

NUREG-0750
Vol. 50, No. 2
Pages 67-218

NUCLEAR REGULATORY COMMISSION ISSUANCES

August 1999



U.S. NUCLEAR REGULATORY COMMISSION

DF02

Available from

Superintendent of Documents
U.S. Government Printing Office
P.O. Box 37082
Washington, DC 20402-9328

A year's subscription consists of 12 softbound issues,
4 indexes, and 2-4 hardbound editions for this publication.

Single copies of this publication
are available from
National Technical Information Service
Springfield, VA 22161

Errors in this publication may be reported to the
Office of the Chief Information Officer
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
(301-415-6844)

NUREG-0750
Vol. 50, No. 2
Pages 67-218

NUCLEAR REGULATORY COMMISSION ISSUANCES

August 1999

This report includes the issuances received during the specified period from the Commission (CLI), the Atomic Safety and Licensing Boards (LBP), the Administrative Law Judges (ALJ), the Directors' Decisions (DD), and the Decisions on Petitions for Rulemaking (DPRM)

The summaries and headnotes preceding the opinions reported herein are not to be deemed a part of those opinions or have any independent legal significance.

U.S. NUCLEAR REGULATORY COMMISSION

Prepared by the
Office of the Chief Information Officer
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
(301-415-6844)

COMMISSIONERS

Greta J. Dicus, Chairman
Nils J. Diaz
Edward McGaffigan, Jr.
Jeffrey S. Merrifield

G. Paul Bollwerk III, Chief Administrative Judge
Atomic Safety & Licensing Board Panel

CONTENTS

Issuances of the Atomic Safety and Licensing Boards

ADVANCED MEDICAL SYSTEMS, INC. (1020 London Road, Cleveland, Ohio) Dockets 30-16055-ML, 30-16055-ML-REN (ASLBP Nos. 99-756-01-ML, 95-707-02-ML-REN) (Renewal of Materials License No. 34-19089-01) MEMORANDUM AND ORDER, LBP-99-28, August 4, 1999.....	67
GARY ISAKOFF (Order Prohibiting Involvement in NRC-Licensed Activities) Docket IA 98-006 (ASLBP No. 99-765-02-EA) MEMORANDUM AND ORDER, LBP-99-29, August 11, 1999.....	73
HYDRO RESOURCES, INC. (2929 Coors Road, Suite 101, Albuquerque, NM 87120) Docket 40-8968-ML (ASLBP No. 95-706-01-ML) (Re: Leach Mining and Milling License) PARTIAL INITIAL DECISION CONCLUDING PHASE I, LBP-99-30, August 20, 1999	77
PRIVATE FUEL STORAGE, L.L.C. (Independent Spent Fuel Storage Installation) Docket 72-22-ISFSI (ASLBP No. 97-732-02-ISFSI) MEMORANDUM AND ORDER, LBP-99-31, August 27, 1999.....	147
PRIVATE FUEL STORAGE, L.L.C. (Independent Spent Fuel Storage Installation) Docket 72-22-ISFSI (ASLBP No. 97-732-02-ISFSI) MEMORANDUM AND ORDER, LBP-99-32, August 27, 1999.....	155
PRIVATE FUEL STORAGE, L.L.C. (Independent Spent Fuel Storage Installation) Docket 72-22-ISFSI (ASLBP No. 97-732-02-ISFSI) MEMORANDUM AND ORDER, LBP-99-33, August 27, 1999.....	161

PRIVATE FUEL STORAGE, L.L.C.
 (Independent Spent Fuel Storage Installation)
 Docket 72-22-ISFSI (ASLBP No. 97-732-02-ISFSI)
 MEMORANDUM AND ORDER, LBP-99-34, August 30, 1999 168

PRIVATE FUEL STORAGE, L.L.C.
 (Independent Spent Fuel Storage Installation)
 Docket 72-22-ISFSI (ASLBP No. 97-732-02-ISFSI)
 MEMORANDUM AND ORDER, LBP-99-35, August 30, 1999 180

PRIVATE FUEL STORAGE, L.L.C.
 (Independent Spent Fuel Storage Installation)
 Docket 72-22-ISFSI (ASLBP No. 97-732-02-ISFSI)
 MEMORANDUM AND ORDER, LBP-99-36, August 30, 1999 202

SEQUOYAH FUELS CORPORATION
 (Gore, Oklahoma Site Decommissioning)
 Docket 40-8027-MLA-4 (ASLBP No. 99-770-09-MLA)
 MEMORANDUM AND ORDER, LBP-99-37, August 30, 1999 210

Issuance of Director's Decision

NORTH ATLANTIC ENERGY SERVICES CORPORATION
 (Seabrook Station, Unit 1)
 Docket 50-443
 DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206,
 DD-99-10, August 3, 1999 213

Atomic Safety and Licensing Boards Issuances

ATOMIC SAFETY AND LICENSING BOARD PANEL

G. Paul Bollwerk III,* *Chief Administrative Judge*
Vacant,* *Deputy Chief Administrative Judge (Executive)*
Frederick J. Shon,* *Deputy Chief Administrative Judge (Technical)*

Members

Dr. George C. Anderson	Dr. Harry Foreman	Dr. Linda W. Little
Charles Bechhoefer*	Dr. David L. Hetrick	Thomas S. Moore*
Peter B. Bloch*	Dr. Frank F. Hooper	Thomas D. Murphy*
Dr. Robin Brett	Dr. Charles N. Kelber*	Dr. Harry Rein
Dr. James H. Carpenter	Dr. Jerry R. Kline	Lester S. Rubenstein
Dr. Richard F. Cole*	Dr. Peter S. Lam*	Dr. David R. Schink
Dr. Thomas S. Elleman	Dr. James C. Lamb III	Dr. George F. Tidey

*Permanent panel members

LICENSING BOARDS

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Administrative Judges:

Charles Bechhoefer, Presiding Officer
Thomas D. Murphy, Special Assistant

In the Matter of

Docket Nos. 30-16055-ML
30-16055-ML-REN
(ASLBP Nos. 99-756-01-ML,
95-707-02-ML-REN)
(Renewal of Materials
License No. 34-19089-01)

ADVANCED MEDICAL SYSTEMS, INC.
(1020 London Road, Cleveland, Ohio)

August 4, 1999

In a consolidated proceeding involving (1) the renewal of a byproduct materials license and (2) a contest to the NRC Staff's denial of that renewal, the Presiding Officer, based on advice from the NRC Staff that Ohio would become an agreement state by the end of August 1999, suspends hearing activities pending transfer of jurisdiction to the State of Ohio.

ADMINISTRATIVE TRIBUNALS: JURISDICTION

When the subject matter of a proceeding becomes subject to the authority of an Agreement State, an NRC Presiding Officer loses jurisdiction to continue litigation in a proceeding, absent explicit agreement to the contrary between the Commission and the State.

RULES OF PRACTICE: STAY OF PROCEEDINGS

Where transfer of jurisdiction over a proceeding to a State is imminent, a Presiding Officer may elect to suspend further hearing activities pending such transfer.

MEMORANDUM AND ORDER (Suspension of Hearing Activities Pending Transfer to Ohio, and Termination of Proceedings Upon Transfer)

These consolidated proceedings involve (1) the application of Advanced Medical Systems, Inc. (AMS or Licensee) for renewal of its byproduct materials license (Renewal Proceeding), and (2) AMS's appeal from the denial of that renewal by the NRC Staff (Denial Proceeding). As set forth below, I have determined to suspend further action in these proceedings pending transfer of jurisdiction to the State of Ohio.

I. BACKGROUND

In my Memorandum and Order dated April 28, 1999 (which reflected a telephone conference call held earlier that day), I posed questions concerning the impending transfer of authority over the byproduct material involved in these proceedings to the State of Ohio. That transfer would be attendant upon Ohio's becoming an Agreement State with respect to such byproduct material.¹ My inquiries concerned both the likely date of transfer and the effect thereof on these proceedings. At the time of that inquiry, it did not appear feasible to complete the proceedings, including time for the Commission to review my decision, prior to the effective date of transfer, then projected to be July 22, 1999. There also was pending before me a number of requests by the parties for access to certain documents, together with motions to strike portions of AMS's March 3, 1999 presentation and to extend the time for various parties' presentations (in response to AMS's presentation).

In response to my April 28, 1999 inquiry, the City of Cleveland, an Intervenor, as well as AMS, took the position that NRC should retain jurisdiction over the proceedings.² They reasoned that the proceedings, which had already been pending

¹ See NRC Staff Board Notification 99-01 (March 5, 1999).

² City of Cleveland Comments Regarding Course of This Proceeding To Reflect Potential Agreement State Status for the State of Ohio (May 27, 1999); AMS Response to ASLBP Memorandum and Order (May 27, 1999).

for over 5 years, would be even further delayed by any transfer.³ They could not confirm whether the transfer would otherwise take place by July 22, 1999, inasmuch as the transfer would not take place until Ohio satisfied the NRC Staff that it had adequately trained personnel to carry out its supervisory responsibilities. Cleveland, at least, deemed the projected July 22, 1999 date to be unlikely. Cleveland also suggested that, alternatively, NRC retain jurisdiction over at least the Denial Proceeding, leaving the Renewal Proceeding to the State of Ohio (a proposal strongly opposed by AMS⁴).

For its part, the NRC Staff took the position that the agreement will become effective prior to August 31, 1999, that the Commission will lose jurisdiction over AMS when the agreement becomes effective, and that even with the extended proposed effective date of August 31, 1999, there would not be sufficient time to complete the proceeding (including time for Commission review) prior to the transfer. The Staff favored suspension of the proceeding, and termination when the agreement with Ohio becomes effective.⁵

Because of the strong positions taken by Cleveland and AMS concerning retention of jurisdiction by NRC, I issued another Memorandum and Order on June 9, 1999, inviting replies to parties' responses and, in particular, requesting comments on the feasibility of the transfer by August 31, 1999, as well as the potential mechanisms, if any, for retaining NRC jurisdiction.⁶ I received replies from the Northeast Ohio Regional Sewer District (NEORS), another Intervenor that explicitly noted that it had declined to respond to my first inquiry,⁷ the City of Cleveland,⁸ and the NRC Staff.⁹

NEORS took strong issue with the projected transfer date (no later than August 31, 1999) that was being advanced by the Staff, terming it "at best disingenuous and at worst a deliberate attempt to mislead the Court." NEORS advised that its counsel had personally consulted a representative of the State of Ohio as recently as June 8, and that such representative advised that Ohio still did not have the required radiation safety personnel and that the NRC Staff was fully aware of this situation. NEORS also stated that NRC retention of jurisdiction over this proceeding was fully contemplated by the NRC-Ohio agreement, subject

³The Renewal Proceeding commenced in 1994, but action in the proceeding was deferred pending completion of the Staff's review. The Denial Proceeding commenced as a result of the Staff's September 28, 1998 denial of AMS's renewal application.

⁴AMS Opposition to City of Cleveland Conclusion That NRC Retain Jurisdiction Only Over the Denial Proceeding (June 9, 1999) [AMS Opposition to Bifurcation].

⁵NRC Staff Comments Regarding the Course of This Proceeding Reflecting Potential Agreement State Status for the State of Ohio (May 28, 1999).

⁶Memorandum and Order (Replies to Responses to Questions) (June 9, 1999).

⁷Northeast Ohio Regional Sewer District's Response to June 9, 1999 Memorandum and Order (June 25, 1999).

⁸City of Cleveland Response to June 9, 1999 Memorandum and Order of Presiding Officer (June 25, 1999).

⁹NRC Staff Reply to "City of Cleveland Comments Regarding the Course of this Proceeding To Reflect Potential Agreement State Status for the State of Ohio" and "AMS[s] Response to ASLBP Memorandum and Order" (June 25, 1999).

only to a determination by the Commission to retain such jurisdiction. NEORSD also concluded that I had sufficient time to complete this proceeding prior to any likely transfer to Ohio.

For its part, Cleveland reiterated that NRC should retain jurisdiction over this proceeding and recommended that I certify to the Commission, for its action, a recommendation to this effect. It also repeated its alternate recommendation that NRC retain jurisdiction at least over the Denial Proceeding. Finally, it urged me not to suspend this proceeding but to continue until the transfer to Ohio took place.

In the interim, the Staff on July 1, 1999, recounted the procedural history and status of this proceeding to a representative of the State of Ohio — the same representative with whom NEORSD counsel stated that he had consulted on June 8.¹⁰ And on July 15, 1999, the Staff filed a Supplemental Status Report advising that, contrary to NEORSD's assertions, the Staff is now satisfied that Ohio's staffing problem has been resolved, that on July 9 it forwarded the proposed Agreement to the Commission for action and that "the Agreement should be signed during August 1999, and should take effect on or before August 31, 1999."

II. DETERMINATION OF PRESIDING OFFICER

Based on the foregoing procedural history, I find that the best course of action here would be for me to suspend these proceedings, pending formal transfer to the State of Ohio, and for the proceedings to be terminated upon such transfer.

I recognize that this course of action may result in additional work for the parties. Upon transfer, AMS's license will remain in effect with the State of Ohio, but AMS will have to seek renewal from the State within a specified time period thereafter. Therefore, it may have to repeat many of the same steps it went through during the past 5 or 6 years before the NRC.

In addition, I do not believe that NRC could retain jurisdiction absent formal agreement between the Commission and the State of Ohio. If the Commission should elect to seek that result, it can do so equally as well in response to appeals of this Order as it could upon my certification of a recommendation to do so.

However, in my opinion, there are reasons why a modification of the agreement in order to retain NRC jurisdiction over these proceedings would not be desirable. Ohio, as the transfer State, would have to live with whatever result I (or the Commission on appeal) determined was appropriate, particularly with respect to the type of decommissioning plan that should be adopted. This seems to me to be a decision most desirable to be made by the supervising authority that would be called upon to enforce it.

¹⁰ Letter, Robert M. Weisman, Esq. (Staff counsel) to Roger L. Suppes, Chief, Bureau of Radiation Protection, Ohio Department of Health, dated July 2, 1999.

Beyond that, there are subsidiary decisions that would have to be made by whatever authority had jurisdiction, such as the release of proprietary data or the enforcement of the terms of a protective order, were I to impose one on the release of information. These matters seem peculiarly appropriate for the State, which will have to live with the result and accommodate the release of information with its own public information policies.

In short, there are factors that weigh in favor of transfer of these proceedings to the State of Ohio. There are also opposing factors such as the potentially wasted efforts of the parties expended in these proceedings over a number of years. Nonetheless, given the apparently imminent transfer, I have decided to allow the agreement to take effect, which means the proceedings will terminate when Agreement State jurisdiction is transferred to Ohio by the Commission.

Finally, I agree with AMS that Cleveland's alternative suggestion — i.e., retention by NRC of the Denial Proceeding and transfer of the Renewal Proceeding — should be rejected. As AMS points out, to adopt that course of action would undo one of the basic reasons for consolidation, the avoidance of undue expense and investment of time by the parties. According to AMS, "the expense and investment of time by the parties will increase as they argue what decisions of the ASLBP are binding on future decisions of the State of Ohio."¹¹

III. ORDER

For the reasons stated, it is, this 4th day of August 1999, *Ordered*:

1. These proceedings are hereby *suspended* pending transfer of jurisdiction to Ohio, and are *terminated* as of the effective date of such transfer.

2. The alternative advanced by the City of Cleveland of NRC's retaining jurisdiction over the Denial Proceeding but not over the Renewal Proceeding is hereby *rejected*.

3. Because under the unique circumstances of these proceedings this Memorandum and Order represents my final determination in these proceedings, thus terminating the parties' right to participate further in these proceedings, it may be *appealed* to the Commission pursuant to 10 C.F.R. §§ 2.1251(a) and 2.786. (*Cf. Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-787, 20 NRC 1097 (1984).) Any party may file a petition for Commission review within fifteen (15) days after service of this Memorandum and Order, on the grounds specified in 10 C.F.R. § 2.786(b)(4). A petition for review must conform to the standards set forth in 10 C.F.R. § 2.786(b)(2). Pursuant to 10 C.F.R. § 2.786(b)(3), any other party may, within ten (10) days after service of a petition for review, file

¹¹ AMS Opposition to Bifurcation at 3.

an answer supporting or opposing Commission review, conforming to the standards set forth therein.

Charles Bechhoefer, Presiding Officer
ADMINISTRATIVE JUDGE

Rockville, Maryland
August 4, 1999

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Charles Bechhoefer, Chairman
Dr. Richard F. Cole
Dr. Charles N. Kelber

In the Matter of

Docket No. IA 98-006
(ASLBP No. 99-765-02-EA)

GARY ISAKOFF
(Order Prohibiting Involvement
in NRC-Licensed Activities)

August 11, 1999

The Atomic Safety and Licensing Board in an enforcement proceeding approves a settlement agreement between the NRC Staff and the individual faced with enforcement sanctions.

MEMORANDUM AND ORDER
(Approving Settlement Agreement and Dismissing Proceeding)

On August 2, 1999, both parties to this enforcement proceeding — Mr. Gary Isakoff and the NRC Staff — filed a joint motion asking this Atomic Safety and Licensing Board to approve a settlement agreement (a copy of which is attached). The agreement provides that there has been no adjudication of any wrongdoing by Mr. Isakoff; and that, as a compromise of disputed claims, the agreement is not to be construed as an admission by Mr. Isakoff or a concession by the NRC Staff. Each party is to bear its own fees and costs. Also, the agreement provides that the order against Mr. Isakoff is to be withdrawn and that the Staff will not take any future action against Mr. Isakoff for the activities described in the Staff's order.

Furthermore, the agreement states that Mr. Isakoff's request for a hearing is withdrawn and, for a period of a year, Mr. Isakoff is not to engage in NRC-licensed activities. For an additional three-year period, Mr. Isakoff is to inform the Staff within 20 days of accepting employment involving NRC-licensed activities. Under the Staff's proposed order, Mr. Isakoff would have been suspended for a year, with a reporting requirement extending for an additional year.

Pursuant to 10 C.F.R. § 2.203, where, as here, a notice of hearing has been issued, we are authorized to entertain a compromise and approve a settlement, according "due weight" to the position of the Staff. By the August 2, 1999 motion, the Staff has indicated that the settlement is "fair and equitable."

According due weight to the position of the Staff, we hereby *approve* the attached settlement agreement and *dismiss* the proceeding.

IT IS SO ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Charles Bechhoefer, Chairman
ADMINISTRATIVE JUDGE

Dr. Richard F. Cole
ADMINISTRATIVE JUDGE

Dr. Charles N. Kelber
ADMINISTRATIVE JUDGE

Rockville, Maryland
August 11, 1999

ATTACHMENT

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

**Docket No. IA 98-006
(ASLBP No. 99-765-02-EA)**

GARY ISAKOFF

SETTLEMENT AGREEMENT

WHEREAS, on February 24, 1999, the staff (Staff) of the U.S. Nuclear Regulatory Commission (NRC) issued an "Order Prohibiting Involvement in NRC-Licensed Activities" (Order) captioned IA 98-006 to Gary Isakoff (Mr. Isakoff). *See* 64 Fed. Reg. 11954 (March 10, 1999).

WHEREAS, on March 16, 1999, Mr. Isakoff answered the Order, denying all of the staff's allegations against him, and requested a hearing.

WHEREAS, it is in the public interest to terminate this proceeding without further litigation and without reaching the merits of the Order, subject to the approval of the Atomic Safety and Licensing Board (Board).

NOW THEREFORE, IT IS STIPULATED AND AGREED AS FOLLOWS:

1. There has not been any adjudication of any wrongdoing by Mr. Isakoff. This Settlement Agreement shall not for any purpose be construed as an admission by Mr. Isakoff or as a concession by the NRC, and is a compromise of disputed claims. Each party shall bear its own fees and costs.

2. The February 24, 1999, Order issued to Mr. Isakoff shall be withdrawn upon the approval of this Settlement Agreement by the Board. The Staff will not take any future enforcement action against Mr. Isakoff based on Mr. Isakoff's activities as a Temple University Hospital employee as described in the February 24th Order. However, in the event Mr. Isakoff breaches this Settlement Agreement, the February 24th Order shall be reinstated and Mr. Isakoff hereby waives his right to contest such reinstatement.

3. Mr. Isakoff's March 16, 1999, request for a hearing is withdrawn, and he waives his right to a hearing in this matter and his right to contest or otherwise appeal this Settlement Agreement once approved by the Board. Mr. Isakoff's

withdrawal and waiver will become effective only upon approval of this Settlement Agreement by the Board.

4. For a period of one year from the date of approval of this Settlement Agreement by the Board, Mr. Isakoff will not engage in NRC-licensed activities, or seek employment involving such activities. NRC-licensed activities are those activities that are conducted pursuant to a specific or general license issued by the NRC, including, but not limited to, those activities of Agreement State licensees conducted in areas of NRC jurisdiction pursuant to the authority granted by 10 C.F.R. § 150.20.

5. For a period of three years following the expiration of the one-year period described in Paragraph 4, Mr. Isakoff will inform the NRC within 20 days of accepting any employment involving NRC-licensed activities.

6. The Staff and Mr. Isakoff will file a joint motion requesting the Board to approve this Settlement Agreement and terminate the proceeding, pursuant to the Commission's regulations in 10 C.F.R. § 2.203.

IN WITNESS THEREOF, Mr. Isakoff and the Staff have caused this Settlement Agreement to be executed by their parties or their duly authorized representatives on this 28th day of July 1999.

L. Michael Rafky, Esquire
Counsel for NRC Staff
U.S. Nuclear Regulatory Commission
Washington, DC 20555
(Counsel for NRC Staff)

Gary Isakoff

John F. O'Riordan, Esquire
Eckert Seamans Cherin
& Mellot, LLC
1515 Market Street
Ninth Floor
Philadelphia, PA 19102
(Counsel for Gary Isakoff)

Dated at Rockville, Maryland,
this 28th day of July 1999.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Administrative Judges:

Peter B. Bloch, Presiding Officer
Thomas D. Murphy, Special Assistant
Robin Brett, Special Assistant

In the Matter of

Docket No. 40-8968-ML
(ASLBP No. 95-706-01-ML)
(Re: Leach Mining
and Milling License)

HYDRO RESOURCES, INC.
(2929 Coors Road, Suite 101,
Albuquerque, NM 87120)

August 20, 1999

This Partial Initial Decision, which concludes consideration of Phase I of this application for a license to conduct injection mining for uranium, affirms the validity of the license granted to Hydro Resources, Inc. (HRI), to mine its Church Rock Section 8 property. This decision covers the following issues: groundwater, National Environmental Policy Act of 1968 (NEPA), cumulative impacts, and environmental justice.

The groundwater portion of this Decision concluded that the Church Rock Section 8 portion of the Crownpoint Uranium Project meets Nuclear Regulatory Commission (NRC) regulatory criteria for licensing and that the geological model presented by Intervenor is not appropriate for the geology of this region. The Presiding Officer also concluded that the *in situ* leach (ISL) mining project on Church Rock Section 8, with the license conditions imposed on it by the Staff of the Commission, does not pose a credible threat to the environment or to human health and safety. That key determination provided the foundation for the further conclusion that the Final Environmental Impact Statement and the findings made in this proceeding, both in prior decisions and in this one, take the "hard look"

required for NEPA determinations, for consideration of cumulative impacts, and for environmental justice.

URANIUM MINING: ISL MINING; DETECTION OF LEAKS

After careful examination of the literature concerning the local hydrogeology, the Presiding Officer concluded that there were not likely to be underground pipes or pathways for rapid movement of water ("channelways") that would permit uranium-laden fluid to escape the monitoring wells that were built in order to detect and help to control leaks.

URANIUM MINING: ISL MINING; PRECIPITATION OF URANIUM

As water that is rich in uranium passes through underground formations that are rich in humates, the uranium precipitates out rather than being carried long distances by the water.

URANIUM MINING: ISL MINING; GROUNDWATER RESTORATION

Intervenor's witness modeled concentrations of uranium and concluded that after about 200 years the concentration would be about 0.17 mg/L. This value is still substantially less than the NRC's primary goal of a restoration value of a uranium concentration of 0.44 mg/L. Accordingly, water quality is acceptable.

URANIUM MINING: ISL MINING; LOCAL HYDROLOGY

Careful study of available information on local hydrology persuades the Presiding Officer that there is little risk from vertical excursions. In addition, Licensee will gather further data by performing pump tests before commencing ISL mining.

URANIUM MINING: ISL MINING; REINJECTION OF BLEED WATER

Licensee's plan to reinject a portion of the bleed water into the aquifer will not reduce negative pressure at the production well because the reinjection will occur far enough from the mining field that it will not affect water pressure in the field.

URANIUM MINING: ISL MINING; URANIUM LEVELS NEED NOT BE MONITORED

Licensee will monitor bicarbonate, chloride, and conductivity at its monitoring wells. This will give adequate advance indication of an excursion. It is, therefore, not necessary to model uranium levels. Licensee has agreed to monitor these levels anyway.

URANIUM MINING: ISL MINING; GROUNDWATER RESTORATION DEMONSTRATION

Under its license, Licensee is required to conduct described demonstration projects concerning groundwater restoration. These demonstration projects are adequately described to provide assurance that groundwater restoration will be adequate.

URANIUM MINING: ISL MINING; EXEMPTED AQUIFER

When EPA has exempted a portion of an aquifer under the Safe Drinking Water Act, its determination implies that there is no drinking water in the exempted portion of the aquifer.

URANIUM MINING: ISL MINING; OVERALL SAFETY

Having resolved all pending arguments except those presently before the Commission, the Presiding Officer concluded that there was an adequate assurance of safety for the licensed ISL project in the mining area subject to adjudication in this phase of the case.

NEPA: BENEFITS OF PROPOSED PROJECT; PRICE OF URANIUM

The final environmental statement for the licensed ISL mining project relied primarily on a price of uranium that is substantially above the current market value. Nevertheless, it is an appropriate price for estimating benefits because economic considerations require that Licensee postpone mining unless the market were to reach the price used in the final environmental statement. Accordingly, the price is an appropriate level for calculating benefits.

NEPA: HARD LOOK; ADEQUACY OF FEIS

After examining Intervenor's arguments in light of the record compiled in this case, the Presiding Officer concluded that the agency has taken an appropriate "hard look" at environmental issues and that the FEIS is adequate.

NEPA: HARD LOOK; CUMULATIVE IMPACTS

The Presiding Officer determined that the small impacts on public safety that would result from Licensee activity were not "the straw that breaks the camel's back" and that they do not require further discussion in the FEIS.

NEPA: HARD LOOK; ENVIRONMENTAL JUSTICE IMPACTS

The Presiding Officer determined that there were no substantial adverse impacts on environmental justice in the community and that the analysis in the FEIS on environmental justice was adequate.

TECHNICAL ISSUES

The following technical issues are discussed: groundwater, hydrology, ISL mining for uranium, groundwater restoration, and reinjection of bleed water.

APPEARANCES

Attorneys representing Eastern Navajo Diné Against Uranium Mining and Southwest Research and Information Center: **Lila Bird, Johanna Matanich, Douglas Meiklejohn, and Douglas Wolf**, Santa Fe, New Mexico 87505; **Diane Curran**, Washington, D.C. 20009.

Attorneys representing the Staff of the Nuclear Regulatory Commission: **John T. Hull and Mitzi Young**, Rockville, Maryland 20852.

Attorneys for Grace Sam and Marilyn Morris: **Roderick Ventura and Samuel D. Gollis**, Window Rock, Arizona 86515.

Attorneys for Hydro Resources, Inc.: **Anthony J. Thompson, Frederick S. Phillips, and David C. Lashway**, Washington, D.C. 20037.

PARTIAL INITIAL DECISION CONCLUDING PHASE I (Groundwater, Cumulative Impacts, NEPA, and Environmental Justice)

This is a proceeding in which Hydro Resources, Inc. (HRI), seeks to retain a license to mine for uranium in McKinley County, New Mexico. It proposes to mine by injecting water, fortified with dissolved oxygen and sodium bicarbonate, into the uranium ore-bearing portion of the aquifer to oxidize and dissolve uranium and bring it to the surface for extraction. This process is also known as *in situ* leach (ISL) mining because it uses fluid to extract uranium from the place (*situ*) in which it is found. HRI's license is opposed by a group of Intervenor who have a variety of concerns, including an allegation that this process will adversely affect the quality of water in the aquifer.

This Partial Initial Decision, which concludes consideration of Phase I of this case, affirms the validity of the license granted to HRI to mine its Church Rock Section 8 property. This Decision follows a series of partial initial decisions. It covers the following issues: groundwater, National Environmental Policy Act of 1968 (NEPA), cumulative impacts, and environmental justice.

The groundwater portion of this Decision examines the geological model presented by Intervenor and concludes that it is not appropriate for the geology of this region and that HRI's analyses demonstrate that the Church Rock Section 8 portion of the Crownpoint Uranium Project meets NRC regulatory criteria for licensing. Accordingly, after consideration of all the areas of concern presented to me in this phase of the litigation, I conclude that the ISL mining project on Church Rock Section 8, with the license conditions imposed on it by the Staff of the Commission, does not pose a credible threat to the environment or to human health and safety. That key determination provides the foundation for the further conclusion that the Final Environmental Impact Statement, NUREG-1508, February 1997, "Summary and Conclusions" (FEIS) and the findings made in this proceeding, both in prior decisions and in this one, take the "hard look" required for NEPA determinations, for consideration of cumulative impacts, and for environmental justice.¹

¹ CLI-99-22, 50 NRC 3, was issued by the Commission on July 23, 1999. Pursuant to that decision, the Commission retained jurisdiction over the adequacy of HRI's financial assurance plan. For purposes of my finding concerning the hard look taken under NEPA, I assume that the Commission is taking a hard look at the adequacy of the financial assurance plan.

I. BACKGROUND: DESCRIPTION OF THE HRI PROJECT²

HRI has applied for and received a materials license to conduct ISL mining on Sections 8 and 17 in Church Rock, New Mexico, and on two sites in Crownpoint, New Mexico, "Unit 1" and "Crownpoint."³ HRI's application proposes processing the uranium extracted from each site at its Crownpoint central processing facility.⁴

This phase of the proceeding, completed by this Decision, covers concerns that the portion of the project at Church Rock Section 8 should not be licensed. It also covers concerns that might demonstrate that the overall project should not be licensed. Memorandum and Order, Scheduling and Partial Grant of Motion for Bifurcation, September 22, 1998 (unpublished), at 3. Prior partial initial decisions in this phase of the proceeding include LBP-99-1, Waste Disposal Issues, 49 NRC 29 (1999); LBP-99-9, Issues Related to the National Historic Preservation Act (NHPA) and the Native American Graves Protection and Repatriation Act (NAGPRA) and Cultural Resources, 49 NRC 136 (1999); LBP-99-10, Performance-Based Licensing Issues, 49 NRC 145 (1999); LBP-99-13, Financial Assurance for Decommissioning Issues, 49 NRC 233 (1999); LBP-99-18, Technical and Financial Qualifications, 49 NRC 415 (1999); LBP-99-19, Radioactive Air Emissions, 49 NRC 421 (May 13, 1999).

At the Church Rock site, HRI's mineral rights include 65 hectares (160 acres) of patented mining claims in Section 8, T16N R16W, and 80 hectares (200 acres) of private minerals operating leases in Section 17, T16N R16W. The site involves 512 hectares (1280 acres) of allotted lands requiring mineral operating leases issued and held in trust for the Navajo allottees by the Bureau of Indian Affairs (BIA). The Unit 1 site is located in Sections 15, 16, 21, 22, and 23, T17 R13W. The Crownpoint site, which involves 365 hectares (912 acres) of private leases and claims areas, is located in Sections 19, 24, and 25, T17N R13W, and Section 29, T17N R12W. The Church Rock Section 17, Unit 1, and Crownpoint sites are scheduled to be considered in Phase II of this proceeding.

The proposed project would be designed to extract a total of 19 million kilograms (42 million pounds) of uranium reserves, at a maximum rate of approximately 1.5 million kg/year (3 million lb/year). HRI anticipates that uranium recovery activities at the Church Rock site would last approximately 8 years.

²This introduction gives an overview of the nature of HRI's proposed project. It is drawn from the FEIS at xix to xxi.

³HRI has been granted a license (SUA-1508, January 5, 1998) to conduct ISL mining. It submitted its initial application on April 13, 1988, and proposed to mine on Section 8 in Church Rock. Hearing Record Accession Number (ACN) 8805200339, Application for Materials License (April 13, 1988). HRI later amended the application to include processing in Crownpoint and mining at Section 17, Unit 1, and Crownpoint. Consolidated Operations Plan (COP), Rev. 2.0, at 2 (Hearing Record ACN 9708210179, August 15, 1997).

⁴COP Rev. 2.0 at 2. See also Hearing Record ACN 8811040138 (HRI changes location of the proposed Central Processing Facility) (October 12, 1988).

HRI proposes to construct ISL well fields where it has claims or leases to economic ore reserves. Existing and new surface facilities at each site would be used as processing plants for extracting uranium from aqueous mining solutions. Groundwater in the aquifer known as the Westwater Canyon Member⁵ of the Morrison Formation (Westwater) would be fortified with dissolved oxygen and sodium bicarbonate, then continuously recirculated by wells through the ore-bearing portion of the aquifer to oxidize and dissolve uranium minerals. In the Church Rock area, the top of the Westwater is found at depths ranging from 140 to 230 meters (460 to 760 feet). The proposed mining process would use a pattern of injection and production wells drilled into the ore zone. Each production well would be pumped at about 95 liters per minute (Lpm) (25 gallons per minute (gpm)), and enough patterns would operate in each well-field area to provide a maximum processing plant flow rate of 15,000 Lpm (4000 gpm). Before mining could occur at either the Unit 1 or Crownpoint site, HRI would be required to conduct a groundwater restoration demonstration at the Church Rock site. The demonstration would be conducted at a large enough scale to determine the number of pore volumes that would be required to restore a production-scale well field.

Uranium would be recovered from the mining solution in each processing plant by circulating it through ion exchange columns. The ion exchange columns would be alternately taken off line and the uranium stripped, precipitated, and concentrated. All uranium slurry produced would be dried using a single dryer located in the central processing plant at Crownpoint. Uranium slurry would be transported by truck from the satellite Church Rock facility to Crownpoint for drying. The Crownpoint processing plant would use an existing building constructed for earlier uranium mining. A satellite processing plant would be constructed at Church Rock. Approximately 2.5 hectares (6 acres) of land would be cleared to construct the satellite plant, including buildings, storage and parking areas, and retention ponds.

HRI proposes that groundwater restoration criteria be established on a parameter-by-parameter basis, and that the primary goal of restoration be to return all parameters to average premining baseline conditions. In the event that water quality parameters cannot be returned to average premining baseline levels, the secondary goal would be to return water quality to the maximum concentration limits as specified in United States Environmental Protection Agency (EPA) secondary and primary drinking water regulations (40 C.F.R. Part 141 and § 143.3). For barium and fluoride, the secondary restoration goal would be set to the State of New Mexico primary drinking water standard. For uranium, 300 pCi/L (0.44 mg/L)

⁵In the literature, the Westwater Canyon Member is referred to also as Westwater Canyon, Westwater Canyon sandstone, Westwater Canyon aquifer, Westwater sandstone, and Westwater aquifer. In this Decision, I will call it simply "Westwater" unless the term is included in a direct quotation, in which case I will accept the author's terminology.

would be used. This concentration was obtained from 10 C.F.R. Part 20 and is suitable for unrestricted release of natural uranium to water. HRI proposes to employ a two-stage treatment system for all liquid effluents. Treated water that meets groundwater standards would be recirculated in the aquifer during restoration and then either reinjected into the Westwater in a location isolated from mine units or applied to the land using ordinary irrigation equipment. Most solid wastes that would be generated by the mining process are defined as 11e(2) byproduct material in the Atomic Energy Act of 1954, as amended, and would require disposal at an offsite licensed disposal facility.

After HRI concludes the mining operation and demonstrates complete aquifer restoration, HRI proposes to plug and abandon the wells, decontaminate or decommission processing facilities, remove all contaminated material to a licensed waste disposal site, survey all disturbed areas, decontaminate to acceptable levels, recontour, revegetate, and release the areas for unrestricted use.

II. GROUNDWATER CONCERN

Intervenors allege that HRI has made serious misrepresentations with respect to the hydrogeology and aqueous geochemistry at the Church Rock site, that necessary water tests were not conducted in a proper manner, and that the geologic unit known as the Westwater is inappropriate for mining activity. They conclude that mining will result in degradation of the quality of the water supply. This allegedly will occur because of inadequate monitoring for excursions, improper criteria for determining excursions, and inadequate groundwater restoration standards, especially for uranium. HRI and Staff both deny these allegations.⁶ I examine each of the arguments, using the order of presentation in the Intervenors' Groundwater Brief.⁷

A. HRI Has Misrepresented the Westwater as a Homogeneous Aquifer

Intervenors argue that ore in the Westwater, in which Church Rock Section 8 is located, was deposited along ancient channelways. Intervenors suggest that the Westwater "consists of thin, stacked, and crisscrossing sand channels bounded by less permeable siltstones and shales." (Intervenors' Groundwater Brief at 17, 18.) They are concerned because they believe that these channels form a pathway for rapid water travel, carrying toxic elements released by mining over large distances

⁶ HRI's Response to Intervenors' Brief . . . with Respect to Groundwater Issues, February 19, 1999 (HRI Groundwater Response); NRC Staff's Response . . . on Groundwater Issues, March 12, 1999 (Staff Groundwater Response).

⁷ Intervenors' Amended Written Presentation in Opposition to Hydro Resources, Inc.'s Application for a Materials License with Respect to Groundwater Protection, January 18, 1999 (Intervenors' Groundwater Brief).

in a relatively short time, thus poisoning the aquifer and adversely affecting its use for drinking water. *Id.* at 19.

The considerable literature on the Westwater⁸ demonstrates that it consists predominantly of sandstone that contains discontinuous clay horizons formed by fluvial deposition⁹ (Turner-Peterson at 47-75¹⁰). On a local scale it is heterogeneous due to the very local occurrence of clay and conglomerate (e.g., Turner-Peterson and Fishman at 373). On a broad scale, that of the proposed mining operation, the Westwater may be approximated as homogeneous.

Seismic studies at Church Rock indicate that the bulk of the ore zone occurs entirely within a portion of the Westwater consisting of a block down-dropped by ancient faulting (Phelps *et al.* at 145). Thickness of sand and sand content are greater within this block than in the remainder of the Westwater. Therefore, the seismic data strengthen the conclusion that the ore zone of the Westwater behaves in a homogeneous manner. Similar thickening occurs elsewhere in the Westwater where the Westwater contains large sandstone-to-mudstone ratios (Turner-Peterson and Fishman at 373).

The technical literature cited by Intervenors offers similar descriptions of the Westwater to that quoted from the Intervenors' Groundwater Brief above. The Intervenors stress the heterogeneity of the Westwater, whereas HRI and Staff stress the homogeneity.

Intervenors differ from the published literature in their belief that channels will rapidly transport water through the Westwater and that the ore has been deposited in a series of vertically stacked channelways. Such deposition along channelways contradicts conventional uranium deposit models. Uranium deposits at redox fronts, where the circulating fluids encounter a more reducing environment, are commonly caused by the presence of organic material, especially humates (e.g., Turner-Peterson and Fishman at 357-88). The published literature does not suggest in any way that these redox fronts are ancient channelways.

The Intervenors rely on references to channelways in AAPG Studies in Geology #22. In examining the literature, however, there are no references to channelways, although statements are made about "vertically stacked and laterally coalesced sandstone beds interbedded with thin, *laterally discontinuous* mudstone beds" (Kirk and Condon at 111). These are not synonymous with channelways and are typical of fluvial sandstone deposits such as the Westwater.

