UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

June 28, 1993

Dianne R. Nielson, Ph.D.
Executive Director
Department of Environmental Quality
168 North 1950 West
P.O. Box 144810
Salt Lake City, Ut 84114-4810

Dear Dr. Nielson:

Thank you for your letters of February 12 and March 17, 1993, responding to our comments and recommendations following our review of the State's radiation control program which were sent to the State of Utah in our letters of September 2 and December 24, 1992.

We appreciate the positive actions you and your staff are implementing in response to our comments. Our understanding is that the State is developing a decommissioning rule that, when adopted, would bring your regulations up-to-date. Your responses to the other comments appear acceptable, except for the land ownership exemption which is discussed below, and we will verify them during the next review of your program.

The State's response on the rationale for the exemption from the land ownership requirement presented the concept of exercising control of the site equivalent to that provided by governmental ownership. The Nuclear Regulatory Commission (NRC) staff considers this to be an acceptable approach to providing the rationale for the exemption. The State presented several clarifying points on how the State would exercise control of the site without the need for the State or Federal government to have title to the site. The Commission approved this approach as acceptable with the proper implementing mechanism(s) put in place. With the implementation of a restrictive covenant that will run with the land (an example is presented as Enclosure 1), the Commission considers the State's controls to be adequate. Please submit a copy of a final restrictive covenant when it is implemented so that our documentation will be complete.

The State may wish to consider requiring some level of trust fund to support the potential activities contained in the deed covenants after the license is terminated. The States response indicates that the entire remaining trust fund would be returned to the licensee when the licensee has met the requirements for license termination. Such funding would be a reasonable additional level of compensation for government ownership that, while not necessary, would be prudent.

The Commission decided that the State of Utah's rationale of exercising effective control of the waste disposal site without State or Federal land ownership is acceptable and is equivalent control to that which would be provided by implementing State or Federal land ownership. (See SECY-93-136 and the resulting Staff Requirements Memorandum, Enclosures 2 and 3).

In discussions with your staff on February 17, 1993 and in subsequent discussions, your staff agreed to update, as part of the annual review, the Trust Agreement and supporting calculations to remove the inconsistencies identified in the attachment to the December 24, 1992 letter from me to Mr. Kenneth Alkema. Enclosure 4 contains a discussion of the major issues and the comments identified by the NRC staff. We will review this update during our next program review.

I appreciate your support of the State's radiation control program and look forward to working with you in the future. Should you have any questions, please feel free to contact me or Robert Doda, Region IV, State Agreements Officer.

Sincerely,

Original signed by:
S. A. Schwartz

Carlton Kammerer, Director
Office of State Programs

Enclosures:
As stated

cc: W. Sinclair, State of Utah
L. Anderson, State of Utah

Distribution:
SA RF
DIR RF
CKammerer
SSchwartz
JSurmeier
DSollenberger
KSchneider
RDoda, RSAO
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PLohaus, NMSS/LLWB w/o encls.
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OFC	OSP:SA	OSP:SA:AD	OSP:D	OSP:D			
NME	DSollenberger:kk	JSurmeier	SSchwartz	CKammerer			
DTE	06/28/93	06/28/93	06/29/93	06/28/93			

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AGREEMENT

ESTABLISHING OF RESTRICTIVE COVENANTS

THIS AGREEMENT is made the day and year herein after given by and between Envirocare of Utah, Inc. (hereafter "Envirocare"), a Utah corporation having its general offices at 215 South State Street, Suite 1160, Salt Lake City, Utah 84111, and UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY (hereinafter the "Department").

RECITALS:

(1) Envirocare is the record owner of the following described premises located in Tooele County, Utah, to wit:

SEE ATTACHED EXHIBIT A FOR A LEGAL DESCRIPTION AND EXHIBIT B FOR A DIAGRAM OF THE PROPERTY.

(2) Envirocare is in the process of constructing and operating a low-level radioactive waste disposal facility described in Exhibit B for the permanent disposal of radioactive material pursuant to a license granted by the Department under R447-25.

(3) The parties desire to clarify and supplement the Agreement Establishing Covenants and Restrictions recorded March 16, 1993 at Book 348, pages 104-107.

Now, therefore, these restrictive covenants are executed by Envirocare to ensure the long-term integrity of the disposal facility for the safety of the people of the State of Utah, to wit:

(1) These covenants shall be in addition to any restrictive covenants currently on record affecting the above-described premises, and recorded at , Tooele County Records.

(2) No excavation or construction, except as necessary to maintain the integrity of the above described premises, shall be allowed after the low-level radioactive waste is disposed of and the facility closed.

(3) No uses of the property shall be made which may impair its integrity. Any change in use following closure of the facility shall require the prior written consent of the Department, or its successors or assigns, which shall not be unreasonably withheld.

(4) Envirocare, its successors or assigns, shall erect monuments and markers and shall thereafter continuously maintain, while it has title, these monuments and markers. These monuments and markers are to be approved by the Department to warn of the presence of radioactive material at the site.

(5) Envirocare shall notify the Department of its intent to convey any interest in the property described herein. Such conveyance shall not be made without the prior written approval of the Department, provided however that such approval is not to be unreasonably withheld. No conveyance of title, easement or other interest in the property shall be consummated by Envirocare

without adequate and complete provision for continued maintenance of the property.

(6) Any State or Federal governmental agency, affected by any violations of these restrictive covenants, may enforce them by legal action in the District Court for Tooele County.

(7) Any of the parties mentioned in the previous paragraph may obtain an immediate temporary restraining order from the District Court upon allegation that these restrictive covenants have been violated without any further showing being required. Envirocare, its successors or assigns, shall then bear the burden of proof as to why such temporary restraining order should not be made a permanent injunction by the Court.

(8) Envirocare, its successors and assigns, shall not at any time institute legal proceedings, by way of quiet title or otherwise, to remove or amend these restrictive covenants unless the Department has given advance written approval.

These restrictive covenants shall run with the land in perpetuity and shall be binding upon Envirocare, its successors and assigns.

Dated this _____ day of _____, 1993.

UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY

By: _____
Executive Director, Department of Environmental Quality

ENVIROCARE OF UTAH, INC., a Utah corporation

By: _____
Khosrow B. Semnani, President

STATE OF UTAH)
) ss.
COUNTY OF TOOELE)

The foregoing instrument was acknowledged before me this _____ day of _____, 1993, by _____ of Envirocare of Utah, Inc. on behalf of the Corporation.

_____
NOTARY PUBLIC

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

OFFICE OF THE
SECRETARY

June 28, 1993

MEMORANDUM FOR: James M. Taylor
Executive Director for Operations

FROM: Samuel J. Chilk, Secretary

SUBJECT: **SECY-93-136 - UPDATE ON THE RESOLUTION OF THE UTAH LAND OWNERSHIP ISSUE**

This is to advise you that the Commission (with all Commissioners agreeing) has approved the course of action recommended by the staff. The draft letter to the State of Utah should be modified to reflect that the Commission decided this matter and a copy of the SECY paper and this memorandum should be enclosed.

If, as the Commission understands the case to be, the trust fund applies only to the non-mixed low-level wastes, in describing the situation in Utah in the future, the staff should make this distinction clear, since separate funding arrangements have been made for the mixed waste portions of the site. The letter to the State should suggest that it consider whether it should require some level of trust fund to support the potential activities contained in the deed covenants after the license is terminated. The plans indicate that the entire remaining trust would be returned to the licensee when the licensee has met the requirements for license termination. Such funding would be a reasonable additional level of compensation for government ownership that, while not necessary, would be prudent.

In addition, the staff should prepare and publish an advanced notice of proposed rulemaking which would seek public input on the advisability of proceeding with rulemaking to reflect the Commission decision in this case in a generic manner in 10 CFR Part 61. In the ANPR the staff should iterate the basis for the original requirement for government land ownership and ask for

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SECY NOTE: This SRM and the subject SECY paper will be made publicly available upon transmittal of the letter to Utah.

ENCLOSURE 3

public comments on whether it should continue to be required in light of the Utah decision while noting that such ownership is not required for hazardous material disposal sites and sanitary land fills. The advantages and disadvantages of codifying the options for alternatives to government ownership should be fully developed in conjunction with the notice. The staff should carefully consider all input in providing a recommendation to the Commission on a proposed rule.

(EDO)

(SECY SUSPENSE: 3/94)

cc: The Chairman
Commissioner Rogers
Commissioner Curtiss
Commissioner Remick
Commissioner de Planque
OGC

t.
DA

MAY 21 PM 5:37

May 18, 1993

SECY-93-136

POLICY ISSUE
(Notation Vote)

For: The Commissioners

From: James M. Taylor
Executive Director for Operations

Subject: UPDATE ON THE RESOLUTION OF THE UTAH LAND OWNERSHIP ISSUE

Purpose:

To request the approval of the Commission for the action the staff is taking to resolve the concerns on Utah's exemption from the land ownership requirement for the Envirocare of Utah low-level waste disposal site in view of the precedent setting implications of the action.

Background:

The State of Utah became an Agreement State on March 29, 1984. The State elected not to include authority for 11e.(2) byproduct material or commercial low-level waste authority. In November 1987, Utah granted S.K. Hart Engineering (Envirocare of Utah) an exemption from the land ownership requirement for its Naturally Occurring Radioactive Material (NORM) disposal facility. On July 17, 1989, Utah requested an amendment to its Agreement to authorize authority for regulating commercial low-level waste (LLW) disposal. The amendment to the Utah Agreement became effective on May 9, 1990.

In September 1990, Envirocare of Utah, Inc. requested the State to amend its license to authorize receipt of LLW for disposal. On March 21, 1991, Utah granted the request authorizing LLW disposal and again issued an exemption from the land ownership requirement. The staff reviewed the State's program in April 1992 and determined that the program is adequate and compatible, subject to satisfactory resolution of significant Category I comments relating to the technical quality of licensing actions for the Envirocare low-level radioactive waste disposal license. The staff transmitted their findings to the State on September 2, 1992. Follow-up questions on the exemption from the land ownership requirement were sent in a letter dated December 24, 1992. The State of Utah responded to these letters by letters dated February 12, and March 17, 1993. A chronology which includes some additional information is presented as Enclosure 1. The above mentioned NRC letters are presented as Enclosure 2. The State of Utah responses are presented in Enclosure 3.

Contact: Dennis Sollenberger, SP
504-2819

NOTE: TO BE MADE PUBLICLY AVAILABLE WHEN THE FINAL SRM IS MADE AVAILABLE

ENCLOSURE 2

On September 21, 1992, U.S. Ecology, Inc. filed a petition with the Nuclear Regulatory Commission requesting that the Commission terminate the Utah Agreement program for regulating the commercial disposal of low-level radioactive waste. This petition was noticed in the Federal Register on November 13, 1992 (57 FR 53941). The staff actions discussed in this paper will also resolve the issue raised in the U.S. Ecology petition; however, the Director's decision addressing the petition will be prepared after the actions have been completed.

Discussion:

Response to the Program Review Comments - The State of Utah's response to the comments resulting from the April 17, 1992, program review were found to be acceptable, except for the justification of the exemption from the land ownership requirement. The actions committed to in the responses will be reviewed as part of the next review of the program.

Land Ownership Exemption Rationale - The staff, in the December 24, 1992 letter, explained that the government land ownership requirement is based in part on the likelihood that government will outlast private entities, providing long-term control of the site. This is a key issue with respect to both the active and passive institutional period. The Draft Environmental Impact Statement for 10 CFR Part 61 states that the most significant concepts for long-term passive institutional control are those of control of the land by a governmental organization, land-use restrictions in the form of titles or deeds, and multiplicity of records. Although active institutional controls cannot be relied upon for more than 100 years, this does not preclude the importance of passive institutional controls with respect to the continued protection of health and safety of the public, continued control of the site, protection of the inadvertent intruder, and protection of the disposal site integrity. The staff requested the State of Utah to show through its land ownership exemption rationale that the substitute mechanism would provide adequate controls comparable to governmental land ownership, or that the hazard present at the site is significantly less than that contemplated by Part 61 because of the nature of the waste being disposed of, and therefore, the public health and safety will be adequately protected without the land ownership provision.

State of Utah's Rationale for Its Exemption - In response to the staff on the issue of justification for the land ownership exemption, the State of Utah put forth the concept of providing for a degree of State control of a disposal site that would be equivalent to the control provided by the requirement in the regulations for the disposal site to be located on State or Federal land. The objective of the land ownership requirement is to provide for long-term control of use of the land and to prevent disturbance of the site. The State presented as part of its rationale the following existing controls:

a. Tooele County has zoned the area that the Envirocare site is in as heavy manufacturing-hazardous designation.

b. Because of the mixed waste licenses held by Envirocare, Envirocare has recorded in the public records of Tooele County an Affidavit which refers to and incorporates the land use restrictions of 40 CFR 264.117(c) which controls post closure activities at the site.

c. Envirocare is required under license Condition 36 to provide "as built" drawings every six months. Because of Envirocare's construction techniques, each generator's waste is segregated from other waste, and site records to be provided after closure will be detailed.

d. The transfer of site records is specifically directed by UAC R313-25-33, previously R447-25-33, particularly subparagraph (4).

The State requires that after closure there is a five-year post closure and maintenance period until the site is transferred to the site owner for institutional control. The license Transfer and Termination sections of the State regulations contemplate that the site operator will transfer and or terminate its license and turn over the site to a governmental agency for the control period. Since Envirocare is the site owner and operator, and no governmental agency is/has been authorized to take title to the site, transfer and termination of the Envirocare license would not occur prior to the active institutional control period. Therefore, Envirocare would remain responsible for the site under the license and the institutional control phase would be implemented in that manner.

The State required Envirocare to establish a financial surety in the form of a trust agreement which gives the State exclusive control of the trust fund. The State requires that the financial surety arrangement shall remain in effect until the closure and stabilization program has been completed and the license has been transferred. Until a transfer of the license occurs, the surety arrangement remains in effect and will continue to be reviewed. With the trust fund and the other regulatory and enforcement authorities, the State will be in a position to take whatever action is necessary to protect the public health, safety and property.

The State has also reviewed the use of a restrictive covenant for the Envirocare site. The State and Envirocare entered into an Agreement Establishing Covenants and Restrictions (attachment to March 17, 1993 letter) which identifies the site and the purpose of the licensed operations at the site.

Analysis of the State's Rationale - The staff has analyzed the control of the disposal site for the three time periods that represent the major phases in the life of a low-level waste disposal site (operations, closure, and post-closure observation and maintenance; active institutional control; and passive institutional control periods). This analysis was to determine which mechanisms, if properly constructed, could provide adequate control in lieu of government ownership of the land.

Operations, Closure, and Post-Closure Observation and Maintenance Period - The licensee has title to the land and therefore, is responsible for all

activities on the site. The licensee has provided a Trust Agreement with the State of Utah that provides funds for closure and the post-closure period and the active institutional control period in the event the licensee is financially incapable of closing the site or abandons the site. The license limits the accumulation of undisposed waste to a specific amount that can be disposed of through the use of the trust funds.

100-Year Active Institutional Control Period - The State has proposed that it is exercising control and can continue to exercise control of the site in such a manner that the land ownership is not necessary to protect the public health and safety from the material that is being disposed of at the site. The State has control of the trust fund that includes the money for the active institutional control period. If the site owner is not capable of conducting the activities required during the active control period the State will carry them out using the money in the trust fund. The State would not need to own the site to carry out these activities.

Passive Institutional Control Period (beyond the 100-year active institutional control period) - The State has proposed the use of deed annotation as a method of informing individuals who may wish to use the site in the future that the land was used for waste disposal and should not be disturbed. The staff found that the mechanism submitted by the State was not specific enough to implement the requisite degree of control. The staff has drafted a proposed "restrictive covenant" that the State o. Utah could use that would be acceptable to the staff. This draft covenant has been informally reviewed by the State of Utah and Envirocare of Utah and incorporates comments provided by the State from both the State and Envirocare. The State proposed that the covenant be worded to be an addition to the deed restriction previously submitted by the State.

Staff Conclusion on the State's Proposal - The staff has reviewed the State's proposal as submitted and has concluded that the two key issues are:

a. The sufficiency of the Trust Agreement in mechanism and amount. The staff previously identified some inconsistencies in the calculation of the necessary surety amount. The State has committed to update the calculations for the surety amount and this will be verified during the next review of their program. The total surety amount may not change significantly but this would eliminate these errors. The Trust Agreement is a standard trust agreement and would not be considered an asset of Envirocare in the event of bankruptcy. This will ensure the continued availability of the fund if such an event were to occur.

b. The ability to exercise control over the use of the land once the radioactive material has been disposed of. The staff review of the specific mechanisms which the State is using to effect this control has shown that the licensing procedures, regulatory and police powers, and Trust Agreement are adequate, however, the land annotation did not provide sufficient restrictions on the future use of the site. The staff has prepared a proposed "restrictive covenant" for the State's consideration which the staff would find acceptable. The State's

informal review of the staff proposal to use a more specific "restrictive covenant" has concluded that such a covenant is consistent with the property law of the State of Utah and could be added to the existing deed annotation. Although the State of Utah and Envirocare have informally reviewed this restrictive covenant, there may be some additional negotiation necessary before it can be formally signed. At this time, however, there do not appear to be any major legal or policy problems with implementation of such a covenant.

c. The staff has prepared a letter (Enclosure 4) which would present the staff's conclusion to the State of Utah. The letter states that, with the implementation of the restrictive covenant, the State will have demonstrated equivalent control of the disposal site to that which would be provided by the State or Federal land ownership requirement. The letter also presents the State's commitment to review and update the surety amount for the Trust Agreement.

Policy Issue - The requirement in 10 CFR 61.59(a) regarding land ownership specifies that disposal of radioactive waste received from others may only be permitted on land owned in fee by the Federal or a State government. The State of Utah has issued an exemption from its State or Federal land ownership requirement pursuant to URC-12-125, which provides that the State may grant "such exemptions or exceptions from the requirements of these regulations as it determines are authorized by law and will not result in undue hazard to public health and safety or property." This Utah exemption provision is parallel to 10 CFR 61.6.

The staff is recommending in this paper that the State's rationale for this exemption be found acceptable under the facts as presented by the State of Utah, i.e., the controls proposed by the State would provide an equivalent control to State ownership. However, there is nothing unique to the State of Utah in the cited controls. If the Commission is willing to accept the rationale that exercising the degree of control demonstrated here by the State of Utah is an equivalent to Federal or State land ownership, it is likely that other Agreement States may wish to implement similar exemptions for low-level radioactive waste disposal sites which they regulate, and States which are regulated by the NRC may seek the same exemption under 10 CFR 61.6.

The Commission may wish to monitor whether other States are seeking from the NRC, or other Agreement States are granting, similar exemptions. In that case, the Commission should consider conducting a rulemaking to incorporate into 10 CFR Part 61 a provision that would allow land use controls and other controls to serve as a substitute for Federal or State ownership of a disposal site.

Recommendations:

The staff recommends that the Commission:

Approve:

1. The staff's conclusion that, with the execution of the restrictive covenant, the State of Utah has provided an acceptable rationale for the issuance of the exemption from the State or Federal land ownership requirement.

Note:

1. The staff intends to send the letter (Enclosure 4) to Dr. Dianne R. Nielson, Executive Director, Department of Environmental Quality, upon Commission approval of the staff's action.

2. The letter requests the State of Utah to submit the final restrictive covenant upon its implementation.

3. The letter presents the State's commitment to review and update the surety calculations and Trust Agreement to resolve the comments in the attachment to the December 24, 1992 letter.

4. The § 2.206 petition will be addressed separately following the implementation of the restrictive covenant by Envirocare and the State of Utah.

Coordination:

The Office of General Counsel has reviewed this paper and has no legal objection.

James M. Taylor
Executive Director
for Operations

Enclosures:
1. Chronology for Land Issue in Utah
2. NRC Letters to Utah, 9/2/92 and 12/24/92
3. Utah Letters to NRC, 2/12/93 and 3/17/93
4. Draft Letter to Dr. Nielson

State of Utah

SAS
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KHS
Utah File

DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF THE EXECUTIVE DIRECTOR

FEB 19 AM 8:37

Michael O. Leavitt
Governor
Dianne R. Nielson, Ph.D.
Executive Director

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P.O. Box 144810
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February 12, 1993

Carlton Kammerer, Director
State Programs
Office of Governmental and Public Affairs
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Kammerer:

This is in partial response to your December 24, 1992 letter, concerning the State's rationale for its granting an exemption to Envirocare from the site ownership requirements of UAC R313-25-9(2), previously UAC R447-25-9(2). This Utah regulation is similar to NRC requirements in 10 CFR Part 61.59. The Utah regulations provide for the granting of exemptions, UAC R313-12-54, previously UAC R447-12-54, which is consistent with a similar exemption provision in NRC regulations, 10 CFR Part 61.6.

Your letter requests we address two general areas of concern, post-closure licensing procedures and the institutional controls of the disposal site after closure, in the context of specific questions listed in your attachments. The primary purpose for the trust agreement and licensing and institutional controls is to provide for the protection of public health, safety, and property. Your concerns are addressed in the following specific responses to your comments:

COMMENT 1

This comment refers to the expected dose to the public after closure as calculated by Rogers and Associates, The following partial response is provided.

The Utah Department of Environmental Quality conducted special modelling tests to determine the level of activity of specific radioactive isotopes that could safely be disposed of at the Envirocare facility without risk of exposures to the public through any pathway in excess of NRC standards. This modelling protocol and the resulting license provisions for isotope-specific limitations on other waste that can be received by Envirocare were for the purpose of providing for the protection of public health, safety, and property.

The limitations imposed on the nature and radioactivity of the materials which Envirocare is authorized to receive, and the engineering features designed to reduce post-closure exposures support the findings for

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granting an exemption. The Envirocare facility is designed and constructed in accordance with the standards in Part 61 which are equivalent to UAC R313-25, previously R447-25. It is located away from human population at a site where ground water contamination is not a risk, although the ground water is being protected as if it were usable. It is licensed to receive only very low activity materials.

Finally, it is important to point out that it is not the State's intention to leave the site "open to unrestricted use following the 100 year active institutional control period." There is in place significant land use controls on the site as is more specifically discussed below. There is no question that government ownership would result in limits on the likelihood of uncontrolled occupation of the site. The State's position is that the government controls, as discussed below, will also limit future use of the site and limit the possibility of an inadvertent intruder.

Furthermore, it is important to note the specific circumstances involving the location of the Envirocare site. Envirocare is located within 300 feet of the Department of Energy Vitro Tailings Disposal site on the north, and also on the west side, within 300 feet of the proposed 11(e)2 disposal facility currently under active consideration by the NRC. Federal government ownership/control over those two sites will provide additional land use control.

COMMENT 2

The comment asks for a description of land use controls in the "absence of governmental control." There is no absence of governmental control, there is an absence of governmental ownership. This confusion between "control" and "ownership" may be the source of part of the expressed concerns.

It is possible to have ownership and exercise no control. On the other hand, state and local government can and do exercise control over the use of the land without any ownership rights through exercise of zoning and regulatory authorities. In the particular instance of the Envirocare facility, in addition to the license and regulatory requirements not referenced below, the following controls exist:

a. Tooele County has zoned the area that Envirocare is in as heavy manufacturing-hazardous (MGH) designation. Enclosed is documentation on those zoning requirements (Enclosure 1).

b. Because of the mixed waste licenses held by Envirocare, Envirocare has recorded in the public records of Tooele County an Affidavit which refers to and incorporates the land use restrictions of 40 CFR 264.117(c) which controls post closure activities at the site (Enclosure 2).

c. Envirocare is required under License Condition 36 to provide "as built" drawings every six months. Because of Envirocare's construction techniques, each generator's waste is segregated from other waste, and site records to be provided after closure will be detailed.

d. The transfer of site records is specifically directed by UAC R313-25-33, previously R447-25-33, particularly subparagraph (4).

e. To be licensed, radioactive waste disposal facilities must meet siting criteria established in UAC R313-25-3, previously R447-25-3, (Enclosure 3).

COMMENT 3

This comment addresses the NRC's concern about licensing procedure and control. The following points are made:

a. This comment can be responded to in part by reference to the government ownership issue. As discussed above, the focus must be on government control not ownership per se. In NRC's Draft Environmental Impact Statement regarding 10 CFR Part 61, referred to in your letter on page 2, the primary concern is governmental control of the site. Government ownership is provided in the NRC rules as a means of maximizing control. See DEIS 4.3.6.1, pp. 4-47 through 4-49. But government ownership is not the exclusive means to protect public health and safety through long term control of the site. The Utah Division of Radiation Control recognized this fact in its Land Ownership Exemption rational of May 8, 1992 in stating that "... private ownership itself does not directly relate to or present undue hazard to public health and safety". While government ownership is related to public health and safety, it is simply not the exclusive means of protecting public health and safety.

b. License Condition 60 of Envirocare's license and UAC R313-25-14, previously R447-25-14, establish requirements that Envirocare must meet to apply for a license amendment that will authorize closure of the facility. License Condition 60 requires one (1) year advance notice of anticipated closure and the regulation states that the application for a license amendment to close the facility shall include "a final revision and specific details of the disposal site closure plan ...". After review and acceptance of the closure plan, the Division of Radiation Control will amend the license authorizing closure. After closure, UAC R313-25-15, previously R447-25-15, prescribes a five (5) year post-closure and maintenance period until the license is transferred to the site owner for institutional control. UAC R313-25-16, previously R447-25-16, "Transfer of License" and UAC R313-25-17, previously R447-25-17, "Termination of License," presumes that the site operator will transfer and or terminate their license authorization and turn over the site to a government agency for the control period. Since Envirocare is the site owner and operator, and no government agency is/has been authorized to take title to the site, transfer and termination of the Envirocare license would not occur. Therefore, Envirocare's owners would remain responsible for the site and the institutional control phase would be implemented in that manner.

The issue is, again, control, not ownership or licensing. The alternative means of control created by Utah through the financial surety and trust agreement give exclusive control of the trust fund to the State. R313-25-31(8), previously R447-25-31(8), states that "financial or surety arrangements shall remain in effect until the closure and stabilization program has been completed...and the license has been transferred". Until a transfer of the license occurs, the surety arrangement remains in effect and will continue to be

reviewed to determine the amount necessary to protect public health, safety, and property. With that fund and other regulatory authorities, the State will be equipped to take whatever action is necessary to protect the public health, safety, and property.

c. There is one other factor which significantly impacts any consideration of the issue of government ownership of this site. Envirocare is also licensed to receive low level mixed waste, meaning material that qualifies as low level radioactive waste under state and federal law, and which is contaminated with materials considered hazardous under state and federal law. As a result of this licensing and permitting, certain portions of Envirocare's facility are subject to dual regulation, by the NRC and State under federal and state radiation control law, and by the U.S. Environmental Protection Agency and State under the Resource Conservation and Recovery Act (RCRA) and state law. To a significant extent, the regulatory concern of EPA and the Utah Department of Environmental Quality under RCRA is identical to that of the NRC and the State under the Atomic Energy Act, the Nuclear Waste Policy Act, and related statutes and regulations; the isolation of toxic wastes from the human environment for sufficiently long periods of time to prevent threats to public health, safety, and property.

RCRA, however, does not impose in any circumstance requirements for governmental ownership of hazardous waste disposal sites. RCRA and state hazardous waste laws rely on siting, design and construction criteria and enforcement mechanisms to protect the public health, safety, and property which is really identical to the NRC approach. See UAC R315-3-36 and R315-8-2 and 6. Envirocare's design and construction meets not only the standards of the NRC and Utah Division of Radiation Control, but also the standards of EPA and the Utah Division of Solid and Hazardous Waste. Further, any violations by Envirocare will be subject to enforcement actions under both regulatory systems. These controls are adequate alternatives to government ownership.

COMMENT 4

The relevance of the State's listed enforcement mechanisms (including the issuance of orders, civil penalties, criminal proceedings, and the State's ability to impound radioactive material) is that these mechanisms are part of the regulatory system that is designed to ensure protection of the public health, safety, and property. They do not stand alone. They supplement the rights of the State under the license and the State's radiation control regulations. They also supplement the trust fund which now exceeds $1.4 million and is regularly evaluated for adjustment and is under the control of the State.

The State has not committed to "step in and take over" the site. The Utah legislature has not authorized the assumption of responsibility for the site nor has it authorized the State to take title to the site. The enforcement mechanisms, license, and trust agreement are not a direct equivalent to government ownership. The issue is not ownership per se, but control. Taking into account the nature and activity level of waste being disposed of at Envirocare and the closure requirements and standards, the listed enforcement mechanisms, license, and trust agreement provide the State control over the site and support the State's decision to exempt this particular facility from the requirement of government ownership.

If Envirocare attempts to abandon the site, the State will have its enforcement measures and licensure provisions to require compliance by Envirocare. Additionally, the State's most effective tool will be the trust fund, which is designed to provide the resources to safely complete any disposal and closure activities in the event of abandonment. Finally, the State could, should all these safeguards prove not to be adequate, in its discretion, take such additional actions as may be further authorized by law to protect public health, safety, and property.

If you have any questions regarding these responses, please contact Dane Finerfrock, Division of Radiation Control.

Best Regards,

Dianne R. Nielson

Dianne R. Nielson, Ph.D.
Executive Director

Enclosure

ENCLOSURE 1

TOOELE COUNTY HAZARDOUS WASTE ZONING ORDINANCE

ENCLOSURE 2

AFFIDAVIT

538

AFFIDAVIT

STATE OF UTAH)
: ss.
COUNTY OF SALT LAKE)

The undersigned affiant having been duly sworn deposes and says as follows:

1. The affiant is Envirocare of Utah, Inc.

2. Affiant owns the following described land in Tooele County, Utah, namely:

Section 32, Township 1 South, Range 11 West, Tooele County, Utah, except for the legal description of their impoundment of the Vitro site:

PROPERTY DESCRIPTION FOR VITRO EMBANKMENT

Beginning at a point located 1120.32 feet N 89 degrees 56' W., along the section line, and 329.49 feet South from the Northeast corner of Section 32, Township 1 South, Range 11 West, Salt Lake Base and Meridian and running thence: N 89 degrees 56' 32" W 1503.72 feet, thence S 0 degrees 03' 28" W 2880.50 feet, thence S 89 degrees 56' 32" E 1503.72 feet, N 0 degrees 03' 28" E 2880.50 feet to the point of the beginning.

3. Such land has been or may be used to manage radioactive and hazardous waste.

4. The use of such land is restricted under 40 CFR 264 117(c).

5. The survey plat and record of the type, location, and quantity of hazardous waste disposed of within each cellar have been filed with the local zoning authority or the authority with jurisdiction over local land use.

IN WITNESS WHEREOF, This Affidavit is executed this 6th day of April 1989.

Khosrow Semnani, President
Envirocare of Utah, Inc.

Subscribed, and sworn to before me this 6th day of April 1989.

My Commission Expires:
5/2/91

Notary Public
Residing in Salt Lake County

BOOK 285

025720

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RECORDED AT REQUEST OF

[illegible] [illegible]

[illegible] APR -6 PM 2 48

DONNA B. McKENDRICK
TOOELE COUNTY RECORDER

DEPUTY [illegible] FEE $.00

ENCLOSURE 3

R313-25 SITING CRITERIA

(19) "Site closure and stabilization" means those actions that are taken upon completion of operations that prepare the disposal site for custodial care and that assure that the disposal site will remain stable and will not need ongoing active maintenance.

(20) "Stability" means structural stability.

(21) "Surveillance" means monitoring and observation of the disposal site for purposes of visual detection of need for maintenance, custodial care, evidence of intrusion, and compliance with other license and regulatory requirements.

(22) "Waste" means those low-level radioactive wastes that are acceptable for disposal in a land disposal facility. For the purposes of this definition, low-level waste has the same meaning as in the Low-Level Radioactive Waste Policy Act, P.L. 96-573, that is, radioactive waste not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in section 11 e.(2) of the Atomic Energy Act (uranium or thorium tailings and waste).

(23) "Treatment" means the stabilization of waste or the reduction in volume of waste by a chemical or a thermal process.

(24) "Land Disposal Facility" means a facility where wastes are kept, maintained, stored, or held for a period exceeding one year.

R447-25-3 Siting Criteria and Pre-licensing Plan Approval for Commercial Radioactive Waste Disposal Facilities.

(1) Each person proposing to construct or operate a commercial radioactive waste disposal facility, including waste incinerators, must obtain a plan approval from the Bureau of Radiation Control prior to applying for a license. No plan may be approved that does not meet the siting criteria and plan approval requirements contained in R447-25-3.

(2) The siting criteria and plan approval requirements in this section apply to prelicensing plan approval applications that have been submitted and that have not yet been approved, as well as all future applications.

(3) Treatment and disposal facilities, including commercial radioactive waste incinerators, may not be located:

(a) within or underlain by:

(i) national, state, and county parks, monuments, and recreation areas; designated wilderness and wilderness study areas; wild and scenic river areas;

(ii) ecologically and scientifically significant natural areas, including wildlife management areas and habitate for listed or proposed endangered species as designated pursuant to federal law;

(iii) 100 year floodplains;

(iv) 200 ft. of Holocene faults;

(v) underground mines, salt domes and salt beds;

(vi) dam failure flood areas;

(vii) areas likely to be impacted by landslide, mud flow, or other earth movement, unless adverse impacts can be reasonably mitigated;

(viii) farmlands classified or evaluated as "prime", "unique", or of "statewide importance" by the U.S. Department of Agricultural Soil Conservation Service under the Prime Farmland Protection Act;

(ix) five miles of existing permanent dwellings, residential areas, and other habitable structures including, schools, churches, and historic structures;

(x) five miles of surface waters including intermittent streams, perennial streams, rivers, lakes, reservoirs, estuaries, and wetlands.

(xi) 100 ft. of uranium mill tailings piles;

(xii) 1000 ft. of archeological sites to which adverse impacts cannot reasonably be mitigated;

(xiii) recharge zones of aquifers containing ground water which has a total dissolved solids content of less than 10,000 mg/l;

(xiv) drinking water source protection areas designated by the State Drinking Water Committee;

(b) in areas:

(i) above or underlain by aquifers containing ground water which has a total dissolved solids content of less than 500 mg/l and which do not exceed state ground water standards for any containment;

(ii) above or underlain by recharge zones of aquifers containing ground water which has a total dissolved solids content of less than 3000 mg/l;

(iii) above or underlain by aquifers containing ground water having a total dissolved solids content of less than 3000 mg/l and within State ground water quality standards;

(iv) above or underlain by aquifers containing ground water which has a total dissolved solids content between 3000 and 10,000 mg/l where the distance from the surface to the ground water is greater than 100 ft.;

(v) areas subject to the lowering or collapse of the land surface, either locally or regionally, such as areas of extensive withdrawal of water, gas, or oil;

(vi) areas above or underlain by weak and unstable soils, such as soils that lose their ability to support foundations as a result of hydrocompaction, expansion, or shrinkage;

(vii) areas above or underlain by karst terrains.

(4) Incinerators with an associated ground disposal facility may not be located above aquifers containing ground water which has a total dissolved solids content below 500 mg/l. Incinerators without an associated ground disposal facility may not be located above aquifers containing ground water which has a total dissolved solids content below 3000 mg/l.

(5) No facility may be located within a distance to existing drinking water wells and watersheds for public water supplies of one year ground water travel time plus 1000 feet for incinerators and of five years ground water travel time plus 1000 feet for land disposal facilities.

(6) The plan approval application must include hydraulic conductivity and other information necessary to adequately determine the one or five year ground water travel distance, as applicable.

(7) The plan approval application must include adequate studies to determine whether ground water aquifers exist in the area of the proposed site and the quality of the ground water of all aquifers identified in the area of the proposed site.

(8) The Bureau may require the applicant to conduct vadose zone or other near surface monitoring if the Bureau determines it is reasonably necessary to support of confirm information provided in the plan approval application.

(9) Emergency response and safety.

(a) The plan approval application shall address the availability and adequacy of emergency services, including medical and fire response. The application shall provide evidence that the applicant has coordinated emergency response plans with local and regional emergency response resources. A plan approval application must demonstrate reasonable availability of emergency services, including medical and fire response services.

(b) The plan approval application shall include emergency response plans for responding to emergencies both at the site and involving wastes being transported to and from the site within the state. Details of the proposed emergency response plan shall be given in the plan approval application and will be stipulated in the plan approval and radioactive materials license.

(c) The plan approval application shall proposed transportation routes within the state for the radioactive wastes to be transported. No proposed plan may be approved which proposes that radioactive waste be transported on roads or bridges where weight restrictions would be exceeded. No proposed plan may be approved which unreasonably poses adverse impact or risk of harm to inhabited areas. The plan approval application shall address risks to inhabited areas, including both residential and non-residential areas; the width, condition, the types of roads to be used; roadside development on proposed routes; seasonal and climatic factors which may affect safety; alternate emergency access to the facility; the type, size, and configuration of vehicles proposed to haul wastes; transportation restrictions on proposed routes; and the transportation means and routes available to evacuate the population at risk in the event of accidents, including spills and fires.

(10) Siting Authority. The Bureau recognizes that Titles 10 and 17 of the Utah Code gives cities and counties authority for local use planning and zoning. Nothing in R447-25-3 precludes cities and counties from establishing additional requirements as provided by applicable state and federal law.

R447-25-4 License Required.

(1) No person may receive, possess, and dispose of waste received from other persons at a land disposal facility unless authorized by a license issued by the Bureau pursuant to this chapter, and R447-22 of these rules.

(2) Each person shall file an application with the Bureau pursuant to R447-22-32 of these rules and obtain a license as provided in this chapter before commencement of construction of a land disposal facility. Failure to comply with this requirement may be grounds for denial of a license.

R447-25-5 Content of Application.

In addition to the requirements set forth in R447-22-33 of these rules, an application to receive from others, possess, and dispose of wastes shall consist of general information, specific technical information, institutional information, and financial information as set forth in R447-25-6 through R447-25-10.

R447-25-6 General Information.

The general information shall include each of the following:

(1) identity of the applicant including:

(a) the full name, address, telephone number, and description of the business or occupation of the applicant;

(b) if the applicant is a partnership, the name and address of each partner and the principal location where the partnership does business;

(c) if the applicant is a corporation or an unincorporated association;

(i) the state where it is incorporated or organized and the principal location where it does business; and

(ii) the names and addresses of its directors and principal officers; and

(d) if the applicant is acting as an agent or representative of another person in filing the application, all information required under R447-25-6(1) must be supplied with respect to the other person.

(2) Qualifications of the applicant shall include each of the following:

PERKINS COIE

A LAW PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS
607 FOURTEENTH STREET, N.W. • WASHINGTON, D.C. 20005-2011 • (202) 628-6600

ANTHONY J. THOMPSON

September 21, 1992

Mr. James M. Taylor
Executive Director for Operations
United States Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Re: Petition for Review of Utah's Agreement State Program

Dear Mr. Taylor:

Please find attached US Ecology's petition for review and revocation of Utah's agreement state program for failure to require state or federal site ownership at the Envirocare of Utah, Inc., low-level radioactive waste facility. This petition and request are submitted under 10 C.F.R. § 2.206, pursuant to the express representations of the United States Nuclear Regulatory Commission ("NRC") in US Ecology v. Northwest Interstate Compact on Low-Level Radioactive Waste Management, et al., No. C92-50916 (W.D. Wash.), that this section provides US Ecology with an appropriate avenue of relief. In accordance with the recommendations of Judge Robert J. Bryan of the United States District Court for the Western District of Washington, US Ecology urges NRC to act as quickly as possible on this petition.

US Ecology would be pleased to provide any additional information in support of this petition that you or members of your staff may deem necessary or helpful. US Ecology also requests the right to participate in any hearing that NRC may hold regarding this issue. Please do not hesitate to call me at (202) 434-1618 if you should have any questions or comments regarding this petition.

Sincerely,

Anthony J. Thompson
Counsel for US Ecology, Inc.

[13813-0006/DA922310.054]

EDO — 008099
92-0617B-A-00

TELEX 44-0277 PCSO UI • FACSIMILE (202) 434-1690
ANCHORAGE • BELLEVUE • LOS ANGELES • PORTLAND • SEATTLE • SPOKANE

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BEFORE THE UNITED STATES
NUCLEAR REGULATORY COMMISSION

September __, 1992

PETITION OF US ECOLOGY, INC. FOR REVIEW AND SUSPENSION OR REVOCATION OF UTAH'S AGREEMENT STATE PROGRAM FOR FAILURE TO REQUIRE STATE OR FEDERAL SITE OWNERSHIP AT THE ENVIROCARE OF UTAH, INC. LOW-LEVEL RADIOACTIVE WASTE FACILITY

Introduction

Pursuant to 10 C.F.R. § 2.206, US Ecology, Inc., hereby petitions the United States Nuclear Regulatory Commission ("NRC") to revoke or suspend Utah's agreement state status under section 274 of the Atomic Energy Act for failure to require federal or state land ownership at the Envirocare of Utah, Inc., low level radioactive waste ("LLRW") disposal facility. Under both Utah's agreement state program and the federal LLRW regulatory program, LLRW may not be disposed of on privately-owned land unless a state or federal government has formally expressed a willingness to accept title to the facility at site closure. Utah Admin. R. 313-15-302 and 10 C.F.R. §§ 61.14, 61.59. The Envirocare site is located on privately-owned land, and neither Utah nor the United States Department of Energy has agreed to or expressed any willingness to accept title to the site. See Attachment A at 1-1 and 1-2; see also Attachment F at 3.

Utah's licensing of the Envirocare facility on privately-owned land and the continuing receipt of LLRW there violates federal law and jeopardizes public health and safety in Utah. For these reasons, US Ecology, Inc., which operates the LLRW disposal facility at Richland, Washington, and which is injured by the failure of NRC and Utah to insist upon state or federal government ownership at the Envirocare facility, hereby requests that the NRC initiate appropriate proceedings -- including initiation of any necessary or relevant hearings -- to suspend or to revocate Utah's agreement state status under section 274(j) of the Atomic Energy Act, 42 U.S.C. § 2021(j), as necessary to protect public health and safety in Utah.

