

**Petition, Complaint and Plea for Redress, directed to  
The European Parliament Petitions Committee**

**The issue of Scientific Policy Advice on  
internal exposures to radioactive pollutants.  
And the legal requirements of  
The EURATOM Basic Safety Standards BSS Directive**

**1. Principal Facts**

**1.1** In common with all European Community member states the government of <COUNTRY> , democratically elected by the people of <COUNTRY> to protect *inter alia* the human rights, health and well-being people of <COUNTRY>, lays down legal limits for members of the public and workers to exposures to ionizing radiation and radionuclide contamination of the environment.

**1.2** The limits laid down by statute are based upon recommendations made in the first place by a National Competent Authority, <NAME> whose mandate it is to assess such risks and to keep abreast of the scientific evidence that the limits being recommended are scientifically sound and based on an accurate assessment of current scientific and epidemiological knowledge of the health effects of such exposures.

**1.3** In Europe, member States (which includes <COUNTRY>) are subject to the Basic Safety Standards (BSS) Directive EURATOM the most recent version of which was agreed in 2011 and has passed into EU Law

**1.4** The latest version of the Directive has within it the following clauses which have aspects identified in **italic bold underline** which are relevant to the present document:

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***BASIC SAFETY STANDARDS (2011)***  
**European Basic Safety Standards Directive – Brussels, 29.9.2011**  
**COM(2011) 593 final 2011/0254**

***Article 2 Scope***

1. This Directive applies to any planned, **existing** or emergency **exposure situation which involves a risk from exposure to ionising radiation which cannot be disregarded from the radiation protection point of view with regard to the health protection of workers, members of the public, or patients and other individuals subject to medical exposure or with regard to the protection of the environment.**

3. **This Directive applies to the management of existing exposure situations**, in particular the exposure of the public to indoor radon, the external exposure from building materials and **cases of lasting exposure resulting from the after-effects of an emergency or a past activity.**

## Article 5

### *General principles*

Member States shall establish legal requirements and an appropriate regime of regulatory control which, for all exposure situations reflect a system of radiation protection based on *the principles of justification, optimisation and dose limitation:*

*(a) Justification: decisions introducing or altering a radiation source, an exposure pathway or actual exposures shall be justified in the sense that such decisions shall be taken with the intent to ensure that the individual or societal benefit resulting from them offsets the detriment that they may cause.*

(b) Optimisation: in all exposure situations, radiation protection shall be optimised with the aim of keeping the magnitude and likelihood of exposure and the number of individuals exposed as low as reasonably achievable, taking into account economic and societal factors,

## Article 14

### *Estimation of the effective and equivalent dose*

For the estimation of effective and equivalent doses, the following values and relationships shall be used:

(a) For external radiation, the values and relationships laid down in Publication 103 of the International Commission on Radiological Protection shall be used to estimate the effective and equivalent doses.

*(b) For internal exposure from a radionuclide or from a mixture of radionuclides, the values and relationships laid down in Publication 103 of the International Commission on Radiological Protection and the ingestion and inhalation dose coefficients laid down in Publication 72 of the International Commission on Radiological Protection*

## Chapter V

### *Justification and regulatory Control of Practices*

#### *Article 20 Justification of practices*

1. Member States shall ensure that new types of practices resulting in exposure to ionising radiation are justified before being approved.

2. Member States shall list the approved types of practices in legislation or administrative acts.

*3. Existing types of practices shall be reviewed as to their justification whenever new and important evidence about their efficacy or potential consequences is acquired.*

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1.5 There are human rights aspects of exposure to radionuclide pollution which are implicit in the following:

1.6 As early as 1972 the Stockholm Conference on the Human Environment addressed the interrelationship between Human Rights (as already enshrined in the Articles of the UN Declarations) and environmental protection.