⁸The source most cited by the parties is *A Basin Analysis Case Study: The Morrison Formation Grants Uranium Region New Mexico* (Christine E. Turner-Peterson *et al.* eds., AAPG Studies in Geology #22, 1986 (AAPG Studies)). This is a collection of articles. In this Partial Initial Decision, I have used scientific citations to articles within this collection, all of which I find relevant and admissible.

⁹A process by which a river lays down deposits. *The Random House College Dictionary* at 509 (1980).

¹⁰Citations in this format, using author names not defined in the text, are citations to *A Basin Analysis Case Study*, cited in note 8, above.

For the Intervenor's concerns about channelways to be relevant to this proceeding, there must be narrow channelways that transport water much faster than surrounding rock, possibly causing water to bypass monitoring wells and to create rapid excursions, much as if there were underground pipes that somehow manage to avoid all the monitoring wells. A channelway must also be long enough to speed up the travel of water for an appreciable fraction of the total distance to be traveled. The principal characteristics of rock that permit water to move within it are its porosity and permeability. For a channelway to flow faster than the surrounding rock, it must have higher porosity (a higher percentage of pore space — which measures its ability to contain water within pores) and higher permeability (ability of water to flow from pore to pore). I conclude, based on a review of the entire record, that the Westwater does not contain channelways.

Intervenor's expert, Wallace (Response Affidavit, May 20, 1999, at 4-11),¹¹ presents a model that he has constructed based on a pump test and some assumptions. However, HRI's license conditions acknowledge that one pump test is by no means definitive either in determining the hydrological properties of the aquifer, including whether or not it is vertically contained. Accordingly, additional pump tests will be conducted. (License Conditions 10.23 to 10.26, 10.30 to 10.31 (SUA-1508 at 8-9).) Furthermore, the conclusions that can be drawn from models depend on their assumptions, and Wallace's model assumes a channelway, which is contrary to the weight of the evidence before me. Wallace states, however, that the model is "nothing more than one of many plausible configurations based on a channel theme." (Wallace Response Affidavit, May 21, 1996, at 10.) Wallace (*id.* at 15) states that

the results represent two solutions among many solutions that could fit the data. While alternative solutions could show lower impacts on the down-gradient well, other alternative solutions could show even greater impacts at any earlier time.

Wallace's model uses postulated conductivities, including the totally unreasonable assumption that the velocity of water through postulated channelways is 10,000 times the velocity of water through surrounding rock.

The model also concludes that restoration will be unsuccessful and that pollution at the nearest private well after 274 years will be about one-fifth the value of maximum contaminant content in the mine area. (*Id.*, Exhibit 2G.) Finally, the model assumes no precipitation of toxic elements along the flow path. However, it is well documented that the Westwater is rich in humates. (AAPG Studies, Fisher at 357-88). Humates are organic compounds that serve as reducing agents,

¹¹ See Intervenor's Joint Response to HRI's and the NRC Staff's Responses to the Presiding Officer's April 21, 1999 Memorandum and Order (Questions), May 25, 1999 (Intervenor's May 25, 1999 Response) at Exhibit 2 (Wallace Response Affidavit).

taking oxygen from groundwater, thus precipitating elements, such as uranium, that depend on the oxygen to remain in solution.

Wallace finds that modeled concentrations of uranium after about 200 years are about 0.17 mg/L. Wallace Response Affidavit, Exhibit 2G. Assuming Wallace's scenario is correct, then this value is still substantially less than the NRC's primary goal of a restoration value of a uranium concentration of 0.44 mg/L. *See, e.g.*, FEIS at 4-60. Accordingly, even if I accept the validity of Wallace's model, I would still find that water quality remained acceptable. Thus, I conclude that Wallace's model, which makes unsupportable assumptions (see the preceding paragraph), has not cast serious doubt on HRI's demonstration that it can adequately restore the mining area.

Intervenors' experts, Abitz¹² and Wallace, are unclear about the three-dimensional structure of the Westwater. The most recent Intervenor position, responding to the informative paper by Cowan (3 *SEPM Concepts in Sedimentology and Paleontology*, at 80-93 (1991) (Cowan Article)), is the position taken by Lucas. Intervenors' expert, Lucas¹³ (Lucas Response Affidavit at 4-7), gives an excellent summary of Cowan's work with respect to the internal structure of the Westwater. He points out that the Westwater is lithologically heterogeneous, but on the large scale each "channel belt" can be "superficially characterized as sandstone, because the majority of the deposit is sandstone." I agree. If one looks at Cowan's photographs and drawings, the Westwater is clearly a fairly pure sandstone, albeit cross-bedded and scoured, and may thus, as noted above, be regarded as generally homogeneous.

Lucas (*id.* ¶ 14, at 6) reports that

Cowan's article can be used to conclude that there must be at least two levels of permeability/porosity in the Westwater Canyon Member: (1) the small scale (averaging 30 meters [100 feet]) of complex conduits; and (2) large scale conduits that correspond to the channel belts.

For reasons stated by Lucas, who is an Intervenor witness, I agree. However, this conclusion does not support Intervenor's position.

Cowan (Cowan Article at 89) states that sheet sandstones act as fluid conduits, but he points out that "in general, it is not possible to trace the base of a sandstone sheet across to adjacent cliff exposures separated by valleys." In addition, the "channelways" are quite discontinuous, and in no sense can be regarded as channelways in a regional sense. Indeed, Cowan points out that these individual sheet sandstone bodies are at least 1 kilometer wide and they "possibly exceed several km." Based on these characteristics, there seems little chance that monitor

¹² Abitz's qualifications are cited in Intervenors' Groundwater Brief at Exhibit 1, Written Testimony of Dr. Richard J. Abitz at 1-3, and Exhibit A. I accept Abitz as an expert.

¹³ Intervenors' May 25, 1999 Response at Exhibit 3 (Lucas Response Affidavit). Lucas's qualifications appear in Lucas Response Affidavit at 1-2 and Exhibits A and B. I accept Lucas as an expert.

wells spaced 400 feet apart would miss an excursion in this environment. I find, contrary to Lucas, that the sheets are 5-10 meters thick, not 30 meters.

The single sheets are discontinuous, possibly because they are overlain and scoured by other sheets. As Lucas points out (Lucas Response Affidavit ¶ 13, at 6), "the Westwater Canyon is a three dimensionally very complex amalgamation of many coalesced channel, bar, and overbank deposits."

It is important to place the Westwater in context when considering whether it is homogeneous or heterogeneous. If you consider a small area of the Westwater, then it might be heterogeneous even though considering a larger area, as if from a distance, it might be homogeneous.

On a small scale, groundwater flow in the Westwater is complicated, just as water flow through a filter is complicated on a very small scale. But on a larger scale the Westwater may be treated as homogeneous, especially because the coalesced channels are kilometers wide. By homogeneous (isometric medium), what is meant here is that groundwater will flow downgradient at about the same velocity in different parts of the Church Rock area.

I agree with HRI expert Bartels that if lengthy channelways exist at Church Rock, they should occur in other ISL uranium sites that have a very similar fluvial environment. (Bartels Affidavit at 10-14.)¹⁴ Channelways have not been reported elsewhere, so far as I am aware, nor do the Intervenor provide evidence of them.

In light of all the above, I conclude that the ore zone in the Church Rock area is homogeneous (isotropic) with respect to fluid flow, and that the ore zone does not contain significant channelways. Staff (Ford May 24, 1999 Affidavit at 1-3)¹⁵ also persuasively refutes the Channelways hypothesis, as does Bartels (Bartels Affidavit, Feb. 19, 1999, at 12-30, and Wasiolek and Spinks (Affidavit, Feb. 16, 1999,¹⁶ at 4-5). The statement (Intervenors' Groundwater Brief at 19) that the sand channels in the Westwater function as "pipelines" is without basis. I see no misrepresentation on the part of HRI. Intervenor have an incorrect understanding of the origin of this type of uranium deposit.

¹⁴ Bartels' February 19, 1999 Affidavit is an unnumbered attachment to HRI Groundwater Response (Bartels Affidavit). Bartels' qualifications are summarized at HRI Groundwater Response, unnumbered exhibit to Bartels Affidavit, February 19, 1999, ¶ 2. I accept Bartels as an expert.

¹⁵ Exhibit 1 to NRC Staff's Response to HRI's Answer to Presiding Officer's Questions, May 25, 1999 (Ford May 24, 1999 Affidavit). Ford's qualifications are found at Exhibit 9 ¶ 2 to NRC Staff's Response to Motion for Stay, Request for Prior Hearing and Request for Temporary Stay, February 20, 1998 (Ford February 20, 1998 Affidavit). I determine that Ford is an expert.

¹⁶ Affidavit of Mary Ann Wasiolek and Michael P. Spinks, P.E., February 16, 1999, unnumbered attachment to HRI Groundwater Response (Wasiolek/Spinks Affidavit).

B. Alleged Misrepresentation

1. HRI Misrepresents Groundwater Pathways and Divides as Features That Provided a Lixiviant Barrier

The Intervenor (Intervenor's Groundwater Brief at 19-22) make this allegation by citing the Wallace January 8, 1999 Testimony (attached as Exhibit 3, at 30-37). The Intervenor accuses HRI of misrepresentation on this issue. All arguments are presented for Crownpoint and are therefore not directly relevant for this phase of the hearing, which is limited to Church Rock. However, the method employed by HRI is a commonly used method for evaluating *in situ* mines (HRI Groundwater Response at 8) and does not misrepresent the groundwater pathways.

2. HRI Misrepresents Its Groundwater Travel Times as Conservative

None of the arguments (Intervenor's Groundwater Brief at 22-23) presented involve Church Rock. Further, in discussing Unit 1 and Crownpoint, Intervenor's witness, Wallace (Jan. 8, 1999 Testimony at 42), appears to question the assumption of homogeneity of the Westwater, rather than the method of calculation of flow rates if homogeneity is assumed. As discussed above, homogeneity appears to be the most reasonable characterization. Accordingly, there is no misrepresentation by HRI.

3. HRI Misrepresented That It Evaluated Whether Faulting Exists That Connects the Westwater With Other Aquifers

a. Alleged Connection to Aquifers Below Westwater

The Intervenor states, in their Groundwater Brief at 23-26, that the Recapture Shale (thought to exist under the Westwater, separating it from the underlying Cow Springs aquifer) probably does not exist at Section 8, so it cannot act as a barrier to the Cow Springs aquifer. They state that HRI uses data from a single borehole, although they possess data from 200 such holes. They state that a 5-foot clay layer is the sole barrier between the two aquifers. Intervenor claims that the Cow Springs aquifer "comes into nearly direct contact with the Westwater." (Wallace Jan. 8, 1999 Testimony at 62-63; *see also* Intervenor's Staub Testimony at 27-28, attached as Exhibit 2 to Intervenor's Groundwater Brief. (Staub January 9, 1999 Testimony).¹⁷) Intervenor's Wallace cites Hilpert (Staub Testimony, Exhibit N), whose cross sections indicate that the Recapture is thin or missing in the area of Church Rock. Staff (FEIS at 3-18) and HRI (HRI's Groundwater Response at 9, 10) adequately rebut this allegation, as is discussed below.

¹⁷ Staub's qualifications appear at 1-3 and Exhibit A. I accept Staub as an expert.

The Intervenor further claim (Intervenor's Groundwater Brief at 25-26) that the Recapture Shale may be an aquifer in its own right and may be contaminated by vertical excursions (Intervenor's Groundwater Brief at 25-26; Wallace Jan. 8, 1999 Testimony at 14-17). Many drill holes penetrated the Recapture Shale to varying degrees, and in every case its characteristics are those of an aquatard. The Recapture appears to be present throughout Section 8, as reported by Staff in the FEIS and HRI (HRI Groundwater Response at 10).

HRI's expert, Lichnovsky (Lichnovsky Affidavit, attached to HRI Groundwater Response at 19)¹⁸ states that at the Church Rock area the Recapture Shale is shale (*id.* at 19) and offers evidence (*id.* at 21) that the Cow Springs sandstone does not intertongue with the Recapture Shale at the site. In addition, HRI will conduct tests to determine whether the Cow Springs aquifer is hydrologically confined from the Westwater. Cow Springs will be monitored if confinement does not exist (HRI Groundwater Response at 17-18). I find no misrepresentation by HRI.

Lucas (Lucas Response Affidavit at 3) points out that "the Recapture Shale is not a confining layer in this region because the Recapture is a fluvial deposit in the southern part of the San Juan Basin." Condon and Peterson, at 21, agree with this, but point out that it contains sandstone, claystone, mudstone, and siltstone, in agreement with HRI and Staff. I therefore find that it is an aquatard, separating the Westwater from the Cow Springs aquifer so that there is little reason to believe that there is an appreciable flow of water between them.

Lucas (Lucas Response Affidavit ¶6) then states, in disagreement with Intervenor's affidavits, Staff, HRI, and the literature cited by them, that "the rock section immediately below the Westwater is not shale — it is a mixture of sandstone, siltstone, and thin gypsum beds that overlie the gypsum beds of the upper Todilto Formation." He does not state if this mixture is the Recapture Shale, nor does he give any reference to support this statement. In stating this, he did not account for either the considerable thickness of the Cow Springs sandstone, which is a known aquifer in the region, or for the Beclabito Member, both of which overlie the gypsum-bearing Todilto Limestone, which is quite thin in this area (e.g., Condon and Peterson, Fig. 4a, at 11). I reject this uncorroborated statement. Instead, I accept the findings of Condon and Peterson that over 500 feet of Recapture, Cow Springs, and Beclabito lie between the Westwater and the Todilto.

Lucas then states that the gypsum beds to which he refers are easily deformed and dissolved, which "produces numerous fractures at the subsurface and at the surface." (Lucas Response Affidavit ¶6, at 3.) This is entirely to be expected for gypsum, and if present could provoke vertical excursions if one accepts Lucas's stratigraphy. However, there is no evidence concerning fractures at the surface in the mine area, which one should see if Lucas's scenario were correct. For the

¹⁸ Lichnovsky's qualifications are cited in his affidavit at 1, 2. I accept him as an expert.

reasons stated, I therefore conclude that Lucas's scenario is incorrect and that there is no fracturing caused by gypsum beds, as Lucas alleges.

b. Alleged Connection to Aquifers Above Westwater

Intervenors' Staub (Staub January 9, 1999 Testimony at 26) makes claims about overlying strata. He contends that the Westwater and overlying Dakota aquifer may be in contact at Church Rock because the Brushy Basin member has been scoured away. Staff (FEIS at 3-18) quotes HRI and Hilpert (1969)¹⁹ on the varying thickness of the Brushy Basin at the Church Rock site. Based on the information provided by the Staff, I am persuaded that the minimum thickness of the Brushy Basin Member is 45 feet, and at no place is the sandstone unit in the Brushy Basin separated from the Westwater and Dakota Members by less than 16 feet of mudstone, which is known to be an efficient aquatard (FEIS at 3-35).

Bartels (Bartels Affidavit at 9, attached to HRI Groundwater Response) discusses the Church Rock Environmental Report (Hearing Record ACN 9304130415 at 110), which points out that the Dakota Sandstone and Poison Canyon units have a positive differential pressure with respect to the underlying Westwater. Bartels correctly concludes that there cannot be appreciable leakage between these units because the leakage would equalize the pressures.

HRI expert Orr (Orr Affidavit ¶3, attached to HRI Groundwater Response)²⁰ concludes that because of the lower pressure of the Westwater with respect to the Dakota, "any vertical excursion into the Dakota could be reversed simply by stopping the operation." This would cause the net flow to be into the lower-pressure, underlying Westwater.

Bartels (Bartels May 11, 1999 Affidavit at 5, attached to HRI May 11, 1999 Response) quotes a memo by J. Holonich, NRC, to P. B. Bloch (dated April 20, 1998):

Historically almost all vertical excursions at ISL mining operations [anywhere] have been caused by faulty well completions or unsealed exploration boreholes. The staff is aware of only one ISL site where vertical excursions may have been caused by stratigraphic interconnections.

Based on this memorandum, I conclude that the Brushy Basin Member shows characteristics of an efficient aquatard in the mine area. Thus, HRI has not misrepresented this issue.

I also conclude that there are unlikely to be any serious problems from vertical excursions in the course of mining Church Rock Section 8.

¹⁹Wallace Testimony, Jan. 8, 1999, at 8.

²⁰The Orr February 19, 1999 affidavit is an unnumbered attachment to the HRI Groundwater Response. Orr's qualifications are cited in his affidavit, ¶1. I accept Orr as an expert.

4. HRI Misrepresented That It Evaluated Whether Faulting Exists That Connects the Westwater With Other Aquifers

Intervenors claim (Intervenors' Groundwater Brief at 26-27, 30) that structural cross sections were not reviewed, so that HRI did not determine whether faults could provide vertical pathways for fluid by bringing one aquifer in contact with another. They point out that vertical faulting is common in the San Juan Basin and that fractures and shear zones could create pathways for vertical excursions (Wallace Jan. 8, 1999 Testimony at 2-24, Exhibit 3).

There is no evidence for any faulting later than the Late Jurassic Period at Church Rock and that faulting appears to have occurred at the time the Westwater was deposited, explaining the greater thickness and sand content in the trough formed by the faulting (Phelps *et al.* at 145). HRI conducted a seismic survey at the Church Rock site and saw no faulting later than the Triassic period (HRI Groundwater Response at 10, 11). Pump testing saw no evidence of vertical excursion indicative of faulting, fracturing, or shearing or of drill holes capable of transporting fluid. HRI will do further hydrologic testing for vertical excursion prior to mining (FEIS at 4-18).

Wallace's (Wallace May 20, 1999 Response Affidavit at 18) view of the scientific literature about Church Rock is that the extent to which the seismic cross section reproduced by Kirk and Condon (at 105-44) "goes through the mining zone cannot be discerned from the relevant figures or text." However, I have examined the text and figures and find that this is wrong. In addition, Phelps *et al.* at 145-60, which Wallace cites in the same footnote, clearly shows the position of faults, ore bodies, and seismic lines.

Wallace states (Wallace May 20, 1999 Response Affidavit at 19) that if most vertical excursions occur due to artificial pathways, then the 174 or more old boreholes in Section 8 may serve as conduits, and that Staff has not assessed this risk. Also, Wallace, on the same page, points out that HRI has data on all these (now "hundreds") of boreholes and has used them to construct stratigraphic cross sections. However, I find that the Staff has assessed the risk that the boreholes might be conduits and has found it to be small. (FEIS at 4-55.) I concur.

Wallace (Wallace May 20, 1999 Response Affidavit at 17-22) complains about lack of structural cross sections, fence diagrams, and structure contour maps. I find that these techniques are useful but not totally reliable when there are changes in the depth of strata not associated with faults. Seismic reflection methods are more direct. They work by passing shock waves through underlying rock and observing the deflection of those waves. This kind of measurement is intrinsically more reliable than by obtaining data on bed depth and thickness from the boreholes and trying to infer how to characterize the strata in the area between the boreholes. To further reduce this element of uncertainty, pump tests have been conducted

and more will be performed. (License Conditions 10.23 to 10.26, 10.30 to 10.31 (SUA-1508 at 8-9).)

Moreover, Staff (Ford May 11, 1999 Affidavit at 15-20, Exhibit 1 to NRC Staff Response to Questions in April 21, 1999 Order) deals adequately with the question of vertical excursion through faults, fractures, shears, joints, etc., and I find that the danger of lasting damage is very small.

5. *HRI Misrepresents Baseline Water Quality in the Westwater*

Intervenors (Intervenors' Groundwater Brief at 28 and 29) allege that HRI lumped chemical data from poor-quality water in the ore zone with data from high-quality water outside the ore zone, thus degrading the baseline for the high-quality water. Intervenors are concerned that that may also be done when setting restoration goals. Furthermore, they claim that there is no role for the NRC in establishing baselines.

As pointed out by HRI (Pelizza February 19 Affidavit at 20 and 21, Exhibit to HRI February 19, 1999 Response) (hereinafter "Pelizza Affidavit"),²¹ baselines have not been set but will be set according to the protocol in COP Rev. 2.0 § 8.6. There is no basis in the record for finding that this protocol is unacceptable. Accordingly, I accept this protocol as adequate, and there has been no misrepresentation. Staff approved the protocol and there is no reason to believe that the protocol is inadequate.

C. *HRI's Aquifer Testing Is Inappropriate for Evaluating Whether a Hydraulic Connection Exists*

1. *HRI Has Not Submitted Structural Cross Sections, Fence Diagrams, or Structure Contour Maps*

I have already addressed all of these concerns. See Section II.B.4, pp. 92-93.

2. *HRI Used an Inappropriate Model To Analyze Pump Test Data*

Intervenors claim (Intervenors' Groundwater Brief at 30-31) that the Theis method used by HRI to model drawdown data from pump tests is inappropriate because it assumes that the aquifer being tested is fully confined vertically. Wallace, for the Intervenors, used the Modified Hantush method. Although Intervenors' witness Wallace states that the Modified Hantush Test agrees with the Theis Test at Church Rock, namely that no upward excursion occurred there during

²¹ Mr. Pelizza's qualifications are cited in his Affidavit at 2-6. Based on his qualifications and my review of his testimony, I find that he is an expert.

the pump tests, he alleges that the Modified Hantush Method indicates that the Westwater and Cow Springs aquifers are in hydrologic communication. (Wallace Jan. 8, 1999 Testimony at 48-49.) As the FEIS indicates at 4-18, license conditions require that more pump tests and monitoring be done before mining commences. The hypothesis that there is hydrologic communication will be further tested during the additional pump tests required by the license. (License Conditions 10.23 to 10.26, 10.30 to 10.31 (SUA-1508, at 8-9).) While I find HRI's model to be correct, I take further comfort because additional testing will add to the assurance provided by the model.

3. HRI Did Not Conduct Pump Tests on an Appropriate Scale

Wallace for the Intervenors (Intervenors' Groundwater Brief at 32-33; Wallace Jan. 8, 1999 Testimony at 43-47) points out that pump tests were performed involving pumping 60 gpm for several days, and that HRI plans to pump several thousand gallons per minute for years. He concludes that the stress on the rocks involved is many orders of magnitude more than that imposed by these pump tests. He alleges that such additional pressures may cause excursions.

However, Staff requires additional pump tests before mining (License Condition 10.23). HRI plans well-field pressures considerably below anticipated conservative fracture pressures for the aquifer (FEIS at 4-24). It would be unrealistic to conclude that fracture definitely will not occur, because rock may be heterogeneous in its reaction to stress. By keeping well pressures considerably below anticipated fracture pressures,²² however, the probability of fracture is low. If a vertical excursion occurs, it can be detected and dealt with without threat to the quality of drinking water drawn from the aquifer. (FEIS at 4-55.)

4. NRC Staff Relies on Improper Data To Detect Vertical Movement Between Aquifers

Wallace (Intervenors' Groundwater Brief at 33; Wallace Jan. 8, 1999 Testimony at 57-58) claims that historic water levels should have been used to complement pump test results. He analyzed the pump tests for Unit 1 and Crownpoint and found that they were in error. He then analyzed historic water levels, which confirm his results. As a result, he alleges a vertical connection. He suggests that Crownpoint results "are relevant to the hydrologic conditions at the Church Rock site" (Wallace Jan. 8, 1999 Testimony at 60). However, Wallace did not have any reason to differ with the pump tests at Church Rock and could not consult historic water levels from wells at Church Rock because there are no wells in the vicinity.

²²The anticipated fracture pressure is the pressure at which a fracture is expected to occur.

I find no reason to believe that the Unit 1 and Crownpoint well tests are relevant to Church Rock, especially when Wallace's interpretation of pump test results at Church Rock agreed with that of HRI and suggests no vertical connection. See Section II.C.2, pp. 93 ff, above.

5. *HRI Did Not Model the Amount of Groundwater It Will "Bleed" To Control Lixiviant and Prevent Horizontal Excursions*

The Intervenor claim (Intervenors' Groundwater Brief at 34) that reintroduction into the Westwater of 97.5% of the bleed water that has been removed gives a true bleed rate of 0.025%, not the 1% that is claimed. (Staub Jan. 9, 1999 Testimony at 28-29.) This is potentially significant because the bleed is intended to create a cone of depression that will cause injected water to move toward the production well rather than spreading outward in a horizontal excursion. (FEIS at 2-7.)

Intervenors allege that this reintroduction of bleed water will reduce the negative pressure that is needed to avoid excursions. HRI (Pelizza Affidavit at 53) agrees with Staub that reinjection should not be done upgrade of the mining operation and they state that it will be done outside the influence of production patterns. HRI, or its parent company, has had experience in reinjection and there is no reason to doubt the statement. Since the reintroduction is outside the production pattern, it will not reduce the negative pressure. Consequently, I conclude that HRI has accurately represented its bleed rate.

D. *Licensing of the Crownpoint Project Is Inimical to Health and Safety Because HRI's Groundwater Monitoring Plan Is Inadequate*

1. *The Proposed Spacing of Groundwater Monitoring Wells Is Inadequate To Provide Timely Detection of Horizontal Excursions*

License Condition 10.17 requires monitoring wells in the Westwater to be placed 400 feet apart and at a maximum distance of 400 feet from production/injection wells. Intervenor claim (Intervenors' Groundwater Brief at 37-40) that these parameters are inadequate because the bulk of fluid passes along narrow sand channels (see p. 84 *et seq.*, above). Intervenor claim that sand channels at Church Rock average 158 feet wide (Intervenors' Groundwater Brief at 37) so that monitors should be placed 300 feet apart, and that a greater concentration be placed downgradient in the mine zone.

This complaint about pump placement is part of Intervenor's claim that sand channels may dominate flow direction and that municipal water pumps at Crownpoint will influence flow. I have concluded that there is a lack of evidence for sand channels, *supra* Section II.A, p. 88. Moreover, given the slow speed at which groundwater travels and the distance of Church Rock from Crownpoint,

Crownpoint municipal pumping would have no effect on groundwater flow at Church Rock.

Staff (Ford March 12, 1999 Affidavit ¶25; *see also* Ford Feb. 20, 1999 Affidavit ¶14) also argues that two rows of monitoring wells — as suggested by Intervenor — have never been required by NRC at any ISL site. Intervenor (Abitz Testimony at 25, 26) point out that no other mines occur in areas with such high water quality. This argument is irrelevant. Given the homogeneous nature of the rock structures in this area, I conclude that one tier of monitors will be adequate for Church Rock Section 8. (*See* p. 84 *et seq.*, which discusses the hydrogeology of this area.) With high water quality, even a minor excursion would be detected because the Upper Control Limits (UCLs) would be lower. (*See* p. 98, below.)

2. *HRI's Groundwater Monitoring Plan Is Inadequate to Detect Vertical Excursions in Overlying and Underlying Aquifers*

Intervenor claim (Intervenor's Groundwater Brief at 41-42) that monitoring is inadequate to detect excursions into the Cow Springs, Brushy Basin (B Sand Layer), and Dakota aquifers. *See* FEIS at 3-19 (describing three layers known as the Brushy Basin).

a. *The HRI License and Application Improperly Failed To Provide for Monitoring of the Cow Springs Aquifer*

Intervenor complain (Intervenor's Groundwater Brief at 41-42) that HRI has no plans to monitor the Cow Springs aquifer. However, HRI will conduct tests to determine if the aquifer is hydrologically confined from the Westwater. The Cow Springs member will be monitored if confinement does not exist. (*See* HRI Groundwater Response at 17, 18.)

b. *The Frequency of Monitor Wells in the Overlying Dakota and Brushy Basin B Aquifers Is Inadequate*

Monitoring of the Dakota aquifer is required at a minimum of one well per 8 acres, and the Brushy Basin at a minimum of one well per 4 acres. (FEIS at 4-56.) Intervenor complain (Intervenor's Groundwater Brief at 42-43) that Staff has not adequately explained or quantified this assessment in terms of the risks involved. However, well densities here are consistent with NRC-approved densities at other ISL operations. The FEIS states (at 4-55)

the risk of a vertical excursion occurring outside the area of former mining activities should be low given the thick aquatards over and under the production zone, the planned well integrity testing program, and the potential for old boreholes to squeeze shut. HRI proposes to monitor

water levels and water quality in the overlying aquifer to detect leaks. Further, in the event of a vertical excursion, HRI proposes to proceed immediately to determine the cause of the leakage and reverse the trend. The potential for an upper aquifer excursion to go undetected should be small, as discussed for the Unit 1 Site in Section 4.3, 1.2.

Intervenors claim (Intervenors' Groundwater Brief at 43) that spacing should be closer at Church Rock because the other sites were "in aquifers where groundwater does not meet drinking water standards." However, HRI reports (HRI Groundwater Response at 19) that a number of these sites are in aquifers whose water is extensively used for drinking.

The purer the water is, the easier it should be to detect an excursion, especially in sandstone sheets that are at least 1 kilometer (3250 feet) wide and cannot therefore be considered as narrow channelways (*see* p. 87 ff, above). The Upper Control Limits would be lower in zones of pure water, thus making the detection of excursions easier. Accordingly, Intervenors' assertion that the frequency of monitor wells is inadequate is without merit.

E. Licensing of the Crownpoint Project Is Adverse to Public Health and Safety Because HRI Has Failed To Provide Adequate Protection Against Excursions

Intervenors claim (Intervenors' Groundwater Brief at 43, 44) that critical excursion indicators are not listed in the license, so that HRI may create scientifically unsound control limits for monitoring excursions.

1. HRI's License Excludes the Use of Necessary Excursion Parameters

License Condition 10.21 establishes bicarbonate, chloride, and conductivity as the parameters for determining whether or not an excursion has occurred. These parameters are expected to increase in an excursion because they are characteristics of the injected lixiviant and are expected to serve as lead indicators that uranium also may be spread in an excursion. FEIS at 4-19 to 4-20. Intervenors state (Intervenors' Groundwater Brief at 44-45) that uranium content should be an additional parameter and that groundwater elevation control limits should also be used. HRI (Pelizza Affidavit at 44) is willing to monitor uranium despite the fact that it and Staff have not found it to be a useful indicator because it comes out of solution outside the oxidizing zone, so that levels may not reach critical limits during an excursion. I am therefore satisfied that there is no need to measure uranium levels and I will not impose a license condition requiring such measurement. Regardless, HRI will monitor water levels. This is an adequate response to Intervenors' objections.

2. *HRI Proposes To Use Scientifically Unsound UCLs (Upper Control Limits)*

Intervenors state (Intervenors' Groundwater Brief at 45) that an excursion will be considered to have occurred when the readings from a monitor well show that any *one* excursion parameter (bicarbonate, chloride, and conductivity) exceeds its UCL by 20% or that *two* excursion parameters exceed their UCL. (License Condition 10.12; FEIS at 4-21.) UCLs are to be determined from baseline mean concentration and then adding 5 standard deviations from the mean to this value (FEIS at 4-20). It is clear from inspecting Church Rock Site Water Quality Data (FEIS, Table 3.19, at 3-36) that UCL plus 20% for all elements listed with EPA standards are purer than EPA standards except for the two elements that do not meet EPA standards in the Church Rock water: uranium and radium. The quality of water impure enough to signal an excursion is usually not harmful unless the original water is harmful. The same conclusions can be made for other water qualities listed in the FEIS.

Intervenors claim (Intervenors' Groundwater Brief at 45, 46) that allowing 5 standard deviations "allow[s] concentrations of excursion parameters to be two to three times greater than under the Groundwater Monitoring [plan] . . . before an excursion can be declared" (Intervenors' Groundwater Brief at 45). This, they claim imposes danger to the aquifer. Abitz (Abitz Testimony at 38-42) claims that by the time chloride reaches its UCL, uranium would be highly concentrated, and that laboratory analyses take 2 weeks to a month to perform. This, Abitz claims, would result in pollution beyond the monitoring area. Uranium is discussed in Section II.E.1, above. Although monitoring is not necessary, it will be monitored.

HRI rebuts by pointing out (Pelizza Affidavit at 45-48) that 5 standard deviations are widely required by NRC of licensees in Wyoming and that such limits would markedly decrease the number of false positives. Numerous false positives could encourage disregard of a true excursion. Pelizza also states that analyses will be done on site within 24 to 48 hours after samples are received.

Pelizza makes a convincing argument on the danger of setting limits that are too close to baseline. One could successfully argue for fewer standard deviations if baselines were constructed for each individual monitoring well. However, the bulk mean is used for a field because baseline values are variable over time and from well to well. Leach water ranges from a factor of 4 to 17 over UCLs in the example given (*id.* at 47); using 3 standard deviations, the factors range from 5 to 26. It seems clear that both the 3-standard-deviation UCL and the 5-standard-deviation UCL would detect excursions and that the latter would do so with fewer false alarms, as discussed below.

The UCL for chlorine is particularly conservative. The FEIS (at 4-20) states that

in areas of good water quality, NRC has found the mean plus 5 standard deviations to be acceptable. However, in aquifers with good water quality, chloride populations have been found to have such a narrow statistical distribution that the mean plus 5 standard deviations plus a defined concentration has been used.

Intervenors point out that away from the ore zone the Westwater contains good drinking water. *Id.* at 3-35. Therefore, NRC's mean plus 5 standard deviations for determining UCLs would apply. However, an increment is not being added to the chlorine mean plus 5 standard deviations (FEIS at 4-20 to 4-21), thus making this UCL more conservative than those at some other sites. I therefore conclude that the 5-standard-deviation excursion parameters to be applied are reasonable.

F. Licensing of the Crownpoint Project Is Inimical to Health and Safety Because HRI Has Failed To Demonstrate That Groundwater Restoration Can Be Achieved

HRI's License Condition 10.21A requires the operator to restore groundwater to baseline as a primary goal, with a secondary goal of federal primary and secondary drinking water standards except that the secondary standards for barium (Ba) and fluorine (F) should be the New Mexico primary standard for drinking water and that for uranium (U) shall be 0.44 mg/L.

Intervenors allege that the HRI method of determining baseline will "inflate the concentration of contaminants in baseline averages" and that secondary standards for barium, fluoride, and uranium do not allow for safe drinking water (Intervenors' Groundwater Brief at 47). Further, "the track record of the ISL industry demonstrates that restoration to the good water quality of the Westwater is not technologically feasible."

1. HRI's Methods To Determine Baseline Will Inflate the Concentration of Contaminants in Baseline Averages

Abitz states (Intervenors' Groundwater Brief at 47; Abitz Testimony at 43) that averages of water analyses in the mineralized zone, which are higher in harmful elements than those outside the mineralized zone, are lumped together, thus producing an inflated baseline for water quality in the mineralized zone.

It is quite clear that the figures given by HRI do not constitute baseline. HRI (HRI Groundwater Response at 22) states:

As described in C.O.P. Rev. 2.0 § 8.6.3, baseline will be determined after the mine units have been installed for groundwater in the ore zone and non-ore zone separately. HRI agrees that baseline should be determined in both the production area and the mine area separately.

As water in the production area would be expected to be naturally higher in radionuclide concentrations, baseline levels may be elevated and they must be measured and accounted for in establishing restoration goals. Conversely, the monitor wells would be expected to have lower concentrations of radionuclides and these levels should be measured and accounted for so that an excursion could be verified and/or corrected properly. Any assertion that Abitz's Table 1 (Abitz Testimony at 12) represents baseline for compliance purposes is therefore incorrect. HRI has taken the statistically sound approach that it will not derive baseline from a small sample but will augment the sample by using actual well-field data. (HRI Groundwater Brief at 22.) I accept the need for more data and adopt this point of view as my conclusion.

2. *The Secondary Standards for Barium and Fluorine Are Not Protective of Health and Safety*

Intervenors claim (Intervenors' Groundwater Brief at 48) that the New Mexico standards for barium and fluoride are groundwater quality standards, but not drinking water standards. Also, these standards are irrelevant because the project lies within the jurisdiction of the Navajo Nation. Therefore, Navajo Nation standards for drinking water, which are the same as federal standards, should serve as the secondary restoration goal.

The Presiding Officer rejects this argument. The New Mexico standard for barium is 1.0 mg/L, the EPA and Navajo Nation Environmental Protection Agency standard (EPA/NNEPA) is 2.0 mg/L. For fluoride, the New Mexico standard is 1.6 mg/L, the EPA/NNEPA standard is 4.0 (FEIS, Table 4.7, at 4-30). Since the New Mexico standard is more rigorous than either the federal or Navajo standard for drinking water, this concern is without merit.

3. *The Secondary Standard for Uranium Is Not Protective of Health and Safety*

Intervenors claim (Intervenors' Groundwater Brief at 49-51) that the secondary standard for uranium (U) at 0.44 mg/L "is not protective of public health, and is contrary to other relevant pollution controls." The EPA standard is 30 pCi/L (0.44 mg/L) as the groundwater restoration standard at inactive uranium processing sites, and the National Research Council proposes a drinking water standard of 0.035 mg/L (*id.* at 49).

At the Church Rock site, uranium in the groundwater varies from 10.9 to 0.002 with a mean of 1.8 mg/L (FEIS, Table 3.19, at 3-36). For Crownpoint, the figures are a range of 0.021 to 0.0 (*sic*) with a mean of 0.005 mg/L (FEIS, Tables 3.13

and 4.5). (It seems clear that EPA standards should be attainable for Crownpoint, but that topic is not part of this phase of the case.)

The uranium content at Church Rock is much higher than at Crownpoint. This suggests that the EPA standard would be difficult or impossible to meet, and even the required secondary standard of 0.44 mg/L might be difficult to meet.

However, as pointed out in the FEIS (*id.* at 4.57, 4.58), dewatering activities caused by the underground mining at Church Rock in Section 17 have created oxidizing conditions in the mine zone. Once the workings filled with water, the oxidized uranium dissolved, causing elevated uranium values downgrade. In addition, as Ford (Ford May 11, 1999 Affidavit at 7) points out, the mining activities may have influenced the natural reducing capacity of the aquifer. This effect is local to the mine area, as is evidenced by the fact that the concentration of uranium in water near the town of Church Rock is a factor of 9 lower than at the proposed mine site. Further, restoration will ameliorate the high uranium content of the mine site, because water high in toxic elements will be removed and replaced with cleaner water.

There is an abandoned surface mine on Church Rock Section 17. Although this area has been beneath the water table for many years and no remediation has occurred, uranium in the water in the vicinity of the Church Rock mine is only a factor of 5 above the EPA standard. Because of the well-known property of uranium ions to precipitate under reducing conditions and because humates are common in the Westwater, uranium values can be expected to decrease rapidly with distance from the mine area (FEIS at 4-57, 4-58; Ford May 11, 1999 Affidavit at 7-8).

4. HRI May Be Permitted To Modify Restoration Goals to a Level That Degrades Water Quality

Intervenors state that the HRI's License Condition 10.21A allows it (HRI) to make a case to the NRC to relax the standards for a given parameter beneath the primary and secondary standards — if these standards cannot be met and if such restoration neither degrades water quality nor threatens public health. Intervenors claim that this “gives HRI the latitude to set different restoration goals and creates an impetus to move away from the baseline to contaminant levels that exceed drinking water standards.” (Intervenors' Groundwater Brief at 51-53).

I disagree with Intervenors' assumptions. The intent of the license is to require compliance with the primary and secondary standards. However, the license recognizes that practical experience might dictate relaxing those goals because they may not be achieved. Intervenors have not established that relaxing the goals would create serious problems. Given the distance of Church Rock Section 8 from the nearest water well, it is very unlikely that relaxation of these standards would affect the quality of drinking water taken from the aquifer. In addition, I expect

both the Staff and the Environmental Protection Agency to be ardent protectors of the quality of the water supply in the event these standards are exceeded.

