

January 18, 2001

Mr. William J. Sinclair, Director
Division of Radiation Control
Department of Environmental Quality
168 North 1950 West
P. O. Box 144850
Salt Lake City, Utah 84114-4850

Dear Mr. Sinclair:

I am responding to your November 9, 2000 letter, which enclosed a petition filed by Envirocare of Utah, Inc. (Envirocare), for exemption to the governmental land ownership requirement in Utah regulations. You also enclosed a public notice on the process the Radiation Control Board will use in making the rule exemption determination. You indicate you are providing us an early copy of the petition and notice in the event we have comments or concerns with the exemption request. The original notice requested comments by December 13, 2000. We understand that the comment period was extended to January 12, 2001. We offer the following comments.

As an Agreement State, Utah has authority to license a Low-Level Waste (LLW) disposal facility in accordance with its regulations that are compatible with the Nuclear Regulatory Commission's (NRC) 10 CFR Part 61. This authority includes the ability to grant exemptions from specific requirements when public health and safety is adequately protected. As discussed in our April 12, 2000 letter, we believe the previous exemption rationale applicable to Class A waste and naturally occurring radioactive material needs to be thoroughly examined by Utah for applicability to Class B and C waste. The review should include a determination whether the bases for the previous exemption from the land ownership requirements continue to apply to the disposal of Class B and C waste. The supporting technical rationale for our recommendation, which is summarized below, is enclosed.

During the licensing phase, land ownership must be considered and addressed in the context of Part 61 regulations (or equivalent Agreement State regulations) so as to provide defense-in-depth to ensure long-term control and protection. This is provided through a combination of controls: siting, design, waste form, and institutional controls including government land ownership. Under our regulations (10 CFR 61.10 and 61.14), Federal or State land ownership is required at the time the license is issued.

Additional waste form and facility design requirements are placed on Class B and C waste and long-term institutional land control through government ownership takes on added importance. Specifically, Class B and C waste is significantly more hazardous than Class A waste and requires greater assurance that intruders will not be exposed to the radioactive material that the facility contains. Reliable long-term control and protection is an essential consideration in finding reasonable assurance that the public will be protected from the hazards associated with Class B and C waste. For this reason, NRC rules require an applicant to obtain either State or Federal ownership if this kind of waste is to be licensed for disposal. Also, as reflected

in our Part 61 implementing guidance and history of other LLW disposal facilities, government land ownership has been an essential approach to address long-term institutional control. Government ownership would also be consistent with past practices associated with the following sites: Beatty, NV; Sheffield, IL; Maxey Flats, KY; West Valley, NY; and Barnwell, SC.

Although NRC staff has not reviewed this specific exemption request or rationale in detail, the staff does not believe that NRC would grant a similar exemption request in the absence of clear evidence that the level of long-term control and protection afforded by Envirocare's proposal is essentially equivalent to that which would be provided by government ownership.

We understand that proposed State legislation was designed for transfer of ownership of the site to the Federal or State Government at the end of the 100-year institutional control period. However, it is also our understanding that this proposed legislation has been withdrawn and therefore, will not be addressed by the State Legislature until perhaps the Spring of 2002. We would consider it appropriate to await the passage of this legislation, and assurance of assumption of government ownership at the end of 100 years, before granting this exemption.

As noted above, we have not performed an independent detailed de novo review of the exemption request. However, after you complete your review, if there are technical or policy issues where you have questions, or you need further assistance in interpretation of NRC regulations in Part 61 or implementing guidance, please let us know.

Sincerely,

/RA/

Paul H. Lohaus, Director
Office of State and Tribal Programs

Enclosure:
As stated

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**Considerations for Envirocare's Exemption Request
From Government Land Ownership for Class B/C LLW**

- I. Protecting potential intruders onto a disposal site and into buried waste from radiation exposures from Class B/C radioactive waste:
 - A. One of the four fundamental "performance objectives" in 10 CFR Part 61 is protection of an inadvertent intruder onto the disposal site. In order to demonstrate that an intruder is protected, Part 61 contains a number of specific requirements that work together to protect persons who might unknowingly come into contact with radioactive waste. Government ownership is one of these controls that act as a system for protection of public health and safety. Other controls include the following:
 - A waste classification system that categorizes waste by the hazard it poses to intruders and which provides a basis for employing additional controls for the higher hazard wastes. An individual intruder exposure limit of 500 mrem/y is the basis for the waste classification system in Part 61.
 - Siting requirements that limit upstream drainage areas, areas with erosion, landsliding, or weathering, that would inundate the waste disposal areas and possibly expose waste to members of the public, or avoiding areas with natural resources that could be exploited and expose individuals to radioactive waste.
 - Specification of particular forms of waste that will maintain their structural integrity for long periods of time and thereby limit exposures to an inadvertent intruder in comparison with dust or soil-like material, or material that has no structural integrity.
 - The use of long lasting (500 year) structural barriers, or increased depth of disposal, for Class C waste, to reduce the probability of human intrusion.
 - The implementation of institutional controls by the government land owner.
 - B. Class B and C LLW are significantly more hazardous than Class A, and thus the reliability of institutional controls is more important. The specific radioactivity of Class C waste, depending upon the radionuclide, is up to several hundred to several thousand times more than Class A. While Class A generally requires little or no shielding to protect people, unshielded Class C waste can cause a lethal radiation dose, based on a 20 minute exposure at a 3 foot distance. In addition, Class C waste does not decay to levels that are protective of an inadvertent intruder until 500 years have elapsed. Thus, both the time of hazard to the intruder and the consequences of exposure are greater for these wastes than for Class A.