**1.7** At the 1968 Teheran conference, Principle 1 of the final UN declaration stated (Final Declaration 1972):

“Man has the fundamental right to Freedom, Equality and Adequate conditions of Life in an environment of a quality that permits a life of dignity and well-being and he bears a solemn responsibility to protect and improve the environment for present and future generations” (International Covenant on Economic, Social and Cultural Rights Dec 16 1966 993 UNTS 2, 6 ILM 360 1967 )

**1.8** 22 years later UN Resolution 45/94:

“Recognises that all individuals are entitled to live in an environment adequate for the health and well-being and calls upon member states and intergovernmental and non-governmental organizations to enhance their efforts towards a better and healthier environment.”

**1.9** To those whose well-being suffers due to environmental degradation Human Rights law currently provides the only set of international legal procedures that can be invoked to seek redress for harm that is the consequence of an act or an omission attributable to a State. The inclusion of INACTION is significant since most environmental harm is due to inactivity of the State.

**1.10** Whilst no international human rights procedure allows direct legal action against private enterprises or individuals who cause environmental harm, a State allowing such harm may be held accountable.

As Judge Weeramantry of the International Court of Justice put it:

“The protection of the environment is a vital part of contemporary human rights doctrine. Damage to the environment undermines all of the human rights spoken of in the Universal Declaration.”

**1.11** Degradation of the environment impacts the right to health and the right to family when genetic or genomic damage is involved since human fertility is affected.

**1.12 The Procedural consequences are**

**Rights to environmental information**

**Public participation in decision-making**

**Remedies in the event of environmental harm**

**1.13** The Stockholm Principle 1 and Rio Declaration both state

“Individuals shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings including redress and remedy shall be provided.”

**1.14** This means proceedings in the national court before a judge. If the court process is not given, the matter is to be taken to the international court.

**1.15** The 1998 Aarhus Convention (UNECE) states

“Every person has the right to live in an environment adequate for his or her health and well-being and the duty, both individually and in association with others to protect and improve the environment for the benefit of present and future generations”

**Article 1**

“Citizens must have access to justice in environmental matters”

Whereas the WHO European Charter states

“Every individual is entitled to information and consultation on the State of the Environment”

**1.16** It follows that Public Participation in environmental decision-making is a right and

it follows from the above that there must be such participation based on the RIGHT of those who may be affected, including foreign citizens and residents to have a say in their environmental future

**The right to be heard**

**The right to affect decisions**

**The right to remedy and redress**

**1.17** Principle 10 of the Rio Declaration gives effective access to judicial and administrative proceedings including redress and remedy.

*<(The following section gives an example of the concerns with regard to Sweden. Petitioner Members of different countries should at this position write about their specific concerns e.g. local nuclear power stations, nuclear re-build, pollution etc )>*

**1.18** **There exists** widespread radioactive pollution of the Baltic Sea and Baltic Sea coasts and projects are being discussed involving further such contamination.

**1.19.** Much information on the radioactivity of the Baltic Sea region is missing. Whilst some information on the current levels of environmental contamination is available in scientific literature, the public is left uninformed. Missing is even the interpretation in terms of effects of environmental contamination on public health. The issue is not properly discussed, nor is it open to such discussion by those citizens affected by environmental degradation. Huge efforts are made to limit pollution from cigarette smoke even though the evidence of ill health from passive smoking is weaker than the evidence of ill health due to radioactive contamination following Chernobyl effects in Sweden (Martin Tondel et al., 2004, see below)

**1.20** Such discussion and consultation is essential to inform on the potential harm of this contamination.

**1.21** Many informational aspects of the contamination levels are not available or have not been obtained through measurements, e.g. (i) sea to land transfer of radionuclide particles and inhalation in coastal environments (ii) concentration of uranium particulates in coastal environments

**1.22** Private industry continuing contamination of the Baltic (e.g. Studsvik, Fortum, E.ON, Vattenfall, etc) has not been properly made subject to any of the procedures on public participation in decision-making.

