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Dnr: M2010/4313/Mk

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Comments by The Swedish Environmental Movement's Nuclear Waste Secretariat (*Miljörörelsens kärnavfallssekretariat, Milkas*) on The European Commission "Proposed Council Directive on the management of spend fuel and radioactive waste" 2010-11-03

In the negotiations on the Council directive Sweden should note that nuclear power is not compatible with sustainable development and refer to Chapter 1 of the Swedish Environmental Code:

## THE ENVIRONMENTAL CODE\* PART ONE - GENERAL PROVISIONS

Chapter 1. Objectives and area of application of the Environmental Code Section 1 The purpose of this Code is to promote sustainable development which will assure a healthy and sound environment for present and future generations. Such development will be based on recognition of the fact that nature is worthy of protection and that our right to modify and exploit nature carries with it a responsibility for wise management of natural resources.

The Environmental Code shall be applied in such a way as to ensure that:

- 1. human health and the environment are protected against damage and detriment, whether caused by pollutants or other impacts;
- 2. valuable natural and cultural environments are protected and preserved;
- 3. biological diversity is preserved;
- 4. the use of land, water and the physical environment in general is such as to secure a long term good management in ecological, social, cultural and economic terms; and
- 5. reuse and recycling, as well as other management of materials, raw materials and energy are encouraged with a view to establishing and maintaining natural cycles.

(\* Available online at: http://www.sweden.gov.se/sb/d/2023/a/22847)

This means that all production of radioactive waste throughout the nuclear fuel chain should be stopped as soon as possible (the term "chain" should be used, not "cycle" as in paragraphs 24 and 25). It should be noted that methods to produce medical isotopes are available that do not require nuclear power. It should also be noted that the civil and military nuclear fuel chains cannot be separated due to shared facilities. In any case, military waste should be included in the Directive (e.g. in Article 2) in order to ensure this waste is also managed in the best way possible.

Formulations that can be interpreted as positive towards nuclear power, e.g. as in paragraph 23, should not be used. Further, the use of deep geological disposal should not be taken for granted, as in paragraph 29. Rather, it should be stressed that research is required on a range of methods. Research on methods of dealing with radioactive waste should be carried out by researchers independent from the nuclear industry. This avoids a conflict of interest between the desire to produce more waste and the task of finding the best method of dealing with already produced waste. For the same reason, facilities should be controlled and licensed by bodies independent from the nuclear industry.

It should also be noted that contrary to the view presented at the bottom of the first page of the explanatory memorandum, there is in fact not a consensus that deep geological disposal is the safest option. There is a large body of literature by researchers independent from the nuclear industry that support other options. Further, the environmental movement worldwide wants more research on alternatives to geological repositories. It should also be noted that in the USA there is broad support for on-site, highly secure, dry storage (referred to as HOSS, hardened on-site storage).

It is requested that Article 2 paragraph 3 be changed from:

This directive shall not apply to authorized releases.

to

This directive shall apply to authorized releases.

The reasoning is that routine releases from nuclear facilities are a serious hazard.

It is also requested that paragraph 2a Article 4, General Principles be changed from:

- (2) Member States shall ensure that:
  - (a) the generation of radioactive waste is kept to the minimum practicable, in terms of both activity and volume, by means of appropriate design measures and of operating and decommissioning practices, including recycle and reuse of conventional materials;

to

- (2) Member States shall ensure that:
  - (a) the generation of radioactive waste be stopped as soon as possible and decommissioning initiated;

"Recycle and reuse of conventional materials" has should be removed due to the problems associated with determining if conventional materials includes those that are radioactive.

It is also requested that paragraph to 2c Article 4, General Principles be changed from:

(c) no undue burdens are imposed on future generations;

to

(c) the hazards and location of radioactive waste should be perpetually passed on to future generations;

The reasoning behind this last change is that even if the nuclear industry is able to achieve its most optimistic schedule, the earliest a facility holding all the currently projected volume of radiated nuclear fuel could be sealed is about the year 2060. One generation is usually considered to be about 30 years. As the majority of the current generation of politicians and staff in the nuclear industry are middle-aged and beyond, after them there will be an additional two or three generations that would have to deal with the problem. However, as the waste is dangerous for over 100,000 years, even if the production of more waste is stopped immediately and an isolation method and site

chosen as soon as possible, the hazards and location of the waste should be perpetually passed on to future generations. Otherwise, there is a risk of contamination due to accidental or deliberate exposure. The waste problem can thus never be "solved" in the sense of not having to be thought of again and considered over and done with.

From the perspective of the environmental movement, the greatest responsibility of this generation regarding nuclear waste is to stop making it.

The option of international storage facilities given in paragraph 3 Article 4, General Principles should be removed. Much research remains to be done regarding HOSS and other options before international storage facilities can be considered. What is more, transportation should not be allowed as transportation hazards are too great and popular opposition to transport too strong at this point in history.

The need for protection of computer systems from viruses and unauthorized access should be included, e.g. in Article 22, Quality assurance.

Regarding Article 12, Transparency, it is important that financing measures for public participation be included.

Finally, the ten-year period between national self-assessments given in Article 15, Reporting, is considered too long. Three years should be considered the maximum.

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