RAS 2685

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKETED 01/31/01

COMMISSIONERS:

SERVED 01/31/01

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In the Matter of	)	
HYDRO RESOURCES, INC. P.O. Box 15910 Rio Rancho, NM 87174	)	Docket No. 40-8968-ML

CLI-01-04

MEMORANDUM AND ORDER

I. Introduction

Hydro Resources, Inc. ("HRI") is seeking a license for a proposed multiple-site in situ leach mining project in New Mexico. The NRC staff granted the license, but several intervenors have challenged its validity in an adjudicatory proceeding initiated under 10 C.F.R. Part 2, Subpart L. Our decision today follows a series of other appellate decisions in this proceeding. See, e.g., CLI-00-08, 51 NRC 227 (2000)(financial qualifications); CLI-00-12, 52 NRC 1 (2000) (groundwater, radioactive air emissions, and technical qualifications). Today we grant review of, and reverse, LBP-99-40, 50 NRC 273 (1999), in which the Presiding Officer placed the remaining portions of this proceeding in abeyance. We lift the abeyance order and direct that the proceeding resume within six months, unless HRI decides to limit its license to the already-adjudicated "Church Rock Section 8" site. In addition, we grant review of, and affirm, LBP-99-30, 50 NRC 77 (1999), which addressed National Environmental Policy Act (NEPA) and environmental justice concerns.

II. Abeyance Order (LBP-99-40)

A. Background

HRI applied for and received an NRC materials license to conduct in situ leach mining at four sites in New Mexico: Sections 8 and 17, located in Church Rock, New Mexico, and the Unit 1 and Crownpoint sites, located in Crownpoint, New Mexico. HRI proposed and the license authorizes a phased development of the properties. For example, HRI is to begin uranium recovery operations in Church Rock Section 8, and may not proceed to inject lixiviant at either the Unit 1 or Crownpoint sites without first conducting an acceptable groundwater restoration demonstration at the Church Rock site. See SUA-1508, Section 10.28. The license, granted on January 5, 1998, is only for a five year term, and thus due to expire on January 5, 2003, unless renewed.[1] Intervenors Eastern Navajo Diné Against Uranium Mining ("ENDAUM"), Southwest Research and Information Center ("SRIC"), Marilyn Morris and Grace Sam challenge the validity of HRI's license.

The proceeding has proved quite complex, due both to its large number of technical issues and to unprecedented legal questions raised by an unusual procedural format. The unusual procedural format took form soon after the Presiding Officer granted the intervenors' requests for hearing. HRI responded by informing the Presiding Officer that "at this time" it only had the intention to mine in Section 8, and had "made no decision to proceed with subsequent sections of the Project." HRI's Request for Bifurcation (June 4, 1998) at 2-3. Any such decision on the other project sites was "potentially years away," HRI explained. Id. at 3. "Therefore," HRI concluded, "petitioners' concerns regarding Section 17, Crownpoint, and Unit

[1] HRI's leach mining activities are anticipated to occur over a 20-year period. The NRC staff, however, proposed taking a phased approach to licensing, given that HRI intended to develop the project incrementally, "the project's potential area of disturbance is vast, and the resource methodologies and interpretations could change during the proposed 20-year license term." CLI-98-8, 47 NRC 314, 318 (1998).

1 (which comprise nearly all of the issues raised by petitioners) are not ripe for consideration." Id.

HRI then requested that the Presiding Officer "bifurcate" the proceeding, to resolve only those issues concerning Section 8 and to hold in abeyance all issues relating to the other project sites "unless and until HRI is prepared to proceed with those phases." Id. Because HRI had not yet made any final decision on whether to proceed with Section 17, Unit 1, or Crownpoint, and "probably" would not make a decision for years, HRI argued that it made "little sense" to proceed with a hearing on those sites. Id. at 13. Instead, HRI suggested, the Presiding Officer and all parties would benefit by conserving resources now and later holding a hearing on the other sections only "if and when" HRI decided to proceed with them. Id. at 14-15. Petitioners would not be deprived of any hearing rights, HRI argued, because they could contest later phases of the project as HRI decided to proceed with them. Bifurcation also would "allow the parties and the Presiding Officer to review the later phases of the project on a more complete and informed record," HRI contended. Id. at 14.

In September 1998, the Presiding Officer granted HRI's bifurcation request, and thus limited the first phase of the hearing to those issues specific to Section 8 of Church Rock. The Presiding Officer ruled that the intervenors would be "prohibited, on the ground of ripeness, from making detailed challenges to parts of the project that have been scheduled many years into the future and that will be completed only if conditions in the uranium market permit profitable mining at that time." Memorandum and Order (Sept. 22, 1998) at 2 (unpublished). Accordingly, those issues involving only section 17 of Church Rock, the Unit 1 site, or the Crownpoint site were not to be included in this first phase of the hearing. In a concession to the intervenors, the Presiding Officer did, though, permit immediate litigation (in Phase I) on "any

issue that challenged the [overall] validity of the license issued to HRI." This ambiguous statement apparently led to some confusion over the intended scope of the Phase I hearing.

Intervenors ENDAUM and SRIC sought to have the Presiding Officer's bifurcation order certified to the Commission for immediate appellate review. According to the intervenors, bifurcation violated both the AEA, by depriving them of a timely hearing on all material issues, and NEPA, by preventing the project's environmental effects, cumulative impacts, and reasonable alternatives from being examined as a whole. The intervenors claimed that the Presiding Officer had illegally segmented into smaller units a project that had been proposed, described, and licensed as a single project and, by addressing Section 8 separately, he would risk taking a distorted view of the rest of the project. See ENDAUM and SRIC's Request for Directed Certification at 3, 7.

HRI and the NRC staff supported the Presiding Officer's bifurcation decision, arguing that it was merely a scheduling order setting up a logical phased approach to the hearing. "It is reasonable for an inquiry into the acceptability of a project that will proceed in stages to consider component mining areas before considering the cumulative impacts of the entire project," the staff stated. NRC Staff Response to ENDAUM and SRIC Request for Directed Certification of Bifurcation Order (Oct. 8, 1998) at 8.

The Presiding Officer denied the request for directed certification. He said that the first phase of the hearing therefore would be limited to issues relating "to the invalidity of the entire license or to operations on Church Rock Section 8." Once this first phase of the hearing was completed, the Presiding Officer would then "determine whether to proceed immediately with the remainder of the case or to wait until there is greater confidence that HRI will undertake injection mining at the other sites." Memorandum and Order (Oct. 13, 1998) at 4.

ENDAUM and SRIC petitioned the Commission to grant interlocutory review of the bifurcation order. The Commission denied review. See CLI-98-22, 48 NRC 215 (1998). The Commission stated:

> The Intervenors' concern that the Presiding Officer's bifurcation order will leave some vital issues unaddressed need not be resolved now. The nature of undecided questions will be clearer, and the Presiding Officer (and ultimately the Commission itself) will be better positioned to assess whether additional issues require immediate adjudication, after the parties submit their initial presentations and the Presiding Officer issues his initial decisions. It would be unproductive and premature for the Commission to consider now whether litigation on some questions can be suspended indefinitely given that the Presiding Officer himself has not yet decided to do so and in a situation where additional developments may shed more light on the question.