## 2 New Science and Justification

**2.1** There is a great deal of important new scientific information on the health effects of radionuclide exposures. This new information is from epidemiology and also from basic theoretical and laboratory discoveries.

**2.2** Various examples of failure of the current radiation risk model, that on which the BSS Directive are briefly presented in Appendix 1 below. All have in common that the new evidence shows unequivocally that assessment of **internal radionuclide** genotoxic effects on health cannot be safely assessed using the concept of absorbed dose which is only correct for external doses which can be averaged over large tissue masses or whole organs. For a discussion see ECRR2010 which is provided.

**2.3** Although a selection of this evidence is attached in Appendix 1 a more extended account is presented in the latest risk model document of the European Committee on Radiation Risk, ECRR2010. These evidences show unequivocally that the health consequences of exposure to internal radionuclides are not assessed properly by the current radiation risk model upon which the EURATOM Basic Safety Standards Directive 96/29 was based. The consequences are that people are dying and will in future die.

**2.4** It is of concern that both the risk models of the International Commission of Radiological Protection and the documents of the United Nations Scientific Committee on which these models are based do not cite or discuss the many peer reviewed scientific reports that show their models to be highly unsafe for internal radionuclide exposures.

**2.5** The most recent draft of the Euratom BSS Directive, from which the excerpts above have been taken, has made **no significant changes** in its dose limit data presented in its Annexes which were constructed in the period up to 1996 despite the clear evidence from new scientific discoveries and from epidemiology after 1996 that the ICRP risk model on which it is based is unsafe for internal exposures.

**2.6** The latest version of the Basic Safety Standards Directive contains the same requirement for re-justification in Article 46 paragraph 2 the clause *Existing classes of practices shall be reviewed as to justification whenever new and important evidence about their efficacy or potential consequences is acquired.*

**2.7** Methodology for assessing the effects of environmental contamination is suspect and has not been opened for discussion or the public right to affect decisions etc which is a fundamental human right (para 1.16). For example, adoption of either the risk models of the ICRP or that of the European Committee on Radiation Risk (ECRR) has not been addressed in a way that will involve members of the public who will be affected by exposures to radioactivity which is limited and controlled by the provisions of the Basic Safety Standards Directive and its Justification.

**2.8** The <COUNTRY> national competent authority <NAME> is irresponsible in that it has not incorporated developments in radiation risk assessment and many recent

post-Chernobyl studies which show clearly that its current methodology is unsafe for radiological protection of the public.

**2.9** It is a matter of deep concern that the national competent authority <NAME>, which has been informed of and is aware of the failures of the risk model on which it bases its advice has taken no action to reassess its advice to government. It has been provided both with evidence and a copy of the Lesvos Declaration of 18 Eminent Radiation Experts (attached Appendix 2) calling for the abandonment of the ICRP Risk Model. Subsequent to this, <NAME> has made no effort itself to open the question of Justification which it is required to do under the BSS.

**2.10** Regarding the question of disputed methodology for radiation risk assessment it is a further matter of concern that there are influential members of the ICRP Committee who have until recently been employed by the Nuclear Industry and therefore may be seen as being biased through a conflict of interest.

### **Petition**

**3.1** I (We) the undersigned therefore hereby petition the European Parliament to demand the re-evaluation of the Justification of all current practices involving exposure to internal radionuclides according to the legal requirements of the Euratom Basic Safety Standards Directive, Art 20 Clause (2).

**3.2** In order to include the Human Rights aspect, in particular the right to affect decisions in para 1.16 above, this reassessment or advice as to its need cannot be left to the Euratom Art 31 Group of Experts who clearly have not carried out any reassessment despite the clear evidence that the current ICRP risk model is incorrect. The process must be legal and open, directed in a proper court preferably by a judge or judges, and must include inputs from experts nominated by the public, specifically those people who live in areas where radioactive contamination exists and affects their human rights.