This request is submitted in accordance with the recommendations of Judge Robert J. Bryan of the United States District Court for the Western District of Washington in US Ecology, Inc. v. Northwest Compact Committee, No. C92-5091B (W.D. Wash.) See Attachment B. In that action, US Ecology has filed suit against the Northwest Interstate Compact on Low Level Radioactive Waste Management, the state of Utah and the NRC for numerous violations of the Low-Level Radioactive Waste Policy Amendments Act and the Atomic Energy Act. The violations alleged in the complaint include NRC's failure to

insist that Utah and Envirocare comply with the site ownership requirement.

On July 2, 1992, Judge Bryan dismissed without prejudice US Ecology's site ownership claims against NRC, ruling that US Ecology must exhaust its administrative remedies before bringing an action in court against NRC. However, Judge Bryan specifically noted that his dismissal was without prejudice "to any other grounds to have them [i.e., the claims against the NRC] in the case that may arise in the future." See Attachment B at 3. Moreover, Judge Bryan also made the following recommendations to NRC and US Ecology:

> It would be my recommendation that US Ecology, as soon as possible, file some sort of formal complaint or petition with the NRC asking the NRC for the relief, whatever relief they request or for whatever sort of a hearing they might request stating the grounds, so that the issue is squarely before the Nuclear Regulatory Commission.
>
> I would urge the Commission not to wait for that but to proceed sua sponte on the information they now have and on the petition or complaint, if and when it comes, to determine whether a hearing on these issues is appropriate, and to make that determination as soon as they can and to make it formally so that if they choose not to proceed with a hearing, the plaintiffs here will have an opportunity to ask the circuit for whatever relief might be appropriate. And so that if there is to be a hearing, it can be processed promptly. So I hope the Commission will move on the basis of the information they have now, along with any other information they get, to make their preliminary decision of whether they

> should have a formal hearing under the regulations.
>
> If there is to be a hearing, I would urge and recommend and request and hope for rapid processing of that hearing. The reason I would request that and ask that the Commission not sit on its hands on this deal, is that it does seem to me that, depending on action of the Commission, if they take action, that the issues in this case may be substantially narrowed. It certainly would be helpful to me if the Commission would do whatever they're going to do before we get to trial in this case.

Oral Opinion of Judge Robert J. Bryan, granting Defendants' Motion to Dismiss (July 2, 1992) in US Ecology, Inc. v. Northwest Compact Committee, et al., No. C92-5091b (W.D. Wash. 1992) (Attachment B) at 4-5.

Based on these recommendations, US Ecology submits this request and asks that NRC expeditiously review the adequacy and compatibility of Utah's agreement state program in light of Utah's failure to require federal or state site ownership at Envirocare or to adequately justify waiver of the requirement. This petition is submitted under 10 C.F.R. § 2.206 pursuant to the express representations of the NRC before Judge Bryan that section 2.206 would provide an appropriate avenue of relief for US Ecology to pursue its site ownership claims. See Attachment C at 8. In addition, Judge Bryan has asked NRC to move as quickly as possible to process this petition. 10 C.F.R. § 2.206(b) specifically notes that

NRC shall act within a "reasonable time" to process a request for relief. Therefore, US Ecology requests that NRC act as expeditiously as possible to process this petition. US Ecology also requests the right to participate in any future hearings before NRC regarding this issue.

Discussion

A. BACKGROUND: UTAH'S WAIVER OF THE SITE OWNERSHIP REQUIREMENT

Under Section 274 of the AEA, 42 U.S.C. § 2021(b), NRC may enter into agreements with

> the Governor of any state, providing for discontinuance of regulatory authority of the Commission . . . . [and] . . . [d]uring the duration of such an agreement, it is recognized that the state shall have authority to regulate the materials covered by the Agreement for the protection of public health and safety from radiation hazards. Id.

To enter into such an agreement, NRC must find that "the state program is . . . compatible with the Commission's program . . . and . . . is adequate to protect the public health and safety with respect to the materials covered by the proposed agreement." 42 U.S.C. § 2021(d)(2).

NRC entered into an agreement with Utah on April 1, 1984. See 49 Fed. Reg. 14,460 (April 1, 1984). The Utah regulatory

requirements for LLRW are essentially identical to the federal LLRW requirements found at 10 C.F.R. § 20 and 10 C.F.R. § 61.

In order to make the Utah agreement state program compatible with federal requirements, Utah's regulations include a provision requiring state or federal land ownership at LLRW sites. Utah Admin. R. 313-15-302. Utah's agreement state program also contains a provision allowing it to grant exemptions or exceptions to rules "as it determines are authorized by law and will not result in undue hazard to public health and safety." Utah Admin. R. 313-12-54 (formerly Utah Admin. R. 447-12-54). A similar provision is found in the federal regulations at 10 C.F.R. § 61.6. On March 8, 1991, the Utah Bureau of Radiation Control "on its own iniative" granted an exemption from the site ownership requirement for the Envirocare site pursuant to Utah Admin. R. 447-12-54 (currently Utah Admin. R. 313-12-54). See Attachment A at 1-2.

Utah has justified its waiver of the site ownership requirement on three grounds. First, Utah noted that the Utah Code does not provide for the "assumption of ownership" by the State. Id. at 1-2. Second, Utah alleges that the site ownership issue does not "directly relate to issues of public health and safety." Id. Third, Utah claims that "a sound

su:ety" arrangement exists. Id. As noted in US Ecology's Memorandum in Opposition to the Utah Defendant's Motion to Dismiss filed in US Ecology, Inc. v. Northwest Interstate Compact, none of these justifications withstands scrutiny. See Attachment D at 20-23.

First, Utah's refusal to accept title to the LLRW disposal site does not justify its failure to require compliance with the site ownership rule. In fact, even if Utah does not have the ability to accept site ownership, the United States Department of Energy does. Utah cannot excuse its failure to require site ownership by insisting that it is powerless to remedy the situation. At a minimum, the Utah Division of Radiation Control retains the ability to deny the site license until either Utah or DOE agrees to accept title.

Second, NRC's site ownership requirements at 10 C.F.R. §§ 61.14 and 61.59, as agreed to by Utah on April 1, 1984, are fundamental elements of NRC's institutional control program that is specifically designed to protect long-term public health and safety at LLRW disposal sites. Neither Utah nor NRC can credibly claim that site ownership does not "directly relate" to public health and safety. Indeed, NRC did not deny that site ownership is directly related to public health and safety at oral argument before Judge Bryan. More importantly,

NRC's own documents indicate that this is the case. See Attachment E at 3-11. And, finally, even Envirocare's principal Mr. Semnani agrees that the "land ownership requirement of NRC-24-135 [currently Utah Admin. R. 313-15-302] supports the protection of public health and safety or property." See Attachment F at 2.

In order to protect public health and safety from the long-term hazards associated with radioactive waste that can persist anywhere from 300 to 500 years, NRC has had a long-standing requirement that LLRW may only be disposed of on land owned (or to be owned) by either a state or the federal government, institutions that are more likely to be stable and long-lived than commerical entities. The site ownership requirement is a keystone in the "institutional controls" portion of NRC's system for reducing potential long-term hazards presented by radioactive waste. This requirement has been in NRC regulations for radioactive waste since the inception of commercial LLRW disposal. See 46 Fed. Reg. 38,085 (July 24, 1981).

The current federal site ownership requirement is found at 10 C.F.R. § 61.59 which flatly states that:

> Disposal of radioactive waste received from other persons may only be permitted on land owned in fee by the federal or a state government.

10 C.F.R. § 61.59. See also Utah Admin. R. 313-15-302.

In order to give the site ownership requirement effect, NRC regulations require the facility license issued by NRC to be transferred to the state or federal landowner upon termination of operations. 10 C.F.R. § 61.30. Thereafter, the state or federal government becomes an NRC licensee responsible for the site. Id. Where a proposed disposal site is on private land, a license applicant must submit a certification that arrangements have been made for future assumption of ownership by a state or federal government entity prior to beginning operations. 10 C.F.R. § 61.14(b).

The site ownership requirement is also explicitly recognized under federal statute. Under the Nuclear Waste Policy Act of 1982, Pub. L. No. 97-425, 42 U.S.C. § 10101 et seq.,

> The Secretary [of the Department of Energy] shall have the authority to assume title and custody of low-level radioactive waste and the land on which such waste is disposed of, upon request of the owner of such waste and land and following termination of the license issued by the Commission for such disposal, if the Commission determines that -
>
> (A) the requirements of the Commission for site closure, decommissioning, and decontamination have been met by the licensee involved and that such licensee is in compliance with the provisions of subsection (a) of this section;

> (B) such title and custody will be transferred to the Secretary without cost to the Federal Government; and
>
> (C) Federal ownership and management of such site is necessary or desirable in order to protect the public health and safety, and the environment.

42 U.S.C. § 10171(b) (emphasis added). As discussed more fully below, by promulgating regulations embodying the site ownership requirement, NRC has determined that federal or state ownership is necessary to protect public health and safety.[1]

Current NRC regulations for the land disposal of LLRW, found at 10 C.F.R. 61, were first proposed on July 24, 1981. 46 Fed. Reg. 38,081 (July 24, 1981). In the preamble discussing the proposed LLRW requirements, NRC explained the site ownership requirement as follows:

> Federal or State government ownership of land for disposal of waste at a land disposal facility has been a requirement in the Commission's regulations (10 C.F.R. 20.302) since the inception of commercial disposal operations. This requirement is being continued to assure adequate control of the disposal site after closure and to reduce the

---

[1]DOE is not required to accept site ownership under 42 U.S.C. § 10171. Instead, NRC regulations require that arrangements be made for acceptance of site ownership prior to licensing in order to preclude DOE from refusing to accept title at closure. See 10 C.F.R. § 61.14. Envirocare's failure to seek such an arrangement, particularly in light of Utah's refusal to accept title, is difficult to justify.

> potential for inadvertent intrusion. (See § 61.59.)

46 Fed. Reg. 38,085 (July 24, 1981). However, the requirement that the site be located on federal or state land was part of the Atomic Energy Commission's (AEC's) original program for regulation of commercial LLRW disposal sites established in February, 1961. NRC Draft Environmental Impact Statement on 10 C.F.R. Part 61 "Licensing Requirements for Land Disposal Radioactive Waste" NUREG-0782, Vol. 2 (1981) at p. 1-9 (hereafter "NRC DEIS").

As is evident, site ownership is specifically designed to reduce the possibility of inadvertent intrusion into the waste site over the extremely long time frames that radioactive waste remains hazardous and to ensure that some responsible public entity maintains control over the site well after the time a private corporation may have ceased to exist. These concerns are undeniably concerns that directly relate to public health and safety.

In its draft environmental impact statement for the Part 61 LLRW regulations, NRC further explained the rationale behind the site ownership requirement. According to NRC:

> Probably the most significant concepts for long-term passive institutional control measures are those of control of the land by a governmental organization, land-use restrictions in the form of titles or deeds,

> and multiplicity of records. As civilizations have evolved over the centuries, societies have characteristically erected superstructures (governments) to perform services -- for example, protection of life, health, and property -- which are less conveniently performed by individuals. Among the function performed by governments are control of titles to and uses of property. Placing the long-term control of a disposal site into the hands of a government organization helps to ensure that such motives as profit and loss do not lead to possible abandonment of the property, or sale for inappropriate uses.

Id. at 4-49.

And, again, in the NRC DEIS explaining this requirement, NRC stressed that site ownership is a key element in the overall system of institutional controls designed to protect public health and safety. According to NRC:

> By permitting use of federal or state land or accepting title to the land, the government agency has accepted responsibility for long-term institutional control of the site . . . . For most land disposal facilities, reliance is placed on the institutional control and without it the public health and safety cannot be assured . . . . In view of the reliance on institutional controls and the potential need for reassessing the control program, licensing for landowner was judged necessary for the Commission to fulfill its responsibilities.
>
> * * *
>
> The option selected is transfer of the site license to the site owner [i.e., the federal or a state government] . . . . Active institutional care will be necessary to protect the public health and safety for a finite period.

NRC DEIS at 8-6 - 8-8 (emphasis added). NRC's documents, therefore, demonstrate that public health and safety concerns lie at the heart of the site ownership requirement.

Utah has exempted the Envirocare facility from the site ownership requirement under Utah Admin. R. 313-12-54, which provides Utah with authority to grant exemptions or exceptions "as it determines are authorized by law and will not result in undue hazard to public health and safety . . . ." Id. Utah's rationale for granting this exemption flies directly in the face of this provision and relevant federal regulations. Utah claims that the site ownership requirement is not "directly related" to public health and safety. This claim is not explained or justified by Utah and cannot withstand even minimal scrutiny.

The primary, if not exclusive, motivation behind requiring federal or state governments to burden themselves with site ownership is to protect public health and safety for as long as institutionally possible. The clear command of NRC's regulations, preambles and relevant Environmental Impact Statements is to require state or federal site ownership at LLRW sites. In spite of this fact, Utah has taken away with one hand what it promised to give with the other: by waiving

"on its own initiative" a clear requirement it agreed to promulgate (and did promulgate) in its own regulations.

LLRW is currently being received at the Envirocare site in Utah. Under the status quo, it will remain there as a potential hazard to public health and safety for the next several hundred years and without adequate assurance of future government involvement or control. NRC must act to correct this situation.

NRC has an obligation to protect public health and safety in Utah under the Atomic Energy Act. Although it has delegated this responsibility to Utah, it retains an obligation under the law to make sure that Utah's program is "compatible" with the federal program. See 42 U.S.C. § 2021. Where NRC has promulgated a rule designed to protect public health and safety, it cannot allow an agreement state to waive such a rule by simply deciding that the requirement is unnecessary. NRC jeopardizes its own credibility and the integrity of the agreement state program by allowing this situation to continue. Unless NRC is willing to contradict its own previous positions and characterize the site ownership as a mere procedural requirement that may be waived at will -- thereby essentially abandoning the site ownership requirement

entirely -- it must suspend or revoke Utah's agreement state program in order to protect public health and safety.

Finally, Utah's last excuse for not requiring site ownership -- that a "sound" surety arrangement exists -- is unjustified and inconsistent with the federal program. As NRC is well aware, site surety and site ownership are two distinct requirements: both are necessary to protect the public health and safety. Site ownership is required to assure long-term site care by a responsible government institution. The governmental institutional care program includes physical control of site access, environmental monitoring and custodial care of the disposal units. See Utah Admin. R. 313-25-28. The responsible government institution is expected to perform these tasks. Id.

In contrast, site surety requires a site operator to provide funds to pay for site closure and for government control following closure. See Utah Admin. R. 313-25-30, 31, 32. Indeed, one of the criteria for transfer of title and custody of LLRW to DOE under the Nuclear Waste Policy Act is that it be "without cost to the Federal government." 42 U.S.C. § 10171(b)(B). Because there is no requirement or assurance that a private corporation will exist after 50-100 years, site surety cannot substitute for government ownership.

For this reason, 10 C.F.R. § 61.63 expressly addresses "Financial assurances for institutional controls," to assure adequate funding during the period of not more than 100 years following transfer of control from the licensee to the governmental owner of the site. See § 61.59(b). Federal or state site ownership constitutes the best institutional bet that regardless of funding, some entity will be present to take long-term responsibility for the site.

Moreover, site surety at the Envirocare site is a paltry $779,000. Attachment A at 10-1. Utah documents indicate that this amount will cover only the cost of disposing of LLRW still in storage at the time of site closure and the costs of 30 years of post-closure monitoring. See Attachment A at 10-11. After 30 years, the surety will not provide money for on-going site control and surveillance. By comparison, US Ecology has posted more than $20 million in site surety for its Richland site.

Utah cannot credibly claim that placing $779,000 in escrow ensures that Utah's public health and safety will be protected over the next 100 years and beyond, especially if there is no state or federal site ownership. Utah's illegal waiver of the site ownership requirement cannot be justified so easily. By existing standards Envirocare's site surety

arrangement would probably be insufficient even if federal or state site ownership did exist. In the absence of federal or state site ownership, it is clearly insufficient. Indeed, in the absence of federal or state ownership if surety were to be considered an adequate substitute, presumably it would have to be several times larger than ordinary. Envirocare surety is not even sufficient by average standards, and it certainly is not large enough to take the place of site ownership over the 100-year and beyond post-closure time frame contemplated under 10 C.F.R. § 61.

Utah's failure to require site ownership at the Envirocare facility has already had a serious impact on the overall LLRW regulatory system. Other states (such as Nebraska) that are seeking to site LLRW facilities, have used Utah's example to argue that federal or state site ownership is not required. Similar issues have come up in California. Prior to Envirocare, all LLRW disposal sites, including all of US Ecology's sites, were subject to state or federal site ownership. Any state that is considering the siting of a LLRW disposal site will naturally seek to avoid accepting title to the site.

Site ownership provides important protection against the real possibility of site abandonment. Although Utah has

suggested that it would be responsible for the site in any event, such a claim cannot be relied upon. That claim seems somewhat hollow when in the same breath the state has indicated it has no authority under state law to assume title and custody of the Envirocare site. It is possible that if the site were abandoned, it could become a superfund site. This would mean, of course, that all of the generators who had relied on NRC stewardship to assure adequate site controls would be in the position of having to pay again for site closure as potentially responsible parties (PRPs). And, Utah although likely a PRP, would be shifting the burden to others by virtue of its decision to waive the NRC and Nuclear Waste Policy Act's requirements.

US Ecology has complied with the site ownership requirement at all its sites at considerable expense. Utah's failure to require site ownership injures US Ecology by providing Envirocare with an unfair competitive advantage gained through violation of applicable law. This failure jeopardizes the long-term public health and safety in Utah and undermines public confidence in both NRC and the LLRW disposal industry. NRC cannot justifiably allow this situation to continue.

For these reasons, US Ecology hereby requests that NRC take any and all actions that are necessary and appropriate under the law to ensure that Utah and Envirocare comply with applicable site ownership requirements. In accordance with Judge Bryan's recommendations, US Ecology urges NRC to act on this petition as quickly as possible. In the event that NRC determines that further information is necessary or desirable, US Ecology would be pleased to cooperate.

Respectfully submitted,

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UTAH BUREAU OF RADIATION CONTROL

SAFETY EVALUATION REPORT

In Consideration of the License Amendment Application
for Radioactive Materials License No. UT 2300249

Envirocare of Utah Inc.

March 1991

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SAFETY EVALUATION REPORT
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I. PROPOSED ACTION

By amendment application dated September 20, 1990, Envirocare of Utah, Inc., requested an amendment of Radioactive Materials License No. UT 2300249 authorizing additional types of radioactive waste for disposal at its Naturally Occurring Radioactive Materials (NORM) waste disposal site. The proposed amendment is to authorize the licensee to receive and dispose of certain byproduct, source, and special nuclear materials in specified limited concentrations.

II. BACKGROUND INFORMATION

In February 1988, a license (Radioactive Material License No. UT 2300249) was issued by the Utah Bureau of Radiation Control (UBRC) to Envirocare of Utah, Inc., (the licensee) authorizing the licensee to dispose of NORM by land burial at a desert location 85 miles west of Salt Lake City, Utah. (These are radioactive materials not regulated by the Federal Atomic Energy Act of 1954, as amended.) Conceptually, the radioactive wastes for disposal include:

1. Contaminated soils and structural debris from remedial action activities undertaken by various state or federal agencies.

2. Industrial processing wastes where enhancement of NORM had occurred to the point when it was desirable or mandated that it be placed in a regulated disposal facility; or

3. Other mill processing tailings, etc. as appropriate.

Physically the wastes are dry, i.e. no free standing water is permitted in the shipping container, and sandy soil like in texture. Also included for disposal are structural debris such as concrete, asphalt and other building materials. As previously mentioned, the radiologic constituents are those that are naturally occurring in the biosphere, the most abundant being primordial uranium and thorium and their decay products

The engineering design employed by the licensee is above grade embankment, anchored into the surrounding native soils by a seven (7) foot deep excavation. This design is a modification of a U.S. Department of Energy/State of Utah design used to permanently dispose of 3.2 million yards of uranium mill tailings for a Salt Lake City abandoned uranium mill site. The bottom of the excavation is scarified and compacted to form a leachate barrier (liner). The entire complex will be covered with native soils as a radon barrier and rock-riprap for an erosion as well as a human intrusion barrier.

In accordance with the licensee's application and the UBRC rules, the licensee has implemented personnel and environmental monitoring programs intended to demonstrate regulatory compliance and that neither the employees nor the local environs are affected in any adverse manner by the license activities. (Copies of the environmental monitoring reports and personnel monitoring data are available at the UBRC.) To date, no upward trends in occupational radiation doses or releases from the site, have been noted.

III. CURRENT STATUS OF DISPOSAL ACTIVITIES

As of December 31, 1990, the licensee has received and disposed of waste from industrial and governmental agency generators. The total volume of wastes involved is approximately 1.22×10^5 cubic yards.

IV. REGULATORY AUTHORITY

Public Law 86-373, dated September 23, 1959, amended the Atomic Energy Act of 1954 by the addition of a new Section 274, " Cooperation with States." The amended Act provides a role for the states in the regulation of nuclear materials and a statutory basis under which the U.S. Nuclear Regulatory Commission (NRC) would discontinue and the states could assume, through agreements, certain NRC regulatory authority. The mechanism by which a state assumes such responsibilities is an Agreement between the NRC and the Governor of the state. Before a state can become an "Agreement State," the Governor must certify that the state has a program for the control of radiation hazards adequate to protect the public health and safety. In addition, the NRC must determine that the state's program is in accord with the requirements of Subsection (o) of Section 27 and is in all other respects compatible with NRC's program for the regulation of the materials covered by the proposed agreement, and is adequate to protect the public health and safety with respect to such materials.

On March 29, 1984, the Governor of Utah signed an agreement with NRC for the assumption of regulatory authority for byproduct material, source material, and special nuclear material in quantities not sufficient to form a critical mass. At that time, the agreement between the State and NRC did not include the authority for Utah to regulate low-level waste disposal of materials listed above in permanent disposal facilities. The State agency which has the responsibility for regulating the use of radioactive materials is the Bureau of Radiation Control in the Division of Environmental Health of the Department of Health. In May 1990, an amended agreement was signed between the NRC and Governor of Utah, granting authority to the State for licensing land disposal of source, byproduct and certain quantities of special nuclear material.

In conjunction with the amended agreement, the State committed to conducting formal reviews of any application for low-level waste disposal by utilizing the guidance found in NRC publication NUREG 1200 "Standard Review Plan for the Review of a License Application for a Low-Level Radioactive Waste Disposal Facility." The applicant would be asked to follow guidance in NUREG 1199 "Standard Format and Content of a License Application for a Low-Level Radioactive Waste Disposal Facility."

Because the Envirocare amendment application request is for radioactive wastes containing byproduct or source material as contaminants, additional or different siting or design criteria and additional application of Utah Bureau of Radiation Control Rules is required beyond that which was necessary for the Envirocare NORM disposal operations. Specifically, the procedures, rules and criteria for "License Requirements for Land Disposal of Radioactive Waste", R447-25, are required as part of the application review process. Other less extensive, but none the less important rules would also be applied as part of the review process.

V. REVIEW SCOPE

The proposed amendment was evaluated against the Utah Radiation Control Rules in particular but, not limited to (1) "Standards for Protection Against Radiation" R447-15, and (2) " Licensing Requirements for Land Disposal of Radioactive Waste" R447-25. As mentioned, the reviews were conducted in accordance with NUREG-1200, Standard Review Plan (SRP) and it is referenced throughout the Safety Evaluations. Additionally, reviewers used other NUREG publications, NRC regulatory guides and industry wide reference materials.

Because the Envirocare facility is located on a section of land for which an Euvironmental Impact Statement had been prepared (USDOE/EIS-0099 F, Remedial Actions at the Former Vitro Chemical Company Site South Salt Lake County, Utah, July, 1984) and because the facility has been operational for approximately three years, the safety evaluation review emphasized hydrology, geology, and seismicity of the facility site, the engineering and design of the disposal embankments/cells, the potential radiologic impacts of waste disposal, and the licensee's radiation safety program.

CHAPTER 1

GENERAL INFORMATION

CHAPTER 1
GENERAL INFORMATION

CONCLUSIONS OF THE REVIEW/Utah Bureau of Radiation Control

Section 1.1 Introduction

The general information supplied by the licensee has been reviewed by the staff in accordance with the guidance in the SRP Section 1.1. The applicant has previously provided similar generic information for the issuance of the current NORM disposal license. This material coupled with the UBRC's high level of active familiarity provides the basis for the conclusion that the technical, financial and institutional information required by R447-25 is available.

Section 1.2 General Facility Description

The general information necessary to evaluate the overall facility design and layout has been evaluated. The licensee has adequately described the facility and its various functions such that the reviewers have an overall understanding of the facility.

Section 1.3 Schedules

This review and safety evaluation is for an amendment to the existing license. The Envirocare facility has been operational for approximately three (3) years. Therefore, schedules for design and construction are not relevant.

Section 1.4 Institutional Information

In November 1987, the UBRC granted an exemption to a rule, URC-24-135 (currently R447-15-302) to S.K. Hart Engineering (currently Envirocare of Utah). The effect of the exemption was to permit the development of a NORM disposal site on privately owned property. This action was taken pursuant to the applicant's request for such an exemption. For the following reasons, the exemption was granted:

1. The Utah Code does not provide for State ownership of this type of facility and it would require legislative action to amend the Code.

2. The Utah Bureau of Solid and Hazardous Waste Management siting requirements stipulate private ownership. Therefore, a precedence factor was taken into account.

3. It is believed that the ownership issue does not necessarily relate to issues of protection of the public health and safety.

4. The recognition that, ultimately (upon failure of all other controls), the State would be responsible for any public health related problems that might occur.

5. The belief that an undisputable surety arrangement for long term monitoring and maintenance would provide for public safety and health.

The Envirocare reque: vas pursuant to URC-12-125 (cu. ntly R447-12-54) which states that the UBRC can grant exemptions or exceptions to rules "as it determines are authorized by law and will not result in undue hazard to public health and safety or property". The exemption continues to be in effect.

In 1988, new radiation control rules went into effect relevant to the Envirocare amendment application. Specifically, R447-25-9(2) states:

> "Where the proposed disposal site is on land not owned by the federal or a state government the applicant shall submit evidence that arrangements have been made for assumption of ownership in fee by the federal or a state agency before the Bureau issues a license."

In March 1991, in accordance with R447-12-54, the UBRC granted an exemption, on its own initiative, to Envirocare regarding R447-25-9(2). The principle reasons for providing the exemption are: (1) the Utah Code does not provide for the "assumption of ownership" by the State; (2) the ownership issue does not directly relate to issues of public health and safety; and (3) there exists a sound surety arrangement which provides for monitoring and maintenance of any items relating to public health and safety. Therefore, Envirocare is in compliance with R447-25-9.

Section 1.5 Materials Incorporated by Reference

The staff has reviewed the materials, information or documentation that has been incorporated into the Safety Analysis Report (SAR) by reference. The materials have been evaluated as to their relevance within the intended context. These materials are generally acceptable or appropriate for the topic for which they were incorporated.

Section 1.6 Conformance to Regulatory Guides

As part of the detailed technical evaluations of various sections of the SAR, the staff has utilized various documents to provide guidance for the reviews. Likewise, the Envirocare staff has utilized some of the same guides to prepare the SAR. Accordingly the staff has evaluated the licensee's conformance to regulatory guidance or where, the guidance has been supplanted by an appropriate alternative, the alternative has been evaluated. The staff is not aware of any non-conformance with regulatory guidance.

Section 1.7 Summary of Principal Review Matters

The licensee has identified, in part, significant licensing issues for their amendment request. Other major licensing issues were identified by the staff reviewers. Envirocare has obtained technical assessments of these issues for submission and review by the UBRC. The applicant has in many instances resolved these matters or as a condition of the license will be required to resolve any open items as part of a compliance schedule.

In particular, significant review matters included those involving geotechnical and groundwater hydrologic issues. Other important but less significant issues included waste handling and storage and concentrations of radionuclides in waste for disposal.

CHAPTER 2

SITE CHARACTERISTICS

CHAPTER 2
SITE CHARACTERISTICS

CONCLUSIONS OF THE REVIEW/Utah Bureau of Radiation Control

Section 2.1.1 Site Location and Description

The staff has reviewed the site location and description information submitted by the licensee in accordance with the requirements found in R447-25-5 and 6. The information is found to be adequate.

Section 2.1.2 Population Distribution

The staff has reviewed the data submitted relevant to population distribution. The staff concludes the data is acceptable and accurately reflects the current population distribution in the vicinity of the site. Similarly, data regarding population growth accurately reflects the expectation that any growth will occur at population centers 30-50 miles from the Envirocare site. Furthermore, recent actions taken by the Local County Commission have designated the Envirocare area as part of a hazardous waste industrial zone.

Section 2.2 Meteorology and Climatology

The staff has reviewed the information presented regarding site meteorology and climatology. (This data was derived from an Environmental Impact Statement performed by the U.S. Department of Energy for the siting of a uranium mill tailings remedial action disposal site. The mill tailings disposal site is within the section of land owned by Envirocare.) The reviewers conclude the data is accurate for the purposes of determining the effects of precipitation on "structure loadings" and are sufficient to meet the general requirement stated in R447-25-7.

CONCLUSIONS OF THE REVIEW/Utah Geological and Mineral Survey

Section 2.3.1 Geological Site Characterization

The geologic site characterization for the Envirocare low-level waste disposal facility has been reviewed according to SRP 2.3.1. The geology and seismology of the proposed site have been adequately characterized, modeled, and analyzed to ensure that the long-term performance objectives of R447-25-19 through 22 are met as required in R447-25-23(1)(a). The tectonic and geologic processes and seismic activity do not occur with such frequency and to such an extent that they significantly affect the ability of the disposal site to meet R447-25-19 through 22 as required in R447-25-23(1)(h) and (i).

Section 2.3.2 Seismic Investigation

The information on the seismic investigation for the Envirocare low-level waste disposal facility has been reviewed according to SRP 2.3.2. As a result of this review, the following conclusions are reached:

1. The seismologic information provided by the applicant is adequate, and no capable faults exist at the site that would adversely affect the safety of the site.

2. The design-b. .is earthquake is adequately defin.d, and the potential for amplification is addressed.

3. Adequate geophysical investigations have been carried out to characterize the site.

The applicant has met performance objectives in R447-25-19 through 22 and the technical requirements for land disposal facilities in R447-25-23(1)(h) and (i).

CONCLUSIONS OF THE REVIEW/Utah Bureau of Water Pollution Control

Section 2.4.2 Groundwater Characterization

1. Quality Control Program - The quality control program focuses on both monitoring well construction and groundwater quality sampling. The staff is unable to draw any conclusions, at this time, regarding these issues. However, all monitoring wells used in the groundwater compliance monitoring network will be required to be constructed in accordance with the EPA RCRA Groundwater Technical Enforcement Guidance Document (TEGD), see license requirements in Appendix B, Part I E 2(g). An approved groundwater sampling quality assurance plan will also be required before construction of the disposal facility to assure quality control of all groundwater quality compliance monitoring data, see license requirements in Appendix B, Part I H 1.

2. Pre-operational Monitoring - The staff has concluded that pre-operational monitoring is incomplete at this time, and cannot be finished until the site hydrogeologic characterization is complete (as required in Appendix B, Part I H 3 of the license). Consequently, after the hydrogeologic report is complete and approved by the Executive Secretary, Envirocare will also complete a one-year period of groundwater sampling of the compliance monitoring wells to determine background groundwater quality (see Appendix B, Part I H 5 of the license). This one year sampling period will begin as soon as possible after the construction of each compliance monitoring well and before the receipt of any waste at the facility. As a result of this sampling, the groundwater protection levels found in Appendix B, Part I C of the license, may be later modified.

3. Groundwater Flow Modeling of the Saturated and Unsaturated Zones - The staff believes the site is capable of being characterized, modeled, analyzed, and monitored for groundwater flow, but is unable to confirm such until the site hydrogeology is fully characterized (see License, Appendix B, Part I H 3) and the flow models are submitted and verified, as per license conditions in Appendix B, Part I H 8.

4. Groundwater Contaminant Transport in the Unsaturated Zone - Unsaturated transport analysis has been conducted by the applicant and reviewed by the staff. Envirocare has estimated the vadose zone transport time of each of the contaminants to be disposed of in the LLRW Embankment by use of a subroutine in the EPA model PATHRAE (Low-Level and NARM Radioactive Wastes, Model Documentation PATHRAE-EPA Methodology and Users Manual, EPA 520-1-87-028, December, 1987). The staff have reviewed the portion of the PATHRAE code used in the analysis and found it to be a vertical, one dimensional analytical solution based primarily on the retardation of contaminant migration and the advective flow of groundwater. The model also assumes a uniform moisture content in the vadose zone both in space and time.

i.e., the model ignores permeability hysteresis. This assumption may be conservative if the moisture content is assigned to be relatively high. The model does not account for dispersion or diffusion of contaminants in the vadose zone, consequently the velocity of the predicted contaminant front is somewhat underestimated.

The staff reviewed the inputs used in the PATHRAE model, and found the distribution coefficient, Kd, used for each of the contaminants to be conservative, each being near the low end of the ranges reported in technical literature, thereby minimizing the retardation effect. For contaminants without literature values, a conservatively low value of 5 was selected for the PATHRAE model. However, one exception was noted, mercury, whose Kd was assigned as 10,000 in the model, though researchers at Clemson University have suggested values between 100 and 1,000 are more appropriate (draft interim report, Verification and Sensitivity of the Calculational Methodology Utilized in the PATHRAE Code to Predict Subsurface Contaminant Transport for Risk Assessments of SRP Waste Sites, R. A. Fjeld, et.al., Clemson University, June, 1986, p.32.). The other hydraulic inputs were also reviewed by the staff:

(a) A conservative value of soil bulk density, 1.6, was assumed in the PATHRAE model. A more reasonable value of 2.12 would increase the retardation factor and estimated travel time.

(b) Effective porosity was assumed by Envirocare to be 20% in the PATHRAE model, a value in the range of sand sized particles. This value may be somewhat low considering the combination of clay and sand strata reported in the subsurface at the site. Clays typically have porosities in the range of 40 to 70%. Consequently, to make the calculations more conservative, the staff recommends an overall estimate of 0.30 to 0.40 is probably more appropriate for effective porosity, considering the interbedded clays and sands at the site. This change results in a decrease in the retardation factor and an increase in the contaminant velocity.

(c) Moisture content assumed in the PATHRAE model was 23.9%, which is probably a realistic value considering the arid environment at the Clive site. However, for conservative purposes a small increase to 30% is recommended by the staff, which coincides with estimates made by Delta Geotechnical in their November 29, 1989 report. This change also results in a decrease in the retardation factor and an increase in the contaminant velocity.

(d) Vertical water velocity was assumed in the PATHRAE model to be 2 cm/yr (0.78 in/yr), based on calculations offered in the Delta Geotechnical report entitled "Attachment VI-5, Hydrogeologic Study, Mixed Waste Landfill Cell", dated November 29, 1989. Close review of this report shows Delta Geotechnical based the vertical velocity on:

(1) The assumption that only 1% of the estimated 4.88 in/yr mean annual precipitation rate resulted in water table aquifer recharge (see p.25-26 of the report), and

(2) Estimates of effective porosity and moisture content of the unsaturated zone of 20% and 30%, respectively.

Staff research indicates that the mean annual precipitation is expected to be approximately 6 in/yr, an increase of 1.2 in/yr over the Delta Geotechnical Report (J. S. Gates and S. A. Kruer, Utah Department of Natural Resources Technical Publication No. 71, 1981, Plate 2). As a part of a seepage analysis of the LLRW Embankment by use of the EPA HELP model, Bingham Environmental estimated the annual precipitation for the period of 1985 thru 1989 at the Clive site to be 5.94 in/yr (December 10, 1990 report). Bingham's HELP model analysis also predicted a seepage rate of 0.82 in/yr (0.32 cm/yr) from the bottom of the embankment. Though this model may conservatively overestimate the seepage rate, it is important to note that it considers several climatological factors and the effect of the rip-rap cover in reducing evapotranspiration and increasing infiltration. Based on this seepage rate and an assumed effective porosity of 0.30 and a moisture content of 0.30, the staff estimated the vertical water velocity to be approximately:

$$Vw = \frac{q}{n^e s} = \frac{0.32 cm/yr}{0.3 * 0.3} = 3.58 \text{ or } 4 \text{ cm/yr}.$$

This is twice the velocity used by Envirocare in their PATHRAE predictions.

No sensitivity analysis was conducted by Envirocare to evaluate the effect of variability of the hydraulic parameters on the output of their model. The staff did not have access to the PATHRAE model, but did build a similar model using the same one-dimensional equations and assumptions on an Excel spreadsheet. More conservative hydraulic inputs were entered for soil bulk density, effective porosity, moisture content, and vertical water velocity, and outputs were evaluated. Based on the more conservative inputs it was determined that all contaminants with a distribution coefficient of 5 or greater should take more than 19,000 years for the advective contaminant front to reach a water table located 6.4 m below the embankment.

It should be noted that this analysis, like the PATHRAE model, did not take into account dispersion or molecular diffusion in its predictions. To evaluate if dispersion was significant in the subject flow regime the staff calculated the Peclet Number for several of the proposed contaminants, as follows:

$$\text{Peclet Number}^* = \frac{Vw * d}{Do}$$ where: Vw = average linear velocity of the water
d = average particle diameter
Do = diffusion coefficient in free liquid.

* R. W. Gillaham & J. A. Cherry, Contaminant Migration in Saturated Unconsolidated Geologic Deposits. Geological Society of America. Special Paper 189, 1982, Figure 5.

Diffusion coefficients were extracted from "...nysical and Chemical Hydrogeology, by P. A. Domenico & F. W. Schwartz, John Wiley & Sons, 1990, p.369. Average particle diameter was assumed to be silt sized, an average of clay and sand, and equal to 1/16 mm or 0.00625 cm. Average velocity of the water was assumed to be the 4 cm/yr (1.27 x 10-7 cm/sec), as derived above.

Contaminant	PATHRAE Distribution Coefficient, Kd(ml/gm)	Free Liquid Diffusion Coefficient, Do (10^{-6}cm^2/sec)	Peclet Number
Potassium-40	5	19.6	4.05 x 10-5
Strontium-90	8	7.94	1.00 x 10-4
Chromium-51	40	5.94	1.34 x 10-4
Radium-228	100	8.89	8.93 x 10-5
Cesium-134	500	20.7	3.83 x 10-5

Comparison of these values with data provided by Gillaham and Cherry indicates that at values of Peclet Number below 2.0 x 10-2 molecular diffusion dominates the transport of contaminants. Sensitivity analysis was conducted by the staff on these Peclet Number calculations. Based on this analysis it was determined that the Peclet Number only slightly exceeded the 2.0 x 10-2 limit only when the average linear velocity reached 20 cm/yr (1 order of magnitude higher), and particle size reached 2 mm (coarse sand). Both of these scenarios are very unlikely at the site. Therefore, based on this analysis mechanical dispersion is not considered a significant component of contaminant transport at the LLRW embankment. This even applies to those more mobile contaminants with a low distribution coefficient such as Strontium-90 and Chromium-51, as seen above.

Diffusion transport simulations were made by both Envirocare and the staff. One-dimensional simulations, based only on diffusion, were conducted by the staff by use of an Excel spreadsheet and a table of beta and the complimentary error function (Domenico & Schartz, 1990, p.637). Constraining assumptions included saturated conditions across the 6.4 m distance to the water table, a tortuosity of 0.67, Groundwater Quality Standard of 26.66 pCi/l, and an initial leachate concentration of 2400 pCi/l. This simulation showed that sole diffusive transport of Cesium-134, a nuclide with a high diffusion coefficient, would cause the water table at 6.4 m below the site to exceed the Groundwater Quality Standard after 72.3 years (C/Co = 27/2400 = 0.0111). However, when the model was modified to account for the apparent diffusion coefficient caused by retardation by dividing the effective diffusion coefficient by the retardation factor (Da = D'd/R = Do*T/R, where T = 0.67 and R = 16,800 [Kd = 500]), to account for retardation of the Cesium; the time necessary for the Cesium concentration at the water table to reach the Groundwater Quality Standard was in excess of 1,218,300 years.

The staff also conducted a one-dimensional diffusion transport simulation with retardation for a worse case nuclide. Potassium-40 was found to be a worst case nuclide because of its relatively high diffusion coefficient (19.6 x 10-6 cm2/sec) and low distribution coefficient, Kd = 5 ml/gm. In fact, of the five nuclides that shared the lowest Kd value for the permitted waste constituents, Potassium-40 had the longest half-life (1.3 x 109 years), and consequently could be considered as a stable nuclide for the time domain of the model, effectively negating any effect of radioactive decay. Using the

same contro. .g assumptions mentioned above, ıcluding a Groundwater Quality Standard of 48 pCi/l and an initial leachate concentration of 1,930,000 pCi/l, the model showed that Potassium-40 concentration at the water table below the site would exceed the Groundwater Quality Standard only after 4,687 years (C/Co = 48/1,930,000 = 0.00189). The staff considers these simulations to be conservative based on the following factors:

(1) The assumption of saturated conditions in the subject domain has over estimated the tortuosity factor. Unsaturated conditions would significantly decrease the tortuosity factor, possibly by more than an order of magnitude. Sensitivity analysis conducted by the staff on the one-dimensional model without retardation showed that this relationship was inversely proportional, i.e., a decrease in the tortuosity would increase the resulting time by a proportional amount.