5. *The Track Record of the ISL Industry Demonstrates That Restoration to the Good Water Quality of Westwater Is Not Technologically Feasible*

Intervenors claim that HRI “has not provided a reasonable level of assurance that it will be able to restore the Westwater . . . to a level that meets either baseline conditions or drinking water standards” (Intervenors’ Groundwater Brief at 53.) They allege that “no ISL operation to date has been attempted in an aquifer that meets all EPA primary and secondary drinking water standards, as most of the Westwater does” (Abitz Affidavit at 25). Abitz speculates that this is presumably because the technology does not exist to restore such high-quality aquifers to their original condition. (*Id.* at 26.)

The Intervenors’ Groundwater Brief at 54 concludes the section by stating that

Since restoration to the water quality present in the Westwater has never been achieved, and indeed well fields in Wyoming and Texas, with poor water quality, have failed to achieve restoration, it is easy to deduce that HRI will not be able to achieve either the primary or secondary restoration goals. These goals are technologically beyond the reach of this company.

Pelizza (Pelizza Affidavit at 34-36), rebuts the statement that ISL licenses are not given for mines in aquifers with potable drinking water by giving several examples. One is that the City of Kingville (Pop. 25,000) obtains its water from the Goliad aquifer 4 miles from an ISL mine in the same aquifer.

It should be noted that Church Rock Section 8 is not required to be an area where subsurface water must be potable by EPA standards; it is exempt. (*Id.*, Attachment 22.) The subsurface water in this part of the Westwater is not potable today; it does not meet EPA standards. It also should be recognized that the Westwater is huge, so that it can tolerate relatively small toxic areas like the Section 17’s old mine workings and still provide high-quality drinking water. The water near the old mine workings is undrinkable yet the aquifer as a whole has not suffered because toxic elements that migrate out of this area are affected by both precipitation and dilution. These natural mechanisms help to protect the quality of water in the aquifer as a whole from the toxicity contained in small areas. (FEIS at 4-57 to 4-58; Ford May 11, 1999 Affidavit at 7-8.)

With respect to plans to restore sites after the completion of ISL mining, Pelizza states that:

HRI will conduct a small isolated pattern demonstration at each site at the beginning of mining activities to verify that general leach solution chemistry and restoration responds as expected. After production begins at any mine site of the CUP (Crownpoint Uranium Project), HRI will

immediately begin work on a field restoration demonstration outside of the actual production, yet inside the monitor well ring, and within the target ore zone.

(Pelizza Affidavit at 78.) Key elements of the restoration demonstration are:

An isolated restoration demonstration pattern, completed in the ore zone, constructed to the same basic configuration as the proposed production wellfield pattern and operated under the same conditions as the proposed mining procedures.

Leaching of the pattern will be run for at least three months under commercial activity conditions using leaching agent concentrations equal to, or greater than is expected to be required for production.

After the leaching phase, a complete chemical description of the produced fluid will be obtained, and a demonstration of a restoration will be initiated.

Sample analysis of key parameters, and fluids will be completed at least every week during the restoration demonstration.

Restoration will continue until the groundwater is restored to levels consistent with baseline.

With each progress report, HRI will calculate and submit the volume of groundwater affected, expressed in pore volumes. Factors to be considered include: areal extent, formation, thickness, and porosity. Upon the completion of the restoration demonstration, the data, analysis, and conclusions will be compiled into a final report.

I am persuaded that these demonstration elements are appropriate measures to ensure adequate restoration.

Ford (Ford May 11, 1999 Affidavit at 2-15) further persuades me of the likelihood of successful restoration and discusses the problems associated with restoration at the Church Rock site. In the interest of full disclosure, he reveals that "it is extremely likely that after ISL mining is completed, the groundwater quality will be restored to acceptable levels so that the water use of the aquifer is maintained." "[I]t is unlikely that groundwater activities at the Church Rock site will achieve baseline concentrations for all groundwater parameters. . . . However, it is likely that most, if not all, of the groundwater parameters will achieve the secondary groundwater restoration goals stated in HRI License Condition 10.21."

The "if not all" statement by Ford above likely is not satisfactory to the Interveners, but I find that it is adequate. Ford points out that 26%, a total of six, of the parameters in the Mobil demonstration in the same or similar horizon of the Westwater as the planned Church Rock operation did not meet secondary groundwater restoration goals after 9-10 pore volumes of restoration effort. However, of the six parameters, three (calcium, sodium, and molybdenum) do not have primary or secondary standards because they are not considered hazardous to humans.

Pelizza (Pelizza Affidavit at 26) points out that the Mobil pilot ore is much higher in certain trace elements, especially molybdenum, than the Church Rock ore, so that similar restoration problems would not be anticipated at Church Rock. Total dissolved solids (TDS) at the Mobil restoration after 9.7 pore volumes were close to the EPA standard of 500 ppm. (*Id.* at 77.)

Ford suggests (Ford May 11, 1999 Affidavit at 3) that the TDS secondary goal would be achieved at Church Rock, although calcium and sodium may not meet their baseline concentrations. High calcium is one of the reasons people drink milk. The sodium content of water after the Mobil pilot restoration was 141 ppm (FEIS, Table 4.13, at 4-38), and sodium in water in the Westwater aquifer under Church Rock Section 8 is 130 ppm (FEIS, Table 3.19, at 3-36) and at some distance from the mine site is 125 ppm (FEIS, Table 4.5, at 4-16). There are, as I have said, no primary or secondary standards restricting the amount of these elements in drinking water.

The other three elements in the Mobil pilot restoration that did not achieve baseline after restoration are radium, arsenic, and uranium. Arsenic at 0.079 mg/L came very close to the primary standard at 0.05 mg/L (Ford May 11, 1999 Affidavit at 4). Pelizza (Pelizza Affidavit at 26) states that like molybdenum, arsenic is much more concentrated at the Mobil site than at the Church Rock site. Arsenic removal therefore should not present a problem at Church Rock. Arsenic, molybdenum, radium, and uranium are readily precipitated by redox reactions or adsorption on mineral grains while traveling through the rock, so most of these elements will remain close to the mine site and not create problems at a distance (*see* Ford May 11, 1999 Affidavit ¶¶ 12-14, 24).

So far as I am aware, there are no reports of water with elevated uranium levels in wells away from the Church Rock site, despite the fact that the mean values of water sampled in the vicinity of the site show values for this element well above any drinking water standards (*see* FEIS, Table 3.19, at 3-36). This is persuasive evidence that uranium does not travel readily through the aquifer, even over timescales of thousands of years.

On the other hand, the existing concentration of radium-226 is double the EPA drinking water standard in wells in the vicinity of Church Rock (FEIS, Table 4.5, at 4-16). This occurs because uranium is more easily reduced than radium in its travel through the rock. Abitz (Abitz Affidavit at 3)²³ cautions that there is too much reliance on "natural attenuation through chemical reduction." Abitz states that this is likely to fail. However, the Intervenors make a point of emphasizing the outstanding purity of water outside the mine area at Church Rock. Because the old mine workings contain highly toxic water, precipitation must occur, so that

²³Intervenors' May 25, 1999 Response, Exhibit 1: Affidavit of Dr. Richard J. Abitz in Response to the Presiding Officer's Questions in the Memorandum and Order of April 21, 1999 (Abitz Affidavit).

even if the water "courses" along channels through the aquifer, uranium would not reach the wells from which pure water currently is being obtained.

I have concluded, for reasons stated above at p. 84 *et seq.* and in the text immediately above, that the water in the channels does not course, that there are no channels, and that the drill holes at Church Rock that sampled the water did not intersect channels. I also conclude that the rock does act as a significant precipitating agent for uranium and other elements.

I also find, based on the behavior of radon at the Crownpoint site, that radium contamination does not move rapidly in the Westwater. Radium is about six times more concentrated at the Crownpoint site than at Church Rock (FEIS, Table 3.13, at 3-27; Table 3.19, at 3-36). This cannot be ascribed to mining operations in the vicinity. Radium occurs in high concentrations in water in the vicinity of uranium deposits. In contrast to the Crownpoint mine site, the Crownpoint town water, from wells in the Westwater, contains radium at about one-tenth of the EPA drinking water standard (FEIS, Table 3.12, at 3-26), indicating that radium is both diluted and removed from the water by the time it reaches the town wells. As was the case with uranium, water in the vicinity of a uranium deposit may be well above safe standards for radium in the vicinity of the mining area, as at Church Rock, but the water from the same aquifer will be safe to drink away from the mine area because the toxic elements are diluted and precipitated.

Ford states that the results of the Mobil pilot restoration represent the closest parallel to a restoration at Church Rock (Ford May 11, 1999 Affidavit ¶17). I note that the simulated restoration using drill core at Church Rock does not closely simulate conditions underground at the Church Rock site. Nevertheless, I will discuss the results (FEIS, Table 4.8, at 4-32; Table 4.9, at 4-33).

The drill core results are affected because conditions of porosity and permeability of the crushed drill core are not the same as those underground; however, the geochemistry of the ore is that of the underground ore. Core leach tests were both slow and fast leaches; the latter clearly represents unrealistic conditions for a restoration. The slow leach test showed that radium, uranium, iron, and manganese do not reach acceptable drinking water standards even after 20 pore volumes have passed through. As discussed above, uranium precipitates in a reducing environment, so it poses no threat to present or reasonably foreseeable water supplies, especially considering the distance to the nearest well.

The radium result is in error. It is improbable that rock containing pregnant lixiviant containing 1010 pCi/L radium in its pores would be flushed with 20 pore volumes of clean water and finish up with a radium content of the final fluid of 1000 pCi/L. The result is quite unlike any other restoration test reported in the FEIS. Another indication that the test is flawed is that iron is 500 times more abundant in the restored fluid than in the leach water, and 1000 times higher than in the pregnant lixiviant. No other restoration tests show such results, which must

be ascribed either to analytical error or the presence of particulates in the dissolved fluid. The Church Rock test does not warrant further discussion.

In addition to the Mobil restoration and the core leach study, the FEIS at 4-31 discussed the Teton test. The results are impressive (FEIS, Table 4.9, at 4-33; Table 4-12, at 4-36) considering that only 1 pore volume was used, but for this and other reasons the FEIS does not place much confidence in this test. Of the three tests, I find that the Mobil test is most applicable, with the limitations discussed above.

Intervenors (e.g., Abitz Affidavit ¶ 18) believe that successful restoration will require more than 9 pore volumes of fluid. If this is correct, HRI will be required to continue to restore; the requirement does not end at 9 pore volumes. FEIS at 4-62. In addition, HRI must demonstrate successful restoration at the Church Rock Section 8 site or it will not be permitted to conduct injection mining elsewhere. (*Id.*)

In light of the above, I agree with Ford (Ford May 11, 1999 Affidavit at 15) that it is very likely that after ISL mining is completed, the water quality will be restored to acceptable levels.

G. Licensing of the Crownpoint Project Is Inimical to Public Health and Safety Because the Westwater Is Not Suitable for ISL Mining

Intervenors allege that “because of the documented problems of site characterization, the high quality of the Westwater, and its use as a drinking water source, the Westwater is not an appropriate location for continued experimentation with ISL mining.” Intervenors’ Groundwater Brief at 55.

Intervenors claim that excursions are so commonplace in ISL mining that operators do not have an adequate control of ISL well fields. (*Id.*) However, excursions do not constitute a spill like an oil spill or a spill of toxic waste. They represent a warning system within the exempt mine zone that alerts the operator that unless something is done, a spill outside the exempt zone may occur. Excursions fill a similar role in ISL mining to an oil pressure light in a car — if something is not done promptly, damage will be done. (*See* Bartels’ May 11, 1999 Affidavit at 8-13.)

Intervenors report that “restoration efforts at other ISL mines have taken longer than anticipated.”²⁴ (Intervenors’ Groundwater Brief at 55.) What they have not shown, however, is that long restoration time results in harm to the aquifer.

Intervenors claim that “few mines have been restored to baseline and none have been restored to baseline water quality equivalent to that of the Westwater

²⁴ Intervenors exaggerate the length of the restoration time taken by a mining company because regulatory approval time is included in the time for restoration. Pelizza (Pelizza Affidavit at 73) points out that the time taken for regulatory agencies to approve restoration is of the same order as the time taken for actual restoration.

or drinking water standards.” This is true because: (a) the water quality did not match that of the Westwater to begin with, as the Intervenors have acknowledged; and (b) in the mine areas the original water in the vicinity of the uranium deposits probably never met drinking water standards, just like the water quality in the vicinity of the Church Rock, Crownpoint, and Unit 1 deposits at present.

Most ISL mining has been done in fluvial aquifers like the Westwater, and no public or environmental harm has occurred (Bartels’ May 11, 1999 Affidavit at 8-13; Lichnovsky Feb. 19, 1999 Affidavit at 25, 27). The Intervenors cite no instances of permanent environmental harm. Consequently, I do not draw any adverse inferences from the history of ISL mining that would affect my conclusions about the adequacy of the portion of the Crownpoint Uranium Project that is planned for Church Rock Section 8.

H. Licensing of the Crownpoint Project Is Inimical to Public Health and Safety Because Conditions Are Inadequate To Remedy Defects in the Project

Intervenors reintroduce (Intervenors’ Groundwater Brief at 57) a number of perceived problems again in this complaint: “unsuitability of the confining units to prevent vertical . . . movement of lixiviant out of the ore zone,” “undetected high permeability,” “geologic faults,” and “hydrofracturing of the ore zone of an underlying and overlying strata.” All of these alleged problems are a repetition of complaints that are discussed above, *passim*.

I. HRI’s Planned Use of Church Rock Section 8 as a Restoration Demonstration Is Hydrogeologically Unsound

Intervenors claim that “because of the hydrogeologic connection between Section 8 and Section 17, Section 17 must be mined first to avoid additional complications with restoration.” (Intervenors’ Groundwater Brief at 58.)

Intervenors contend that

Section 17 with its old mine workings is up-gradient from Section 8. Therefore, if Section 17 were mined last, an excursion in a Section 17 well-field would flow down gradient and contaminate a previously restored well-field, or a well-field undergoing restoration in Section 8.

(*Id.* at 59.) They therefore claim that it would be more sensible to mine Section 17 before Section 8. Pelizza (Pelizza Affidavit at 52-53) discusses the consequences of mining Section 8 before Section 17 and he argues that there will not be a problem of competing bleeds because of the distance apart of the restoration wells in Section 8 and production wells in Section 17.

However, I need not decide this issue now. In Phase II of this proceeding, Intervenor may argue that it is improper to mine Section 17 because Section 8 will have been mined first.

J. Licensing of the Crownpoint Project Is Inimical to Public Health and Safety Because HRI's Operation Poses an Undue Threat to the Quality and Safety of the Public Water Supply

Intervenor claim (Intervenor's Groundwater Brief at 59, 60) that underground injection violates the Safe Drinking Water Act (SDWA). Contrary to this assertion, the Environmental Protection Agency has granted an aquifer exemption for the Church Rock Section 8 site. (Pelizza Affidavit at Exhibit 22.) This exemption means that EPA has determined, pursuant to its authority, that there is no drinking water to be protected at this site. Thus, the allegation is groundless. (See also the discussion in the next section of the Decision, § K.)

K. The SDWA Applies To Protect the Westwater at Church Rock and Crownpoint

Intervenor (Intervenor's Groundwater Brief at 61) state that the Crownpoint Uranium Project (CUP) will violate EPA's program to protect drinking water, as set forth in 40 C.F.R. § 144.12, which prohibits injection activity "that allows the movement of fluid containing any contaminant into underground sources of drinking water." The Intervenor paint a ghastly scenario of pregnant lixiviant escaping undetected along a channel, oxidizing more and more radium and uranium in its path until the contaminants have invaded NTUA Well No. 1. In these channels, the water "courses" through the aquifer, perhaps reminiscent of a mountain stream during the spring meltoff.

This argument is a dramatic repetition of the earlier argument that there will be undetected excursions. I reject that argument. *See* p. 84. First, the concept of channelways contradicts both the published literature on the Westwater (some cited earlier, and in Intervenor's, Staff's, and HRI's exhibits) and the literature on all similar sandstone aquifers containing uranium deposits (e.g., Lichnovsky Affidavit, Bartels February 19, 1999 Affidavit). For these reasons, I agree with the arguments against the channel theory made in the Bartels February 19, 1999 Affidavit and the Wasiolek and Spinks Affidavit.)

Second, although the lixiviant oxidizes only a limited amount of the toxic elements listed because it contains only a limited amount of oxygen, humates in the rock will cause reduction, thus further depleting the lixiviant and ultimately causing precipitation of some toxic elements from solution. *See* pp. 86-87, above. Finally, the closest well downgrade to the mining operation is 14,200 feet from the

northeast corner of Section 8. At reasonable flow velocities not involving water coursing along channelways, it would take 1632 years at 8.7 ft/year and would be diluted and much of the toxic elements reprecipitated before it reached the site (see HRI May 11, 1999 Reply).

In general, as discussed above, the underground geology of this area and the monitoring program that HRI will implement carefully attend to the protection of drinking water. There is no reason to believe that the Church Rock Section 8 project will contaminate sources of drinking water.

For these reasons, I conclude that HRI's project does not violate the SDWA at Church Rock Section 8, nor has there been a showing that the license should be invalidated because of a serious problem under the SDWA at Crownpoint.

In reaching this conclusion, I note again that *the portion of the aquifer* in which the Church Rock ore is found has been exempted. It is not necessary that the whole aquifer qualify for an exemption. It is enough that the ore-bearing portion of the aquifer qualify. 40 C.F.R. § 146.4. EPA has granted an exemption for this section. (Intervenors' Groundwater Brief at 14; Pelizza Affidavit at Exhibit 22.)

L. The FEIS Fails To Adequately Describe Impacts of the Crownpoint Uranium Project on Groundwater

Intervenors' claim (Intervenors' Groundwater Brief at 65) that the FEIS failed to adequately consider the environmental impacts of the Crownpoint project. This is a recapitulation of themes already stated by Intervenors and addressed by me. They do not state separate grounds for this argument. Accordingly, my discussion of Intervenors' arguments, above, is an adequate response to Intervenors' overall assertion. I find that there is no reason to question the Staff's conclusions in the FEIS with respect to groundwater. The FEIS is therefore adequate because it is both thorough and correct.

M. Groundwater Conclusions

In sum, I conclude that the risks of ISL mining at Church Rock are minimal and that they do not call the validity of the HRI license into question. I also conclude that Intervenors' allegations that HRI and its experts are guilty of misrepresentation are without merit.

III. CONCLUSIONS CONCERNING SAFETY AND THE EFFECT ON THE ENVIRONMENT

In this proceeding, I have issued partial initial decisions considering Intervenors' arguments concerning the environmental, safety and cultural impacts of liquid

wastes, air emissions, effects on cultural resources, performance-based regulation, groundwater, and financial assurance for decommissioning. In the course of these decisions, I have considered each of Intervenor's significant arguments. Nevertheless, I have been convinced by HRI and the Staff, by a preponderance of the evidence, that the Church Rock Section 8 portion of the Crownpoint Uranium Project — conducted pursuant to the license granted by the Staff — will have no substantial inimical impact. Reasonable conditions have been imposed to ensure that any risks have been minimized so that they do not constitute a public health and safety concern.²⁵

IV. ALLEGED FAILURE TO COMPLY WITH NEPA, TO CONSIDER CUMULATIVE EFFECTS, AND TO CONSIDER ENVIRONMENTAL JUSTICE ISSUES

A. Failure to Comply with NEPA

1. *The Law*

As the Nuclear Regulatory Commission said in *In the Matter of Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87-88 (1998):

NEPA establishes a "broad national commitment to protecting and promoting environmental quality." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 348 (1989), citing 42 U.S.C. § 4331. To ensure that this commitment is "infused into" the actions of the federal government, NEPA mandates particular "action-forcing" procedures. *Id.*, quoting 115 Cong. Rec. 40,416 (1970) (remarks of Sen. Jackson). Chief among these procedures is the environmental impact statement (EIS), which NEPA requires federal agencies to prepare for all proposals that would "significantly affect . . . the quality of the human environment." 42 U.S.C. § 4332(2)(C). The EIS must describe the potential environmental impact of a proposed action and discuss any reasonable alternatives. See 42 U.S.C. § 4332.

The principal goals of an FEIS are twofold: to force agencies to take a "hard look" at the environmental consequences of a proposed project, and, by making relevant analyses openly available, to permit the public a role in the agency's decision-making process. See *Robertson*, 490 U.S. at 349-50; *Hughes River Watershed Conservancy v. Glickman*, 81 F.3d 437, 443 (4th Cir. 1996). This latter information disclosure function of the EIS "gives the public the assurance that the agency has indeed considered environmental concerns . . . and perhaps more significantly, provides a springboard for public comment." *Robertson*, 490 U.S. at 349 (citation omitted). The EIS, then, should provide "sufficient discussion of the relevant issues and opposing viewpoints to enable the decisionmaker to take a 'hard look' at environmental

²⁵ CLI-99-22 was issued by the Commission on July 23, 1999. Pursuant to that decision, the Commission retained jurisdiction over the adequacy of HRI's financial assurance plan. For the purpose of making my finding concerning compliance with NEPA, I assume that the Commission will take a hard look at the issue concerning the financial assurance plan and that they will modify the license, if necessary, to ensure that risks are minimal based on their consideration of the evidence and the law.

factors and to make a reasoned decision.” *Tongass Conservation Society v. Cheney*, 924 F.2d 1137, 1140 (D.C. Cir. 1991) (quoting *Natural Resources Defense Council, Inc. v. Hodel*, 865 F.2d 288, 294 (D.C. Cir. 1988)). It is intended to “foster both informed decision-making and informed public participation,” [footnote omitted] and thus ensure that the agency does not act upon “incomplete information, only to regret its decision after it is too late to correct.” *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 371 (1989).

As the Licensing Board emphasized repeatedly in LBP-96-25, NEPA does not require agencies to select the most environmentally benign option. *See, e.g.*, 44 NRC at 341-42. “If the adverse environmental effects of the proposed action are adequately identified and evaluated, the agency is not constrained by NEPA from deciding that other values outweigh the environmental costs.” *Robertson*, 490 U.S. at 350.

Although the statute itself does not mandate a cost-benefit analysis, NEPA is generally regarded as calling for some sort of a weighing of the environmental costs against the economic, technical, or other public benefits of a proposal. *See, e.g.*, *Idaho By and Through Idaho Public Utilities Commission v. ICC*, 35 F.3d 585, 595 (D.C. Cir. 1994); *Calvert Cliffs’ Coordinating Committee, Inc. v. AEC*, 449 F.2d 1109 (D.C. Cir. 1971). The EIS need not, however, always contain a formal or mathematical cost-benefit analysis. *See, e.g.*, *Sierra Club v. Lynn*, 502 F.2d 43, 61 (5th Cir. 1974) (“NEPA does not demand that every federal decision be verified by reduction to mathematical absolutes for insertion into a precise formula”), *cert. denied*, 422 U.S. 1049 (1975). *See also* Council on Environmental Quality (CEQ) Regulations, 40 C.F.R. § 1502.23. NRC regulations direct the Staff to consider and weigh the environmental, technical, and other costs and benefits of a proposed action and alternatives, and, “to the fullest extent practicable, quantify the various factors considered.” 10 C.F.R. § 51.71(d). If important factors cannot be quantified, they may be discussed qualitatively. *Id.*

The core of the Commission’s principled statement about NEPA is that the EIS should provide “sufficient discussion of the relevant issues and opposing viewpoints to enable the decisionmaker to take a ‘hard look’ at environmental factors and to make a reasoned decision.” The test is one of judgment that requires an analysis of the particular decision that is being examined. Look hard. Look hard. Look reasonably.

2. Is an FEIS Required?

HRI has argued, without reference to specific regulations, that an EIS is not required by law. (HRI NEPA Response at 6-7.²⁶) It cites a mining engineering text for the proposition that the risks from *in situ* uranium mining are minimal. (*Id.* at 6-7 and Exhibit 1.) However, HRI also acknowledges that the Bureau of Indian Affairs requires an EIS in connection with any lease of Navajo territory. (*Id.* at 7.)

For its part, the Staff of the Nuclear Regulatory Commission found that the EIS “is based on the requirements” of law. Moreover, in preparing the EIS,

²⁶ HRI’s Response to ENDAUM and SRIC’S Brief With Respect to NEPA Issues Concerning Project Purpose and Need, Cost/Benefit Analysis, Action Alternatives, No Action Alternative, Necessity to Supplement EIS, Mitigation and Cumulative Impacts, March 25, 1999 (HRI NEPA Response).

the Staff found that the proposal had potential significant impacts that “can be mitigated” through conditions the Staff chose to apply.²⁷ “Final Environmental Impact Statement: To Construct and Operate the Crownpoint Uranium Solution Mining Project,” NUREG-1508 (February 1997) (FEIS) at xxi, §§ 1.3, 1.4 (at 1-3). The Staff’s decision to prepare an EIS was consistent with its responsibility under 10 C.F.R. § 51.20.

3. *Intervenors’ Arguments*

Intervenors have made a variety of arguments concerning the inadequacy of the NEPA analysis.²⁸

a. *Inadequate Statement of Purpose and Need*

SRIC and ENDAUM allege that the FEIS provides an inaccurate and simplistic statement of purpose and need that unreasonably distorts the entire FEIS. (Intervenors’ NEPA Brief at 20-23.) They cite the FEIS at 1-3 as saying:

The purpose of the proposed action is to license and regulate HRI’s proposal to construct and operate facilities for ISL uranium mining and processing. The NRC’s need for action is to fulfill its statutory responsibility to protect public health and safety and the environment in matters related to source nuclear material (Atomic Energy Act of 1954 as amended). The BLM and BIA’s need for action is to fulfill their statutory responsibilities to regulate mining activities on Federal and Indian lands (Mining Law of 1872, Allotted Lands Mineral Leasing Act of 1921, National Historic Preservation Act of 1966, Endangered Species Act of 1973, Federal Land Policy and Management Act of 1976).

b. *The FEIS Fails to Perform an Adequate Cost/Benefit Analysis*

The principal argument advanced by Intervenors is that the FEIS overstates economic advantages to local communities because it assumes a uranium price of \$15.70 per pound,²⁹ which is far above the current market price of under \$11 per pound and because it overstates the need for domestic uranium. (Intervenors’ NEPA Brief at 32-46.) Given Intervenors’ assumptions, they are correct. Present market conditions do not indicate support for additional uranium supplies. HRI states that its fixed cost to bring the Church Rock Section 8 property into production

²⁷ For example, the FEIS that was prepared concluded, among other things, that before doing lixiviant injection at the Crownpoint site, HRI should relocate the town’s drinking wells. FEIS at 4-59.

²⁸ ENDAUM’s and SRIC’s “NEPA Issues Concerning Project Purpose and Need, Cost/Benefit Analysis, Action Alternatives, No Action Alternative, Failure to Supplement EIS, and Lack of Mitigation,” February 19, 1999 (Intervenors’ NEPA Brief); Grace Sam and Marilyn Morris, “Final Written Presentation,” February 19, 1999. Staff “Response to Intervenor Presentations on NEPA Issues, April 1, 1999; HRI “Response to ENDAUM and SRIC’s Brief with Respect to NEPA Issues,” March 25, 1999 (SAM Final Presentation).

²⁹ FEIS, Table 5.4, at 5-5.

is approximately \$14.50 per pound, as discussed in FEIS Chapter 5.³⁰ HRI also states that its break-even production cost is \$15.70 per pound; and Intervenors do not challenge this statement.³¹ I therefore conclude that the FEIS was correct in using a \$15.70 price per pound for uranium. It is highly unlikely that the project will proceed unless the price reaches that level. Furthermore, an increase in price to that level would indicate an improvement in the demand/supply ratio, validating the Staff's assumption of demand for uranium production.

It does not concern me that at present market prices this project will not go forward. That is the very result Intervenors seek. It is the no-action alternative. If that happens, there will be none of the adverse effects discussed in the FEIS. It is only when the market price crosses HRI's break-even point that the validity of the FEIS is in question. And, assuming that the market price has climbed to that level, it is clear that there would be an active market for uranium and that the additional supply would be useful. Intervenors have not succeeded in casting any doubt on the assumptions made in the FEIS *at the price level of \$15.70 per pound* for uranium.³² (FEIS at 4-97, 5-2 to 5-3.)

There may be small differences in the local benefits if the actual price of uranium is slightly different from \$15.70. In the overall scheme of things, these differences are not important. The risks to the environment have been thoroughly analyzed and license conditions imposed to mitigate the risks.

I thus find no basis for disturbing the Staff's FEIS conclusion that it is desirable to initiate a project that creates minimum risks³³ to public health and safety and to the environment and that increases local economic activity.

c. Groundwater

In the portion of this opinion concerning groundwater, I have determined that Intervenors' arguments on groundwater are invalid. *See* p. 84 *et seq.* Accordingly, I find that failure to address these erroneous arguments (Intervenors' NEPA Brief at 46-50) in the FEIS was not an error.

³⁰ HRI Reply to April 21, 1999 Questions, May 11, 1999, at 19. I note that Intervenors object that HRI's brief represents attorney testimony and should not be admitted. However, this objection is not well taken. Each statement made in HRI's brief is properly documented by reference to a part of the record. Most of the brief is merely explaining what the FEIS has said.

³¹ *See* Intervenors' Joint Response to HRI and Staff Responses, May 25, 1999, at 26-29, challenging whether the breakeven point will be reached but not challenging the validity of the break-even point.

³² Although Intervenors argue that production costs may be higher than anticipated by HRI or that the price of uranium may fall subsequent to startup, making HRI's operation uneconomical, they do not address why the surety bond required of HRI would not provide adequate protection to permit effective cleanup if further production was uneconomical.

³³ Risks to the public are, of course, a public concern. Costs borne by HRI are internal to HRI, affecting its costs and its business decision about whether to commence this project. *See* FEIS at 5-1.

d. Relocating Individuals

Intervenors argue that proposed mitigation for relocating residents is inadequate. (Intervenors' NEPA Brief at 50-51.) People who graze livestock on HRI's Unit 1 property are either mineral lease holders or are beneficiaries of leases held by others. Some of these people may be displaced because HRI is exercising mineral rights to which it has valid title. Under applicable law, these people do not have the right to continue to graze their livestock upon land on which they do not have continuing grazing rights. Nevertheless, the FEIS considers this impact to be an environmental justice impact and grazing rights permittees and others who would be required to relocate will be compensated. (FEIS at 4-118, § 4.12.6.) I conclude that the FEIS has given adequate consideration to the relocation of individuals. The loss of the small plot of land in Church Rock Section 8, set as it is in the midst of a vast desert, will not materially affect the ability of people to graze their cattle.

e. Environmental Costs of Air Emissions

Intervenors argue that radiological emissions will exceed NRC standards. (Intervenors' NEPA Brief at 51.) The FEIS discusses the effect of Alternative 3 (the NRC Staff-recommended action) on radioactive air emissions. It concludes that there would be only minor impacts on air quality. These issues have been considered in detail in LBP-99-19, Radioactive Air Emissions, 49 NRC 421 (1999), and I am satisfied that the FEIS has given adequate consideration to possible radioactive air emissions. The conditions imposed by the Staff (FEIS 4-5, § 4.1.3 (SUA-1508 § 10.9, at 5; § 10.30, at 9)) provide additional protection against air emissions. These conditions, in my opinion, represent an abundance of caution.

f. Environmental Costs of Liquid Waste Disposal and Cultural Impacts

Intervenors complain that there is inadequate treatment in the FEIS of liquid waste disposal and cultural resources. (Intervenors' NEPA Brief at 51-52.) The FEIS discusses the effect of Alternative 3 (the NRC Staff-recommended action) on waste disposal issues. In my prior decision on this issue, I concluded that the FEIS was adequate. (LBP 99-1, 49 NRC 29 (1999).) For reasons stated in that opinion, I consider the FEIS to be more than adequate with respect to waste disposal issues; and I also find that HRI's methods of waste disposal provide adequate protection for the environment. Intervenors had failed to provide any reason to believe that the waste disposal methods will have substantial adverse environmental impacts. For reasons stated in the partial initial decision on cultural resource impacts, I also find no reason to believe that there will be substantial adverse impacts on cultural resources. (LBP-99-19, 49 NRC 421 (1999).)

g. Environmental Costs of Health Impacts

In this argument, Intervenor again reiterates their groundwater allegations. (Intervenor's NEPA Brief at 52-53.) There is no reason to find that these arguments are any more valid in this context than they have been found to be in the discussion in Section II, beginning at p. 84, above. To the extent that Intervenor challenges the validity of the NRC standard of 0.44 mg/L for the concentration of uranium, they are impermissibly challenging the validity of an NRC regulation. Since EPA also will have to be satisfied with the effect of this project on the quality of drinking water, this attempt to challenge the NRC regulation overlooks an important additional safeguard for water quality. To the extent that Intervenor raises questions of cumulative impacts, those questions are addressed below at pp. 119-21.

h. The Costs Listed in Section 5 of the FEIS Are Unreasonably Undervalued

The FEIS, at 5-6 and 5-7, § 5.2, lists a variety of costs of the proposed project. The earlier partial initial decisions and the discussion of groundwater in Section II, above, beginning at p. 84, appear to be the "hard look" at costs required by NEPA. (Intervenor's NEPA Brief at 53-54.) Intervenor does not present evidence to challenge the adequacy of this list.

i. The FEIS Does Not Perform an Ultimate Cost-Benefit Analysis Among Alternatives and Does Not Adequately Evaluate the Action Alternatives and the No-Action Alternatives

Intervenor argues that the FEIS does not provide a suitable summary of the costs and benefits of alternative courses of action. To the contrary, I find that the FEIS, as explained by the cost/benefit determination filed by Mr. Robert Carlson of the NRC Staff as an attachment to NRC Staff Response to Questions Posed in April 21 Order, May 11, 1999 (Carlson May 11, 1999 Affidavit),³⁴ takes a suitable, hard look at the costs and benefits of this project and is adequate to fulfill the requirements of NEPA.

j. HRI's Environmental Reports Do Not Calculate the Costs and Benefits of the Project

Intervenor argues that the Environmental Reports do not contain a cost/benefit analysis. (Intervenor's NEPA Brief at 55-56.) Section 51.45(b) of 10 C.F.R. states

³⁴ A relevant excerpt of Carlson's May 11, 1999 Affidavit is provided as Attachment A to this decision. I find that Carlson's explanation of information already contained in the FEIS clarifies the Staff's analysis of the costs and benefits of this project. I include it as a way of notifying the public of this explanation.

that the “environmental report shall contain a description of the proposed action, a statement of its purposes, a description of the environment affected” However, it is clear that this requirement is designed to facilitate the Staff’s preparation of the FEIS, which is the focus of any NEPA concerns. Providing that the Staff prepares an adequate FEIS, the purpose of NEPA is fully met. Therefore, I find that Intervenor’s criticism of the ER is without merit.

k. The NRC Staff Violated NEPA by Failing to Supplement the DEIS and FEIS and Recirculate Them for Public Comment

Intervenor’s argue that the use of “performance-based licensing” by the Staff required supplementation of the FEIS.³⁵ (Intervenor’s NEPA Brief at 60-72.) I disagree. This license, which contains many conditions, is not a dramatic departure from previous licensing practices. (See LBP-99-10, 49 NRC 145 (1999).) Moreover, Intervenor’s have provided no reason to believe that performance-based licensing, as applied to this license, will result in any increased risks to public safety or to the environment.

Next, Intervenor’s argue that the FEIS developed and evaluated two new alternatives. These did not, however, involve any substantial change in the description of the project. What the Staff did was to pursue further analysis of the proposed project, including the evaluation of some fresh alternatives and the evaluation of some license conditions that helped to improve safety and reduce risk to the environment. Consistent with 10 C.F.R. § 51.72(a), I conclude that this further Staff analysis did not require a further circulation of the FEIS for comment. Nor was it necessary to develop further alternatives for evaluation.

Finally, Intervenor’s argue that the Staff permitted a substantial change in the sequence of mining, thus requiring EIS supplementation. (Intervenor’s NEPA Brief at 69-70.)

This portion of the case is restricted to an examination of Church Rock Section 8 and of issues that are so important that they call into question the validity of the entire license. Intervenor’s have, however, challenged whether the change in the order of mining Section 8 and Section 17 requires supplementation of the FEIS. Whether or not to require a supplement requires consideration of whether or not it will be appropriate subsequently to permit the mining of Section 17 after Section 8 has been mined. That question need not be answered in this phase of the case. If it is inappropriate to mine Section 17 after Section 8 or if subsequent mining of Section 17 raises important questions requiring supplementation may be reserved for a subsequent portion of this case. In that portion of the case, Intervenor’s will need to raise some question concerning how the change in the order of mining

³⁵The argument about performance-based monitoring also is reiterated in Intervenor’s NEPA Brief at 74.

will affect drinking water. Accordingly, I do reserve the question concerning the impact of the change in the order of mining.³⁶

l. Impact of Mitigative Measures

Intervenors argue that the FEIS fails to explore the impact of measures to mitigate or reduce environmental effects, such as the requirement that Crownpoint drinking water wells should be moved. (Intervenors' NEPA Brief at 73-75.) In their brief, Intervenors distort the purpose and effect of requiring that the Crownpoint Water Supply be moved. (*Id.* at 73.) The purpose of having the wells moved is to avoid having the wells cause a cone of depression that would cause an excursion of lixiviant. Hence, once the wells are moved, there is no reason to believe that an excursion would occur that would affect the quality of the water in the area of the closed wells. With the wells closed, there will be nothing to draw lixiviant in that direction.

Furthermore, the required moving of the wells will occur only if the Crownpoint water authority agrees to close down the affected wells and to open new ones. At that point, the Staff would examine the new plan to ensure that it would protect water quality. The EPA likewise would examine that question. So it will take the concurrence of HRI, the municipal water authority, the NRC, and the EPA before this plan is effectuated. If there is no appropriate way to move the wells, then they will not be moved and the no-action alternative for Crownpoint will be implemented.

There is no reason to determine now whether this plan is adequate. There is nothing in Intervenors' Groundwater Brief that persuades me to rule that the entire license is invalid because of this license condition. Accordingly, the question of whether Crownpoint's municipal water supply is adequately protected is reserved for a subsequent phase of this case.

m. Livestock and Displacement

Intervenors object that it is impermissible for HRI to displace individuals from this area, even if it compensates them. They also object that the loss of grazing rights will prevent Larry J. King and Mitchell Capitan from being "complete or 'free.'" (*Id.* at 75.) However, I have been to the site of these projects and I am at a loss to understand the harm of which Intervenors complain. There are no people living on Church Rock Section 8, so there will be no displacement. Furthermore,

³⁶The phased consideration of this case does not create an improper segmentation for NEPA purposes. Intervenors have not provided any evidence that a project-by-project NEPA balance is improper because of an alleged additive effect when the projects are considered together. Hence, there are no NEPA issues being neglected because of phased consideration.

the land being removed from grazing is very small in comparison to the size of the vast desert in which it is located. I do not understand how anyone could possibly be prevented from raising livestock because ISL mining will take place on Section 8. Furthermore, there is no indication in the record that *any* family will be required to relocate. Accordingly, I find Intervenors' allegations about relocation and about grazing rights to be without merit.

n. Inadequate Discussion of Secondary Effects

Grace Sam and Marilyn Morris (the Sams) argue that the FEIS gave inadequate attention to "socioeconomic or 'secondary' benefits." Sams' Final Written Presentation at 24 *et seq.* They argue that the benefits are too speculative. However, the gist of the argument is that the specific benefits to be derived from the project may be somewhat different than the FEIS estimates, particularly in the area of benefits from employment, royalty income, and benefits from tax revenues. In some of these arguments, the Sams appear to be at least partially correct. For example, legal disputes may cause the Navajo Nation to lose the right to a Business Activity Tax and it may also cause some of the benefit for local communities to be wasted in litigation expenses. There is also a mention of the possibility that revenue might be derived by a hotel or motel from visitors to the project or to its employees. As the Sams state, no dollar figure is put on this speculative item. Likewise, the FEIS anticipates that workers at the project would spend some of their earnings locally, generating secondary benefits to the local economy. The Sams are concerned that there is no more detailed analysis than this. The FEIS also says that only about ten to fifteen employees would likely come from outside these communities. The Sams criticize this discussion on the ground that Navajo law requires equal treatment of all Navajos, so that benefits might flow to Navajo's who do not live locally. Likewise, the FEIS discusses a possible tax benefit to McKinley County but does not analyze the extent to which the County would keep these funds local or would benefit local residents outside the area.

