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Presiding Officer Marshall E Miller  
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STATEMENT OF POSITION

4 July 1980

NEIGHBORS FOR THE ENVIRONMENT (NfE) believes that the necessary research and development has been accomplished for the safe disposal of high level nuclear waste ; that continued R&D is desirable only for the sake of improvement in technology rather than for any insufficiency ; that excessively narrow focus upon nuclear waste hazards has blinded us to similar hazards for the wastes of long-accepted and currently-acceptable energy cycles just as surely as narrow focus upon incredible accidents blinded us to the hazards of more likely and smaller accidents such as TMI-2 ; and that the major barrier to the actual safe disposal of high-level nuclear waste is a narrow adherence to legal- and bureaucratic-procedures which would prevent any similar activity if applied in the same manner.

NfE asks that the Presiding Officer, upon review of the Record, establish a positive finding of confidence in nuclear waste disposal.

NfE believes that USDOE and other testimony will establish the broad scope of this, and seeks only to assist by these thoughts :

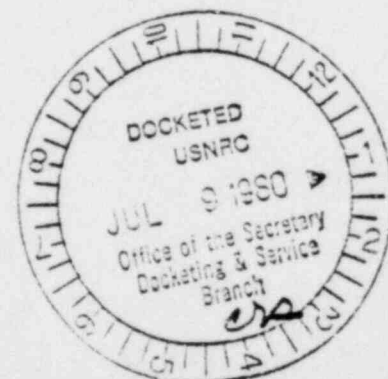
- IA that a demonstrated technology exists in high level nuclear waste management, in the sense that a Professor of the History of Technology understands the terms.
- IB that the waste from several definable energy sources have a potential toxicity that is generally comparable to the waste from the nuclear fuel cycle.
- IIA That there should not be undue concern about the accumulation of spent fuel assemblies at nuclear reactors properly designed to control the hazards of a single equilibrium full-core discharge.

Very truly yours

*Eugene N. Cramer*

Attachments

- 1. Details of the Statement of Position
- 2. Supporting evidence for each point



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## DETAILS OF THE STATEMENT OF POSITION

I " the degree of assurance now available that radioactive waste can be safely disposed of"

IA A distinguished Professor of the History of Technology concludes "that a demonstrated technology exists in High Level Nuclear Waste Management, in the sense that I understand the terms as a historian of technology". Professor John Rae reached these conclusions by comparison of the development of three major technological innovations -- the steam engine, the moving assembly line, and the modern transport airplane (attached).

NfE contends that perspective has been lost in considerations of nuclear waste disposal by an overly narrow focus first upon a scientist's dream of a never-ending search for BEST ; and second upon a search for artificial legal- and bureaucratic-procedures that will satisfy all parties. NfE particularly commends to the Hearing Officer : Prof Rae's comments on pg 21/22 on the difference between engineering decision-making and the scientists search for the absolute, and Prof Rosenberg's comment on pg 4 about an improvement period between demonstration and economic applicability.

NfE contends that the present 'degree of confidence' confusion is a misunderstanding about the significance of this period of improvement -- that the existance of the considerations of alternatives and minor improvement and even the Regulatory Process is , in effect, an unconscious agreement that the basic technology of safe disposal is indeed sound and demonstrated.

IB A specialist in a State Department of Environmental Resources concludes "that the wastes from several definable energy sources have a potential toxicity that is generally comparable to the waste from the nuclear fuel cycle". Mr William Dornsife compares the toxicity of nuclear reactor high-level waste with the wastes of coal combustion and of solar thermal electric to show (for equal amounts of useful energy) the toxicity is essentially the same after 1000 years. (attached)

NfE is concerned that an unduly harsh precedent set for nuclear waste because of non-technical consideration may later be used unthinkingly as grounds for similar treatment of other energy sources. As a somewhat esoteric example, if the radioactive half-life of Plutonium is deserving alone of great consideration, then the human body will undubitably require equal treatment since it contains Potassium in large quantity which has a much longer half-life.

Because of the much larger quantities of material involved, solar and coal technologies may be unable to bear the costs of similar equitable waste disposal requirements. NfE commends to the Hearing Officer ; the four figures particularly number 3, and the appropriate discussion.

II "whether radioactive wastes can be safely stored on-site... until offsite storage is available".

IIA A study of the hazards of spent fuel concludes "that there should not be undue concern about the accumulation of spent fuel assemblies at nuclear reactors properly designed to control the hazards of a single equilibrium full-core discharge". The authors reach this conclusion after analysis of the ingestion toxicity in stored spent fuel assemblies showed that the accumulation of 36 years of operation was some 85% of the toxicity of one full core operated one year -- so a lifetime of operation does NOT even double the initial years toxicity. (attached)

NfE believes that the record shows substantial and sufficient care has been taken to control the hazards in a reactor's spent fuel pool of a limited amount of fuel -- essentially 1 1/3 cores -- with allowances for a corrosion lifetime of the pool of at least 30 years. NfE believes the record shows that nuclear fuel has and will withstand the mild service conditions of such long-term storage.

NfE believes the only barrier to a positive finding is the subconscious belief that somehow continued production of spent fuel may somehow overload the hazards control system. NfE commends to the Hearing Officer : figure 1 on pg 18 which shows that the ingestion toxicity does not increase rapidly or inordinately over the lifetime of the reactor ; and figures 3 and 4 which show that the more-mobile gaseous radioactivity remains at about 1% of the total radioactivity and likewise does not accumulate inordinately.

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