(2) The models did not account for decay of the radionuclides. Such decay would significantly reduce the initial concentration at the source, and the concentration of the nuclides in the diffusive flux with the passage of time. This is a significant factor for short-lived radionuclides, which make up a majority of the waste disposal inventory.

In summary, both the PATHRAE model and the model used by the staff show that the advective contaminant front of the proposed contaminants should take in excess of 19,000 years to migrate to the water table below the LLRW Embankment, based on a water infiltration rate estimated by the EPA HELP model and estimates of average effective porosity and saturation. Based on these same hydraulic assumptions, it is apparent that molecular diffusion is the dominant mechanism of contaminant transport through the unsaturated zone. Diffusion transport analysis with retardation has shown that Potassium-40, a worse case radionuclide, will take in excess of 4,687 years for the contaminant front to cause the 6.4 m water table to exceed the Groundwater Quality Standards.

Saturated zone contaminant transport modeling was not conducted by either Envirocare or the staff. This modeling was found to be unnecessary in that the unsaturated zone contaminant transport analysis has demonstrated that the concentrations of the contaminants in the waste, as authorized by the license, will not cause the water table below the LLRW embankment to exceed the Groundwater Quality Standards for a period which exceeds the 500 year minimum time criteria specified in NUREG 1200. Any additional contaminant transport modeling of the saturated zone would show only that longer periods of time would be necessary for the contaminant front to exceed the Groundwater Quality Standards at a given horizontal location in the water table aquifer.

5. Groundwater Intrusion and Fluctuation - Water level monitoring in 13 existing wells (SC series) in Section 32, T.1S., R.11W. between September 22, 1981 and November 7, 1989 demonstrate the water table has risen an average of 1.65 ft., with a maximum rise in well SC-3 of 3.06 ft. Though regular quarterly or monthly data has not been consistently collected from these wells in a single water year to assess seasonal fluctuation, the staff believes that the randomness of the measurements and the long period of data collection over a time of high regional precipitation would make these values somewhat representative of the maximum seasonal fluctuation the water table would experience in a single water year.

Water level measurements made on December 13, 1990 in wells found closest to the proposed site (within approximately 800 ft. of the proposed embankment) place the water table at the following depths below ground surface:

Well/Piezometer	Ground Elevation (ft)	Water Level Depth (ft)
GW-2	4277.65	29.29
GW-11	4276.22	27.70
GW-12	4276.31	27.91
GW-13	4276.71	28.31
I-2(N)	4276.62	28.42
I-2(S)	4276.63	28.63
I-3-30	4277.24	29.71
Average	4276.77	28.57

As can be seen, the average depth to water table was below ground surface 28.57 feet. Based on the proposed design, the bottom of the lower clay liner will be located approximately 8 feet below grade. This results in a 20.57 foot separation between the base of the bottom clay liner and the average water table elevation of December 13, 1990.

The staff agrees with Envirocare's submittal of December 26, 1990 which predicted about a 4 foot rise in the local water table, provided regional climatic conditions maintained the level of the Great Salt Lake below 4217 ft. amsl. The lake has reached or exceeded this level at least twice in the last 3,000 years; once within the last 400 years, based on archeological evidence. The lake may have also approached the 4217 ft. level during the Little Ice Age (1670-1700 A.D.), based on paleoclimatic modeling (Currey, D.R., et al. 1984, Major Levels of Great Salt Lake and Lake Bonneville, UGMS Map 73). If the lake reaches or exceeds the 4217 ft. level, the shore of the lake will be located approximately 15 miles west of the site, or less. Under these conditions, it is difficult to predict the magnitude of the rise in water table, however, both the staff and Envirocare agree it will be greater than the 4 foot rise referenced above and may be as great as 10 to 12 ft. above normal water table conditions. Based on these estimates and assumptions it appears that the waste disposal is not in the zone of water table fluctuation and that groundwater intrusion into the waste at some future date should not occur.

6. Surface Discharge - based on low topographic and apparent groundwater hydraulic gradients in Section 32 (T.1S., R.11W.), and fence diagrams of subsurface stratigraphic units found in the vicinity, provided by Envirocare, the staff has concluded that the hydrogeologic units used for disposal will not discharge groundwater to the surface within the disposal site. However, if the in the unlikely event the level of the Great Salt Lake were to exceed 4217 ft amsl, and the local water table rises by 12 feet, groundwater beneath the disposal site may eventually discharge to the surface in an area located approximately 2 miles west of the disposal site in Section 36, T.1S. R. 12W., at an approximate elevation of 4260 ft.

CONCLUSIONS OF T E REVIEW/Utah Geological and . neral Survey

Section 2.5 Geotechnical Characteristics

The geotechnical characteristics of the Envirocare low-level waste disposal facility have been reviewed according to SRP 2.5. The objectives of the review were to ensure that: (1) the scope of the geotechnical and geophysical field investigations and laboratory and field testing are adequate; (2) the interpretations of the data to develop typical soil layering, typical cross-sections, and design parameters used in the design are reasonable and conservative; and (3) the geotechnical characterization of the site meets the guidance and acceptance criteria in SRP 2.5.

The following information was determined during this review:

1. The geologic characterization of the site addresses the potential for surface or subsurface subsidence at the site, the instability of soil because of mineralogy, and the history of deposition and erosion of soil deposits.

2. The design-basis seismic event is adequately defined by parameters such as magnitude and acceleration.

3. The geotechnical and geophysical investigations conducted to characterize the site and borrow materials are adequate in scope.

4. The static and dynamic engineering properties of various materials used in the analysis and design of the facility are based on adequate field and laboratory testing and a reasonable and conservative interpretation of the test data.

5. The groundwater conditions such as the position of the groundwater table, the extent of its fluctuation, and the presence of artesian conditions have been defined on the basis of adequate investigation.

6. The selection of the properties of fill borrow material was based on an adequate exploration and testing program.

7. Site stratigraphy and design parameters used in the design are a reasonable and conservative interpretation of the data.

The geotechnical site characterizations in the license amendment application provide the basic data needed to determine if the disposal facility meets the performance objectives stipulated in the regulations, thereby satisfying the requirements of R447-25-7(1), R447-25-11(6), and R447-25-23(1).

CONCLUSIONS OF THE REVIEW/Utah Bureau of Water Pollution Control

Section 2.5 Geotechnical Characteristics

Groundwater Conditions - the staff has determined that the position of the water table and the extent of its seasonal and potential long-term fluctuation have been adequately estimated by Envirocare and reviewed by the staff. Artesian conditions have not been discovered at the site, though two separate piezometer nests at sites I-1 and I-3, may have located a small upward vertical hydraulic gradient, based on measurements made on December 13, 1990 and January 2, 1991. At site I-1, located approximately 800 feet southeast of the proposed disposal site, the deeper (100 ft.) piezometer measured a head which averaged 0.84 feet higher than the shallow (30 ft.) piezometers. A site I-3, located approximately 400 feet north of the disposed site, the

deeper (100 ft.) piezon. Æ recorded heads which averaged 3.63 feet above those measured in the shallow (30 ft.) piezometer. Though rather inconclusive at this time, further studies will more accurately define vertical hydraulic gradients at the site, see License, Appendix B, Part I H 3(d and e).

Section 2.6 Geochemical Characteristics

1. Groundwater Geochemistry - the staff has concluded that the description of local groundwater geochemistry is incomplete. As a result, the license will require Envirocare to provide addition data and detail, and interpretation to allow the staff to arrive at an understanding of the local groundwater quality and geochemistry. This study will be completed within one year of construction of each of the groundwater compliance monitoring wells, see License, Appendix B, Part I H 5.

2. Leachate Geochemistry - Envirocare has predicted the quality of the leachate that will leave the base of the LLRW Embankment. The staff has reviewed this information and found it to be based on conservative estimates of the distribution coefficient for each of the radionuclides and the conservative assumption that the solutes immediately go into solution with the leachates being instantaneously transported to the base of the embankment. Based on this data it has been concluded by the staff that this leachate will significantly exceed the Groundwater Quality Standards. Consequently, evaluation of contaminant transport issues was necessary before issuance of the license. These leachate concentrations were later used as initial concentrations for the unsaturated contaminant transport modeling.

3. Subsurface Soil Geochemistry - Subsurface soils have been characterized at the site by Envirocare in terms gradation by the Unified Soils Classification System. The hydrostratigraphic units (subsurface strata) at the site consist primarily of an upper clay-silt, an upper silty sand, a middle clay-silt, and a lower sand, in descending order. Review of the distribution coefficients, Kd, used in the contaminant transport modeling of the unsaturated zone, show that the Kd values chosen for the modeling were sufficiently conservative to address minor variation in soil mineralogy that may be present at the site. For all of the contaminants modeled, Envirocare chose Kd values that were at or near the low end of the ranges reported in the technical literature. Staff review of the literature values showed that the Kd ranges were distributed among varying soil and rock types, with lower values dominated by rock and sand media (coarse grained media) and higher values typical of clay soils (fine grained media). Review of soil logs from nearby monitoring wells at the site shows the abundance of clay and silts in the unsaturated zone, as summarized below:

		Linear Footage Reported in Soil Logs in the Upper 28 feet of the Soil Column			
Well No	Relative Location To Site	Sand* ft. (%)	Silt ft. (%)	Clay ft. (%)	Total Silt + Clay ft. (%)
1-2	West Margin	10 (36%)	5 (18%)	13 (46%)	18 (64%)
1-3	North Margin	10 (36%)	2 (7%)	16 (57%)	18 (64%)
GW-2	East Margin	14 (50%)	0 (0%)	14 (50%)	14 (50%)
GW-12	South Margin	9 (32%)	5 (18%)	14 (50%)	19 (68%)

* Sand reported in soil logs were consistently described as silty and/or clayey. Clays and silts were similarly described as having minor amounts of sand, silt, or clay, respectively.

Consequently, the staff has determined that the Kd values used in the contaminant transport model were conservative in that they were indicative of rock and sand or coarse grained media, while finer grained clay and silt media predominate the unsaturated zone at the site. The staff concludes that abundance of clays and silts at the site will compensate for error that may arise from minor variations in the Kd due to variation of mineralogy of the materials in the unsaturated zone.

No surface expression has been observed of local undisturbed soils which would indicate solution failure or collapse. Consequently, the staff has concluded that the possibility of unstable soils under the LLRW Embankment is unlikely, especially after consideration that the facility will not significantly increase the rate of infiltration or seepage that would occur if the facility were used for disposal of liquids.

CONCLUSIONS OF THE REVIEW/Utah Geological and Mineral Survey

Section 2.7.1 Geologic Resources

The information on known geologic resources near the Envirocare low-level waste disposal facility has been reviewed according to SRP 2.7.1. The applicant has correctly and adequately identified known occurrences of sand and gravel near the proposed waste disposal facility. The applicant has shown that the deposits are at a location so that future exploitation of those deposits is unlikely and will not result in the failure of the proposed facility's performance objectives under R447-25-19 through 22 as required in R447-25-23(1)(c). No other known geologic resources occur in the proposed disposal area or region and attempts at future resource exploitation are unlikely.

CONCLUSIONS OF THE REVIEW/Utah Bureau of Water Pollution Control

Section 2.7.2 Water Resource

1. Future Pumpage of an On-Site Well - the staff has concluded that the evaluation of the effect of future pumpage of a well in Section 32, T.1S., R.11W. on local groundwater flow is incomplete. Consequently, it is unknown if such pumpage would result in failure or compliance with the performance objectives of UAC R447-25-7. As a result, the license will require Envirocare to make this assessment and receive approval before construction and use of the well (see License, Appendix B, Part I H 9). This work may be completed as a part of the groundwater flow modeling required for the facility (see License, Part I H 8), or may be completed by use of a separate flow modeling analysis.

2. Nearby Potential Use of Groundwater - the staff has concluded that due to poor groundwater quality of the uppermost water table aquifer, total dissolved solids in the range of 19,717 (well SC-1) to 50,130 (well SC-2) mg/l, that future use of untreated groundwater from the uppermost aquifer in the immediate vicinity of the disposal facility will be limited to industrial uses only. The staff has also concluded that as long as groundwater protection levels are met at the compliance monitoring wells that beneficial use of the groundwater will not be adversely impacted and that the performance objectives of UAC R447-25-7 will be met.

CONCLUSIONS OF THE REVIEW/Utah Bureau of Radiation Control

Section 2.8 Biotic Features

The data provided by the licensee regarding biotic features was derived from an Environmental Impact Statement performed by the U.S. Department of Energy for the siting of a uranium mill tailings remedial action project within the section presently owned by Envirocare . (The effects of the DOE project on avian, mammalian or reptilian species or vegetation thus precedes any induced effects by Envirocare's activities.) Thus, the staff concludes that the licensee's relevant information is adequate and meets the applicable requirement of R447-25.

CONCLUSIONS OF THE REVIEW/Utah Bureau of Water Pollution Control

Section 2.9 Site Characterization Monitoring

1. Groundwater Compliance Monitoring - the staff have concluded that Envirocare's groundwater compliance monitoring system has not been adequately justified. For this purpose, the license will require a full characterization of the local hydrogeology and description of the compliance monitoring system, see License, Appendix B, Part I E 2 and I H 3. These studies and reports will be required to identify the critical pathways of potential contaminant migration and the corresponding numbers and locations of wells, both horizontal and vertical, required to provide reliable warning of contaminant migration. Compliance monitoring wells will be located as close as practical to the disposal facility in order to allow independent monitoring of the LLRW Embankment from other facilities in the vicinity, and to comply with UAC R448-6-6.9 A. The compliance monitoring well system shall be complete and approved by the Executive Secretary before receipt of any waste at the disposal facility.

2. Groundwater Sampling Quality Assurance (QA) - the staff has determined that Envirocare's QA plan for groundwater sampling is incomplete. Consequently, the license will require the submittal of a groundwater sampling plan that complies with the RCRA TEGD. This plan will be approved by the Executive Secretary before any construction of the wells or the LLRW Embankment at the disposal facility, see License, Appendix B, Part I H 1.

3. Compliance Monitoring Well Construction - All wells used in the compliance monitoring well network shall confirm to the criteria found in the RCRA TEGD. After completion of the compliance monitoring well network Envirocare will be required to submit "As-Built" report and well construction diagram for each well, see License, Appendix B, Part I H 4. The "As-Built" reports shall be approved by the Executive Secretary before any construction at the disposal facility [License, Appendix B, Part I E 2(f)]. Failure to construct the well in accordance with the RCRA TEGD will be a failure to monitor, see License, Appendix B, Part I E 2(h).

CHAPTER 3

DESIGN AND CONSTRUCTION

CHAPTER 3
DESIGN AND CONSTRUCTION

CONCLUSIONS OF THE REVIEW/Utah Bureau of Water Pollution Control

Section 3. Design and Construction

1. Final Engineering Drawings and Specifications - the staff has determined feasibility of design based on conceptual plans and preliminary drawings. However, final detailed construction engineering drawings and specifications must be submitted for staff and Executive Secretary review and approval before construction of the disposal facility, see License, Appendix B, Part I D 2.

2. Facility Location - the location of the facility has been established and restricted by the permit, see License, Appendix B, Part I D 3. This restriction has been placed on the licensee because:

   (1) the specified location is the only local where enough acceptable geotechnical data was available for the Utah Geological and Mineral Survey to complete a satisfactory evaluation of the geotechnical characteristics of the site,

   (2) the contaminant transport modeling was conducted based on depth to water table and subsurface materials data derived from the specified location, and

   (3) to move the LLRW Embankment to another local without reevaluation of the geotechnical and contaminant transport issues could result in a failure of the facility to comply with the performance objectives of UAC R447-25-7, or the requirements of the Ground Water Quality Protection Regulations.

   Consequently, any change of the location of the embankment, the size of the embankment, or number of embankments will require reapplication, the submittal of supporting technical documentation, and major modification of the Ground Water Quality Discharge Permit.

3. Waste Restrictions and Prohibitions - restrictions on the wastes to be received have been imposed to ensure that the facility is operated in accordance with approved design and procedures. The concentrations of radionuclides in the waste to be received will be limited by the license. Any disposal of radioactive waste in excess of these limits in the LLRW Embankment will require prior modification of the Ground Water Quality Discharge Permit. Envirocare will also be prohibited from disposal of hazardous wastes or hazardous constituents in the LLRW Embankment, since the design of the facility has not yet been shown to be compatible or feasible for the disposal of these materials (License, Appendix B, Part I D 5 and 6). Any disposal of hazardous wastes or hazardous constituents will require prior modification of the Ground Water Quality Discharge Permit.

4. Site Monitoring (SRP Section 3.1.4.3.10) - the staff have reviewed Envirocare's proposal for site monitoring and the requirements of the Utah Ground Water Quality Protection Regulations, particularly UAC R448-6-6.1 and 6.4A and have determined that the proposed term of ground water monitoring is adequate. However, the license will require ground water quality monitoring from the compliance monitoring well network for as long as the facility requires a Ground Water Quality Discharge Permit, see License, Appendix B, Part I E 5. This would be expected to at least equal the active operational life of the facility and the required 30 year post-closure monitoring period.

5. Semi-Annual As-Built Report - the staff have determined that during the construction of the embankment Envirocare will submit semi-annual "As-Built" Reports to document construction of the disposal facility in compliance with conditions of the license (Appendix B, Part I G 10). Failure to construct the LLRW Embankment as per approved design or in a manner inconsistent with the Construction Quality Assurance Plan/Quality Control Plan will be cause for the Executive Secretary to conduct enforcement action against Envirocare, see License, Appendix B, Part I D 8.

6. Construction Equipment - the staff have determined that some proposed construction equipment and practices will be detrimental to performance of the design (e.g. use of a drum roller/compactor for clay liner or radon barrier compaction). As result, the license will require Envirocare to submit a CQA/QC Plan and receive Executive Secretary Approval before any construction of the LLRW Embankment, see License, Appendix B, Part I D 4.

CONCLUSIONS OF THE REVIEW/Utah Bureau of Radiation Control

Section 3.1.5 Principal Design Features

The staff has reviewed the principal design features for Envirocare's low-level waste disposal facility in accordance with SRP 3.1. The objective of the review was to verify that the applicant has presented sufficient descriptive information in an overall disposal facility plan to provide reasonable assurance that the principal design features will: (1) minimize infiltration of water into disposal units; (2) ensure the integrity of disposal unit covers; (3) ensure the structural stability of backfill, wastes, and covers; (4) minimize contact of waste with standing water; (5) provide adequate site drainage during operations and after closure; (6) facilitate site closure and stabilization; (7) minimize the need for long-term maintenance; (8) provide a barrier against inadvertent intrusion; (9) maintain occupational exposures as low as is reasonably achievable; (10) provide adequate monitoring of the disposal site; and (11) provide and adequate buffer zone for monitoring and potential mitigative action.

The standard review objective has been met and is supported by the finding that the technical information required by R447-25-7(2) has been provided, the technical requirements in R447-25-24(1)(A) through (F) have been met, and the design information as required by other SRPs has been provided.

On the basis of its revi , the staff concludes that the des. .ptions of the principle design features have been clearly presented in a coherent disposal facility plan and the principal design features are acceptable. Specific design information and details on the principal design features are addressed and evaluated under other pertinent SRPs.

Section 3.2.5 Design Considerations for Normal and Abnormal/Accident Conditions

The staff has reviewed the principal design criteria for Envirocare's low-level waste disposal facility under normal operating and abnormal/accident conditions according to SRP Section 3.2. The objectives of the review were: (1) to verify that the principal design criteria are consistent with the information in other sections and will support the design analyses and results performed for the principal design features; (2) to ensure that abnormal events or accident conditions will not invalidate performance assessment assumptions or result in unacceptable disposal facility performance; and (3) to verify that the design bases and design-basis natural events used for the principal design features of the proposed facility were correct.

The staff concludes that the objectives of the review have been met because the applicant: (1) has clearly described the principal design criteria; (2) has adequately described the relationship between the functional requirements of the principal design features reviewed under SRP 3.1 for normal and abnormal/accident conditions; (3) has verified that the principal design criteria ensure that performance will not be invalidated by abnormal events or accidents; and (4) has verified that the principal design criteria are sufficient to support the contribution of the principal design features used for performance analyses in the SAR.

The information provided by the applicant on principal design criteria related to normal conditions, abnormal conditions, and accident scenarios is adequate to satisfy the objectives of the staff review. On the basis of its review, the staff concludes that the information provided gives reasonable assurance that the disposal facility is properly designed and will be acceptably constructed ~~which will satisfy the applicable portions of the regulatory objectives and requirements~~ of R447-25-7(2) through (7), R447-25-8(1) through (4), R447-25-11 (1) through (7), R447-25-19 through R447-25-22, R447-25-24(1) and R447-25-25(1).

Section 3.3.1 Construction Methods and Features

The staff has reviewed the construction methods and features for the Envirocare low-level waste disposal facility according to SRP Section 3.3.1 to ensure that the construction methods used by the applicant will result in the long-term stability of the disposal site and that the required construction procedures and methods will ensure that the construction of the waste disposal facility will meet R447-25-19, R447-25-20, R447-25-21, and R447-25-22.

The construction procedures and methods that will be used by the applicant are applicable to the construction features of the disposal site and are related to site preparation, control and diversion of water, construction of disposal units, concrete and steel construction, backfilling, and disposal unit closure. The procedures and methods to be used will ensure that the functional requirements of the principal design features will be met.

The site plans have clearly shown the site boundary, restricted zone, security area, buffer zone, operational area, and general layout of the disposal facility. The engineering drawings have provided the necessary information for the construction of the waste disposal facility at Envirocare. Construction specifications provided by the applicant are based on the function and design requirements of the land disposal facility. Compliance with the construction drawings and specifications will provide assurance that the land disposal facility will be properly constructed and will perform its intended safety function.

The applicant has provided the information identified in SRP 3.3.1 and in R447-25-7(5) and (6). The construction procedures and methods that will be used by the applicant conform with established criteria, codes, standards, specifications, and good engineering judgment and are acceptable to the UBRC staff. The use of these criteria, as defined by good engineering judgment and practice, and the applicable codes, standards, guides, and specifications (as noted below) provides reasonable assurance that, in the event of an occurrence of a design-basis event or of a postulated accident during construction and operation, the constructed facilities will withstand the specific design imposed loading conditions without impairment of structural integrity and stability.

The applicant has provided acceptable detailed descriptions of the construction methods and procedures for the disposal facility. Because these procedures and methods have been proven to be adequate, they provide assurance that the construction of the waste disposal facility will meet the design requirements.

The applicant has met R447-25-7(1) by providing a construction quality control program, which provides measures for implementing the guidelines related to construction inspection, material control, and audits.

The site plans provided by the applicant have clearly shown the location and boundary of the disposal site. General layout of the facilities and disposal units are also indicated on the plans.

Engineering drawings provided by the applicant have conveyed the design information correctly and adequately. The drawings have provided the necessary information for the construction of the disposal facility including the location, type, and details of the structures, systems, and components of the land disposal facility. The engineering drawings provided by the applicant ensure that the designed land disposal facility will be properly constructed and will conform to the required design standards. The engineering drawings are acceptable and have met the technical information requirements of R447-25-7(2), (5) and (6).

Construction specifications provided by the applicant are compatible and consistent with well-established industry codes, standards, and specifications and are acceptable to the staff. Provisions of the construction specifications provide reasonable assurance that the constructed disposal facility will conform to the specified design requirements and will meet R447-25-11(3), (5) and (6).

On the basis of the findings, the staff concludes that there is reasonable assurance that the procedures and methods proposed by the applicant for the construction of the waste disposal facility are acceptable and meet R447-25.

Section 3.3.2 Constr on Equipment

The staff has reviewed the types of equipment, and their capabilities, that are to be used in the construction operation of the Envirocare low-level waste disposal facility according to SRP Section 3.3.2 to ensure that the equipment will meet the construction requirements and will safely perform its intended functions. Selection and use of the designated construction equipment is based on the construction function and capability of the equipment. The applicant has ensured that, with the use of the designated equipment, the construction and operation of the disposal facility will meet the performance objectives of R447-25-18 through 22.

The staff has reviewed the information on the construction equipment provided by the applicant and has concluded that the equipment is acceptable because reasonable assurance has been provided that it: (1) will perform its intended function; (2) is in conformance with the construction requirements, and (3) will permit safe construction and operation of the disposal facility.

The applicant has met SRP 3.3.2 and R447-25-7(5) (6) and (11) and has provided adequate information on the types of equipment and on equipment specifications and capabilities that will provide assurance of the safe performance of the equipment. The land disposal facility constructed and operated by the use of this equipment will meet the required safety function and will fulfill the performance objectives of R447-25-18 through 22.

The applicant has provided acceptable documentation on the quality assurance/quality control program for the equipment that will be used in the construction and operation of the land disposal facility. The documentation provides evidence and assurance that the selected equipment will reliably perform its intended function without impairing the quality and integrity of the disposal facility and that the applicable portions of R447-25-7(10) will be met.

The applicant's procedures for the purchase, replacement, maintenance, and inspection of equipment are adequate, and the use of these procedures will ensure that there will be no unacceptable breakdown, interruption, or delay in the construction and operation of the land disposal facility.

Section 3.4.1 Utility Systems

The staff has reviewed the utility systems for Envirocare's low-level waste disposal facility according to SRP Section 3.4.1 to verify that sufficient information has been provided for each utility system that is required by the facility design; that each utility system has been designed and will be constructed to provide the supporting functions required by the principal design features, construction, and safe operation of the facility; and that the design and construction of the utility system will not adversely affect facility performance.

The applicant has accurately described the required functions of the communication system, including all the materials and components that are necessary so that it will function as required and at the capacity required. The staff has evaluated the adequacy of the applicant's proposed design criteria and bases for the communication system and the requirements for facility operations. The staff has determined that the applicant's proposed design of the communication system is consistent with the principal design criteria and bases. The system's design does not interfere with the design of the principal design features or the safe operation of the facility. Therefore, there is reasonable assurance that the communication system, which the staff has found meets R447-25-7(2) through (6), R447-25-11(1) through (7), and R447-25-24, will provide adequate support for the principal design features.

The applicant has accurately described the required functions of the electric and lighting system, including all the materials and components that are necessary so that it will function as required and at the capacity required. The staff has evaluated the adequacy of the applicant's proposed design criteria and bases for the electric and lighting system and the requirements for facility operations. The staff has determined that the applicant's proposed design of the electric and lighting system is consistent with the principal design criteria and bases. The system's design does not interfere with the design of the principal design features or the safe operation of the facility. Therefore, there is reasonable assurance that the electric and lighting system, which the staff has found meets R447-25-7(2) through (6), R447-25-11(1) through (7), and R447-25-24, will provide adequate support for the principal design features. On the basis of its review, the staff concludes that the design of the electric and lighting system conforms to all applicable regulations and industry standards and is acceptable.

The applicant has accurately described the required functions of the water and waste water systems, including all the materials and components that are necessary so that it will function as required and at the capacity required. The staff has evaluated the adequacy of the applicant's proposed design criteria and bases for the water and waste water systems and the requirements for facility operations. The staff has determined that the applicant's proposed design of the water and waste water systems is consistent with the principal design criteria and bases. The system's design does not interfere with the design of the principal design features or the safe operation of the facility. Therefore, there is reasonable assurance that the water and waste water systems, which the staff has found meets R447-25-7(2) through (6), R447-25-11(1) through (7), and R447-25-24 will provide adequate support for the principal design features.

Section 3.4.2 Auxiliary Facilities

The staff has reviewed the auxiliary facilities for Envirocare's low-level waste disposal facility according to SRP Section 3.4.2 to verify that sufficient information has been provided by the applicant for each auxiliary facility that is required by the facility design; that each auxiliary facility has been designed to provide the supporting functions required by the principal design features, construction, and safe operation of the facility; and that the design and construction of the auxiliary facilities will not adversely affect the disposal facility performance.

The staff concludes that the objectives of the review have been met and that the review supports the following conclusions for the auxiliary facilities.

The applicant has accurately described the required functions of each auxiliary facility, including all buildings and roadways necessary to function as required by the disposal facility design, construction, and operation. The staff has determined the adequacy of the applicant's proposed design criteria and bases for each auxiliary facility. The staff has determined that each auxiliary facility conforms to the design criteria and bases and that the design does not interfere with the design of the principal design features, construction, or operation of the disposal facility. Therefore, there is reasonable assurance that the auxiliary facilities which the staff has found meet R447-25-7(2) through (6) and R447-25-24, will provide adequate support for the principal design features.

On the basis of its review, the staff concludes that the design of each auxiliary facility conforms to all applicable regulations and industry standards and is acceptable.

Section 3.4.3 Fire Protection System

The staff has reviewed the fire protection system for the Envirocare low-level waste disposal facility according to SRP Section 3.4.3. The staff concludes that the fire protection system has been designed: (1) to maintain occupational exposures as low as is reasonably achievable if an accidental fire should occur; and (2) to be compatible with the facility's radiation safety and emergency planning programs. The applicant has provided provisions for an adequate training program for personnel in fire prevention and protection. The fire protection system, therefore, meets R447-25-6(2)(c) and (d), R447-25-7(11) and R447-25-21, as they relate to fire protection.

In meeting these requirements, the applicant has used the recommended methods in the following national fire codes published by the National Fire Protection Association (NFPA):

1. NFPA 801-1986, "Recommended Fire Protection Practice for Facilities Handling Radioactive Materials"

2. NFPA 901-1981, "Uniform Coding for Fire Protection"

On the basis of its review the staff concludes that the proposed fire protection system is reasonable and acceptable.

Section 3.4.4 Erosion and Flood Control System

The staff has reviewed the erosion and flood system for Envirocare's low-level waste disposal facility according to SRP Section 3.4.4.

During the operation of the facility, diversion channels and flood embankments will be constructed to protect the site from the effects of on-site flooding. The diversion ditches will eventually become part of the long-term design against flooding.

For both off-site and on-site local flooding, the UBRC staff independently estimated peak flood flows and velocities to determine the adequacy of the design features. These features were analyzed in accordance with the hydrologic procedures discussed in SRP 6.3.1. On the basis of these independent analyses, the staff concludes that the design of the facility meets the requirements of R447-25-24(1)(e) and (f), so that site hydrologic features, when enhanced with the proposed design features, will prevent erosion and flooding of the disposal units during operation. Additional details related to the staff analysis are found in SRP 6.3.1; particularly for those features that will become part of the long-term design.

CHAPTER 4

FACILITY OPERATIONS

CHAPTER 4
FACILITY OPERATIONS

CONCLUSIONS OF THE REVIEW/Utah Bureau of Radiation Control

Section 4.1.2 On-Site Acceptance Review

The staff has reviewed the applicant's procedure for the receipt and inspection of incoming wastes at the Envirocare facility according to SRP Section 4.1 of NUREG 1200.

The applicant's procedures and the conditions written into the license will result in inspections that provide reasonable assurance that waste entering the disposal facility meets all appropriate rules or regulations. The applicant's procedure and license conditions will result in the identification of waste class, chemical and physical content, the shipper identification and assurance that the waste meets the requirements for waste form and classification in accordance with R447-15-307.

Section 4.1.5 Receipt and Inspection of Waste

The staff reviewed the applicant's procedures for the receipt and inspection of waste entering the Envirocare low-level waste disposal facility according to SRP Section 4.1 and finds that the information is as recommended in NUREG-1199, Section 4.1.

The applicant's procedures will result in routine inspections that provide reasonable assurance that waste entering the disposal facility meets the packaging, labeling, placarding, and survey requirements of the U.S. Department of Transportation and R447-19-100.

The applicant's procedures will result in verification of the waste manifest requirements of R447-15-311, including identification of the waste class, chemical and physical contents, identification of the person shipping the waste, and probable assurance that the waste meets the requirements for waste classification as required by R447-15-307 and 308

The applicant's procedures provide for adequate and reasonable measures to ensure that the waste does not contain hazardous constituents, as defined by the U.S. Environmental Protection Agency's regulation in 40 CFR 261.

The applicant's procedures help to ensure that the performance objectives of R447-25-18 through 22, will be met with regard to the following:

1. Protection of the general population from releases of radioactivity and the maintaining of any releases as low as is reasonably achievable as required by R447-25-19.

2. Protection of individuals from inadvertent intrusion as required for certain waste classes that are identified and verified by the applicant's inspection procedures and as required by R447-25-20.

3. Protection of individuals during operations as determined by a comparison of exposures against R447-15 as it applies to occupational exposures and as required by R447-25-21.

4. Stability of disposal site after closure (R44 - 22) as ensured by meeting the minimum waste form and stability requirements of R447-15-308.

Section 4.2 Waste Handling and Interim Storage

The information provided in the Envirocare license amendment application regarding waste handling and storage has been reviewed according to SRP 4.2. The reviewer conclude that the waste handling and storage operations are designed to maintain radiation exposure as low as is reasonably achievable and minimize erosional effects. Therefore, certain requirements of R447-25-24 and R447-25-7 are satisfied.

Section 4.3 Waste Disposal Operations

The staff has reviewed the waste disposal operations for the Envirocare low-level waste disposal facility in accordance to SRP 4.3.

The conclusions are that the applicant's procedures will dispose of wastes in a manner that maintains: (1) the embankment stability and integrity; (2) places and covers wastes in a fashion that limits water infiltration and the radiation dose in contact with the surface of the disposal cell to levels that will permit the applicant to comply with the provisions of R447-15; (3) locate, map, and mark boundaries of embankments/cells; (4) provide for a buffer zone between disposal cells and/or site boundaries; and (5) permits disposal unit closure and site closure in accordance with applicant's plans.

Wastes will be placed to avoid voids so that each lift meets compaction requirements as committed to by the applicant.

Wastes will not be disposed of within buffer zones and the buffer zones will be of sufficient size to provide for early warning of any failure of a design feature. The buffer zones size will also allow for mitigation measures, if needed, to take place within the zone.

The reviewer conclude the waste disposal operations meet appropriate provisions of R447-25-7, R447-25-21, R447-25-23, and R447-25-24.

CONCLUSIONS OF THE REVIEW/Utah Bureau of Water Pollution Control

Section 4.3 Waste Disposal Operations

1. Control of Liquid Content of Wastes - the staff have determined that Envirocare must provide and execute testing of the liquid content of wastes upon receipt of wastes at the disposal facility in order to assure performance as per the approved design. As a result, the license will require that Envirocare submit a plan for such testing and control for all wastes received, for Executive Secretary Review and approval before receipt of any waste for disposal, see License, Appendix B, Part D 4 and 5. Envirocare will also be required to record and report the results of said testing. Materials failing to meet the liquid content requirement will stabilized in accordance with approved procedures and retested before placement in the LLRW Embankment, or refused receipt and returned to their place of origin. Regular monitoring and reporting of the wastes liquid content will also be required, see license, Appendix B, Part I E 9. Moisture control for construction purposes will be controlled according to the Construction QA/QC Plan required by License, Appendix B, Part I D 4.

2. Temporary Storage of Wastes - the staff have determined that Envirocare's plans for the temporary storage of wastes must be revised in order to prevent the release of contaminant to local soils and ground water. Consequently, the license will require that Envirocare submit detailed description and engineering plans and specifications for temporary waste storage facilities and operations, and receive Executive Secretary approval before the receipt of any waste, see License, Appendix B, Part I D 7 and Part I H 12. However, temporary storage of LLRW materials will be allowed for a brief period if the wastes are stored in water-tight containers, while Envirocare is in the process of securing approval of the permanent temporary waste storage area.

3. Waste Disposal Operations - the staff have determined that Envirocare's description of waste disposal operations does not provide sufficient detail to allow the staff to determine if is meets the criteria of NUREG 1200. SRP Section 4.3. As a result, the license will require Envirocare to submit a detailed description and receive staff approval before any construction at the disposal facility, see License, Appendix B, Part I D 4 and 7, and H 12. This plan will adequately address all the elements in Section 4.3 of the SRP, except the filling of void spaces.

4. Buffer Zone - the staff are unable to determine if the 50 foot zone proposed between the "edge of the embankment and the fence" is enough distance for environmental monitoring and mitigative measures. This can only be determined after: 1) final engineering design and embankment location are verified, 2) the hydrogeologic characteristics of the site are fully known, including hydraulic gradient, flow direction, average linear velocity, etc., 3) Ground water compliance monitoring wells are located relative to the disposal facility, and 4) Potential ground water mitigative/remedial measures are identified in the Contingency Plan. Consequently, the license requires said evaluation and inclusion of the necessary information into the final design of the LLRW Embankment, see License, Appendix B, Part I H 10 and D 2.

5. Other Sources of Potential Discharge to Ground Water - the staff are unable to determine if the following related facilities have adequate design and operation to prevent the release of contaminants to soil or ground water:

   a. Railcar Rollover
   b. Secondary railcar unloading area
   c. Railcar wash down area
   d. Truck wash at the administration building
   e. Temporary truck wash at the disposal facility
   f. Evaporation pond

   As a result, the license will require Envirocare to submit detailed engineering plans and descriptions and receive Executive Secretary approval before receipt of waste at the disposal facility, see License, Appendix B, Part I H 12. However, Envirocare will be allowed to receive and temporarily store wastes if they arrive on site and are maintained in water-tight containers.

6. Reuse of Decc ..nination Water - the staff have ..ermined that water used to decontaminate vehicles or equipment must be discharged only to an Executive Secretary approved facility in order to prevent contamination of ground water. This may include reuse of the water for dust depressing or moisture control on the low-level radioactive waste embankment, if this reuse does not cause the embankment to surpass them moisture content criteria as determined in the Construction QA/QC Plan (License, Appendix B, Part I D 4). As a result, the license will require prior Executive Secretary approval of any disposal or reuse of water used for decontamination purposes, see License, Appendix B, Part I D 9.

7. Operational Ground Water Monitoring - the staff have determined that Envirocare's description of operational ground water monitoring is incomplete, and consequently cannot determine if the measures satisfy the requirements of UAC R447-15 and R447-25. As a result, the license will require Envirocare to complete the following activities before construction of the disposal facility:

   a. Characterization of local hydrogeology, including ground water flow modeling, see License, Appendix B, Part I H 3 and 8.

   b. Completion of a compliance monitoring well network, see License, Appendix B, Part I E 2.

   c. Demonstration that the compliance monitoring well network will provide early warning and sufficient warning to evaluate the need for mitigative/remedial measures and implement the preferred measure while the contaminant remains in the buffer zone, see License, Appendix B, Part I H 3, 8 and 10.

8. Waste Characterization Monitoring - in order to ensure that the LLRW Embankment performs in accordance with approved design, a waste characterization and control plan has been required (License, Appendix B, Part I H 13). The purpose of this plan is to ensure that: 1) only allowable concentrations of low-level radioactive wastes are received for disposal, and 2) that hazardous waste and hazardous constituents are denied disposal in the LLRW Embankment, in accordance with the requirements of the license, Appendix B, Part I D 5 and 6. Regular monitoring and reporting of the waste characteristics will also be required, see license, Appendix B, Part I E 8.

CONCLUSIONS OF THE REVIEW/Utah Bureau of Radiation Control

Section 4.4 Operational Environmental Monitoring and Surveillance

The staff has reviewed the operational environmental monitoring program as proposed by Envirocare according to SRP 4.4. The reviewer(s) concludes the program provides for compliance with R447-15 and R447-25. The applicant's environmental monitoring program includes evaluation of radiological and/or chemical constituents as potential contaminants in air, soil, surface water, groundwater, and vegetation. This includes surveillance of controlled access areas and nearby site environs. The licensee has available the resources to conduct the environmental monitoring program. License conditions number 22, 25 and 28 address issues relevant to the licensee's environmental monitoring program.

CHAPTER 5

SITE CLOSURE AND INSTITUTIONAL CONTROLS

CHAPTER 5
SITE CLOSURE AND INSTITUTIONAL CONTROLS

CONCLUSIONS OF THE REVIEW/Utah Bureau of Radiation Control

Section 5.1.1 Surface Design and Erosion Protection

The areas have been addressed and the staff conclusions are found in Section 3.1.5 and Section 6.3.1 of this Safety Evaluation Review.

CONCLUSIONS OF THE REVIEW/Utah Geological and Mineral Survey

Section 5.1.2 Geotechnical Stability

The geotechnical stability aspects of the proposed site closure plan for the Envirocare low-level waste disposal facility has been reviewed according to SRP 5.1.2. The objectives of the review are to ensure that: (1) the overall site grading plan provides for adequate cover on all the disposal unit excavation caps and for appropriate grading to direct the flow of surface water away from the excavations, taking into consideration the anticipated long-term settlement and/or subsidence at the site; (2) all the natural and artificial slopes of dikes and ditches at the disposal site will be stable in the long term and the disposal site will require minimal care and maintenance during the institutional control period; (3) the monitoring programs to evaluate the performance of the disposal excavations are adequate in scope so that the needed data can be collected; and (4) the applicant has committed to use all the data collected during the operational phase of the facility to revise and/or improve the final site closure plan that will be submitted before site closure.

The information in the license amendment application has been reviewed to determine if:

1. The applicant has adequately described how the excavation will be backfilled, how the excavation cap will be constructed, and how the performance of the excavation will be monitored.

2. The applicant has committed to analyze the monitoring program data, either to validate the predicted performance of the excavation cap or to change, if necessary, the design and/or construction procedures to enhance the performance of the backfill and cap.

3. The applicant's proposal for final grading of the site provides for a cover of adequate thickness on all excavations and appropriate grading to direct the flow of surface water away from, the excavations.

4. All artificial and natural slopes of the dikes and ditches within the disposal site will be stable in the long term.

5. The long-term monitoring program to evaluate the performance of the geotechnical aspects of the disposal site is adequate in scope and presented in appropriate detail.

6. The applicant has committed to use the data and experience gained during the operational phase and to revise and/or improve the site closure plan that will be submitted for review during the final stage of the operational phase.