**3.3** For the specific case of <COUNTRY> we require the European Commission to ask the Ministry of the Environment in <COUNTRY> to conduct an open re-assessment of **all Justifications of current exposures** of the public in <COUNTRY>.

**3.4** The reassessment of the Justification will be based on the legal requirements of the Euratom BSS to which the State of <COUNTRY> is bound (para 2.5).

**3.5** Such a reassessment must include the human rights aspect of **public participation** and the **ability of the public to affect decisions** (see above).

**3.6** The **form of such a reassessment must be therefore such that it is made independent of the current National Competent Authority** although it must include experts from the current National Competent Authority and perhaps also from the ICRP. It should be in the form of a **re-assessment the adequacy of the current Justification in view of the new scientific evidence into the health effects of internal radionuclides** and be organized and administered by the Environment

Ministry or an independent group appointed by the Environment Ministry. It must include evidence and expertise provided by the public and by NGOs in order to follow the Human Rights considerations implicit in para 3.4. It will naturally include experts and expert evidence appointed by the European Committee on Radiation Risk.

SIGNED:

ADDRESS

PERSONAL NUMBER/ PASSPORT NUMBER

## APPENDIX 1

### **Evidence of failure of the current Basic Safety Standards Directive and the new and important information that requires the re-justification of all radiation producing practices in the territory**

The Petition is based on the following:

1. Radiation exposure is legally controlled in Europe by the Directive EURATOM 96/29 which has been updated in 2012 and either is being or has already been adopted by Member States. It is thus law.
2. The latest version of this “Basic Safety Standards” Directive has a clause which requires a re-justification of all radiation practices if new and important information which affects the scientific assessment of radiation risk becomes available.
3. The ICRP risk model is formally adopted by this BSS Directive which depends on it for its calculation of the quantity of ill-health (e.g. cancer, leukemia) caused by any dose.
4. Since 1996 when the BSS was written there have been many scientific and epidemiological studies and reports which show the ICRP model to be wrong by a very large amount. Therefore, the BSS law requires a Re justification of all radiation practices.
5. The error in ICRP for the kind of internal exposures is between 300 and more than 1000-fold. This means that between 300 and more than 1000 times more people develop radiation related cancer than the ICRP model predicts.

There is some confusion about what this means, and many people feel that this number is very large and could not have been overlooked by the ICRP. So I (we) will just briefly give an explanation of how it is worked out, for a number of different cases. We have to begin by saying what a risk model is. The ICRP model is based on the idea of DOSE. This is measured in Milli Gray or Milli Sievert. It is defined as the absorbed energy per unit mass in Joules Per Kilogram. Such a measure of radiation exposure cannot be used for internal radiation effects from e.g. plutonium particles since one single particle of diameter a few micrometers will impart huge amounts of energy to local cells but if averaged over large masses of tissue the DOSE will be almost nothing. This is the origin of the large error factor. A list of evidence that this is so follows. These are by no means all the instances of the failure of the current risk model but science does not require many instances of the failure of a theory; one instance is enough for the theory to be dismissed as wrong.

### **List of evidence**

#### **1. Childhood cancer near nuclear installations**

There have been reports in peer reviewed journals of increased risk of childhood leukemia and non Hodgkin lymphoma near many nuclear sites in Europe. A list and discussion may be found in ECRR2010. Child leukemia excesses are found near nearly all the sites that have been examined [1] e.g the reprocessing sites at Sellafield [2] Dounreay UK [3] and La Hague (France) [4] near the Atomic Weapons Establishment Aldermaston (UK) [5], the Atomic Energy Research Establishment Harwell (UK) [6], near Hinkley Point nuclear power station (UK) [7] and recently,



after 1996 when the BSS was written, near all the combined nuclear sites in Germany (KiKK study) [8, 9] and near all the combined nuclear sites in France [10].