The Sams are correct that the calculation of secondary benefits is approximate. However, I find the FEIS to be adequate in this respect. None of the items suggested by the Sams would have a significant impact relative to the overall cost/benefit discussion. Basically, this project represents local economic activity in an area affected by poverty. The increase in economic activity associated with the CUP will produce direct and indirect economic benefits, thus having a small favorable impact on local poverty. Since there are no serious risks attendant to this project, as I have found in this Decision and in prior partial initial decisions, there is a net benefit to the local community if the project goes forward. There is, of course, some uncertainty about the extent to which these benefits will remain strictly local or will benefit others in the County, the State, and the Navajo Nation.

B. Cumulative Effects and Segmentation Issues

This portion of the Final Initial Decision denies relief requested by Intervenor ENDAUM and SRIC concerning "Cumulative Impacts and Segmentation of Consideration of Impacts (Intervenor's Segmentation Brief).³⁷ In addressing these issues, it is important to note that the issuance of a license to HRI does not condone past practices by other companies with respect to mining or mill tailings. When there are substantial impacts imposed by the HRI project, then Intervenor is correct in pointing out that those impacts must be considered cumulatively with existing impacts in order to assess their importance. However, when the impacts imposed by this project are very small, as they uniformly appear to be for this project, the harm does not flow from this project but from the already existing problems and the small incremental increases caused by HRI are acceptable, absent some showing that they are the "straw that breaks the camel's back."

1. Intervenor's Arguments

Intervenor argues that Council on Environmental Quality regulations require that an EIS consider cumulative effects of proposed federal actions. (Intervenor's Segmentation Brief at 8-11; 40 C.F.R. §§ 1508.7, 1508.8, 1508.25.) They cite *Baltimore Gas & Electric Co. v. Natural Resources Defense Council*, 462 U.S. 87, 106-07 (1983), for the proposition that "NEPA requires an EIS to disclose the *significant* health, socioeconomic and cumulative consequences of the environmental impact of a proposed action." (Intervenor's Cumulative Impact Brief at 9 (emphasis added).)

Intervenor further provide a catalog of alleged specific deficiencies regarding cumulative effects including radiological and health effects (*id.* at 15-25); ground-water effects (*id.* at 25-30); effects on cultural resources (*id.* at 30-33); cumulative impacts from disposal of liquid waste (*id.* at 33-34); and socioeconomic and infrastructure cumulative impacts (*id.* at 35-36). In addition, Intervenor argues that the cumulative impacts of health and environmental effects, along with environmental justice impacts on the communities of Crownpoint and Church Rock, cause psychological stress ("stressors") that is not evaluated. (*Id.* at 36-43.)

HRI responds that the Staff adequately analyzed all of the cumulative impacts Intervenor claim as deficient in section 4.13 of the FEIS. (HRI NEPA Brief at 30-35.) The Staff responds that the FEIS adequately addresses the cumulative impact concerns argued by Intervenor. (Staff Segmentation Brief at 4-7.)

³⁷ HRI responded with a Brief With Respect to NEPA Issues Concerning Project Purpose and Need, Cost/Benefit Analysis, Action Alternative, No Action Alternative, Necessity to Supplement EIS, Mitigation and Cumulative Impacts, March 25, 1998 (HRI NEPA Brief) and the Staff responded with a Presentation on Cumulative Impact and Segmentation Issues, April 1, 1999 (Staff Segmentation Brief).

2. Analysis and Conclusion

In LBP-98-9, 47 NRC 261, 283 (1998), I ruled that concerns regarding *existing* radiological conditions in and around HRI's Church Rock site are not germane to this proceeding. The Intervenor's argue that the FEIS inaccurately represents existing and continuing sources of radioactivity in the Church Rock area. My reading of the FEIS at 4-72, 4-73, and 4-124 confirms that the FEIS acknowledges the existence of elevated levels of radioactivity from previous mining and milling activities near Church Rock. In addition, there is a thorough discussion of the background radiological characteristics of the Church Rock, including levels from a previous mining and milling activities site, in DEIS § 3.7. This information was inadvertently omitted from the FEIS but had been made available in the DEIS and was available so that the public might have information about radiation. McKenney April 7, 1999 Affidavit at 9 [attached to Staff's April 7, 1999 Response to LBP-99-15, March 18, 1999 Order].

The FEIS, NUREG-1508 (February 1997), reviews cumulative impacts at pp. 4-120 to 4-127. The key section on health physics effects states:

The total annual population dose was estimated for the period in time of greatest releases from all three project sites. Two population dose estimates were calculated: one for the Crownpoint/Unit 1 sites and one for the Church Rock site. As the area of impact is similar for both calculations, the results were combined with a total population dose less than 0.01 man-Sv/year (1 man-rem/year). The population within the 80 km (50 mi) radius of the entire project is approximately 76,500 persons. Population dose commitments resulting from facility operations represent less than 1 percent of the dose from natural background sources. The population dose from natural background would be approximately 170 man Sv/year (17,000 man-rem/year). FEIS at 4-124.

Additionally, the FEIS at 4-124 to 4-125 adequately discusses the negligible impact on the population in the 50-mile radius from the expected releases from *in situ* leach mining activities HRI proposes.

As I pointed out in LBP-99-15, March 18, 1999 (Questions Concerning Radioactive Air Emissions), the expected impact of radiation from the HRI project will be a small fraction of 1 millirem to an individual in the area. There is no reason to anticipate health effects from such a minimal dose. Accordingly, the FEIS and DEIS have adequately addressed issues concerning radioactive air emissions and no more detailed discussion is required. Likewise, the FEIS § 4.6 at 4-80 to 4-88 adequately treats liquid waste issues. In my Partial Initial Decision, LBP-99-1 (Waste Disposal Issues), 49 NRC 29, I analyzed the Intervenor's waste disposal concerns and ruled that the Staff has adequately conditioned the license to handle waste disposal issues. (*Id.* at 32-35.)

With respect to groundwater cumulative impacts, claims that groundwater will not be restored properly are addressed above. (Section II.E at p. 99.) The FEIS satisfactorily evaluates potential excursions at 4-54 and 4-55. Finally, in my Memorandum and Order (Scheduling and Partial Grant of Motion for Bifurcation)

dated September 22, 1998, I narrowed the scope of this phase of the proceeding to the Church Rock area. Accordingly, Intervenor's argument at this time raising concerns about relocation of wells in Crownpoint is not ripe for this phase of the proceeding, which is focused on Church Rock Section 8. (Intervenor Segmentation Brief at 25-26.)

FEIS Section 13.3 analyzes cultural resources and states that no significant effects are likely to occur. In my Partial Initial Decision (Issues Related to the National Historic Preservation Act (NHPA) and the Native American Graves Protection and Repatriation Act (NAGPRA), and Cultural Resources (LBP-99-9, 49 NRC 137) I found that Intervenor failed to make a case that the Staff did not comply with NHPA, that NAGPRA was not applicable, and that the Staff adequately conditioned the license to handle cultural resource concerns. 49 NRC at 143.

FEIS § 4.13.9 adequately considers socioeconomic and infrastructure impacts. In fact, it considers many of the impacts such as long-term employment, wages, and tax revenues to be a positive impact. I find the treatment in the FEIS adequate.

I have analyzed below Intervenor's health and environmental stress and environmental justice concerns. Intervenor has made no additional arguments with respect to the cumulative impacts of these issues that have not been addressed below. Intervenor's segmentation concerns are addressed in my analysis of their NEPA concerns.

After a careful review of the FEIS and Intervenor arguments concerning cumulative impacts and segmentation issues, I conclude that Intervenor has not provided any analysis or testimony that leads me to conclude that the Staff has not adequately analyzed and weighted the past and future cumulative impacts and segmentation issues associated with licensing HRI to conduct ISL operations at Section 8.

C. Environmental Justice Concerns

1. Legal Background

Executive Order 12898 (EO), "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," 3 C.F.R. § 859 (1995), provides that "each Federal agency³⁸ shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." EO 12898,

³⁸ For the purposes of the EO, "Federal agency" is defined as any agency on the Working Group, and such other agencies as are designated by the President of the United States, that conducts any federal program or activity that substantially affects human health or the environment. Independent agencies, like NRC, are requested to comply with the order pursuant to the EO. See EO at 6-604.

59 Fed. Reg. 7629 (Feb. 16, 1994), *codified at* 3 C.F.R. § 859 (1995). The President's memorandum accompanying the EO states that "each Federal agency shall analyze the environmental effects, including human health, economic, and social effects, of Federal actions, including effects on minority communities and low-income communities, when such analysis is required by the National Environmental Policy Act of 1969 ('NEPA'), 42 U.S.C. section 321 *et seq.*" Memorandum for the Heads of All Departments and Agencies (accompanying EO) (Feb. 11, 1994), 30 Weekly Comp. Pres. Doc. 279 (Feb. 14, 1994). The EO goes on to state that:

Each Federal agency shall conduct its programs, policies, and activities that *substantially affect* the human health or the environment, in a manner that ensures that such programs, policies and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discriminate under, such programs, policies, and activities, because of their race, color, or national origin.

(EO at 2-2 (emphasis added).)

In interpreting and applying the EO and CEQ guidance, NRC has determined that the executive order "by its own terms, establishe[s] no new rights or remedies." (*Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-5, 47 NRC 113 n.2 (1998) (hereinafter "*LES*"); citing EO 6-609; *LES* at 102.) "Its purpose was merely to "underscore certain provision[s] of existing law that can help ensure that all communities and persons across this nation live in a safe and healthful environment." (*Id.*, citing *LES* at 102.)

The NRC has decided that it will not examine a company's motive in order to assess whether or not it has been responsible for racial or economic discrimination. This view is fortified by the position taken by the agency with the greatest expertise in interpreting NEPA, the Council on Environmental Quality (CEQ). In recently issued draft "Guidance for Considering Environmental Justice under NEPA," CEQ calls for a close NEPA examination of a proposed project's impacts on minority and disadvantaged communities, but neither states nor implies that if adverse impacts are found, an investigation into possible racial bias is the appropriate next step.

Instead of focusing on racial bias, the Commission chose in the *LES* case (CLI-98-3, 47 NRC 77, 109-10 (1998)) to focus on measures that might mitigate adverse effects on minority communities. It said:

The Board directed the NRC Staff to consider whether actions can be taken to mitigate the impacts of relocating Parish Road 39. *See* 45 NRC at 406. We concur in that direction, and also direct the NRC Staff to consider whether actions can be taken to mitigate the impacts on property values. Dr. Bullard describes roads in Forest Grove and Center Springs as generally "either unpaved or poorly maintained." *See* Bullard Prefiled Testimony, dated Feb. 24, 1995, at 18. There may well be simple and relatively inexpensive measures that could be taken to improve existing driving and walking conditions (e.g., improving current roads and footpaths).

This in turn could mitigate property devaluation in these communities by improving overall living conditions.

2. *The Facts*

In this case, Intervenors have attempted to show that serious environmental costs will be imposed on the communities of Church Rock and Crownpoint, where the alleged environmental justice population lives. These communities are more than 4 miles from HRI's Church Rock Section 8 project.³⁹ FEIS at 3-79, 3-55. In previous partial initial decisions and my discussion of groundwater, I have already determined that Intervenors' principal arguments concerning environmental effects are without merit. Accordingly, I have no basis for finding that injection mining at the Church Rock Section 8 site will have any serious impact on an environmental justice population.

Indeed, my visit to this site permitted me to observe the vastness of the desert and raises serious questions about how this project at Church Rock Section 8 could possibly have any serious adverse impact on the people of the area. The project is industrial in nature, but it creates no serious risk of pollution. Since I have found the project at Church Rock Section 8 to be safe, there is no serious adverse impact on an environmental justice population and, unlike the LES situation, there is no basis for taking measures to mitigate or reduce that effect. Nor is there any reason to consider, in the context of a new project, the highly regrettable negative impacts of prior projects that involved uranium milling and mining. *See* Intervenors' Environmental Justice Brief at 21.

The only "adverse" impacts are those that any new economic activity would have, like road traffic; and, as the entirely adequate discussion of transportation risks in the FEIS makes clear, there is no reason to mitigate that kind of effect. *See* FEIS at 4-116.⁴⁰

³⁹ ENDAUM and SRIC filed a Brief in Opposition to the HRI Application, with Respect to: Environmental Justice Issues, February 19, 1999 (Intervenors' Environmental Justice Brief); Grace Sam and Marilyn Morris filed a Final Written Presentation, February 19, 1999 (Sam Final Presentation); HRI Filed a Response to Intervenors' Brief Regarding Environmental Justice, March 25, 1999; and the Staff filed a Response to Intervenors' Presentations on Environmental Justice, April 1, 1999.

⁴⁰ Although Grace Sam and Marilyn Morris are correct in mentioning that there also is a risk to pedestrians walking along the roads and to cattle grazing near to roads (Sam Final Presentation at 8), there is no evidence that any roads will be closed or that the risk to pedestrians or livestock will be of such importance that the failure to analyze this risk means that the FEIS took an inadequate look at the costs and benefits of this project. In particular, during my site visit I did not see any livestock roaming free and I have not seen any evidence concerning the frequency of this alleged problem.

The argument that roadways might also be used at night is not significant (FEIS at 4-69 to 4-70 and 4-116). In particular, the Sams have not shown an increase in the probability of release of materials from a nighttime accident. Furthermore, HRI will not be transporting licensed material to or from its sites at night. HRI's Response to the Final Written Presentation of Grace Sam and Marilyn Morris at 2.

I find that the consideration of environmental justice in the FEIS is wholly adequate with respect to Church Rock Section 8. FEIS at 3-78 to 4-5 and 4-112 to 4-120. The Staff has taken a hard look at a project that does not raise serious risks for the surrounding community.

V. OVERALL CONCLUSIONS

All areas of concern with respect to Church Rock Section 8 have been considered. *See* pages 82 and 109, above. None of the Intervenor's concerns have been found to require relief. Accordingly, the HRI license for Section 8 stands as issued.

VI. ORDER

For all the foregoing reasons and upon consideration of the entire record in this matter, it is, this 20th day of August 1999, ORDERED that:

1. The relief requested by Eastern Navajo Diné Against Uranium Mining (ENDAUM) and the Southwest Research and Information Center (SRIC) and Grace Sam and Marilyn Morris relative to the revocation or revision Hydro Resources Inc.'s license (SUA-1508, January 5, 1998) to conduct *in situ* leach mining in Church Rock Section 8 is *denied*.

2. There is no reason either for further Phase I filings or for oral argument before the Presiding Officer.

3. Pursuant to the Commission's Order of May 3, within 14 days after the Presiding Officer issues this Decision, each party may file a single petition for review by the Commission, not to exceed 30 pages, addressing all remaining challenges to decisions rendered by the Presiding Officer. Responses to such petitions for review shall be filed within 14 days after the petition is filed, and shall not exceed 30 pages.

4. Hydro Resources, Inc., may file a brief before the Presiding Officer concerning the schedule and procedures for the remainder of this case. Its brief must be received by the Service List on or before September 14, 1999. Intervenor (ENDAUM, SRIC, Grace Sam, and Marilyn Morris) may file a brief concerning the schedule and procedures for the remainder of the case. The Intervenor's brief must be received by the Service List on or before September 28, 1999. The Staff of the Nuclear Regulatory Commission may file a responsive brief concerning

the schedule and procedures for the remainder of the case. Their brief must be received by the Service List on or before October 5, 1999.

Peter B. Bloch, Presiding Officer
ADMINISTRATIVE JUDGE

Rockville, Maryland

ATTACHMENT A

Carlson Affidavit (See note 34 at p. 115, *supra*.)

3. “[Question] 4. What are the adjusted benefits of the CUP, as stated in the FEIS, for one or two prices of yellowcake that are at or above the minimum price at which HRI would commence work on this project? (This is important because the price of uranium fluctuates and a reasonable cost/benefit picture requires an assessment of benefits at more than one arbitrary price.)”

The Staff does not know the minimum price that HRI would commence work on Section 8 or the rest of the mining project. The FEIS cost/benefit analysis assumes a price of \$15.70 per pound of U_3O_8 (FEIS Section 5.1). The “adjusted benefits” of the proposed project, using a similar cost/benefit analysis using two realistic U_3O_8 prices (*e.g.*, minimum prices) based on the current spot market value of uranium can be examined as follows.

4. The first step in the analysis is to determine the “minimum” prices. The FEIS, at page 5-3, states:

The important point relevant to assessing the project’s potential benefits to the local community is that the benefits depend on HRI’s costs being lower than the future price of U_3O_8 , which has been quite volatile. If the price of U_3O_8 is less than the costs of operation, then operations may be discontinued. If this happens, there would be no economic benefits to the local community.

FEIS Table 5.1 (reprinted here as Table 1) indicates that HRI’s production costs would vary from \$9.38 to \$11.83 per pound, depending on where the U_3O_8 is mined, processed, and dried. Thus, a conservative estimate of benefits would be to assume prices of \$9 and \$12 per pound. These prices are conservative because they “bound” HRI’s production costs as well as the current spot market price (\$10.85 per pound) as of May 3, 1999. www.uxc.com/review/ux_prices.shtml (Ux Consulting Company LLC website).

5. The second step is to examine the project’s benefits using these two alternative U_3O_8 prices. As discussed in the FEIS, both the employment generated

by the project and the taxes paid by HRI would depend on the production of U_3O_8 . In turn, the amount of U_3O_8 produced would depend on the market price and the cost of production. Table 1 (FEIS Table 5.1), below, shows HRI's projected costs of producing U_3O_8 for the alternative operations.

Table 1. Average Production Costs per Pound of U_3O_8 Under Alternative Project Designs

Alternative configurations	Church Rock	Unit 1	Crownpoint
Haul loaded resin to other site for processing and drying	\$11.36	\$10.46	\$9.46
Ship yellowcake slurry to dryer at other site for drying	\$11.32	\$10.48	\$9.40
Ship yellowcake slurry to Texas for drying	\$11.83	\$11.05	\$9.87
Stand alone — all processing done at each site	\$11.30	\$10.51	\$9.38

Source: HRI, Response to Request for Additional Information, Issue 92: Cost/Benefit Analysis.

6. The most important local benefit would be opportunities for employment and earnings. The FEIS assumes that the project would create about 100 long-term jobs with an average annual salary of around \$24,000. FEIS at 5-3, Section 5.1.2. The number of jobs and average salary might be lower with U_3O_8 prices of \$9 and \$12 per pound (as compared to \$15.70 per pound), if HRI decides to hire less workers and pay less salary. The Staff has no information from HRI to make revised assumptions regarding these matters.

7. There could be between \$630,000 (see Table 2, pp. 127-28, which is a modified version of FEIS Table 5.4) and \$840,000 (see Table 3, pp. 129-30, which is a modified version of FEIS Table 5.4) in annual royalty income going to holders of leases, depending on production from Unit 1. (There would be no individual lease holders receiving royalties from production of the Church Rock site. However, HRI would have to pay royalties to private companies holding lease rights at the Church Rock site, *e.g.*, United Nuclear Corporation.) As indicated in the FEIS, at page 5-4, Section 5.1.2, this income would be concentrated (in the hands of about 9 lease holders), and would probably not have a widespread effect.

8. As discussed in FEIS Section 5.1.3 and indicated in Tables 2 and 3 below, significant tax revenues would be collected by McKinley County and possibly the Navajo Nation regardless of the price of U_3O_8 .

Table 2. Annual Project Benefits (assuming U₃O₈ at \$9 per pound)

	Navajo Nation	Local Navajo Communities	McKinley County/ Non-Navajo
Employment	NA	Of 100 long-term jobs that would not require highly specialized skills, local communities could get up to 100 depending on how well HRI executes its intention to hire local Navajo.	Total estimated long-term jobs less those going to Navajo (about 40 if Navajo get 100).
Earnings	NA	Average annual earnings for local employees would be about \$24,000.	Average annual earnings for management/technical positions would be about \$36,000.
Royalties	None	\$630,000 annually (assuming 1 million pounds of yellowcake produced annually from allotment leases at \$9/lb). This would be distributed among 9 lessors of Unit 1 properties.	None.
Taxes	\$540,000 annually for Business Activities Tax (assuming 2 million pounds of yellowcake at \$9/lb and contingent on legal jurisdiction to tax). \$15,000 for construction tax (assuming \$500,000 in drill rig contracts).	Cannot tax. Cannot tax.	\$270,000 annually for real property tax (assuming 2 million pounds of yellowcake at \$9/lb). \$55,000 for personal property (based on value of assets at Unit 1 and Crownpoint).

(Continued)

Table 2. Continued

	Navajo Nation	Local Navajo Communities	McKinley County/ Non-Navajo
Other benefits	NA	Several jobs related to income expenditure in local community or incidental services required by project.	Several jobs related to expenditures in the local community or incidental services required by project.

9. The potential costs of the proposed project to the local communities would not change from those discussed in the FEIS (Section 5.2), regardless of the price of U_3O_8 .

10. “[Question] 5. Because of financial and market uncertainties, it is foreseeable that Church Rock Section 8 will be the only section developed. What are the governmental needs that arise because of the CUP? Would local governments need to make any capital expenditures that might not be recouped if the CUP suspended or terminated mining operations without going beyond Section 8? In light of the financial situation of local governments, would environmental justice considerations require indemnification or assurances to local governments for possible losses [footnote: *See Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 100 (1998).]”

The demand for public infrastructure and services (*i.e.*, “governmental needs”) associated with the proposed project would decrease if Church Rock Section 8 were the only section of the project developed. Typically, increases in the demand for public infrastructure and services are related to increases in population.

11. As discussed in FEIS Section 4.9.2, HRI’s proposed project may cause increases in population of about 25-40 people (less than 0.1 percent of the 1990 McKinley County population of 60,686) and such increases would not be significant. FEIS at 4-99. Therefore, the FEIS concludes that no significant or detrimental effects on housing, schools, utilities, or other public services would occur as a result of project-related population growth in Crownpoint or other communities in the project vicinity. This conclusion, which also relates to environmental justice considerations, would remain valid if Church Rock Section 8 were the only section developed by HRI since mining there is only projected to last six years, *see* FEIS at 4-97 to 4-98, and the resulting population increase would be less than that mentioned above.

12. With respect to HRI’s proposed project, the most significant risk in terms of “governmental needs” would be the need to replace the town of Crownpoint’s

Table 3. Annual Project Benefits (assuming U₃O₈ at \$12 per pound)

	Navajo Nation	Local Navajo Communities	McKinley County Non-Navajo
Employment	NA	Of 100 long-term jobs that would not require highly specialized skills, local communities could get up to 100 depending on how well HRI executes its intention to hire local Navajo.	Total estimated long-term jobs less those going to Navajo (about 40 if Navajo get 100).
Earnings	NA	Average annual earnings for local employees would be about \$24,000.	Average annual earnings for management/technical positions would be about \$36,000.
Royalties	None	\$840,000 annually (assuming 1 million pounds of yellowcake produced annually from allotment leases at \$12/lb). This would be distributed among 9 lessors of Unit 1 properties.	None.
Taxes	\$720,000 annually for Business Activities Tax (assuming 2 million pounds of yellowcake at \$12/lb and contingent on legal jurisdiction to tax). \$15,000 for construction tax (assuming \$500,000 in drill rig contracts).	Cannot tax. Cannot tax.	\$360,000 annually for real property tax (assuming 2 million pounds of yellowcake at \$12/lb). \$55,000 for personal property (based on value of assets at Unit 1 and Crownpoint).

(Continued)

Table 3. Continued

	Navajo Nation	Local Navajo Communities	McKinley County Non-Navajo
Other benefits	NA	Several jobs related to income expenditure in local community or incidental services required by project.	Several jobs related to expenditures in the local community or incidental services required by project.

water supply wells. See FEIS Section 4.3.1.1. If the entire project were developed, HRI would be required to pay for water supply well replacement and to reimburse the town of Crownpoint for operating costs that would occur because of the drawdown of the water table. See FEIS Section 4.3.3; Source Material License SUA-1508, License Conditions (LCs) 10.16 and 10.27. The FEIS concludes that little or no adverse effect would occur to the community because these required mitigation measures would provide a process to assure that replacement wells are acceptable. The need to replace the wells would *only* stem from project development at the Crownpoint site, and *not* from development at Church Rock Section 8. Therefore, the conclusion that the need to replace Crownpoint water supply well is the most significant governmental needs risk remains valid if Church Rock Section 8 were the only section of the project developed.

13. Because project-related population increases would be less than predicted in the FEIS if Church Rock Section 8 were the only section of the project developed or due to lower uranium prices, there would be only slight changes in demand for emergency, fire, and police services. FEIS Section 4.9.4, at page 4-100, notes that “although the probability of accidents related to the project’s operation is very low,” responding to radiological hazards associated with the processed material “would result in the need for additional standby emergency services that currently are not required or available in the Church Rock area.” As discussed in FEIS, HRI has made several commitments to address these issues which include providing “the local hospital with the proper equipment, on-going training for hospital staff, and a separate room equipped for decontamination (Pelizza 1996a).” FEIS at 4-100. HRI’s proposed mitigation measures have been found adequate for the entire project, and therefore would suffice if Church Rock Section 8 were the only section of the project developed.

14. Traffic on New Mexico Highway 566 would increase as project employees commute to Church Rock Section 8 during the work week. Because existing traffic on this road is very light, see FEIS at 4-100, the additional traffic associated with the project would not cause congestion or traffic problems. Average Annual Daily

Traffic on Highway 566 (which extends north from I-40 through the town of Church Rock, then bypasses the Church Rock mining site and continues north into the Navajo Indian Reservation property) from 1990 to 1994 was 3,490 vehicles. FEIS at 4-101. This volume of traffic is consistent with the Transportation Research Board's "peak hour Level of Service (LOS) rating of 'C,' which is characterized by stable traffic flows." See FEIS at 4-101. "Using the methodology in *Highway Capacity Manual* (Transportation Research Board 1985) for evaluating traffic flow on rural two-lane highways, at peak project [*i.e.*, the entire Crownpoint project] employment (assuming the addition of up to 100 vehicles at rush hour) the additional traffic would not degrade the existing LOS." FEIS at 4-101. Therefore, there would be even less traffic impacts associated with mining at Church Rock Section 8 only based on the reduced number of people/employees discussed in paragraph 11, above.

15. For the reasons discussed above and in FEIS Section 4.9, it is not likely that local governments would need to make any capital expenditures that might not be recouped if HRI suspended or terminated mining operations without going beyond Church Rock Section 8. Any "losses" to local governments could be addressed as part of socioeconomic mitigation measures required by the license. FEIS Section 4.9.6 discusses the mitigation of socioeconomic impacts provided for in the Staff-recommended action (Alternative 3). Such measures are addressed in LC 9.13 (HRI required to have applicable Memoranda of Agreements with local authorities, the fire department, medical facilities, and other emergency services), LC 9.14 (HRI required to obtain necessary permits and licenses from the appropriate regulatory authorities), LC 10.16 (HRI required to reimburse operators of the Crownpoint water supply wells for any increased costs caused by the project), and LC 10.27 (HRI required to replace the town of Crownpoint's water supply wells).

16. "[Question] 6. What are the financial effects of uncertainties about the application of a tax on the CUP by the Navajo Nation? In light of these uncertainties and the possibility of litigation about this tax, are the parties willing to offer to begin negotiation with relevant governments? Have negotiations begun? Are negotiations producing results?"

As stated in FEIS Section 4.9.5.2:

Potential tax collections by the Navajo Nation would be through the Navajo Business Activities Tax (BAT) and the BAT Construction Tax. . . .

[These taxes] apply to activities on the Navajo Reservation and in areas outside the reservation if such areas meet the definition of "Indian country." The proposed project would not be located on the Navajo Reservation. However, the BAT could apply to the project's gross receipts if it is determined that the project would be within Indian country. The definition of Indian country may be viewed by some as vague and may ultimately be determined through litigation.

The above excerpt from Section 4.9.5.2 of the FEIS reflects that HRI is litigating such issues in the U.S. Court of Appeals for the 10th Circuit. While the Staff is of the opinion that the financial effects of uncertainties related to these taxes is unclear, the FEIS already recognizes that, for the Navajo Nation, if taxes are not applied to the project, there would be the loss of the potential tax revenues as reported in FEIS Table 4.29 on page 4-102.

17. The NRC Staff has no information as to whether the parties are willing to begin negotiations with relevant governments, whether negotiations have begun, or whether the negotiations are producing results.

18. “[Question] 7. For Church Rock [*sic*] Section 8 . . . What is your comparative analysis of the NRC Staff-Recommended Action to: (1) the non-action alternative, and (2) Alternative 2 (modified action) — including a concise, descriptive summary of the advantages and disadvantages of the options? See CEQ ‘Memorandum to Agencies; Answers to 40 Most Asked Questions on NEPA Regulations,’ 46 Fed. Reg. 18,026; see also 40 C.F.R. § 1502.14 (Council on Environmental Quality, guidance). *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 98 (and 97-99) (1998). In your answers to this question, please consider the answers to the questions set forth above in your overall discussion. [footnote omitted]”

Tables 4 through 15 (attached) provide the NRC Staff’s comparative analysis for Church Rock Section 8 of the ‘NRC Staff-Recommended Action’ alternative (Alternative 3) with the ‘No Action’ alternative (Alternative 4) and the Modified Action alternative (Alternative 2). These tables summarize information in FEIS Sections 4.1 through 4.12.

19. In general, the NRC Staff-Recommended Action would have the advantage of allowing HRI to develop Section 8, while providing more environmental protection than the Modified Action (because of the additional mitigation measures recommended by Staff). The NRC Staff-Recommended Action would have the disadvantages of being more expensive for HRI than the Modified Action alternative and of creating impacts that would not exist under the No Action alternative.

20. The Modified Action alternative would have the advantage of allowing HRI to develop Section 8 at a lower cost than under the NRC Staff-Recommended Action, but would have the disadvantages of providing less environmental protection than the NRC Staff-Recommended Action (because there would be no additional mitigation measures recommended by staff) and of creating impacts that would not exist under the No Action alternative.

21. The No Action alternative would have the advantage of maintaining the status quo and avoiding the minimal impacts (to air quality and noise, geology and soils, groundwater, surface water, transportation risks, health physics and radiological risks, ecology, land use, socioeconomics, aesthetics, cultural resources and environmental justice) associated with development of Section 8. The disadvantages of the No Action alternative would be not allowing any uranium

production from Section 8 and any of the beneficial socioeconomic impacts discussed in the FEIS. See FEIS Sections 4.9.1, 4.9.5, 5.1.2 and 5.1.3.

22. Based on the Staff's comparative analysis in the FEIS and summarized in Tables 4-15, below, Alternative 3 (Staff Recommended Action) was superior to Alternative 2 (Modified Action) with respect to mitigating environmental impacts from the project. Similarly, Alternative 3 (Staff Recommended Action) was considered favorable to Alternative 4 (No Action) because the environmental impacts are acceptable (*i.e.*, insignificant and/or mitigable) and has socioeconomic benefits that flow from conducting mining operations at Section 8. These socioeconomic [benefits] outweigh the benefits of the No Action alternative.

Table 4. Air Quality and Noise (Church Rock — Section 8)

Alternatives	Impacts	Comments
Alternative 2 (Modified Action)	Impacts more significant than under Alternative 3 (no mitigation measures except those proposed by HRI).	Air quality and noise impacts in Church Rock Section 8 will be relatively insignificant under both Alternatives 2 and 3.
Alternative 3 (Staff-Recommended Action)	Impacts less significant than under Alternative 2 (staff-recommended mitigation measures plus those proposed by HRI): — Utilize dust suppression techniques to reduce fugitive dust from unpaved roads	Under Alternative 3, the NRC Staff's recommendation to utilize dust suppression techniques to reduce fugitive dust from unpaved roads was primarily for the Crownpoint and Unit 1 sites (<i>i.e.</i> , Church Rock Section 8 has only a short stretch of unpaved roadway). However, construction and maintenance activities at the Church Rock well fields, and traffic on the facility grounds could result in creation of some fugitive dust, thereby necessitating use of some form of dust suppression technique.
Alternative 4 (No Action)	No impacts to air quality; no noise impacts.	

Table 5. Geology and Soils (Church Rock — Section 8)

Alternatives	Impacts	Comments
Alternative 2 (Modified Action)	Impacts more significant than under Alternative 3 (no mitigation measures except those proposed by HRI).	Geological and soils impacts at Church Rock Section 8 are expected to be minimal under both Alternatives 2 and 3. Under Alternatives 2 or 3, HRI has not determined which of its proposed groundwater restoration approaches or methods of waste water disposal it will utilize.
Alternative 3 (Staff-Recommended Action)	Impacts less significant than under Alternative 2 (staff-recommended mitigation measures plus those proposed by HRI): 1. No construction of above grade wastewater retention ponds prior to NRC approval of embankment engineering system. 2. Maintain sufficient reserve capacity in retention pond system to enable transfer of contents among ponds. 3. Submit detailed site reclamation plan for NRC approval 12 months prior to shutdown. 4. Maintain adequate financial surety to cover reclamation costs.	Under Alternative 3, the NRC Staff imposes additional license requirements to ensure licensee compliance with regulatory requirements. — Reduces risk of surface water and soils being contaminated from structural failure of the retention ponds. — Reduces risk of surface water and soils being contaminated from over-topping of the retention ponds. — Ensures adequate safety evaluation review is conducted of licensee's reclamation plan. — Establishes adequate funding to ensure all groundwater restoration and surface reclamation costs are covered.
Alternative 4 (No Action)	No impacts to geology or soils.	

Table 6. Groundwater (Church Rock — Section 8)

Alternatives	Impacts	Comments
Alternative 2 (Modified Action)	Impacts more significant than under Alternative 3 (no mitigation measures except those proposed by HRI).	Alternative 2 has a higher risk than Alternative 3 that groundwater could potentially be contaminated by vertical excursions and that the groundwater may not be properly restored.
Alternative 3 (Staff-Recommended Action)	Impacts less significant than under Alternative 2 (staff-recommended mitigation measures plus those proposed by HRI): <ol style="list-style-type: none"> 1. Perform well integrity tests on each injection and production well before use. 2. Dispose of all liquid effluents from process buildings and other process waste streams in NRC-approved manner. 3. Do not exceed maximum flow rate of 15,000 Lpm (4000 gpm) at ion exchange plant. 4. Establish NRC-approved effluent and environmental monitoring program. 5. Establish baseline water quality data at NRC-specified locations in well field. 6. Collect sufficient water quality data and conduct sufficient hydrologic confinement tests to characterize the Cow Springs aquifer. 	<ul style="list-style-type: none"> — Reduces risk of aquifer contamination from vertical excursions. — Ensures licensee requirement to obtain NRC review and approval of any future liquid waste effluent disposal option. — Ensures potential risk scenarios are within the scope of the EIS/SER review. — Ensures licensee's environmental monitoring program meets NRC regulatory requirements. — Improves baseline characterization and reduces risk of inadequate restoration. — Reduces risk of Cow Springs aquifer contamination from vertical excursions.

(Continued)

Table 6. Continued

Alternatives	Impacts	Comments
Alternative 3 (Staff- Recommended Action)	7. Conduct acceptable groundwater restoration demonstration; determine number of pore volumes required for restoration; determine amount of surety based on demonstration.	— Reduces risk of inadequate groundwater restoration by setting an adequate level of surety.
	8. Conduct Westwater Canyon aquifer step-rate injection test.	— Reduces risk of contaminating overlying aquifers from vertical excursions caused by high injection pressures.
	9. In the event of vertical excursion, explore significant aquifers above Dakota sandstone aquifer for vertical excursions.	— Ensures that all aquifers contaminated by vertical excursions are identified and cleaned up.
	10. Develop NRC-approved groundwater restoration plan.	— Reduces risk that groundwater will not be adequately restored.
	11. Maintain adequate financial surety to cover groundwater restoration costs.	— Reduces risk that groundwater will not be adequately restored.
	12. Complete all wells to NRC-established specifications.	— Reduces risk of contaminating overlying aquifers from vertical excursions.
Alternative 4 (No Action)	No impacts to groundwater.	

Table 7. Surface Water (Church Rock — Section 8)

Alternatives	Impacts	Comments
Alternative 2 (Modified Action)	Impacts more significant than under Alternative 3 (no mitigation measures except those proposed by HRI).	Surface water impacts in Church Rock Section 8 are expected to be minimal under both Alternatives 2 and 3. Under Alternative 2 no design details have been provided to NRC by HRI.
Alternative 3 (Staff-Recommended Action)	Impacts less significant than under Alternative 2 (staff-recommended mitigation measures plus those proposed by HRI): — No construction of wastewater retention ponds prior to NRC approval of embankment engineering system.	Under Alternative 3, the licensee will be required to provide design details to the NRC Staff for approval of its waste water retention ponds prior to operation. The NRC Staff has provided additional guidance to HRI for design of surface water impoundments and erosion protection measures, which will further minimize any potentially adverse impacts from construction of the facility.
Alternative 4 (No Action)	No impacts to surface water.	

Table 8. Transportation Risk (Church Rock — Section 8)

Alternatives	Impacts	Comments
Alternative 2 (Modified Action)	Impacts more significant than under Alternative 3 (no mitigation measures except those proposed by HRI).	Although the number of shipments of U ₃ O ₈ and other materials would be the same under both Alternatives 2 and 3, transportation risk would be reduced under Alternative 3 because of additional NRC-required safety measures.
Alternative 3 (Staff-Recommended Action)	Impacts less significant than under Alternative 2 (staff-recommended mitigation measures plus those proposed by HRI): 1. All delivery trucks must carry appropriate certifications of safety inspections. 2. All delivery trucks must hold appropriate licenses.	
Alternative 4 (No Action)	No increased transportation risk.	

Table 9. Health Physics and Radiological Impacts (Church Rock — Section 8)

Alternatives	Impacts	Comments
Alternative 2 (Modified Action)	Impacts more significant than under Alternative 3 (no mitigation measures except those proposed by HRI).	Radiological impacts in Church Rock Section 8 are expected to be minimal under both Alternatives 2 and 3. HRI will restrict access to operating and restoring wellfields, which will reduce potential exposures to the public.
Alternative 3 (Staff-Recommended Action)	<p>Impacts less significant than under Alternative 2 (staff-recommended mitigation measures plus those proposed by HRI):</p> <ol style="list-style-type: none"> 1. All U₃O₈ must be stored inside restricted area; liquid oxygen tanks must be located in well fields; other chemical storage tanks must be located on concrete pad near waste retention pond. 2. Maintain an area within restricted area boundary for storing contaminated materials prior to disposal; all contaminated waste must be disposed of at NRC- or Agreement State-licensed radioactive waste disposal site. 	Under Alternative 3, HRI would be required to clean-up the wellfields (or any other part of the restricted area) after use before allowing unrestricted access. This will allow NRC staff to verify compliance with regulatory clean-up standards for those affected areas related to the mining process.
Alternative 4 (No Action)	No health physics or radiological impacts.	