48 NRC at 217-18.

The Presiding Officer concluded the first phase of the hearing on August 20, 1999. See LBP-99-30, 50 NRC 77 (1999). At that point, he ordered the parties to file a proposed schedule for the remainder of the case. HRI instead filed a motion to place in abeyance all issues concerning section 17, Unit 1, and Crownpoint. HRI stated that it did not intend to proceed with operations at the other sections "at this time." The Presiding Officer agreed with HRI that it would be wasteful to litigate issues related to the other sections if there was no present intention to mine them. He agreed, therefore, to hold the rest of the proceeding in abeyance. See LBP-99-40, 50 NRC 273 (1999). He imposed, however, the condition that HRI give 8-months advance notice prior to undertaking any mining activity on any of the three sections that had not yet been subject to hearing.

B. Parties' Arguments Before the Commission

In petitions for review filed before the Commission, Intervenors ENDAUM, SRIC, Marilyn Morris, and Grace Sam challenge the Presiding Officer's decision to hold the remainder of this

proceeding in abeyance. The intervenors claim that placing the hearing in abeyance violates the AEA and the Administrative Procedure Act, which require hearings to be conducted within a reasonable time. The intervenors argue that "[p]ostponing the conclusion of a hearing for an unlimited period, simply to serve the convenience of one of the litigants when a license has been granted and all issues are ready for adjudication," exceeds any legitimate policy rationale for a "phased hearing." ENDAUM and SRIC Petition for Interlocutory Review of Oct. 19, 1999 Order (Nov. 8, 1999) at 7 n.7. See also Morris and Sam's Petition for Review of Oct. 19, 1999 Order (Nov. 8, 1999) at 7-10.

The intervenors also claim that holding the proceeding in abeyance violates NEPA. The gist of the intervenors' NEPA argument is as follows:

> Regardless of whether the Staff's FEIS considered the Crownpoint Project as a whole, the crucial fact remains that the Presiding Officer has not considered the project as a whole in this adjudicatory proceeding....This defeats NRC regulations requiring that the FEIS must 'accompany the application ... through, and be considered in, the Commission's decision making process.' Here, the FEIS as a whole has *not* accompanied the Presiding Officer's decision making process, nor is it likely to.... Instead, only some pieces of the FEIS have been reviewed by the Presiding Officer, thus guaranteeing that the FEIS will be reviewed by the Commission in piecemeal fashion.

ENDAUM/SRIC Petition at 9, referencing 10 C.F.R. § 51.94. The intervenors further argue that the abeyance order violates their due process rights under the Fifth Amendment of the U.S. Constitution to a prompt hearing on their health, safety, and environmental concerns. Id. at 8 n.8.

In their repeated objections to both the initial "bifurcation" order and to the later order holding the hearing in abeyance, the intervenors have stressed that these decisions have severely prejudiced them in this proceeding. They state that "[t]he prejudice to the Intervenors is all the more severe in light of the fact that HRI already has the license: HRI now has a

tremendous incentive to 'wait out' the Intervenors. If, at some point, the Intervenors are unable to maintain their readiness to resume the litigation, HRI will have *carte blanche* to commence mining, without any further hearings." Id. at 5.

HRI and the NRC staff oppose Commission review of the abeyance decision. Both claim that because HRI has no immediate plans to mine Section 17, Unit 1, or Crownpoint, it would be premature and wasteful to resume the proceeding. Both reiterate their earlier arguments that the abeyance decision is merely a scheduling order and reflects a sensible decision to hold off additional litigation until the issues involving the other sites "ripen" sufficiently for hearing. See HRI Opposition to Marilyn Morris and Grace Sam Petition for Review (Nov. 23, 1999) at 7; NRC Staff's Response to ENDAUM and SRIC's Petition for Interlocutory Review (Nov. 23, 1999) at 6 and n.3.

There is no NEPA violation, HRI and the staff maintain, because the FEIS assessed the project in its entirety, and thus there already has been a proper NEPA evaluation of the potential impacts at all the proposed sites. "Once an adequate EIS covering an entire project is issued, as is the case here, the project may be completed in stages," the staff stresses. NRC Staff's Response to Morris's and Sam's Petition for Commission Review (Nov. 23, 1999). The staff and HRI argue that the phased development -- and concomitant phased adjudicatory review -- of the project does not violate NEPA, the AEA, or the APA.

The Commission has reviewed all the parties' briefs and grants review of LBP-99-40. No further briefing on the bifurcation/abeyance issues is necessary. The extensive record accumulated in this proceeding suffices for the Commission's review of LBP-99-40. Our careful review of the record leads us to reverse LBP-99-40, both on the ground of expeditious case management and on the ground that the abeyance order imposes an unacceptable prejudicial burden on the intervenors.

C. Analysis

The Commission has a "long-standing commitment to the expeditious completion of adjudicatory proceedings." See "Statement of Policy on Conduct of Adjudicatory Proceedings," CLI-98-12, 48 NRC 18, 24 (July 28, 1998)("Policy Statement"). The objectives of our adjudicatory procedures and policies are three-fold: "to provide a fair hearing process, to avoid unnecessary delays in the NRC's review and hearing processes, and to produce an informed adjudicatory record that supports agency decision-making on ... public health and safety, the common defense and security, and the environment." Id. at 19. With these policy goals in mind, we reverse LBP-99-40.

The NRC staff has granted HRI a single license covering four sites. The intervenors challenge the license's validity at all four sites, but thus far our adjudicatory process has considered just one, the "Church Rock Section 8" site. Below we direct resumption of the Subpart L hearing process to consider the intervenors' arguments on all sites. The hearing process should resume approximately six months from issuance of this decision -- unless HRI chooses to accept an amendment limiting its license to the already-litigated Section 8 site. It is neither sensible nor fair to leave HRI's full license intact while we postpone indefinitely a resolution of the intervenors' challenge to it.

1. Indefinite Delay

HRI defends the abeyance decision as a resource-saving measure. Yet it is far from clear that NRC time and resources will be saved by keeping this proceeding lingering indefinitely on our docket. This is not a simple case that parties and adjudicators may easily pick up and resume years down the road. The case record is voluminous, the legal and technical arguments multifaceted and difficult. An extensive body of information -- both

technical and legal -- already has entered the record. A lengthy delay in resuming the HRI hearings means that years from now the Commission, the agency Presiding Officers, and the NRC staff, not to mention HRI itself and the intervenors, will need to begin again virtually from scratch to acquaint themselves with the disparate details of this case. See HRI's Request for Bifurcation (June 4, 1998) at 13 (HRI says it will likely take "years" to decide whether to mine non-Section 8 sites).

The NRC staff already has spent considerable time -- spanning some 6 years -- reviewing HRI's license application for in situ leach mining at all four sites for which a license was requested. Were HRI now to disclaim any intent to proceed beyond Church Rock Section 8, all site-specific issues on the other three sites would become moot. But HRI has not taken the step of requesting that its license be amended to reduce the scope of authorized activities. Mindful of HRI's current -- and possibly future -- intention of only mining Section 8, the Commission a while ago explicitly offered HRI the option of seeking to reduce the scope of its license. See CLI-00-8, 51 NRC 227, 243 (2000). HRI, however, has not indicated any intent to do so. With HRI uncertain about its future intentions, the Commission simply cannot assume that HRI will not seek to mine beyond Section 8.

HRI's indecision should not dictate the scope and timing of the hearing process. HRI holds, in effect, a four-site license, but the adjudication has focused on just one site, Church Rock Section 8, with the remainder placed on hold indefinitely. With the proceeding held in abeyance, not only must the intervenors "stand at the ready" to resume the hearing, perhaps even a decade or more from now, but so must the Commission. Like the intervenors, the Commission has no sense of when HRI will decide whether to mine in the other three project sites. Our ability to plan and allocate resources for adjudicatory proceedings is hindered by having a highly complex proceeding lurking on the agency case docket, pending on a timetable

to be triggered only by, and thus subject to the exclusive knowledge and control of, the licensee.