The information on the geotechnical stability aspects of the site closure plan in the license amendment application is adequate to satisfy the objectives of this review. On the basis of information provided for this review, there is reasonable assurance that the disposal facility, if closed according to the site closure plan, will satisfy the long-term performance objectives of R447-25-7(7), R447-25-11(6), R447-25-22, and R447-25-25(1)(j).

The geotechnical stability aspects of the site closure plan in the license amendment application meet all applicable regulations and are acceptable.

CONCLUSIONS OF THE REVIEW/Utah Bureau of Radiation Control

Section 5.2 Decontamination and Decommissioning

The staff has reviewed the decontamination and decommissioning plan for the Envirocare radioactive waste disposal facility according to the SRP Section 5.2.

The staff has verified that sufficient information exists to: (1) meet the requirements of R447-25-15; (2) substantiate fixed and removable contamination levels for facilities, equipment or other items for unrestricted release will be below those specified by license condition 26; and (3) wastes generated during decontamination will be disposed of on-site.

Furthermore, the staff concludes the site will be capable of meeting the performance objectives of R447-25 after decommissioning. License Condition 60 addresses these performance criteria during the post-closure period.

CONCLUSIONS OF THE REVIEW/Utah Bureau of Water Pollution Control

Section 5.3 Post-operational Environmental Monitoring

Ground Water Monitoring - the staff have determined that Envirocare's postclosure ground water monitoring plan is incomplete. As a result, the license will require Envirocare to submit a plan for postclosure ground water monitoring and receive Executive Secretary approval before any construction of the disposal facility, see License, Appendix B, Part I H 6.

CHAPTER 6

SAFETY ASSESSMENT

CHAPTER 6
SAFETY ASSESSMENT

CONCLUSIONS OF THE REVIEW/Utah Bureau of Water Pollution Control

Section 6.1.3 Radionuclide Release/Normal Conditions

Ground Water Pathway - the staff have determined that based on the waste concentration limits specified in the license and the contaminant transport modeling information submitted, that the radionuclides released as leachates from the base of the LLRW Embankment will be attenuated during both advective flow to the water table and diffusive transport in the unsaturated zone. The staff have also determined that the concentration of each of the radionuclides in the ground water at the water table will be maintained at or below the Ground Water Quality Standards for a period of time in excess of 500 years.

Section 6.1.5 Transfer Mechanism - Groundwater

The staff have carefully reviewed the input parameters and the code used for simulation of the unsaturated zone transport of the radionuclides allowed for disposal by the license. Though site specific information was limited, the assumed values for distribution coefficients, retardation factors, diffusion coefficients and hydraulic inputs to the model were sufficiently conservative to overcome the data limitations and adequately simulate conditions expected at the site. The contaminant transport modeling demonstrated that the concentrations of the radionuclides at the water table will not exceed the Ground Water Quality Standards for a period of time in excess of 500 years. Longer periods of time would be required for horizontal transport of the radionuclides to a location where ground water could be withdrawn for consumptive purposes.

In addition, the Groundwater Quality Standards have been established for the protection of ground water for purposes of human consumption, primarily on the basis of EPA drinking water MCLs (maximum concentration limits). Consequently, these standards represent acceptable concentrations of radionuclides with respect to dosage. Therefore, the contaminant transport evaluation has shown satisfactory dosage assessment relative to the ground water pathway. This assessment also includes an extra built-in margin of safety in that though the water table aquifer is unfit for drinking water uses without significant pretreatment (Class IV aquifer), Envirocare has been required to demonstrate that the concentration of the radionuclides will not exceed drinking water MCLs at the water table for at least a 500 year period.

CONCLUSIONS OF REVIEW/Utah Bureau of Radiation Control

Section 6.1 Through 6.1.6 Release of Radioactivity

The general purpose of the sections of this portion of the SRP is to demonstrate that Envirocare has provided reasonable assurance that the following Utah Bureau of Radiation Control Rules (as performance objectives) will be met.

1. R447-15 "Standards for Protection Against Radiation"
2. R447-25-19 "Protection of the General Population from Releases of Radioactivity"

The two regulations lir adioactive releases to off-site a . Furthermore, R447-25 limits doses such that the following annual doses to the public will not be exceeded:

A. 25 millirem to the whole body
B. 75 millirem to the thyroid gland .
C. 25 millirem to any other organ .

Additionally, R447-15 stipulates the occupational radiation standards to be met by Envirocare, i.e., 1,250 millirem per quarter to an on-site worker during disposal operations.

In order to evaluate the various pathways for exposure to radiation, the UBRC and later, the applicant, contracted with Rogers and Associates Engineering, Inc., Salt Lake City, Utah, to perform the appropriate pathways analyses. The model, PATHRAE, models off-site and on-site pathways through which persons may come in contact with contaminated wastes.

The off-site pathways include groundwater transport to a surface river or a well, surface (wind or water) erosion, facility overflow, and atmospheric transport. The on-site pathways include direct gamma exposure, dust inhalation, food grown on the waste site, biointrusion, and radioactive gas inhalation. On-site pathways of concern arise principally from worker doses during operations and from post-closure site reclamation (intruder) activities such as constructing a house and living on-site, growing edible vegetation on-site, and drilling wells for irrigation or drinking water.

Exposures to individuals were calculated based on unit concentrations (1 pCi/g) of each radionuclide postulated to be present in waste disposed at the Clive facility. The unit concentration dose results were then combined with applicable dose criteria to infer proposed concentration limits for the safe disposal of waste at the Clive facility. The quotients of the applicable dose criteria divided by the unit concentration dose results provided scaling factors by which the unit concentrations were multiplied to determine the maximum permissible concentrations of radionuclides in the waste.

Any "inferred concentration limit" or a fraction thereof provides reasonable assurance that if an individual were exposed to any of the licensed radionuclides, the resultant exposure would not exceed the appropriate annual exposure standards under postulated conditions. The "inferred concentration limits" for each isotope or a lesser value (as requested by the applicant) is a condition of the license. (See Draft License appended).

The information provided by the applicant and also generated contractually for the UBRC demonstrates that:

1. Potential impacts for on-site individuals, conducting routine activities during the facility operational period, will be controlled so that they will not exceed the limits specified in R447-15.

2. Potential off-site release will be controlled so that impacts on individuals through any combination of exposure pathways will not exceed the limits specified in R447-25-19.

Section 6.2 Intrud.. Protection

The staff has reviewed the intruder protection systems according to Section 6.2 of the SRP. The staff concludes that the engineered intruder barriers will provide reasonable assurance that an inadvertent intruder will be adequately protected. This is for the period after active control is discontinued. Class C wastes will not be authorized for disposal therefore, the requirement of R447-25-25 is not relevant. The staff concludes that the requirements in R447-25-8, 11 and 20 are met by the facility design.

Section 6.3.1 Long-Term Stability

The SRP Section 6.3, concerns itself with the following parameters: site erosion and maximum probable flooding and precipitation, slope failure and liquefaction and differential settlement.

The staff have reviewed the information submitted by the applicant regarding, flooding and erosional effects on long-term stability including: maximum probable flood and maximum probable precipitation and those erosion design features which should mitigate the effects of those probabilist events. Accordingly, the staff concludes that on-site drainage channels, erosion protection for perimeter ditches, and erosion protection for the embankment are adequate and meets the relevant requirements in R447-25-7.

CONCLUSIONS OF THE REVIEW/Utah Geological and Mineral Survey

Section 6.3.2 Stability of Slopes

The long term stability of the slopes at the Envirocare low-level waste disposal facility has been reviewed according to SRP 6.3.2. The objectives of this review were to ensure that: (1) critical slopes at the disposal site have been identified for evaluation; (2) the information on the geotechnical characterization of the slope area and borrow material is adequate; (3) slope characteristics have been described in appropriate detail; (4) the design and analysis of slope stability were presented in appropriate detail; (5) there are provisions for quality control during construction; and (6) information in the license amendment application meets SRP 6.3.2.

The information in the license amendment application have been reviewed to determine if:

1. The applicant has identified both engineered and natural slopes at, or in, the general vicinity of the disposal facility that should satisfy the long-term stability requirement of the regulations.

2. The information in Section 2.5 is adequate to enable the reviewer to independently judge the applicant's interpretation of the stratigraphy and design parameters used in the slope stability analyses.

3. The applicant's description of the slope characteristics, cross-sections, the soil and foundation conditions at the slope, the summary and description of both the static and dynamic properties of the soil, and the phreatic surface and seepage forces used in the analysis are a reasonable and conservative interpretation of the available data.

4. In the static and dynamic analyses performed by the applicant, reasonable and conservative design assumptions were used and uncertainties were considered with regard to the shape of the slope, the boundaries of several types of soil within the slope, forces acting on the slope, pore-water pressure within the slope, failure surface corresponding to the lowest factor of safety, the effect of assumptions inherent in the method of analyses, and adverse environmental conditions.

5. The applicant has definite plans for applicable quality control actions pertaining to both the selection and excavation of borrow materials and the compaction phase of earthwork.

The information on both short-term and long-term slope stability in the license amendment application is adequate to satisfy the objectives of this review. On the basis of data and analyses provided for this review, the applicant has proven that the factors of safety against short-term and long-term failure of engineered slopes and natural slopes at the site are greater than the acceptable minimum of 1.30 for short-term and 1.50 for long-term static stability and greater than 1.0 for dynamic stability for both cases. Therefore, there is reasonable assurance that the slopes at the disposal facility are stable in the long term and that the slope stability requirements of R447-25-8(4), R447-11(6), R447-25-22, R447-25-23(1)(i), R447-25-24(1)(a), and R447-25-24(1)(b) are met.

On the basis of this review, it has been determined that the long-term slope stability aspects of the license amendment application meet all the requirements of the applicable regulations.

Section 6.3.3 Settlement and Subsidence

The long-term settlement and/or subsidence aspects for the Envirocare low-level waste disposal facility were reviewed according to SRP 6.3.3. The objective of the review was to ensure that: (1) information on the site characteristics, construction of the facility, waste disposal operations, and disposal excavation caps is adequate; (2) the areas that are potentially susceptible to long-term settlement have been identified and their modeling (characterization of the problem) is reasonable and conservative; (3) the uncertainties have been considered and addressed appropriately in the settlement analyses; (4) the applicant has committed to perform remedial actions if long-term settlement should be a potential problem; and (5) the information presented meets the guidance and acceptable criteria in SRP 6.3.3.

The information in the license amendment application has been reviewed to determine if:

1. The information on site characteristics, the excavation and backfilling of disposal excavations during the operations phase, and disposal excavation cap design and construction was adequate to justify the applicant's interpretation of stratigraphy, the typical section of disposal excavations, and the parameters used in the settlement analyses.

2. Both the general areas within the disposal site and the excavation cover areas that are potentially susceptible to long-term settlement are identified, and the applicant's description of the typical sections, the long-term condition of the backfill and buried waste were within the excavation, the parameters used in estimating the settlement, and the assumptions on groundwater conditions were a reasonable and conservative interpretation of the available data.

3. The uncertainties such as severe events or conditions resulting in settlement, the extent and boundaries of the various materials within the sections being analyzed, and the effect of assumptions inherent in the method of analysis were considered by the applicant in the settlement analyses.

4. The applicant has provided definite proposals for remedial actions if excessive settlement and/or settlement-induced cracks should occur in the disposal excavation cover, and evaluated the slope and feasibility of such proposals.

The information on long-term settlement and its safety implications is adequate to satisfy the objectives of this review. On the basis of the review of information provided by the applicant and the commitment for remedial action during the operational phase and initial 5 years or longer, if necessary, of the institutional control phase, the applicant has satisfactorily demonstrated that the potential for long-term settlement and/or cracking of the disposal excavation cover is minimal and thereby the settlement and/or subsidence aspects of R447-25-8(4), R447-25-11(6), R447-25-22, R447-25-24(1)(a), and R447-25-24(1)(b) are satisfied.

On the basis of this review it has been determined that the adverse effect of long-term settlement and/or subsidence on the performance of the disposal facility is minimal. The information on the settlement and/or subsidence aspects meets all the applicable regulations, contingent on the commitment by the applicant to perform remedial actions, if necessary, to mitigate the adverse effects of settlement and/or subsidence on the performance of the disposal facility.

CHAPTER 7

OCCUPATIONAL RADIATION EXPOSURE

CHAPTER 7
OCCUPATIONAL RADIATION EXPOSURE

CONCLUSIONS OF THE REVIEW/Utah Bureau of Radiation Control

Section 7.1 Occupational Radiation Exposure

The staff has reviewed the information on occupational radiation exposure in relation to the as low as is reasonably achievable (ALARA) principle for the Envirocare low-level waste disposal facility according to SRP Section 7.1.

The staff concludes that the ALARA policy, facility design, and operational considerations are acceptable because the applicant has met the training requirements of R447-18-12 and the ALARA provisions of R447-15-10.

The applicant has provided a management commitment to ensure that Envirocare will be designed, constructed, and operated in a manner consistent with the above criteria.

The objective of the facility radiation protection program is to maintain individual doses and total person-rem doses to facility workers and to members of the general public within the ALARA concept and to maintain individual doses within the limits of R447-15-101. Within restricted areas, sources of direct radiation and airborne radioactive contamination were considered in the review.

Section 7.2 Radiation Sources

The staff has reviewed the radiation sources for the Envirocare facility according to the SRP Section 7.2. During operation, the greatest potential for personnel radiation dose is direct gamma. Otherwise, the primary source(s) of personnel exposure is dust inhalation. A complete description of the routine operation source term evaluations are contained in "Evaluation of the Potential Public Health Impacts Associated With Radioactive Waste Disposal at a Site Near Clive, Utah", Rogers and Associates Engineering Corporation, Salt Lake City, Utah. The applicant has described a facility that can meet the standards found in R447-15.

Section 7.3 Radiation Protection Design Features

The staff has reviewed the information submitted in accordance with Section 7.3 of the SRP. This section deals with radiation protection design features such as equipment and facilities, shielding, ventilation and air monitoring instrumentation.

Due to the nature of the materials for disposal, much of these reviews are not relevant. Specifically, unique shielding is not necessary, nor is special ventilation since activities are conducted out of doors.

The applicant has provided documentation designating radiation control or limited access areas. The applicant has provided data regarding fixed area radiation monitoring and continuous airborne radioactivity monitoring instrumentation and monitoring methods.

On the basis of the exa nation of these materials, the st concludes the radiation protection design features are adequate and the applicant can meet the relevant sections of R447-15 and R447-25. In order to emphasize the importance of these items in the facility safety procedures and program, license conditions 19, 22, 24 and 25 were included.

Section 7.4 Radiation Protection Program

The staff has reviewed the following areas of the applicant's radiation protection program: (1) organization; (2) equipment, instrumentation and facilities; and (3) radiation protection procedures. These reviews were conducted utilizing 7.4 of the SRP.

On the basis of the review, it is concluded that the program is acceptable and generally meets the requirements stated in R447-15 and R447-25.

The duties, responsibilities and qualifications of the applicant's radiation program staff provides reasonable assurances of experienced and knowledgeable senior personnel. The organization provides for accountability and internal checks and balances for the radiation protection program. The applicant's training program for new hires or non-radiation personnel is adequate and includes basic radiation science and radiological health procedures as well as facility policies and procedures for the radiation control program.

The radiation protection features include a radiochemistry laboratory, personnel decontamination areas, access control points, office, and laundry and locker room facilities. These facilities are sufficient to maintain occupational radiation exposures ALARA.

Equipment to be used for radiation protection purposes includes portable radiation survey instruments, personnel monitoring equipment, fixed and portable area and airborne radioactivity monitors, laboratory equipment, air samplers, respiratory protective equipment, and protective clothing. The number and types of equipment to be used are adequate, and provide reasonable assurance that the applicant will be able to maintain occupational exposures ALARA.

All permanent and temporary facility personnel will be assigned beta-gamma thermoluminescent dosimeter badges. These badges will be processed quarterly, and more frequently if significant exposures are suspected. The applicant has provided policies and procedures for monitoring radiation exposures to visitors.

Appropriate caution signs, labels, and signals will be provided in accordance with R447-15-203 and R447-15-204. Bioassays will be provided when deemed necessary by the radiation protection manager or directed by the UBRC. Records of surveys, personnel monitoring, and bioassays will be maintained in accordance with R447-15-401.

Procedures have been developed to insure that exposure limits are not exceeded by on-site personnel; to control the radiation work areas; to post radiation areas; to control all radioactive materials on vehicles; equipment or personnel leaving the radiation control areas; to monitor and control contamination of facilities; to monitor airborne contaminants; and to provide for access and use, by qualified personnel, of appropriate radiation detection and monitoring instrumentation.

CHAPTER 8

ORGANIZATIONAL STRUCTURE

CHAPTER 8
ORGANIZATIONAL STRUCTURE

CONCLUSIONS OF THE REVIEW/Utah Bureau of Radiation Control

Section 8.1 Organizational Structure

The staff has reviewed the information provided in regards to the organizational structure. This includes the management structure and its resources available to support on going construction activities, staffing and other technical support necessary for safe facility operation. This information provides sufficient assurances that the operations can be conducted in accordance with licensee commitments and the Utah Radiation Control Rules. In order to emphasize the importance of this factor, license condition 31 has been included.

Section 8.2 Qualification of the Applicants

Utah Radiation Control Rule, R447-25-11(2) requires an applicant to demonstrate "the applicant is qualified by reason of training and experience to carry out disposal operations in a manner that protects health and minimizes danger to life or property".

The applicant has described the staff positions within the organization structure, the reporting chain of command up to the corporate chief executive officer, staff size for various positions and their responsibilities. The applicant has provided a description of the qualifications for each position and the resumes for key personnel currently employed. On this basis, the staff concludes the licensee's operating organization is acceptable and can met the requirements of R447-25-11(2). To emphasize the importance of this element of facility operations, license condition 32 is included.

Section 8.3 Staff Training Program

The licensee has provided information regarding the staff training program for the Envirocare facility to include the curriculium for each category of instruction and a schedule for refresher training. The UBRC staff has reviewed this information and finds it adequate and meets the goals of R447-18-12 and R447-25-11(2). To emphasize the importance of continued training, license condition 29 has been included.

Section 8.4 Emergency Planning

The staff has reviewed the information on emergency planning for the Envirocare low-level radioactive waste disposal facility. The licensee has established plans for responding to on-site emergencies of all types including those involving radioactivity. The licensee includes in these plans, procedures that include interaction with local governments and locally available medical treatment. The emergency response plans are judged to be adequate.

Section 8.5 Reviews and Audits

The UBRC staff has reviewed the information provided by the licensee relevant to internal reviews and audits of operational activities. The Envirocare program includes independent third-party audits of their engineering and safety related programs. The review and audit procedures include a frequency of audit schedule, a listing of subject matter to be reviewed and the qualifications of the individuals performing the audits. The licensee also provided information regarding senior staff reviews of operating programs. The UBRC concludes these programs are adequate.

Section 8.6 Facility Administrative and Operating Procedures

The licensee has provided information regarding the policies and procedures implemented in order to provide control over activities that are important to safe facility operations. The UBRC staff has reviewed these policies and procedures and finds that major safety related procedures and site operating policies have been addressed.

Section 8.7 Physical Security

The staff has reviewed the licensee's information relevant to physical security for the site. The licensee's program is comprehensive and should provide for adequate protection against theft or vandalism. License conditions 48 and 49 address aspects of the physical security plan.

CHAPTER 9

QUALITY ASSURANCE

CHAPTER 9
QUALITY ASSURANCE

CONCLUSIONS OF THE REVIEW/Utah Bureau of Radiation Control

Section 9.1 Quality Assurance During the Design and Construction Phase

The staff has reviewed the quality assurance (QA) program during the design and construction phase for Envirocare's low-level waste disposal facility according to SRP Section 9.1.

The organizations and persons performing QA functions have the required independence and authority to effectively carry out the QA program without undue influence from those directly responsible for costs and schedules.

The quality assurance requirements outlined in the SAR are applicable to both the design and construction phase as well as the operation phase of the project. The majority of the construction for this project has already been completed.

During the design phase of this project, the major objective has been to design a disposal embankment that will afford environmental protection, safety, and stability to at least the same degree as the Vitro disposal embankment at South Clive. The design criteria as presented in Section 3 of the SAR has been approved by the UBRC. Any design changes must be submitted for review and approval by the UBRC before implementation by Envirocare.

It was not the intent of this section to specify the number, model, weights, etc., of construction equipment to be used by the construction contractor during the project. The construction contractor is to be given the design/construction specifications, and required to meet them.

This section itemizes the specific tests and frequencies that must be performed on each type of construction material, calibration and control of measuring equipment, and records to be maintained.

This section also discusses corrective actions to be taken when non-conformance items are encountered.

During the operation of the waste disposal facility, Envirocare will assure that all activities affecting structures, systems, or components important to safety will be subject to the applicable controls of the QA program, and that specific equipment, environmental conditions, skills or processes will be provided as necessary.

The QA program covers activities affecting structures, systems, and components important to safety as identified in the SAR.

Accordingly, the staff concludes that the applicant's description of the QA program complies with applicable Utah Bureau of Radiation Control Rules and industry standards and can be implemented for the pre-operational, operational and post operational phases of the Clive facility.

CONCLUSIONS OF TI . REVIEW/Utah Bureau of Water . ollution Control

Section 9.1 Quality Assurance

Construction Quality Assurance - the staff have determine that the construction quality assurance/quality control (CQA/QC) procedures are in need of major revision in order to comply with recent EPA construction guidance. As a result, Envirocare will be required to submit and receive staff and Executive Secretary approval of a revised CQA/QC Plan before construction of the disposal facility, see License, Appendix B, Part I D 4. This plan will comply with the guidance found in the EPA document entitled "Construction Quality Assurance for Hazardous Waste Land Disposal Facilities", July, 1986, EPA/530-SW-86-031, and address related comments found in Notice of Deficiency No. 6 issued to Envirocare on November 26, 1990.

CONCLUSIONS OF THE REVIEW/Utah Bureau of Radiation Control

Section 9.2 Quality Assurance During the Operations Phase

The staff has reviewed the quality assurance (QA) program during the operations phase for Envirocare's low-level waste disposal facility according to SRP Section 9.2.

The organizations and persons performing QA functions have the required independence and authority to effectively carry out the QA program without undue influence from those directly responsible for costs and schedules.

The QA program describes the requirements, procedures, and controls that, when properly implemented, comply with Appendix B to 10 CFR 50, 10 CFR 50.55a and 50.55e.

The quality assurance requirements outlined in the SAR are applicable to both the design and construction phase as well as the operational phase of the project. The majority of the construction for this project has already been completed.

During the design phase of this project, the major objective has been to design a disposal embankment that will afford environmental protection, safety, and stability to at least the same degree as the Vitro disposal embankment at South Clive. The design criteria as presented in Section 3 of the SAR has been approved by the UBRC. Any design changes must be submitted for review and approval by the UBRC before implementation by Envirocare.

It was not the intent of this section to specify the number, model, weights, etc., of construction equipment to be used by the construction contractor during the project. The construction contractor is to be given the design/construction specifications, and required to meet them.

This section itemizes the specific tests and frequencies that must be performed on each type of construction material, calibration and control of measuring equipment, and records to be maintained.

This section also discusses corrective actions to be taken when non-conformance items are encountered.

During the operation of the waste disposal facility, Envirocare will assure that all activities affecting structures, systems, or components important to safety will be subject to the applicable controls of the QA program, and that specific equipment, environmental conditions, skills or processes will be provided as necessary.

The QA program covers activities affecting structures, systems, and components important to safety as identified in the SAR.

Accordingly, the staff concludes that the applicant's description of the QA program complies with applicable Utah Bureau of Radiation Control Rules and industry standards and can be implemented for the pre-operational, operational and post operational phases of the Clive facility.

CHAPTER 10

FINANCIAL ASSURANCE

CHAPTER 10
FINANCIAL ASSURANCE

CONCLUSIONS OF THE REVIEW/Utah Bureau of Radiation Control

Section 10.1 Financial Assurance

Utah Radiation Control Rules requires certain licensees to provide financial surety arrangements for the decontamination, decommissioning and reclamation of the licensee's grounds and facilities. This is an integral part of the licensing process and ultimately the license. The purpose of these rules is to ensure the protection of the public health and safety in the event of abandonment, default, or other inability of the licensee to meet the requirements of the rules or conditions of the license.

Envirocare was required to provide such surety for the NORM license and has, in fact, implemented the necessary financial surety. During the licensing process, Envirocare provided operation, closure, and post-closure plans (including long-term monitoring and maintenance) and associated costs to the UBRC for review and approval by the UBRC staff and engineers. Based on those plans and costs, a surety amount was established and approved by the UBRC, the Utah Attorney General's Office, and Envirocare's legal and financial consultants.

Currently, the type of financial surety arrangement accepted by the UBRC is a Trust Agreement with a cash bond in the amount of $779,000.00 plus interest. Essentially, the surety provides money to the Trustee, Key Bank of Utah, for reimbursements of costs to properly place a maximum of 300,000 cubic yards of contaminated material into the disposal cell; to complete all phases of the disposal cell embankment to the required design specifications; to decontaminate the grounds, equipment and facilities; and to monitor the site for thirty (30) years after its closure. The Trustee shall make payments from the surety fund w the Department of Health, UBRC shall direct. There are provisions in license condition 58 for the surety arrangement to be reviewed and updated annually.

The staff has again reviewed this plan and finds the applicant has submitted a comprehensive and acceptable financial assurance plan to cover estimated costs for decontamination, decommissioning and site reclamation. In particular, it complies with the UBRC rules including R447-25-30, R447-25-31, and R447-25-32.

The staff has reviewed the financial assurance plan for Envirocare low-level waste disposal facility.

The applicant has submitted a comprehensive financial assurance plan to cover the estimated costs of conducting all licensed activities over the planned operating life of the project, including costs of construction and disposal.

The staff has reviewed this plan and finds that it contains all the features considered essential for such a program and is, therefore, acceptable. In particular, it complies with the Utah Bureau of Radiation Control Rules including R447-25-30, R447-25-31 and R447-25-32.

GENERAL COMMENTS

GENERAL COMMENTS

CONCLUSIONS OF THE REVIEW/Utah Bureau of Water Pollution Control

Groundwater Permit Issues: Basis for Specific Groundwater Conditions

1. Ground Water Classification (License, Appendix B, Part I A) - 24 ground water quality samples from wells SC-1 through SC-5 which are located nearby the low-level radioactive waste (LLRW) embankment in Section 32. T. 1S. R. 11W., indicates that ground water has an average total dissolved solids (TDS) content of 34,914 mg/l. These five wells which are completed both in the shallow and deeper apparently confined aquifer, demonstrate similar TDS concentrations.

2. Background Ground Water Quality (License, Appendix B, Part I B) - background quality has been determined based on the same 24 samples from wells SC-1 through SC-5, collected as a part of the Vitro Embankment Environmental Impact Studies during September, 1981 through August, 1982; with partial radiochemistry data from April, 1987. Unfortunately many radionuclides proposed for disposal have gone unsampled in the existing ground water quality data. Notwithstanding, the Executive Secretary has set the ground water protection levels at the same concentrations as the Ground Water Quality Standards. Future sampling will yield information at a later date, before receipt of waste at the facility, which will allow the Executive Secretary to determine background values. Based on the new data the protection levels may be modified if the it is shown that background concentrations exceed the Ground Water Quality Standards, see Part I H 5.

3. Ground Water Protection Levels (License, Appendix B, Part I C) - protection levels have been set at the highest of the following two values:

   a. Ground Water Quality Standards (GWQS) - as defined in UAC R448-6-2, Table 1, for Beta and/or Gamma emitting man-made radionuclides, GWQS have been calculated from National Bureau of Standards (NSB) Handbook 69. For conservative purposes, the lowest concentration causing the equivalent 4 millirem/year dosage limit was selected from the criteria for the total body or any internal organ as found in NSB Handbook 69.

   b. Background Ground Water Quality - as determined from wells SC-1 through SC-5, as mentioned above.

   As more background ground water quality becomes available, especially site specific data, the protection levels may be modified by the Executive Secretary (License, Appendix B, Part I C 2).

   For those radionuclides without a value in NSB Handbook 69, an analog value was determined by the Bureau of Radiation Control using values from Table 1.b of "Limiting Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation, Submersion, and Ingestion", Federal Guidance Report No. 11 (EPA document EPA-520/1-88-020). The analog value was calculated from a ratio of the Annual Limit of Intake (ALI) values for ingestion from Federal Guidance Document No. 11 and the Maximum Permissible Concentrations for Water (168 hr week) from NSB Handbook 69 as follows:

Potassium-4 analog = $\frac{\text{K-40 ALI}}{\text{K-42 ALI}}$ X K-42 MPCw-168 hr
(MPCw-168hr)

The Ground Water Quality Standards, UAC R448-6-2, Table 1 require that for the case of multiple radionuclides "the sum of their annual dose equivalent to the total body or any organ shall not exceed four millirem/yr". In practice, this is usually accomplished by the Sum-of-Fractions Rule; which in turn requires discrete radiochemistry analysis of every radionuclide proposed for disposal, and the result divided by the corresponding protection level (or GWQS in this case), and the ratios summed. The Sum-of-Fractions Rule usually requires the sum of the ratios to be less than or equal to 1.0. However, this rule was designed for the circumstance where background concentrations are significantly smaller than the standard of compliance, resulting in fractions significantly less than 1.0. In this permit the Executive Secretary has determined to require Envirocare not to increase the background concentrations of the each of the radionuclides present in the uppermost ground water; and has consequently assigned the background concentrations as protection levels. This has created a problem in the application of the Sum-of-Fractions Rule because the sum of the ratios results in a value greater than 1.0. Because the background concentrations for three of the radionuclides (Pb-210, Th-230, and U-nat) appear to exceed the 4 millirem annual dosage requirement and in an effort to minimize the cumulative impact that multiple radionuclides may cause on the uppermost ground water, the Executive Secretary has determined to set the sum of the fractions at a higher value than 1.0, based on baseline conditions to be determined by Envirocare. The Executive Secretary expects that this summation value will include the first standard deviation in order to account for natural variance. The sum will be determined upon approval of the Accelerated Background Sampling Report required by Appendix B, Part I H 5 of the license.

As a consequence of this action the Sum-of-Fractions rule cannot be used in ground water quality compliance determinations until after completion of the background sampling. However, after the background concentrations have been determined and approved, permit compliance will be determined by both:

a. Comparison of the individual radionuclide concentrations with their individual protection levels, and by

b. Comparison of the current sum-of-fractions value with the initial or baseline summation value determined at the conclusion of the accelerated background monitoring.

4. Final Design (License, Appendix B, Part I D 2) - because the application was based on conceptual design data, Envirocare will be required to submit detailed final engineering design and specifications and secure Executive Secretary approval before any construction of the LLRW Embankment. Failure to construct any portion of the facility in compliance with the approved design or CQA/QC Plan will be cause for the Executive Secretary to require Envirocare to retrofit, reconstruct, or otherwise mitigate the facility to prevent the release of contaminants to ground water.

5. Compliance Monitoring (License, Appendix B, Part I E) - Envirocare will use statistical methods provided by EPA to determine compliance of ground water quality at the compliance monitoring wells with the ground water protection levels.

   Because the compliance monitoring wells have not yet been constructed, specific requirements have been provided to ensure the wells are adequate for the purpose. Envirocare will be required to construct the compliance monitoring well network and secure Executive Secretary approval before any construction of the LLRW Embankment.

   If at any time in the future, the Executive Secretary determines, after review of any compliance monitoring or other data, that the compliance monitoring well network needs to be modified, Envirocare will be notified to submit a plan and compliance schedule to complete the needed changes.

   Ground water monitoring will be quarterly and will include all the protection level parameters, including all the radionuclides proposed for disposal and their indicator decay products as to be determined in Part I H 7.

   Compliance monitoring will also include liquid moisture content testing and control of the waste in accordance with the plan approved by the Executive Secretary, pursuant to Part I H (11).

   Post closure monitoring has not yet been defined, consequently Envirocare will secure approval for such a plan.

6. Non-Compliance and Out-of-Compliance Status (License, Appendix B, Part I F) - these requirements recapitulate those found in UAC R-448-6-6.16 through 6.18.

7. Reporting Requirements (License, Appendix B, Part I G) - these parallel the compliance monitoring requirements to ensure reporting of the same. The notice of clay bottom liner and cover construction are to provide the Executive Secretary opportunity to inspect said construction. The semi-annual "As-built" report is to document construction as per approved design.

8. Hydrogeologic Report (License, Appendix B, Part I H 3) - some investigation has been completed in the area relevant to the nearby Vitro Embankment and the Mixed Waste Facility. However, site specific hydrogeologic data is necessary to support the compliance monitoring well system. Consequently, hydrogeologic studies will be completed before any construction of the LLRW Embankment. These will form the basis for the ground water flow modeling. Characterization of the unsaturated zone has been included here in order to evaluate any perching of leachates under the facility in the vadose zone and ensure adequate ground water compliance monitoring.

9. Determinati(of Indicator Radionuclide and D(y Products (License, Appendix B, Part I H 7) - because the radionuclides decay into distinctly different daughter products, it will be critical to identify all these daughters, and ensure they have established monitoring parameters in the permit, particularly for short-lived radionuclides. More mobile radionuclides must also be identified with the intent of focusing on those as lead indicators of ground water contamination. As a result, the extensive list of monitoring parameters found in the permit today may be modified at a later date to include a two phase approach, where a short list of mobile indicator parameters are monitored first, on a regular basis; an exceedance of which would trigger monitoring of a second phase comprehensive list of parameters.

10. Related Facilities Which Require Executive Secretary Approval (License, Appendix B, Part I H 12) - very little information, in terms of engineering design, has been submitted on various facilities related to receipt, handling, and temporary storage of wastes. In order to ensure these facilities meet the spill containment requirements of Part I D 7 of the permit, Envirocare will submit detailed engineering plans and secure Executive Secretary approval before receipt of any low-level radioactive waste not received and maintained in water-tight containers at the facility.

11. Contingency Plan (License, Appendix B, Part I H 2) - because the application omitted a Contingency Plan, the license will require Envirocare to submit and receive Executive Secretary approval of a Contingency Plan before construction of the disposal facility, see License, Appendix B, Part I H 2. This Contingency Plan will address all the comments found in Utah Bureau of Radiation Control Notice of Deficiency No. 6, Comment WPC-13, dated November 26, 1990. Satisfactory response to all these issues should also help satisfy Buffer Zone requirements, see License, Appendix B, Part I H 10.

Liquid Restriction and Control of Waste - In addition to the requirements above, Envirocare will be prohibited from receiving free liquid wastes (License, Condition 15), and will implement testing and control of the liquid content of the waste at the time of receipt, as required in License, Appendix B, Part I D 6, and Part I E 9, respectively.

Spill Containment - Envirocare will ensure that all waste handling and temporary storage facilities will prevent releases to soil and ground water by submitting detailed engineering plans and description and securing Executive Secretary approval of said facilities (see License, Appendix B, Part I D 7 and H 12).

LICENSE CONDITIONS

Judge Robert J. Bryan

UNITED STATES DISTRICT COURT FOR THE
WESTERN DISTRICT OF WASHINGTON
AT TACOMA

US ECOLOGY, INC., a California corporation, Plaintiff, v. NORTHWEST INTERSTATE COMPACT ON LOW-LEVEL RADIOACTIVE WASTE MANAGEMENT, and ROGER STANLEY, its Chairman, and ELAINE CARLIN, its Executive Director; LARRY ANDERSON, ADRIAN HOWE, JAMES IKEDA, GLENN MILLER, DAVID STEWART-SMITH, and JONATHAN CARTER, its State Representatives; WASHINGTON DEPARTMENT OF ECOLOGY, and CHUCK CLARK, its Director; UTAH BUREAU OF RADIATION CONTROL, and LARRY ANDERSON, its Deputy Director; UNITED STATES NUCLEAR REGULATORY COMMISSION, and IVAN SELIN, its Chairman; Defendants.	NO. C92-5091B AFFIDAVIT OF MAILING

STATE OF WASHINGTON)
) ss.
COUNTY OF KING)

I, Kathryn Lester, being first duly sworn on oath, depose and say:

PERKINS COIE
1201 THIRD AVENUE 40TH FLOOR
SEATTLE WASHINGTON 98101-3099
(206) 583-8888

That I am a secretary for the law firm of Perkins Coie, Seattle, Washington, that on the 10th day of August, 1992 I served true and correct copies of Declaration of William A. Gould and Plaintiff's Memorandum in Opposition to Compact and Washington State Defendants' Motion to Dismiss to the following, postage prepaid, United States Mail:

James K. Pharris
Assistant Attorney General
Ecology Division
4407 Woodview Drive SE, 4th Floor
PO Box 40117
Lacey, WA 98504-0117

Larry F. Anderson, Deputy Director
Utah Bureau of Radiation Control
Division of Environmental Health
288 N. 1460 West
Salt Lake City, UT 94116-0690

Kathryn Lester
Kathryn Lester

SUBSCRIBED AND SWORN to before me this 10th day of August, 1992, by Kathryn Lester

Carol L. Russell
Notary Public in and for the State of Washington, residing at Mercer Island.

My appointment expires 11-12-92

PERKINS COIE
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SEATTLE, WASHINGTON 98101-3099
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U.S. DISTRICT COURT
FOR THE WESTERN DISTRICT OF WASHINGTON
AT TACOMA

US ECOLOGY, INC., a California corporation, Plaintiffs, vs. NORTHWEST INTERSTATE COMPACT ON LOW-LEVEL RADIOACTIVE WASTE MANAGEMENT, and ROGER STANLEY, its Chairman, and ELAINE CARLIN its Executive Director; LARRY ANDERSON, ADRIAN HOWE, JAMES IKEDA, GLENN MILLER, DAVID STEWART-SMITH, and JONATHAN CARTER, its state representatives; WASHINGTON DEPARTMENT OF ECOLOGY, and CHUCK CLARKE, its Director; UTAH BUREAU OF RADIATION CONTROL, and LARRY ANDERSON, its Deputy Director; UNITED STATES NUCLEAR REGULATORY COMMISSION, and IVAN SELIN, its chairman; Defendants,	NO. C92-5091B

RULING ON FEDERAL DEFENDANTS' MOTION TO DISMISS in the above-entitled matter on July 2, 1992, before the Honorable Robert J. Bryan, United States District Judge, at the United States Courthouse, Tacoma, Washington.

Appearance of Counsel:

On Behalf of Plaintiff: MR. ROBERT L. DEITZ
MR. WILLIAM GOULD

On Behalf of Defendants: MS. SUSAN FONNER
MR. WILLIAM H. RUBIDGE

Corri L. Rene', CSR
Court Reporter

INDEX

(Excerpt of proceedings.)

THE COURT: Well, this is the Defendant -- or I guess we're calling it the Federal Defendants' Motion to Dismiss. And they bring this motion on two grounds; the first being that the administrative remedies with the Nuclear Regulatory Commission should be exhausted, and on the second ground that this court lacks jurisdiction under the Hobb's Act.

On the first ground, the exhaustion issue, I agree with the federal defendants on this. And it's my judgment that on that ground, the motion should be granted and the federal defendants should be dismissed from this case.

I thought about staying the case as to them, but it seems to me that, under the nature of this case, there would be no particular benefit for that. After any administrative remedies are exhausted, if it's appropriate to bring them back in, that can be done as easily, it seems to me, by bringing them back in as it could be by lifting a stay. I'm not sure that that would ever be appropriate; I make no finding in that regard. But it seems to me that a dismissal is more appropriate on exhaustion grounds than a stay.

I want it to be clear that the dismissal is on exhaustion grounds only and is without prejudice to any other grounds to have them in the case that may arise in the future. I make no ruling on the Hobb's Act, the ninth

circuit jurisdiction issue at this point.

I'm going to make some recommendations. At this point, these are only recommendations, but I would hope that Ms. Fonner would pass these on to the Commission, and that Mr. [illegible]ti consider them for his clients. It would be my recommendation that U.S. Ecology, as soon as possible, file some sort of formal complaint or petition with the NRC asking the NRC for the relief, whatever relief they request or for whatever sort of a hearing they might request stating the grounds, so that the issue is squarely before the Nuclear Regulatory Commission.

I would urge the Commission not to wait for that but to proceed sua sponte on the information they now have and on the petition or complaint, if and when it comes, to determine whether a hearing on these issues is appropriate, and to make that determination as soon as they can and to make it formally so that if they choose not to proceed with a hearing, the plaintiffs here will have an opportunity to ask the circuit for whatever relief might be appropriate. And so that if there is to be a hearing, it can be processed promptly. So I hope the Commission will move on the basis of the information they have now, along with any other information they get, to make their preliminary decision of whether they should have a formal hearing under the regulations.

If there is to be a hearing, I would urge and recommend and request and hope for rapid processing of that hearing. The reason I would request that and ask that the Commission not sit on its hands on this deal, is that it does seem to me that, depending on action of the Commission, if they take action, that the issues in this case may be substantially narrowed. It certainly would be helpful to me if the Commission would do whatever they're going to do before we get to trial in this case.

Those are only recommendations for what appear to me to be the sensible processing of the issues that are presented here. But I would hope that all concerned would proceed with this on the basis that everyone is trying to find a quick and inexpensive answer to these questions so that the wealth of the country not be spent in supporting lawyers but rather in getting to the bottom line of the real issues in this case.

And it does seem to me that the issues are fairly narrow, the issues with the federal defendants, and I would hope that they would not be needlessly complexified but made simple. It seems to me that we really are dealing in this part of the case with some very narrow issues, and I would hope that you could get, by cooperation and agreement and assistance to each other and not too many staff people involved in it, you could probably get to an answer to the

question to whether there should be proceedings quickly, and if there are to be proceedings, you could get to the merits very quickly. And I would hope that you would proceed to pace.