The radiation risk community [e.g 9, 11, 12 ] basing calculations on the ICRP risk model have worked out the doses ranges and say they cannot be more than a few hundred microSieverts, well below Natural Background. The ICRP risk model predicts an excess risk of 0.05 leukemias per Sievert. 100 microSieverts is 1/10,000 th ( $10^{-4}$  of a Sievert). So the excess risk living near a nuclear power station according to ICRP is  $0.05 \times 1/10,000 = 0.000005$ . But we see a doubling of risk, there are twice as many child leukemias as are expected. In this case, the error in the ICRP is more than 10,000 times. But we can also employ the Risk model for child leukemia following obstetric X-rays (Alice Stewarts studies). Stewart found a 40% excess risk after an X-ray dose of 10mSv. That would suggest a 4% increase after 1mSv, 0.4% after 100uSv. But we are seeing a 200% increase at this level. The error is now  $200/0.4 = 500$ -fold. However the ICRP do not accept the Stewart findings or at least they are not incorporated into the model.

## **2. Infant leukemia after Chernobyl**

Five different groups [13-17] reported a statistically significant increase in infant leukemia in 5 different countries of Europe in those children who were in the womb at the time of the Chernobyl Caesium-137 fallout as measured by whole body monitoring. The effect was also reported from the USA [18]. Thus the Chernobyl exposure is the only explanation for the increase. This occurred and was reported from Greece, Germany, Scotland, Wales, Belarus, USA and the error this shows in the ICRP model was the subject of two peer reviewed papers in 2000 [17] and 2009 [19]. Using the Alice Stewart relation between dose and leukemia above, the error is about 400-fold (depending on the country) [19]. Using the ICRP model it is upwards of 1000-fold. This analysis is most relevant since it unequivocally supports the causal relation revealed by the nuclear site child leukemias yet in this case fission product internal radiation can be the only cause.

## **3. Cancer following Chernobyl in Northern Sweden**

The study by Martin Tondel found a 11% increase in cancer for every 100kBq/sq metre of Cs-137 from Chernobyl [20]. It is possible to calculate that 100kBq/m<sup>2</sup> Cs-137, if it remained there for one year, would give a dose of about 3mSv [22] The ICRP model [21] predicts 0.05 cancer risk per Sv, so would predict a risk of  $0.05 \times 3 \times 10^{-3} = 0.015$  %. The error is  $11/0.015 = 733$ -fold. Of course the Cs-137 did not remain there at the initial levels for a year and the UN provided an assessment [23] that showed that Sweden received far less than this dose. Accordingly, the error in the ICRP model is higher than this.

## **4. Human sex ratio at birth perturbed by low doses of internal fission-product ionising radiation**

Studies by Hagen Scherb and Kristina Voigt [24] show clear and highly statistically significant alterations in the human sex ratio at birth (the number of boys born to girls) after (a) atmospheric bomb testing, (b) Chernobyl and (c) near nuclear facilities. Effects are shown to be local, European (several countries were studied) and global, supporting earlier evidence of increases in infant mortality during the period of

atmospheric weapons testing [25, 26]. Sex ratio has been accepted as a measure of genetic damage with the preferential killing of one or other sex depending on the type of exposure (mothers or fathers). According to Sherb and Voigt, millions of babies were killed by these effects [27]. Recent re-analysis of the sex ratio effect in Hiroshima reveals the effect in those populations also [28], evidence which was overlooked by the USA researchers through poor epidemiology and questionable decisions. This evidence objectively confirms the serious genotoxic effect of internal ionising radiation on germ cells and the exquisite sensitivity of humans and other living creatures to releases from Uranium fission. Neither the BSS nor the ICRP consider such effects nor are they included in any assessment of harm. This is clearly a human rights issue which was not considered when the BSS was prepared in 1996 and the effects of internal fission nuclide exposures on the foetus and germ cells has now been confirmed.