The Presiding Officer's abeyance decision yields the curious scenario in which a hearing on the issued license is unlikely to be resumed, let alone completed, prior to the end of the original license term, which concludes January 2003. This is hardly the result contemplated by our hearing policies which seek "to instill discipline in the hearing process and ensure a prompt yet fair resolution of contested issues in adjudicatory proceedings." See Policy Statement, CLI-98-12, 48 NRC at 19. Nor can it be the result contemplated by our Subpart L hearing procedures, which envisioned more expedient proceedings "involv[ing] less ... delay for parties and the Commission," and otherwise sought to further the Commission's interest in achieving "regulatory finality" -- resolution -- of materials licensing proceedings. See Final Rule, "Informal Hearing Procedures for Materials Licensing Adjudications," 54 Fed. Reg. 8,269, 8271, 8275 (Feb. 28, 1989).

In short, as a matter of sound case management, we cannot abide a situation where a license is issued but contested issues lie fallow without resolution for years. It is sensible to decide the most time-sensitive issues first, as the Presiding Officer did here when he examined Section 8-related issues initially, but it is unacceptable to simply decline to reach other questions about an already-issued license. Contrary to the Presiding Officer's views in this case, those questions are "ripe" now.[2]

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[2] HRI has suggested that all issues pertaining to Section 17, Unit 1, and Crownpoint are not "ripe" for hearing because additional detailed information on these sites will not be known until mining activities have begun. The Commission recognizes that there is a level of technical specificity that cannot be known prior to the commencement of ISL mining activities, and that certain issues may appropriately be left for post-licensing verification, particularly under a performance-based license. Nonetheless, there no doubt remain a number of questions that can be subject to hearing. Intervenors may, for instance, challenge the sufficiency of the information HRI submitted for licensing. See, e.g., CLI-00-8, 51 NRC 227 (2000)(where Commission found that requisite financial assurance plan should have been provided with

2. Fairness to the Parties

Not only our commitment to expeditious decision-making but also our commitment to treat all parties fairly causes us to set aside the Presiding Officer's abeyance decision. To judge the fairness question, it is helpful to look back at the early portions of the record and to understand how the intervenors first entered the hearing process and gained admission to the proceeding. Back in 1988, HRI's original license application was to construct and operate mining facilities only at its Church Rock site in McKinley County, New Mexico. The following year HRI amended its application to include uranium recovery processing at an existing mine facility in Crownpoint, New Mexico. HRI later acquired mineral interests on two lease areas in the Unit 1 and Crownpoint sites. In April and July 1992, respectively, HRI again amended its application to include ISL mining at the Unit 1 and Crownpoint sites.

During these years when the number of sites covered by the application grew, HRI requested that the staff defer review of the license application. HRI was uncertain about whether to proceed with the proposed project, given a tentative uranium market. In 1992, HRI decided to proceed with its license application covering the Church Rock, Unit 1 and Crownpoint sites, and the NRC staff resumed its review of the application. See "Draft Environmental Impact Statement," NUREG-1508 (Oct. 1994)("DEIS") at 1-3.

The NRC staff completed a Draft Environmental Impact Statement (DEIS) in October 1994. The DEIS covered all of the proposed sites: Church Rock, Unit 1, and Crownpoint. Soon after, the NRC staff published in the Federal Register a "Notice of Availability of Draft Environmental Statement and Notice of Opportunity for Hearing." 59 Fed. Reg. 56,558 (Nov.

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license application). Particular license conditions also might be subject to challenge. See, e.g., CLI-00-12, 52 NRC 1, 6 n.4 (2000)(where Commission stated that in subsequent hearing on other three sites intervenors may raise their concerns about secondary groundwater restoration standard for uranium).

14, 1994). The intervenors reviewed the DEIS and timely submitted requests for hearing. Their understanding was that any hearing that might be granted would include all of the proposed project sites. Accordingly, among their submitted Areas of Concern were numerous issues that pertained essentially to the Crownpoint or Unit 1 sites. There was no indication at the time that HRI did not intend to go forward with all sites. On the contrary, HRI's pleadings referred to a plan to install and operate the Churchrock, Unit 1 and Crownpoint mines.

Without ruling on the intervention petitions, the Presiding Officer in September 1995 stayed the proceedings pending completion of the staff's review of the license application and the staff's issuance of the Final Environmental Impact Statement (FEIS). As the Presiding Officer explained, the FEIS and the staff's decision whether to grant or deny the license would be significant components of the hearing file. "Because the hearing file forms the basis upon which potential litigants contest the licensing action," the Presiding Officer decided to wait until the file was complete before going forward with the proceeding. See Memorandum and Order (Sept. 13, 1995).

In March 1997, the Staff issued the FEIS, which describes the license application and project as encompassing the Church Rock, Unit 1, and Crownpoint sites. In December 1997, the staff issued its Safety Evaluation Report (SER) for the license. The SER also specifies that the "three sites" (Church Rock, Unit 1, and Crownpoint) comprise the project. In addition, the SER lists various additional information that HRI provided the staff after the FEIS was issued -- specific, technical information relating to the proposed operations at Unit 1 and Crownpoint.

With the FEIS and SER completed, the hearing process resumed in December 1997. By that time, intervenors had reviewed the license application, the DEIS, the FEIS, HRI's Consolidated Operations Plan, Rev.1 (later revised), and extensive correspondence between the NRC staff and HRI about the application. They also had retained several expert consultants

to aid in the review of these materials. See, e.g., Petitioners' ENDAUM and SRIC's Motion for Leave to Amend Requests for Hearing (Aug. 19, 1997) at 18-22. All these documents referred to a project encompassing the Church Rock, Unit 1, and Crownpoint sites.

The Presiding Officer granted the petition for hearing and admitted the intervenors on May 13, 1998. In doing so, he explicitly declared that "this proceeding must examine the HRI application. It therefore includes *all* the sites at which in situ leach mining is to be conducted, including sites on which radioactive wastes may be discharged." LBP-98-9, 47 NRC 261, 274 (1998) (emphasis in original). He went on to admit many of the intervenors' Areas of Concern, most of which were understood to encompass -- if not focus upon -- the Unit 1 and Crownpoint sites. It was only immediately after the Presiding Oficer granted the hearing and admitted the intervenors that HRI first made its change of plans known to the Presiding Officer and to the parties, and asked to "bifurcate" the case between the "Section 8" site and the other sites.

In all of the time prior to HRI's request to have the proceeding bifurcated to consider only the site-specific issues involving Section 8, the intervenors spent considerable effort reviewing documents that went to the entire project, not simply Section 8. Their experts filed detailed affidavits that focused largely upon the Unit 1 and Crownpoint sites. Indeed, the decision to bifurcate the proceeding to focus on Section 8 apparently took the intervenors by surprise, for they had until then focused the bulk of their review upon the Crownpoint and Unit 1 sites.[2] See, e.g., Joint Motion for Reconsideration of Bifurcation Order (Sept. 30, 1998) at 16; NRC Staff Response to Intervenors' Petition for Review (Oct. 20, 1998) at 9. Yet at no time while the intervenors were engaged in preparing their voluminous pleadings did HRI intimate that it had no current intention of mining anywhere other than in the Church Rock Section 8 site.

[2] Section 8, as described by HRI, is "the least sensitive area with the fewest potential environmental or health risks." HRI's Request for Bifurcation (June 4, 1998) at 14.