Those are recommendations only. I think I don't have authority other than to make recommendations after I determine that the federal defendants should be dismissed from this case. But that is my judgment. The motion is granted.

MR. DEITZ: Thank you, Your Honor.

MS. FONNER: Thank you, Your Honor.

(End of proceedings.)

I certify that the foregoing is a correct transcript from the record of proceedings in the above-entitled matter.

Corri L. Rene', CSR

Date

CERTIFICATE OF MAILING PERSONAL SERVICE

I certify that I mailed/personally served a copy of the foregoing document to which this certificate is attached, to the attorneys of record of the [illegible] defendants, the 6 day of May 92

UNITED STATES ATTORNEY

E Woolef

RECEIVED

MAY 0 7 1992

PERKINS COIE

Judge Bryan

FILED — RECEIVED — LODGED

MAY 6 1992

CLERK U.S. DISTRICT COURT WESTERN DISTRICT OF WASHINGTON AT TACOMA

DEPUTY

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON

US ECOLOGY, INC., a California corporation, Plaintiff, v. NORTHWEST INTERSTATE COMPACT ON LOW-LEVEL RADIOACTIVE WASTE MANAGEMENT, and ROGER STANLEY, its Chairman, and ELAINE CARLIN, its Executive Director; LARRY ANDERSON, ADRIAN HOWE, JAMES IKEDA, GLENN MILLER, DAVID STEWART-SMITH, and JONATHAN CARTER, its state representatives; WASHINGTON DEPARTMENT OF ECOLOGY, and CHUCK CLARKE, its Director; UTAH BUREAU OF RADIATION CONTROL, and LARRY ANDERSON, its Deputy Director; UNITED STATES NUCLEAR REGULATORY COMMISSION, and IVAN SELIN, its Chairman; Defendants.	)	No. C92-5091B MOTION TO DISMISS NOTED: May 29, 1992

Pursuant to Rules 12(b)(1) and (6) of the Federal Rules of Civil Procedure, federal defendants United States Nuclear Regulatory Commission and its Chairman, Ivan Selin, hereby move this Honorable Court to enter an order dismissing plaintiff's

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complaint. The grounds for this motion are set forth in the accompanying memorandum; a proposed order is also attached.

DATED this 6 day of May 1992.

MIKE McKAY
United States Attorney

WILLIAM H. RUBIDGE
Assistant United States Attorney

for JOHN F. CORDES, JR.
Solicitor

for SUSAN FONNER
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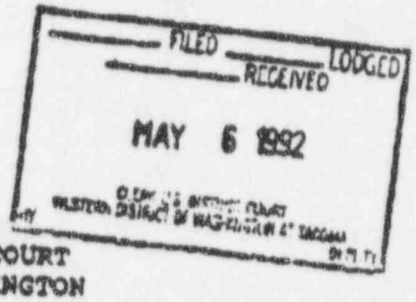
Judge Bryan



UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON

US ECOLOGY, INC., a California corporation,

Plaintiff,

v.

NORTHWEST INTERSTATE COMPACT ON LOW-LEVEL RADIOACTIVE WASTE MANAGEMENT, and ROGER STANLEY, its Chairman, and ELAINE CARLIN, its Executive Director; LARRY ANDERSON, ADRIAN HOWE, JAMES IKEDA, GLENN MILLER, DAVID STEWART-SMITH, and JONATHAN CARTER, its state representatives; WASHINGTON DEPARTMENT OF ECOLOGY, and CHUCK CLARKE, its Director; UTAH BUREAU OF RADIATION CONTROL, and LARRY ANDERSON, its Deputy Director; UNITED STATES NUCLEAR REGULATORY COMMISSION, and IVAN SELIN, its Chairman;

Defendants.

No. C92-5091B

FEDERAL DEFENDANTS' MEMORANDUM IN SUPPORT OF MOTION TO DISMISS

The United States Nuclear Regulatory Commission (NRC) and its Chairman, Ivan Selin, referred to herein as "the federal defendants", respectfully request the Court to dismiss plaintiff's complaint with respect to them pursuant to Rules 12(b)(1) and (6)

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of the Federal Rules of Civil Procedure (FRCP). With respect to such defendants, the Court lacks jurisdiction over the subject matter of plaintiff's claims and the complaint fails to state a claim upon which the Court can grant relief.

The Court should dismiss the complaint with respect to the federal defendants because plaintiff has failed to exhaust its administrative remedies available from the NRC. However, even if that omission is remedied by the plaintiff, this Court lacks jurisdiction to review plaintiff's claims against the federal defendants because the Court of Appeals has exclusive jurisdiction over the subject matter of those claims.

STATUTORY BACKGROUND

Under the Atomic Energy Act of 1954 (AEA), the Atomic Energy Commission, the predecessor to the NRC,[1] was given the sole licensing and regulatory authority over the peaceful uses of nuclear energy in the United States. The NRC's regulatory authority spans most commercial activities relating to radioactive materials,[2] including the disposal of radioactive wastes. The Commission's jurisdiction in the field of radiation health and safety is exclusive, unless the Commission has ceded this

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[1]The Atomic Energy Commissionw as abolished and its licensing and regulatory functions under the AEA transferred to the NRC effective January 19, 1975. See 42 U.S.C. §§ 5801, 5841, 5842; Executive Order 11834 (Jan. 15, 1975).

[2]Naturally occurring radioactive material (NORM), except source material (see note 3, infra), is not subject to regulation under the AEA.

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jurisdiction under an Agreement entered into pursuant to Section 274 of the AEA, 42 U.S.C. § 2021.

Section 274 was enacted in 1959 as an amendment to the AEA. This provision permits the Commission to cede to the states jurisdiction to regulate source materials, byproduct materials, and small quantities of special nuclear materials, as defined by the AEA.[3] When these materials require disposal and fall within certain specifications, they are termed "low-level radioactive

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[3]The terms "source material," "special nuclear material," and "byproduct material" are defined in the AEA, as follows:

> The term 'source material' means (1) uranium, thorium, or any other material which is determined by the Commission pursuant to the provisions of section 61 to be source material; or (2) ores containing one or more of the foregoing materials, in such concentration as the Commission may by regulation determine from time to time. AEA § 11z., 42 U.S.C. § 2014(z).
>
> The term 'special nuclear material' means (1) plutonium, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51, determines to be special nuclear material, but does not include source material; or (2) any material artificially enriched by any of the foregoing, but does not include source material. AEA § 11aa., 42 U.S.C. § 2014(aa).
>
> The term 'byproduct material' means (1) any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material, and (2) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content. AEA § 11e., 42 U.S.C. § 2014(e).

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waste (LLRW)" and fall within section 274,[4] which provides in pertinent part:

> a. It is the purpose of this section --
>
> * * *
>
> (4) to establish procedures and criteria for discontinuance of certain of the Commission's regulatory responsibilities with respect to byproduct, source, and special nuclear materials, and the assumption thereof by the States;
>
> * * *
>
> b. [T]he Commission is authorized to enter into agreements with the Governor of any State providing for discontinuance of the regulatory authority of the Commission under chapters 6, 7, and 8 [relating to regulation of special nuclear material, source material, and byproduct material], and section 161 [relating to general authority of the Commission] of this Act....
>
> During the duration of such an agreement it is recognized that the State shall have authority to regulate the materials covered by the agreement for the protection of the public health and safety from radiation hazards.

As the statute makes clear, the Commission is authorized to relinquish a portion of what had earlier been the exclusive federal jurisdiction over nuclear materials, and the state then assumes jurisdiction over that portion. Such an Agreement was entered into between the Nuclear Regulatory Commission and the

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[4] See, for example, the definition of low-level radioactive waste in section 2(9) of the Low-Level Radioactive Waste Policy Amendment Acts of 1985, 42 U.S.C. § 2021b.(9).

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State of Utah effective April 1, 1984. *See* 49 Fed. Reg. 14460 (April 11, 1984).[5]

Section 274j. of the AEA provides the NRC with the authority to terminate or suspend the Agreement with Utah and reassert licensing and regulatory authority should the Commission find that such termination or suspension is required to protect the public health and safety, or that Utah has not complied with one or more requirements of section 274. However, the NRC must give the State reasonable notice and an opportunity for a hearing before terminating or suspending all or part of the Agreement.[6] *See* AEA §274j.(1), 42 U.S.C. § 2021(j)(1).

PLAINTIFF'S COMPLAINT

Plaintiff's complaint does not implicate the federal defendants, except in Count VII and in Paragraph G of the prayer for relief. In Count VII, plaintiff alleges that under NRC regulations on Licensing Requirements for Land Disposal of Radioactive Wastes, 10 CFR Part 61, before low-level radioactive waste from other persons may be disposed of, the cognizant state or the federal government must certify a willingness to accept transfer of the disposal site license at closure, and that such

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[5]An amendment to the Agreement became effective May 9, 1990. *See* 55 Fed. Reg. 22113 (May 31, 1990).

[6]The Commission may temporarily suspend an agreement with a state without notice or hearing only if an emergency situation exists with respect to any material covered by the agreement creating danger which requires immediate action. AEA § 274j.(2); 42 U.S.C. § 2021(j)(2).

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disposal may be permitted only on land owned by the federal or state government. It further alleges that Utah has adopted the same rules under its Agreement program, but that it waived them at the Envirocare site "in contravention of federal and state law." Plaintiff also alleges that such waiver is unlawful, and maintains that because the site ownership requirement is related to public health and safety, the Nuclear Regulatory Commission is required to suspend or revoke Utah's Agreement state status. Therefore, among other things, US Ecology seeks a declaration that NRC's failure to insist upon compliance with the site ownership requirements violates federal law.[7]

DISMISSAL OF PLAINTIFF'S CLAIMS AGAINST THE FEDERAL DEFENDANTS

A. THE COURT SHOULD DISMISS THE COMPLAINT PURSUANT TO FRCP 12(b)(6) BECAUSE PLAINTIFF HAS FAILED TO EXHAUST ITS ADMINISTRATIVE REMEDIES

With respect to the federal defendants, this case appears to be an attempt to compel the NRC to take action that will affect the status of Utah as an Agreement state under section 274 of the AEA. Judicial review is not appropriate with respect to such a request "until the prescribed administrative remedy has been exhausted." Myers v. Bethlehem Shipbuilding Corp., 303 U.S. 41, 51 (1938). The Supreme Court has explained the basis for this

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[7] In its prayer for relief, plaintiff seeks a declaration "that the waiver of site ownership by Utah and the Nuclear Regulatory Commission" is contrary to law. There is, however, no allegation that such a waiver was ever issued by the NRC.

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rule in McKart v. United States, 395 U.S. 185, 193-195 (1969), as follows:

> The agency, like a trial court, is created for the purpose of applying a statute in the first instance. Accordingly, it is normally desirable to let the agency develop the necessary factual background upon which the decisions should be based. And since agency decisions are frequently of a discretionary nature or frequently require expertise, the agency should be given the first chance to exercise that discretion or apply that expertise.

In numerous cases involving claims against the United States Nuclear Regulatory Commission, the courts have ruled that the Commission should have "the first chance to exercise that discretion or apply that expertise." See Coalition for Safe Nuclear Power v. United States Atomic Energy Commission, 463 F.2d 954, 955-956 (D.C. Cir. 1972); Sunflower Coalition v. Nuclear Regulatory Commission, 534 F.Supp. 446 (D. Col. 1982); Desrosiers v. United States Nuclear Regulatory Commission, 487 F.Supp. 71, 74 (E.D. Tenn. 1980); Honicker v. Mandrig, 465 F.Supp. 414, 417-418 (M.D. Tenn. 1979), aff'd 605 F.2d 556 (6th Cir. 1979), cert. denied 444 U.S. 1072 (1980); Concerned Citizens of Rhode Island v. Nuclear Regulatory Commission, 430 F.Supp. 627, 631-632 (D. Rhode Island 1977); Nader v. Ray, 363 F.Supp. 946, 953-954 (D.D.C. 1973).

The doctrine of exhaustion of administrative remedies is applicable to this case. Although the law provides procedures for Commission review of plaintiff's claims against the federal defendants and gives the Commission power to afford all of the relief necessary to remedy them, plaintiff's complaint includes no

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allegation that it has exhausted, or even initiated, these administrative remedies.

Commission regulations permit any person to request action by the NRC. The Commission receives and reviews many such petitions seeking many different forms of relief. The procedures are well developed, readily available, and simple to comply with. The regulations provide that--

> (a) Any person may file a request [with the Commission] to institute a proceeding . . . to modify, suspend or revoke a license, or for such other action as may be proper. . . . The requests shall specify the action requested and set forth the facts that constitute the basis for the request. . . .
>
> (b) Within a reasonable time after a request pursuant to paragraph (a) of this section has been received, the Director of the NRC office with responsibility for the subject matter of the request shall either institute the requested proceeding . . . or shall advise the person who made the request in writing that no proceeding will be instituted in whole or in part, with respect to the request, and the reasons for the decision.

10 C.F.R. 2.206 (emphasis added). If the Director's decision is that no proceeding will be instituted or other action taken, the Commission is authorized to review the decision to determine if the Director has abused his discretion. 10 C.F.R. 2.206(c).

Requiring recourse first to the agency charged with making an administrative decision (1) allows that agency to perform functions within its special competence; (2) discourages frequent and deliberate flouting of the administrative process; (3) allows the agency to have the opportunity to develop the facts and apply the law that it was designed to administer; and (4) allows the

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agency to correct its own errors, mooting controversies and economizing on judicial resources. McKart v. United States, 395 U.S. at 193-195; West v. Bergland, 611 F.2d 710, 715-717 (8th Cir. 1979), cert. denied 449 U.S. 821 (1980); United States v. California Care Corp., 709 F.2d 1241 (9th Cir. 1983).

Even though the doctrine of exhaustion of administrative remedies is not applied as inflexibly as jurisdictional rules [See Koch, Administrative Law and Practice 10.21, 10.22, and 10.24 (1985 ed.)], its application is still appropriate in this case because the factors that would have to be considered in addressing plaintiff's claims against the federal defendants fall within the special competence of the NRC. These are matters that require fact-finding and application of technical expertise that lie within the specialized knowledge and experience of the NRC.

Plaintiff alleges that Utah's waiver of the site ownership requirement with respect to Envirocare is unlawful, and maintains that because the site ownership requirement is related to public health and safety, the Nuclear Regulatory Commission is required to suspend or revoke Utah's Agreement state status. NRC has been authorized to cede its authority to regulate and license certain radioactive materials, including LLRW, to the states, and it can suspend or terminate a state's authority and reassert NRC regulatory authority if it finds that a state's program is inadequate to protect the public health and safety. NRC has the facilities, the expertise and the statutory responsibility to

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investigate health and safety issues associated with such regulation and licensing.

Clearly, Congress contemplated that the NRC's expertise in evaluating facts relevant to NRC's regulations on disposal of radioactive waste and allegations of an Agreement state's failure to protect the public health and safety through its Agreement state program would be indispensable to a determination of what is demanded by the relevant statutes and the implementing regulations. The question whether the public health and safety require termination or suspension of an Agreement or a particular state licensing action requires the application of technical expertise to facts that are themselves technical. It would be inappropriate for this Court to burden itself with these matters before the NRC has had the opportunity to develop the relevant information and apply its expertise to resolving the issues raised.

Further, not only do Commission procedures under the AEA provide a means for plaintiff to request that the Commission conduct a hearing on the issues plaintiff has raised in its complaint, but the Commission could not suspend or revoke Utah's Agreement state status without providing the state with notice and an opportunity for a hearing. AEA § 274j.(1), 42 U.S.C. § 2021(j)(1). It is, therefore, entirely inappropriate for the plaintiff to attempt to achieve that result through this Court without first requesting the NRC to take action on its allegations.

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Commission procedures under the Atomic Energy Act provide a means for plaintiff to request that the Commission conduct a hearing on the issues plaintiff has raised in its complaint. Should the Commission conduct proceedings under these provisions and find in plaintiff's favor, it could exercise any remedial authority which the law provides it. The Commission would have the authority to terminate or suspend the Agreement with the State of Utah if it found, after notice and the opportunity for a hearing, that termination or suspension was "required to protect the public health and safety" or if the state had "not complied with one or more of the requirements" of the Act. AEA § 274j.(1); 42 U.S.C. § 2021(j)(1). Upon termination or suspension of the Agreement, the Commission would reassert its regulatory authority over the radioactive materials covered by the Agreement. However, despite the availability and scope of the administrative remedy available to it, plaintiff's complaint lacks any allegation that it has exhausted such remedy.[8]

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[8]As part of the NRC's biennial state program review process, the NRC is currently reviewing the operation of Utah's Agreement state program. As part of that review, the NRC is considering one or more questions that overlap some of the allegations contained in the complaint, but no request has been received by the NRC, from the plaintiff or any other party, that the agency institute a proceeding to rescind its agreement with Utah.

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B. THE COURT SHOULD DISMISS THE COMPLAINT PURSUANT TO FRCP 12(b)(1) BECAUSE THE COURT OF APPEALS HAS EXCLUSIVE JURISDICTION OVER THE SUBJECT MATTER OF PLAINTIFF'S CLAIMS

That exclusive jurisdiction over review of NRC orders lies in the courts of appeals was made absolutely clear in Florida Power and Light v. Lorion, 470 U.S. 729 (1985). In Lorion, it was argued that the district courts should be permitted to retain jurisdiction over some types of cases involving NRC orders.[9] The Supreme Court unequivocally rejected that proposition, and expended considerable effort to explain the statutory basis and underlying rationale for exclusive jurisdiction in the courts of appeals. The basis for the Court's ruling is found in two statutes: the AEA and the Administrative Orders Review Act, commonly referred to as the "Hobbs Act," 28 U.S.C. § 2342.

Section 189b. of the Atomic Energy Act, 42 U.S.C. § 2239(b), provides that--

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[9] In Lorion, a private party petitioned the NRC urging the Commission to suspend the operating license of a nuclear plant operator. The NRC denied the petition. The court of appeals refused to exercise jurisdiction over the private party's petition for review under the Hobbs Act, reasoning that the Hobbs Act applied only to cases in which the petitioner had a right to a hearing under section 189a. of the AEA, and that the petitioner in the case under consideration had no such right to a hearing. The Supreme Court reversed, holding that judicial review over any final order of the NRC in a licensing proceeding lay exclusively in the court of appeals, regardless of the petitioner's hearing rights. The Court pointed out that to hold otherwise would mean that the proper court for judicial review would "depend on the 'fortuitous circumstance' of whether an interested person requested a hearing," with some cases going through the district court and others going directly to the court of appeals. Florida Power & Light v. Lorion, 470 U.S. at 740.

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> Any final order entered in any proceeding of the kind specified in [Section 189(a)] shall be subject to judicial review in the manner prescribed in the Act of December 29, 1950, as amended [i.e., the Hobbs Act]. . . .

Section 189a.(1) of the AEA, 42 U.S.C. 2239(a)(1), describes the NRC proceedings that produce final orders subject to Hobbs Act review as follows:

> Any proceeding under this Act, for the granting, suspending, revoking, or amending of any license or construction permit, or application to transfer control, and . . . any proceeding for the issuance or modification of rules and regulations dealing with the activity of licensees. . . .

(Emphasis added)

Section 2342 of the Hobbs Act confines review to the courts of appeals, providing as follows:

> The court of appeals . . . has exclusive jurisdiction to enjoin, set aside, suspend (in whole or in part), or to determine the validity of--
>
> . . .
>
> (4) all final orders of the Atomic Energy Commission [now the NRC] made reviewable by section 2239 of title 42 [i.e., Section 189 of the AEA].

Even before Lorion, a number of cases had held that under this statutory scheme an order entered by the NRC at the end of proceedings instituted under section 189a., or even an order entered by the NRC declining to institute such proceedings, with a statement of reasons, is a "final order entered in [a] proceeding of the kind specified in subsection a" of section 189 subject to review exclusively by the courts of appeals. Natural Resources Defense Council v. United States Nuclear Regulatory Commission,

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606 F.2d 1261, 1264-1266 (D.C. Cir. 1979); Honicker v. United States Nuclear Regulatory Commission, 590 F.2d 1207, 1208-1209 (D.C. Cir. 1979), cert. denied 441 U.S. 906 (1979); Citizens for a Safe Environment v. Atomic Energy Commission, 489 F.2d 1018 (3rd Cir. 1974).

In Lorion, the Supreme Court found that there had been a "basic congressional choice of Hobbs Act review" in section 189b. of the AEA (470 U.S. 740), and the Court rejected the chaotic review system that would result from having "duplication of judicial review in the district court and the court of appeals, with its attendant delays. . . ." 470 U.S. at 742. The purposes of exclusive jurisdiction were also stressed in California Save Our Streams Council, Inc. v. Yeutter, 887 F.2d 908, 912 (9th Cir. 1989), where the Ninth Circuit noted that the vesting of exclusive jurisdiction in the courts of appeals avoids "the duplication of district and appellate review which crowds the timely and efficient disposition of administrative decisions." 887 F.2d at 911.[10]

The rule that NRC orders are reviewable exclusively in the courts of appeals applies not only to cases involving NRC license applicants and present NRC licensees, it also applies to cases involving petitions requesting the NRC to exert licensing and regulatory authority that it is not now exercising. See, for

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[10] California Save Our Streams Council involved the Federal Power Act, 16 U.S.C. § 313(b), which vested "exclusive" jurisdiction over Federal Energy Regulatory Commission licensing orders in the courts of appeals.

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example, Natural Resources Defense Council v. United States Nuclear Regulatory Commission, 606 F.2d at 1266 (determination by the NRC that it did not have authority to license storage tanks for high-level radioactive waste was well within the class of final orders reviewable under section 189 of the AEA).

In Sunflower Coalition v. Nuclear Regulatory Commission, 534 F.Supp. 446 (D. Col. 1982), the plaintiff alleged that the defendants had violated the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA), Public Law 95604 (the primary portions of which are contained at 42 U.S.C. §§ 7901-7942). Among other things, UMTRCA amended the AEA to authorize the NRC to discontinue its authority in favor of state regulation of byproduct material, such as uranium mill tailings. In its lawsuit, plaintiff claimed Colorado failed to comply with UMTRCA requirements and that the NRC was required to supervise the state's regulation of uranium mills and mill tailings more closely. Alternatively, plaintiff sought an order requiring the NRC to reassert its jurisdiction over such mills and tailings. Because the plaintiff had failed first to petition the NRC for administrative relief, the court rules that the complaint would be dismissed unless the plaintiff first sought administrative relief from the NRC. Accordingly, plaintiff filed a petition with the NRC setting forth its grievances, but the NRC issued an order denying that petition. The district court then dismissed the action on the ground that it lacked subject matter jurisdiction because the courts of appeals have "exclusive jurisdiction over

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NRC final orders in licensing decisions" and "the NRC's supervision, acceptance, or termination of a state agreement is a licensing decision, since the NRC thereby 'exercises' its licensing authority in a particular state." Sunflower Coalition v. Nuclear Regulatory Commission, 534 F.Supp. at 448.

In Natural Resources Defense Council v. NRC, 8 NLR 20163, No. 77-1570 (D.C. Cir. 1978), the D.C. Circuit reviewed and summarily affirmed the NRC's denial of a request for a hearing to determine whether an environmental impact statement should be prepared on a uranium mill license issued by New Mexico, an Agreement State. Among other things, the NRC had concluded that its Agreement with New Mexico divested it of its authority over such licensing actions. On review, the appellate court's exclusive review jurisdiction was challenged. Nevertheless, the D.C. Circuit Court of Appeals took jurisdiction and affirmed the NRC's actions on the merits. Implicit in the court's decision was its finding that an NRC decision on the scope of its licensing authority in an Agreement State under section 274 is reviewable exclusively in the courts of appeals.

The present case is similar to these cases in that an NRC decision here would determine the scope of NRC licensing and regulatory authority in Utah. For the duration of an Agreement with a state under the AEA, the NRC lacks licensing and regulatory authority in the state with respect to materials covered by the Agreement. In the case before this Court, the relief sought by plaintiff with respect to the NRC would require the NRC to

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derogate from Utah's licensing authority under the agency's Agreement with that state. At a minimum, the NRC would have to assert its authority to determine requirements for issuance of a particular license for materials covered by the state Agreement. Thus, an NRC decision in this case would be a determination relating to the NRC's licensing authority and that determination would be reviewable exclusively in the courts of appeals, as provided by the Hobbs Act.

Where Congress makes special provisions for judicial review of particular agency actions, the review mechanism so provided is exclusive. See, for example, Whitney Nat'l Bank v. Bank of New Orleans & Trust Co., 379 U.S. 411, 419-23 (1965); North American Savings Assoc. v. Federal Home Loan Bank Bd., 755 F.2d 122, 124-26 (8th Cir. 1985). Thus, a statute that provides for review of particular agency actions in the courts of appeals forecloses district court review of those same actions. See Farmers Union Central Exchange, Inc. v. Thomas, 881 F.2d 757, 761 (9th Cir. 1989); Telecommunications Research & Action Center v. FCC, 750 F.2d 70, 77 (D.C. Cir. 1984) ("TRAC") ("where a statute commits final agency action to review by the court of appeals, the appellate court has exclusive jurisdiction to hear suits that might affect its future power of review"). This is so whether the judicial challenge is to final agency decisions or (as in this case) is brought prior to completion or exhaustion of agency proceedings. See TRAC, 750 F.2d at 77-79. Accord, Public Utility

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Comm'n of Oregon v. Bonneville Power Administration, 767 F.2d 622, 626-28 (9th Cir. 1985).

Consistent with these general principles, courts have held regularly that district courts lack authority to review agency decisions committed to the exclusive jurisdiction of the courts of appeals under the Hobbs Act. See, for example, FCC v. ITT World Communications, 466 U.S. 463, 468-69 (1984); Southwestern Bell Telephone v. Arkansas Public Service Comm'n, 738 F.2d 901, 906 (8th Cir. 1984), vacated on other grounds, 476 U.S. 1167 (1986); Simmons v. Arkansas Power & Light Co., 655 F.2d 131, 133-34 (8th Cir. 1981) (challenge to NRC oversight of power plant emergency preparedness must be brought under Hobbs Act provisions). The same is true here.

Finally, under the plain terms of AEA section 189a., the NRC's promulgation of its regulations at 10 C.F.R. Part 61, which underlie Count VII of the Complaint, constituted a "final order" subject to Hobbs Act limitations on judicial review. Section 189a.(1) unequivocally identifies the promulgation of regulations "dealing with the activities of licensees" as a form of "final order" within the meaning of section 189b. As the Second Circuit held when it applied the Hobbs Act in Natural Resources Defense Council v. NRC, 539 F.2d 824 (2d Cir. 1976), vacated and remanded for consideration of mootness, 434 U.S. 1030 (1978), "no distinction exists for review purposes between agency adjudications and other pronouncements, such as rulemaking." 539 F.2d at 836. Moreover, these regulations clearly pertain to

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"activities of licensees," since their entire purpose is to set licensing standards.

In sum, if plaintiff exhausts its administrative remedies and still seeks judicial review of its claims against the federal defendants, it may not do so in this Court. The courts of appeals will have exclusive jurisdiction over the subject matter of the plaintiff's claims. And, even assuming that exhaustion of remedies was not required here, this Court still would lack jurisdiction. The Hobbs Act vests exclusive jurisdiction in the courts of appeals to adjudicate not only challenges to final agency decisions, but also challenges to preliminary or nonfinal agency actions or failures to act.

CONCLUSION

For the foregoing reasons, the federal defendants request that the Court grant their motion to dismiss the complaint for lack of jurisdiction over the subject matter of plaintiff's claims against the federal defendants or on the basis that the complaint fails to state a claim upon which the Court can grant relief.

DATED this 5 day of May 1992.

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Judge Bryan

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON

US ECOLOGY, INC., a California corporation,

Plaintiff,

v.

NORTHWEST INTERSTATE COMPACT ON LOW-LEVEL RADIOACTIVE WASTE MANAGEMENT, and ROGER STANLEY, its Chairman, and ELAINE CARLIN, its Executive Director; LARRY ANDERSON, ADRIAN HOWE, JAMES IKEDA, GLENN MILLER, DAVID STEWART-SMITH, and JONATHAN CARTER, its state representatives; WASHINGTON DEPARTMENT OF ECOLOGY, and CHUCK CLARKE, its Director; UTAH BUREAU OF RADIATION CONTROL, and LARRY ANDERSON, its Deputy Director; UNITED STATES NUCLEAR REGULATORY COMMISSION, and IVAN SELIN, its Chairman;

Defendants.

No. C92-5091B

ORDER

This matter having come before the Court upon the federal defendant's motion to dismiss and the Court having reviewed and considered all items submitted by the parties on the aforesaid motion, and good cause having been shown for the entry of this order, it is hereby

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ORDERED the federal defendants' motion to dismiss is hereby GRANTED. Accordingly, all claims against defendants United States Nuclear Regulatory Commission and Ivan Selin are dismissed with prejudice.

DATED this _____ day of _____ 1992.

UNITED STATES DISTRICT JUDGE

Presented by:

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JUDGE ROBERT J. BRYAN

UNITED STATES DISTRICT COURT FOR THE
WESTERN DISTRICT OF WASHINGTON
AT TACOMA

US ECOLOGY, INC.,

Plaintiff,

v.

NORTHWEST INTERSTATE COMPACT ON LOW-LEVEL RADIOACTIVE WASTE MANAGEMENT, et al.

Defendants.

NO. C92-5091B

PLAINTIFF'S MEMORANDUM IN OPPOSITION TO THE UTAH DEFENDANTS' MOTION TO DISMISS

ORAL ARGUMENT REQUESTED

Noted for: August 20, 1992

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I. INTRODUCTION

US Ecology, Inc., submits this memorandum in opposition to the motion to dismiss of defendants Utah Division of Radiation Control ("UDRC") and Larry Anderson (collectively "Utah" or the "Utah defendants").[1] The Utah defendants claim that US Ecology's complaint should be dismissed because: 1) they are immune from suit under the Eleventh Amendment; 2) this Court lacks personal jurisdiction over them; 3) venue in this district is improper; and 4) US Ecology's complaint fails to state a claim upon which relief can be granted. See Memorandum in Support of Utah Defendants' Motion to Dismiss. These claims are without merit.

First, US Ecology is seeking injunctive and declaratory relief from the Utah defendants. The Eleventh Amendment does not bar claims against state officials sued in their official capacity for prospective relief. Second, because the Utah defendants have sufficient contacts with this forum, this Court has personal jurisdiction over them. Third, because Washington has the most significant relationship to this dispute, this district is the appropriate venue for suit. Finally, by waiving site ownership

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[1]In 1991, the Utah Bureau of Radiation Control was re-named the Utah Division of Radiation Control ("UDRC"). Larry Anderson, formerly Deputy Director of the Bureau, is now Director of UDRC. This memorandum addresses only the claims of UDRC and Anderson in his capacity as its Director. US Ecology addressed Anderson's amenibility to suit as a representative of the Northwest Compact on Low-Level Radioactive Waste in response to the Northwest Compact's motion to dismiss. See Plaintiff's Memorandum in Response to Compact and Washington State Defendants' Motion to Dismiss.

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requirements for the Envirocare facility and refusing to impose surcharges on disposal there, the Utah defendants have violated federal law. Thus, US Ecology's complaint states a claim upon which relief may be granted. Accordingly, this Court should deny the Utah defendants' motion to dismiss.

II. STATEMENT OF FACTS

This case arises under the Low-Level Radioactive Waste Policy Amendments Act ("LLRWPAA" or the "1985 Act"), 42 U.S.C. § 2021a et seq. (1985). Defendants in this action are the Northwest Interstate Compact On Low-Level Radioactive Waste Mar gement ("the Compact" or "the Northwest Compact"), its officers and representatives, the Washington Department of Ecology, its Director (collectively the "Washington defendants"), UDRC and its Director, Larry Anderson.

US Ecology operates the low-level radioactive waste ("LLRW") disposal site at Richland, Washington. This site is recognized and protected under the LLRWPAA. 42 U.S.C. § 2021e. Under the 1985 Act, the Richland site must remain open to LLRW disposal from across the nation until 1993. 42 U.S.C. § 2021e(a). Neither the Northwest Compact, Washington state, nor the Utah defendants can prevent LLRW disposal at the Richland site prior to 1993 unless LLRW is generated in a state that fails to meet specific LLRWPAA milestones. 42 U.S.C. § 2021e(e). Together with the Compact and the Washington state defendants, the Utah defendants have violated the 1985 Act.

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On October 11, 1990, the Compact met at Seattle, Washington to discuss an amendment to the license of Envirocare of Utah, Inc., to allow receipt of LLRW. Declaration of William A. Gould ("Gould Decl."), Ex. 1. During deliberations on the proposed amendment, defendant Anderson lobbied on behalf of both Utah and Envirocare in favor of Compact approval. Id. at 4. Anderson "stated [that] Utah was favorably considering an amendment to Envirocare's license that would permit additional wastes to come to the Envirocare facility that may not be accepted at other [LLRW] facilities." Id. (emphasis added). Anderson also stated that "he did not believe the [Richland] facility would be threatened." Id.

On January 9, 1991, the Compact met in Utah and again discussed the proposed Envirocare license amendment. Contrary to his previous representation, Anderson "explained that with the license amendment the [Envirocare] site legally would be authorized to receive some waste that otherwise would go to a LLRW site." Gould Decl., Ex. 2 at 5. Anderson insisted, however, that "the Envirocare proposal . . . would have only a minimal impact, if any, on US Ecology Inc.'s operation." Id.

On March 8, 1991, pursuant to Utah Admin. R. 313-12-54, UDRC waived the site ownership requirement for the Envirocare site. As an Agreement State under the Atomic Energy Act ("AEA"), 42 U.S.C. § 2021, Utah is required to regulate LLRW in accordance with federal requirements. Nuclear Regulatory Commission ("NRC")

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regulations require federal or state site ownership to protect public health and safety from the long-term hazards associated with the disposal of radioactive waste. See 10 C.F.R. §§ 61.14, 61.59.

In order to make the Utah Agreement State program compatible with NRC requirements, Utah's regulations also include a state or federal site ownership requirement. See Utah Admin. R. 313-15-302. Utah nevertheless waived this requirement by claiming that the site ownership rule "does not directly relate to issues of public health and safety." Gould Decl., Ex. 3 at 1-2.

The Compact and the Utah defendants have also refused to impose surcharges on LLRW disposal at the Envirocare site, even though maximum surcharges are charged for disposal at the Richland site and a Compact resolution requires collection of maximum surcharges at all LLRW disposal facilities in the Compact region. Gould Decl., Ex. 4. The Compact and Utah defendants took this action knowing that it effectively precludes LLRW disposal at the Richland site. Their expressed intent is to create a national high volume LLRW site that will operate outside the compact system, undermining the purpose and intent of the 1985 Act. US Ecology has asked this Court to remedy this illegal situation before it further damages both the compact system and US Ecology.

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III. ARGUMENT

A. US Ecology's Claims Are Not Barred By The Eleventh Amendment To The United States Constitution.

The Utah defendants claim that the Eleventh Amendment to the United States Constitution bars US Ecology's claims against them. Utah Memorandum at 4-5. Because US Ecology named Anderson in his official capacity and seeks only injunctive and declaratory relief from the Utah defendants, the Eleventh Amendment does not bar plaintiff's claims.

The Eleventh Amendment provides that "[t]he judicial power of the United States shall not be construed to extend to any suit in law or equity, commenced or prosecuted against one of the United States by Citizens of another State. . . ." U.S. Const. amend. XI. Under the Eleventh Amendment, a state cannot be sued by a citizen of another state, or of its own state, in federal court for damages. Hans v. Louisiana, 134 U.S. 1 (1890).

In Ex parte Young, 209 U.S. 123 (1908), the Supreme Court held that the Eleventh Amendment does not bar an action against a state official sued in his official capacity for violating the federal Constitution. The Court reasoned that when a state official acts unconstitutionally, he is "stripped of his official or representative character" and is no longer protected by the state's immunity. Id. at 159-60; see also Papasan v. Allain, 478 U.S. 265, 276-78 (1986); Pennhurst v. State Sch. and Hosp. v. Halderman, 465 U.S. 89, 102 (1984). Following Ex parte Young, the Ninth Circuit has held that similar principles of supremacy of

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federal law remove Eleventh Amendment immunity for violations of federal statutory law. See Almond Hill Sch. v. Dept. of Agric., 768 F.2d 1030, 1034 (9th Cir. 1985).

This removal of the Eleventh Amendment bar, however, only applies to actions against state officials for injunctive or declaratory relief. Edelman v. Jordan, 415 U.S. 651 (1974); Austin v. State Indust. Ins. System, 939 F.2d 676, 680 n. 2 (9th Cir. 1991); Southern Pacific Transp. Co. v. City of Los Angeles, 922 F.2d 498, 508 (9th Cir. 1990), cert. denied, 112 S. Ct. 382 (1991). A state official sued in his official capacity for damages is still entitled to Eleventh Amendment immunity because a judgment against the official imposes liability on the entity he represents. Austin, 939 F.2d at 679-80.

In this action, US Ecology did not name Utah in its complaint. Rather, it named UDRC and Anderson in his official capacity as Director of UDRC. Moreover, US Ecology alleges that the Utah defendants have violated and continue to violate federal law by undermining the purposes and intent of the LLRWPAA and by failing to comply with the Atomic Energy Act.[2] Finally, US Ecology seeks only injunctive and declaratory relief from the Utah

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[2]See Section III.C, infra. US Ecology also maintains that defendants' unlawful conduct violates the Commerce Clause to the Constitution. See Plaintiff's Memorandum In Opposition to the Compact and Washington State Defendants' Motion to Dismiss at 16-17.

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defendants to prevent their continuing violations of federal law. Accordingly, its claims are not barred by the Eleventh Amendment.

B. This Court Has Personal Jurisdiction Over The Utah Defendants And Venue Is Proper In This District.

1. Defendants Have Substantial Contacts With This Forum.

The Washington long-arm statute allows exercise of personal jurisdiction to the extent permitted by the Due Process Clause of the Fourteenth Amendment. Therefore, a single constitutional inquiry suffices for determining personal jurisdiction. Shute v. Carnival Cruise Lines 897 F.2d 377, 380 (9th Cir. 1990), rev'd on other grounds, 111 S. Ct. 1522 (1991). Because the Utah defendants have sufficient minimum contacts with this forum, this Court has personal jurisdiction over them. See Int'l Shoe Co. v. Washington, 326 U.S. 310, 316 (1945).

Acting as a UDRC representative, Anderson has attended more than one Compact meeting in Washington state.[3] Gould Decl. Exs. 1 and 5. At these meetings, Anderson argued in favor of allowing LLRW receipt at Envirocare. As a result of his efforts, the Compact allowed Envirocare to receive LLRW, without surcharges. Although Anderson knew that licensing Envirocare could have a damaging effect on the Richland facility, he told the Compact Committee otherwise. Gould Decl., Ex. 1 at 5. Because of

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[3]Although Anderson is also a member of the Compact Committee, all references to his actions in Section III.B. are to his actions on behalf of UDRC.

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Anderson's actions in Washington and because the Utah defendants knew that their unlawful licensing of Envirocare and refusal to impose surcharges on disposal at the Utah site would have an effect in Washington, they are subject to personal jurisdiction in this Court.

This Court may exercise specific jurisdiction over the Utah defendants if they satisfy the Ninth Circuit's three-part due process test. See Shute, 897 F.2d at 381. Under the Shute test, defendants must have purposefully availed themselves of the privilege of conducting business in the forum thereby invoking the benefits and protections of its laws. Id. Second, the cause of action must arise from defendants' forum-related activities. Id. Third, jurisdiction over defendants must be reasonable. Id. The Utah defendants satisfy each prong of the Ninth Circuit's test, and, therefore, this Court has jurisdiction over them.

Two prongs of the Shute test can be dispensed with briefly. First, US Ecology's cause of action arises from the defendants' actions in and directed at Washington. In the Ninth Circuit, jurisdiction is proper where "but for" the forum contacts, the cause of action would not have arisen. Id. at 383. But for Anderson's visits to Washington to lobby on behalf of Envirocare, and his licensing of Envirocare without surcharges, US Ecology would not have been injured. The Utah defendants' contacts with the forum are precisely the actions that give rise to US Ecology's cause of action.

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Moreover, exercise of personal jurisdiction over the Utah defendants is reasonable. Because the Utah defendants have purposefully availed themselves of the benefits of the forum state, jurisdiction over them is presumptively reasonable. Burger King Corp. v. Rudzewicz, 471 U.S. 462, 476 (1985). As a result, the burden is on the Utah defendants to "present a compelling case that the presence of some other considerations would render jurisdiction unreasonable." Burger King, 471 U.S. at 477 (emphasis added); Haisten v. Grass Valley Medical Reimbursement, 784 F.2d 1392, 1400 (9th Cir. 1986). The Utah defendants have failed to meet this burden. Furthermore, Washington has a "'manifest interest' in providing its residents with a convenient forum for redressing injuries inflicted by out-of-state actors." Id. at 473. In light of these factors, this Court's exercise of jurisdiction over the Utah defendants is reasonable.

Finally, and most important, the Utah defendants have satisfied the first prong of the Shute test by purposefully availing themselves of the benefits of conducting business in Washington. Affirmative actions allowing or promoting the transaction or solicitation of business in the forum state constitute purposeful availment. Decker Coal Co. v. Commonwealth Edison Co., 805 F.2d 834, 840 (9th Cir. 1986). See also Shute, 897 F.2d at 381; Sinatra v. National Enquirer, Inc., 854 F.2d 1191, 1195 (9th Cir. 1988). More than once, Anderson has visited Washington, regarding the Envirocare licensing, as a UDRC

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representative. By doing so he purposefully availed himself of the benefits and protections of conducting business in Washington. In light of Anderson's successful solicitation in Washington of the Compact's approval of LLRW disposal at Envirocare, the Utah defendants purposefully availed themselves of the benefits of doing business in this forum and undeniably had "fair warning" that their activities could subject them to suit here. Burger King, 471 U.S. at 472.