### **5. Cancer, leukemia/lymphoma and heart disease in Uranium workers**

Irina Guseva Canu and co-workers in the French nuclear risk establishment IRSN have been studying the health effects of Uranium exposure on French nuclear workers who are exposed only to Uranium. There are three relevant published papers [29-31]. These show a number of things. First that very low doses of Uranium exposure by inhalation cause increased hazards of developing lung cancer and lymphoma/leukemia. Second they find that the severity of the risk of a question of the type of Uranium exposure. In addition, the authors show that the exposures cause increased risk of heart disease. By employing exposure matrix the method used by the authors with their earlier correlation between their exposure matrix and absorbed dose as calculated by an ICRP based UK Health Protection Agency computer model [29, 30] it is easy to show that the error in the ICRP model shown by the studies is of the order of 2400-fold. That is to say, there are 2400 times more lymphomas that are predicted by the ICRP risk model. This finding supports the discoveries in Iraq and the Balkans of Uranium effects in those exposed to weaponised Uranium nanoparticles.

### **6. Secondary Photoelectron Effect**

The ability of high atomic number ( $Z$ ) elements in the body to act as antennas for natural background gamma radiation was published in 2005 [32, 33] and 2008 [34,35]. Briefly, the physical absorption of natural background gamma radiation by elements of proportional to the fourth power of their atomic number  $Z$ . This means that nano particles of insoluble high  $Z$  elements (Gold, Platinum, Uranium) absorb background radiation thousands of times more effectively than living tissue (mainly water) and then release this energy into tissue as local photoelectrons. This means that the radiation dose near such particles is extremely high. Two computer studies by the radiation establishment have conceded that there is an enhancement of dose near such particles [36, 37] but both have shown that the enhancement is finite but modest. The studies are both flawed by the same methodology, which is to dilute the energy into a large volume of tissue. The experimental measurements with gold foil [38] and gold nanoparticles [39] and other computer analyses which examine the dose close to the particles [40] show quite clearly that the effects are those of high enhancement of dose largely predicted by theory. In addition, since Uranium, which has the highest  $Z$  of any element also has a strong affinity for DNA, the enhancement of hazard from

molecular or ionic Depleted Uranium, shown by a number of studies [41,42] is explained. The SPE has not been incorporated into ICRP risk modelling and these discoveries (and others relating to Uranium hazards [43, 44] reported since 1996) falsify the ICRP risk model which is the basis of the BSS.

## **7. Cancer and genotoxic effects in Iraq following DU exposure**

A series of studies of the population of Fallujah Iraq shown [45 -47] to have been exposed to Uranium following the 2003-2004 battles have revealed extremely high rates of congenital malformation at birth and cancer and leukemia/lymphoma in adults. The studies also draw attention to significant sex ratio effects at birth beginning after 2004. These results, and the increases in genotoxic effects in the offspring of Gulf veterans support and are supported by the other sets of observations reviewed above which show that inhaled Uranium nanoparticles represent a very serious hazard which was not incorporated into the BSS and is entirely overlooked by ICRP.

## **8. Chernobyl effects as reported in the Russian peer-reviewed literature**

The effects of the Chernobyl accident exposures have been reported in the Russian language peer review literature since 1996. These results have been reviewed by Busby and Yablokov 2006 [48] Yablokov et al 2010 [49] and Busby et al 2011 [50] but have been largely ignored by ICRP. They constitute a very large body of peer reviewed work which show that the effects of the Chernobyl accident exposures are massive and extremely serious [50]. They range from cancer and leukemia to heart disease especially in children together with a range of illnesses which can be best described by the term premature ageing [51]. They include congenital transgenerational diseases and are reported in animals and plants which cannot be affected by the kind of psychological processes (radiophobia) which have been employed by the radiation risk establishment to account for the early reports coming out of the affected territories. In addition, there are objective measurements of serious biological harm to humans and other living creatures affected by the exposures. The germline mutations found by minisatellite tests [53] in humans were also associated with real morphological effects and fitness loss in birds [54] and were shown to have caused significant sex ratio changes in the birds and also population loss [55] which is in agreement with the findings of Scherb and Voigt [24] and the infant mortality findings [25, 26]. The implications for the understanding of the historic effects of the nuclear project on human health are alarming.