Table 10. Ecology (Church Rock — Section 8)

Alternatives	Impacts	Comments
Alternative 2 (Modified Action)	Impacts more significant than under Alternative 3 (no mitigation measures except those proposed by HRI).	Ecological impacts in Church Rock Section 8 are expected to be minimal under both Alternatives 2 and 3. The amount of land disturbed in Section 8 would be the same (between 140 and 150 acres) under Alternatives 2 and 3.
Alternative 3 (Staff-Recommended Action)	Impacts less significant than under Alternative 2 (staff-recommended mitigation measures plus those proposed by HRI): <ol style="list-style-type: none"> 1. Revegetate disturbed areas with NRC-recommended seed mixture. 2. Follow NRC guidelines listed in FEIS for revegetating disturbed areas. 3. Implement methods for discouraging waterfowl use of project retention and evaporation ponds. 	Under Alternative 3, impacts would be further reduced because revegetation guidelines recommended by the NRC Staff (which were adopted from the Navajo Nation EPA guidelines) were specifically designed for the terrestrial and meteorological environment in which the project would be located. Additionally, Alternative 3 includes measures to discourage waterfowl use of project ponds, which should reduce potential impacts to waterfowl in the area.
Alternative 4 (No Action)	No impacts to ecological resources.	

Table 11. Land Use (Church Rock — Section 8)

Alternatives	Impacts	Comments
Alternative 2 (Modified Action)	Impacts same as under Alternative 3 (no grazing permits affected; no allottee lands affected).	Land use impacts in Church Rock Section 8 are expected to be minimal under both Alternatives 2 and 3. Surface rights to Section 8 of the project are owned by HRI, and therefore no grazing permits or allottee lands will be affected.
Alternative 3 (Staff-Recommended Action)	Impacts same as under Alternative 2 (no grazing permits affected; no allottee lands affected).	
Alternative 4 (No Action)	No land-use impacts.	

Table 12. Socioeconomics (Church Rock — Section 8)

Alternatives	Impacts	Comments
Alternative 2 (Modified Action)	Impacts more significant than under Alternative 3 (no mitigation measures except those proposed by HRI).	Adverse socioeconomic impacts from mining on Church Rock Section 8 are expected to be minor under both Alternatives 2 and 3. The number of jobs created (approximately 60), the amount of income generated (between \$1-1.7 million annually), and the amount of tax revenues generated (at least \$250,000) would be the same under both Alternatives 2 and 3.
Alternative 3 (Staff-Recommended Action)	Impacts less significant than under Alternative 2 (staff-recommended mitigation measures plus those proposed by HRI): <ol style="list-style-type: none"> 1. Document intention to hire local Navajo in written project hiring plan. 2. Provide annual report concerning employment of local Navajo. 3. Develop memorandum of understanding with local governments to outline responsibilities for emergency medical response and training. 	Under Alternative 3, beneficial effects would be increased because the Navajo hiring practices recommended by NRC Staff would help ensure that local residents benefit from the project. Alternative 3 also includes the additional measure of developing an MOU to ensure that local governments do not have to pay for increased fire and emergency medical services.
Alternative 4 (No Action)	No socioeconomic impacts.	Alternative 4 would mean the potential loss of jobs, royalties, increased salaries, and tax revenues to the local populace.

Table 13. Aesthetics (Church Rock — Section 8)

Alternatives	Impacts	Comments
Alternative 2 (Modified Action)	Impacts more significant than under Alternative 3 (no mitigation measures except those proposed by HRI).	Impacts on aesthetics at Church Rock Section 8 are expected to be minimal under both Alternatives 2 and 3.
Alternative 3 (Staff-Recommended Action)	Impacts less significant than under Alternative 2 (staff-recommended mitigation measures plus those proposed by HRI): — Develop and implement NRC-approved site reclamation plan.	Under Alternative 3, the long-term impacts (e.g., permanently disturbed land areas) would be minimized because of the development and implementation of an NRC-approved reclamation plan by the licensee — which would include the revegetation guidelines discussed under ecological resources.
Alternative 4 (No Action)	No impacts to aesthetic resources.	

Table 14. Cultural Resources (Church Rock — Section 8)

Alternatives	Impacts	Comments
Alternative 2 (Modified Action)	Impacts more significant than under Alternative 3 (no mitigation measures except those proposed by HRI).	Cultural resource impacts are expected to be minimal at Church Rock Section 8 for both Alternatives 2 and 3.
Alternative 3 (Staff-Recommended Action)	Impacts less significant than under Alternative 2 (staff-recommended mitigation measures plus those proposed by HRI): — Develop and implement NRC-approved cultural resources management plan.	Under Alternative 3, cultural resource protection would be enhanced because of the development and implementation of an NRC-approved cultural resources management plan. The plan would include additional NRC Staff recommended measures in the event that HRI's policy of "total avoidance" is not practicable.
Alternative 4 (No Action)	No impacts to cultural resources.	

Table 15. Environmental Justice (Church Rock — Section 8)

Alternatives	Impacts	Comments
Alternative 2 (Modified Action)	Impacts more significant than under Alternative 3 (no mitigation measures except those proposed by HRI).	Adverse environmental justice impacts are potentially significantly higher under Alternative 2 than under Alternative 3.
Alternative 3 (Staff-Recommended Action)	<p>Impacts less significant than under Alternative 2 (staff-recommended mitigation measures plus those proposed by HRI):</p> <ol style="list-style-type: none"> 1. In the event of lixiviant excursion, notify Navajo Nation, BIA, and BLM by telephone within 24 hours and by letter within 7 days. Provide written report within 60 days. 2. In the event of retention pond leak, notify Navajo Nation, BIA, and BLM by telephone within 48 hours and provide written report within 30 days. 3. In the event of solution spill or embankment failure, notify Navajo Nation, BIA, and BLM by telephone within 48 hours and provide written report within 7 days. 4. Work with U.S. EPA and State of New Mexico to involve Navajo Nation in UIC permitting. 5. Facilitate negotiations between State of New Mexico and Navajo Nation in water rights permitting. 	Under Alternative 3, potentially significant environmental justice impacts would be avoided because HRI would implement the NRC Staff recommended measures for all resource areas. Additionally, the NRC Staff has included the Navajo Nation regulatory authorities in oversight and decision making regarding HRI's mining project in order to provide the Navajo Nation a more active role in regulating the project.

(Continued)

Table 15. Continued

Alternatives	Impacts	Comments
Alternative 3 (Staff- Recommended Action)	6. Consult with traditional practitioners of the Church Rock Chapter to ascertain whether specific ceremonies should be facilitated on project land.	
Alternative 4 (No Action)	No environmental justice impacts.	

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman
Dr. Jerry R. Kline
Dr. Peter S. Lam

In the Matter of

Docket No. 72-22-ISFSI
(ASLBP No. 97-732-02-ISFSI)

PRIVATE FUEL STORAGE, L.L.C.
(Independent Spent Fuel Storage
Installation)

August 27, 1999

In this proceeding concerning the application of Private Fuel Storage, L.L.C. (PFS), under 10 C.F.R. Part 72 to construct and operate an independent spent fuel storage installation (ISFSI), acting pursuant to 10 C.F.R. § 2.749, the Licensing Board grants summary disposition in favor of PFS in connection with contentions Security-A, Security-B, and Security-C, as they relate to the issue of the proper adoption of a cooperative agreement providing the local sheriff's office with law enforcement authority on the Native American reservation that houses the PFS site.

RULES OF PRACTICE: SUMMARY DISPOSITION (BURDEN OF PERSUASION; BURDEN OF PROOF)

As with the analogous Rule 56 of the Federal Rules of Civil Procedure, the movant bears the initial burden of making the requisite showing that there is no genuine issue as to any material fact, which it attempts to do by means of a required statement of material facts and any supporting materials that accompany the dispositive motion. An opposing party must counter each adequately supported material fact with its own statement of material facts in dispute and supporting materials, or the movant's facts will be deemed admitted. *See Advanced Medical*

MEMORANDUM AND ORDER
(Granting Motion for Summary Disposition Regarding Contentions
Security-A and Security-B and Partial Summary Disposition
Regarding Contention Security-C)

Applicant Private Fuel Storage, L.L.C. (PFS), has requested that summary disposition be entered in its favor regarding contentions Security-A and Security-B and that partial summary disposition be entered in its favor regarding contention Security-C. As admitted, these contentions allege that Tooele County, Utah, failed to properly approve a cooperative agreement providing the Tooele County sheriff's office with law enforcement authority on the reservation of Intervenor Skull Valley Band of Goshute Indians (Skull Valley Band), which is the site of PFS's proposed 10 C.F.R. Part 72 independent spent fuel storage installation (ISFSI). According to PFS, there is no genuine issue as to any material fact relevant to these contentions so that, in accordance with 10 C.F.R. § 2.749, it is entitled to a determination on these contentions as a matter of law. The NRC Staff supports the motion for summary disposition, which sponsoring Intervenor State of Utah (State) does not directly challenge.

For the reasons described below, on these issues we grant summary disposition in favor of PFS.

I. BACKGROUND

Pursuant to 10 C.F.R. § 72.180, PFS is required to "establish a detailed plan for security measures for [the] physical protection" of its proposed ISFSI facility. This plan must "describe how the applicant will meet the requirements of § 73.51 . . . and include within the plan the design for physical protection, the licensee's safeguards contingency plan, and the security organization personnel training and qualification plan." The specific requirements for an ISFSI's physical protection plan are set forth in 10 C.F.R. § 73.51(d), which, as pertinent here, requires:

(5) A security organization with written procedures must be established. The security organization must include sufficient personnel per shift to provide for monitoring of detection systems and the conduct of surveillance, assessment, access control, and communications to assure adequate response. Members of the security organization must be trained, qualified, and requalified to perform assigned job duties in accordance with appendix B to part 73, sections I.A, (1)(a) and (b), (B)(1)(a), and the applicable portions of II.

(6) Documented liaison with a designated response force or local law enforcement agency (LLEA) must be established to permit timely response to unauthorized penetration or activities.

In addition, section 3 (“Licensee Planning Base”) of Appendix C to 10 C.F.R. Part 73 requires:

d. Law Enforcement Assistance — A listing of available local law enforcement agencies and a description of their response capabilities and their criteria for response; and a discussion of working agreements or arrangements for communicating with these agencies.

Thus, compliance with section 73.51 requires documented identification of a local law enforcement agency (LLEA) responsible for responding to unauthorized penetration or activities at the facility and a discussion of arrangements/working agreements for communication with the LLEA.

In this instance, although PFS will provide for onsite security, the Skull Valley Band on whose reservation the PFS ISFSI will be located does not possess the resources and facilities needed to act as LLEA to protect the PFS facility from offsite intrusions. Moreover, because of the sovereign nature of Native American reservations, state and local governments generally do not provide law enforcement on reservations, absent some agreement with the tribe. Therefore, as was indicated in the PFS security plan, in order to satisfy section 73.51 requirements, the United States Department of the Interior Bureau of Indian Affairs (BIA), the Skull Valley Band, and Tooele County entered into a cooperative law enforcement agreement (CLEA) in June 1997 that provided the Tooele County sheriff’s office with law enforcement authority on the Skull Valley Goshute Reservation.

On January 3, 1998, the State filed eight contentions challenging the PFS physical security plan (PSP). The Licensing Board ruled on the admissibility of the State of Utah’s contentions on PFS’s PSP on June 18, 1998. *See* LBP-98-13, 47 NRC 360 (1998). The Board held that contentions Security-A and Security-B were inadmissible because they sought “to rely on the question of the designated LLEA’s lack of jurisdiction and law enforcement authority on the Skull Valley Band’s reservation.” *Id.* at 368-69. The Board found that the State’s assertion that the CLEA failed to provide the Tooele County sheriff’s office, as the LLEA, with the needed law enforcement authority lacked adequate legal or factual support. Next, the Board found that part of contention Utah Security-C was inadmissible because “a [CLEA] ha[d] been shown to exist between the LLEA [or the sheriff’s office], [BIA], and the Skull Valley Band” and that the agreement “ha[d] not been subjected to an adequately supported legal or factual challenge by the State.” *Id.* at 370. Finally, the Board admitted another portion of Security-C that it limited to the issue whether the “LLEA will provide a ‘timely’ response to an unauthorized entry.” *Id.*

Following this ruling, the State moved for reconsideration based on the fact it recently had been given access to the CLEA and had identified problems with its enactment. In an August 5, 1998 ruling, the Board found reconsideration appropriate and admitted Security-A and Security-B as well as the remaining part of Security-C. See LBP-98-17, 48 NRC 69 (1998). The Board explained:

Our ruling here means the State may pursue its Security-C claim of regulatory noncompliance that the Tooele County sheriff's office cannot act as the designated LLEA because the alleged failure to comply with the requirements of Utah Code Annotated section 11-13-5 regarding approval of the June 1997 agreement arguably would deprive the sheriff's office of law enforcement authority on the Skull Valley Band reservation. Further, we admit contentions Security-A and Security-B on the same basis.

Id. at 75-76.

Thus, these three contentions, as admitted, allege that Tooele County's failure to approve the June 1997 CLEA creates a factual dispute about the validity of the section of the PSP that designated the Tooele County sheriff's office as the LLEA. Specifically, the State claimed that Tooele County did not comply with state statutory adoption requirements when it enacted this CLEA. Under Utah Code Ann. § 11-13-5 (1997):

Adoption of appropriate resolutions by the governing bodies of the participating public agencies are necessary before any [cooperative] agreement may enter into force.

Finding there was no evidence a written resolution had been passed by Tooele County relevant to the CLEA, the Board held that "the State has made a sufficient showing there is a genuine material dispute adequate to warrant further inquiry relative to the question whether the June 1997 agreement had been adopted by Tooele County [in accordance with section 11-13-5] so as to provide its officials with law enforcement authority at the Skull Valley Band reservation." *Id.* at 74.

As accepted by the Board for litigation, *id.* at 76-77, the three contentions thus read as follows:

SECURITY-A — Security Force Staffing

CONTENTION: The Applicant has failed to establish a detailed plan for security measures for physical protection of the proposed ISFSI as required by 10 C.F.R. § 72.180, including failure to demonstrate that it has adequate staffing capability to cope with or respond to safeguards contingency events.

* * * *

SECURITY-B — Equipment and Training

CONTENTION: The Applicant has not described the type or location of security equipment available to security force personnel, nor has the Applicant described adequate training for fixed site guards or armed response personnel.

* * * *

SECURITY-C — Local Law Enforcement

CONTENTION: The Applicant has not met the requirements of 10 C.F.R. Part 73, App. C, Contents of the Contingency Plan, Law Enforcement Assistance.

LBP-98-13, 47 NRC at 368, 369.

Thus, the Board found the question was whether, in the apparent absence of a written resolution, Tooele County complied with the “appropriate resolution” requirement of Utah Code section 11-13-5 in approving the CLEA. Without such a resolution, the Board suggested the effectiveness of the CLEA seemingly was in doubt, raising questions “about the Tooele County sheriff’s office status to act as the designated LLEA for the PFS facility in accordance with [the requirements of] 10 C.F.R. Part 73, App. C.” LBP-98-17, 48 NRC at 75.

As the forgoing makes apparent, under Utah law a CLEA among public agencies would enter into force only after it had been approved by Tooele County through an “appropriate resolution.” In a summary disposition motion filed on June 11, 1999, PFS now claims that subsequent events establish that BIA, the Skull Valley Band, and the Tooele County sheriff’s office have entered into a valid CLEA agreement. *See* [PFS] Motion for Summary Disposition of Contentions Utah Security-A and Security-B, and Partial Summary Disposition of Contention Utah Security-C (June 11, 1999) [hereinafter PFS Motion]. According to PFS, on September 1, 1998, a revised CLEA was approved and authorized by a written resolution of the Tooele County Board of Commissioners. During this meeting, the Commissioners voted “to approve Resolution 98-13 — Approving and Authorizing the Cooperative Law Enforcement Agreement (CLEA) Between Tooele County, the Bureau of Indian Affairs and the Skull Valley Band of Goshute Indians.” *Id.* exh. 1, at 12 (Tooele County Board of Commissioners Sept. 1, 1998 meeting minutes). PFS now contends that the August 1998 CLEA is an “appropriate resolution” and satisfies the Utah Code requirements. To this end, PFS has provided copies of both the August 1998 CLEA and the resolution passed by the Commissioners. *See id.* at 2-3, 6-7, exh. 1.

In its July 1, 1999 response to the motion, the Staff agrees with PFS’s claim that a procedurally valid CLEA is now in force. Referring to the September 1, 1998 resolution by Tooele County Board of Commissioners that ratified the CLEA, the Staff concludes that “an approved cooperative law enforcement agreement has been submitted, providing assurance that the Tooele County sheriff’s office can act as the LLEA for the PFS facility.” NRC Staff’s Statement of Position Concerning Group I Contentions (June 15, 1999) at 23.

As the contentions’ sponsor, the State does not directly challenge the PFS motion for summary disposition. Instead, it asserts that the Tooele County Commissioners’ approval of the August 1998 CLEA does not mean that the sheriff’s office has an obligation to respond to incidents at the Skull Valley Reservation. *See* [State] Response to [PFS] Motion for Summary Disposition

(July 1, 1999) at 2 [hereinafter State Response]. The State alleges that there “is nothing in the record to support reliance by PFS on law enforcement assistance from the Tooele County Sheriff.” *Id.* It maintains that the 1998 CLEA resolution was adopted without reference to PFS and that the county had not entered into an agreement allowing PFS to locate on the reservation at the time of this adoption. Therefore, the State concludes that even if the CLEA was properly adopted, Tooele County gave its approval without contemplating the role the sheriff’s office would be required to play on the reservation in order to comply with section 73.51. *See id.* at 2-3. It requests that the Staff require a “written agreement or understanding between Tooele County and PFS, that proves that PFS has ‘documented liaison with a LLEA’ as required by 10 C.F.R. § 73.51(d).” *Id.* at 3.

II. ANALYSIS

A party to an NRC proceeding is entitled to summary disposition on any or all matters

if the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law.

10 C.F.R. § 2.749(d). As with the analogous Rule 56 of the Federal Rules of Civil Procedure, the movant bears the initial burden of making the requisite showing that there is no genuine issue as to any material fact, which it attempts to do by means of a required statement of material facts and any supporting materials that accompany the dispositive motion. An opposing party must counter each adequately supported material fact with its own statement of material facts in dispute and supporting materials, or the movant’s facts will be deemed admitted. *See Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993).

In this instance, PFS has provided a statement of material facts, accompanied by two supporting documents, the Comprehensive Law Enforcement Agreement of August 7, 1998, and Resolution 98-13 by which the Tooele County Board of Commissioners approved the aforementioned agreement. These materials show that the deficiencies alleged in support of contentions Security-A, Security-B, and Security-C have been remedied by Tooele County’s adoption of the 1998 CLEA by “appropriate resolutions.”

As we have previously noted, under Utah Code Ann. § 11-13-5, local governing bodies like Tooele County are required to adopt cooperative agreements through “appropriate resolutions” before they enter into force. Further, resolutions adopted by municipalities must “be in writing before the vote is taken.” Utah Code

Ann. § 10-3-506 (1997). As the basis for its contentions, the State charged that Tooele County Board of Commissioners failed to comply with section 11-13-5 because the resolution they approved was not in written form. However, the Tooele Commissioners have rectified this procedural error with the approval and authorization of Resolution 98-13 on September 1, 1998. This written resolution accepted and approved the August 1998 CLEA and was executed by the Tooele Commission Chairman the following day. Also, as is evidenced by item nine of the "Minutes of the Regular Meeting of the Tooele County Board of Commissioners Held September 1, 1998," which is included with the PFS motion, Resolution 98-13 was duly approved. Therefore, in terms of the county's participation, the CLEA was ratified in a manner that complies with the requirements of Utah Code section 11-13-5 and by its terms provides the Tooele County sheriff's office with law enforcement authority on the Skull Valley Goshute Reservation.

As we have noted, the State does not directly challenge PFS's request for summary disposition. The State certainly does not deny that the August 1998 CLEA was adopted in compliance with the procedural requirements set out in the Utah Code. Instead, the State seeks to reintroduce an issue relative to contentions Security-A, Security-B, and Security-C that was rejected by the Board in our previous decision in LBP-99-7, 49 NRC 124 (1999). There, concluding that the State failed to satisfy the five-factor balancing test found in 10 C.F.R. § 2.714(a)(1) that governs the late admission of contentions, we refused to admit a late-filed contention based upon a statement by the Tooele County Attorney that the State claimed established PFS cannot fulfill the requirements of 10 C.F.R. § 73.51(d)(6) and 10 C.F.R. Part 73. *See id.* at 127; *see also* State Response at 2-3. Having previously refused to entertain this matter, the Board now declines to revisit that issue as it would be required to do if we were to consider whether we can impose any requirement that the Staff obtain a written agreement as requested by the State.

We thus conclude that PFS has met its burden of establishing that there are no material facts in dispute and that, relative to the issues admitted in the Board's August 5, 1998 ruling in LBP-98-17, summary disposition should be entered in favor of PFS in toto on contentions Utah Security-A and Security-B and partially on contention Security-C. As admitted, these issues are, for all practical purposes, now moot.

III. CONCLUSION

With regard to contentions Security-A, Security Force Staffing, Security-B, Equipment and Training, and Security-C, Local Law Enforcement, as they were admitted relative to the question of whether a CLEA was appropriately adopted by Tooele County so as to be effective, PFS has established there is no genuine issue

as to any material fact and it is entitled to a judgment in its favor as a matter of law.

For the foregoing reasons, it is, this 27th day of August 1999, ORDERED that the June 11, 1999 PFS motion for summary disposition regarding contentions Security-A and Security-B, and for partial summary disposition regarding contention Security-C is *granted* and, for the reasons given in this Memorandum and Order, a decision regarding these contentions is rendered in favor of PFS.

THE ATOMIC SAFETY AND
LICENSING BOARD*

G. Paul Bollwerk, III
ADMINISTRATIVE JUDGE

Dr. Jerry R. Kline
ADMINISTRATIVE JUDGE

Dr. Peter S. Lam
ADMINISTRATIVE JUDGE

Rockville, Maryland
August 27, 1999

*Copies of this Memorandum and Order were sent this date by Internet e-mail transmission to counsel for (1) Applicant PFS; (2) Intervenors Skull Valley Band of Goshute Indians, Ohngo Gaudadeh Devia, Confederated Tribes of the Goshute Reservation, Southern Utah Wilderness Alliance, and the State; and (3) the Staff.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman
Dr. Jerry R. Kline
Dr. Peter S. Lam

In the Matter of

Docket No. 72-22-ISFSI
(ASLBP No. 97-732-02-ISFSI)

PRIVATE FUEL STORAGE, L.L.C.
(Independent Spent Fuel Storage
Installation)

August 27, 1999

In this proceeding concerning the application of Private Fuel Storage, L.L.C. (PFS), under 10 C.F.R. Part 72 to construct and operate an independent spent fuel storage installation (ISFSI), acting pursuant to 10 C.F.R. § 2.749, the Licensing Board grants summary disposition in favor of PFS in connection with contention Utah G, Quality Assurance.

RULES OF PRACTICE: SUMMARY DISPOSITION (BURDEN OF PERSUASION; BURDEN OF PROOF)

As with the analogous Rule 56 of the Federal Rules of Civil Procedure, the movant bears the initial burden of making the requisite showing that there is no genuine issue as to any material fact, which it attempts to do by means of a required statement of material facts and any supporting materials that accompany the dispositive motion. An opposing party must counter each adequately supported material fact with its own statement of material facts in dispute and supporting materials, or the movant's facts will be deemed admitted. *See Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993). Ultimately, however, the burden remains with the movant to

establish that no material facts are in dispute so that it is entitled to a dispositive ruling in its favor. *See Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), ALAB-443, 6 NRC 741, 753-54 (1977) (if evidence before presiding officer does not establish absence of genuine issue of material fact, summary disposition motion must be denied even if unopposed).

TECHNICAL ISSUE DISCUSSED

The following technical issue is discussed: quality assurance.

MEMORANDUM AND ORDER (Granting Motion for Summary Disposition Regarding Contention Utah G)

Applicant Private Fuel Storage, L.L.C. (PFS), has requested that summary disposition be entered in its favor regarding contention Utah G, Quality Assurance. As admitted, that contention details Intervenor State of Utah's (State) claim that the PFS quality assurance (QA) program for its proposed Skull Valley, Utah independent spent fuel storage installation (ISFSI) fails to satisfy the requirements of 10 C.F.R. Part 72, Subpart G. PFS now asserts there is no genuine issue as to any material fact relevant to this contention so that, in accordance with 10 C.F.R. § 2.749, it is entitled to a determination on this contention as a matter of law. The NRC Staff supports this request, while the State, the contention's sponsor, does not directly oppose summary disposition, having declined to file a response to PFS's motion.

For the reasons described below, on this issue we grant summary disposition in favor of PFS.

I. BACKGROUND

Under 10 C.F.R. § 72.24(n), an ISFSI applicant like PFS must provide:

A description of the quality assurance program that satisfies the requirements of subpart G The description must identify the structures, systems, and components important to safety. The program must also apply to managerial and administrative controls used to ensure safe operation of the ISFSI or [multiple retrievable storage facility].

ISFSI quality assurance is also addressed by section 72.140(c) under which an applicant is required to "file a description of its quality assurance program, including a discussion of which requirements of [Subpart G] are applicable and how

they will be satisfied” Additionally, an applicant’s QA organization “must have sufficient authority and organizational freedom to identify quality problems; to initiate, recommend, or provide solutions; and to verify implementation of solutions” in order to comply with section 72.142(b).

In filing contention Utah G, the State challenged the sufficiency of the PFS QA program as outlined in the Safety Analysis Report (SAR) accompanying PFS’s application for its Skull Valley facility, alleging that the QA description in the PFS SAR failed to meet these NRC requirements. In our April 1998 decision addressing the validity of Intervenor contentions, we admitted contention Utah G, which reads as follows:

UTAH G — Quality Assurance

CONTENTION: The Applicant’s Quality Assurance (“QA”) program is utterly inadequate to satisfy the requirements of 10 C.F.R. Part 72, Subpart G.

LBP-98-7, 47 NRC 142, 252, *reconsideration granted in part and denied in part on other grounds*, LBP-98-10, 47 NRC 288, *aff’d on other grounds*, CLI-98-13, 48 NRC 26 (1998). Although the Board rejected bases two and three of the contention as impermissible challenges to agency regulatory program, rulemaking and/or generic determinations, it accepted the contention with “its bases one and four that assert a lack of detail in the PFS QA program description and a failure to demonstrate the independence of the PFS QA program.” LBP-98-7, 47 at 188.

Relying on its statement outlining twenty-four material facts not in dispute, the accompanying affidavit of former PFS QA committee chairman John G. Thorgersen, and the discovery deposition of State QA witness Dr. Marvin Resnikoff, PFS now argues that summary disposition is proper because the two issues raised by contention Utah G — the level of detail in its QA plan and the independence of its QA organization — have been resolved. PFS asserts that, in conjunction with its SAR, its QA program description, as provided to the Staff in August 1996 and revised in May 1999, complies with applicable standards because that plan contains a level of detail adequate for Staff review of the commitments contained within the plan description. PFS also declares that its QA plan ensures that the QA organization has the independence needed to perform its QA functions. *See* [PFS] Motion for Summary Disposition of Utah G (June 28, 1999) at 4-10 [hereinafter PFS Motion].

Agreeing that there are no issues of material fact in dispute, the Staff supports the PFS dispositive motion. As is explained in the affidavit of NRC Office of Nuclear Materials Safety and Safeguards safety inspection engineer Thomas O. Matula that accompanies the Staff’s response, after reviewing the PFS SAR and its QA plan and supporting documents, the Staff has determined that the level of detail in the QA plan and the independence of the PFS QA organization are sufficient, making summary disposition proper for this issue. *See* NRC Staff’s Response to

[PFS] Motion for Summary Disposition of Utah Contention G (Quality Assurance) (July 19, 1999) at 7-8, unnumbered exh. 1 [hereinafter Staff Response]; *see also* NRC Staff's Statement of Its Position Concerning Group I Contentions (June 15, 1999) at 9-13.

Finally, as previously indicated, the State, as the contention's sponsor, does not directly challenge the PFS motion, having chosen not to file a response to the PFS summary disposition request or the Staff's response. *See* [State] Response to [PFS] Motion for Summary Disposition of Utah Contention G (July 27, 1999) at 1.

II. ANALYSIS

A party to an NRC proceeding is entitled to summary disposition on any or all matters

if the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law.

10 C.F.R. § 2.749(d). As with the analogous Rule 56 of the Federal Rules of Civil Procedure, the movant bears the initial burden of making the requisite showing that there is no genuine issue as to any material fact, which it attempts to do by means of a required statement of material facts and any supporting materials that accompany the dispositive motion. An opposing party must counter each adequately supported material fact with its own statement of material facts in dispute and supporting materials, or the movant's facts will be deemed admitted. *See Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993). Ultimately, however, the burden remains with the movant to establish that no material facts are in dispute so that it is entitled to a dispositive ruling in its favor. *See Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), ALAB-443, 6 NRC 741, 753-54 (1977) (if evidence before presiding officer does not establish absence of genuine issue of material fact, summary disposition motion must be denied even if unopposed).

Regarding basis one of contention Utah G, PFS asserts that the level of detail in its QA plan complies with the governing QA requirements of Subpart G. PFS acknowledges that under 10 C.F.R. § 72.140(c) it is required to file a QA program description that includes a discussion of the applicable requirements and how they will be satisfied. PFS asserts, however, that its QA plan furnishes enough information for the Staff to analyze whether its plan satisfies the terms of Subpart G.

In this regard, PFS declares that under the Appeal Board's analogous analysis in *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-

734, 18 NRC 11 (1983), the focus of the Staff's review is the commitments contained within the QA plan, not the details of the implementing methodology that may be developed at a later date. *See* PFS Motion at 5 & n.8. Under this interpretation, PFS asserts, the commitments within its QA plan are fully sufficient to satisfy 10 C.F.R. § 72.24. *Id.* at 5-6. PFS also maintains that the inadequacies alleged in the State's contention are "either immaterial, because the information is not required, or factually erroneous, because the material is actually present." *Id.* at 6.

Responding to the State's basis four claim that its QA program lacks the required independence, PFS declares that its "QA organization has sufficient independence to perform its QA functions during the licensing, construction, and operation of the facility." *Id.* at 7. More specifically, regarding the section 72.142(b) requirement that a QA organization have access to a management level that can ensure cost and schedule concerns will not override QA considerations, PFS notes that its QA committee reports directly to the PFS Board of Directors, the highest level of the organization. Further, addressing the State's concern that there is not a defined relationship between the PFS architect/engineer (A/E) and the PFS QA committee, PFS references the SAR and the QA plan provisions that discuss how the QA committee must approve, review, and audit the A/E and has authority to stop work if there is project QA noncompliance. *See id.*

As to the State's allegation that the facility SAR did not clearly describe the allocation of day-to-day organizational and scheduling responsibilities and the functional interrelations within the PFS organization, PFS declares that the SAR and the QA plan show that the Project Manager and the A/E, not the QA committee, have day-to-day project design, cost, and schedule responsibilities as well as outline the interaction between the QA organization and other PFS units. Finally, responding to the State's concern about compliance with 10 C.F.R. § 72.144(d) relative to each PFS unit's control over the adequacy of the QA in its own program, PFS maintains that this is based on a misunderstanding of the role of the unit manager relative to QA. According to PFS, unit managers are not to determine their unit's QA performance, but rather are to review that performance to ensure quality project design, construction, and operation, subject to an independent audit by the PFS QA organization. *See id.* at 8-9.

On this basis, PFS declares, and the Staff agrees, that there are no material factual issues remaining in dispute relative to contention Utah G, thereby entitling PFS to summary disposition in its favor on this issue.¹ For its part, the State has made no effort to refute this conclusion. After reviewing the PFS and Staff submissions, which include a copy of the PFS QA program description, *see* PFS

¹ Citing his deposition testimony, both PFS and the Staff also assert that Dr. Resnikoff cannot qualify as an expert for the State on QA matters. *See* PFS Motion at 3; Staff Response at 7 n.7. Because the State has not provided any response to the PFS motion, we need not decide this matter.

Motion exh. 1, attachs. 3, 5, we likewise have concluded that the matters of QA plan detail and QA organization independence that were of concern to the State both appear to have been adequately addressed in the PFS SAR and its QA plan. Accordingly, we grant summary disposition in favor of PFS on contention Utah G.

III. CONCLUSION

Relative to contention Utah G, Quality Assurance, and the issues of QA plan detail and QA organization independence that were admitted to this proceeding, PFS has established there is no genuine dispute as to any material fact and it is entitled to a judgment in its favor as a matter of law.

For the foregoing reasons, it is, this 27th day of August 1999, ORDERED that the June 28, 1999 PFS motion for summary disposition regarding contention Utah G is *granted* and, for the reasons given in this Memorandum and Order, a decision regarding this contention is rendered in favor of PFS.

THE ATOMIC SAFETY AND
LICENSING BOARD²

G. Paul Bollwerk, III
ADMINISTRATIVE JUDGE

Dr. Jerry R. Kline
ADMINISTRATIVE JUDGE

Dr. Peter S. Lam
ADMINISTRATIVE JUDGE

Rockville, Maryland
August 27, 1999

²Copies of this Memorandum and Order were sent this date by Internet e-mail transmission to counsel for (1) Applicant Private Fuel Storage, L.L.C.; (2) Intervenors Skull Valley Band of Goshute Indians, Ohngo Gaudadeh Devia, Confederated Tribes of the Goshute Reservation, Southern Utah Wilderness Alliance, and the State of Utah; and (3) the NRC Staff.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman
Dr. Jerry R. Kline
Dr. Peter S. Lam

In the Matter of

Docket No. 72-22-ISFSI
(ASLBP No. 97-732-02-ISFSI)

PRIVATE FUEL STORAGE, L.L.C.
(Independent Spent Fuel Storage
Installation)

August 27, 1999

In this proceeding concerning the application of Private Fuel Storage, L.L.C. (PFS), under 10 C.F.R. Part 72 to construct and operate an independent spent fuel storage installation (ISFSI), acting pursuant to 10 C.F.R. § 2.749, the Licensing Board grants summary disposition in favor of PFS in connection with contention Utah M, Probable Maximum Flood.

RULES OF PRACTICE: SUMMARY DISPOSITION (BURDEN OF PERSUASION; BURDEN OF PROOF)

As with the analogous Rule 56 of the Federal Rules of Civil Procedure, the movant bears the initial burden of making the requisite showing that there is no genuine issue as to any material fact, which it attempts to do by means of a required statement of material facts and any supporting materials that accompany the dispositive motion. An opposing party must counter each adequately supported material fact with its own statement of material facts in dispute and supporting materials, or the movant's facts will be deemed admitted. *See Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993). Ultimately, however, the burden remains with the movant to

establish that no material facts are in dispute so that it is entitled to a dispositive ruling in its favor. See *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), ALAB-443, 6 NRC 741, 753-54 (1977) (if evidence before presiding officer does not establish absence of genuine issue of material fact, summary disposition motion must be denied even if unopposed).

TECHNICAL ISSUE DISCUSSED

The following technical issue is discussed: flood protection.

MEMORANDUM AND ORDER (Granting Motion for Summary Disposition Regarding Contention Utah M)

Applicant Private Fuel Storage, L.L.C. (PFS), has requested that summary disposition be entered in its favor regarding contention Utah M, Probable Maximum Flood, because that issue is now moot. As admitted, that contention details Intervenor State of Utah's (State) assertion that, as required by 10 C.F.R. §§ 72.24(d)(2), 72.98, PFS failed to estimate accurately the probable maximum flood (PMF) in its application for a license to construct and operate an independent spent fuel storage installation (ISFSI) in Skull Valley, Utah. According to PFS, there is no genuine issue as to any material fact relevant to this contention so that, in accordance with 10 C.F.R. § 2.749, it is entitled to a determination in its favor on this contention as a matter of law. The NRC Staff supports this request, while the State, as the contention's sponsor, does not directly oppose the PFS request and declines to file a response to the motion for summary disposition.

For the reasons described below, we grant summary disposition in favor of PFS on this issue.

I. BACKGROUND

As submitted in November 1997, contention Utah M challenged the accuracy of PFS's PMF calculation that, as an ISFSI applicant, PFS is required to perform in order to evaluate the ability of its proposed site to withstand possible flooding. Under 10 C.F.R. § 72.122(b)(2), ISFSI structures, systems, and components important to safety must be designed to withstand the effect of natural phenomena, such

as floods.¹ Further, the standard review plan for licensing ISFSIs indicates that an applicant's site assessment process must include a calculation of the greatest probable flood or PMF of the region surrounding a proposed site. See Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, NUREG-1567, Standard Review Plan for Spent Fuel Dry Storage Facilities at 2-8 to -9 (draft Oct. 1996). The State claimed that the PFS PMF calculation underestimated the flood volume for the area and failed to satisfy the dictates of 10 C.F.R. § 72.24(d)(2), which requires that in its Safety Analysis Report (SAR) an ISFSI applicant must discuss the ability of facility structures to withstand accidents and natural disasters such as floods. The State asserted that the underestimations contained in its PMF calculations meant that PFS could not prove adequate facility design as required by section 72.24(d)(2). See [State] Contentions on the Construction and Operating License Application by [PFS] for an Independent Spent Fuel Storage Facility (Nov. 23, 1997) at 96-97.

In an April 22, 1998 decision, the Board admitted a number of the State's contentions regarding the sufficiency of the PFS ISFSI proposal, including contention Utah M. As admitted, contention Utah M reads:

UTAH M — Probable Maximum Flood

CONTENTION: The application fails to accurately estimate the Probable Maximum Flood (PMF) as required by 10 C.F.R. § 72.98, and subsequently, design structures important to safety are inadequate to address the PMF; thus, the application fails to satisfy 10 C.F.R. § 72.24(d)(2).

1. The Applicant's determination of the PMF drainage area to be 26 sq. miles is inaccurate because the Applicant has failed to account for all drainage sources that may impact the ISFSI site during extraordinary storm events.
2. In addition to design structures important to safety being inadequate to address the PMF, the consequences of an inaccurate PMF drainage area may negate the Applicant's assertion that the facility is "flood dry."

LBP-98-7, 47 NRC 142, 253-54, *reconsideration granted in part and denied in part on other grounds*, LBP-98-10, 47 NRC 288, *aff'd on other grounds*, CLI-98-13, 48 NRC 26 (1998).

Relying on an eleven item statement of material facts not in dispute and the supporting affidavits of Stone & Webster Engineering Corporation (S&W) program manager Dr. George H.C. Liang and S&W project engineer Jerry Cooper, along

¹ As it did in its response to the State's original contention, the Staff suggests that in addition to (or in lieu of) section 72.98, the contention Utah M should reference 10 C.F.R. § 72.122(b) as its established design criteria for the protection of structures important to safety against environmental conditions and natural phenomena, including floods. See Staff Response at 3 n.3. The absence of any reference in contention Utah M to section 72.122(b) has no substantive impact on our ruling here, however.

with assorted discovery materials,² PFS now asserts that the bases for the contention have been eradicated by its revision of the PMF in accordance with the concerns of the State and the Staff. PFS also claims that the revised PMF, which has been incorporated into section 2.4 of its SAR by a May 1999 license application amendment, satisfies applicable NRC regulations. As a result of these revisions, PFS argues, there are no longer material facts in dispute and summary disposition in its favor is proper. *See* [PFS] Motion for Summary Disposition of Utah Contention M — Probable Maximum Flood (June 28, 1999) at 4-7 [hereinafter PFS Motion].