Even if Anderson had not attended Compact Committee meetings in Washington, the Utah defendants would still be subject to personal jurisdiction in Washington. Both the Supreme Court and the Ninth Circuit have approved an "effects" test for satisfying the first prong of the Shute test, holding that out-of-state acts having an effect in the forum state are sufficient to support jurisdiction. Calder v. Jones, 465 U.S. 783, 789 (1984); Brainerd v. Governors of the University of Alberta, 873 F.2d 1257, 1259-60 (9th Cir. 1989); Haisten, 784 F.2d at 1398 ("defendant who enters into an obligation which she knows will have effect in the forum state purposely avails herself of the privilege of acting in the forum state").

In Calder, the Supreme Court held that a California court had personal jurisdiction over Florida defendants based on the effects in California of their Florida conduct. 465 U.S. at 789 (citing World Wide Volkswagen Corp. v. Woodson, 444 U.S. 286, 297-98 (1980)). The Court did not consider "mere untargeted negligence"

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on the part of the defendants sufficient for exercise of personal jurisdiction, but determined that defendants who knew that their actions would have a potentially devastating impact in the forum state "'must reasonably anticipate being haled into court there.'" Id. at 789-90 (quoting World Wide Volkswagen, 444 U.S. at 297 and citing Kulko v. California Superior Court, 436 U.S. 84, 97-98 (1978); Shaffer v. Heitner, 433 U.S. 186, 216 (1977)). The Court further stated that "[a]n individual injured in California need not go to Florida to seek redress from persons who, though remaining in Florida, knowingly cause the injury in California." 465 U.S. at 790; see also Brainerd, 873 F.2d at 1258-59 (court holds that two unsolicited telephone calls and one letter support the court's exercise of personal jurisdiction over a Canadian defendant where defendant knew that these contacts would injure plaintiff in the forum).

It is beyond dispute that Anderson knew his actions would have effects in Washington. At Compact meetings in Washington, Utah and elsewhere, Anderson discussed at length his view of the effect on US Ecology of licensing Envirocare. Gould Decl., Exs. 1, 2 and 5. Anderson incorrectly maintained that his actions would have virtually no effect on US Ecology. By licensing Envirocare, waiving the site ownership requirements and refusing to impose surcharges on disposal at Envirocare, the Utah defendants have excluded waste from the Richland site and caused injury in Washington. Thus, even if the Utah defendants' wrongful

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conduct occurred solely within Utah, because they knowingly caused injury to US Ecology in Washington, US Ecology can seek redress in this forum. See Burger King, 471 U.S. at 475-76; Calder, 465 U.S. at 790.

The Utah defendants have satisfied each prong of the Ninth Circuit's due process test for specific jurisdiction. Accordingly, this Court should deny defendants' motion to dismiss for lack of personal jurisdiction.[4]

2. Venue Is Proper In This District.

Contrary to the Utah defendants' assertions, venue in the Western District of Washington is proper. See Utah Memorandum at 7-8. Under 28 U.S.C. § 1391(b)(2) (Supp. 1992), venue is proper in a judicial district "in which a substantial part of the events or omissions giving rise to the claim occurred . . . ." Although events that bear upon US Ecology's cause of action occurred in virtually every state of the Compact, including Washington, Hawaii, Alaska and Utah, the primary locus of this case is Washington.

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[4]Personal jurisdiction in the instant case is not inconsistent with Michigan Coalition v. Griepentrog, 954 F.2d 1174 (6th Cir. 1992), cited by the Utah defendants. See Utah Memorandum at 7. In Michigan Coalition, the state officials never set foot in the forum state. 954 F.2d at 1177. Their only contacts with the forum state were telephone calls and letters, and the Sixth Circuit found these communications insufficient for personal jurisdiction. Id. The Ninth Circuit, however, has held that telephone calls and letters, without more, can support personal jurisdiction. Brainerd v. Governors of the University of Alberta, 873 F.2d 1257, 1259 (9th Cir. 1989). In addition, Anderson has made several visits to the forum state and conducted UDRC business there.

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First, the Compact itself is located in this district and any orders, resolutions or other approvals issued by the Compact take effect from that location. It appears that on December 18, 1992 in Washington, defendant Roger Stanley signed the order executing the Compact resolution that allows receipt of LLRW at Envirocare.[5] Furthermore, the Richland facility is located in Washington, is licensed by the Washington Department of Health and obtains its lease from the Washington Department of Ecology. Moreover, surcharges on disposal at the Richland site are paid to the Compact in Washington. Finally, most of the parties are located in Washington. Indeed, Anderson himself is a member of the Compact Committee whose offices are located in Washington. Finally, at a Compact Committee meeting in Washington, Anderson first lobbied on behalf of allowing LLRW receipt at Envirocare. Gould Decl., Ex. 1.[6]

Even if this Court holds that a substantial part of the events giving rise to this action did not occur in Washington, venue is

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[5]Discovery will confirm where Stanley signed the order.

[6]Leroy v. Great Western United Corp., 443 U.S. 173 (1979), cited by the Utah defendants, is inapposite. Utah Memorandum at 7. Leroy was decided prior to the Judicial Improvements Act of 1990, which substantially revised 28 U.S.C. § 1391. Under the version of § 1391 then in effect, venue was appropriate in the district where "the claim arose," suggesting that only one district was appropriate. Under the 1990 version of § 1391, venue in more than one district is clearly appropriate. As one commentator has noted, as a result of the amendments Leroy is now largely academic. David D. Seigel, Commentary on 1990 Revision of Subdivision (a), (b), and (e), printed in 28 U.S.C.A. § 1391 (Supp. 1992)

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proper in this district. Under § 1391(b)(3), if no other district is appropriate, a plaintiff may bring its cause of action in "a judicial district in which any defendant may be found . . . ." Because no district has more significant ties than Washington, US Ecology has properly asserted venue in this district.

C. US Ecology Has Stated A Claim For Relief Under The LLRWPAA.

The Utah defendants argue that Counts II, III and VII of US Ecology's complaint should be dismissed for failure to state claims upon which relief can be granted. Utah Memorandum at 8-11.[7] Motions to dismiss under Fed. R. Civ. P. 12(b)(6) are disfavored and rarely granted. Hall v. City of Santa Barbara, 833 F.2d 1270, 1274 (9th Cir. 1986), cert. denied, 485 U.S. 940 (1988); United States v. City of Redwood City, 640 F.2d 963, 966 (9th Cir. 1981). When considering a 12(b)(6) motion, plaintiff's allegations of fact are taken as true and construed in the light most favorable to plaintiff. Hall, 833 F.2d at 1274 n.9; City of Redwood City, 640 F.2d at 966. A complaint should not be dismissed unless it appears beyond doubt that plaintiff can prove no set of facts that would entitle it to relief. Conley v. Gibson, 355 U.S. 41, 45-46 (1957). Under this standard, US Ecology more than adequately states claims upon which relief can be granted.

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[7]The Utah defendants are also implicated in Count V of the complaint. However, they do not address this count in their motion to dismiss.

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1. **Utah's Failure To Impose Surcharges Violates And Undermines The LLRWPAA.**

The Utah defendants argue that Utah is not required to impose surcharges on Envirocare because surcharges are discretionary and Envirocare is not a "regional disposal facility." Utah Memorandum at 8-11. These arguments assume that Envirocare can operate outside the LLRWPAA and that defendants can ignore the effect of their actions on the compact system.

For over a decade, this nation has struggled with the politically divisive issue of how to dispose of LLRW. In 1980, Congress directed states to form compacts to create their own regional disposal sites by 1986. See 42 U.S.C. § 2021d(a)(2). Congress' express policy was that the disposal of LLRW could be most safely and effectively managed on a state and regional basis. See 42 U.S.C. § 2021d(a)(1). By 1985, however, it was obvious that no new disposal sites would be built by 1986. See H.R. Rep. No. 99-314, 99th Cong. 1st Sess. 14, reprinted in 1985 U.S.C.C.A.N. 3002, 3003. Therefore, Congress extended the time for developing sites until 1993. 42 U.S.C. § 2021e(e). In order to force the creation of new sites by 1993, Congress created a detailed carrot and stick process of incentives and penalties. Id. It is the undermining of this approach, and hence the undermining of Congress' goal, that lies at the heart of this case.

With the 1993 deadline approaching, the LLRW disposal situation has not changed significantly since 1980. No new sites

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will be in operation by 1993. Moreover, states that had previously agreed to site disposal facilities have begun to renege on their commitments.[8] Each of the sited states, in turn has expressed its intention to bar access to LLRW after 1992. Thus, after 14 years of effort to solve the LLRW disposal problem, the basic dilemma remains.

The Envirocare site adds yet another obstacle to the effective functioning of the compact system. Because it is in a compact region with an existing disposal site, Envirocare has attempted to operate as if it had no LLRWPAA obligations. This damages the compact system in two ways. First, non-sited states and regions now have an unrestricted disposal outlet that may be used for high volume wastes that are difficult to store. This will encourage them to delay siting their own disposal facilities. Second, when the sited states all bar access in 1993, Envirocare will receive a disposal monopoly. Neither of these results are intended or permissible under the LLRWPAA. That Act sets an opposite goal: to force states and regions to site their own

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[8]For example, in an attempt to escape its commitment to build a disposal site for its compact region, New York recently challenged the validity of the LLRWPAA before the Supreme Court in New York v. United States, 60 U.S.L.W. 4603 (U.S. June 19, 1992). The Supreme Court upheld the Act, striking only the portion of the LLRWPAA that requires a state to take title to waste after 1986 unless the state has a disposal site or belongs to a region with a disposal site. Id. at 4612. Nevertheless, it is now apparent that New York will not be able to meet the 1993 deadline. Other states, such as Michigan and North Carolina, have also been accused of reneging on their commitments to site new disposal facilities. See, e.g., Michigan Coalition v. Griepentrog, 954 F.2d 1174 (6th Cir. 1992).

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disposal facilities in order to avoid disposal monopolies. Envirocare's presence on the LLRW scene without LLRWPAA obligations threatens the integrity of the compact process. Defendants must account for this fact.

To further their own agendas, defendants have actively encouraged this situation. In order to preserve disposal capacity and prevent LLRW disposal within the state, Washington has sought for over 13 years to deny access to out-of-compact waste. Through Envirocare, it has now achieved indirectly what it could not achieve directly.

Moreover, by sending all high volume waste to Envirocare,[9] pressure on the compact system is relieved. When 1993 arrives, some outlet for waste will exist, thereby enabling Washington more easily to close its doors to LLRW. As the Elaine Carlin, Executive Director of the Compact noted, "[t]he other states and regions struggling to develop these new sites have one less problem to contend with if these large volume cleanup wastes can go to Envirocare." Affidavit of Elaine Carlin, in support of Compact Defendants' Motion to Dismiss ("Carlin Affidavit") at 7.

Although defendants suggest that their use of Envirocare will aid the compact system, it is evident that the opposite result will occur: Envirocare will help states evade the carrot and

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[9] See Affidavit of Elaine Carlin, in support of Compact Defendants' Motion to Dismiss, at 7 (noting that the compact would like Envirocare to become a "national" high volume LLRW disposal site).

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stick approach and delay the siting of new LLRWPAA facilities. Neither Utah nor the Compact has the legal right to encourage such a result. The LLRWPAA mandates that states and regions must be forced to develop their own disposal sites. Defendants' actions subvert this expressed goal.

US Ecology has accepted the terms of the LLRWPAA through its operation of the Richland site and in its attempts to site new, compact-approved facilities. It has abided by, and invested millions of dollars in, the compact system. It has been subject to millions of dollars in surcharges and its rates are regulated by Washington state.

Envirocare, on the other hand, has never been subject to the compact system and until 18 months ago was only licensed for disposal of naturally occurring radioactive materials ("NORM"). Only defendants' disregard for the compact system has allowed Envirocare to open so quickly. When 1993 arrives and sited states all deny access, Envirocare will effectively become the only nationally available LLRW disposal site in the United States.[10] The Utah defendants and Envirocare have exploited the LLRWPAA to create a national disposal monopoly for Envirocare. Ironically, although Envirocare now operates as if it is without LLRWPAA

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[10]Although the Envirocare site is now only licensed for certain types of LLRW, once all other sites close their doors, Envirocare will undoubtedly seek to revise its license to accept a wider variety of LLRW. In order to dispose in Utah, generators will work hard to characterize their waste as falling within the subset of LLRW defined by Utah, the Compact and Envirocare.

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obligations, it is the LLRWPAA that will provide Envirocare with the ability to eliminate its competition.

The Utah defendants do not dispute that Envirocare is operating outside the compact system. Instead, they argue that because Envirocare is not a "regional disposal facility" subject to the LLRWPAA, Utah cannot legally impose surcharges. Utah Memorandum at 9. This argument is circular.

Under the LLRWPAA, a "regional disposal facility" is a disposal facility established and operated under a compact. 42 U.S.C. § 2021b(11). It is clear that defendants have not treated the Envirocare facility as a "regional LLRW disposal facility" and that it was not established and operated under a compact. See Complaint ¶ 41. Nevertheless, defendants together must abide by the compact system. The Utah defendants and the Compact clearly retain the legal authority to insist upon surcharges at Envirocare. Prior to licensing, Utah could insist that the Compact establish Envirocare as a compact site eligible for surcharges. The Compact, in turn, could condition its approval of LLRW receipt at Envirocare upon Utah's imposition of surcharges. Neither defendant can credibly evade responsibility for ensuring that Envirocare complies with the compact system. Yet, that is exactly what they have attempted to do.

The Utah defendants also argue that the LLRWPAA gives states the discretion to impose surcharges. Utah Memorandum at 9. This claim also begs the question. Although surcharges are

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discretionary for the three originally sited states, the LLRWPAA does not allow defendants to act in concert to exclude indirectly waste from sited states prior to 1993. The Utah defendants are well aware that by allowing Envirocare to operate without surcharges, Envirocare alone will receive certain LLRW. The effect of defendants' actions is clear: if Washington imposes surcharges and Utah does not, no generator will dispose at Richland. Consequently, waste goes to Envirocare and not to Richland. Defendants intend and desire this result without regard to its effect on the LLRWPAA system. The LLRWPAA prohibits defendants from excluding waste prior to 1993. The Utah defendants cannot abuse their discretion to reach a result that the LLRWPAA prohibits.[11]

2. By Waiving The Site Ownership Requirements, The Utah Defendants Have Violated the AEA and Utah Law.

Blatantly disregarding their own radioactive control regulations, as well as corresponding federal regulations, the Utah defendants waived the prohibition on LLRW disposal on privately owned land. Utah justified this waiver by claiming that

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[11]This is not a case in which three separate defendants acting independently took actions that incidentally affect US Ecology. The distinctions among defendants in this case are more formal than substantive. Larry Anderson is the Director of the UDRC and is also Utah's Compact Committee representative. Roger Stanley is the Director of the Washington Department of Ecology's Nuclear and Mixed Waste Management Program and is the Compact Committee chairman. Elaine Carlin is executive director of the Compact Committee and recently received an offer of employment from Envirocare. See Gould Decl., Ex. 6 at 60-61. Ms. Carlin has admitted that the Compact would like to direct certain waste to Envirocare only. See Carlin Affidavit at 7.

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this requirement is unrelated to public health and safety. See Ex. 3 at 1-2. Utah also claimed, as additional justification, that adequate surety has been provided. Id. Neither of these justifications withstands scrutiny.

As discussed more fully in US Ecology's Memorandum in Opposition to the Motion to Dismiss of the United States Nuclear Regulatory Commission ("Opposition to NRC"), NRC documents confirm that the site ownership requirement is directly related to public health and safety. Indeed, public health and safety depend upon it. See Opposition to NRC at 3-11. Furthermore, adequate site surety, which does not exist at Envirocare, is a separate requirement from site ownership and is intended solely to ensure that sufficient funds are available for future site care. Under NRC and Utah regulations, government control remains a necessity regardless of who pays for it.

This Court has already heard oral argument regarding the site ownership issue. Federal or state site ownership is required at LLRW sites to ensure long-term "institutional controls" over the hundreds of years that radioactive waste may remain hazardous. Not only do NRC documents indicate that site ownership is required to protect public health and safety but, at oral argument, NRC did not deny that the site ownership requirement is directly related to public health and safety.

The Utah defendants fail to mention that their primary justification for waiving the site ownership requirement was that

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site ownership "does not directly relate to issues of public health and safety." Gould Decl., Ex. 3 at 2. Apparently, both Utah and NRC have recognized that Utah's waiver of the site ownership requirement cannot be justified on that basis.

In order to overcome this deficiency, Utah claims that an adequate site surety arrangement exists to protect the public. Id.; see also Utah Memorandum at 11. However, site ownership and site surety are two distinct requirements; both are necessary to protect public health and safety.

Site ownership is required in order to assure long-term site care by a responsible government institution. The governmental institutional care program includes physical control of site access, environmental monitoring and custodial care of the disposal units. See Utah Admin. R. 447-25-28. The responsible government institution itself is expected to perform these tasks. Id.

In contrast, site surety requires a site operator to provide funds to pay for site closure and for government control following site closure. See Utah Admin. R. 447-25-30, 31, 32. Because there is no requirement or assurance that a private corporation will exist after 50-100 years, site surety cannot substitute for government ownership. Federal or state site ownership constitutes the best institutional bet that regardless of funding, some entity will be present to take long-term responsibility for the site.

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Thus, Utah cannot justify a failure to require site ownership by pointing to a surety arrangement.[12]

It is also questionable whether Envirocare's site surety arrangement is adequate under any circumstances. Envirocare has currently placed only $779,000 in surety for the site. Utah documents indicate that this amount will cover only the cost of disposing LLRW still in storage at the time of site closure and the costs of 30 years of post-closure monitoring. See Gould Decl., Ex. 7 at 10-11. After 30 years, the surety will provide no money for on-going site control and surveillance. By comparison, US Ecology has posted more than $20 million in site surety for its Richland site.

Utah cannot credibly claim that placing $779,000 in escrow ensures that Utah's public health and safety will be protected over the next 100 years, especially if there is no state or federal site ownership. Utah's illegal waiver of the site ownership requirement cannot be justified so easily.

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[12]Indeed, all other LLRW disposal sites in the United States, even those that are now closed, are located on land owned by a state or by the federal government.

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JUDGE ROBERT J. BRYAN

UNITED STATES DISTRICT COURT FOR THE
WESTERN DISTRICT OF WASHINGTON AT TACOMA

US ECOLOGY, INC., a California Corporation,

Plaintiff,

v.

NORTHWEST INTERSTATE COMPACT ON LOW-LEVEL RADIOACTIVE WASTE MANAGEMENT, et al.,

Defendants.

NO. C92-5091B

PLAINTIFF'S MEMORANDUM IN OPPOSITION TO DEFENDANT UNITED STATES NUCLEAR REGULATORY COMMISSION'S MOTION TO DISMISS

ORAL ARGUMENT REQUESTED
(Noted for: May 29, 1992)

I. INTRODUCTION

Plaintiff US Ecology, Inc. ("US Ecology"), submits this memorandum in opposition to the motion to dismiss filed by defendants United States Nuclear Regulatory Commission (the "NRC") and Ivan Selin its Chairman (collectively, the "Federal Defendants") and respectfully requests that this Court deny the motion. As the public documents of NRC already indicate, failure to require state or federal land ownership at a low-level radioactive waste ("LLRW") disposal site is clearly unlawful and poses significant risks to public health and safety. The Court need not seek nor rely upon agency expertise or fact-finding ability to reach this conclusion. In such a case, there is no need for a plaintiff to exhaust

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its administrative remedies, and it lies within the sound discretion of the district court to to decline to require exhaustion. Accordingly, the Federal Defendants' motion to dismiss for failure to exhaust administrative remedies should be denied.

Similarly, and as discussed more fully below, the Federal Defendants' argument that the Court lacks jurisdiction over plaintiff's cause of action against them also is erroneous as a matter of law and should be rejected.

II. BACKGROUND

US Ecology operates the LLRW disposal site at Richland, Washington. This site is located on the Hanford Federal Reservation and is leased from the federal government by the State of Washington. US Ecology, in turn, subleases the site from the State of Washington at considerable expense.

The US Ecology site is one of only four commercial LLRW disposal sites in the nation. It is one of only three such sites in the nation expressly recognized under the Low-Level Radioactive Waste Policy Amendments Act, 42 U.S.C. § 2021a et seq., which requires that the Richland site remain open to accept LLRW from throughout the nation until 1993.[1] The

[1]The two other "Compact" sites are located at Beatty, Nevada and Barnwell, South Carolina. The Beatty site is also operated by US Ecology.

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fourth site, operated by Envirocare of Utah, Inc. on a site in Clive, Utah, is at the heart of this action.

Briefly, the Northwest Interstate Compact, Utah and the Federal Defendants have permitted the receipt of LLRW at the Envirocare site. However, unlike the three Compact sites, the Envirocare site is not owned by either the State or the federal government, and neither Utah nor the federal government has expressed any willingness to take title to the site. Because the receipt of LLRW at the Envirocare site under these circumstances clearly violates federal law and applicable NRC and Utah regulations, US Ecology included this claim in its suit.

This and other failures of the Northwest Compact, Utah and Federal Defendants to act in accordance with federal law mean that, in practice, certain types of LLRW are diverted and effectively excluded from the US Ecology facility at Richland. Federal law prohibits this result.

III. ARGUMENT

A. UTAH'S WAIVER OF THE SITE OWNERSHIP REQUIREMENT

Under Section 274 of the AEA, 42 U.S.C. § 2021, NRC may enter into agreements with

> the Governor of any state, providing for discontinuance of regulatory authority of the Commission . . . . [and d]uring the duration of such an agreement, it is recognized that the state shall have authority to regulate the materials covered by the Agreement for the

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protection of public health and safety from radiation hazards. Id.

In order to enter into such an agreement, NRC must find that "the state program is compatible with the Commission's program . . . and is adequate to protect the public health and safety with respect to the materials covered by the proposed Agreement." 42 U.S.C. § 2021(d)(2).

NRC entered into an agreement with Utah on April 1, 1984. See 49 Fed. Reg. 14,460 (April 11, 1984). The Utah regulatory program requirements for LLRW are essentially identical to the federal LLRW requirements found at 10 C.F.R. § 20 and 10 C.F.R. § 61.

In order to make the Utah Agreement State program compatible with federal requirements, Utah's regulations include a provision requiring state or federal land ownership at LLRW sites. Utah Admin. R. 313-15-302.[2] Utah's Agreement State program also contains a provision allowing it to grant exemptions or exceptions to rules "as it determines are authorized by law and will not result in undue hazard to public health and safety." Utah Admin. R. 313-12-54.

On March 8, 1991, the Utah Bureau of Radiation Control waived the site ownership requirement for the Envirocare site pursuant to Utah Admin. R. 313-12-54. Ex. 2, Ehlenbach Decl.

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[2]The Utah regulations cited in this memorandum are reproduced as Exhibit 1 to the accompanying Declaration of Paul J. Ehlenbach ("Ehlenbach Decl.").

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According to Utah, the ownership requirement does not relate "directly" to issues of public health and safety and Utah law does not provide for assumption of ownership by the state. Ex. 3, Ehlenbach Decl.

B. SITE OWNERSHIP

In order to protect public health and safety from the long-term hazards associated with radioactive waste that can persist anywhere from 300 to 500 years, NRC has had a long-standing requirement that LLRW may only be disposed of on land owned (or to be owned) by either a state or the federal government. The site ownership requirement is a keystone in the NRC system of "institutional controls" for reducing potential long-term hazards presented by radioactive waste. This requirement has been in NRC regulations for radioactive waste since the inception of commercial LLRW disposal. See 46 Fed. Reg. 38,085 (July 24, 1981).

The current federal site ownership requirement is found at 10 C.F.R. § 61.59 which flatly states that:

> Disposal of radioactive waste received from other persons may only be permitted on land owned in fee by the federal or a state government.

10 C.F.R. § 61.59. See also Utah Admin. R. 313-15-302.

In order to give the site ownership requirement effect, NRC regulations require the facility license issued by NRC to be transferred to the state or federal landowner upon

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termination of operations. 10 C.F.R. § 61.30. Thereafter, the state or federal government become NRC licensees responsible for the site. Id. Where a proposed disposal site is on private land, a license applicant must submit a certification that arrangements have been made for future assumption of ownership by a state or federal government entity prior to beginning operations. 10 C.F.R. § 61.14(b).

The site ownership requirement is also explicitly recognized under federal statute. Under the Nuclear Waste Policy Act of 1982, Pub. L. No. 97-425, 42 U.S.C. § 10101 et seq.,

> The Secretary [of the Department of Energy] shall have the authority to assume title and custody of low-level radioactive waste and the land on which such waste is disposed of, upon request of the owner of such waste and land and following termination of the license issued by the Commission for such disposal, if the Commission determines that-
>
> (A) the requirements of the Commission for site closure, decommissioning, and decontamination have been met by the licensee involved and that such licensee is in compliance with the provisions of subsection (a) of this section;
>
> (B) such title and custody will be transferred to the Secretary without cost to the Federal Government; and
>
> (C) Federal ownership and management of such site is necessary or desirable in order to protect the public health and safety, and the environment.

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42 U.S.C. § 10171(b) (emphasis added). As discussed more fully below, by promulgating regulations embodying the site ownership requirement, NRC did determine that federal or state ownership is necessary to protect public health and safety.[3]

Current NRC regulations for the land disposal of LLRW, found at 10 C.F.R. 61, were first proposed on July 24, 1981. 46 Fed. Reg. 38,081 (July 24, 1981). In the preamble discussing the proposed LLRW regulations, NRC explained the site ownership requirement as follows:

> Federal or State government ownership of land for disposal of waste at a land disposal facility has been a requirement in the Commission's regulations (10 C.F.R. 20.302) since the inception of commercial disposal operations. This requirement is being continued to assure adequate control of the disposal site after closure and to reduce the potential for inadvertent intrusion. (See § 61.59.)

46 Fed. Reg. 38,085 (July 24, 1981).

As is evident, site ownership is specifically designed to reduce the possibility of inadvertent intrusion into the waste site over the extremely long time frames that radioactive waste will remain potentially hazardous and in order to ensure that some responsible public entity maintains control over the

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[3]Note that DOE is not required to accept site ownership under 42 U.S.C. § 10171. Instead, NRC regulations require that arrangements be made for acceptance of site ownership prior to licensing in order to preclude DOE from refusing to accept title at closure. See 10 C.F.R. § 61.14. Envirocare's failure to seek such an arrangement, particularly in light of Utah's refusal to accept title is difficult to explain.

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site well after the time a private corporation may have ceased to exist. These concerns are undeniably concerns directly related to public health and safety.

In its draft environmental impact statement for the Part 61 LLRW regulations, NRC further explained the rationale behind the site ownership requirement. According to NRC:

> [P]robably the most significant concepts for long-term passive institutional control measures are those of control of the land by a governmental organization, land-use restrictions in the form of titles or deeds, and multiplicity of records. As civilizations have evolved over the centuries, societies have characteristically erected superstructures (governments) to perform services -- for example, protection of life, health, and property -- which are less conveniently performed by individuals. Among the function performed by governments are control of titles to and uses of property. Placing the long-term control of a disposal site into the hands of a government organization helps to ensure that such motives as profit and loss do not lead to possible abandonment of the property, or sale for inappropriate uses.

NRC Draft Environmental Impact Statement on 10 C.F.R. Part 61 "Licensing Requirements for Land Disposal of Radioactive Waste" NUREG-0782, Vol. 2 (1981) at p. 4-49 (hereafter "NRC DEIS").[4]

And, again, in the NRC DEIS explaining this requirement, NRC stressed that site ownership is a key element in the

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[4]Relevant excerpts from the NRC DEIS are reproduced as Exhibit 4 to the Ehlenbach Decl.

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overall system of institutional controls designed to protect public health and safety. According to NRC:

> By permitting use of federal or state land or accepting title to the land, the government agency has accepted responsibility for long-term institutional control of the site. . . . For most land disposal facilities, reliance is placed on the institutional control and without it the public health and safety cannot be assured . . . . In view of the reliance on institutional controls and the potential need for reassessing the control program, licensing the landowner was judged necessary for the Commission to fulfill its responsibilities.
>
> * * *
>
> The option selected is transfer of the site license to the site owner [i.e., the federal or a state government] . . . . Active institutional care will be necessary to protect the public health and safety for a finite period.

NRC DEIS AT 8-6 - 8-7. (Emphasis added.) NRC's own documents, therefore, already demonstrate that public health and safety concerns lie at the heart of the site ownership requirement.

Utah has exempted the Envirocare facility from the site ownership requirement under Utah Admin. R. 313-12-54 which provides Utah with the ability to grant exemptions or exceptions "as it determines are authorized by law and will not result in undue hazard to public health and safety . . . ." Id. Utah's rationale for granting this exemption flies directly in the face of this provision and

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relevant federal regulations. Utah claims that the site ownership requirement is not "directly related" to public health and safety. Ex. 3, Ehlenbach Decl. This claim is not explained or justified and cannot withstand even minimal scrutiny.

The primary, if not exclusive, motivation behind requiring federal or state governments to burden themselves with site ownership is to protect public health and safety for as long as institutionally possible. The clear command of NRC's regulations, preambles and relevant Environmental Impact Statements is to require state or federal site ownership at LLRW sites. In spite of this fact, Utah has taken away with one hand what it promised to give with the other: by self-servingly waiving a clear requirement it agreed to promulgate (and did promulgate) in its own regulations. NRC, faced with this flagrant violation, has so far declined to act. There can be no excuse for this inaction.[5]

Upon information and belief, LLRW is currently being received at the Envirocare site in Utah. Under the current status quo, it will remain there as a potential hazard to public health and safety for the next several hundred years

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[5]Contrary to the assertion in the Federal Defendants' brief, plaintiff brought this situation to NRC's attention in January 1992, but NRC indicated at that time that it had made no determination to do anything.

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and without any assurance of future government involvement or control. It is fully within this Court's power to remedy this situation without further delay.

C. EXHAUSTION

In its motion to dismiss, NRC requests that this Court dismiss Plaintiff's claims against NRC because US Ecology has failed to exhaust its administrative remedies. As NRC has correctly noted, the exhaustion doctrine is intended to allow the agency to develop the factual background for decisionmaking and to apply any special expertise it may have in a particular area before engaging the resources of the Court. Defendants' Motion to Dismiss at 7, quoting McKart v. United States, 395 U.S. 185, 193-195 (1969). The exhaustion requirement is also intended to discourage litigants from intentionally bypassing the administrative process and to economize on judicial resources. Motion to Dismiss at 8-9, (citing McKart v. United States, 395 U.S. 185 at 193-195 (1969), and West v. Bergland, 611 F.2d 710, 715-717 (8th Cir. 1979), cert. denied, 449 U.S. 821 (1980)).

However, the exhaustion doctrine is not without exceptions. As the Supreme Court noted in McKart v. United States, 395 U.S. 185 (1969), none of the Supreme Court's exhaustion cases stands "for the proposition that the exhaustion doctrine must be applied blindly in every case."

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Id. See also West v. Bergland, 611 F.2d 710, 715-717 (8th Cir. 1979) cert. denied, 449 U.S. 821 (1980) (exhaustion doctrine need not be applied "woodenly"). In fact, unless exhaustion is required by statute, application of the exhaustion requirement lies within the sound discretion of the trial court. Morrison-Knudsen Co. v. CHG Int'l. Inc., 811 F.2d 1209, 1223 (9th Cir. 1987), cert. dismissed, sub nom. American Federal Savings and Loan Ass'n v. Westside Federal Savings and Loan Ass'n, 488 U.S. 935 (1988); Rodrigues v. Donovan, 769 F.2d 1344, 1348 (9th Cir. 1985); see also, Mathis v. Pacific Gas & Elec. Co., 891 F.2d 1429, 1434 (9th Cir. 1989) (district court may entertain challenge to NRC administrative action although administrative remedies not exhausted); Montes v. Thornburgh, 919 F.2d 531, 537 (9th Cir. 1990) (prudential exhaustion requirement is not a jurisdictional prerequisite but lies within the discretion of the district court); Winterberger v. General Teamster Auto Truck Drivers, 558 F.2d 923, 925 (9th Cir. 1977) (it may be an abuse of discretion to excuse failure to exhaust in some circumstances).

The AEA does not explicitly require exhaustion of administrative remedies. Therefore, this Court retains the discretion to allow plaintiff to continue its action without exhausting administrative remedies.

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Waiver of the exhaustion requirement is appropriate where the question is solely a matter of statutory interpretation involving purely legal and not factual matters. See e.g., McKart v. United States, 395 U.S. 185, 199 (1969) (exhaustion requirement waived where question is "solely one of statutory interpretation" and resolution of the issue "does not require any particular expertise"); Frontier Airlines, Inc. v. C.A.B., 621 F.2d 369, 371 (10th Cir. 1980) (exception to exhaustion exists where question is solely one of statutory interpretation); State of Colorado v. Veterans Admin., 430 F. Supp. 551, 558 (D. Colo. 1977), aff'd 602 F.2d 926 (10th Cir. 1979), cert. denied, 400 U.S. 1014 (1980) (exhaustion not required when issues concern statutory interpretation and constitutional issues); Honicker v. Hendrie, 465 F. Supp. 414, 417-418 (M.D. Tenn. 1979) (plaintiff not required to exhaust administrative remedies before NRC if question presented is one of pure law and if fact-finding expertise of agency is unnecessary to resolve claim).

NRC claims that the issue at hand cannot be determined without the application of agency expertise and fact-finding ability. Motion to Dismiss at 9-10. According to NRC, its "expertise in evaluating facts relevant to NRC's regulations . . . and allegations of an agreement state's failure to protect public health and safety . . . would be indispensable

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to a determination of what is demanded by relevant statutes and implementing regulations." Id. at 10.

In fact, however, these regulations and statutes are clear on their face. Whatever agency expertise and fact-finding ability were necessary to determine that federal or state land ownership is required to protect public health and safety has already been exercised by NRC in promulgating its Part 61 LLRW disposal rules in a proceeding that involved numerous parties, including other relevant government agencies such as EPA and DOE, and that took over four years to complete. See 47 Fed. Reg. 57,446 (Dec. 27, 1982).

Utah's justification of the waiver of the site ownership requirement (i.e., that the requirement is not directly related to public health and safety) is utterly without precedent. The Envirocare site is the only LLRW disposal site in the United States located on privately owned land where no government organization has agreed to take title. Utah's reliance on its exemption provision and its assertion that the site ownership requirement is unrelated to public health and safety cannot be justified under any reasonable reading of federal and state law.

This Court has the ability to determine, as well as (and perhaps better than) NRC, "what is demanded by relevant statutes and implementing regulations." Motion to Dismiss at

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10. As is evident from the discussion above, US Ecology has asked this Court to determine, solely as a matter of statutory and regulatory interpretation, whether Utah's waiver of the site ownership requirement is unlawful and whether both NRC and Utah must abide by their own regulations. Therefore, US Ecology's claim falls within a well-recognized exception to the exhaustion doctrine.

No facts beyond those necessary to establish conclusively that Utah did indeed waive the site ownership requirement for land privately owned by Envirocare are necessary to determine that Utah and NRC have ignored the clear dictates of their own regulations. These facts may easily be established by this Court without the application of any agency expertise or technical fact-finding ability. Indeed, assuming that Utah and the Federal defendants answer the Complaint, these facts may well be undisputed.

In considering whether to require exhaustion of administrative remedies, courts imply a balancing test that weighs the agency's need for administrative remedies, the need for judicial economy and the value of allowing the agency to exercise its expertise against the interests and rights of private parties in seeking redress. See Morrison-Knudsen Co. v. CHG Int'l., Inc., 811 F.2d 1209 at 1223 (9th Cir. 1987);

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Colon v. Federal Reserve Bank, 538 F. Supp. 498 (N.D. Cal. 1982).

In this case, requiring US Ecology to resort to the administrative process would fulfill none of the purposes of the exhaustion requirement. Utah's waiver of the site ownership requirement violates applicable Utah and NRC regulations. No agency expertise or fact-finding ability is necessary to reach this conclusion. Moreover, instead of encouraging judicial and administrative waste, a decision on this issue would in fact conserve both NRC and judicial resources by providing an immediate answer to the purely legal question at issue. Given the obvious violation of federal law alleged by US Ecology in this case, there is considerable justification for retaining the claim against both the federal defendants and Utah in this Court.

C. JURISDICTION

In its Motion to Dismiss, NRC argues that this Court lacks jurisdiction over the claims against the Federal Defendants because jurisdiction over such actions lies exclusively in the United States courts of appeals. According to NRC "even assuming that exhaustion of remedies was not required . . . this Court would still lack jurisdiction. The Hobbs Act vests exclusive jurisdiction in the courts of appeals . . ." Motion to Dismiss at 19.

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In arguing this position, NRC has failed to interpret properly the applicable jurisdictional provisions and has misapplied relevant case law. On its face, the statute does not require allegations that an Agreement State program violated federal law and regulations to be brought only in the courts of appeals. Under NRC's theory of jurisdiction, all legal challenges to NRC actions of any kind would need to be lodged in the courts of appeals. Relevant jurisdictional provisions simply do not support this reading. Exclusive jurisdiction in the courts of appeals for NRC actions is limited under the AEA and the Hobbs Act to proceedings related directly to individual licenses and NRC promulgation of rules and regulations dealing with activities of licensees. US Ecology's claim in this action falls into neither of these categories.

Under the Hobbs Act, 28 U.S.C. § 2342,

> The Court of Appeals has exclusive jurisdiction to enjoin, set aside, suspend or determine the validity of --
>
> * * *
>
> (4) All final orders of the Atomic Energy Commission [currently the NRC] made reviewable by section 2239 of Title 42.

Id. Section 2239 of Title 42 of the United States Code (AEA Section 189) sets out the types of final orders subject to review by the courts of appeals. These include:

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> [A]ny proceeding under this section for the granting, suspending, revoking, or amending of any license or construction permit, or application to transfer control, and in any proceeding for the issuance or modification of rules and regulations dealing with activities of licensees. . . .

42 U.S.C. § 2239(a)(1). As is evident, the plain language of the statute limits actions reviewable exclusively in the courts of appeals to specific types of actions, namely, those dealing with "any [i.e., an individual] license or construction permit" and/or NRC issuance or modification of rules or orders "dealing with the activities of licensees." Id.

US Ecology's claim in the case at hand does not fall within the types of proceedings specified within 42 U.S.C. § 2239(a)(1). No final NRC order granting, suspending or revoking an individual license is at issue; nor is NRC's issuance or modification or the validity of any promulgated rule dealing with the activities of licensees at issue here either. Indeed, in this case the validity of the regulation at issue is central to US Ecology's claim, not NRC's. US Ecology has brought this action to challenge Utah's unlawful failure to implement the site ownership regulation, thereby calling into question the status of Utah's Agreement State program. On its face, such a challenge does not fall within the scope of 42 U.S.C. § 2239(a)(1). District court review is therefore appropriate.

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Moreover, because no individual licensing decision or NRC rule promulgation is at issue, there is no need for initial agency fact-finding expertise that naturally supports review by courts of appeals. The issue in this case is simply whether Utah and NRC must abide by their own statutes and regulations. Such a question is properly cognizable in a district court under 42 U.S.C. § 2239.

In support of their claim that this Court lacks jurisdiction under the Hobbs Act, the Federal Defendants cite the Supreme Court's opinion in Florida Power & Light v. Lorion, 470 U.S. 729 (1985). According to the NRC:

> that exclusive jurisdiction over review of NRC orders lies in the courts of appeals was made absolutely clear in [the Lorion case] . . . . In Lorion, it was argued that the district courts should be permitted to retain jurisdiction over some types of cases involving NRC orders. The Supreme Court unequivocally rejected that proposition. . . ."

Motion to Dismiss at 12, citing Florida Power & Light v. Lorion, 470 U.S. 729 (1985) (emphasis added).

Lorion does not hold that all cases involving NRC orders must be brought in the courts of appeals. Instead, Lorion stands for the proposition that exclusive courts of appeals jurisdiction, for NRC orders involving licensing actions, does depend on whether a petitioner has a right to a hearing. Lorion at 740-41; see also Motion to Dismiss at 12 n.9.

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Moreover, Lorion makes it clear that the primary limitation placed on proceedings subject to the Hobbs Act under 42 U.S.C. § 2239 is on the type of proceeding involved, namely licensing proceedings.

According to the Supreme Court:

> When Congress decided on the scope of judicial review, it did so solely by referance to the subject matter of the Commission action . . . .

Lorion at 240. (Emphasis added). Congress apparently "intended to limit the scope of judicial review to final orders entered in licensing proceedings." Lorion at 738. (Emphasis in original). The reason why Congress juxtaposed a hearing requirement with the judicial review limitation was "to provide for a hearing in the types of proceedings in which initial courts of appeals review would take place -- that is licensing proceedings." Lorion at 741. Contrary to the Federal Defendants' assertion, the Supreme Court did not reject the proposition that "district courts should be permitted to retain jurisdiction over some types of cases involving NRC orders." Motion to Dismiss at 12. Under defendants' view, even the remotest connection or potential connection to a licensing proceeding is sufficient to invoke the exclusive jurisdiction of the courts of appeals. This position is not in accord with the relevant language of the statute.

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In support of its argument that this Court lacks jurisdiction, the Federal Defendants cite a single district court case, Sunflower Coalition v. NRC, 534 F.Supp. 446 (D. Colo. 1982).[6] In that case, a district court ruled that it lacked jurisdiction under 42 U.S.C. § 2239 to hear a challenge to the validity of state and federal action under an Agreement State program. 534 F.Supp. 446, 448.