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**APPENDIX 2**  
**LESVOS DECLARATION**

**ECRR - CERI**

European Committee on Radiation Risk  
Comité Européenne sur le Risque de l'Irradiation

**The Lesvos Declaration**

6th May 2009

- A. Whereas, the International Commission on Radiological Protection (ICRP) has promulgated certain risk coefficients for ionizing radiation exposure,
- B. Whereas, the ICRP radiation risk coefficients are used worldwide by federal and state governmental bodies to promulgate radiation protection laws and standards for exposure to workers and the general public from waste disposal, nuclear weapons, management of contaminated land and materials, naturally occurring and technologically enhanced radioactive materials (NORM and TENORM), nuclear power plant and all stages of the nuclear fuel cycle, compensation and rehabilitation schemes, etc,
- C. Whereas, the Chernobyl accident has provided the most important and indispensable opportunity to discover the yields of serious ill health following exposure to fission products and has demonstrated the inadequacy of the current ICRP risk model, especially as applied to foetal and early childhood exposures to radiation,
- D. Whereas, by common consent the ICRP risk model cannot validly be applied to post-accident exposures, nor to incorporated radioactive material resulting in internal exposure,
- E. Whereas, the ICRP risk model was developed before the discovery of the DNA structure and the discovery that certain radionuclides have chemical affinities for DNA, so that the concept of absorbed dose as used by ICRP cannot account for the effects of exposure to these radionuclides,
- F. Whereas, the ICRP has not taken into consideration new discoveries of non-targeted effects such as genomic instability and bystander or secondary effects with regard to understanding radiation risk and particularly the spectrum of consequent illnesses,
- G. Whereas, the non-cancer effects of radiation exposure may make it impossible to accurately determine the levels of cancer consequent upon exposure, because of confounding causes of death,
- H. Whereas, the ICRP considers the status of its reports to be purely advisory,
- I. Whereas, there is an immediate, urgent and continuing requirement for appropriate regulation of existing situations involving radioactivity, to protect the human population and the biosphere,

We the undersigned, acting in our individual capacities

1. assert that the ICRP risk coefficients are out of date and that use of these coefficients leads to radiation risks being significantly underestimated,

2. assert that employing the ICRP risk model to predict the health effects of radiation leads to errors which are at minimum 10 fold while we are aware of studies relating to certain types of exposure that suggest that the error is even greater,
3. assert that the yield of non-cancer illnesses from radiation exposure, in particular damage to the cardio-vascular, immune, central nervous and reproductive systems, is significant but as yet unquantified,
4. urge the responsible authorities, as well as all of those responsible for causing radiation exposures, to rely no longer upon the existing ICRP model in determining radiation protection standards and managing risks,
5. urge the responsible authorities and all those responsible for causing exposures, to adopt a generally precautionary approach, and in the absence of another workable and sufficiently precautionary risk model, to apply without undue delay the provisional ECRR 2003 risk model, which more accurately bounds the risks reflected by current observations,
6. demand immediate research into the health effects of incorporated radionuclides, particularly by revisiting the many historical epidemiological studies of exposed populations, including re-examination of the data from Japanese A-bomb survivors, Chernobyl and other affected territories and independent monitoring of incorporated radioactive substances in exposed populations,
7. consider it to be a human right for individuals to know the level of radiation to which they are exposed, and also to be correctly informed as to the potential consequences of that exposure,
8. are concerned by the escalating use of radiation for medical investigation and other general applications,
9. urge significant publicly funded research into medical techniques which do not involve radiation exposures to patients.

Statements contained herein reflect the opinions of the undersigned and are not meant to reflect the positions of any institution to which we are affiliated.

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