For its part, the Staff champions the PFS dispositive motion, stating that all the material facts presented by PFS are correct. Supported by the affidavit of Colorado State University civil engineering professor Dr. Steven R. Abt, the Staff maintains the PFS revisions, first submitted as part of its responses to a December 1998 Staff requests for additional information (RAI), fully rectify the inaccuracies contained in the initial PMF that formed the basis for admission of contention Utah M. The Staff asserts that the revised PMF provides an accurate basis for PFS's conclusion that the design structures for its Skull Valley ISFSI adequately satisfy the applicable regulatory requirements. *See* NRC Staff's Response to [PFS] Motion for Summary Disposition of Utah Contention M — Probable Maximum Flood (July 19, 1999) at 8-9 [hereinafter Staff Response]; *see also* NRC Staff's Statement of Its Position Concerning Group I Contentions (June 15, 1999) at 17-18. The State, on the other hand, has declined to file a response to the PFS motion or the Staff's response. *See* [State] Response to [PFS] Motion for Summary Disposition of Utah Contention M (July 27, 1999) at 1.

II. ANALYSIS

A party to an NRC proceeding is entitled to summary disposition on any or all matters

if the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law.

10 C.F.R. § 2.749(d). As with the analogous Rule 56 of the Federal Rules of Civil Procedure, the movant bears the initial burden of making the requisite showing that there is no genuine issue as to any material fact, which it attempts to do by means of a required statement of material facts and any supporting materials

²There are no objections by PFS, the Staff, or the State to the qualifications or expertise of the various affiants whose statements are relied upon to provide support for other parties' assertions regarding the material factual matters at issue in connection with contention Utah M.

that accompany the dispositive motion. An opposing party must counter each adequately supported material fact with its own statement of material facts in dispute and supporting materials, or the movant's facts will be deemed admitted. *See Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993). Ultimately, however, the burden remains with the movant to establish that no material facts are in dispute so that it is entitled to a dispositive ruling in its favor. *See Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), ALAB-443, 6 NRC 741, 753-54 (1977) (if evidence before presiding officer does not establish absence of genuine issue of material fact, summary disposition motion must be denied even if unopposed).

PFS's summary disposition motion is based upon its claim that the revised PMF analysis included in its response to the Staff's December 1998 RAI, as incorporated into section 2.4 of its SAR in May 1999, establishes that there are no longer material facts in dispute. In this instance, PFS has provided a statement of material facts, accompanied by the Liang and Cooper affidavits, excerpts from the deposition of State flood expert David B. Cole, and excerpts from the State's second amended discovery response. PFS asserts that these documents establish that the revised PMF corrects the underestimations that formed the basis of the concerns raised by the State in contention Utah M.

Initially, PFS declares that the current PMF accounts for all the drainage sources that may impact the ISFSI site during extraordinary weather. PFS has increased the area analyzed in the revised PMF from the 26 square miles in the original PMF to 270 square miles. This expansion addresses State concerns that the initial PMF was inaccurate because it failed adequately to explore all the possible drainage sources in the area. By expanding the PMF to 270 square miles, PFS asserts that its analysis both satisfies and exceeds the 240 square miles suggested by NRC Staff and the State's demand for a more expansive exploration of possible flooding. Furthermore, referencing the State's second discovery responses, PFS claims the State has acknowledged this "is an appropriate drainage area for calculating the PMF." PFS Motion at 3 (footnote omitted).

PFS also maintains that it "has adopted ultra conservative assumptions for calculating the PMF [as] suggested by the NRC, which are collectively more conservative than the assumptions used by the State in its PMF calculations." *Id.* at 5. As a result, PFS's present design, based upon PFS's calculation of a flood infiltration flow rate of 85,000 cubic feet per second (cfs) rather than the State's calculation of 64,500 cfs, is 31% larger than the design estimate advocated by the State. *See id.*

Next, PFS asserts that through the revisions, the current PMF complies with the requirements of 10 C.F.R. § 72.24(d)(2) by providing sufficient information to analyze the effects of possible floods on facility structures. The revised PMF contains data adequate to support PFS's conclusion that there will be no adverse impact on health or safety at the maximum probable flood level. PFS asserts

that under the revised PMF, the facility and all appropriate structures, systems, and components (SSCs) important to safety will remain flood-dry because peak flood level will be at least 5 feet below the ISFSI site's lowest elevations. PFS also describes the ways in which the design of the facility access road ensures that flood waters will remain away from the facility. *See* PFS Motion at 6-7. According to PFS, these conclusions, based upon the revised, accurate PMF, fulfill the demands of section 72.24(d)(2). This view, which likewise is advanced by the Staff, is not challenged by the State.

After reviewing the PFS and Staff submissions, we have concluded that the revised PMF seemingly has remedied the inaccuracies and inadequacies that formed the basis of contention Utah M and now satisfies the applicable regulatory requirements. Given that the changes made to the PMF exceed those advocated as necessary by the State at the contention's admission, we conclude that summary disposition in favor of PFS is appropriate in that this contention is now moot.

III. CONCLUSION

With regard to contention Utah M, Probable Maximum Flood, having revised its flood calculations in a manner that fully addresses the analytical deficiencies noted by the State relative to the admission of this contention, PFS has established there is no genuine issue as to any material fact and it is entitled to a judgment in its favor as a matter of law.

For the foregoing reasons, it is, this 27th day of August 1999, ORDERED that the June 28, 1999 PFS motion for summary disposition regarding contention

Utah M is *granted*, and, for the reasons given in this Memorandum and Order, a decision regarding this contention is rendered in favor of PFS.

THE ATOMIC SAFETY AND
LICENSING BOARD³

G. Paul Bollwerk, III
ADMINISTRATIVE JUDGE

Dr. Jerry R. Kline
ADMINISTRATIVE JUDGE

Dr. Peter S. Lam
ADMINISTRATIVE JUDGE

Rockville, Maryland
August 27, 1999

³Copies of this Memorandum and Order were sent this date by Internet e-mail transmission to counsel for (1) Applicant PFS; (2) Intervenors Skull Valley Band of Goshute Indians, Ohngo Gaudadeh Devia, Confederated Tribes of the Goshute Reservation, Southern Utah Wilderness Alliance, and the State; and (3) the Staff.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

**G. Paul Bollwerk, III, Chairman
Dr. Jerry R. Kline
Dr. Peter S. Lam**

In the Matter of

**Docket No. 72-22-ISFSI
(ASLBP No. 97-732-02-ISFSI)**

**PRIVATE FUEL STORAGE, L.L.C.
(Independent Spent Fuel Storage
Installation)**

August 30, 1999

In this proceeding concerning the application of Private Fuel Storage, L.L.C. (PFS), under 10 C.F.R. Part 72 to construct and operate an independent spent fuel storage installation (ISFSI), acting pursuant to 10 C.F.R. § 2.749, the Licensing Board grants summary disposition in favor of PFS in connection with contention Utah B, License Needed for Intermodal Transfer Facility.

**RULES OF PRACTICE: SUMMARY DISPOSITION (BURDEN OF
PERSUASION; BURDEN OF PROOF)**

As with the analogous Rule 56 of the Federal Rules of Civil Procedure, the movant bears the initial burden of making the requisite showing that there is no genuine issue as to any material fact, which it attempts to do by means of a required statement of material facts and any supporting materials that accompany the dispositive motion. An opposing party must counter each adequately supported material fact with its own statement of material fact in dispute and supporting materials. If uncontroverted, the movant's facts will be deemed admitted. *See*

Advanced Medical Systems, Inc. (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993).

RULES OF PRACTICE: CONTENTIONS (CHALLENGE OF COMMISSION RULE)

Agency adjudications are not the proper forum for challenging applicable federal regulations. *See* LBP-98-7, 47 NRC 142, 184 (1998).

REGULATIONS: INTERPRETATION (10 C.F.R. PART 71)

The established regulatory scheme for the transportation of spent nuclear fuel is found in 10 C.F.R. Part 71 and the complementary Department of Transportation regulations and is applicable to a proposed rail to heavy-haul truck intermodal transfer point that would be utilized in shipping spent fuel to a proposed ISFSI. Because a presiding officer cannot go afield of what is required by these regulations, Intervenor concerns challenging this regulatory scheme, to the degree it desires that scheme to mirror the various requirements of 10 C.F.R. Part 72, must be pursued as an effort to change those rules. *Compare* 10 C.F.R. § 2.758.

TECHNICAL ISSUE DISCUSSED

The following technical issue is discussed: transportation of nuclear materials.

**MEMORANDUM AND ORDER
(Granting Motion for Summary Disposition Regarding
Contention Utah B)**

Applicant Private Fuel Storage, L.L.C. (PFS), has requested that summary disposition be entered in its favor regarding contention Utah B, License Needed for Intermodal Transfer Facility. As admitted, the contention details the claim of Intervenor State of Utah (State) that the PFS application for a 10 C.F.R. Part 72 independent spent fuel storage installation (ISFSI) in Skull Valley, Utah, is incomplete because a planned Intermodal Transfer Point (ITP), to be located at Rowley Junction, Utah, is a de facto interim spent storage facility that does not comply with the requirements of 10 C.F.R. Part 72. According to PFS, however, there is no genuine issue as to any material fact relevant to this contention so that, in accordance with 10 C.F.R. § 2.749, it is entitled to a determination in its favor on this contention as a matter of law. The NRC Staff supports the motion for

summary disposition while the State opposes it on the ground that genuine issues of material fact remain in dispute.

For the reasons described below, on this issue we grant summary disposition in favor of PFS. In addition, because portions of other contentions admitted in this proceeding concern the ITP, we provide the parties an opportunity to make a filing outlining their positions on the impact of this ruling.

I. BACKGROUND

PFS submitted its proposal to construct and operate an independent spent fuel storage installation (ISFSI) on the reservation of the Skull Valley Band of Goshute Indians (Skull Valley Band) in a June 1997 license application. As detailed in the safety analysis report that accompanies the application, *see* [PFS] Safety Analysis Report at 4.5-3 (rev. 2 Aug. 1998), if PFS decides to transport the shipping casks containing spent reactor fuel by heavy-haul trucks from the Union Pacific railroad mainline to the PFS facility some 25 miles to the south, the ITP, which consists of rail sidings, a tractor/trailer yard, a gantry crane, and a weather enclosure, will serve as the point at which the shipping casks are transferred from railroad cars to trucks.¹ According to PFS, these casks will remain both sealed and in shipment mode throughout the time they remain at the ITP. *See* [PFS] Motion for Summary Disposition of Contention Utah B (June 11, 1999) at 4 [hereinafter PFS Motion].

The agency's regulations on transportation of spent nuclear fuel, 10 C.F.R. Part 71, make it clear that both NRC and the United States Department of Transportation (DOT) regulate the shipment of spent nuclear fuel. A memorandum of understanding, 44 Fed. Reg. 38,690 (1979), delegates responsibilities to each: NRC regulates transportation licensing, packaging, and physical protection while DOT regulates transportation preparation and operations. For its part, NRC licenses the shipment of spent nuclear fuel by general license granted under 10 C.F.R. § 71.12. As is pertinent here, that section provides:

(a) A general license is hereby issued to any licensee of the Commission to transport, or to deliver to a carrier for transport, licensed material in a package for which a license, certificate of compliance, or other approval has been issued by the NRC.

10 C.F.R. § 71.12(a).

In its contention Utah B, the State claimed that the size and nature of the operations to be performed at the Rowley Junction ITP mandated PFS compliance with the requirements of 10 C.F.R. Part 72, which governs the ISFSI storage of

¹As we have noted elsewhere in this proceeding, currently the PFS preferred transportation option is to move the shipping casks from the rail mainline to the facility using a spur line running from Low Junction, Utah. *See* LBP-98-29, 48 NRC 286, 289 (1998).

spent nuclear fuel and high-level radioactive waste. In admitting contention Utah B, the Board accepted those portions of the contention in which the State claimed that the ITP was “not merely part of the transportation but a de facto interim spent fuel storage facility” and that depending on how this material was handled, PFS might be required to provide “a security plan, and emergency plan and radiation dose plan” in compliance with 10 C.F.R. Part 72. LBP-98-7, 47 NRC 142, 184, *reconsideration granted in part and denied in part on other grounds*, LBP-98-10, 47 NRC 288, *aff’d on other grounds*, CLI-98-13, 48 NRC 26 (1998). In making this determination, the Board held:

In this instance, there is a genuine legal/factual issue that merits further inquiry as to whether the PFS scheme for operation of the Rowley Junction ITP will cause the materials delivered there to remain within the possession and control of an entity or entities that comply with the terms of the general license issued under section 71.12 or will be handled in such a way as to require specific licensing under Part 72.

Id. at 185 (citation omitted).² The contention, as admitted by the Board, reads as follows:

UTAH B — License Needed for Intermodal Transfer Facility

CONTENTION: PFS’s application should be rejected because it does not seek approval for receipt, transfer, and possession of spent nuclear fuel at the Rowley Junction Intermodal Transfer Point (“ITP”), in violation of 10 C.F.R. § 72.6(c)(1), in that the Rowley Junction operation is not merely a part of the transportation operation but a de facto interim spent fuel storage facility at which PFS will receive, handle, and possess spent nuclear fuel. Because the ITP is an interim spent fuel storage facility, it is important to provide the public with the regulatory protections that are afforded by compliance with 10 C.F.R. Part 72, including a security plan, an emergency plan, and radiation dose analyses.

Id. at 251.

In its pending motion for summary disposition, which is accompanied by an eleven item statement of material facts not in dispute, PFS argues there no longer are any genuine issues of material fact in dispute because the related questions posed by contention Utah B — whether the materials delivered to the ITP comply with the terms of section 71.12 and whether specific licensing under Part 72 is required — have been resolved. PFS argues that because it qualifies for the general license granted in section 71.12, it is authorized to undertake the activities proposed at the Rowley Junction ITP without a specific license issued under Part 72. This is so, PFS asserts, because its plan for ITP operation complies with applicable

² As originally submitted to the Board, contention Utah B also posed questions about the regulatory status of the Rowley Junction ITP under 10 C.F.R. Part 72 based on the volume and quantity of fuel shipments that would pass through the facility. See LBP-98-7, 47 NRC at 184. The Board, however, rejected these portions of the contention as “impermissibly challeng[ing] the Commission’s regulations or rulemaking-associated generic determinations, including the provisions of 10 C.F.R. Part 71.” *Id.*

NRC and DOT transportation and operational requirements. Relying upon the attached sworn declarations of several of those with substantial responsibility for the proposed project, PFS asserts that regulation under Part 72 is not warranted because all proposed activities at Rowley Junction will be within the scope of Part 71 as it governs the transportation of spent fuel. *See* PFS Motion at 3-4.

In addressing whether its activities are subject to regulation under the general license issued in Part 71 or require a specific license under Part 72, PFS maintains the agency already has held that a general license, not a specific license, is needed for the intermodal transportation of spent nuclear fuel. *See id.* at 8-9 & n.13 (citing *State of New Jersey* (Department of Law and Public Safety's Requests Dated October 8, 1993), CLI-93-25, 38 NRC 289, 294 (1993); *Shipments of Fuel from Long Island Power Authority's Shoreham Nuclear Power Station to Philadelphia Electric Co.'s Limerick Generating Station*, DD-93-22, 38 NRC 365 (1993) (ruling by director of NRC Office of Nuclear Materials Safety and Safeguards (NMSS) that specific licensing is not required for a licensee's intermodal transportation of spent nuclear fuel)). PFS claims that this proposition is further supported by the agency guidance in NUREG-0561 that addressed the physical protection of spent nuclear fuel during transportation. *See id.* at 9 & nn.14-15 (citing NMSS, U.S. Nuclear Regulatory Commission, NUREG-0561, Physical Protection of Shipments of Irradiated Reactor Fuel 2, 9, 33, 36 (rev. 1 1980), for the proposition guidance furnished operates on the premise transportation of spent nuclear fuel is governed by Part 71 and not Part 72).

The NRC Staff supports the PFS motion for summary disposition. Following PFS's initial June 1997 filing of its application and the Board's April 1998 decision to admit contention Utah B, the Staff in a December 10, 1998 requests for additional information (RAI) posed questions regarding the process by which the shipment of spent nuclear fuel would be transported between the rail mainline and the PFS facility using the Rowley Junction ITP. The Staff maintains that the PFS February 10, 1999 responses to the December 1998 RAI "establish that its operation of that [ITP] facility will be conducted in accordance with applicable NRC and DOT regulations" and that "materials delivered to the ITP will remain in the possession and control of an entity that will comply with the general license established for carriers, and will not be handled in a manner that requires licensing under 10 C.F.R. Part 72." NRC Staff's Response to [PFS] Motion for Summary Disposition of Contention Utah B (July 16, 1999) at 11-12 [hereinafter Staff Response]; *see also* NRC Staff's Statement of Its Position Concerning Group I Contentions (June 15, 1999) attach. at 1-3. Based on this information, the Staff contends there are no longer any material facts in dispute regarding contention Utah B so that summary disposition in favor of PFS is appropriate.

In opposing the PFS summary disposition motion, the State filed a supporting statement of material facts in dispute that lists twenty-three elements. As part of its argument, the State claims that PFS has failed to show how all activities at the

ITP will be regulated under Part 71, mandating NRC specific licensing under Part 72 so that potential dangerous situations do not “fall through the cracks” under the existing regulatory scheme. [State] Opposition to [PFS] Motion for Summary Disposition of Utah Contention B (July 16, 1999) at 6 [hereinafter State Response]. The State emphasizes the need to regulate under Part 72 the machinery that will lift and move the casks while at Rowley Junction. *See* State Response at 5-6. According to the State, Part 71 only regulates the “‘structural part of the package [cask] that could be used to lif[t] or tie down the package during transport’” and not stationary facilities or stationary structures like the gantry crane proposed by PFS. *Id.* at 8 (quoting 10 C.F.R. §71.87(h)). This is a regulatory void in Part 71 that must be filled by requiring the facility to comply with Part 72, the State declares. Otherwise, various of the PFS commitments regarding ITP operation that are outlined in its motion will be nothing more than unenforceable promises. *See id.* at 11; *see also* [State] Response to NRC Staff’s Response to [PFS] Motion for Summary Disposition of Contention Utah B (July 26, 1999) at 2-3 [hereinafter State Reply].

In addition, the State distinguishes the present proposal from the Commission’s *New Jersey* ruling and the *Shoreham* 10 C.F.R. § 2.206 director’s decision cited by PFS, arguing that the size of the casks, the radioactivity of materials to be carried, and the mode of transportation are markedly different from those outlined in the PFS plan. *See id.* at 9-10. Finally, the State maintains that additional safety requirements must be imposed by NRC because of the unique nature of the activities and environment around Rowley Junction — e.g., nearby bombing ranges, rocket engine transportation on the adjacent interstate highway, and the Great Salt Lake. The State concludes that these factors, combined with the fact that the ITP facility will store spent nuclear fuel, mean that NRC must require compliance with Part 72 including the completion of an accident analysis, an emergency plan, and safeguards in order to guarantee safety at the site. *See id.* at 11-12. Since the PFS plan for the ITP does not comply with these Part 72 requirements, the State argues that genuine issues of material fact remain so that summary disposition would be improper.

II. ANALYSIS

A. Legal Standard for Summary Disposition

A party to an NRC proceeding is entitled to summary disposition on any or all matters

if the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no

genuine issue as to any material fact and that the party . . . is entitled to a decision as a matter of law.

10 C.F.R. § 2.749(d). As with the analogous Rule 56 of the Federal Rules of Civil Procedure, the movant bears the initial burden of making the requisite showing that there is no genuine issue as to any material fact, which it attempts to do by means of a required statement of material facts and any supporting materials that accompany the dispositive motion. An opposing party must counter each adequately supported material fact with its own statement of material fact in dispute and supporting materials. If uncontroverted, the movant's facts will be deemed admitted. *See Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993).³

B. Board Ruling

The pivotal question regarding summary disposition for contention Utah B is whether the rail to truck transfer activity that is to be accomplished at the Rowley Junction ITP is a transportation function that falls within the scope of Part 71. In making this determination, we must also decide whether there could be any specific activities carried on at the ITP, such as cask handling, that would be governed by Part 72 such that a specific license is required.

The PFS February 1999 responses to the Staff's December 1998 RAI, *see* PFS Motion attach. 1, exh. 2 (February 10, 1998 PFS Response to Staff RAI), along with the affidavits of PFS technology committee chairman John A. Vincent (who is also a senior engineer nuclear fuel with GPU Nuclear) and PFS project director John Donnell,⁴ describe the nature of PFS's operation of the ITP as set forth in the ITP plan for the facility. And in doing so, they attempt to demonstrate that the spent fuel shipments to PFS's main storage facility via the Rowley Junction ITP would be regulated by Part 71 requirements.

³As the Staff has noted, *see* Staff Response at 8 n.8, in the interest of avoiding unnecessary evidentiary hearings, the use of summary disposition has been encouraged by both the Commission and the Appeal Board when there are no genuine issues of material fact in dispute. *See Statement of Policy on Conduct of Licensing Proceedings*, CLI-81-8, 13 NRC 452, 457 (1981); *see also Wisconsin Electric Power Co.* (Point Beach Nuclear Plant, Unit 1), ALAB-696, 16 NRC 1245, 1263 (1982); *Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station, Unit 1), ALAB-590, 11 NRC 542, 550 (1980). Nevertheless, in July 1998, the Commission directed that licensing boards should forego summary disposition absent a written justification explaining why permitting summary disposition motions to be filed would benefit the timeliness and efficiency of the proceeding. *See Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 20-21 (1998). In this instance, the Board has contemplated since April of last year that the use of summary disposition would contribute substantially to the timely and efficient conduct of this proceeding. *See* LBP-98-7, 47 NRC at 244; *see also* Licensing Board Memorandum and Order (General Schedule for Proceeding and Associated Guidance) (June 29, 1998) at 8-10 (unpublished). We continue to hold that view.

⁴There have been no objections by PFS, the Staff, or the State to the qualifications or expertise of these or the other affiants, including State declarants Dr. Marvin Resnikoff and Bronson W. Hawley, Ph.D, and Staff declarant Earl P. Easton, whose statements are relied upon to provide support for other parties' assertions regarding the material factual matters at issue in connection with contention Utah B.

The PFS plan establishes, among other things, that materials delivered to the ITP will remain under the possession and control of an entity complying with the terms of a section 71.12 general license. Spent fuel would be shipped in NRC-certified transportation casks from the originating reactor site to the PFS ISFSI facility. The shipper will be the originating reactor licensee, who will ship the spent fuel under the general license authority of section 71.12 and retain ownership of the spent fuel throughout the transportation process (as well as while the fuel is at the PFS ITP and the Skull Valley facility). By virtue of the section 71.12 general license, the originating reactor licensee/fuel owner is empowered to deliver the fuel for transport to the PFS ISFSI facility to one or more carriers authorized under the general license provided for by section 70.20a. Under the PFS plan, cask transport to its Skull Valley facility would be undertaken by one or more section 70.20a authorized carriers in an NRC-approved package or cask that carries a certificate of compliance or other NRC approval. Throughout the transportation operation (i.e., from the reactor, to the rail line, to the ITP, to the heavy-haul truck, to the PFS Skull Valley facility), the fuel would be sealed inside casks that will remain in shipment mode, with the carrier in possession of the spent fuel transportation casks having custody and control of the cask, subject to NRC and DOT regulations. *See* PFS Motion at 5-8, 10-11.

In connection with the Rowley Junction ITP, under its plan, PFS (or another entity if PFS elects not to be the carrier) would operate the ITP and be in possession of the spent fuel at the ITP as a "carrier" within the meaning of Part 71.⁵ PFS asserts that there appear to be no physical or legal impediments to it qualifying as a carrier, which would include qualifying with DOT as a motor carrier and as a carrier of hazardous materials, and that it will comply with the applicable DOT and NRC regulations if it becomes the carrier. *See* PFS Motion at 11-12.

In this regard, as a carrier PFS would be subject to the safety fitness requirements of the DOT Federal Highway Administration, *see* 49 C.F.R. Part 385, and the DOT hazardous materials transportation requirements, *see id.* Parts 107, 171-173, 177, 178, 180, as well as the NRC requirements in 10 C.F.R. Parts 71 and 73. As to the former, PFS would be required to verify that the cask is accompanied by appropriate shipping papers and is marked, labeled, and placarded in compliance with 49 C.F.R. §§ 172.3, 174.24, 177.817, which it has indicated it will do. Regarding the latter, PFS acknowledged that, during the time it is acting as a carrier at the ITP, to meet the general licensing requirements of section 71.12, the

⁵In this regard, although 10 C.F.R. Part 71 defines a "carrier" to include either a common, contract, or private carrier, *see* 10 C.F.R. § 71.4 (definition of "carrier"), according to PFS, it would not act as a private carrier because it will never take title to or own the spent fuel. *See* PFS Motion at 6 n.7. Rather, in becoming a "carrier" authorized to transport material under a section 70.20a general license, PFS asserts it may choose to qualify as either a common or contract carrier, with the main difference between these being that under the regulations of DOT's Federal Highway Administration, which regulates motor carriers, a common carrier must file proof of cargo insurance while a contract carrier need not do so. *See* PFS Motion at 12 n.19 (citing 49 C.F.R. § 365.109(a)(5)(iii)).

spent fuel would have to remain sealed in NRC-certified transportation casks and be handled in conformance with the cask's design basis as described in the cask's NRC certificate of compliance (CoC),⁶ as well as being protected in accordance with the physical protection requirements set forth in 10 C.F.R. § 73.37,⁷ all of which PFS has committed to doing as well. *See* PFS Motion at 11-12.

Based on this PFS transportation plan, we conclude that there are no material facts in dispute regarding contention Utah B and that PFS has established it is entitled to a judgment in its favor on the issue of whether Rowley Junction ITP activities are governed by the general licensing provisions of 10 C.F.R. Part 71 and the related DOT regulations for transporting spent nuclear fuel so as not to require specific licensing under 10 C.F.R. Part 72. In doing so, we also conclude that the State failed to demonstrate that there are material facts in dispute regarding the ITP plan or any ITP transportation-related activities.

To be sure, the State has attempted to interpose various material disputes, factual and otherwise. For instance, it argues that the close proximity of the ITP to several local activities and places (e.g., Interstate Highway 80 along which various potentially destructive items, including powerful rocket motors, are transported; the Great Salt Lake; military bombing ranges; flight patterns for the Salt Lake City International Airport) could result in accidents at the ITP not considered by PFS or the Staff. *See* State Response at 12. The State also maintains that NRC Part 71 and DOT regulations do not mandate protections for ITP workers — such as radioactivity inspections of casks or dosimeters — that will be afforded to employees 25 miles to the south when the casks are received at the PFS facility. *See id.* at 6-7. According to the State, this “regulatory gap” is further evidenced by the fact that an important component of the transportation cask handling process, the gantry crane, will not be regulated under Part 71. *See id.* at 7-9.

In light of the PFS showing in its motion regarding the Rowley Junction ITP, however, the answer to these concerns is the same as we provided in our April 1998 ruling on other aspects of contention Utah B. Agency adjudications are not the proper forum for challenging applicable federal regulations. *See* LBP-98-7, 47 NRC at 179, 184. The established regulatory scheme for the transportation of spent nuclear fuel is found in 10 C.F.R. Part 71 and the complementary DOT

⁶In this regard, PFS declares that the sole operation at the ITP will be transferring the sealed transportation casks from a rail car to a heavy-haul trailer, during which time the cask will remain in its shipment mode, i.e., loaded on its transportation cradle, horizontally with impact limiters installed. Also according to PFS, all cask CoC requirements will be complied with and all ITP operations will be conducted in accordance with the cask's design basis and the PFS Part 71 quality assurance program. *See* PFS Motion at 3-4, 6; *id.* ex. 1, at 4-5.

⁷PFS declares that under the general license provision of section 71.12, the “shipper” (i.e., the utility) is responsible for ensuring the provision of the physical protection elements mandated by section 73.37, while the general license provision of section 70.20a makes the carrier responsible for ensuring implementation of those requirements. PFS further notes that if it becomes the carrier at the ITP, it is prepared to meet the section 73.37 requirements as part of the transportation services agreements it will enter into with its utility/shipper customers, including providing armed escorts, a staffed communications center, and other safeguard precautions relative to the spent fuel transportation casks that will come into the ITP. *See* PFS Motion at 6-7 & n.9.

regulations and is applicable to the ITP.⁸ Because this Board cannot go afield of what is required by these regulations, the State's concerns challenging this regulatory scheme, to the degree it desires that scheme to mirror the various requirements of Part 72, must be pursued as an effort to change those rules.⁹ Compare 10 C.F.R. § 2.758.

We would add that our conclusion in this regard is bolstered by the Commission's *State of New Jersey* decision, CLI-93-25, 38 NRC at 294, holding that transportation activities for the shipment of spent nuclear fuel are governed by Part 71 and do not require a specific license under Part 72. Notwithstanding the State's claim of factual distinctions between that case and this proceeding (e.g., cask size, extent of radioactivity, and mode of transportation), these differences do not obviate the Commission's determination in *State of New Jersey* that Part 71 (rather than Part 72) governs the transportation of spent fuel. None of the matters presented by the State provides a basis for declining to follow that holding, which dictates that transportation activities, including activities at the ITP as they are described in the sworn declarations by PFS, are governed by Part 71 and the complementary DOT regulatory regime.

Accordingly, we grant the PFS request that summary disposition of contention Utah B be entered in its favor.

⁸ To the degree the State's arguments in this regard appear to rest upon the assumption that intermodal transfer activities (such as the unloading and reloading activities at an ITP) are somehow not part of the "transportation" process regulated under Part 71 and the complementary DOT regulations, they are misplaced. Under the terms of the Hazardous Materials Transportation Act (HMTA), 49 U.S.C. §§ 5101-5127, from which DOT derives its authority to regulate the transportation of materials like spent nuclear fuel, "transportation" is defined as "the movement of property and loading, unloading, or storage incidental to the movement." *Id.* § 5102(12). DOT, as the agency with principal responsibility for implementing HMTA's provisions, further interprets "transportation" to mean "any movement of property by any mode, and any loading, unloading, or storage incidental thereto." 49 C.F.R. § 107.3. Nothing presented by the State suggests that DOT would characterize the loading and unloading activities performed at the ITP, as well as any incidental storage of spent fuel at the ITP, as outside of its definition of "transportation" or its jurisdiction.

⁹ In fact, the focus of much of the State's argument is not on the question whether there is a legal basis for applying the specific licensing provisions of Part 72. Rather, the State outlines its position that the existing general licensing requirements in Part 71 and the DOT hazardous waste transportation regulations are inadequate to address its safety concerns because they result in regulatory oversight of important ITP components, in particular the 150-ton gantry crane, that is either nonexistent or relies upon PFS commitments that cannot be enforced. According to the State, this situation must be corrected by the Board in the course of this adjudicatory proceeding. See State Response at 5-8; State Reply at 2-3.

We disagree with the State's basic premise. For instance, it is not apparent that the gantry crane that will be used to lift the casks from a rail car to trucks at the ITP falls outside the jurisdiction of the NRC or DOT under the existing NRC/DOT regulatory scheme. Although, as far as we can determine, stationary components such as a crane are not specifically mentioned in these regulations, their use at a facility like the proposed PFS ITP would clearly seem to be a part of the transportation process, and thus subject to scrutiny under this regime. See 49 C.F.R. 107.3 (definition of "transportation"). The degree to which DOT and NRC have sought to exercise that authority is, however, a separate question that goes to the scope of the existing regulations and, in any event, is not a matter with which we can deal in the context of this proceeding regarding the sufficiency of the PFS license application under 10 C.F.R. Part 72.

III. IMPACT OF RULING

As has been noted in other summary disposition rulings issued this date, *see* LBP-99-35, 50 NRC 180, 183 (1999) (contention Utah K/Confederated Tribes B); LBP-99-36, 50 NRC 202, 203 (1999) (contention Utah R), our ruling in favor of PFS on this issue is potentially dispositive of portions of other contentions that were admitted subject to a merits resolution of this contention. These contentions include Utah K/Confederated Tribes B, Inadequate Consideration of Credible Accidents; Utah N, Flooding; Utah O, Hydrology; Utah R, Emergency Plan; Utah S, Decommissioning; Utah T, Inadequate Assessment of Required Permits and Other Entitlements; Utah U, Impacts of Onsite Storage Not Considered; and Utah W, Other Impacts Not Considered. *See* LBP-98-7, 47 NRC at 190 n.12, 192 n.15, 193 n.16, 196 n.18, 197 n.19, 198 n.20, 199 n.22, 202 n.24. PFS has suggested that a ruling in its favor on this motion merits the dismissal of contentions (or portions of contentions) that concern the ITP. *See* [PFS] Motion for Partial Summary Disposition of Utah Contention R — Emergency Plan (June 28, 1999) at 2 n.2. In the absence of such a motion, however, we will afford the parties an opportunity to address the question of the continuing validity of the ITP-related portions of these issues. Accordingly, the parties shall have up to and including 1:00 p.m. EDT (11:00 a.m. MDT) on Tuesday, September 7, 1999, within which to provide the Board with their views on whether, in light of this ruling on contention Utah B, the above referenced contentions should be dismissed as they relate to the ITP.

IV. CONCLUSION

For the reasons explained above, we find that the Rowley Junction ITP and the transportation activities conducted at that facility are governed by, and subject to compliance with, 10 C.F.R. Part 71 and the complementary DOT regulations regarding hazardous materials transportation and, as such, cannot, and need not, be regulated under 10 C.F.R. Part 72. We also conclude that there are no material factual issues remaining pertaining to contention Utah B and that, as a matter of law, contention Utah B should be resolved in favor of PFS. Further, we afford the parties an opportunity to provide the Board with their views on the impact of this ruling on the ITP-related portions of other admitted contentions.

For the foregoing reasons, it is, this 30th day of August 1999, ORDERED that:

1. The June 11, 1999 motion for summary disposition of PFS regarding contention Utah B is *granted* and, for the reasons set forth in section II of this Memorandum and Order, a decision regarding contention Utah B is rendered in favor of PFS.

2. As outlined in section III of this Memorandum and Order, the parties may provide views on the impact of this ruling on the ITP-related portions of other admitted contentions.

THE ATOMIC SAFETY AND
LICENSING BOARD¹⁰

G. Paul Bollwerk, III
ADMINISTRATIVE JUDGE

Dr. Jerry R. Kline
ADMINISTRATIVE JUDGE

Dr. Peter S. Lam
ADMINISTRATIVE JUDGE

Rockville, Maryland
August 30, 1999

¹⁰ Copies of this Memorandum and Order were sent this date by Internet e-mail transmission to counsel for (1) Applicant PFS; (2) Intervenors Skull Valley Band of Goshute Indians, Ohngo Gaudadeh Devia, Confederated Tribes of the Goshute Reservation, Southern Utah Wilderness Alliance, and the State; and (3) the Staff.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman
Dr. Jerry R. Kline
Dr. Peter S. Lam

In the Matter of

Docket No. 72-22-ISFSI
(ASLBP No. 97-732-02-ISFSI)

PRIVATE FUEL STORAGE, L.L.C.
(Independent Spent Fuel Storage
Installation)

August 30, 1999

In this proceeding concerning the application of Private Fuel Storage, L.L.C. (PFS), under 10 C.F.R. Part 72 to construct and operate an independent spent fuel storage installation (ISFSI), acting pursuant to 10 C.F.R. § 2.749, the Licensing Board grants in part and denies in part a PFS request for summary disposition in its favor in connection with contention Utah K/Confederated Tribes B, Inadequate Consideration of Credible Accidents.

RULES OF PRACTICE: SUMMARY DISPOSITION (BURDEN OF PERSUASION; BURDEN OF PROOF)

The movant bears the initial burden of making the requisite showing that there is no genuine issue as to any material fact, which it attempts to do by means of a required statement of material facts not at issue and any supporting materials (including affidavits, discovery responses, and documents) that accompany its dispositive motion. An opposing party must counter each adequately supported material fact with its own statement of material facts in dispute and supporting materials, or the movant's facts will be deemed admitted. *See Advanced Medical*

Systems, Inc. (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993); *see also* LBP-99-23, 49 NRC 485, 491 (1999).

RULES OF PRACTICE: SUMMARY DISPOSITION (SUFFICIENCY OF SUPPORTING EVIDENCE)

Agency caselaw indicates that a summary disposition opponent is entitled to the favorable inferences that may be drawn from any evidence submitted. *See Sequoyah Fuels Corp.* (Gore, Oklahoma Site Decontamination and Decommissioning Funding), LBP-94-17, 39 NRC 359, 361, *aff'd*, CLI-94-11, 40 NRC 55 (1994)). This authority, however, does not relieve the opposing party from the responsibility, in the face of well pled undisputed material facts, of providing something more than suspicions or bald assertions as the basis for any purported material factual disputes. *See Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-94-6, 39 NRC 285, 306-07 (1994), *aff'd*, *Advanced Medical Systems, Inc. v. NRC*, 61 F.3d 903 (6th Cir. 1995) (table).

TECHNICAL ISSUES DISCUSSED

The following technical issues are discussed: aircraft and missile crash risk; aircraft crash probability; fire protection measures.

MEMORANDUM AND ORDER
(Granting in Part and Denying in Part
Motion for Partial Summary Disposition Regarding
Contention Utah K/Confederated Tribes B)

Among the contentions that currently are the subject of summary disposition motions by Applicant Private Fuel Storage, L.L.C. (PFS), is contention Utah K/Confederated Tribes B. This issue challenges the sufficiency of PFS's consideration of credible accidents caused by external events and facilities that purportedly would affect its proposed 10 C.F.R. Part 72 Skull Valley, Utah independent spent fuel storage installation (ISFSI). In this instance, the PFS request is for partial summary disposition, which the NRC Staff supports and the State of Utah (State), as the lead intervenor party on this contention, opposes.

For the reasons set forth below, we grant in part and deny in part the PFS motion.

I. BACKGROUND

In our April 1999 decision ruling on the sufficiency of the intervening parties' contentions, the Board admitted portions of contention Utah K and contention Confederated Tribes B and consolidated them for consideration in this proceeding. See LBP-98-7, 47 NRC 142, 190-91, 234-35, 247-48, *reconsideration granted in part and denied in part on other grounds*, LBP-98-10, 47 NRC 288, *aff'd on other grounds*, CLI-98-13, 48 NRC 26 (1998). The contention, as admitted,¹ provides:

The Applicant has inadequately considered credible accidents caused by external events and facilities affecting the ISFSI and the intermodal transfer site, including the cumulative effects of the nearby hazardous waste and military testing facilities in the vicinity and the effects of wildfires.

Id. at 253. Further, in admitting this consolidated contention, the Board limited the scope of the contention to (1) the impact upon the PFS facility of (a) accidents involving materials or activities at or emanating from (i) the Tekoi Rocket Engine Test facility (Tekoi), (ii) Salt Lake City International Airport (SLCIA), (iii) Dugway Proving Ground (DPG), including Michael Army Airfield (MAAF), (iv) Hill Air Force Base (HAFB), and (v) the Utah Test and Training Range (UTTR), and (b) wildfires in Skull Valley; and (2) the impact upon the PFS proposed Rowley Junction, Utah intermodal transfer point (ITP) of (a) materials or activities from the above specified facilities; or (b) hazardous materials that pass through Rowley Junction from the Laidlaw APTUS hazardous waste incinerator, the Envirocare low-level radioactive and mixed waste landfill, or Laidlaw's Clive Hazardous Waste Facility and Grassy Mountain hazardous waste landfill. Finally, the Board made the State the lead intervenor party relative to this contention. See *id.* at 243.