The district court concluded that "[i]n effect, the NRC's supervision, acceptance or termination of a state agreement is a licensing decision, since the NRC thereby exercises its licensing authority in a particular state." Id. This summary conclusion fails to square with the plain language of the statute which states that courts of appeals jurisdiction is limited to "actions involving any license or construction permit" (i.e., an individual license or permit and not licenses or permits) or "to any proceeding for the issuance or

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[6]In its Motion to Dismiss, NRC also cited Natural Resources Defense Council v. NRC, 8 ELR 20163, No. 77-1570 (D.C. Cir. 1978), in support of exclusive courts of appeals jurisdiction. In fact, that case fails to address specifically the issue that NRC claims it does. As the D.C. Circuit noted, "petitioner in this case did not request a hearing before the Commission challenging the compatibility of the New Mexico program with the federal regulatory program. The court took no view on whether petitioners would have been entitled to such a hearing or on whether the New Mexico program, as it now stands, is compatible with the federal regulatory framework." Although the NRC claims that "[i]mplicit in the court's decision was a finding that an NRC decision on the scope of its licensing authority in an agreement state under section 274 is reviewable exclusively in the Court of Appeals," Motion to Dismiss at 16, in fact the court's failure to address the agreement state compatibility issue is simply that--a failure to address the issue.

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modifications of rules and regulations dealing with activities of licensees (i.e., promulgation, amendment or challenges to the validity of NRC regulations).

In the Sunflower case, the district court acknowledged that this was a case of first impression. Sunflower at 447. Its summary reasoning ignores both the language of the statute and the Supreme Court's reasoning in Lorion. Taken to its logical conclusion, the court's reasoning in Sunflower would make any action of the NRC a licensing decision, since everything NRC does ultimately relates to a licensing decision. In this case, NRC is not promulgating a rule or taking action on an individual license. Instead, NRC's relationship with state authorities and its failure to abide by its regulations is at issue. In such a case, 42 U.S.C. § 2239 does not apply.

In the Lorion case, the Supreme Court discussed the underlying rationale behind exclusive courts of appeals jurisdiction under the Hobbs Act. According to the Court, review in the courts of appeals normally takes place after the agency has had the opportunity to develop and compile a fact-finding record on the issue. "The reviewing court is not generally empowered to conduct a de novo inquiry into the matter being reviewed . . . [and therefore] the fact-finding capacity of the district court is thus typically unnecessary

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to judicial review of agency decisionmaking." Lorion at 744. It was therefore logical for Congress to have limited exclusive courts of appeals jurisdiction to NRC actions where the development of an agency record is necessary, namely, individual license or permit decisions and NRC's promulgation of final rules and regulations applicable to such licenses.

Although Sunflower's procedural facts are similar to those at issue here, the two-page opinion reveals little of the precise substance of plaintiff's particular claim. That claim may well have involved an individual license decision directly within the scope of either NRC's or the state's authority and expertise. In any event, the Sunflower opinion should not be followed by this Court. Without reason, it expands the scope of 42 U.S.C. § 2239 to all challenges involving any aspect of an Agreement State program. Yet the statute itself does not contemplate such actions within its terms. Moreover, there is no reason to favor courts of appeals review over district court review where no need for agency fact-finding expertise exists. Finally, the Supreme Court's opinion in Lorion suggests that courts of appeals jurisdiction is limited to licensing actions and rules.

For these reasons, nothing in the Atomic Energy Act 42 U.S.C. § 2239, or the Hobbs Act, 28 U.S.C. § 2342, deprives the Court of jurisdiction over this action that in effect

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challenges the NRC's inaction with respect to an invalid Agreement State program.

IV. CONCLUSION

For the foregoing reasons, plaintiff US Ecology respectfully requests that this Court deny in all respects the Federal Defendants' Motion to Dismiss.

Respectfully submitted this 26th day of May, 1992.

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3-Ex. 1

UTAH ADMINISTRATIVE CODE 1992

The Complete Administrative Rules
of the State of Utah
Effective as of January 1, 1992

VOLUME 1

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Old R Number and Agency Name		New R Number and Agency Name	
R447.	Environmental Health, Radiation Control.	R313.	Radiation Control (DEQ).
R448.	Environmental Health, Water Pollution Control.	R317.	Water Quality (DEQ).
R449.	Environmental Health, Drinking Water and Sanitation.	R309.	Drinking Water (DEQ).
R449.	Environmental Health, Drinking Water and Sanitation.	R392.	Health, Community Health Services, Environmental Services.
R450.	Environmental Health, Solid and Hazardous Waste.	R315.	Solid and Hazardous Waste (DEQ).
R451.	Environmental Health, Environmental Response and Remediation.	R311.	Environmental Response and Remediation (DEQ).
R454.	Health Care Financing, Contracts and Hearings.	R410.	Health Care Financing.
R455.	Health Care Financing, Coverage and Reimbursement Policy.	R414.	Health Care Financing, Coverage and Reimbursement Policy.
R457.	Health Care Financing, Medical Payments.	R418.	Health Care Financing, Medicaid Claims Processing.
R460.	Health Care Financing, State Medical Services.	R420.	Health Care Financing, Medical Assistance Program.
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R464.	Housing Finance.	R460.	Administration.
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R471.	Administration.	R558.	Administration.
R475.	Employment Security/Job Service.	R562.	Employment Security/Job Service.
R486.	Anti-Discrimination.	R560.	Anti-Discrimination.
R487.	Labor.	R572.	Labor.

addressed under the au... ority of Section 26-14a-501 et seq. U.C.A. 1953 as amended.

(a) National Priority List Sites. The Federal Register publication dates are indicated below.

TABLE

SITE NUMBER	SITE NAME	FEDERAL REGISTER PUBLICATION DATE
1	Hill Air Force Base	July 22, 1987
2	Monticello Vicinity Properties	June 10, 1986
3	Ogden Defense Depot	July 22, 1987
4	Portland Cement Sites 2 and 3	June 10, 1986
5	Rose Park Sludge Pit	September 8, 1983
6	Utah Power and Light, Asarco Barrel	October 4, 1989
7	Sharon Steel	August 30, 1990
8	Tooele Army Depot, North	August 30, 1990
9	Monticello Mill Site	November 21, 1989
10	Midvale Slag	February 11, 1991
11	Wasatch Chemical, Lot 5	February 11, 1991

(b) Proposed National Priority List Sites. The Federal Register publication dates are indicated below.

SITE NUMBER	SITE NAME	FEDERAL REGISTER PUBLICATION DATE

(c) Secured Sites Reserved

[illegible] hazardous substances, hazardous substances priority list" [illegible]

26-14a-501

R313. Radiation Control.

R313-10. Radiation Control.
R313-12. General Provisions.
R313-14. Violations and Escalated Enforcement.
R313-15. Standards for Protection Against Radiation.
R313-16. General Requirements Applicable to the Installation, Registration, Inspection, and Use of Radiation Machines.
R313-18. Notices, Instructions and Reports to Workers by Licensees or Registrants--Inspections.
R313-19. Requirements of General Applicability to Licensing of Radioactive Material.
R313-21. General Licenses.
R313-22. Specific Licenses.
R313-28. License Requirements for Land Disposal of Radioactive Waste - General Provisions.
R313-28. Use of X-Rays in the Healing Arts.
R313-32. Medical Use of Radioactive Material.
R313-36. Special Requirements for Industrial Radiographic Operations.
R313-38. Radiation Safety Requirements for Wireline Service Operation and Subsurface Tracer Studies.
R313-40. Radiation Safety Requirements for Analytical X-Ray Equipment.
R313-44. Radiation Safety Requirements for Particle Accelerators.
R313-70. Schedule of Fees.

R313-10. Radiation Control.

R313-10-1. Foreword.

R313-10-1. Foreword.

The Department of Health has established these rules in order ... develop a total Radiation Control Program within the State of Utah. The rules are designed to protect the public and the environment from hazards associated with radiation. Although limits are set for maximum permissible doses and concentrations, it is the policy that radiation levels and exposures from all sources of radiation will be reduced to the lowest level that can reasonably be achieved. Serious efforts will be made to reduce radiation exposures and releases of radioactive material in effluents to unrestricted areas to as low as is reasonably achievable.

The Bureau of Radiation Control is the Department's agent in administering these rules. The objective of these rules is to obtain optimum benefits from uses of sources of radiation while minimizing the risks. To achieve this objective requires knowledge of technical factors and understanding of their relative importance. The Bureau's staff will require sound basic training, and a continuing education program in order to effectively administer these rules. The Bureau is devoted to minimizing unproductive radiation exposures to human beings and to reduce the unnecessary release of radioactive materials to the environment.

[illegible] radiation
1990

26-1-24

R313-12. General Provisions.

R313-12-1. Authority.
R313-12-2. Purpose and Scope.
R313-12-3. Definitions.
R313-12-4. The International System of Units (SI).
R313-12-5. Radiation Technical Advisory Committee.
R313-12-6. Powers of the Radiation Technical Advisory Committee.
R313-12-51. Records.
R313-12-52. Inspections.
R313-12-53. Tests and Surveys.
R313-12-54. Exemptions.
R313-12-90. Elimination of Immediate Hazards.
R313-12-100. Prohibited Uses.
R313-12-110. Communications.
R313-12-120. Information on Transportation of Special Form Licensed Material.

R313-12-1. Authority.

The rules set forth herein are adopted pursuant to the provisions of Chapter UCA 26-1-27 through 29, UCA 26-23-1 through 3, UCA 26-23-6, UCA 26-23-8, and UCA 63-38-9.

R313-12-2. Purpose and Scope.

It is the purpose of these rules to state such requirements as shall be applied in the use of radiation, radiation machines, and radioactive materials to ensure the maximum protection of the public health and safety to all persons at, or in the vicinity of, the place of use, storage, or disposal. These rules are intended to be consistent with the proper use of radiation machines and radioactive materials. Except as otherwise specifically provided, these rules apply to all persons who receive, possess, use, transfer, own or acquire any source of radiation, provided, however, that nothing in these rules shall apply to any person to the extent such person is subject to regulation by the U.S. Nuclear Regulatory Commission. See also R313-12-110.

at all reasonable times opportunity to inspect sources of radiation and the premises and facilities wherein such sources of radiation are used or stored.

(2) Each licensee or registrant shall make available to the Bureau for inspection, upon reasonable notice, records maintained pursuant to these rules.

R313-12-52. Tests and Surveys.

(1) Each licensee or registrant shall perform upon instructions from the Bureau or shall permit the Bureau to perform such reasonable tests and surveys as the Bureau deems appropriate or necessary including, but not limited to, tests and surveys of:

(a) sources of radiation;

(b) facilities wherein sources of radiation are used or stored;

(c) radiation detection and monitoring instruments; and

(d) other equipment and devices used in connection with utilization or storage of licensed or registered sources of radiation.

(2) Additional Requirements. The Bureau may, by rule, or order, impose upon any licensee or registrant such requirements in addition to those established in these rules as it deems appropriate or necessary to minimize any danger to public health and safety or property.

R313-12-54. Exemptions.

(1) The Bureau may, upon application therefor or upon its own initiative, grant such exemptions or exceptions from the requirements of these rules as it determines are authorized by law and will not result in undue hazard to public health and safety or property.

(2) Any U.S. Department of Energy contractor or subcontractor and any U.S. Nuclear Regulatory Commission contractor or subcontractor of the following categories operating within this state is exempt from these rules to the extent that such contractor or subcontractor under his contract receives, possesses, uses, transfers or acquires sources of radiation:

(a) prime contractors performing work for the Department of Energy at U.S. Government-owned or controlled sites, including the transportation of sources of radiation to or from such sites and the performance of contract services during temporary interruptions of such transportation;

(b) prime contractors of the Department of Energy performing research in, or development, manufacture, storage, testing or transportation of, atomic weapons or components thereof;

(c) prime contractors of the Department of Energy using or operating nuclear reactors or other nuclear devices in a United States Government-owned vehicle or vessel;

(d) any other prime contractor or subcontractor of the Department of Energy or of the Nuclear Regulatory Commission when the state and the Nuclear Regulatory Commission jointly determine (i) that the exemption of the prime contractor or subcontractor is authorized by law; and (ii) that under the terms of the contract or subcontract, there is adequate assurance that the work thereunder can be accomplished without undue risk to the public health and safety.

R313-12-80. Elimination of Immediate Hazards.

(1) Where conditions exist that the radioactive material of any person creates an imminent threat or danger to the public health or safety, the radioactive material may be impounded by the Bureau of Radiation Control if the person is also in violation of any provisions of UCA 26-1-27 through 26-1-29, rules or orders promulgated thereunder, or of the terms of a license, permit or registration certificate issued under those sections.

(2) Decisions by the Bureau of Radiation Control under this section are subject to the hearing processes and appeal rights provided in UCA Section 26-23-2 prior to disposal of impounded radioactive materials.

R313-12-100. Prohibited Uses.

(1) Hand-held fluoroscopic screens shall not be used.

(2) Shoe-fitting fluoroscopic devices shall not be used.

R313-12-110. Communications.

All communications and reports concerning these rules, and applications filed thereunder, should be addressed to the Bureau of Radiation Control, P.O. Box 16690, 288 North 1460 West, Salt Lake City, Utah 84116-0690.

R313-12-120. Information on Transportation of Special Form Licensed Material.

(1) "Special form" means any of the following physical forms of licensed material:

(a) The material is in solid form having no dimension less than 0.5 millimeter or at least one dimension greater than five millimeters; does not melt, sublime, or ignite in air at a temperature of 1,000 degrees Fahrenheit (537.8 degrees C); will not shatter or crumble if subjected to the percussion test described in R313-12-120(2)(b) of this chapter; and is not dissolved or converted into dispersible form to the extent of more than 0.005 percent by weight by immersion for one week in water at 68 degrees Fahrenheit (20 degrees C) or in air at 86 degrees Fahrenheit (30 degrees C).

(b) The material is securely contained in a capsule having no dimension less than 0.5 millimeter or at least one dimension greater than five millimeters, which will retain its contents if subjected to the tests prescribed in R313-12-120(2) of this chapter; and which is constructed of materials which do not melt, sublime, or ignite in air at 1,475 degrees Fahrenheit (801.7 degrees C), and do not dissolve, or convert into dispersible form, to the extent of more than 0.005 percent by weight by immersion for one week in water at 68 degrees Fahrenheit (20 degrees C) or in air at 86 degrees Fahrenheit (30 degrees C).

(2) Tests for Special Form Licensed Material.

(a) Free Drop-A free drop through a distance of 30 feet (9.14 m) onto a flat essentially unyielding horizontal surface, striking the surface in such a position as to suffer maximum damage.

(b) Percussion - Impact of the flat circular end of a 1 inch (2.54 cm) diameter steel rod weighing 3 pounds (1.36 kg), dropped through a distance of 40 inches (101.6 cm). The capsule or material shall be placed on a sheet of lead, of hardness number 3.5 to 4.5 on the Vickers scale, and not more than 1 inch thick, supported by a smooth essentially unyielding surface.

(c) Heating - Heating in air to a temperature of 1,475

(m) an MFS in which one false statement was made with careless disregard;

(n) deliberate falsification of records which the Bureau requires be kept involving significant information;

(o) action by plant management above firstline supervision in violation of R313-15-16(3).

(3) Severity III - significant violations involving for example:

(a) single exposure of a worker in excess of 3 rems (30.0 mSv) of radiation to the whole body, 7.5 rems (75.0 mSv) to the skin of the whole body, or 18.75 rems (187.5 mSv) to the feet, ankles, hands, or forearms;

(b) a radiation level in an unrestricted area such that an individual could receive greater than 100 millirem (1.0 mSv) in a one hour period or 500 millirem (5.0 mSv) in any seven consecutive days;

(c) failure to make a 24-hour notification as required by R313-15-403(2) or an immediate notification required by R313-15-402;

(d) substantial potential for an exposure or release in excess of the limits of R313-15 whether or not such exposure or release occurs (e.g., entry into high radiation areas, such as under reactor vessels or in the vicinity of exposed radiographic sources, without having performed an adequate survey, operation of a radiation facility with a non-functioning interlock system);

(e) release of radioactive material to an unrestricted area in excess of the limits of R313-15-106;

(f) improper disposal of licensed material not covered in Severity Levels I or II;

(g) Exposure of a worker in restricted areas in excess of the limits of R313-15-103;

(h) release for unrestricted use of contaminated or radioactive material or equipment which poses a realistic potential for significant exposure to members of the public, or which reflects a programmatic (rather than isolated) weakness in the radiation control program;

(i) cumulative worker exposure above regulatory limits when such cumulative exposure reflects a programmatic, rather than an isolated weakness in radiation protection;

(j) conduct of licensee activities by a technically unqualified person;

(k) significant failure to control licensed material;

(l) breach of transportation package integrity;

(m) surface contamination or external radiation levels in excess of, but less than a factor of five above Bureau requirements, that did not result from a breach of transportation package integrity;

(n) any radioactive material transportation non-compliance with labeling, placarding, shipping paper, packaging, loading, or other requirements that could reasonably result in the following:

(i) improper identification of the type, quantity, or form of material;

(ii) failure of the carrier or recipient to exercise adequate controls; or

(iii) substantial potential for personnel exposure or contamination, or improper transfer of material.

(o) failure to make required initial notification associated with Severity III violations;

(p) failure to control access to licensed materials for radiation purposes as specified by Bureau requirements;

(q) possession or use of unauthorized equipment or materials in the conduct of licensee activities which degrades safety;

(r) use of radioactive material on humans where such use is not authorized;

(s) medical therapeutic misadministrations;

(t) an MFS not amounting to a Severity Level I or II violation;

(u) deliberate falsification, or falsification by or with the knowledge of management, of records which the Bureau requires be kept that did not involve significant information;

(v) Action by first line supervision in violation of R313-15-16(3).

(4) Severity IV - violations involving for example:

(a) exposures in excess of the limits of R313-15-101 not constituting Severity Level I, II, or III violations;

(b) a radiation level in an unrestricted area such that an individual could receive greater than 2 millirem (0.02 mSv) in a one hour period or 100 millirem (1.0 mSv) in any seven consecutive days;

(c) failure to make a 30 day notification required by R313-15-405;

(d) failure to make a follow-up written report as required by R313-15-402 and R313-15-409;

(e) any other matter that has more than minor safety or environmental significance;

(f) failure to maintain patients hospitalized who have cobalt-60, cesium-137 or iridium-192 implants or to conduct required leakage or contamination tests, or to use properly calibrated equipment;

(g) failure to report medical diagnostic misadministrations;

(h) a false statement caused by an inadvertent clerical or similar error involving information which, had it been available to the Bureau and accurate at the time the information should have been submitted, would probably not have resulted in regulatory action or the Bureau seeking additional information.

(5) Severity V - violations that have minor safety or environmental significance.

(l) Personnel overexposures and associated violations incurred during a life saving effort, will be treated on a case-by-case basis.

NEW: penalties, licensing, radioactive materials
1988

39-1-89.1

R313-15. Standards for Protection Against Radiation.

R313-15-1. Purpose and Scope.
R313-15-2. Definitions.
R313-15-10. As Low As Reasonably Achievable (ALARA).
R313-15-101. Radiation Dose to Individuals in Restricted Areas.
R313-15-102. Determination of Prior Accumulated Dose.
R313-15-103. Exposure of Individuals to Concentrations of Radioactive Materials in Restricted Areas.
R313-15-104. Exposure of Minors*.
R313-15-105. Permissible Levels of Radiation From External Sources in Unrestricted Areas*.
R313-15-106. Concentration in Effluents to

Unrestricted Areas.
R313-15-107. Leak Tests.
R313-15-108. Orders Requiring Furnishing Bioassay Services.
R313-15-201. Surveys.
R313-15-202. Personnal Monitoring.
R313-15-203. Caution Signs, Labels, and Signals.
R313-15-204. Exemptions From Posting and Labeling Requirements.
R313-15-205. Procedures For Picking Up, Receiving, and Opening Packages.
R313-15-206. Instruction of Personnel.
R313-15-207. Security of Stored Radioactive Material in Unrestricted Areas.
R313-15-301. Waste Disposal, General Requirement.
R313-15-302. Method of Obtaining Approval of Proposed Disposal Procedures.
R313-15-303. Disposal by Release Into Sanitary Sewerage Systems.
R313-15-304. Disposal by Burial in Soil.
R313-15-305. Disposal by Incineration.
R313-15-306. Disposal of Specific Wastes.
R313-15-307. Classification of Radioactive Waste for Near Surface Disposal.
R313-15-308. Radioactive Waste Characteristics.
R313-15-309. Labeling.
R313-15-311. Transfer for Disposal and Manifests.
R313-15-401. Records of Surveys, Radiation Monitoring and Disposal.
R313-15-402. Reports of Theft or Loss of Radiation Sources.
R313-15-403. Notification of Incidents.
R313-15-406. Reports of Overexposures and/or Excessive Levels and Concentrations.
R313-15-407. Vacating Premises.
R313-15-409. Notifications and Reports to Individuals.
R313-15-420. Concentrations in Air and Water Above Natural Background.
R313-15-430. Quantities For Use With R313-15-303 and R313-15-308.

R313-15-1. Purpose and Scope.

This chapter establishes standards for protection against radiation hazards. Except as otherwise specifically provided, this chapter applies to all licensees and registrants. It is the purpose of the rules in this chapter to control the possession, use, and transfer of sources of radiation by any licensee or registrant in such a manner that the total dose to an individual does not exceed the standards of radiation protection prescribed in this chapter. Nothing in this chapter shall be interpreted as limiting the intentional exposure of patients to radiation for the purpose of medical diagnosis or therapy.

R313-15-2. Definitions.

"Dosimetry processor" means an individual or an organization that processes and evaluates personnal monitoring equipment in order to determine the radiation dose delivered to the equipment.

R313-15-10. As Low As Reasonably Achievable (ALARA).

(1) Within two years of the effective date of these rules each licensee and registrant shall develop and implement a written radiation protection program that includes provisions for keeping doses ALARA. The conditions imposed by ALARA programs shall not be regarded by the Bureau as rules, i.e., not subject to citation or penalty.

(2) To satisfy the requirement of paragraph (1) of this section, one of the paragraphs below must be followed:

(a) At a medical institution, management, the Radiation Safety Officer, and all authorized users must participate in the program as requested by the Radiation Safety Committee.

(b) For licensees that are not medical institutions, management and all authorized users must participate as requested by the Radiation Safety Officer.

(3) The program must include notice to workers of the program's existence and worker's responsibility to help keep doses equivalents ALARA, a review of summaries of the types and amounts of radioactive material used, occupational doses, changes in radiation safety procedures and safety measures, and continuing education and training for all personnal who work with or in the vicinity of radioactive material.

R313-15-101. Radiation Dose to Individuals in Restricted Areas.

(1) *In accordance with the provisions of R313-15-102 and except as provided in R313-15-101(2) no licensee or registrant shall possess, use, receive, or transfer sources of radiation in such a manner as to cause any individual in a restricted area to receive in any period of one calendar quarter from all sources of radiation in the licensee's or registrant's possession a total dose in excess of the limits specified in the following table:

TABLE

	Rem (Sv) PER CALENDAR QUARTER
Whole body; head and trunk; active blood-forming organs; lens of eyes; or gonads	1.25 (12.5 mSv)
Hands and forearms; feet and ankles	18.75 (187.5 mSv)
Skin of whole body	7.5 (75.0 mSv)

NOTE: *For determining the doses specified in R313-15-101 a dose from x-or gamma rays up to 10 MeV may be assumed to be equivalent to the exposure measured by a properly calibrated appropriate instrument in air at or near the body surface in the region of the highest dose rate.

(2) A licensee or registrant may permit an individual in a restricted area to receive a total occupational dose to the whole body greater than that permitted under R313-15-101(1), provided that all of the following:

(a) During any calendar quarter the total occupational dose to the whole body from sources of radiation in the licensee's or registrant's possession shall not exceed 3 rems (30.0 mSv).

(b) The dose to the whole body, when added to the accumulated occupational dose to the whole body, shall not exceed 5(N-18) rems (50(N-18)mSv) when "N" equals the individual's age in years at the individual's last birthday.

(c) The licensee or registrant has determined the individual's accumulated occupational dose to the whole body on form NRC-05 or on a clear and legible record containing all the information required in that form and has otherwise complied with the requirements of R313-15-102. As used in R313-15-101(2) "dose to the whole body" shall be deemed to include any dose to the whole body, gonads, active blood-forming organs, head

dental to some other use nor to nuclear reactor generated radiation other than radiation from byproducts, source, or special nuclear materials that are used in sealed sources in non-self-shielded irradiators.

R313-15-304. Exceptions From Posting and Labeling Requirements.

Notwithstanding the provisions of R313-15-303:

(1) Notwithstanding the requirements of R313-36-42, a room or area is not required to be posted with a caution sign because of the presence of a sealed source, provided the radiation level twelve inches (30.5 cm) from the surface of the source container or housing does not exceed five millirem per hour (0.05 mSv/hr.).

(2) Rooms or other areas in hospitals are not required to be posted with caution signs, and control of entrance or access thereto pursuant to R313-15-303(1)(a), is not required because of the presence of patients containing radioactive material, provided that there are personnel in attendance who will take the precautions necessary to prevent the exposure of any individual to radiation or radioactive material in excess of the limits established in the rules in this chapter.

(3) Caution signs are not required to be posted in areas or rooms containing radioactive material for periods of less than eight hours provided that the following conditions are met:

(a) The material is constantly attended during such periods by an individual who shall take the precautions necessary to prevent the exposure of any individual to radiation or radioactive material in excess of the limits established in this chapter.

(b) Such area or room is subject to the licensee's or registrant's control.

(4) A room or other area is not required to be posted with a caution sign, and control is not required for each entrance or access point to a room or other area which is a high radiation area, solely because of the presence of radioactive material prepared for transport and packaged and labeled in accordance with regulations of the U. S. Department of Transportation.

(5) Rooms with x-ray equipment may not be required to be posted with caution signs provided that access is controlled.

(6) The interior of a teletherapy room is not required to be posted with caution signs provided such posting is conspicuously placed at all the entrances to the rooms.

R313-15-305. Procedures For Picking Up, Receiving, and Opening Packages.

(1) Each licensee who expects to receive a package containing quantities of radioactive material in excess of a "Type A" quantity as specified in or determined by procedures described in R313-15-100 Table A-1 shall make arrangements to receive:

(a) the package when the carrier offers it for delivery; or

(b) notification of the arrival of the package at the carrier's terminal and to pick up the package expeditiously.

(2) Each licensee shall monitor the external surfaces of a package known to contain radioactive material for radioactive contamination and radiation levels if the package:

(a) is labeled as containing radioactive material; or

(b) has evidence of potential contamination such as packages that are crushed, wet, or damaged.

(3) The licensee shall perform the monitoring required by paragraph (2) of this section as soon as practical after receipt of the package, but not later than 3 hours after the package is received at the licensee's facility if it is received during the licensee's normal working hours, or not later than 3 hours from the beginning of the next working day if it is received after working hours.

(4) The licensee shall immediately notify the final delivery carrier by telephone, and shall notify the Bureau, by telephone and telegram, mailgram, or facsimile, when:

(a) Removable radioactive surface contamination exceeds 0.01 microcurie (370 Bq) per 100 square centimeters on the external surfaces of the package.

(b) Radiation levels at 1 meter from the external surface of the package exceeds 0.01 rem (0.1 mSv) per hour.

(5) Each licensee shall:

(a) establish, maintain, and retain written procedures for safely opening packages in which radioactive material is received; and

(b) ensure that the procedures are followed and that due consideration is given to special instructions for the type of package being opened.

R313-15-306. Instruction of Personnel.

Instructions required for individuals working in or frequenting any portion of a restricted area are specified in R313-15-12.

R313-15-307. Security of Stored Radioactive Material in Unrestricted Areas.

(1) Licensed materials stored in an unrestricted area shall be secured from unauthorized removal from the place of storage.

(2) Licensed materials in an unrestricted area and not in storage shall be tended under the constant surveillance and immediate control of the licensee.

R313-15-901. Waste Disposal, General Requirement.

No licensee shall dispose of any radioactive material except:

(1) by transfer to an authorized recipient as provided in R313-19-41; or

(2) as authorized pursuant to R313-15-106, R313-15-302, R313-15-303, or R313-15-304.

R313-15-903. Method of Obtaining Approval of Proposed Disposal Procedures.

(1) Any person may apply to the Bureau for approval of proposed procedures to dispose of radioactive material in a manner not otherwise authorized in this chapter. Each application shall contain a description of the radioactive material, including the quantities and kinds of radioactive material and levels of radioactivity involved, and the proposed manner and conditions of disposal. The application, where appropriate, should also include an analysis and evaluation of pertinent information as to the nature of the environment, including topographical, geological, meteorological, and hydrological characteristics; usage of ground and surface waters in the general area; the nature and location

of other potentially affected facilities; and procedures to be observed to minimize the risk of unexpected or hazardous exposures.

(2) The Bureau will not approve any application for a license to receive radioactive material from other persons for disposal on land not owned by a state or the Federal Government.

R313-15-303. Disposal by Release Into Sanitary Sewerage Systems.

No licensee shall discharge radioactive material into a sanitary sewerage system unless:

(1) it is readily soluble or dispersible in water;

(2) the quantity of any radioactive material released into the system by the licensee in any one day does not exceed the larger of:

(a) the quantity which, if diluted by the average daily quantity of sewage released into the sewer by the licensee, will result in an average concentration not greater than the limits specified in R313-15-420, Table I, Column 2;

(b) ten times the quantity of such material specified in R313-15-430, of this chapter;

(3) The quantity of any radioactive material released in any one month, if diluted by the average monthly quantity of water released by the licensee, will not result in an average concentration exceeding the limits specified in R313-15-420, Table I, Column 2.

(4) The gross quantity of radioactive material released into the sewerage system by the licensee does not exceed 1 curie (37.0 GBq) per year excluding H-3 and C-14.

(5) Excreta from individuals undergoing medical diagnosis or therapy with radioactive material shall be exempt from any limitations contained in this section: PROVIDED, that the licensee provides for appropriate radiological monitoring whenever any waste line in the licensee's installation which may carry such excreta is opened.

R313-15-304. Disposal by Burial in Soil.

No licensee shall dispose of radioactive material by burial in soil except as specifically approved by the Bureau pursuant to R313-15-302.

R313-15-305. Disposal by Incineration.

No licensee shall incinerate radioactive material for the purpose of disposal or preparation for disposal except as specifically approved by the Bureau pursuant to R313-15-106 and 302.

R313-15-306. Disposal of Specific Wastes.

(1) Any licensee may dispose of the following radioactive material without regard to its radioactivity:

(a) 0.05 microcurie (1.850 kBq) or less of hydrogen-3 or carbon-14 per gram of medium used for liquid scintillation counting.

(b) 0.05 microcurie (1.850 kBq) or less of hydrogen-3 or carbon-14 per gram of animal tissue averaged over the weight of the entire animal, provided, however, tissue may not be disposed of under R313-15-306 in a manner that would permit its use either as food for human or as animal feed.

(2) Nothing in R313-15-306(1), however, relieves the licensee of maintaining records showing the receipt, transfer and disposal of such radioactive material as specified in R313-12-61 of these rules.

(3) Nothing in these rules relieves the licensee from complying with other applicable Federal, State, and local rules governing any other toxic or hazardous property of these materials.

R313-15-307. Classification of Radioactive Waste for Near Surface Disposal.

(1) Considerations. Determination of the classification of waste involves two considerations. First, consideration must be given to the concentration of long-lived radionuclides (and their shorter-lived precursors) whose potential hazard will persist long after such precautions as institutional controls, improved waste form, and deeper disposal have ceased to be effective. These precautions delay the time when long-lived radionuclides could cause exposures. In addition, the magnitude of the potential dose is limited by the concentration and availability of the radionuclide at the time of exposure. Second, consideration must be given to the concentration of shorter-lived radionuclides for which requirements on institutional controls, waste form, and disposal methods are effective.

(2) Classes of Waste.

(a) Class A waste is waste that is usually segregated from other waste classes at the disposal site. The physical form and characteristics of Class A waste must meet the minimum requirements set forth in R313-15-308(1). If Class A waste also meets the stability requirements set forth in R313-15-308(2), it is not necessary to segregate the waste for disposal.

(b) Class B waste is waste that must meet more rigorous requirements on waste form to ensure stability after disposal. The physical form and characteristics of Class B waste must meet both the minimum and stability requirements set forth in R313-15-308.

(c) Class C waste is waste that not only must meet rigorous requirements on waste form to ensure stability but also requires additional measures at the disposal facility to protect against inadvertent intrusion. The physical form and characteristics of Class C waste must meet both the minimum and stability requirements set forth in R313-15-308.

(3) Classification Determination by Long-Lived Radionuclides. If the waste contains only radionuclides listed in Table 1, classification shall be determined as follows:

(a) If the concentration does not exceed 0.1 times the value in Table 1, the waste is Class A.

(b) If the concentration exceeds 0.1 times the value in Table 1 but does not exceed the value in Table 1, the waste is Class C.

(c) If the concentration exceeds the value in Table 1, the waste is not generally acceptable for near-surface disposal.

(d) For wastes containing mixtures of radionuclides listed in Table 1, the total concentration shall be determined by the sum of fractions rule described in R313-15-307(7).

DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH

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March 8, 1991

Khosrow Semnani
Envirocare of Utah, Inc.
215 South State Street, Suite 1160
Salt Lake City, Utah 84111

RE: Radioactive Material License No. UT 2300249

Dear Mr. Semnani:

By letter dated November 18, 1987, you were notified that pursuant to your request for an exemption to rule URC-24-135, the exemption had been granted. This provided for private ownership for the Envirocare site and it continues to be in effect.

As you are aware, the Bureau has been reviewing Envirocare's amendment application for disposal of certain "byproduct, source or special nuclear materials", contaminated wastes. Utah Radiation Control Rule R447-25-9(2) states that in circumstances where private land ownership exists for radioactive waste disposal sites, the applicant "shall submit evidence that arrangements have been made for assumption of ownership in fee by the federal or a state agency before the Bureau issues a license". Since provisions do not exist within the Department of Health enabling legislation to provide for "the state to acquire by ownership in fee" the Envirocare site, the Bureau is through its own initiative providing an exemption to R447-25-9(2). Therefore, in accordance with Utah Radiation Control Rule R447-12-54(1), Envirocare is granted an exemption to Radiation Control Rule R447-25-9(2).

Sincerely,

Larry F. Anderson, Director
Bureau of Radiation Control

12-Ex. 2

UTAH BUREAU OF RADIATION CONTROL

SAFETY EVALUATION REPORT

In Consideration of the License Amendment Application
for Radioactive Materials License No. UT 2300249

Envirocare of Utah Inc.

March 1991

CHAPTER 1
GENERAL INFORMATION

CONCLUSIONS OF THE REVIEW/Utah Bureau of Radiation Control

Section 1.1 Introduction

The general information supplied by the licensee has been reviewed by the staff in accordance with the guidance in the SRP Section 1.1. The applicant has previously provided similar generic information for the issuance of the current NORM disposal license. This material coupled with the UBRC's high level of active familiarity provides the basis for the conclusion that the technical, financial and institutional information required by R447-25 is available.

Section 1.2 General Facility Description

The general information necessary to evaluate the overall facility design and layout has been evaluated. The licensee has adequately described the facility and its various functions such that the reviewers have an overall understanding of the facility.

Section 1.3 Schedules

This review and safety evaluation is for an amendment to the existing license. The Envirocare facility has been operational for approximately three (3) years. Therefore, schedules for design and construction are not relevant.

Section 1.4 Institutional Information

In November 1987, the UBRC granted an exemption to a rule, URC-24-135 (currently R447-15-302) to S.K. Hart Engineering (currently Envirocare of Utah). The effect of the exemption was to permit the development of a NORM disposal site on privately owned property. This action was taken pursuant to the applicant's request for such an exemption. For the following reasons, the exemption was granted:

1. The Utah Code does not provide for State ownership of this type of facility and it would require legislative action to amend the Code.
2. The Utah Bureau of Solid and Hazardous Waste Management siting requirements stipulate private ownership. Therefore, a precedence factor was taken into account.
3. It is believed that the ownership issue does not necessarily relate to issues of protection of the public health and safety.
4. The recognition that, ultimately (upon failure of all other controls), the State would be responsible for any public health related problems that might occur.
5. The belief that an undisputable surety arrangement for long term monitoring and maintenance would provide for public safety and health.

The Envirocare request was pursuant to URC-12-125 (currently R447-12-54) which states that the UBRC can grant exemptions or exceptions to rules "as it determines are authorized by law and will not result in undue hazard to public health and safety or property". The exemption continues to be in effect.

In 1988, new radiation control rules went into effect relevant to the Envirocare amendment application. Specifically, R447-25-9(2) states:

> "Where the proposed disposal site is on land not owned by the federal or a state government the applicant shall submit evidence that arrangements have been made for assumption of ownership in fee by the federal or a state agency before the Bureau issues a license."

In March 1991, in accordance with R447-12-54, the UBRC granted an exemption, on its own initiative, to Envirocare regarding R447-25-9(2). The principle reasons for providing the exemption are: (1) the Utah Code does not provide for the "assumption of ownership" by the State; (2) the ownership issue does not directly relate to issues of public health and safety; and (3) there exists a sound surety arrangement which provides for monitoring and maintenance of any items relating to public health and safety. Therefore, Envirocare is in compliance with R447-25-9.

Section 1.5 Materials Incorporated by Reference

The staff has reviewed the materials, information or documentation that has been incorporated into the Safety Analysis Report (SAR) by reference. The materials have been evaluated as to their relevance within the intended context. These materials are generally acceptable or appropriate for the topic for which they were incorporated.

Section 1.6 Conformance to Regulatory Guides

As part of the detailed technical evaluations of various sections of the SAR, the staff has utilized various documents to provide guidance for the reviews. Likewise, the Envirocare staff has utilized some of the same guides to prepare the SAR. Accordingly the staff has evaluated the licensee's conformance to regulatory guidance or where, the guidance has been supplanted by an appropriate alternative, the alternative has been evaluated. The staff is not aware of any non-conformance with regulatory guidance.

Section 1.7 Summary of Principal Review Matters

The licensee has identified, in part, significant licensing issues for their amendment request. Other major licensing issues were identified by the staff reviewers. Envirocare has obtained technical assessments of these issues for submission and review by the UBRC. The applicant has in many instances resolved these matters or as a condition of the license will be required to resolve any open items as part of a compliance schedule.

In particular, significant review matters included those involving geotechnical and groundwater hydrologic issues. Other important but less significant issues included waste handling and storage and concentrations of radionuclides in waste for disposal.

NUREG-0782
Vol. 2

Draft Environmental Impact Statement on 10 CFR Part 61 "Licensing Requirements for Land Disposal of Radioactive Waste"

Main Report

U.S. Nuclear Regulatory Commission

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September 1981

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VOLUME II

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Chapter 4

PRESENTATION AND ANALYSIS OF ALTERNATIVES-INTRUDER

4.1 INTRODUCTION

This chapter reviews the potential hazard presented by inadvertent human intrusion into disposed waste and methods which may be used to mitigate the hazard. Two general concentration-limited inadvertent intrusion scenarios are considered:

1. Excavation into disposed waste or construction of a house or building at the disposal facility; and

2. Living on and consuming food grown at the disposal facility.

As implied above, the first general intrusion scenario may be broken into two sub-scenarios, depending upon the length of time that exposure occurs.

A third inadvertent intrusion scenario, which involves consumption of water from a well drilled at the site, is considered in Chapter 5 since it relates to ground-water migration.

Four methods are addressed by which potential human intrusion impacts may be mitigated:

1. Controlling the disposal of specific waste streams;

2. Waste form and packaging;

3. Institutional controls; and

4. Use of engineered and/or natural barriers to intrusion.

Section 2 presents background information about intrusion and selection of the specific scenarios analyzed in this EIS. Section 3 analyzes inadvertent human intrusion presenting the impacts of the base case "no action" alternative and incremental changes in those impacts due to application of a range of alternative controls involving disposal of specific waste streams, waste form and packaging, institutional controls, and use of natural and engineered barriers. Sections 4 and 5 analyze development of a performance objective for protection of an inadvertent intruder leading to selection of a preferred performance objective. Section 6 reviews technical requirements derived from the analyses, and those involving codification of existing practice, that should be applied in the near-surface disposal of waste to ensure protection of the inadvertent intruder. For those requirements involving a change to existing practice, a range of alternatives is considered and the costs and impacts presented. In some cases, based on a balancing of costs and benefits, a specific prescriptive requirement is selected. In other cases, flexibility in meeting the requirement is maintained to allow for individual cost-benefit considerations.

The slit trench option results in an additional 2.8 ha (7 acres) committed to waste disposal. The overall land use efficiency for this option is estimated to be 8.75 ft^3/ft^2 (mixture of regular and slit trenches). The major anticipated benefit of employing this option is a reduction in the occupational exposures received by the waste emplacement labor force at the disposal facility. It is estimated that the use of slit trenches can possibly reduce occupational exposures by between 10 and 20%. Use of slit trenches for high activity wastes would be expected to reduce potential intruder exposures by a factor of about two. A drawback to the use of these slit trenches are the moderate slope failure hazards existing for vertical-walled trenches. In addition, the restricted width dimensions of slit trenches may preclude the burial of very large waste packages.

