

## Ethical foundations of Canada's nuclear waste management program

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The under riding postulate of my analysis of Canada's nuclear waste management program is that the fundamental principle of nuclear waste fuel management is:

- ***Ensure that ALL research, ALL activities, ALL decisions, ALL recommendations are framed by explicitly articulated ethical values***

Implementing a waste disposal program by implication then requires:

- ***The articulation of the ethical values that will frame ALL aspects of the nuclear waste disposal process***

The reason for this is that the fundamental challenge of successfully managing the safe disposal of nuclear waste is building, winning and earning justified trust. Trust is simply the belief that those in whom one trusts will be guided in all relevant respects by shared ethical values. For nuclear waste disposal this means:

- All relevant decisions regarding the disposal of nuclear waste
- All aspects of the knowledge creation and application process relevant to the disposal of nuclear waste.

What this requires is that the pursuit of scientifically grounded solutions to the disposal issue should be guided by explicitly articulated ethical values, a huge challenge in our "enlightenment" scientific culture.

Although challenging, this is the path that the NWMO chose to follow in developing a road map for solving the Canadian nuclear waste disposal dilemma. Following its creation the NWMO did two things:

1. *It created an ethics Roundtable (2003)*

- to identify the ethical standards that should guide all aspects of the operations of the NWMO
- To organize those standards into a coherent ethical and social framework

2. *It undertook extensive public consultation and engagement with a view to:*

- identifying the values that the public believed should guide the disposal of nuclear waste
- organizing those values into a set of objectives that the public would recognize as reflecting what was heard in the consultation process

The result was

- an ethical framework constructed around a series of questions focused on both procedural and substantive ethical values
- A set of eight objectives to be to guide all aspects of the decision making process:
  - fairness*
  - public health and safety*
  - worker health and safety*
  - security*
  - economic viability*
  - community well-being*
  - environmental integrity*
  - adaptability*

Examples of values relevant to procedures:

Q 1 Is the NWMO conducting its activities in a way appropriate to making public policy in a free, pluralistic and democratic society?

Q 2 Are those making decisions ... impartial?

Q 3 Are groups wishing to make their views known ... being provided with forms of assistance they require to present their case effectively?

Q 4 Is the NWMO committed to basing its deliberations and decisions on the best science, the best aboriginal knowledge and the best ethics?

Examples of substantive values:

Q 8 Do NWMO's recommendations reflect respect for life ...?

Q 10 If implemented would NWMO's decisions be fair?

Q 11 Do the recommended provisions protect the liberty of future generations to pursue their lives as they choose not constrained by unresolved problems caused by our nuclear activities?

To approach the management of nuclear waste disposal in this way requires values based management which builds into the organizational culture a process of continuous, on-going moral reflection. The challenge for the NWMO is to persuade the organization to endorse an unconventional management model and then is to build values based into a vastly expanding and diverse organizational system and culture comprised of highly trained individuals whose approach to both research and management will require fundamental reorientation.