While HRI frequently emphasized that its license outlines a phased mining approach, mandating the successful completion of in situ leach activities at Section 8 before HRI can move on to the other project sites, HRI's pleadings still referred to the "proposed ISL mining at the Crownpoint and Unit 1 sites." HRI's experts likewise referred to the Section 17, Unit 1, and Crownpoint sites. Indeed, as late as one month before the Presiding Officer granted the hearing request and admitted the intervenors, HRI's adjudicatory submissions still conveyed the intent to mine all three sites.

We understand that HRI, due to fluctuating market conditions or other economic concerns, is indecisive about whether to pursue earlier plans to mine the other project sections. HRI's vacillation, however, should not be allowed to prejudice duly-admitted intervenors who seek their opportunity for a timely hearing on a current license. We take no issue with HRI's clear prerogative to alter its plans as the market dictates. Just as HRI amended its license application to add project sites, HRI certainly has been free all along to amend its application (now license) to reduce the license's scope. Our concern lies with HRI's desire to retain a license for mining all of the sites while at the same time putting off indefinitely, likely for years and with no clear resolution in sight, a hearing on the other sites encompassed by its already-issued license. HRI cannot both hold an NRC license and refuse to litigate its validity -- particularly in the circumstances of this case, where the intervenors had every reason to believe that the entire HRI license was subject to a hearing and invested substantial effort and resources in getting ready for a hearing.

In granting HRI's request for an abeyance order, the Presiding Officer noted that:

> To be sure, Intervenors have invested substantial legal and technical resources in this proceeding. Whatever is already in the record will, of course, be available for them to reference should the proceeding be resumed. In addition, they may choose to preserve testimony in affidavit form. These affidavits, if they choose to use them, will be available for

use in future proceedings.

LBP-99-40, 50 NRC at 274. HRI, though, informed the Presiding Officer that, most likely, it would not be making a decision on whether to proceed with the other sites "at least for the next few years." Request for Bifurcation (June 4, 1998) at 13 (emphasis added). The Commission does not find unreasonable, then, the intervenors' concern that its "expert affidavits may grow stale and dated with time," and that previously retained experts who have filed affidavits or otherwise already have a familiarity with the case may prove unavailable years down the road. See Petition for Interlocutory Review of Oct. 19, 1999 Order (Nov. 8, 1999) at 5 n.3.

In addition, the Commission recognizes that the record in this proceeding grew rapidly, is highly technical, and relates to a number of different regulations and statutes, including the AEA, NEPA, the Uranium Mill Tailings Radiation Control Act, the National Historic Preservation Act, the Safe Drinking Water Act, and the codes of the State of New Mexico. Numerous NRC Regulatory Guides and Technical Position Papers also provide information relating to in situ leach mining applications and operations. In short, the amount and complexity of information the intervenors and their experts reviewed before the hearing was bifurcated (and then placed in abeyance) most certainly were formidable. To compel them now to wait years without knowing when or if there will be any further hearing imposes an unacceptable and unfair burden.

The intervenors responded to a 1994 notice of hearing and were admitted to this proceeding over two and a half years ago. The Commission believes it is time to resume the hearing process and allow the intervenors to litigate the rest of their concerns. Our decision furthers the Administrative Procedure Act's directive that an agency "within a reasonable time, shall set and complete proceedings required to be conducted ... and shall make its decision." 5 U.S.C. § 558(c).

To avoid a hearing on Section 17, Unit 1, and Crownpoint, HRI may, of course, apply for an amendment to reduce the scope of its license. Otherwise, the proceeding shall resume approximately six months after the date of this order. This gives HRI some time to consider its economic position and gives all of the parties time to plan and prepare for resuming the hearing process. At least three months prior to the resumed hearing, HRI must indicate on the record whether it wishes to retain its full license and proceed to hearing, or modify it to cover only the Section 8 site. We direct the Presiding Officer to consult with the parties and to establish a precise schedule for further proceedings.[3]

III. NEPA Order (Second Half of LBP-99-30)

We turn now to intervenors ENDAUM and SRIC's challenge of the NEPA (and Environmental Justice) findings the Presiding Officer made in the second half of LBP-99-30.[4] NEPA requires federal agencies to include a detailed statement of environmental consequences, commonly know as an environmental impact statement (EIS), for all proposals that would "significantly affect[] the quality of the human environment." 42 U.S.C. § 4332(2)(C). Preparation of an EIS serves two goals:

> It ensures that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts; it also guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of the decision.

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[3] While we agree with the intervenors that the Presiding Officer's abeyance ruling was wrong from policy and fairness perspectives, our decision today intimates no view on whether the abeyance ruling in any way violated the AEA, NEPA, or other statutes.

[4] The first half of LBP-99-30 addressed technical, health and safety groundwater issues pertaining to the Section 8 site. The Commission denied the intervenors' petition for review of the first half of LBP-99-30. See CLI-00-12, 52 NRC 1 (2000).

Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989). NEPA, though, does not require that the agency select any particular options. It "does not mandate particular results, but simply prescribes the necessary process." Id. at 350. "Simply by focusing the agency's attention on the environmental consequences of a proposed project, NEPA ensures that important effects will not be overlooked or underestimated only to be discovered after resources have been committed or the dies otherwise cast." Id. at 349.

In their petition for review, the intervenors raise a number of legal and factual challenges. NEPA issues often involve complex and important legal considerations, and this lengthy, contentious, and "bifurcated" proceeding certainly does so. The Commission therefore grants review of the Presiding Officer's NEPA/environmental justice decision. Given the comprehensive record already accumulated in this proceeding, the Commission finds it unnecessary to request additional appellate briefs from the parties. The Commission has carefully reviewed the parties' arguments, the Presiding Officer's findings, and relevant portions of the hearing record. We find no material error in LBP-99-30 and, for the reasons outlined below, we affirm the decision. Before beginning our discussion, however, several overriding points warrant special mention.

First, our decision largely does not revisit fact findings by the Presiding Officer with which we agree or have no strong basis to second guess. As we stated recently in this proceeding:

> [B]ecause the Presiding Officer has reviewed the extensive record in detail, with the assistance of a technical advisor, the Commission is generally disinclined to upset his findings and conclusions, particularly on matters involving fact-specific issues or where the affidavits or submissions of experts must be weighed. While we certainly have discretion to undertake a *de novo* factual review where appropriate, we ordinarily attach significance to the [presiding officer's] evaluation of the evidence and ... disposition of the issues, and we do not second guess his or her reasonable findings.

Hydro Resources, CLI-00-12, 52 NRC 1, 3 (2000)(quotations and citations omitted). Many of the Presiding Officer's NEPA findings rest entirely or largely upon his analysis of the parties' fact-specific arguments, submitted by their various experts. Unless otherwise noted in this decision, therefore, the Commission agrees with the results reached by the Presiding Officer.

Indeed, infused throughout the intervenors' petition for review are claims that the Presiding Officer -- and the FEIS -- underestimated particular environmental costs of the project. These NEPA claims, though, consist essentially of fact-specific, technical arguments, already rejected by the Presiding Officer and, in many cases, also by the Commission.