In a June 7, 1999 filing, PFS sought partial summary disposition of contention Utah K/Confederated Tribes B. Relative to the impact of the specified facilities on the PFS facility, it asked for a ruling in its favor on the ground that no genuine issue exists concerning any facts material to whether accidents at those facilities would impact the PFS facility so as to result in radioactive releases in excess of regulatory limits. See [PFS] Motion for Partial Summary Disposition of Utah Contention K and Confederated Tribes Contention B (June 7, 1999) at 2-18 [hereinafter PFS Motion]. PFS also moved for summary disposition regarding that portion of the contention that concerns the potential negative impact of Skull Valley wildfires on the PFS facility. See *id.* at 18-20. Both aspects of this motion are supported by a statement of material facts not in dispute, affidavits or declarations by ten

¹As admitted, this contention also included part of contention six of former Intervenor's Castle Rock Land and Livestock, L.C., and Skull Valley Co., Ltd. (Castle Rock/Skull Valley). See LBP-98-7, 47 NRC at 214. That portion, however, was dismissed upon Castle Rock/Skull Valley's withdrawal from this proceeding earlier this year. See LBP-99-6, 49 NRC 114, 120-21 (1999).

individuals, depositions of State witnesses, and other State discovery responses.² PFS has not asked for summary disposition on the issue of credible accidents impacting the ITP in this pleading, *see id.* at 2 n.2; however, in a June 11, 1999 motion for summary disposition PFS has requested that a ruling in its favor be entered regarding whether the ITP requires specific licensing under Part 72, *see* [PFS] Motion for Summary Disposition of Contention Utah B (June 11, 1999), which potentially is dispositive of all ITP-related issues, including this one.

On June 22, 1999, the Staff submitted a response, with three affidavits, supporting the PFS motion for partial summary disposition. The Staff agreed that partial summary disposition is appropriate for contention Utah K/Confederated Tribes B in that there are no material factual disputes pertaining to credible accidents, with the exception of those associated with military aircraft crashes — a matter about which the Staff is still formulating a position — so that PFS is entitled to a decision in its favor on those matters. *See* NRC Staff's Response to [PFS] Motion for Partial Summary Disposition of Utah Contention K and Confederated Tribes Contention B (July 22, 1999) at 1-2 [hereinafter Staff Response].

Also on July 22, 1999, the State filed its opposition to the PFS motion, together with its statement of material facts in dispute and the sworn declarations of three individuals. The State opposed the motion by disputing numerous material facts proffered by PFS. In addition, the State raised the issue of cumulative risk by claiming that PFS has failed to consider the cumulative risk posed by the summation of all the hazards involving commercial/private aircraft and missile activities. *See* [State] Opposition to [PFS] Motion for Partial Summary Disposition of Utah Contention K and Confederated Tribes Contention B (July 22, 1999) at 4-12 [hereinafter State Response]. The State, however, did not address the issue of military aircraft crashes; instead, in a separate unopposed motion the State asked that this question be deferred pending the Staff's determination of its position regarding this matter. *See id.* at 2. The Board granted this request in a July 27, 1999 order. *See* Licensing Board Order (Granting Filing Extension Motions and Setting Schedule for Responses to Request for Admission of Late-filed Contention) (July 27, 1999) at 2 (unpublished). Thereafter, the State filed a reply to the Staff's response indicating that it disagreed with the Staff's position that summary disposition was appropriate. *See* [State] Reply to NRC Staff's Response in Support of [PFS] Partial Motion for Summary Disposition of Utah Contention K and Confederated Tribes Contention B — Inadequate Consideration of Credible Accidents (Aug. 4, 1999) [hereinafter State Reply].

Finally, on July 30, 1999, PFS moved to strike that portion of the State's July 22 opposition that dealt with transportation of rocket motors to and from Tekoi,

²There have been no objections by PFS, the Staff, or the State to the qualifications or expertise of the various affiants whose statements are relied upon to provide support for other parties' assertions regarding the material factual matters at issue in connection with contention Utah K/Confederated Tribes B.

asserting that the affiant supporting the State's position that there was a material factual dispute regarding this facility was not identified to PFS during discovery as a person knowledgeable about, or a testifying witness regarding, activities at Tekoi. See [PFS] Motion to Strike Part of [State] Response to [PFS] Motion for Summary Disposition of Contention Utah K (July 30, 1999) at 4-8. In an August 6, 1999 response, the State indicated it was voluntarily withdrawing its arguments relating to Tekoi, while reserving the right to oppose similar discovery disclosure arguments in the future. See [State] Response to [PFS] Motion to Strike Part of [State] Response to [PFS] Motion for Summary Disposition of Contention Utah K (Aug. 6, 1999) at 1 [hereinafter State Motion to Strike Response].

II. ANALYSIS

A. Summary Disposition Standards

In an earlier ruling on a PFS motion for summary disposition, we summarized the general standards governing our consideration of summary disposition requests as follows:

Under 10 C.F.R. § 2.749(a), (d), summary disposition may be entered with respect to any matter (or all of the matters) in a proceeding if the motion, along with any appropriate supporting material, shows that there is "no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law." The movant bears the initial burden of making the requisite showing that there is no genuine issue as to any material fact, which it attempts to do by means of a required statement of material facts not at issue and any supporting materials (including affidavits, discovery responses, and documents) that accompany its dispositive motion. An opposing party must counter each adequately supported material fact with its own statement of material facts in dispute and supporting materials, or the movant's facts will be deemed admitted. See *Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993).

LBP-99-23, 49 NRC 485, 491 (1999).

B. Application to Contention Utah K/Confederated Tribes B

With these principles in mind, we turn to the PFS summary disposition request, which the Applicant has organized into five parts. Adopting that construct, we address each portion separately below.

1. Tekoi Rocket Engine Test Facility

a. PFS Position

PFS proffers seventeen undisputed material facts, designated A1 through A17, in support of its argument that Tekoi poses no significant hazards to the PFS

facility, *see* PFS Motion, Statement of Material Facts at 1-3 [hereinafter PFS Undisputed Material Facts], which are supported by the affidavits of Stone and Webster Engineering Corporation (S&W) lead mechanical engineer Bruce Brunson, Alliant Techsystems, Inc., explosives safety specialist C. Floyd Davis, S&W licensing engineer Jeffrey Johns, and S&W lead electrical engineer Wesley Jacobs, *id.*, attachs. 1-4. In its motion, PFS first identifies the potential hazards to its proposed facility from Tekoi and then explains why each has no health and safety significance based on the likelihood of occurrence or consequence, or both. According to PFS, the State-identified hazards from Tekoi involve a rocket motor (1) exploding while being tested; (2) exploding while being transported to Tekoi; or (3) escaping from its test stand and striking the PFS facility. *See* PFS Motion at 4.

Regarding rocket motor explosions during testing, PFS states that it performed a standard calculation that shows such explosions would pose no significant hazard to the PFS facility. This is so, PFS declares, because the largest rocket motor that can be tested at Tekoi would contain 1.2 million pounds of Class 1.1 explosive propellant, the detonation of which the calculation shows would produce an overpressure of 1 pound per square inch (psi) or more only to a distance of 4,782 feet and an overpressure of 0.5 psi or more out to a distance of 7,970 feet (1.5 miles) from Tekoi. In light of the NRC Regulatory Guide 1.91 overpressure safe threshold of 1 psi for explosions postulated to occur near nuclear power plants, *see* Office of Standards Development, U.S. Nuclear Regulatory Commission, Regulatory Guide 1.91, at 1.91-2 (rev. 1 Feb. 1978), with the PFS facility at a distance of more than 2 miles from Tekoi, PFS asserts that its safety analysis report (SAR) conclusion that systems important to safety at the PFS facility would not be harmed by an explosion that created an overpressure of 1 psi or less, *see* PFS SAR at 3.3-9 (rev. 2 Aug. 1998), was correct. PFS thus concludes that these considerations, taken together, establish that rocket motor explosions at Tekoi would pose no significant hazard to its proposed facility. *See* PFS Motion at 4-5. So too, explosions of rocket motors in transit on Skull Valley Road, which runs south from Interstate 80 toward the Tekoi facility, or the Tekoi access road, which runs west from Skull Valley Road to the Tekoi facility, would pose no significant hazard to the ISFSI facility, PFS claims, because the restricted area is more than 2 miles from the access road at its closest point and is 1.9 miles from Skull Valley Road. At these distances, an explosion on either road of the largest motor that could be tested at Tekoi would not create an overpressure of 1.0 psi at the PFS facility, thus posing no threat to the facility. *See id.* at 5-6.

Regarding the risks posed by a rocket motor escaping its test stand at Tekoi and striking the PFS facility, PFS argues that such an event is not credible because of the design and safety procedures employed at Tekoi and the intervening distance and terrain between Tekoi and its facility. According to PFS, Tekoi has conservatively designed safety features to prevent rocket motors from escaping,

including a large thrust block into which the motor is directed and embedded structural steel to restrain and to retain the motor in place. Further, safety procedures require the inspection of the facility before each rocket motor is tested. Indeed, PFS declares, in nearly 25 years of operation no rocket motor has escaped a test stand at Tekoi. *See id.* at 6.

PFS further maintains that even in the unlikely event a motor were to escape, it is extremely unlikely it would strike the PFS facility. At a distance of more than 2 miles from Tekoi, the facility's restricted storage area would comprise a small fraction of the potential area to which an escaped rocket motor might fly. Additionally, any rocket motor headed in the direction of the PFS facility would likely strike Hickman Knolls — a large hummock located between the facility and Tekoi that is 270 feet higher than Tekoi and 400 feet higher than the PFS facility — before reaching the PFS ISFSI. This, PFS asserts, makes it extremely unlikely that a rocket motor escaping the test stand would strike the facility. Moreover, when combined with the highly unlikely possibility that a rocket motor would escape a test stand in the first place, it simply is not credible, PFS concludes, that the facility would be struck by a rocket motor escaping from the Tekoi facility. *See id.* at 6-7.

As to the portion of contention Utah K/Confederated Tribes B relating to Tekoi, PFS thus concludes it is entitled to summary disposition.

b. Staff Position

For its part, the Staff does not dispute any of the seventeen material factual statements provided by PFS on this issue. *See* Staff Response at 9-10. Further, as is outlined in the affidavit of Southwest Research Institute principal engineer Dr. Amitava Ghosh that accompanies the Staff's response, the Staff expresses its support for the PFS motion on this part of the contention based on its own evaluation as set forth in its June 15, 1999 statement of position on this issue (and most of the other Group I contentions). *See id.* unnumbered attach. 1; *see also* NRC Staff's Statement of Its Position Concerning Group I Contentions (June 15, 1999) attach. at 14 [hereinafter Staff Position Statement]. The Staff maintains that the analysis is acceptable and this part of the contention no longer has any material facts in dispute.

c. State Position

In opposing the PFS motion, the State disputed two material facts proposed by PFS, A10 and A17, claiming that flying objects propelled by an exploding rocket motor while being transported would pose a significant risk to the facility. *See* State Response, Statement of Material Facts in Dispute Regarding Utah Contention

K and Confederated Tribes Contention B at 1 [hereinafter State Disputed Material Facts]. This assertion, which was supported by the affidavit of Radioactive Waste Management Associates senior associate Dr. Marvin Resnikoff, *see id.* exh. 1, at 5, was not addressed explicitly by PFS in its motion or by the Staff in its position on Group I contentions or in its motion response. The State did not respond to the other PFS arguments that its concerns about overpressure from an exploding rocket motor at Tekoi, overpressure from an exploding rocket motor while being transported, and a rocket motor escaping from its test stand do not pose an undue risk to the PFS facility. Subsequently, however, in response to a PFS request to strike portions of Resnikoff's affidavit relating to this stated concern, the State voluntarily withdrew its arguments regarding Tekoi. *See State Motion to Strike Response at 1.*

d. Board Ruling

The only dispute raised by the State relates to the issue of flying objects propelled by an exploding rocket motor in transit threatening the PFS facility. The State, however, has voluntarily withdrawn its argument regarding Tekoi. Given the State's action, and the showing made by the PFS, as supported by the Staff, we conclude that there are no material facts in dispute relative to this portion of the contention and that, as a consequence, PFS is entitled to judgment as a matter of law on this item. We thus grant the PFS motion relative to Tekoi.

2. Salt Lake City International Airport

a. PFS Position

PFS outlines nine undisputed material facts, B1 through B9, that support its motion regarding the portion of this contention that concerns the impact of activities from SLCIA. *See PFS Undisputed Material Facts at 3-4.* The airport is located approximately 50 miles northeast of the PFS facility. According to PFS, the State has admitted that the only hazard that the SLCIA would pose to the facility would arise from overflights by aircraft flying to or from the airport. PFS argues, however, that such activity poses no significant hazard to the PFS facility because of (1) the substantial distance between SLCIA and the facility; (2) the lack of civilian airways near the PFS facility; and (3) the especially low crash rate of aircraft in the cruising phase of flight. *See PFS Motion at 7-8.* In support of this position, PFS provides the affidavit of National Air Traffic Controllers' Association executive director and former United States Air Force (USAF) Brigadier General James L. Cole, Jr. *See id.* exh. 5.

Initially, PFS declares that under NRC caselaw, the hazard posed by crashes of aircraft flying to or from an airport is insignificant and need not be considered

if the number of takeoffs and landings at the airport per year is less than $1,000 \times D^2$, where D is the distance from the airport to the facility in miles. Utilizing that formula here, PFS maintains that with a distance of 50 miles between SLCIA and the PFS facility, the number of takeoffs and landings would have to reach 2,500,000 (1000×50^2), before SLCIA would pose any risk to the facility. According to PFS, in 1998 there were 365,000 total takeoffs and landings at SLCIA. PFS thus concludes that the risk posed to the facility by crashes of aircraft flying to and from SLCIA is insignificant and need not be considered. *See* PFS Motion at 8.

In addition, PFS asserts that under NRC caselaw, the hazard posed to a nuclear facility from aircraft flying in a civilian airway need not be considered if the closest edge of the airway is more than 2 miles from the facility. According to PFS, the closest civilian airway to the PFS facility is high altitude Jet Route J-56, which passes 10 nautical miles north of the PFS site. For the purpose of its analysis, PFS took the high altitude jet routes as having a width of 8 nautical miles. Therefore, the closest edge of J-56 is more than 5 statute miles from the facility. Similarly, the next closest civilian airway to the PFS facility is Low Altitude Route V257, which runs north and south 17 nautical miles to the east of the facility on the far side of the Stansbury Mountains, and is more than 10 statute miles from the PFS site at its closest edge. Thus, PFS declares the aircraft in both J-56 and V257 and any other airway farther from the PFS facility would also pose no significant hazard to it. *See* PFS Motion at 8-9.

Finally, PFS maintains that any civilian aircraft in the region of the PFS facility would be in the cruise phase of flight, given the long distance to SLCIA (or any other airport). According to PFS, aircraft during the cruise phase of flight exhibit very low crash rates relative to other aspects of flight. This factor, together with the distance from established airways, shows conclusively that SLCIA flights pose no significant risk to its Skull Valley facility. *See id.* at 9.

Accordingly, PFS asserts that it is entitled to summary disposition on this aspect of contention Utah K/Confederated Tribes B as well.

b. Staff Position

The Staff does not dispute any of the nine material facts proposed by PFS. Again citing the supporting Ghosh affidavit that accompanies the Staff's response, the Staff declares that it supports the PFS conclusion that aircraft flying to and from SLCIA (and other nearby municipal airports) would not pose a significant risk to the PFS facility. *See* Staff Response at 11.

c. State Response

The State disputes two material facts, B7 and B9, proposed by PFS. *See* State Disputed Material Facts at 1-2. As is detailed in the supporting affidavit of former

USAF Major General John W. Matthews, the State maintains that PFS expert Cole has erred in assuming that a commercial aircraft flying near the PFS facility would be in the cruising mode. According to Matthews, the formulas for determining initial descent for an aircraft approaching the SLCIA indicated that such aircraft would, instead of cruising, be descending as they went over the PFS facility. *See* State Response at 8. This is a material factual dispute, the State asserts, because, as outlined in Resnikoff's affidavit, descending aircraft have higher accident rates than cruising aircraft. The State further declares, based on Resnikoff's affidavit, that PFS should have considered the growth of air traffic in its evaluation of commercial aircraft risks. *See id.* at 8. Finally, in response to the Staff's filing, the State questions whether PFS properly computed the aircraft crash risks for flights using paths J-56 and V257. *See* State Reply at 6-7.

d. Board Ruling

Of the matters raised by the State relating to SLCIA, at least two, the higher commercial aircraft risks posed by descending aircraft compared to cruising aircraft and the higher risks due to the growth of air traffic leading to a higher number of takeoffs and landings, have sufficient support to identify a genuine dispute of material fact relative to the SLCIA portion of this contention. We thus deny the PFS motion relative to this part of the contention.³

3. Dugway Proving Ground

a. PFS Position

PFS proposed twenty-two material facts not in dispute, C1 through C22, to support its motion for the part of the contention concerning DPG. *See* PFS Undisputed Material Facts at 4-7. PFS declares that the hazards the State has alleged DPG would pose to the PFS facility involve (1) the firing of conventional ground weapons in military testing and training; (2) the testing, storage, and disposal of chemical munitions and agents; (3) the testing of biological materials; (4) the transportation of biological, chemical, and hazardous materials to and from DPG; (5) unexploded ordnance; and (6) aircraft flights into and out of DPG's Michael Army Airfield, including landings of military aircraft carrying "hung bombs" and the landing of the X-33 experimental space plane. *See* PFS Motion at 9-10.

³ In connection with further litigation of Resnikoff's remarks about SLCIA expansion, however, we note that the relevant issue appears to be whether the nearly seven-fold expansion in aircraft takeoffs and landings that, under the caselaw formula cited by PFS, seemingly would be necessary to have any material impact on the risk analysis at issue would have some reasonable likelihood of occurring during the 20-year term of the PFS facility Part 72 license.

Relying on the affidavits of Cole and former DPG Commander George A. Carruth, *see id.* exhs. 5-6, PFS generally attempts to dismiss the hazards from DPG based on the distance between its Skull Valley site and the DPG locations where the alleged hazardous activities take place, the nature of the activities, and the safety precautions that are taken at DPG with respect to potentially dangerous activities at that facility. Additionally, PFS claims that, in their deposition testimony, State witnesses knowledgeable about activities at DPG, including Matthews, State Division of Solid and Hazardous Waste/Waste Chemical Demilitarization Section (DSHW/WCDS) environmental engineer David C. Larsen, and DSHW/WCDS section manager Martin D. Gray, cited no specific, credible hazard at DPG that would threaten the PFS facility. Specifically, PFS points to the fact that State witness David Larsen, in response to the question, "So it's safe to conclude as you said before, that you don't see any hazard posed to the Private Fuel Storage facility from Dugway?" answered "Right. Right." PFS Motion at 10 (quoting PFS Motion exh. 14, at 72 (Larson deposition)).

In connection with the individual PFS responses to purported hazards, PFS first indicates that military training exercises and the firing and testing of conventional weapons will not pose a hazard to the PFS facility because (1) the firing of weapons is covered by rigid procedures; (2) the closest firing position to the PFS site is more than 15 miles away; (3) the range of most of the weapons is insufficient to reach the Skull Valley facility from those distances; and (4) the weapons are fired toward the south and northwest, away from the PFS facility. PFS thus claims there is no credible scenario by which conventional munition fired from Dugway would strike its ISFSI. *See* PFS Motion at 11.

Relative to the second issue of chemical munitions and agents at Dugway, PFS likewise maintains these will pose no significant hazard to its facility. According to PFS, open air testing of chemical munitions and agents was prohibited by law in 1969 (50 U.S.C. § 1512), and has not been conducted since that time. Thus, activities at DPG involving chemical agents and munitions is limited to indoor testing of chemical agents, storage of agents and unexploded chemical munitions recovered from the firing ranges, and disposal of chemical agents. PFS claims these activities will not pose a credible hazard to its facility because of the distance between DPG and the PFS facility and the limited quantities of agents whose release would be credible. *See* PFS Motion at 11.

In this regard, PFS declares that the indoor testing of chemical agents is done in facilities nearly 20 miles from the PFS facility that are designed to preclude the release of chemical agents, and thus would pose no credible hazard to the Skull Valley facility. Similarly, chemical munitions and agents are stored in locations at DPG that are more than 17 miles from the Skull Valley facility and are subject to various restrictions, including State regulations under the federal Resource Conservation and Recovery Act (RCRA). PFS argues that by virtue of the distance to its facility and the many controls designed to protect public health

and safety, the release of chemical agents from chemical munitions or agents stored at DPG does not pose a credible hazard to that facility. *See id.* PFS asserts that the worst credible threat posed by a chemical agent at DPG would arise from the accidental detonation of a previously unexploded 8-inch projectile filled with chemical agent GB (which PFS likewise indicates is an extremely unlikely event). The distance at which such an event would pose a threat, however, is approximately 3 miles, much less than the actual distance to the PFS facility. Further, according to PFS, disposal of chemical munitions and agents is done under rigorous controls, including regulations by the State under RCRA, and would pose no credible hazard to the PFS facility. *See id.* at 12-13.

A third potential hazard addressed by PFS is the biological materials present on DPG, which PFS asserts also would not pose a credible hazard to its facility. According to PFS, the use of biological materials at DPG occurs at the Life Sciences Test Facility that is more than 20 miles from the PFS facility and is conducted under engineering and procedural controls designed to prevent the release of material to the environment. Furthermore, PFS claims that, even if biological material at the test facility were to escape, it would pose no significant hazard to the PFS facility because it would have little, if any, chance of surviving in the environment long enough to be carried the 20 miles from the testing facility to the PFS facility. Thus, PFS argues that the use of biological materials at DPG also poses no credible hazard to the PFS facility. *See id.* at 13.

PFS further maintains that the transportation of chemical agent or biological materials to or from Dugway does not pose a significant hazard to its facility. Larger shipments of such material are performed with safety precautions and, moreover, do not travel along Skull Valley Road. Although small, laboratory quantities of material could potentially be shipped by common carrier along Skull Valley Road, the safe packaging of those shipments is regulated by the United States Department of Transportation so as to prevent a release even in the event of an accident. PFS also maintains that hazardous wastes shipped from DPG do not include chemical agents but rather only chemically neutralized agents, which are less hazardous and would not threaten the PFS facility even if spilled on Skull Valley Road. *See id.* at 13-14.

The fifth PFS-identified item, unexploded ordnance in firing ranges on the DPG facility, is not a significant hazard to the Skull Valley facility, PFS asserts, because (1) it is very unlikely that such ordnance would explode spontaneously or accidentally; and (2) even if it did, the PFS facility is far enough away that the material in the unexploded round would not pose a significant hazard. Moreover, unexploded ordnance is not likely to be found off DPG close enough to pose a risk to the PFS facility, in that the firing ranges at DPG are all at least 15 miles away and Army records of where munitions were fired at DPG, while showing two offsite areas to the south of DPG in which there may be unexploded ordnance, give no indication that munitions were fired off site to the north of DPG in the

direction of the Native American reservation on which the PFS facility will be located. *See id.* at 14.

Finally, regarding Michael Army Airfield at DPG, PFS declares that the landing of aircraft at MAAF would not pose a hazard to the PFS facility. According to PFS, the airfield is over 17 miles from the PFS site, making it outside the takeoff and landing traffic pattern. Additionally, because the number of aircraft flying into MAAF annually is small and the crash rate those aircraft experience is very low (mostly transport aircraft that have a rate similar to commercial airliners), an air crash probability analysis in accordance with the agency caselaw endorsed reactor standard review plan analysis, *see* Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, NUREG-0800, Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants § 3.5.1.6 (rev. 2, July 1981), indicates that the likelihood that an aircraft flying into MAAF would crash into the PFS facility is insignificant. *See* PFS Motion at 14 & n.30.

Also in connection with MAAF, PFS states that aircraft with hung ordnance flying from the UTTR to MAAF would pose no significant hazard to the PFS facility. First, PFS declares only about five aircraft per year experience such problems. Second, aircraft on the UTTR with hung ordnance fly directly into MAAF following specially developed approach procedures without crossing Skull Valley. As a result, any aircraft with "hung ordnance" would not pose a hazard to the PFS facility. *See* PFS Motion at 14-15.

Relative to MAAF, PFS also contends that the proposed MAAF landing of the X-33 experimental aircraft does not pose a significant hazard to the Skull Valley ISFSI. Putting aside the fact that all flights of the X-33 are scheduled to be concluded by mid-2000, the proposed flight path for the X-33 would not bring the space plane over Skull Valley, let alone the PFS facility. *See id.* at 15.

In sum, PFS maintains that none of the activities of concern to the State concerning DPG would pose a credible hazard to the PFS facility so that PFS is entitled to summary disposition of this part of contention Utah K as well.

b. Staff's Position

As is outlined in the supporting Ghosh affidavit, after conducting its own evaluation and reviewing the PFS motion, the Staff has determined that it does not dispute any of the PFS material facts regarding the hazards posed to the PFS facility by DPG (which the Staff identifies as C17, C18, and portions of C20 and C22) other than those relating to military aircraft crashes for which it has not formulated a position. *See* Staff Response at 10-11; *id.* unnumbered attach. 1, at 3 (Ghosh affidavit); *see also* Staff Position Statement attach. at 15-16. It thus supports granting summary disposition in favor of PFS regarding all other aspects of the DPG issue.

c. *State Position*

Relying on information in the affidavits of Resnikoff, Matthews, and Gray, the State disputes nine of the twenty-two material facts proposed by PFS, including C2, C4, C6 through C9, C14, C15, and C22. *See* State Disputed Material Facts at 2-3. These include questions regarding whether ordnance from DPG training exercises could reach the PFS facility and ordnance disposal/unexploded ordnance.

In response to the PFS assertion that the firing of conventional weapons during military training sessions will not impact the PFS facility, the State points out that at the Wig Mountain site in the northwestern portion of DPG, which is 15 miles from the PFS facility, Army and National Guard troops fire a multiple rocket launch system with a range of 18 miles. *See* PFS Motion at 9; *see also* State Reply at 2-3 & n.3.

On the subject of ordnance disposal/unexploded ordnance, the State declares that relative to the risks involved in chemical and biological agent disposal, PFS has failed to analyze adequately the potentially significant sources of risk to PFS facility integrity posed by the historical disposal of chemical agents, biological agents, and/or explosives and propellants or by unexploded ordnance that has not yet been discovered/rediscovered. The State asserts that since 1988 DPG, in cooperation with State regulators, has identified 216 DPG ordnance disposal sites and three sites outside DPG's boundaries that were contaminated from past DPG disposal practices. The State also contends that the search for such sites is not yet completed, since 17 new DPG sites were added in 1998 and more are expected. The State also maintains that chemical agent munitions were discovered at three separate contaminated sites at DPG during the past 2 years and a biological munition was also found at another DPG contaminated site this year. The State argues that these finds, in conjunction with the Army's historically poor recordkeeping, establish a genuine dispute with the accuracy of PFS's statements claiming there is no factual dispute about the existence of unaccounted for ordnance as a result of chemical or biological ordnance disposal or munitions firing activities. *See* State Response at 10; *see also* State Reply at 5.

That such ordnance may be found near the PFS site is significant, the State further asserts, because in some cases unstable munitions must be detonated in place, raising the possibility of site evacuation, toxic fumes at the site (such as were detected following munitions detonations at the Aberdeen Proving Ground in Maryland), and other impacts. The State also argues that it is possible that undiscovered munitions will explode spontaneously. Nor, according to the State, is it possible to say what the worst-case or bounding accident is because an essential element of such analysis, the amount of contaminants, is unknown. Because these risks have not been adequately addressed in the PFS motion, the State asserts, summary disposition is inappropriate relative to the matter of disposal/unexploded ordnance. *See* State Response at 11; *see also* State Reply at 4-5.

d. *Board Ruling*

Of the six DPG-related items identified by PFS that do not relate to the deferred issue of military aircraft crashes, the State has raised no material factual dispute relative to the testing and storage of chemical munitions and agents; the testing of biological materials; the transportation of biological, chemical, and hazardous materials to and from DPG; and MAAF landings involving military aircraft carrying "hung bombs" or the X-33 experimental space plane. Further, based upon our own review of the materials provided by PFS and the Staff in support of the motion, we conclude there are no material facts at issue and that summary disposition in favor of PFS on these matters is appropriate.

In connection with the training exercise ordnance and ordnance disposal/unexploded ordnance issues about which the State has sought to establish there are disputed material facts, the State has provided a sufficient showing to establish that a genuine dispute of material fact exists regarding the training exercise ordnance issue. The State's sworn assertions regarding the current training use of a missile at the Wig Mountain site that can reach the PFS facility establishes a litigable material factual dispute. We thus deny the PFS motion relative to this portion of contention Utah K/Confederated Tribes B.

With regard to the State's assertion concerning impacts to the PFS facility relating to previously unaccounted for disposal sites or unexploded ordnance, the State references agency caselaw indicating that a summary disposition opponent is entitled to the favorable inferences that may be drawn from any evidence submitted. *See* State Response at 3 (citing *Sequoyah Fuels Corp.* (Gore, Oklahoma Site Decontamination and Decommissioning Funding), LBP-94-17, 39 NRC 359, 361, *aff'd*, CLI-94-11, 40 NRC 55 (1994)). This authority, however, does not relieve the opposing party from the responsibility, in the face of well pled undisputed material facts, of providing something more than suspicions or bald assertions as the basis for any purported material factual disputes. *See Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-94-6, 39 NRC 285, 306-07 (1994), *aff'd*, *Advanced Medical Systems, Inc. v. NRC*, 61 F.3d 903 (6th Cir. 1995) (table). In seeking to base its opposition on three off-DPG disposal sites whose location and nature the State did not disclose; the existence of ordnance in offsite areas south of DPG that formerly were DPG range areas but are no longer within DPG borders, *see* PFS Motion attach. 15, at 74-75 (Gray deposition); *see also id.* attach. 14, at 39 (Larsen deposition) (no ordnance found north of DPG); and a purported presumption about the inadequacy of military recordkeeping, the State has failed to show there is a credible factual nexus between the ordnance disposal/unexploded ordnance deficiencies it sets forth in support of its position and the PFS ISFSI site sufficient to create a material factual dispute. We therefore grant the PFS motion on this point.

4. *Utah Test and Training Range and Hill Air Force Base*

a. *PFS Position*

Utilizing support from affiant Cole and discovery depositions of Matthews and State DSHW employee Bronson W. Hawley, PFS submits nineteen material facts, D1 through D19, to support its argument in favor of summary disposition on this portion of contention Utah K/Confederated Tribes B. *See* PFS Undisputed Material Facts at 7-9. The HAFB is located north of Salt Lake City on the eastern shore of the Great Salt Lake, approximately 65 miles from the PFS facility. USAF aircraft based at HAFB (and military aircraft based outside the State of Utah) utilize the UTTR, which is restricted to military training and testing operations. The UTTR is divided into a North Area, which is located on the western shore of the Great Salt Lake to the north of Interstate 80, and a South Area, which is located west of the Cedar Mountains to the south of Interstate 80 and northwest of DPG. *See* PFS Motion at 15-16.

According to PFS, the State's allegations regarding HAFB and UTTR center on the possibility that (1) aircraft flying to and from HAFB and over the UTTR pose a hazard to the PFS facility; and (2) the firing of air-delivered munitions (e.g., bombs and missiles) on the UTTR would pose a hazard to its ISFSI facility. *See id.* at 16. As is outlined below, PFS claims that both these hazards are not significant.

Regarding the overflight hazard, PFS maintains that the only aircraft from HAFB that approach the PFS facility are those that pass through Skull Valley en route to the UTTR South Area. Flying south, they pass west of Deseret Peak, near the Stansbury Mountains about 5 miles east of the PFS facility, to practice terrain masking to evade radar. During this portion of the flight they conduct no combat maneuvers and maintain their armament release switches on "safe" until they are inside United States Defense Department land boundaries. *See id.* at 16-17.

According to PFS, because aircraft en route to the UTTR South Area fly at low altitudes at a distance of about 5 miles from the PFS facility, the likelihood that such aircraft would crash into or otherwise impact the facility is low and would not pose a significant hazard. PFS states that the military traffic down the east side of Skull Valley is analogous to air traffic in a civilian airway that, in the context of its consideration of a nuclear power reactor, the NRC would consider insignificant if more than 2 miles away. PFS thus asserts that such aircraft likewise should be excluded here as posing no significant risk to its Skull Valley facility. *See id.* at 17.

Concerning the hazard involved in the use of air-delivered weapons on the UTTR, PFS claims this does not pose a significant hazard to its facility. PFS declares this is so because aircraft outside the UTTR and DPG are required to maintain weapons release switches on "safe," thus rendering insubstantial the likelihood of an accidental weapon release that would hit the PFS facility. In

addition, according to PFS, the weapon releases on the UTTR are so carefully planned and controlled, the UTTR has not experienced a weapon release outside an intended launch area. Further, the closest weapon launch/drop boxes are about 30 miles from the PFS facility so that weapon use at the UTTR is too far away to pose a risk to its facility, PFS maintains. *See id.* at 17-18.

Addressing a more specific State concern, PFS also claims that cruise missile launches at targets on the UTTR would not pose a significant hazard to its facility. According to PFS, there are about six launches per year and the targets in the UTTR South Area are approximately 30 miles west of the PFS facility. Furthermore, cruise missile run-ins, drops, and launches are normally conducted from north to south or east to west, away from the PFS facility and all missiles with the capability of exceeding range boundaries are equipped with a Flight Termination System (FTS) that permits the destruction of the missile if it goes off course. In fact, PFS asserts, the UTTR has not experienced an FTS failure. *See id.* at 18.

These facts, PFS argues, establish that it is entitled to summary disposition for this part of contention Utah K/Confederated Tribes B as well.

b. Staff's Position

While again expressing no position regarding military aircraft crashes involving planes en route to or from the UTTR and Hill, the Staff does not dispute the validity of the other material facts posited by PFS. Further, as described by Staff affiant Ghosh, based on its own review, the Staff agrees with the PFS position that munitions testing, including cruise missile launches at the UTTR, do not pose any significant hazard to the PFS facility. *See Staff Response* at 12.

c. State Position

Relying on the sworn statements of Resnikoff and Matthews, the State disputes eight of the nineteen material facts proposed by PFS, including D11 through D13 and D15 through D19. *See State Disputed Material Facts* at 3-4. These disputed facts involve the evaluation of noncrash hazards from overflights, including dropped ordnance and aircraft parts, and cruise missiles.

Regarding overflight hazards other than actual crashes into the PFS facility, the State notes that relative to the postponed portion of this contention concerning military aircraft crashes, it intends to show there will be military flights over or near the PFS facility. There is also the possibility of mechanical failure or pilot error relative to the use of "safe" switches during such overflights, which could result in the release of a bomb that, even if a dummy, could do radiologically significant damage to a storage cask. In addition, the State declares that PFS has failed to analyze another significant risk from overflights, the possibility of engine

problems that would cause the plane to actually lose an engine or have to jettison its fuel tank and munitions, any of which could do significant damage to a storage cask. *See* State Response at 8-9; *see also* State Reply at 9.

Also flawed, the State declares, is the PFS analysis showing cruise missiles pose no significant hazard to the proposed ISFSI. The State claims that, not only are cruise missile tests permitted in the vicinity of the ISFSI, they have actually been conducted there, and one has crashed in the same unit of military airspace. The State asserts that, as discussed by its expert Matthews, the USAF conducts cruise missile exercises in the Sevier B Military Operating Area (MOA) airspace. The Sevier B MOA airspace is directly over the PFS facility and adjacent to the UTTR land and is considered part of the UTTR airspace. According to the State, cruise missile flight patterns may include a cruise missile flight within 1 nautical mile of the site. Indeed, the State claims that in June 1999 a cruise missile crashed on United States Department of the Interior Bureau of Land Management property in the southern portion of the Sevier B MOA, the same MOA in which PFS proposes to build its facility. *See* State Response at 6; *see also* State Reply at 8-9.

The State also maintains that the FTS for the cruise missile that crashed in June 1999 was either ineffective or missing. The State declares that whether the system failed, was not installed in the missile, or was simply not activated because the missile was not off course is still unknown because the accident investigation is not complete. Additionally, the State claims that malfunctioning equipment was involved in a 1997 cruise missile crash in which the operators lost communication, and therefore control, of the cruise missile. As a result, the operators were unable to direct it away from the civilian observatory to which it was headed. Thus, although the missile had a working FTS, the operators were unable to use the system to prevent the crash. The 1997 and 1999 cruise missile crashes, according to the State, demonstrate that cruise missiles are prey to equipment failure and/or human error, with potentially serious results for the PFS facility. *See* State Response at 6-7; *see also* State Reply at 9-10.

Also in connection with the PFS arguments regarding cruise missiles, the State disputes the PFS assertion that targets for the cruise missile are no closer than 30 miles away from the proposed PFS facility. It declares that one cruise missile target is located approximately 15 miles from the proposed PFS facility. Additionally, the State observes that the December 1997 cruise missile crash mentioned in the PFS motion occurred on Cedar Mountain, which borders the proposed PFS facility on the west, and argues that because the missile was out of control at the time of the crash, it could have overflowed Cedar Mountain and struck a target in Skull Valley. Moreover, the State asserts, given the two local cruise missile incidents in the last 2 years, including one crash in the vicinity of the proposed PFS facility and the second within the Sevier B MOA which includes the proposed site, PFS's reliance on the small number of cruise missile launches in its evaluation is wholly misplaced. *See* State Response at 7; *see also* State Reply at 8-9.

In summary, the State maintains that in light of the cruise missile flight paths, the targets, the nature and number of recent mishaps for those missiles, and the magnitude of the consequences that would result from a cruise missile hit of the ISFSI, the risk posed by cruise missile activity alone is significant and has not been adequately analyzed by PFS.

d. Board Ruling

Relative to the issue of noncrash consequences of overflights, it is apparent this question hinges on whether UTTR aircraft will transit Skull Valley, a factual matter that the Staff has asked be deferred as part of its military aircraft crash analysis. *See* Staff Response at 4 n.3 (Staff takes no position on PFS material facts D2, D5 through D10). We thus will postpone any ruling on this aspect of the contention, with the understanding that at an appropriate point following the Staff's action, PFS may supplement its summary disposition motion on this point (with an opportunity for other interested parties to respond).

Concerning the issue of cruise missile activity, the circumstances of the recent cruise missile incidents provide a basis for disputing PFS material facts D11 through D13 and D15 through D19 that is sufficient to demonstrate that a genuine dispute exists regarding material facts concerning the possible impact of cruise missile activities upon the PFS facility. Accordingly, we deny the PFS motion relative to this matter.

5. Wildfires

a. PFS Position

Citing as support the affidavits of Texas Tech University professor Carlton Britton, S&W project engineer Jerry Cooper, and Holtec International president and chief executive officer Krishna Singh, PFS has proffered eleven material facts not in dispute, E1 through E11, to bolster its argument that wildfires do not pose a significant hazard to its facility. *See* PFS Undisputed Material Facts at 9-10. As summarized in the PFS motion, these proposed material facts contain the following observations.