4.3.5.3 Other Methods of Disposal

Since this EIS is limited to near-surface disposal, NRC did not analyze in detail other methods of disposal. Other methods of disposal, however, such as intermediate depth burial, mined cavities, and ocean and space disposal can be very effective against intrusion. For example, use of a mined cavity would place the waste several hundred meters below the surface of the earth--far below most activities of man. Space disposal removes the waste entirely from the earth's surface. However, both options are very expensive--i.e., $500 to $840 per cubic meter for mined cavity disposal (not including postoperational costs) and $2 million/$m^3$ for space disposal. In the case of space disposal, the technology for routine implementation of this option is not available at the present time and the potential hazards are unknown. Therefore, if space disposal were required for all low-level waste, then large quantities of low-level waste would need to be stored until the technology was fully developed. This would be extremely expensive to licensees.

Waste can also be disposed of at much deeper depths. The opportunities for doing so may be limited at most eastern disposal sites, and an intermediate depth disposal facility at a western site (an unused open-pit mine) is illustrated in Appendix F as an example. This is expected to be effective against potential intrusion but could also be expensive. The reader is referred to Appendix F for further information. With respect to mined cavity disposal, there are currently no mined cavity disposal facilities licensed to operate in the country. If all low-level waste were required to be disposed of by this method, then all waste currently being generated would have to be stored until mined cavity facilities were licensed.

4.3.6 Institutional Controls

Another mechanism for reducing potential impacts to a potential inadvertant intruder is use of institutional controls.

4.3.6.1 Background

Institutional controls are controls which require performance of some action by a governmental agency to preclude human contact with the waste, or require a continuing social order. Examples include the following:

- Access to a disposal site can be controlled to restrict entry. For example, the site can be surrounded by a fence or other barrier to human or livestock intrusion. This barrier can be posted with warnings not to intrude upon the site. In addition, the site can be under routine surveillance by regulatory and/or law enforcement agencies to assure continued integrity of the fence and to inspect for possible disturbance.

- Controlled productive use of the site surface--for example, construction of a golf course--can be carried out under regulatory agency licensed control. In such instances, access to the site can be patrolled or otherwise restricted by those licensed to use the site. Controlled productive site use could also result in income which may partially off-set administrative costs incurred by the licensed custodial agency.

- Periodic inspection of the disposal site and monitoring for potential ground-water releases can be performed by a regulatory or other governmental agency. (The act of monitoring and inspection necessarily implies an understanding of the potential hazards contained within the site.)

This period of time can be termed a period of active observation. Gradually, however, such active means of institutional controls are anticipated to decrease. The interval between inspections lengthens. As regulators move on to other concerns, gradually less time and effort is placed upon surveillance and control of a particular site.

Ultimately, institutional controls must also rely upon relatively passive means involving some manner of social order. The types of controls which would be relied upon during this passive control period can include the following:

- The location of the disposal facility as well as the location of specific disposal areas on the facility can be referenced to USGS benchmarks. Long-lasting monuments can be emplaced which contain an inscription describing the nature of the hazard.

- The location and configuration of the disposal facility, together with a description of the hazard, can be inexpensively recorded and maintained in a number of different locations on a local, county, state, and national level. This redundancy in recordkeeping would help to ensure that knowledge of the disposal facility would be retained.

- Control of the disposal facility site can be maintained by a responsible government body--that is, the federal government or the government of the state in which the site is located. Government ownership of the land minimizes the potential for possible abandonment of the site. State or federal ownership is already a requirement in existing NRC regulations in 10 CFR Part 20.

- The title to the disposal site (the deed) can contain a convenant which specifically warns of the potential hazard and specifies a restriction on the use of the land.

Probably the most significant concepts for long-term passive institutional control measures are those of control of the land by a governmental organization, land-use restrictions in the form of titles or deeds, and multiplicity of records. As civilizations have evolved over the centuries, societies have characteristically erected superstructures (governments) to perform services--for example, protection of life, health, and property--which are less conveniently performed by individuals. Among the function performed by governments are control of titles to and uses of property. Placing the long-term control of a disposal ~~site into the hands~~ of a government organization aims to ensure that such motivies as profit and loss do not lead to possible abandonment of the property, or sale for inappropriate uses.

Certain governmental functions, such as tax collecting, land controls, and an interest in the health and welfare of the society, are independent of the type and form of government involved. Whether the government is capitalistic or socialistic, democratic or autocratic, use of land is controlled for what is perceived to be the maximum benefit of the society. From time to time societies have altered (or have had alterations performed by outside means) their type and form of government by peaceful or violent means. Yet, these societies have merely changed the form of the government, not eliminated government altogether. The government may change but the institution of government does not change. Germany, for example, has within the last 60 years undergone a number of upheavals resulting in radical changes in its government. During these upheavals, temporary breakdowns in several governmental functions have occurred. However, such functions were relatively quickly resumed by the newly established governments.

In the system familiar to Western culture, land may be owned by a government, an individual, or an organization. Title to the land is expressed through deeds--which often contain restrictions or specifications on the use of the land. Legal restrictions and administrative requirements (for example, records) are imposed upon the ownership and transfer of the land. On a number of occasions, title for a particular property has remained in the same hands--that is, by a family, an organization, or a government--for several centuries.

Similarly, the title to a piece of property may change hands, but the use of the land for a particular purpose (for example, cemeteries) will remain essentially the same for very long time periods. Even for land owned and used collectively, some organization controls the title to and prescribes the use of the land. The land is used for a specified purpose (for example, farming) by a particular group of people, and the land futhermore has boundaries.

The principle of government control of a near-surface disposal facility site does not preclude productive use of the land. The surface of a near-surface disposal facility, for example, can probably be used in perfect safety, as long as the users of the land are precluded from excavating deeply into the subsurface. Indeed, controlled use of the land may be potentially encouraged as a means to collect revenues to off-set the administrative costs of exercising control.

Chapter 8

REGULATORY PROGRAM--PRESENTATION AND ANALYSIS OF ALTERNATIVES

8.1 INTRODUCTION AND SUMMARY

The regulatory program is the combination of licensing procedures; requirements for recordkeeping, reports, and manifests; and participation by states and Indian tribes. The following discussion presents the existing licensing procedures, requirements for recordkeeping and reports, and state and tribal participation; alternatives and rationale considered; and changes proposed. The licensing procedures are discussed in two parts: (1) the licensing steps and (2) the information requirements and necessary Commission findings. The major changes in the licensing steps are to add a tendering step, to clarify renewals, and to define responsibilities and provide orderly steps after operations cease. The changes in required information and findings are directed at focusing on and complying with the performance objectives, technical criteria, financial requirements, and institutional controls. None of the changes in licensing procedures are judged to be a significant incremental burden. The major changes dealing with records, reports, and manifests are the initiation of a manifest system and specific reporting and recordkeeping requirements on the disposal facility operator. The manifest system requires the waste generator to provide more complete information in the shipping papers and to track shipments. The incremental burden is judged small. The facility operator must submit annual reports keep more complete records and participate in the manifest system. The new requirements reflect, to a large extent, existing practices imposed by host states and are not a significant new burden. The major changes concerning state and tribal participation are to propose a subpart establishing a formal mechanism for state and tribal participation in Commission license reviews, recognition of tribal rights, the initiation of interaction at the tendering step, and documentation concerning landownership and institutional care arrangements. The proposed changes are expected to improve state, tribal, and public participation and have little incremental impact on the applicant, the NRC, or the states, tribes, or public.

8.2 LICENSING PROCEDURES

Licensing procedures are the legal and procedural steps covering and defining the complete life cycle of a licensed activity. Requirements which the Commission must follow and which applicants must follow are included. Existing regulations for receipt of waste radioactive material from other persons for commercial disposal define procedural requirements which the Commission will follow in 10 CFR Part 2. General requirements that are to be followed by all byproduct, source, and special nuclear material applicants and licensees are specified in 10 CFR Parts 30, 40, and 70. Policies and procedures for complying with the requirements of the National Environmental Policy Act (NEPA) of 1969 are prescribed in 10 CFR Part 51. The decisions to be made are which of the existing requirements should be kept or modified, which dropped, and what new requirements should be added. Where the requirements should be located in the regulations must also be decided.

The placement of requirements for procedures for a land disposal facility is a matter of editorial preference and does not affect whether they apply or not and does not affect the impacts. The approach taken was to try and consolidate related requirements as much as possible and to relegate procedures which the Commission must follow in processing applications to 10 CFR Part 2, procedures for applicants and licensees to the new 10 CFR Part 61, and procedures for complying with NEPA to 10 CFR Part 51.

A basic objective in reviewing existing procedural requirements was to limit changes to those which would clearly improve the process. The following discussion will review the existing procedures and then discuss proposed changes including rationale and alternatives considered.

8.2.1 Existing Procedures

8.2.1.1 Licensing Steps

Existing procedures begin with receipt of an application. The application must be docketed upon receipt (10 CFR 2.101(a)). Local site and alternative site governmental officials must be notified by the applicant (10 CFR 2.101(b)), docketing noticed in the Federal Register by the Commission (10 CFR 2.101(d)), and the Governor and state officials notified by the Commission (10 CFR 2.101(d)) An environmental report (ER) must accompany the application (10 CFR 51.40(c)). Provisions such as §30.32(f) of Part 30 require that the ER be filed at least nine months before construction begins; however, 10 CFR 30.33(a)(5) provides that construction cannot begin until NEPA review by the Commission is finished. Under existing rules, hearings are held only if requested by the applicant or interested parties. Hearing procedures are described in 10 CFR Part 2.

After the Commission completes its review and prepares an environmental impact statement (10 CFR 51.5(b)), a decision to issue or deny the application is made. If no hearings have been requested and the decision is to issue a license, the notice of the proposed action must be published in the Federal Register (10 CFR 2.105(a)(2)). If no request for hearings are filed after the proposed action is noticed, the license is issued (10 CFR 2.105(e)) and state and local officials are notified and issuance noticed in the Federal Register (2.105(e) and 2.106(a)(1)). If hearings are requested, they are held in accordance with the rules in 10 CFR Part 2 beginning with hearings before an Atomic Safety and Licensing Board (ASLB). An Atomic Safety and Licensing Appeal Board and/or the Commission may review the findings of the ASLB or the ASLB findings may be appealed to the Appeal Board or the Commission and to the courts. Upon resolution of the hearings, reviews, and appeals a license is issued and noticed in the Federal Register.

After the license is issued it may be amended. Preparation of ERs and EISs is judgmental under Part 51 for amendments.* If no hearings are requested and if the amendment involves a significant hazards consideration, it must be noticed in the Federal Register as a proposed action (2.105(a)(3)) and noticed after issuance (2.106(a)(1)). Renewals are handled in the same manner. Continued operation is provided if a timely application for renewal is filed (10 CFR 2.109). Termination of licenses is handled as an amendment and is not specifically mentioned in the regulations.

8.2.1.2 Contents of Applications

Parts 30, 40, and 70 provide general requirements for contents of applications and findings necessary for issuing licenses. The requirements for approving applications are in §§30.33, 40.32, and 70.23(a). A decision that the applicant's training and experience and equipment and facilities are adequate must be made. Procedures must be adequate and the proposed activities authorized by the Atomic Energy Act.

8.2.2 Changes and Alternatives to Existing Procedures

8.2.2.1 Scope of Procedures

A fundamental issue for the procedural aspects of the rulemaking is whether each of the procedures and requirements apply to all land disposal applicants and licensees or just to near-surface disposal applicants and licensees. The licensing steps to be prescribed in the proposed rulemaking should be equally valid for all methods of land disposal. The requirements for contents of applications, Commission findings, and other procedural requirements can also be general for all disposal methods.

8.2.2.2 Licensing Steps

8.2.2.2.1 Tendering

Alternatives to the process beginning with docketing were considered. One alternative was to require a notice of intent 3-6 months before filing an application. The notice of intent would be used to notify governors, legislatures, other state or municipal officials, or tribal governing bodies early in the process. Public concerns could be identified and factored into the applicant's proposal prior to submittal. This alternative was not adopted because: (1) it added an administrative burden on the applicant; (2) from a practical standpoint, it is probably not needed to assure early state input; and (3) its purpose can be accomplished by other means. For example, early state involvement is virtually assured by the "Low-Level Radioactive Waste Policy Act" (Ref. 1) which states that:

> "each State is responsible for providing for the availability of capacity either within or outside the State for the disposal of low-level radioactive wastes generated within its borders except for waste generated as a result of defense activities of the Secretary or Federal research and development activities."

States are reviewing needs, developing compacts, and taking other active measures concerning low-level wastes. Any applicant will have to develop a site in this context. Further, state ownership of the disposal site is likely and evidence of these negotiations are a required part of the application.

The second and preferred alternative was to provide a tendering step. Treating the application first as a tendered document allows the Commission to determine the extent to which the application and environmental report are complete and

acceptable for docketing. This should help avoid the delay associated with formally rejecting an application or environmental report that has been docketed and save the costs of reproducing and distributing copies that are incomplete or otherwise unacceptable for processing. Notification of state, local, and tribal officials at this point still allows early knowledge of the applicant's plans. Publication in the Federal Register at this early stage can be used to solicit public views and comments for consideration by the Commission and applicant. If the application and ER are acceptable for docketing as initially submitted, the time between tendering and docketing could be on the order of a month. Depending on the nature of the missing information, the time could be several months or more. Thus at no increased burden or delay for the applicant, a potential method for additional time for public input is provided. A new provision to explicitly state that Commission staff will be available was also added to help assure early interaction with state, county, and municipal officials and tribal governing bodies.

8.2.2.2.2 Docketing

The prescribed activities at the docketing stage for the applicant to distribute copies and the Commission to notice docketing in the Federal Register remain valid. With the tendering steps in place, no alternatives had merit.

8.2.2.2.3 NEPA

The requirements for the applicant to submit an ER and the Commission to prepare an EIS are consistent with NEPA and no alternatives were considered. The existing requirements, however, dealing with when construction may begin could be confusing to applicants. Since construction of a land disposal facility should not be complex or take more than a few months and since existing requirements provide that construction may not begin until the NEPA review is completed, no good reason to change this requirement seemed to exist. The language was, however, simplified. The major benefit of this requirement to not begin construction is to provide flexibility to consider alternative sites without the influence of commitments by the applicant at one site. Site exploration and associated activities are permitted and the commitment to investigate the site cannot be avoided.

8.2.2.2.4 Construction Authorization

The related issue of whether to issue a separate authorization for construction was also considered. Near-surface disposal facilities are current practice and are expected to dominate new applications. This expectation is discussed elsewhere and is the basis for developing specific technical requirements for this type facility first. The building of support facilities such as administrative offices, health physics labs, etc., and preparation of a near-surface facility for beginning operations would not ordinarily involve sufficient commitments to necessitate a separate authorization for construction. The one-step licensing as provided for under existing rules was maintained. If this one-step process should prove a burden for other land disposal methods, such as disposal in a mine, exemptions can be granted for construction work at the applicant's risk. Before authorizing receipt of waste, however, NRC will

inspect the facility to determine whether the facility is in conformance with the description, design, and construction described in the application.

8.2.2.2.5 Hearings

The only alternative to holding hearings if requested is to require hearings. This alternative was considered but not adopted for two principal reasons: (1) other means of input into the review of the application and environmental report are available and (2) the desire to minimize the burden on applicants consistent with health, safety, and environmental responsibilities. State, local and county officials, Indian tribes, and the public can participate in the EIS scoping process and comment on the draft and final EIS documents. As discussed earlier, the state will probably be involved under the "Low-Level Radioactive Waste Policy Act" and is a potential landowner of the disposal site. Hearings require significant resources of all parties involved and at least a year to complete. If issues can be resolved by less formal methods, all benefit. The proposed revisions to 10 CFR Part 2 include offering a single opportunity for a hearing to the applicant and other affected persons in a Federal Register notice after docketing. The notice would be in accordance with existing requirements in §2.105. Noticing is not required for the applicant or interested parties to request hearings but it serves as a reminder. No changes were considered or proposed for the hearing process as currently defined in Part 2. Opportunity for hearings will also be specifically provided for renewals, site closure, license transfer, and license termination.

8.2.2.2.6 Issuing Licenses

Licenses are issued or denied under §2.103. Only a minor conforming change was considered and it was adopted. Section 2.103 requires, among other things, notification of state and local officials for initial issuance of a license for commercial disposal of wastes from other persons. This requirement was clarified and moved to the Notice of Issuance section (§2.106). The new subsection makes it clear that any action to issue a license for a land disposal facility or amendment of such a license involving a significant hazard consideration will be noticed in the Federal Register and officials notified regardless of whether hearings are held or not. No other changes to the amendment process were considered or proposed.

8.2.2.2.7 Renewals

Experience with existing sites has demonstrated a need to clarify the renewal process as it applies to disposal. Two alternatives were considered. One was to delete the provision for license expiration altogether. The license would remain in effect until terminated. The disadvantage of this alternative is primarily the lack of incentive to update the license to reflect the developing state-of-the-art technology and to fully factor operating experience and new site information and site performance into periodic reassessments of site operations and planning. The advantages are the reduced burden in fees and resources devoted to the renewal application by the licensee and in review by the Commission. The discipline of periodic renewals was chosen as the preferred

alternative. Other means of updating the license requirements such as submitting reports or reassessments under specific conditions of the license do not provide the same degree of assurance that the licensee and the Commission will act. Consistent with existing Commission practice for other licensees, no specific period for the renewal is specified in the regulations. For most licensees the usual period specified by specific license conditions is five years. Shorter or longer times are specified as judged appropriate. This same flexibility was retained.

The scope of the renewal process was also clarified based on experience with the existing sites. The renewal applies only to continued waste receipt and disposal operations not the licensee's continuing responsibility for disposed wastes. Existing specific license conditions for the Barnwell, South Carolina and Richland, Washington sites reflect this scope.

8.2.2.2.8 Closure

If the licensee no longer wishes to receive wastes, the licensee must file an application for site closure. Existing rules such as §30.34(f) require that licensees notify the Commission when they plan to discontinue licensed activities. Such procedures may be adequate when sealed sources, very small quantities, or very short half-lived materials are involved. They are not adequate for an orderly preparation of the disposal site for custodial care by the landowner. The closure activities are sufficiently important that specific provisions and guidance for this type of amendment was judged necessary and a less formal approval unacceptable. No alternatives were considered.

8.2.2.2.9 Postclosure

Once closure plans are approved by specific license amendment and implemented, several choices exist. The license can be terminated or transferred or the licensee can continue to control the site for a period of postclosure observation and maintenance. Although much of the work toward closure should be performed throughout the operational period, some final site contouring and preparation may be necessary. These measures need time to stabilize. Additional assurances that the site is performing as expected can be provided by a period of observation and monitoring. If the site closure measures need modification or correction, the facility operator would have the best experience to carry out the modification. Regulatory control and review of these activities provides additional assurances that the public health and safety are protected. The performance objectives to provide stability of the site after closure and to eliminate the need for ongoing active maintenance is aimed at the long-term care period. Continued responsibility of the facility operator for a period of at least five years of postclosure observation and maintenance was judged to provide reasonable assurances without undue burden (see the site closure and stabilization requirements in Chapter 5).

Following the period of licensed postclosure observation and maintenance, the the license may be terminated or transferred to the government agency which is to provide custodial care. ~~The issue of whether the site owner should be licensee should custodian is at the heart of this decision.~~ By permitting use

34-Ex. 4

of federal or state land or accepting title to the land, the government agency has accepted responsibility for long-term institutional control of the site. The nature and duration of the controls needed to assure that the performance objectives will be met is one of the findings the Commission must make in licensing the land disposal facility and in all subsequent licensing actions. For most land disposal facilities, reliance is placed on the institutional control and without it the public health and safety cannot be assured. The type of monitoring or surveillance performed might need to be changed during the custodial period based on site performance or other factors. In view of the reliance on institutional controls and the potential need for reassessing the control program, licensing the landowner was judged necessary for the Commission to fulfill its responsibilities.

The final question is how to license the custodial agency. The alternatives considered included: (1) issuing a general license to state and federal agencies for custodial care, (2) termination of the facility operator's license and issuing a new specific license to the custodial agency, (3) transferring an appropriately conditioned license to the custodial agency, (4) making the custodial agency a colicensee when the site is licensed, and (5) requiring that the custodial agency be the only licensee. The general license approach would provide regulatory authority over activities, provide a mechanism for requiring reports and allow inspections. The difficulty is in the site-specific nature of the control program, particularly the monitoring, and in the potential need to alter the program during the institutional control period. The general license does not provide sufficient flexibility and was not selected. Terminating one license and issuing another is procedurally more complex and requires development of specific requirements for contents and reviewing of such applications. Any action to terminate one license would have to be taken concurrently with the issuance of the new license to provide continuity of responsibility. Transfer of the license would accomplish continuity. Both would involve custodial agency consent to be a licensee. Consent by the agency has the advantage that the agency can assure that the site meets any applicable requirements not covered by the Commission's authority and that staff and resources are arranged to implement custodial care. It has the disadvantage that the agency may delay consent beyond the time the operator planned for in his financial arrangements.

Another way to assure continuity is to require that the state or federal agency be a colicensee when the site is initially licensed. The operators's responsibility would be terminated by amending the license to delete the operator and leave the agency as the only licensee. This arrangement does not eliminate the need for agreement between the parties but does provide the greatest assurances of responsibility. Colicensee arrangements involve complex agreements and arrangements between the two parties to clearly define roles and responsibility. Covering all situations can prove difficult. Because of the complexities and uncertainties a colicensee arrangement was not mandated. ~~A final option considered was to require that the custodial agency be the only licensee. Any commercial firm involved would be a contractor only. The Commission may no basis to deny the commercial sector the right to be a licensee under existing authority. This option would require the government agency to be involved in the day-to-day operation at the site. The agency would be responsible for all activities and would, at the very least, have to audit and oversee the activities.~~

This option would eliminate the potential uncertainties and problems associated with termination, transfer, or even amendment to delete a colicensee.

The option selected is transfer of the license to the site owner. Administrative convenience and continuity are provided at little risk or burden to the licensee. The options for colicensees and site owner as required licensees are not precluded by the preferred option and may well be the option followed in some cases.

Active institutional care will be necessary to protect the public health and safety for a finite period. In analyses and findings throughout the earlier licensing phases, 100 years is the upper limit assumed for institutional control. Unless new information develops or future generations apply different criteria, the license should be terminated when the active institutional controls are no longer necessary and oversight and regulatory authority is no longer necessary. The only alternative is to leave the license open ended. A cutoff point and a specific provision for termination was judged preferable.

8.2.2.2.10 Summary

In summary, the licensing steps have been modified to add a tendering step, to clarify renewal, and to define responsibilities and provide orderly steps after operations cease. Specific license amendments are proposed for site closure, transfer to the site owner, and termination. The changes in licensing steps have been chosen to minimize the burdens on all parties. The incremental impacts caused should be positive in that more specific guidance is provided and roles are more clearly defined. No quantitative estimate of the impacts was attempted.

8.2.2.3 Contents of Applications and Findings

The license procedures also involve information exchange, analyses, and findings at each step. The existing very general requirements do not provide specific guidance to applicants or the Commission. The basic requirements such as complying with the Act, must still be met but questions such as how much detail should be in the regulations and how much deferred to other parts of the regulatory framework (e.g., regulatory guides, branch positions); how much flexibility can applicants and licensees be given and still accomplish the goal of minimizing resolution of issues on a case-by-case basis; and what is the resulting burden on applicants, licensees, or the Commission were considered in analyzing the contents of applications and other actions required. The results hopefully represent a reasonable balance of such considerations.

8.2.2.3.1 Contents of Applications

The principal purpose of the information in an application is to inform the Commission of the nature of the project and the safety evaluations that have been performed to evaluate whether the project can be carried out without undue risk to the health and safety of the public. The documentation of the information is the principal means (a) for an applicant to provide the information needed to understand the basis on which this conclusion has been

ENVIRONMENTAL

S.K. HART

October 8, 1987

RECEIVED
OCT 8 1987
BUREAU OF RADIATION CONTROL

Larry F. Anderson, M.P.S.
Director
Bureau of Radiation Control
288 North 1460 West
P.O. Box 16700
Salt Lake City, Utah 84116-0690

Dear Mr. Anderson:

This request for exemption or exception from the land ownership requirement of URC-24-135 is filed pursuant to URC-12-125 on behalf of S. K. Hart Engineering ("Hart").

Hart has obtained from the State of Utah, a parcel of land located at Clive, Tooele county, Utah, and more particularly described as follows: Section 32 of Township 1 South, Range 11 West, Salt Lake Base and Meridian containing 640 acres except for:

> Beginning at a point located 1120.32 feet N89 59' West along the section line and 329.49 feet South from the Northeast corner of Section 32, Township 1 South, Range 11 West, SLB&M, and running thence N89 56'32" W 1503.72 feet; thence S0 03'28" W 2880.50 feet thence S89 56'32" E 1503.72 feet; thence N0 03'28" E 2880.50 feet to the point of beginning. Containing 99.437 acres, more or less.

Hart intends to use the said parcel for the commercial disposal or waste (e.g., contaminated soil and dry sludge) which contains very low levels of naturally occurring radioactive material that was present in raw ores and has passed through industrial processes. Hart is presently preparing, for submission to the Bureau, its application pursuant to URC-24-135

for authorization to engage in the operations described above. That application will be filed on or about October 14, 1987.

URC-24-135 states, in part, that: "The Bureau will not approve any material from other persons for disposal on land not owned by a State or the Federal Government." The regulation does not distinguish between the very low level radioactive waste proposed to be handled by Hart and other types of waste which contain far greater concentrations of radioactivity in the material. However, URC-12-125 provides that the Bureau may grant "such exemptions or exceptions from the requirements of these regulations as it determines are authorized by law and will not result in undue hazard to public health and safety or property."

The land ownership requirement of URC-24-135 supports the protection of public health and safety or property. The requirement provides for monitoring, control, and any necessary clean up of radioactive waste sites through government ownership of the land. In the alternative, however, reasonably comparable protection could be provided through surety and/or escrow arrangements which could be required by and incorporated into site licenses. This alternative could provide for the funding and infrastructure necessary to protect public health and safety or property both during active operation of the sites and after they are closed.

The Colorado Radiation Control Regulations offer another alternative. Those regulations contain specific provision for a "uranium or thorium milling license or tailings license" which call for the ownership by the State or Federal Government of land on which such waste will be placed "prior to termination of the license" (Colorado Department of Health, Rules and REgulations PErtaining to Radiation Control, Part III, Schedule E, Criterion 8).

The waste material described in Criterion 8 of the Colorado Regulations is comparable to the material proposed to be handled by Hart. The Colorado approach provides protection through the licensing process during the operation of disposal sites. It goes on to provide additional protection through government ownership of the land after the sites are closed.

However, neither the State of Utah nor the Federal Government have indicated that they would be interested in and/or willing to own the land described above. In this regard, it is important to recognize that the owner of land is absolutely liable for damage to others or their property caused by the storage of hazardous materials on his premises, and that the land owner's liability extends to punitive damages and damages for mental suffering (see Branch v. Western Petroleum, 657 P.2d, 267

(Utah 1982). The Colorado approach clearly would subject the State or Federal Government to greater risk than would a simple exemption or exception from the land ownership requirement of URC-24-135.

Furthermore, current thinking with regard to hazardous wastes require siting on privately owned land. Regulating concerns are directed towards proper site operation, closure and long term (30 years) monitoring. Recently released joint NRC/EPA guidelines for mixed waste also require use of the foregoing rationale.

The application of Hart will provide for the surety and/or escrow arrangements necessary to protect against undue hazard to public health and safety or property and to support abatement of future problems, if any. We submit that an exemption or exception from the land ownership requirement of URC-24-135 based on such surety and/or escrow arrangements is wholly consistent with the public health and safety and current thinking in the field of hazardous waste siting and should be granted. The public would be protected by regulation under the licensing process during the period of active waste storage operations, and by the surety and/or escrow arrangements during such operations and thereafter. Accordingly, we hereby request

that Hart be granted an exemption or exception from the land ownership requirement of URC-24-135.

Very truly yours,

Khosrow B. Semnani

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Ref. EDO 8099

Action: Kammerer, SP

Cys: Taylor, Bernero, Sniezek, Scinto, Thompson, Lieberman, Blaha

PERKINS COIE

A LAW PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS
607 FOURTEENTH STREET, N.W. • WASHINGTON, D.C. 20005-2011 • (202) 628-6600

ANTHONY J. THOMPSON

December 8, 1992

RECEIVED
DEC -9 AM 8:29

Mr. James M. Taylor
Executive Director for Operations
United States Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Re: Petition for Review of Utah's Agreement State Program

Dear Mr. Taylor:

On September 21, 1992, US Ecology submitted a petition for review and revocation of Utah's agreement state program for failure to require state or federal site ownership at the Envirocare of Utah, Inc., low-level radioactive waste facility. US Ecology is hereby submitting a supplemental legal analysis in support of that petition. In accordance with the recommendations of Judge Robert J. Bryan of the United States District Court for the Western District of Washington, US Ecology urges NRC to act as quickly as possible on this petition. US Ecology v. Northwest Interstate Compact on Low-Level Radioactive Waste Management, et al., No. C92-50916 (W.D. Wash.)

US Ecology would be pleased to provide any additional information in support of this petition that you or members of your staff may deem necessary or helpful. As stated in our September 21, 1992 petition, US Ecology also requests the right to participate in any hearing that NRC may hold regarding this issue. Please do not hesitate to call me at (202) 434-1618 if you should have any questions or comments regarding this petition.

Sincerely,

Anthony J. Thompson
Counsel for US Ecology, Inc.

[13813-0006/DA923430.003]

TELEX 44-0277 PCSO UI • FACSIMILE (202) 434-1690
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SUPPLEMENTAL MATERIAL TO SUPPORT US ECOLOGY'S SEPTEMBER 21, 1992 PETITION FOR REVIEW OF UTAH'S AGREEMENT STATE PROGRAM

INTRODUCTION

On September 21, 1992, US Ecology, Inc. filed with the Nuclear Regulatory Commission (NRC) a "Petition for Review and Suspension or Revocation of Utah's Agreement State Program For Failure To Require State Or Federal Site Ownership At The Envirocare of Utah, Inc. Low-Level Radioactive Waste Facility."

US Ecology's petition sets out in some detail the reasons NRC should require agreement state compatibility with NRC's requirement for state or federal ownership at low-level radioactive waste (LLRW) disposal facilities (10 C.F.R. 61.14 and 10 CFR 61.59) in order to adequately protect the public health and safety. However, based on review of a document signed by Larry F. Anderson, Director, Division of Radiation Control (DRC), Utah Department of Environmental Quality dated May 8, 1992, addressing the land ownership exemption issue, US Ecology believes additional comments and analysis are warranted. See Appendix A.

DISCUSSION

The DRC document sets forth an apparent explanation of the reasons an exemption to the State's requirement for state

or federal ownership of LLRW disposal facilities was granted in November 1987 for disposal of naturally occurring radioactive material (NORM) and a further exemption granted on DRC's "own initiative" for disposal of LLRW in March, 1991. DRC's submittal contains four Appendices. Appendix B is a letter requesting the first exemption from S.K. Hart Engineering (Envirocare of Utah) dated October 8, 1987.[1] Appendix C is correspondence of the Technical Advisory Committee of the DRC. Appendix C contains the Governor's Briefing Papers, and Appendix E sets forth letters to Envirocare granting the exemptions. The Appendices are attached to this supplemental petition.

S.K. Hart's 1987 letter relies on a number of basically erroneous or irrelevant assertions to support its request for an exemption. It is important to review these assertions to examine how they affected Utah's decision to grant exemptions.

First, the Hart letter states that "the regulation does not distinguish between the very low-level radioactive waste proposed to be handled by Hart and other types of wastes [presumably LLRW] which contain far greater concentrations of

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[1]This document is currently Attachment F to US Ecology's original petition.

radioactivity in the material." At p. 2. It then goes on to suggest that radiation control regulations of the State of Colorado provide an "alternative" to the Utah requirements that only requires site ownership by a state or the federal government "prior to termination of a license." (Citing Colorado Department of Health, Rules and Regulations Pertaining to Radiation Control Part III, Schedule E, Criterion 8). At p. 3. The request further states that the "waste material described in Criterion 8 of the Colorado regulations is comparable to the material proposed to be handled by Hart." Id. Hart concludes that the Colorado "approach" provides protection through the licensing process during operations and provides "additional protection through government ownership of the land after the sites are closed." Id. Interestingly, in the very next paragraph, Hart acknowledges that neither the State of Utah nor the federal government has indicated it would be interested in, or willing to assume, ownership of the land described above. Id.

More importantly, Hart's reference to the Colorado approach is to regulations governing uranium or thorium mill tailings and is irrelevant to the waiver of NRC and Utah requirements for federal or state ownership prior to commencing operations at a LLRW disposal site. The Uranium Mill Tailings Radiation Control Act (UMTRCA) specifically requires ownership of uranium or thorium milling disposal

sites to be transferred to the United States or to a state if the state exercises the option to acquire the land used for disposal. 42 U.S.C. § 2014(a)(2). Thus, UMTRCA provides a statutory guarantee that the federal government will take title to such disposal sites. No such guarantee exists for LLRW disposal sites. The Nuclear Waste Policy Act provides the Secretary of Energy with authority to assume title and custody of both the low-level radioactive waste and the disposal site upon request of the owner following termination of the NRC or Agreement State license for disposal as long as certain regulatory requirements are satisfied (42 U.S.C. § 10171(b)), but does not require the Secretary to assume title and custody as UMTRCA does. Thus, Hart's reliance on the Colorado "alternative" is not relevant to the exemption it requested from DRC.

Second, the Hart request suggests that ownership can result in absolute liability for the State under current legal interpretations relating to hazardous waste disposal (citing Branch v. Western Petroleum, 657 P.2d 267 (Utah 1982)). Hart reasons that even the "Colorado approach" could subject the state or federal government to greater risk than a simple exemption does. Thus, the emphasis here is not on public health and safety, but rather on the potential risk of future liability to the State of Utah. Thus, Hart focuses on the future state liability even though the Hart proposal

explicitly acknowledges that the land ownership requirement of then URC-24-135 "supports protection of public health and safety or property." At p. 2.

Next Hart suggests that surety is an alternative that provides "reasonably comparable protection to the land ownership requirement." This assertion, of course, fails to even remotely address the real world of radioactive waste disposal. NRC's Part 61 regulations require adequate surety (10 C.F.R. 61.62) as well as site ownership by state or federal government (10 C.F.R. 61.19, 61.52) and, even where title is required to be transferred to the federal government (or a state if it opts for transfer of ownership) by UMTRCA, NRC regulations also explicitly require adequate NRC approved surety for closure of uranium mill tailings facilities. 10 C.F.R. 40, Appendix A, Criterion 9. Surety is not an alternative to government ownership; it is an additional requirement.

Finally, Hart suggests that current thinking with regard to "hazardous wastes" requires siting on privately owned land (without a citation to support the statement) and that regulatory concerns are directed towards proper site closure and long-term (30 year) monitoring. Hart also asserts that recently released joint NRC/EPA guidelines for "mixed waste" require the "use of the foregoing rationale."

Hart's reasoning is seriously deficient. Hazardous waste siting and 30 year monitoring periods have absolutely nothing to do with the kinds of requirements applicable to either LLRW disposal or even the 11(e)(2) by-product material addressed by the Colorado regulations. And, NRC/EPA guidance states that the hazardous component of mixed waste will be treated according to appropriate hazardous waste requirements, while the radioactive component will be treated in accordance with the requirements applicable to the radioactive component (i.e., for LLRW--10 C.F.R. Part 61). In summary, Hart's justification for an exemption from the land ownership requirement was either based on a failure to understand the facts and circumstances associated with disposal of radioactive waste, or an analysis that is disingenuous or irrelevant to the issues DRC should have been examining to make a determination about the request for exemption.

Significantly, Appendix C, the "Governor's Briefing Paper," apparently prepared by the DRC, reflects some of the same errors contained in the Hart petition. For example, on page 1, the Governor's Briefing Paper indicates that "Texas and Colorado allow <u>low-level radioactive waste disposal</u> on private property but require land transfer to State or Federal control before license termination." (Emphasis added). As noted above, the requirements in Criterion 8 of the Colorado rules

apply to 11(e)(2) by-product material not LLRW, and the requirement for land transfer to state or federal control after operations but prior to license termination is a statutory requirement of UMTRCA. In fact, where LLRW is concerned, Colorado regulations directly contradict the assertion in the Utah Governor's Briefing Paper. For example, the "Institutional Information" submitted by the applicant must comply with the following:

> Where the proposed disposal site is on land not owned by the federal or state government, the applicant shall submit evidence that arrangements have been made for assumption of ownership in fee by the federal or state or a state agency before the Department issues a license.

9 CRI 1-86 at 273. See Appendix F. (Emphasis added). The Texas Regulations contain a similar requirement. See TRCR 45.15(b).

The Governor's Briefing Paper also reflects the concerns urged by the Hart petition regarding potential state liability as follows:

> Our attorneys, however, have informed us that state ownership of the property upon which a repository was located would unnecessarily complicate any enforcement action taken in the event that there was a problem at the site because it is likely that any party operating a state-owned facility would file a counterclaim against the State alleging liability based on ownership. Moreover, given the current trend toward strict liability of landowners regardless of whether their actions cause hazardous substance problems, it is entirely

> possible that counterclaims would be successful and that the State would be held partially liable for clean-up costs. Though it is undoubtedly true that the state or federal government would end up paying to clean up the site should the operator go bankrupt, our attorneys do not see any need to expose the State to liability if a solvent responsible party is available.

At p. 3-4 (Emphasis added).

The Governor's Briefing paper concludes that Utah has only two viable alternatives:

> The first is to grant a variance to the regulations and allow development on private property. This option would eliminate potential future liability should there be a problem with the site. It would also allow liability to remain with the private sector, where the benefits will also have accrued.
>
> The second option is to allow development of repository only on property owned by the state or federal government. This would place additional institutional control of the site in the hands of that government, along with the risk.

At p. 5 (Emphasis added).

Thus, the Governor's Briefing Paper both misstates the relevant requirements regarding LLRW and land ownership and, instead of urging concerns for public health and safety, essentially urges avoidance of potential liability on the Governor while in the same breath suggesting that the State might ultimately become liable anyway. This document can hardly be said tc demonstrate the level of concern for public

health and safety that should be necessary to justify NRC granting Utah Agreement State status.

With those materials as background, it is appropriate to consider the DRC's explanation, as set forth in the May 8 document signed by Larry Anderson. This explanation essentially reasserts the explanation set forth in the DRC's Safety Evaluation Report (SER) for Envirocare's license amendment application that is contained in Appendix A of US Ecology's petition. It is revealing to compare the two explanations and note some subtle but significant changes:

(1) DRC continues to cite hazardous waste siting requirements and 10 C.F.R. Part 40 (uranium mill tailings) requirements to justify the exemption. In the SER, the DRC gave weight to this "precedence factor."

(2) The DRC finally acknowledges that government ownership is based on public health and safety concerns, but later finds that, in effect, they are not relevant.

(3) The DRC claims that surety arrangements are sufficient to address site closure and 100 years of post-closure monitoring rather than the 30 year (hazardous waste) time frame

discussed in the Hart Petition and the SER.

See Appendix F.

In September, 1990, Envirocare requested an amendment to its license authorizing the disposal of LLRW at the Envirocare site despite the fact that Hart's original Petition asserted that it would be disposing of "very low-level radioactive" materials, so-called "orphaned" NORM wastes. As the DRC states:

> This amendment requested authority to dispose of LLRW [not 11(e)(2) byproduct material] in addition to the "orphan" NORM waste that was originally authorized for disposal. The "effect of the amendment would be to authorize Envirocare to receive for disposal, specific types and quantities of byproduct, source or special nuclear materials. Such materials would be disposed of in similar fashion and in the same disposal embankment as the NORM waste."

The State's justification in its documents is set forth as follows:

> A. (i) Again the circumstances regarding land ownership were discussed and similar conclusions were drawn regarding any undue risk to public health and safety by private ownership. In March, 1991, in accordance with R447-12-54, the DRC granted an exemption to R447-25-9(2) regarding assumption of ownership in fee. (May, 1991 at 2).
>
> (ii) In March 1991, in accordance with R447-12-54, the UBRC [DRC] granted an exemption, on its own initiative, to Envirocare regarding R447-25-9(2). The principle reasons for providing the exemption are:

(1) The Utah Code does not provide for the 'assumption of ownership' by the state;

(2) The ownership issue does not directly relate to issues of public health and safety; and

(3) There exists a sound surety arrangement which provides for monitoring and maintenance for items relating to public health and safety. Therefore, Envirocare is in compliance with R447-25-9. (Emphasis added).

Essentially, DRC relies on the basic reasoning behind granting the initial exemption for the NORM waste disposal site. The same inaccuracies and inconsistencies inherent in the reasoning in the earlier exemption decision are applicable to the second exemption. These are:

(a) The State cannot take title and on the other hand ultimately the State may have to take title.

(b) The land ownership requirement does not relate directly to public health and safety whereas the May 8 submissions suggest it does, as does the Hart submission. NRC's support documents for the Part 60 rules unequivocally demonstrate that it does.

(c) The reliance on a sound surety arrangement (which is not sound by comparison to surety arrangements for either 11(e)(2) sites or any of the existing LLRW disposal sites at Hanford, Beatty or Barnwell) and surety requirements for both 10 C.F.R. Part 40 and 10 C.F.R. Part 60 sites are in addition to government ownership requirements and ongoing licensing requirements.

CONCLUSION

In summary it appears that the UBRC/DRC relied upon faulty reasoning and misunderstanding or misstatement of fact and law in relying upon hazardous waste disposal requirements, 11(e)(2) byproduct materials disposal requirements, and potential liability rather than public health and safety in urging acceptance of Hart's exemption to the Governor and more recently to NRC. The DRC's recommendation demonstrates an unfortunate mix of incorrect analysis, disingenuous reasoning, and outright misrepresentation. As a consequence, the basis upon which Utah granted an exemption to the Envirocare facility is without merit under either existing law or regulations and requires suspension or revocation of the State's compatability status.