A specific example is the intervenors' claim that the FEIS underestimates the impact of radioactive air emissions and the impacts to groundwater. These claims are rooted directly in specific, technical, health and safety issues resolved in HRI's favor by earlier Presiding Officer decisions. See LBP-99-19, 49 NRC 421 (1999); LBP-99-30, 50 NRC 77 (1999)(first half). The Commission previously considered these earlier decisions on air emissions and groundwater protection and found them to be free of any clear, significant error. See, e.g., CLI-00-12, 52 NRC 1 (2000). At that time, the Commission considered but found unpersuasive all of the intervenors' specific arguments on radioactive air emissions and groundwater protection. We find no reason now to disturb the Presiding Officer's finding that the FEIS's discussion of the air and groundwater impacts to the Church Rock Section 8 area is adequate. In short, underlying their claim that these impacts have been underestimated in the FEIS are the same fact-specific, technical arguments previously rejected by the Presiding Officer -- and later, the Commission -- as either incorrect or otherwise unpersuasive.

Similarly, the intervenors allege generally that the FEIS underestimates the environmental costs to cultural resources and the costs from liquid waste disposal. See ENDAUM and SRIC's Petition for Review of LBP-99-18, LBP-99-19, and LBP-99-30 (Sept. 3,

1999)("Intervenors' Brief") at 43, 49. The Commission, though, already has considered whether the FEIS fairly treats the issues of cultural resources and liquid waste disposal. See CLI-99-22, 50 NRC 3 (1999)(rejecting intervenors' NEPA and other claims regarding liquid waste disposal and cultural resources).

As we just have emphasized, the Commission is not inclined to second-guess those highly fact-specific conclusions made by the Presiding Officer with the assistance of his technical advisor. Moreover, the intervenors' petition for review simply raises no new NEPA-centered argument casting doubt on the adequacy of the FEIS's discussion of the various possible impacts to Section 8. We therefore find no basis to revisit LBP-99-30's fact-based conclusions on groundwater, air emissions, liquid waste disposal, cultural resources, and health impacts.[5]

We must note, additionally, that the intervenors' petition for review is marred by frequent generalized claims followed by citations to lengthy, multi-page sections of earlier briefs they filed before the Presiding Officer. This practice runs afoul of our page limits on petitions for review and briefs, which are intended to encourage parties to make their strongest arguments clearly and concisely, and to hold all parties to the same number of pages of argument. Significantly, as the Commission considered the intervenors' petition for review, we often did not know what specific claims were being alleged. The Commission should not be expected to sift unaided through large swaths of earlier briefs filed before the Presiding Officer in order to

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[5] The one technical topic upon which we reserve judgment is the Presiding Officer's statements regarding the adequacy of the 0.44 mg/L secondary groundwater restoration standard for uranium. In CLI-00-12, 52 NRC 1 (2000), the Commission declined to reopen the record to admit new evidence on the adequacy of this standard. We said in that decision that this secondary restoration standard was unlikely ever to be an issue for Church Rock Section 8, but likely could be for the other proposed project sites. The standard has been referred generically to the NRC staff for re-evaluation. "Since the record is not closed concerning those sites, the Petitioners may raise this groundwater issue in the hearing on those sites." 52 NRC at 6 n.4.

piece together and discern the intervenors' particular concerns or the grounds for their claims. Cf. Commonwealth Edison Co. (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185 194 (1999). The intervenors, therefore, bear responsibility for any misunderstanding of their claims. The Commission further takes this occasion to place all parties on notice against use of this practice in future submissions.

We come now to the other issues raised by the intervenors. We note, first, that the Presiding Officer's decision in LBP-99-30 generally must be read within the context of the FEIS. While the Presiding Officer repeatedly references the FEIS, in some places his decision would have benefitted from a fuller discussion of the FEIS's contents. At times, his statements can appear rather cursory. Accordingly, the Commission finds that several issues warrant additional review and comment.

A. Burden of Proof

In repeated instances, the intervenors provide only unspecific, conclusory claims, as in their unsupported argument that the Presiding Officer "erred as a matter of law by placing the burden of proof on most NEPA issues on the Intervenors." See ENDAUM and SRIC's Petition for Review of LBP-99-18, LBP-99-19, and LBP-99-30 (Sept. 3, 1999) at 41. The sole basis for this claim, apparently, was that the Presiding Officer did not always provide express citations to portions of HRI's or the staff's briefs. See id. It is clear, nonetheless, from the Presiding Officer's decision that he drew heavily from the arguments presented by HRI and the staff and that, generally, throughout the proceeding, he was "convinced by HRI and the Staff, by a preponderance of the evidence." 50 NRC at 110.

B. Project Purpose and Need

The FEIS states that the primary benefit of this in situ leach mining project is that it "would provide a domestic source of uranium." FEIS at 5-1. The FEIS further specifies that while annual imports of uranium increased 300% between 1985 and 1994, the annual domestic uranium production decreased 75% during this time. Id. By 1994, for example, uranium imports totaled 35 million pounds annually, compared to less than five million pounds of domestic uranium. Id. The FEIS thus concludes that "[t]he proposed project, which would produce about one million pounds of uranium per year at each of the three project sites, would have the beneficial effect of helping the United States offset this deficit in domestic production." Id.

Concededly, this information appears in the FEIS's section titled "Costs and Benefits," rather than the section expressly titled "Purpose of and Need for the Proposed Action." Nevertheless, the FEIS should be read and understood as a whole. It clearly identifies domestic uranium production as the primary public benefit associated with this project.

The intervenors claim that this benefit of domestic uranium "does not exist." See Intervenors Brief at 42. The gist of this vague claim is that there is no need for an additional domestic source of uranium, given current market conditions. HRI, however, has repeatedly emphasized that if market conditions are unfavorable -- taking into account uranium prices and HRI's costs of operations -- it will not go forward with the project. As the Presiding Officer described, only if uranium prices climb and cross HRI's "break-even" point will HRI choose to enter the market. The Presiding Officer assumed that if the price of uranium rises to a level HRI finds conducive to entering the uranium market, the change in price "would indicate an improvement in the demand/supply ratio." 50 NRC at 113. Such changes in the uranium price

would reflect a more "active market for uranium," the Presiding Officer reasoned, in which case it may well prove that HRI's "additional supply would be useful." See id.

The FEIS simply recognizes the general need for domestic uranium production. It does not purport to evaluate who may be the strongest and most viable market participants in the domestic uranium field. Moreover, predictions of demand for uranium are highly speculative and subject to fluctuating factors. Just as market conditions may have changed since HRI first applied for its license, they may significantly change again. The Commission therefore is "not inclined to second-guess ... findings on supply, demand, and pricing." See Louisiana Energy Services (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 93 (1998)("LES"). Such findings "reflect not ineluctable truth, but rather a plausible scenario." Id. at 94. The intervenors have not called into question the general interest in maintaining a domestic uranium production industry or HRI's possibly significant role as a domestic uranium producer. Regardless of the current market price for uranium or shifting market scenarios speculating upon future uranium supply and demand, it remains in the national interest to maintain a domestic uranium production capability. See FEIS at 5-1; see also U.S.C. §§ 2210b, 2296b-3.

C. Cost-Benefit Analysis:

1. Secondary Benefits

The intervenors claim that the Presiding Officer relied "exclusively" on secondary benefits to the local economy to support the project. Indeed, the decision does often focus upon the local economic benefits of the project, a subject of great dispute in this proceeding. The Presiding Officer, however, also explicitly discussed the benefit of domestically produced uranium. As we just noted above, he addressed and rejected the intervenors' claim that the FEIS "overstates the need for domestic uranium," finding instead, that if uranium market prices

climb, "there would be an active market for uranium and [] the additional supply [from HRI] would be useful." 50 NRC at 113. In any event, the FEIS clearly provides that additional domestically-produced uranium would be the project's primary public benefit.

