

14 June 2005

Ms. Liz Dowdeswell, President
NWMO
49 Jackes Avenue, First Floor
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Dear Ms. Dowdeswell,

Thank you and your organization for arranging to have a copy of "Choosing a Way Forward" sent to me. While the report is still on my desk and fresh in my mind, I would like to respond and comment on the impressions that most immediately presented themselves to me.

Firstly, I would tell you that I am immensely impressed by the substantial nature of this report. In the very first place - what a well-written document. The language is wonderfully clear and clean. Then, the lay-out and illustrations are good. And the whole thing is generous with information. So of course I come away feeling satisfied and included.

The term - 'a milestone document' - feels entirely appropriate. Amongst other things, because it indicates just how far we have all come in creating a process that can articulate and engage others in this deeply-awkward issue of the radioactive materials. In marked contrast to an earlier period when there was no consultation process at all.

So, appreciations for your team and the consultants who have contributed to this sensible presentation. Thinking still of milestones, it is evident to me that there are miles and miles to go yet. Indeed, I believe we are embarked on a task that has no real end to it. As I see it, the moment we first fissioned the atom, we opened a door to the smaller and internal part of our universe that can never be closed. The only way forward is to go into this new 'new world' with even greater curiosity, and a good quota of compassion in our interest.

This last comment highlights what is for me the missing aspect in your otherwise very full report. I feel I can not rest until I have sought to communicate to you the blind spot in our view of the Atomic world and nuclear energy, and now this issue of the radioactive waste materials.

In this context, I would like to make the following points.

Firstly, I feel we have not stepped back far enough in this whole study of radiation, to properly review and check out the premises on which y/our work is being developed.

How can I say this ? Let me try an analogy. While I am presently residing at Findhorn in Scotland, for many years I worked as a geologist in BC, (sometimes for one of your consulting firms - Golders in Vancouver). I worked on a dam site investigation where the dam was being sited on the basis of the local geology. It was an entirely obvious choice that offered itself to the design team. But a subsequent study of the regional geology showed a deeply-buried fault line running under the proposed site. There was no evidence in the valley of this fault. It was inferred by looking at a much larger picture and considering effects and events at a continental magnitude.

For me, the missing element or chapter in your report is a concern for the regional, which is better said as 'the universal' nature of nuclear energy. I find that in a much larger consideration of our universe - of the energetic systems that together form it - there is an whole lot of other information about the internal and subjective nature of the atom and radiation that might well allow us a different approach to the issue of the waste materials.

The equivalent of the local geology (in the dam site parable) is the knowledge and information provided by conventional nuclear physics. But this, as-it-were, local picture of the forces at work within the nucleus of an atom contains no reference to the very social nature of the relationships that are between and amongst the particles.

Wearing a different set of spectacles - ones that have a more universal prescription - I think it relatively easy for any or everyone to see that nuclear physics, with its' cold technical language, is in fact describing what in reality is a warm friendly vibrant living energetic system.

To run on ahead, as I must, atoms look more and more like the family and community structures of the particle population. Nuclear fission is nothing but a mischievous process that destroys community life at the atomic level. The energy that comes up to us, as the social

fabric of this smaller realm unravels, is at source too similar to what we might otherwise identify as the Holy Spirit for us to ignore. And radiation, in this context, is an expression of the extreme distress and despair that is always a consequence of the breakdown or breakup of good family and working relationships.

This is a strong story. A strong pain-full story. I have found that once I assumed the particle world was some sort of lively and vital and alert system - alert rather than inert as is the assumption of conventional science - all our knowledge of the physics of this smaller world supports and indeed affirms this perception. The new requirement of us is to learn to see how objective and subjective information complement each other; and together create this deeper and more wholesome, more holistic, understanding.

I would emphasise how the modern insights of quantum physics have moved us on substantially from the mechanistic view of the atom that prevailed fifty years ago. While it still suits the nuclear industry to use the earlier ideas about structure and energy of the atom to explain and design their reactors, the original version (a blunderbuss kind of technology) does not illuminate our new concern and inquiry for the disposal of the waste products of the reactors.

Indeed, I would point out that there has been significant discussion since at least the 1970's that the organisation of our universe is along holographic lines. Here is a model worthy of our attention, with much of its theory complete, that could dramatically change the way we see and approach the waste issue.

How are you doing so far, I wonder, with my comments, ?

Your report is a milestone in its openness. Looking at it once again, I see how the terms of reference that created your organization and initiated this study might also constrain the scope of your thinking. I wonder if it is possible for you to suggest the need for an inquiry into the holistic nature of nuclear energy when you make your final recommendations. Otherwise the conventions of the past will unduly preclude us from pursuing new avenues into the future.

While I have, I hope, your attention, I would offer some additional comments about a subjective view of radiation. For me, this is a key in opening the door to a more complete view of the atomic world.

A subjective account is one that especially values experiential information: Being as it is in marked contrast to an objective account

which carefully excludes experience and depends on physical measurement for its data.

A subjective view of radiation reports that, at heart, radiation is an emotional energy. In simple terms, it is an energy that is laden with painful feelings. Radiation is an emotionally-charged effect. An effect that radiates unease and anguish and distress at such an intensity that the cells of our body can not bare to feel or hear it, without being distressed themselves.

The basic qualities of nuclear radiation can be identified as emotions such as grief, sadness, despair. How can I write so specifically, you might ask. Because I worked one year at Dounreay, the experimental fast breeder reactor site in northern Scotland. As a geologist, working on a site investigation being undertaken by Nirex. Being both curious and an introspective kind of person, I found it possible on several occasions to visit the laboratory where fuel rods were being cut up for metallurgical testing. I was entirely surprised the first time I went there by the hospital-like feel in the lab. It was actually the women in our group who made me aware of it. There was an atmosphere of un-wellness, of illness, of silent pain. A memory of an hospital ward. It is an hard thing to define.

I made it a concern of mine to visit the lab on several other occasions, and settled in a corner there and listened and felt what this diluted (by the protective barriers) field of radiation felt like. It was always sad and hurt-full and laden with sorrow and similar effects. I would go there feeling clean, and then felt the feelings arrive in me, coming it seemed from the spent fuel rods that were being cut up. I reported my experience to the managers of the site, but they were engineers and not especially interested or moved by my report.

It must surely be a matter of concern for all of us that we proceed with our work in the atomic world using a (scientific) method that chooses not to record subjective information. It is as though we deliberately put on a set of blinkers before we look into or think about the particle world. We only care to observe one half of the character of the world we are working in. There are historical reason that explain why we have adopted this procedure. But there is no good reason to continue this old habit of a practice.

I am willing to bet that you never hear any suggestion from your consultants that there is a blind spot in our understanding of the atomic world. But it is in this direction that I believe we should be looking and listening. To the soft underbelly of our atomic theory and

perceptions. Here is an area of knowledge that we have ignored for too long. That every nuclear nation has sought to avoid.

On a personal note, I have often found that the things which frighten me and make me uncertain, contain rewarding information about myself and my abilities when I do finally challenge them. I like to think that something similar will happen for us, if and when we give more of ourselves to this phenomena of radiation.

Thanks for listening to my take on this whole subject. It is indeed a sense of the wholeness of the atomic world that informs my opinion and impels me to write to you.

I believe that if we can open the door of our imagination to some friendly yet grounded speculation about the alien and disturbing subject of radiation, an enormously creative tide of research will be released that can only but benefit the complex dilemma that now confronts us.

Well then, best wishes with all your endeavours.

Yours sincerely

Ian Turnbull

