recommend any changes to the central values of risk factors and dose coefficients as currently recommended by the International Commission on Radiological Protection (ICRP). However, it does recommend that ICRP should give more explanation of the intended uses of the defined parameters *equivalent dose* and *effective dose* and their limitations when considering doses and risks from internal emitters. It also recommends that recent findings on the biological effects of radiation should continue to be included in consideration of health risks at low doses and their quantitative uncertainty. It endorses ongoing national and international radiobiology research programmes, particularly regarding microdosimetry, induced genomic instability, bystander effects, cancer mechanisms and germline minisatellite mutagenesis.

The CERRIE minority report includes a foreword by Michael Meacher, in which he expresses his deep disappointment that it has proved necessary to publish the minority report. He says that the CERRIE final report presents a one-sided view and fails to explain the reasons for the continuing disagreements.

The minority report concludes that: "The evidence and theoretical considerations taken together suggest that current ICRP risk models could underestimate the true level of radiation risks for certain internal radionuclides and certain forms of those radionuclides by two to three orders of magnitude." It says: "We believe that in the short term the evidence of harm and the scientific insecurity of the ICRP methodology are sufficient to trigger application of the Precautionary Principle in respect of releases of radioactivity. Long-term research is needed on the implications of these mechanisms for radiation risks, from both internal and external radiation."

COMARE -9

The COMARE 9th report is devoted entirely to commenting on the CERRIE final report. It does not consider the CERRIE minority report. In general COMARE agrees with the majority CERRIE view and, in particular, that the biological evidence at present available does not imply a need for immediate changes in radiological protection standards. It says: "The two members [of CERRIE] who consider that the ICRP risk factors underestimate the risk from man-made fission products by very large factors (100–500-fold) have not, in our view, justified their position. They have ignored a great deal of sound work over half a century of radiation research and they have failed to see the extent of the uncertainties and errors in the work that they cite to support their case. COMARE's position is that uncertainties exist but are not of such magnitude and this is also the position of the majority of the members of CERRIE."

“COMARE agrees that further work is required and this may in future take advantage of the fact that internal emitters have been used for many years in medical procedures.”

Nuclear Decommissioning Authority (NDA)

The first NDA Board meeting was held on 29 October 2004 and an initial bilateral meeting between Sir John Harman and Barbara Young, for the Environment Agency, and Sir Anthony Cleaver and Ian Roxburgh, for the NDA, was held on 8 November.

The headquarters of the NDA has temporarily been established at Pelham House, Cumbria, it will eventually move to accommodation at Westlakes Science Park, on the outskirts of Whitehaven. Most of the NDA Team in the DTI have moved, or are moving, to Pelham House. However, the Contracts group will remain in London, as will the Communications arm. The NDA Team member dealing with British Energy issues will also remain in London. These staff will in due course move to the NDA southern office to be set up in the neighbourhood of Harwell.

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