If ultimately HRI finds it economically prohibitive to enter the market, then "the project will not go forward" and "there will be none of the adverse effects discussed in the FEIS." 50 NRC at 113. The intervenors, though, argue that HRI's license "does not prohibit the licensee from commencing operations" even if the market price of uranium does not rise to a level advantageous to HRI, and that HRI may simply "find it expedient to operate the project at a loss." See Intervenors' Brief at 42-43. The NRC, however, is not in the business of regulating the market strategies of licensees. HRI has provided information on its estimated operating costs. Admittedly, those costs and the price of uranium are subject to frequent and significant fluctuations. It remains nonetheless within HRI's business discretion to determine whether market conditions warrant commencing mining operations. The NRC looks to whether HRI can conduct operations safely. We leave to HRI the intricate ongoing business decisions that relate to costs and profit. In the end, we cannot but presume that HRI will not seek to go forward with mining operations unless it expects ultimately to have a successful market for its product. Nothing revealed in this proceeding renders such a market so implausible that the goals of the project cannot be achieved.

The intervenors further challenge FEIS estimates of secondary benefits to the local economy. Benefits such as the number of jobs created by the project and amount of taxes HRI will pay depend upon the quantity of U_3O_8 produced. Uranium production, in turn, hinges upon HRI's costs of production and the market price for uranium. See FEIS at 5-2, 5-3.

The FEIS presumes a uranium market price of $15.70. The intervenors claim that "[t]he current market [price] is below $11.00 and is not forecast to rise anywhere near $15.70 in the

next decade." Intervenors' Brief at 42. They therefore emphasize that the secondary benefits listed in the FEIS may "never come to pass." Id. at 43. Their point is well taken, but already repeatedly acknowledged in the FEIS and by the Presiding Officer's decision:

> 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 at 5-3; see also 50 NRC at 125-26 (staff affidavit incorporated in decision).

Both the Presiding Officer's decision and the FEIS make clear that the number of jobs and the average salary of workers may be lower if U_3O_8 prices prove to be lower than $15.70 per pound. See FEIS at 5-2, 5-3, 4-96, 4-97; see also 50 NRC at 126. The Presiding Officer recognized that a host of factors may impact and reduce the benefits from employment, royalty income and taxes, that some potential benefits are not quantified,[6] and that all figures provided are at best approximations. See 50 NRC at 118.

The FEIS indeed emphasizes that spot market prices have been "very volatile, fluctuating from a high of over $16 in 1987 to a low of less than $8 in 1991," and that "[a]s late as 1995, the price was less than $10 per pound." FEIS at 5-2. And, as the Commission already has stressed in this opinion, "price projections reflect not ineluctable truth, but rather a plausible scenario." LES, 47 NRC at 94. We find no reason to disturb the estimates of secondary benefits drawn in the FEIS. These are only estimates of secondary local benefits which the FEIS itself acknowledges conceivably may never materialize. Moreover, while unnecessary, the Presiding Officer even incorporated into his decision some additional -- and

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[6] Nor must all economic benefits be quantified. NEPA "does not require a particularized assessment of non-environmental impact." Idaho Conservation League v. Mumma, 956 F.2d 1508, 1522-23 (9th Cir. 1992); see also Public Util. Comm'n of California v. FERC, 900 F.2d 269, 282 (D.C. Cir. 1990).

lower -- estimates of secondary benefits, based upon a lower uranium price of $9 per pound. See 50 NRC at 127.

In short, the Presiding Officer merely concluded that the secondary benefits would have a "small favorable impact" on the local economy, while the hearing on Section 8 revealed "no serious risks attendant to the project." Id. at 118. The Commission finds no compelling reason to disturb the Presiding Officer's conclusion.

Of course, there has yet to be a hearing on the safety and environmental impacts of the other three project sites. In many respects, then, the Presiding Officer's cost/benefit assessment can be said to have been merely partial or preliminary, for he had only examined the various costs -- air emissions, groundwater, etc. -- associated with Section 8. If the resumed hearing on the other project sites brings to light any significant new finding bearing on the overall project's costs, the FEIS cost/benefit analysis may need to be modified. It remains to be determined, then, whether the potential costs of one or more of the other project sites may require revision of the FEIS's cost/benefit conclusions.

2. Land Use

We turn next to the intervenors' argument on land use impacts. These impacts, as described in the FEIS, include on-site disturbance of approximately 90% of the Church Rock site, the temporary disruption of livestock grazing at project sites, and the potential relocation of residents. See FEIS 4-93, 4-94. The FEIS recognizes that "[l]ocal residents have expressed concern that this disruption of grazing would adversely affect Navajo who have grazing permits for the land and rely on livestock as an important economic resource." Id. at 4-94.

The intervenors challenge certain statements by the Presiding Officer on land use impacts. In particular, they challenge the Presiding Officer's statement that "[t]he 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." 50 NRC at 114; see also id. at 118 ("I do not see how anyone could possibly be prevented from raising livestock because ISL mining will take place on Section 8"). The intervenors argue that the Presiding Officer "ignores the fact that HRI's proposals for waste disposal involve more than Section 8." Intervenors Brief at 44. They reference an earlier brief, filed before the Presiding Officer on the issue of Liquid Waste Disposal, which indicated that there is one Church Rock resident of Section 17 who grazes his cattle on Section 16, one of the areas proposed for liquid waste disposal from Section 8.

The FEIS, however, clearly and repeatedly acknowledges that HRI's proposals for disposing liquid wastes from the Church Rock site may involve more than Section 8. See, e.g., FEIS at 4-11; 4-93; 3-55; 2-26. One of the possible liquid waste disposal methods is "land application," in which agricultural irrigation equipment is used to apply wastewater over a relatively large land area. See id. at 2-19. If land application ultimately is selected as the waste disposal method for Section 8, there are four possible sites that may be used: Section 17, Section 8, Section 12, and Section 16. Id. at 4-11. Up to 640 acres of pasture land from Section 16 might be affected. Id. at 4-11; 4-93. That land is owned by the State of New Mexico. Id. at 4-11.

The Presiding Officer may have overlooked the one individual who holds a grazing permit for part of Section 16, on which he grazes 18 to 30 head of cattle, and whose activity may be temporarily impacted by operations on Section 8. It should be noted, however, that this remains only a possibility. There are four different possible methods of liquid waste disposal that HRI ultimately may select: evaporation ponds, land application, surface water discharge, or

deep well injection. See id. at 4-86. Land application might not be the liquid waste disposal method ultimately chosen for Section 8.

More significantly, HRI's license does not currently authorize waste disposal through land application. For HRI to conduct waste disposal through land application, it must first submit a plan, in the form of a "detailed license amendment" application, and receive approval by the NRC. See id. at 4-80; 4-90; see also License Condition 11.8; Hydro, CLI-99-22, 50 NRC 3, 10 (1999). The "NRC would consider any consequences arising from such [an] approval[] at that time." Hydro, CLI-99-22, 50 NRC at 10. Land application, in short, "would have to be proposed by HRI under a license amendment and [then] would be subject to additional environmental review." See FEIS at 2-18; 4-90. Meanwhile, the FEIS does not overlook the general possibility that individuals with grazing permits may be temporarily displaced and should be compensated accordingly. See, e.g., id. at 4-118; 4-95.

D. Failure to Supplement FEIS

1. Performance-based Licensing

The intervenors claim that the staff's decision to include performance-based licensing concepts in HRI's license warrants formal supplementation of the FEIS. See Intervenors' Brief at 45. We disagree. First, the Commission already has considered and rejected the intervenors' claims that performance-based licensing (1) violates the AEA and NEPA, (2) accords undue discretion to the licensee, and (3) deviates sharply from agency regulatory practices and trends. See Hydro, CLI-99-22, 50 NRC at 15-17.

