
Introductory Remarks

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Introductory remarks

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Radioactive waste arises in large quantities only as a consequence of the civil and military applications of nuclear energy. The problems connected with its management and eventual disposal are not, therefore, problems that would have suggested themselves as topics for research but for the existence of large-scale reactor operations. Interest in nuclear waste management has therefore both a social and a scientific origin. This is not to say, however, that the researches that are necessary in order safely and responsibly to handle nuclear radioactive waste arisings do not entrain questions of considerable scientific interest in their own right. In particular, the need to find secure disposal routes and sites lead us into geological and marine researches that have a high interest in their own academic right. There is, similarly, very considerable scientific interest in establishing and understanding the interlinked pathways through which nuclear waste, buried or otherwise disposed of, might work its way back into the food chain.

This Discussion Meeting addresses itself to such scientifically interesting aspects of nuclear waste management, particularly of the more highly active and longer-lived wastes. We shall not attempt to cover the whole range of nuclear waste management; in particular, we shall not attempt to discuss methods of management, such as very long-term storage, that are complementary to those involving eventual disposal, reversible or irreversible. Such problems are closely related to those of civil engineering of a type already familiar and therefore not appropriate for treatment at a meeting that addresses itself to problems of a more scientific nature.

Two final points need to be emphasized. The first is that this meeting is in no sense a meeting of advocates of a nuclear power programme; it is a meeting of persons interested in the scientific problems that are associated with the management of radioactive waste, that waste having once arisen. The second point of emphasis is that the large amounts of radioactive waste already generated by the nuclear power and military programmes in several countries would require just as much care in their disposal and just as much research leading towards satisfactory disposal routes if no further nuclear activities were to be carried out in the future; these wastes exist already and their responsible management makes an irreducible demand.