ENCLOSURE

- C. The principle behind government land ownership is that governments are longer lasting than private companies, and would be more likely to ensure that the interests of the public were served in the long term. Although the government could have oversight of a privately held site, "ownership" of the site by a government would provide greater assurance that persons would not use the site or the land in inappropriate ways that would cause radiation exposures.
- D. In the context of reviewing assurance for financing and oversight of long-term stewardship, the December 2000 Resources for the Future report entitled, "Long-Term Stewardship of Contaminated Sites -- Trust Funds as Mechanisms for Financing and Oversight," concludes that State and private trust funds are more likely than a Federal stewardship trust fund to successfully assure financing and oversight of the long-term stewardship. While Federal funds will be needed to work at Federal facilities, it is unclear whether Federal agencies currently have legal ability to use Federal funds to finance State or private trusts, and Federal trust funds are more vulnerable to political or economic pressures. "On balance, the laws surrounding administration of private charitable trusts make them the preferred option for funding long-term stewardship, with State and local trust funds close behind."
- E. Institutional controls, and their lack of reliability in the long term, have received significant attention in the last several years, however, the announced findings are somewhat conflicting. For example:
- The June 2000 National Academy of Sciences' report, "Long-Term Institutional Management of U.S. Department of Energy Legacy Waste Sites," states that "...there is no convincing evidence that institutional controls and other stewardship measures are reliable over the long-term." Any steps that might lessen the effectiveness of these controls would exacerbate this situation.
 - A 1998 report entitled, "Long-Term Stewardship and the Nuclear Weapons Complex: The Challenge Ahead," by the Center for Risk Management, Resources for the Future, stated, "Another, and perhaps more effective, form of institutional control available for federal facilities [more effective than DOE implementing mechanisms that inform any renters or purchasers of DOE land and facilities of the hazards involved] is continued federal government ownership and control. The federal government can restrict the use of land, surface water, and groundwater on land it owns and controls."
 - In its February 6, 1995, letter to Chairman Selin, the ACNW expressed the following views regarding private ownership of LLW sites:

"The Advisory Committee on Nuclear Waste (ACNW) has concluded that there are no fundamental reasons why private ownership of low-level waste (LLW) disposal sites should be prohibited but finds that several related issues require deliberate and cautious action by the Commission. The first concerns the assurance of the protection of the health and safety of the public and of the environment (protection function). We recognize that the extent to which assurance of adequacy of the protection function is obtained may be strongly influenced by Agreement State laws and the extent to which the NRC exercises

surveillance of the quality of the Agreement State activities. During the recent Commission policy discussions of adequacy and compatibility, the topic of provisions for private ownership of waste disposal sites was not included. We believe that the NRC needs to include explicit statements for pertinent requirements under the heading of adequacy and compatibility if the Commission proceeds with generic approval of private ownership of waste sites. In addition, the NRC should require effective and timely transfer of ownership to another responsible and capable entity, such as the State, when any changes in the private ownership provision for waste sites, including dissolution of the corporate entity, are effected. The measure of adequacy and compatibility of Agreement State operations should include effective and frequent monitoring and evaluation of private entities that are responsible for waste sites.”

II. On the need to increase public confidence

- A. In a Federal Register notice of August 3, 1994, NRC announced that it was considering amending its regulations to allow private ownership of LLW facilities sites as an alternative to the current requirement for Federal or State ownership. In SECY-95-152, the staff recommended that the Commission not proceed with a rulemaking to allow private land ownership of LLW disposal sites (a recommendation subsequently adopted by the Commission), based on the comments received. In that paper, the staff stated:

“This change [i.e., revising our rules to allow private ownership of LLW sites] could also generate significant public misunderstanding and unwarranted public concern about the potential rollback of other LLW disposal requirements. The Idaho National Engineering Laboratory’s National Low-Level Waste Management Program summarized this issue, stating:

‘For over three decades the public has been led to believe that all LLW disposal sites would necessarily be owned and controlled by either a Federal or State government. This, we believe, has been an important factor in convincing many proponent groups and State and local LLW advisory groups that LLW can and will be disposed of in a safe manner. To now try and convince these groups that Federal or State ownership of LLW disposal sites is not required, may be difficult and generate a significant credibility problem.’ ”

- B. Although comments on the Advanced Notice of Proposed Rulemaking for private land ownership of LLW sites were mixed, members of the public were generally opposed to private ownership.
- C. In its letter to Chairman Selin on this topic, the ACNW stated the following regarding public confidence and private land ownership:

“We believe that the procedures used by the NRC that involve open meetings, public and other stakeholder participation, judicial review, and other factors give all interested parties ample opportunity to have their views transmitted and considered. We believe that the importance of transferring accountability for the protection function to a private entity with a likely modest life compared to the hazard life of the waste requires procedures comparable to those used by the NRC. The NRC should

ensure that privatization of ownership of LLW disposal sites involves procedures that are at least as open and accessible to stakeholders as those procedures managed according to the policies and regulations of the NRC.”

- D. The State of Utah has extended the comment period for the requested exemption from Envirocare from the government land ownership provisions and scheduled two more public meetings in the month of January because of the interest of the public in this action.