Secondly, the mere inclusion of performance-based concepts in HRI's license does not warrant FEIS supplementation. Performance-based licensing concepts allow "minor operational modifications, without significant safety or environmental impact." Id. at 16. They are based on

the notion that requiring a license amendment for any change, "no matter how inconsequential, would burden both licensees and the NRC, to no good end." Id.

License Condition 9.4 permits HRI to make certain changes in operations without NRC approval, but "only those changes that are consistent with existing license conditions and applicable regulations," and with the Safety Evaluation Report (SER) and FEIS. Id. at 17. If any of these conditions are not met, HRI must seek a license amendment. See License Condition 9.4. Any change made pursuant to License Condition 9.4 must be fully documented and reported to the NRC, which will monitor all changes to assure that in fact no license amendment was required.

"Not every change requires a supplemental EIS; only those changes that cause effects which are significantly different from those already studied." Davis v. Latschar, 202 F.3d 359, 369 (D.C. Cir. 2000). The new circumstance must reveal a "seriously different picture of the environmental impact of the proposed project." Hydro, CLI-99-22, 50 NRC at 14 (citing Sierra Club v. Froehlke, 816 F.2d 205 (5th Cir. 1987)). Here, "[b]y its own terms, License Condition 9.4 requires HRI to apply for a license amendment if any change, test, or experiment it undertakes is not consistent with the findings in the FEIS." Hydro, 50 NRC at 17. By no means will License Condition 9.4 "affect the quality of the human environment in a significant manner or to a significant extent not already considered." See Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 374 (1989).

2. Alternatives in FEIS

We similarly reject the intervenors' claim that new alternatives and proposed mitigation measures provided in the FEIS require a supplemental EIS.[7] The intervenors declare that the alternatives in the FEIS represent "significant changes" -- to the draft EIS -- warranting supplementation. See Intervenors' Brief at 45-46. The argument, presented in conclusory and summary form, is unpersuasive. The Commission agrees with the Presiding Officer that the listed alternatives in the FEIS do not reflect a "substantial change in the description of the project," and thus do not warrant further circulation of the FEIS for comment. See 50 NRC at 116.

An FEIS typically is issued after comments on the DEIS have been received and reviewed. That the FEIS, in response to comments received, may supplement, refine, or otherwise adapt the project alternatives is not only reasonable but expected. See Council on Environmental Quality Regulations (CEQ), 40 C.F.R. § 1503.4. The FEIS, for instance, might typically add "mitigation measures" to an alternative, or might suggest a new alternative that is a variation upon one or more previously proposed alternatives. See Forty Most Asked Questions Concerning CEQ's NEPA Regulations, 46 Fed. Reg. 18,026, #29b (1981).

Here, the alternatives in the final EIS were well within the "spectrum" and "range" of alternatives discussed in the draft EIS. See Dubois v. U.S. Dept of Agriculture, 102 F.3d 1273, 1292-93 (1st Cir. 1996), cert. denied, 521 U.S. 1119 (1997). The primary distinction of the FEIS's "Alternative 2," for instance, is that the project might be reduced to only one or two of the proposed sites, instead of necessarily encompassing all of them. FEIS at 2-31. "Alternative 3," as the Presiding Officer found, simply includes additional NRC-imposed license conditions to

[7] Under NEPA, the FEIS must include a statement on the alternatives to the proposed action. See 42 U.S.C. § 4332(2)(C)(iii).

"improve safety and reduce risk to the environment." See 50 NRC at 116. The intervenors, moreover, will have full opportunity to challenge the adequacy of these license conditions in the resumed adjudicatory proceeding.

3. Inclusion of Staff Affidavit

Finally, the Presiding Officer's incorporation into LBP-99-30 of a staff affidavit on costs and benefits also does not require FEIS supplementation. All of the information in that affidavit was based upon and entirely encompassed by the FEIS. No significantly new picture of environmental or other impacts is presented by the affidavit.

In addition, in an adjudicatory hearing, to the extent that any environmental findings by the Presiding Officer (or the Commission) differ from those in the FEIS, the FEIS is deemed modified by the decision. See, e.g., Philadelphia Elec. Co., (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 706-07 (1985); Niagara Mohawk Power Corp. (Nine Mile Point Nuclear Station, Unit 2), ALAB-264, 1 NRC 347, 371-72 (1975). "The adjudicatory record and Board decision (and, of course, any Commission appellate decisions) become, in effect, part of the FEIS." Louisiana Energy Services (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 89 (1998). Indeed, the hearing process itself "allows for additional and more rigorous public scrutiny of the FES than does the usual 'circulation for comment.'" Limerick, 22 NRC at 707.

E. Evaluation of Project Alternatives

The intervenors challenge the Presiding Officer's discussion of the project alternatives, including the "no action" alternative. Once again, they provide us with no specific challenge to the FEIS, and instead expect the Commission to review portions of an earlier brief before the

Presiding Officer to glean their concerns. See Intervenors' Brief at 46. While we have no obligation to search for unidentified arguments buried in earlier briefs, we nonetheless have examined the intervenors' earlier claims, and find no basis to reverse the Presiding Officer's statements on alternatives. We do, however, agree with the intervenors that the Presiding Officer failed to expressly address some of the claims the intervenors raised before him. His decision also would have benefitted from a more detailed treatment of the "alternatives" issue. The Commission therefore provides the following additional comments.

1. "No Action" Alternative

Generally, one of the alternatives proposed in an FEIS is the agency alternative of taking "no action." For the "no action" alternative, there need not be much discussion. See Headwaters, Inc. v. Bureau of Land Management, 914 F.2d 1174, 1181 (9th Cir. 1990). It is most simply viewed as maintaining the status quo. See Association of Public Agency Customers v. Bonneville Power Administration, 126 F.3d 1158, 1188 (9th Cir. 1997)(referencing Council on Environmental Quality Memorandum to Agencies, 46 Fed. Reg. 18,026, 18,027 (Mar.1, 1981)).

In this case, "no action" would mean denial of the HRI license. It is self-evident from both LBP-99-30 and the FEIS that the "no action" alternative would have the advantage of obviating all of the health and environmental impacts associated with the project, but also would forego "uranium production from Section 8" and the "beneficial socioeconomic impacts discussed in the FEIS." 50 NRC 132-33; see, e.g., id. at 133-41; FEIS at 4-63, 4-66, 4-72. While the FEIS could have done a better job articulating final conclusions on the alternative chosen, it is nonetheless implicit in the FEIS that the "no action" alternative was rejected because the impacts of the project were found acceptable, while the ISL mining would yield

significant quantities of domestically produced uranium as well as some local socioeconomic benefits. See, e.g., FEIS at 4-120 to 4-127 (finding cumulative impacts either minor or, given license conditions and other mitigative measures, acceptable, for air quality, radiological health, ecology, land use, transportation risk, groundwater, etc.); see also id. at 5-1 to 5-5 (on benefits). Similarly, the Presiding Officer's decision ultimately rejects the "no action" alternative because it finds the impacts of the project either "minimal" or "acceptable" and the benefits desirable. See, e.g., 50 NRC at 132-33.

Clearly, the intervenors preferred the "no action" alternative, but NEPA imposes no obligation to select the most environmentally benign alternative. See Robertson v. Methow Valley, 490 U.S. 332, 350 (1989). NEPA "does not dictate agency policy or determine the fate of contemplated action." Davis v. Latschar, 202 F.2d 359, 360 (D.C. Cir. 2000) (quoting Environmental Defense Fund v. Massey, 986 F.2d 528, 532 (D.C. Cir. 1993).