The PFS facility restricted area, in which the spent fuel casks will be located at all times, will be enclosed by a fenced area and perimeter road that will have a surface of crushed rock. A wildfire could not be sustained inside this area. No spent fuel cask will be nearer than 162 feet from the edge of this crushed rock. Moreover, the restricted area will be surrounded by a 300-foot wide barrier of fire-resistant crested wheat grass. Together, the firebreak of crushed rock and the surrounding 300 feet of crested wheat grass will protect equipment, structures, and

life within the restricted area from any heat damage from a wildfire. *See* PFS Motion at 18-19.

PFS also notes that the storage casks to be used at the facility are designed to withstand a temperature of at least 1475°Fahrenheit (F) for significantly longer than the likely duration of a wildfire at the facility, even without the more than 150 foot crushed rock firebreak and 300 foot barrier of fire resistant crested wheat grass. In addition, a wildfire could not cause harm to any spent fuel casks or structures inside the canister transfer building because of that building's thick concrete walls. Further, because of the crested wheat grass and crushed rock barriers, a wildfire could not ignite or explode any of the diesel fuel present inside the restricted area. Nor would smoke from a fire threaten either the systems, structures, or components at the PFS facility that are important to safety or PFS facility security personnel. Finally, PFS declares that the threat a fire might pose to systems at the PFS facility other than those important to safety is irrelevant to the licensing of the facility. *See id.* at 19-20.

PFS thus submits that wildfires pose no credible hazard to the facility and it is entitled to summary disposition on this part of contention Utah K/Confederated Tribes B.

b. Staff's Position

With the affidavits of Ghosh, NRC senior reactor engineer Guttman, and NRC fire protection engineer Paul Lain as support, the Staff fails to accept only one of PFS's proposed material facts in support of this part of the contention. With respect to material fact E11, the Staff disagrees with PFS that the threat a wildfire may pose to systems at the PFS facility other than those important to safety are necessarily "irrelevant" to licensing. The Staff concludes, however, it is satisfied that wildfires would not pose a significant hazard to the PFS facility. *See* Staff Response at 12-14; *see also* Staff Position Statement attach. at 16.

c. State Position

In its response, the State declared it will not respond to the PFS proposed material facts relative to this issue. *See* State Response at 2-3.

d. Board Ruling

Because the PFS proposed statement of material facts is not disputed by the State, and our own review of the PFS motion and the Staff's supporting pleading leads us to conclude that there is a sufficient basis to support these material facts,

we find PFS is entitled to summary disposition in its favor regarding this portion of contention Utah K/Confederated Tribes B.⁴

6. *Cumulative Risks*

As part of its summary disposition response, the State also asserts that summary disposition is not appropriate regarding this contention because in evaluating the impacts of credible accidents upon its facility, PFS has failed to provide a sufficient analysis of the cumulative risks of those matters. Specifically, relying upon the Resnikoff affidavit, the State declares that, consistent with NUREG-0800, any analysis of aircraft accident probabilities must include an analysis of the sum of the risks from (1) military aircraft flying to and from MAAF; (2) military and private aircraft flying in the Sevier B MOA other than to and from MAAF; (3) commercial aircraft flying in airways V257 and J-56; (4) cruise missiles; and (5) aircraft parts or munitions (inert or alive) being intentionally or unintentionally dropped on the PFS facility. *See* State Response at 4-5; *id.* exh. 1, at 2; *see also* State Reply at 7. Given that a significant factual underpinning of this assertion is the deferred question of military aircraft crash impacts on PFS, we likewise will postpone any decision on this matter, albeit again with the caveat that it may be the subject of a PFS supplement to its summary disposition motion (and party responses) at an appropriate time after the Staff has provided its position on military aircraft crashes.

IV. CONCLUSION

The PFS June 7, 1999 motion for partial summary disposition of Utah K/Confederated Tribes B is denied in part, granted in part, and deferred in part as follows:

1. The Tekoi rocket engine test facility — Granted.
2. Salt Lake City International Airport — Denied.
3. Dugway Proving Ground — (a) the firing of conventional ground weapons in military testing and training, denied; (b) the testing and storage of chemical munitions and agents, granted; (c) the testing of biological materials, granted; (d) the transportation of biological, chemical, and hazardous materials to and from DPG, granted; (e) ordnance disposal/unexploded ordnance, granted; and (f) aircraft flights into and out of DPG's MAAF, deferred pending a Staff position on military aircraft crashes except for

⁴ As we explain further in ruling today on the PFS motion for summary disposition of contention Utah R, we decline to adopt the PFS characterization of the fire threat to equipment and systems not designated as "important to safety" as "irrelevant." *See* LBP-99-36, 50 NRC 202, 207 (1999).

those portions regarding landings of aircraft carrying “hung bombs” and the landing of the X-33 experimental space plane, which are granted.

4. Utah Test and Training Range and Hill Air Force Base — (a) aircraft flying to and from HAFB and over the UTTR pose a hazard to the PFS facility, deferred pending a Staff position on military aircraft crashes; and (b) the firing of air-delivered munitions (e.g., bombs and missiles) on the UTTR would pose a hazard to its ISFSI facility, deferred as to bombs pending a Staff position on military aircraft crashes and denied as to cruise missiles.
5. Wildfires — Granted.
6. Aircraft Accident Cumulative Impacts — Deferred pending Staff position on military aircraft crashes.

For the foregoing reasons, it is, this 30th day of August 1999, ORDERED that (1) the June 7, 1999 motion for summary disposition of Applicant PFS is *granted in part, denied in part, and deferred in part* as outlined above in this Memorandum and Order; and (2) as to those portions of this contention for which summary disposition is granted, PFS having established there is no genuine issue as to any material fact, a decision regarding these matters is rendered in favor of PFS.

THE ATOMIC SAFETY AND
LICENSING BOARD⁵

G. Paul Bollwerk, III
ADMINISTRATIVE JUDGE

Dr. Jerry R. Kline
ADMINISTRATIVE JUDGE

Dr. Peter S. Lam
ADMINISTRATIVE JUDGE

Rockville, Maryland
August 30, 1999

⁵ Copies of this Memorandum and Order were sent this date by Internet e-mail transmission to counsel for (1) Applicant PFS; (2) Intervenor Skull Valley Band of Goshute Indians, Ohngo Gaudadeh Devia, Confederated Tribes of the Goshute Reservation, Southern Utah Wilderness Alliance, and the State; and (3) the Staff.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

**G. Paul Bollwerk, III, Chairman
Dr. Jerry R. Kline
Dr. Peter S. Lam**

In the Matter of

**Docket No. 72-22-ISFSI
(ASLBP No. 97-732-02-ISFSI)**

**PRIVATE FUEL STORAGE, L.L.C.
(Independent Spent Fuel Storage
Installation)**

August 30, 1999

In this proceeding concerning the application of Private Fuel Storage, L.L.C. (PFS), under 10 C.F.R. Part 72 to construct and operate an independent spent fuel storage installation (ISFSI), acting pursuant to 10 C.F.R. § 2.749, the Licensing Board denies a PFS request for summary disposition in its favor in connection with contention Utah R, Emergency Plan.

RULES OF PRACTICE: SUMMARY DISPOSITION (BURDEN OF PERSUASION; BURDEN OF PROOF)

As with the analogous Rule 56 of the Federal Rules of Civil Procedure, the movant bears the initial burden of making the requisite showing that there is no genuine issue as to any material fact, which it attempts to do by means of a required statement of material facts in dispute and any supporting materials that accompany the dispositive motion. An opposing party must counter each adequately supported material fact with its own statement of material facts in dispute and supporting materials. If uncontroverted, the movant's facts will be deemed admitted. *See*

Advanced Medical Systems, Inc. (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993).

TECHNICAL ISSUES DISCUSSED

The following technical issues are discussed: emergency plan(s); fire protection measures.

MEMORANDUM AND ORDER (Denying Motion for Partial Summary Disposition of Contention Utah R)

In LBP-98-7, 47 NRC 142, 196, 248, *reconsideration granted in part and denied in part on other grounds*, LBP-98-10, 47 NRC 288, *aff'd on other grounds*, CLI-98-13, 48 NRC 26 (1998), the Licensing Board admitted contention Utah R, which concerns emergency planning for the proposed 10 C.F.R. Part 72 independent spent fuel storage installation (ISFSI) of Applicant Private Fuel Storage, L.L.C. (PFS), on the Utah reservation of the Skull Valley Band of Goshute Indians (Skull Valley Band). PFS now requests that we grant partial summary disposition in its favor relative to the third (and last) portion of that contention concerning the adequacy of onsite firefighting support capability. The NRC Staff supports the entry of summary disposition for PFS, albeit on a basis different from that proffered by PFS. Intervenor State of Utah (State) opposes the PFS request, asserting there are material factual disputes outstanding that preclude summary disposition.

As we explain in more detail below, we agree with the State that partial summary disposition is inappropriate relative to the third portion of contention Utah R and, accordingly, deny the PFS motion.

I. BACKGROUND

As part of its June 1997 license application for its proposed Skull Valley ISFSI, in accordance with 10 C.F.R. § 72.32(a), PFS submitted an emergency plan (EP) for the facility. In seeking to challenge the adequacy of the PFS EP, the State sought the admission of a five-part contention. *See* LBP-98-7, 47 NRC at 195-96. Ultimately, the Board admitted only three portions of that contention. Two of these involved the proposed Rowley Junction, Utah Intermodal Transfer Point (ITP), which is the subject of another summary disposition motion ruling this date. *See* LBP-99-34, 50 NRC 168, 178 (1999). The third, which concerns the matter of

onsite firefighting capability, is the subject of the pending PFS summary disposition motion. As admitted by the Board, this portion of the contention provides:

UTAH R — Emergency Plan

CONTENTION: The Applicant has not provided reasonable assurance that the public health and safety will be adequately protected in the event of an emergency at the storage site or the transfer facility in that:

* * * *

3. PFS has not adequately described the means and equipment for mitigation of accidents because it does not have adequate support capability to fight fires onsite.

LBP-98-7, 47 NRC at 254.

In its June 28, 1999 motion, PFS has sought summary disposition of this portion of contention Utah R. Relying on a twenty-seven item statement of material facts not in dispute and supporting affidavits (with exhibits) from BNFL Fuel Solutions design engineering manager Ram Srinivasan, Stone & Webster Engineering Corporation (S&W) licensing engineer Jeffrey Johns, Texas Tech University professor Carlton Britton, S&W project engineer Jerry Cooper, S&W lead electrical engineer Wesley Jacobs, and Holtec International president and chief executive officer Krishna Singh,¹ PFS declares summary disposition is appropriate because the issues of the adequacy of the PFS facility water supply and PFS's general firefighting capability that the State seeks to raise are immaterial to any decision the agency must make regarding the adequacy of the PFS EP. Specifically, PFS asserts that its facility is designed to withstand the effects of credible fires without firefighting by response personnel or the operation of any automatic fire detection/suppression system. *See* [PFS] Motion for Partial Summary Disposition of Utah Contention R — Emergency Plan (June 28, 1999) at 2-3. PFS bases this conclusion on its analysis of the impacts of credible diesel fuel fires and wildfires upon the spent fuel shipping, transfer, and storage casks,² which it concludes would not have any detrimental radiological consequences so as to be cognizable under the direction in section 72.32(a)(5) that an EP contain a brief description of the

¹There have been no objections by PFS, the Staff, or the State to the qualifications or expertise of the various affiants whose statements are relied upon to provide support for other parties' assertions regarding the material factual matters at issue in connection with contention Utah R.

²The PFS operational plan calls for the shipping cask holding the spent fuel canister to be moved into the canister transfer building (CTB) on a heavy-haul truck or rail car, taken off the truck or rail car by crane and moved to a canister transfer cell. There, the shipping cask lid is removed, a transfer cask with movable bottom shield doors is placed over the shipping cask by a crane and the spent fuel canister is lifted through the open shield doors into the transfer canister. The shield doors are then closed, the transfer canister is lifted by crane onto the top of a storage cask that also is located in the transfer cell, the transfer cask bottom shield doors are opened, and the spent fuel canister is lowered into the storage cask. The storage cask is then sealed with a lid and transported to the storage pads on the PFS facility using a cask transporter vehicle. *See* PFS Safety Analysis Report at 5.1-4 to -6 (rev. 1 & 2 May 1998 & Aug. 1998).

means of mitigating the radiological consequences of accidents, including onsite protection of workers. *See id.* at 6-9.

In response to the PFS motion, the Staff declares its support for the result sought by PFS, i.e., summary disposition in its favor, but on somewhat different grounds than PFS puts forth to justify that result. Although the Staff indicates it agrees with the PFS assertion that an applicant must describe the means of mitigating the consequences of radiological accidents at its ISFSI facility, the Staff expresses its disagreement with the PFS assertion that the focus of an applicant's consideration of fire events need go no further than those that would involve significant radiological releases. Instead, the Staff asserts, the focus should be on the adequacy of the PFS plans for detecting, assessing, and mitigating the consequences of facility fires. Further, relying on the supporting affidavits of NRC fire protection engineer Paul W. Lain and agency emergency preparedness specialist Randolph L. Sullivan, the Staff recommends that summary disposition be granted because the PFS EP demonstrates that the PFS onsite firefighting capability and equipment, including fire brigade staffing and training, fire water tank capacity, and sprinkler systems, are adequate to respond to a fire event. *See* NRC Staff's Response to [PFS] Motion for Partial Summary Disposition of Utah Contention R — Emergency Plan (July 28, 1999) at 10-11 & n.16; *see also* NRC Staff's Statement of Position Concerning Group I Contentions (June 15, 1999) at 20-22.

In its August 9, 1999 response to the PFS and Staff pleadings, based on a twenty-seven item statement of material facts in dispute, which raises a specific challenge to eight of the PFS statements of material fact, and the supporting affidavit of Radioactive Waste Management Associates senior associate Dr. Marvin Resnikoff, the State declares that it disagrees with both parties' positions.

Relative to PFS's assertion that the adequacy of its firefighting capabilities, including the water supply, is immaterial to an NRC decision about the sufficiency of the PFS EP, the State contends this is inconsistent with the terms of the Staff's spent fuel dry storage facility standard review plan. According to the State, that review plan declares the EP must describe the means of mitigating the consequences of each type of accident and a description of the facility equipment maintenance program and requires this analysis to include “ ‘any non-radiological, hazardous material releases that could impact emergency response efforts’ ” and “ ‘events which could lead to initiation of an alert . . . [including] fire onsite that might affect radioactive material or systems important to safety . . . [or compromise] ongoing security.’ ” [State] Response to [PFS] Motion for Partial Summary Disposition of Utah Contention R and Reply to the Staff's Response to the [PFS] Motion at 4 (quoting Office of Nuclear Materials Safety and Safeguards, U.S. Nuclear Regulatory Commission, NUREG-1567, Standard Review Plan for Spent Fuel Dry Storage Facilities at C-6, C-7 (draft Oct. 1996)) [hereinafter State Response].

Further, according to the State, PFS has failed to analyze the effects of fire to other systems, structures, and components (SSCs) that are important to safety, in particular a fire caused by spilled fuel inside the canister transfer building (CTB) at the PFS facility. A CTB fire is significant, the State asserts, because it is in this building that the canister containing the spent fuel is taken out of a shipping cask, placed in a transfer cask, and then transferred to a storage cask. Acknowledging that PFS purports to have done an analysis of a fire in the CTB resulting from a 300 gallon diesel fuel spill from a heavy-haul truck and a 50 gallon spill from a cask transporter vehicle, the State nonetheless contests the PFS assertion that none of the fuel from these accidents considered by PFS will spread beyond the CTB unloading bay into the transfer cells. According to the State, PFS has failed to show what “building designs” it proposes will prevent such a fuel movement. This is a significant deficiency, the State declares, given that a 300 gallon fuel fire will cause temperatures inside the CTB to rise above 1200 degrees Fahrenheit, a temperature beyond what the transfer casks are designed to withstand so as to cause spent fuel cladding degradation. *See State Response at 5-6.* Equally important, the State indicates, is the PFS admission that a 300 gallon fire could cause the loss of electrical power to SSCs inside the CTB, because neither the PFS motion nor the safety analysis report that accompanies its application discusses how PFS will recover from a fire-related electrical loss during the critical period of canister transfer operations or protect onsite electrical repair workers needed to repair faulty or burned out CTB wiring. *See id.* at 7.

Also wanting, the State asserts, is the PFS analysis of locomotive fuel fires, which could involve 6000 gallons of diesel fuel and could impact on the storage, transfer, and shipping casks, and SSCs. Noting that PFS again relies upon unspecified building design to prevent spill movement as well as administrative procedures that will keep a locomotive out of the CTB, the State asserts that a material factual dispute exists by reason of the PFS failure to explain how a 200 ton cask loaded rail car will be moved into the CTB and how the unloaded car will then be moved out of the CTB. This, in turn, raises the reasonable inference that a locomotive will be required to enter and exit the CTB to accomplish this task and creates a material deficiency in the PFS fire analysis. *See id.* at 8.

As to the Staff’s arguments that a material factual dispute has not been shown, the State finds the Staff’s reliance upon an onsite fire pumper truck, a Skull Valley Band reservation pumper truck, and an unsupported PFS declaration that there will be sufficient water for firefighting even though PFS has not sought State permission to withdraw groundwater are insufficient to support the Staff’s conclusion that PFS will have the means to provide sufficient water for firefighting. The State thus maintains that there are material factual disputes over the adequacy of PFS’s firefighting capabilities. *See id.* at 9-10.

II. ANALYSIS

A. Legal Standard for Summary Disposition

As we have recently noted elsewhere in this proceeding, a party to an NRC proceeding is entitled to summary disposition on any or all matters

if the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and affidavits, if any, show that there is no genuine issue as to any material fact and that the party . . . is entitled to a decision as a matter of law.”

10 C.F.R. § 2.749(d). As with the analogous Rule 56 of the Federal Rules of Civil Procedure, the movant bears the initial burden of making the requisite showing that there is no genuine issue as to any material fact, which it attempts to do by means of a required statement of material facts in dispute and any supporting materials that accompany the dispositive motion. An opposing party must counter each adequately supported material fact with its own statement of material facts in dispute and supporting materials. If uncontroverted, the movant’s facts will be deemed admitted. *See Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993).

B. Board Ruling

As the Staff points out, events involving fires clearly are within the design basis of this facility based on the fact that the PFS EP indicates that certain types of fires warrant an emergency action level of Alert, the highest accident/off normal event classifications used by PFS. *See* Staff Response at 11 n.16. Among these is a fire affecting a loaded storage, transfer, or shipping cask if the cask is affected by fire longer than 15 minutes. *See* PFS EP at 2-15 (rev. 4 Aug. 1999). PFS declares that it has examined what it considers the only two possible (albeit not credible) large-scale fire scenarios — a 300 gallon diesel spill from a heavy-haul tractor trailer and a 50 gallon spill from a cask transporter vehicle. One other suggested scenario — involving a 6000 gallon diesel spill from a locomotive — PFS dismisses as not meriting further scrutiny because it has administrative procedures that prohibit a locomotive from entering the CTB, the area where a fuel-related conflagration is likely to be the most problematic.

As the State’s arguments suggest, however, a significant link in the factual chain that must be completed to eliminate this scenario from consideration is still unaccounted for. If, as PFS declares, a locomotive is not being used to move rail cars carrying a 142-ton shipping cask into, and, once unloaded, out of, the CTB, then the obvious query is what hauling method is going to be used that does not involve an unevaluated fire hazard. Absent a response to this question, at this point

we are unable to conclude there are no disputed material facts relative to contention Utah R, either as to the PFS assertion there are no radiologically significant fire hazards or the Staff's claim that PFS has adequate firefighting capabilities and equipment.³

Accordingly, because the State has established the existence of a material factual dispute,⁴ we decline to enter summary disposition for PFS relative to the third portion of contention Utah R.

III. CONCLUSION

Albeit for somewhat different reasons, PFS and the Staff assert there are no material facts in dispute in connection with the third portion of contention Utah R, Emergency Plan, which concerns the adequacy of PFS's onsite firefighting capability. The State, however, has established that a material factual dispute does exist relative to the question of fires in the CTB resulting from leakage and ignition of transportation vehicle fuel. Accordingly, we deny the PFS request for partial summary disposition on this part of contention Utah R.

For the foregoing reasons, it is, this 30th day of August 1999, ORDERED that:

1. The NRC Staff's July 28, 1999 unopposed request for a one-page extension of the page-limit for its response to the PFS summary disposition motion, *see* Staff Response at 1 n.1, is *granted*.

³ Given the potential size and duration of a fuel-related fire involving a locomotive, which thus far is the only PFS-identified device for moving rail cars into and out of the CTB, this unresolved factual question likewise negates the Staff's conclusion about the existence of material factual disputes regarding the adequacy of the PFS firefighting program in detecting, assessing, and mitigating fires. We note further, however, that with our ruling today on contention Utah K/Confederated Tribes B as it concerns wildfires, *see* LBP-99-35, 50 NRC 180, 199-200 (1999), such fires are not subject to further consideration in litigating this contention.

⁴ As was noted in the discussion above, the State has asserted that other material factual disputes exist, including questions about the effect of CTB design and water availability. Because we find a material factual dispute exists regarding this contention and can discern no ready basis for further parsing its substance, we see no need to resolve these additional State claims.

2. The June 28, 1999 motion of PFS for partial summary disposition of contention Utah R is *denied*.

THE ATOMIC SAFETY AND
LICENSING BOARD⁵

G. Paul Bollwerk, III
ADMINISTRATIVE JUDGE

Dr. Jerry R. Kline
ADMINISTRATIVE JUDGE

Dr. Peter S. Lam
ADMINISTRATIVE JUDGE

Rockville, Maryland
August 30, 1999

⁵ Copies of this Memorandum and Order were sent this date by Internet e-mail transmission to counsel for (1) Applicant PFS; (2) Intervenors Skull Valley Band of Goshute Indians, Ohngo Gaudadeh Devia, Confederated Tribes of the Goshute Reservation, Southern Utah Wilderness Alliance, and the State; and (3) the Staff.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Administrative Judges:

Charles Bechhoefer, Presiding Officer
Thomas D. Murphy, Special Assistant

In the Matter of

Docket No. 40-8027-MLA-4
(ASLBP No. 99-770-09-MLA)

SEQUOYAH FUELS CORPORATION
(Gore, Oklahoma Site Decommissioning)

August 30, 1999

In a proceeding considering a proposed decommissioning plan for a uranium processing facility, the Presiding Officer denies reconsideration of his earlier order authorizing the State of Oklahoma to file a supplement to the State's previously filed request for a hearing.

RULES OF PRACTICE: INFORMAL PROCEEDINGS

Although a supplement to a request for a hearing is not explicitly provided for under the informal hearing procedures of 10 C.F.R. Part 2, Subpart L, a Presiding Officer has the general authority under 10 C.F.R. § 2.1209 to permit it in proceedings governed by those procedures.

MEMORANDUM AND ORDER
(Denying Motion for Reconsideration)

In my Memorandum and Order (Supplement to Request for Hearing), dated August 12, 1999, I provided an opportunity for the State of Oklahoma, a potential Intervenor in this proceeding, to supplement its previously filed request for a

hearing. (On the same day, the State of Oklahoma filed a petition for me to permit it to file a supplement — a petition that I had not received at the time I issued my Memorandum and Order but which sought the same relief as my Order had already granted.) Sequoyah Fuels Corporation (SFC or Applicant) on August 19, 1999 filed a Motion for Reconsideration of my August 12, 1999 Order. On August 23, Oklahoma filed a response opposing SFC's reconsideration motion. On August 27, the NRC Staff filed a response that also opposed the reconsideration motion.

For reasons set forth herein, I am denying SFC's reconsideration motion (and, by so doing, granting Oklahoma's request that it be given an opportunity to supplement its earlier request). The filing dates set forth in my August 12, 1999 Order still govern.

The substance of SFC's motion for reconsideration is that I should not have provided Oklahoma with an opportunity to file a supplement to its request for a hearing. SFC maintains in essence that, unlike the procedures for formal hearings under 10 C.F.R. Part 2, Subpart G, the informal hearing procedures under 10 C.F.R. Part 2, Subpart L, that govern this proceeding include no specific authority for a person requesting a hearing to amend its hearing request. According to SFC, the omission from Subpart L procedures was "deliberate." SFC urges that the only Subpart G procedures included in Subpart L are those expressly referenced in Subpart L.

Subpart L, of course, provides Presiding Officers with broad authority to conduct a fair and impartial hearing, including power to "[r]egulate the course of the hearing." 10 C.F.R. § 2.1209. Under that authority, I permitted Oklahoma to supplement its request for a hearing, as it would have an unqualified right to do under the more formal Subpart G procedures. I reasoned that the informal hearing procedures under Subpart L should be interpreted as providing at least as much procedural flexibility in treating participation requests as do the more formal and structured Subpart G procedures.

There has been precedent, of course, for presiding officers to have granted opportunities for persons in Subpart L proceedings to provide a supplemental filing. In my August 12 Order, I cited a published decision where that had occurred. *Babcock and Wilcox* (Apollo, Pennsylvania Fuel Fabrication Facility), LBP-92-24, 36 NRC 149 (1992). (Oklahoma cites the same decision in its request to file a supplemental response.) SFC attempts to differentiate that decision, however, on the ground that, unlike here (where Oklahoma is represented by an experienced attorney), it permitted *pro se* petitioners to file supplemental requests.

In at least one other Subpart L proceeding, a Presiding Officer, in an unpublished order, permitted a large, well-funded entity to supplement its hearing request, for purposes of elaborating upon its statement of standing. *Quivera Mining Co.* (Memorandum and Order (Request for Hearing)), dated June 20, 1997. The Presiding Officer explained (at 3):

In proceedings subject to Subpart G of 10 C.F.R. Part 2, a petitioner would have a right to amend its petition without leave of the Presiding Officer (in those proceedings, an Atomic Safety and Licensing Board). 10 C.F.R. § 2.714(a)(3). In proceedings subject to Subpart L of 10 C.F.R. Part 2, such as this one, there is no specific right of this type, although there also is no prohibition.

Reflecting the common statutory derivation of the formal and informal hearing procedures (i.e., § 189a of the Atomic Energy Act, 42 U.S.C. § 2239(a)), the Subpart L procedures, while differing in material respects from the formal procedures, do not appear to have been intended to make it more difficult to attain intervention in an informal proceeding than in a formal one. A meaningful opportunity for a hearing must of course be offered. *City of West Chicago, IL v. NRC*, 701 F.2d 633, 645 (7th Cir. 1983).

The Presiding Officer went on to conclude (at 3-4) that a “necessary concomitant” of a meaningful right to a fair hearing is that a petitioner have an adequate opportunity to provide the “minimal amount of detail essential to determine that a petitioner has standing and seeks to raise germane issues,” citing *Combustion Engineering, Inc. (Hematite Fuel Fabrication Facility)*, LBP-89-23, 30 NRC 140 (1989).

Further, nothing in the Statement of Considerations for Subpart L (54 Fed. Reg. 8269 (Feb. 28, 1989)) suggests that a petitioner should not be afforded an opportunity to file a supplemental statement. Given the foregoing considerations, I am here *denying* SFC’s motion for reconsideration and providing Oklahoma an opportunity to file a supplemental request. Such request must be filed (mailed) by September 3, 1999. SFC and the Staff may respond to Oklahoma’s supplement by no later than September 24, 1999, and October 1, 1999, respectively. (Copies of this Memorandum and Order are today being telefaxed to Oklahoma and SFC and hand delivered to the NRC Staff.)

IT IS SO ORDERED.

Charles Bechhoefer, Presiding Officer
ADMINISTRATIVE JUDGE

Rockville, Maryland
August 30, 1999

Directors'
Decisions
Under
10 CFR 2.206

DIRECTORS' DECISIONS

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF ENFORCEMENT

R. W. Borchardt, Director

In the Matter of

Docket No. 50-443

**NORTH ATLANTIC ENERGY
SERVICES CORPORATION**
(Seabrook Station, Unit 1)

August 3, 1999

On March 31, 1999, the Petitioner, Mr. David Lochbaum of the Union of Concerned Scientists, requested the following three specific actions pursuant to the "other actions" provision of 10 C.F.R. § 2.206: (1) The Petitioner requested that the individuals responsible for discrimination against a contract electrician at the Seabrook Nuclear Generating Station as identified in an NRC Office of Investigations (OI) report be banned by the NRC from participation in licensed activities at and for any nuclear power plant for a period of at least 5 years; (2) the individuals responsible for creating a false record to cover up the concern raised by the contract electrician as identified in the cited OI report also be banned by the NRC from participation in licensed activities at and for any nuclear power plant for a period of at least 5 years; and (3) the Petitioner be permitted to attend the upcoming Predecisional Enforcement Conference (June 2, 1999) on this matter.

Based upon the NRC's review of the investigative records and the additional information developed during the June 2, 1999 Predecisional Enforcement Conference, the NRC Staff concluded that enforcement action was warranted against North Atlantic Energy Services Corporation (NAESCO), the Williams Power Corporation, and the Williams Power foreman for discriminating against a contract electrician in violation of 10 C.F.R. § 50.7. A finding that the foreman created a false document in violation of 10 C.F.R. § 50.9 was not substantiated. Instead of a section 50.9 violation, the NRC Staff believed that the foreman as well as the electrician committed minor violations of Seabrook procedural requirements.

In reaching the enforcement decision against the foreman, the NRC Staff weighed such factors as the past performance of the foreman and the electrician,

the fact that the Williams Power Corporation foreman was only an acting first-line supervisor, and the severity of the adverse action including the fact that Williams Power Corporation, at the request of NAESCo, promptly rehired the electrician to reduce the probability that there would be a chilling effect on other employees for raising safety concerns. Consideration was also given to evidence presented at the Predecisional Enforcement Conference which indicated that the foreman had encouraged and was receptive to safety concerns raised by employees in the past. The violation in this case is based on the NRC Staff's conclusion that the foreman selected the electrician for layoff because the electrician raised a safety concern with a NAESCo QC inspector. The NRC Staff considered issuing the foreman an order banning him from licensed activities, as requested by the Petitioner, but concluded that an order was not warranted in this case or necessary to protect public health and safety.

Even though the NRC Staff concluded that enforcement action against the foreman was warranted for the discrimination against the electrician, the Petitioner's specific request that the individual be banned from participating in licensed activities at and for any nuclear utility for a period of at least 5 years was denied. The Petitioner's request to attend the closed Predecisional Enforcement Conference was also denied. The reason was explained in a letter dated April 20, 1999 to the Petitioner. This letter informed the Petitioner that it is the Commission's policy to normally close conferences to public observation when the enforcement action being contemplated by the NRC Staff is based on the findings of an OI investigation report that has not been publicly disclosed or when the enforcement action being contemplated may be taken against an individual. The Petitioner was informed that the fact that a 2.206 petition has been filed does not provide a basis for permitting public observation.

DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206

I. INTRODUCTION

On March 31, 1999, David A. Lochbaum (Petitioner) filed a petition pursuant to 10 C.F.R. § 2.206 requesting that the U.S. Nuclear Regulatory Commission (NRC) take enforcement action against unspecified individuals working at the Seabrook Nuclear Power Station (Seabrook Station) who allegedly: (1) discriminated against a contract electrician in violation of 10 C.F.R. § 50.7; and (2) created a false record in violation of 10 C.F.R. § 50.9. More specifically, the Petitioner requested that the NRC ban these unspecified individuals from participating in licensed activities for a period of at least 5 years. The Petitioner also requested (3) permission to

attend an upcoming Predecisional Enforcement Conference between the NRC and the Licensee on this matter.

As the basis for his request, the Petitioner cited a March 16, 1999 letter from the NRC to the North Atlantic Energy Services Corporation (NAESCO), the owner of the Seabrook Station. This letter informed NAESCO that an investigation conducted by the Office of Investigations (OI) had concluded that a Williams Power Corporation foreman had discriminated against an electrician, in violation of section 50.7, for raising a safety concern and that this same Williams Power Corporation foreman had deliberately caused an inaccurate record to be created, in violation of section 50.9.

By a letter dated April 20, 1999, the Petitioner was informed that his requests for enforcement action had been referred to the Office of Enforcement and that pursuant to section 2.206, action on his requests would be taken within a reasonable time.

II. DISCUSSION

On May 29, 1998, OI issued Report 1-1998-005 which concluded that a Williams Power Corporation foreman had discriminated against an electrician for raising a safety concern, in violation of section 50.7, and that this same Williams Power Corporation foreman had deliberately caused an inaccurate record to be created, in violation of section 50.9. On March 16, 1999, the NRC sent a letter to NAESCO which summarized the findings of the OI report and invited NAESCO's representatives to meet with the NRC and present their views on the apparent violations identified in the report. As is customary, a copy of the NRC's March 16, 1999 letter to NAESCO was placed in the Public Document Room and made available for public inspection.

The Petitioner obtained a copy of the NRC's March 16, 1999 letter to NAESCO and used the summary of the OI findings contained in the letter as a basis for requesting enforcement action under section 2.206. A member of the NRC enforcement staff contacted the Petitioner on April 15, 1999, to determine whether the Petitioner had any information regarding his March 31, 1999 request for action under section 2.206 that was not contained in his petition or the NRC's March 16, 1999 letter to NAESCO. The Petitioner informed the NRC enforcement staff member that he had no knowledge of the apparent violations for which he was requesting enforcement action other than that information summarized in the NRC's March 16, 1999 letter.

A closed Predecisional Enforcement Conference was held on June 2, 1999, between the NRC and NAESCO, Williams Power Corporation, and the Williams Power Corporation foreman whose actions allegedly caused NAESCO to violate sections 50.7 and 50.9. This conference was closed to the public because it is the

Commission's policy to normally close conferences to public observation when the enforcement action being contemplated by the NRC Staff is based on the findings of an OI investigation report that has not been publically disclosed or when the enforcement action being contemplated may be taken against an individual. The Petitioner was informed that the fact that a 2.206 petition has been filed does not provide a basis for permitting public observation. During this conference, the participants discussed the circumstances that led to the foreman's decision to layoff the electrician who had raised a safety concern and the circumstances surrounding the creation of the document that OI concluded was inaccurate. The electrician who had raised the safety concern and was subsequently selected for layoff by Williams Power Corporation also attended the conference, and he met with the NRC participants following the conference to present his views on the matters discussed during the conference and to answer NRC questions.

Based on the information contained in OI Report 1-1998-005 and the information developed during the June 2, 1999 Predecisional Enforcement Conference, the NRC Staff concluded that a violation of section 50.7 had occurred as stated in the OI report but that no violation of section 50.9 had occurred because the allegedly inaccurate document was in fact complete and accurate in all material respects.

III. ANALYSIS

Based on the information contained in OI Report 1-1998-005 and the information developed during the June 2, 1999 Predecisional Enforcement Conference, the NRC Staff has concluded that enforcement action is warranted against NAESCO, the Williams Power Corporation, and the Williams Power foreman for discriminating against a contract electrician in violation of section 50.7. After carefully weighing all the circumstances of the case, the NRC Staff has concluded that it is appropriate to issue NAESCO a Severity Level III Notice of Violation and Proposed Civil Penalty in the amount of \$55,000 (EA 98-165), and to issue the Williams Power Corporation (EA 98-338) and the Williams Power Corporation foreman (IA 99-003) each Severity Level III Notices of Violation.

In reaching this enforcement decision against the foreman, the NRC Staff weighed such factors as the past performance of the foreman and the electrician, the fact that the Williams Power Corporation foreman was only an acting first-line supervisor, and the severity of the adverse action including the fact that Williams Power Corporation, at the request of NAESCO, promptly rehired the electrician to reduce the probability that there would be a chilling effect on other employees for raising safety concerns. Consideration was also given to evidence presented at the Predecisional Enforcement Conference which indicated that the foreman had encouraged his employees to raise their safety concerns with him and which indicated that the foreman had been receptive to safety concerns raised

by employees in the past. The violation in this case is based on the NRC Staff's conclusion that although the foreman might have encouraged his employees in the past to raise safety concerns, the foreman expected that his employees would bring all their concerns to him rather than raise their concerns directly with representatives of NAESCo. The NRC Staff concluded in this case that the foreman selected the electrician for layoff because the electrician raised a safety concern with a NAESCo QC inspector.

Given all the circumstances of this case, the NRC Staff concluded that issuing the foreman a Severity Level III Notice of Violation was an appropriate enforcement action to put the foreman on notice that discriminating against employees who take their safety concerns directly to representatives of NAESCo is unacceptable. After meeting with the foreman, the NRC Staff is satisfied that the foreman understands that employees are permitted by NRC regulations to raise their safety concerns with whomever they choose and that he cannot retaliate against individuals who choose to raise their concerns directly with NAESCo or the NRC. After meeting with the foreman, the NRC Staff is also confident that the foreman will comply with NRC regulatory requirements in the future. Therefore, while the NRC Staff considered issuing the foreman an order banning him from licensed activities, as requested by the Petitioner, the NRC Staff does not believe that an order is warranted in this case or necessary to protect public health and safety.

Based on the information contained in OI Report 1-1998-005 and the information developed during the June 2, 1999 Predecisional Enforcement Conference, the NRC Staff has concluded that no violation of section 50.9, "Completeness and Accuracy of Information," occurred. Specifically, the NRC concluded that, because the wiring discrepancy was noted in the work document by the contract electrician, the documentation of the control building air conditioning (CBA) system control panel work activities was accurate. However, the failure to terminate the conductors in accordance with the applicable design document constituted a violation of requirements contained in Seabrook site procedures. This violation was of minor significance and is not subject to formal enforcement action.

IV. CONCLUSION

For the reasons set forth above, the petition is denied. In accordance with 10 C.F.R. § 2.206(c), a copy of this Decision will be filed with the Secretary of the Commission for the Commission's review. As provided by this regulation, this Decision will constitute the final action of the Commission 25 days after issuance

unless the Commission, on its own motion, institutes a review of the Decision within that time.

FOR THE NUCLEAR
REGULATORY COMMISSION

R. W. Borchardt, Director
Office of Enforcement

Dated at Rockville, Maryland,
this 3d day of August 1999.

BIBLIOGRAPHIC DATA SHEET

(See instructions on the reverse)

1. REPORT NUMBER
(Assigned by NRC, Add Vol., Supp., Rev.,
and Addendum Numbers, if any.)
NUREG-0750
Vol. 50, No. 2
Pages 67-218

2. TITLE AND SUBTITLE

Nuclear Regulatory Commission Issuances for August 1999

3. DATE REPORT PUBLISHED

MONTH	YEAR
October	1999

4. FIN OR GRANT NUMBER

5. AUTHOR(S)

6. TYPE OF REPORT

Legal

7. PERIOD COVERED (Inclusive Dates)

8. PERFORMING ORGANIZATION - NAME AND ADDRESS (If NRC, provide Division, Office or Region, U.S. Nuclear Regulatory Commission, and mailing address; if contractor, provide name and mailing address.)

**Office of the Chief Information Officer
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001**

9. SPONSORING ORGANIZATION - NAME AND ADDRESS (If NRC, type "Same as above"; if contractor, provide NRC Division, Office or Region, U.S. Nuclear Regulatory Commission, and mailing address.)

**Office of the Commission
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001**

10. SUPPLEMENTARY NOTES

11. ABSTRACT (200 words or less)

Legal issuances of the Commission, the Atomic Safety and Licensing Board Panel, the Administrative Law Judges, and NRC Program Offices are presented.

12. KEY WORDS/DESCRIPTORS (List words or phrases that will assist researchers in locating the report.)

legal issuances

13. AVAILABILITY STATEMENT

Unlimited

14. SECURITY CLASSIFICATION

(This Page)

Unclassified

(This Report)

Unclassified

15. NUMBER OF PAGES

16. PRICE