2. Other Alternatives

Agencies need only discuss those alternatives that are reasonable and "will bring about the ends" of the proposed action. Citizens Against Burlington v. Busey, 938 F.2d 190,195 (D.C. Cir.), cert. denied, 502 U.S. 994 (1991). "When the purpose is to accomplish one thing, it makes no sense to consider the alternative ways by which another thing might be achieved." Id. (citing City of Angoon v. Hodel, 803 F.2d 1016, 1021 (9th Cir. 1986)(per curiam), cert. denied, 484 U.S. 870 (1987)).

The intervenors mischaracterize the project's purposes by declaring -- over-broadly -- that the project's main public benefit is simply to provide fuel for nuclear power plants. It is, more specifically, to help maintain the viability of a dwindling "domestic uranium mining industry." FEIS at 5-1. The "viability of the industry is a Federal concern," aimed at assuring a

dependable, ongoing domestic source of uranium. See id.. Other public benefits of the project include the socioeconomic benefits to the local community, the local governments, and the State of New Mexico. FEIS at 5-1 to 5-5; 50 NRC at 125-29. Of course, the applicant, too, would benefit from revenues generated from uranium sales. FEIS at 5-1. Additional alternatives suggested by the intervenors would not satisfy the goals of the project.

The intervenors entirely ignore the nature of the ISL project -- it is a project proposed by a private applicant, not the NRC. "Where the Federal government acts, not as a proprietor, but to approve ... a project being sponsored by a local government or private applicant, the Federal agency is necessarily more limited." Citizens Against Burlington, 938 F.2d at 197. The NRC is not in the business of crafting broad energy policy involving other agencies and non-licensee entities. Nor does the initiative to build a nuclear facility or undertake ISL uranium mining belong to the NRC.

When reviewing a discrete license application filed by a private applicant, a federal agency may appropriately "accord substantial weight to the preferences of the applicant and/or sponsor in the siting and design of the project." Id. The agency thus may take into account the "economic goals of the project's sponsor." City of Grapevine v. Dept. of Transportation, 17 F.3d 1502, 1506 (D.C. Cir.), cert. denied, 513 U.S. 1043 (1994); see also Citizens Against Burlington, 938 F.2d at 196 ("the agency should take into account the needs and goals of the parties involved in the application"). HRI proposes to mine on Section 8 of Church Rock because it owns land there in fee simple and that is where the ore body is located.

The NRC has the statutory responsibility to assure that all licensees meet applicable safety and environmental regulations. Here the staff found that HRI satisfied all safety and environmental requirements for its license. In its NEPA review, the staff determined that the

health and environmental risks of the project could be mitigated satisfactorily and did not warrant denial of the license. The FEIS sets forth this conclusion.

As to the Section 8 site, the intervenors already have had the opportunity to challenge the adequacy of HRI's license and the FEIS. Today we order that the hearing be resumed, allowing the intervenors to challenge the rest of the license and the rest of the FEIS. Their participation will help assure that the FEIS has identified and evaluated all adverse environmental effects of the other project sites. Indeed, throughout this decision, the Commission has emphasized that there has yet to be a final agency adjudicatory decision on the cost/benefit balance for the entire project, given that the hearing so far focused only upon Section 8.

3. Comparison of Alternatives

The Presiding Officer's discussion of project alternatives, also, necessarily was limited because of his focus upon Section 8. The decision makes clear why the "no action" alternative ("Alternative 4") was rejected. See 50 NRC at 132-33. It also notes that the staff's recommended "Alternative 3" -- containing numerous additional staff-imposed protective measures -- is preferable to the other FEIS-listed alternatives (Alternatives "1" and "2"), which only include those mitigative measures proposed originally by HRI but found inadequate by the staff. See id. at 132; see also id. at 133-45. These conclusions on alternatives, however, necessarily only take into account the various findings on Section 8.

Having narrowed the initial hearing to Section 8, the Presiding Officer had no basis to address the full gamut of options available under "Alternative 2," one of the proposed alternatives. Alternative 2 would restrict the number of sites for ISL mining. Specific options under Alternative 2 include restricting operations to: (1) the Church Rock site; or (2) the Unit 1

site; or (3) the Crownpoint site; or (4) the Church Rock and Unit 1 sites; or (5) the Church Rock and Crownpoint sites; or (6) the Unit 1 and Crownpoint sites. FEIS at 2-31.

Alternative 2 stems from the possibility -- considered in the FEIS -- that "potential impacts to public health and safety or the environment might indicate that ISL mining should not be conducted at all three sites" (Church Rock, Unit 1, and Crownpoint). Id. Given this possibility, instead of examining and discussing generally the entire project's impacts, the FEIS addresses the Church Rock, Unit 1 and Crownpoint impacts individually, as "subunits of the proposed project." Id. For each type of environmental impact, ecological, hydrological, meteorological, radiological, etc. -- the FEIS breaks its discussion down into separate sections for Church Rock, Unit 1, and Crownpoint. In the end, however, the FEIS does not find any of the proposed project sites' impacts so significant as to warrant eliminating from the license one or more of the sites.

Because the hearing focused only upon Church Rock Section 8, the Presiding Officer's decision does not address the sundry project configurations offered by Alternative 2. In the resumed hearing, however, the intervenors may raise any of their arguments that go to whether the Unit 1, Crownpoint, or Church Rock Section 17 sites should not have been approved and included in the license. If the resumed hearing on the safety and environmental aspects of the Church Rock Section 17, Unit 1, and Crownpoint sites reveals any significant problem with conducting mining operations on any of those sites, there remains the possibility that the license ultimately may be restricted to fewer than the four proposed areas. At that time, there would be sufficient information and basis to examine in detail any called-for changes to this project.[8]

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[8] In the event that HRI chooses voluntarily to narrow the scope of its license to Section 8 alone, the issue of other possible project design configurations becomes moot. The license then is reduced to cover operations only at Section 8. In effect, that would be similar to the first

F. Cumulative Impacts

1. Inter-regional Impacts

We turn now to the question of the project's "cumulative impacts." Under NEPA, "[w]hen several proposals for ... actions that will have a cumulative or synergistic environmental impact upon a region are pending concurrently before an agency, their environmental consequences must be considered together." Kleppe v. Sierra Club, 427 U.S. 390, 410 (1976). The term "synergistic" relates to the joint action of different parts -- or sites -- which, acting together, enhance the effects of one or more individual sites.

The expression "cumulative impacts," as it is used in NEPA analysis, frequently is misunderstood and indeed may have been misunderstood by one or more of the parties in this proceeding. NEPA analysis looks at both the severity of "impacts" a project may have on different resources, and the possibility that these impacts may combine in such a fashion that will enhance the significance of their individual effects. Only the latter consideration is the NEPA "cumulative impacts" concern.

To look at the "cumulative impacts" of a project, then, does not mean simply examining and adding up the "separate effects in each planning area," but instead goes to whether the "simultaneous development" of these areas will in fact heighten the project's overall impact. See Natural Resources Defense Council, Inc. v. Hodel, 865 F.2d 288, 297 (D.C. Cir. 1988). In other words, cumulative impacts analysis considers whether the sum may be greater than its

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option proposed under Alternative 2: restricting mining to Section 8. The license, however, would also include all of the current staff-imposed mitigative measures, many of which Alternative 2 did not require.

parts.[9] Not all projects will have cumulative impacts. The impacts from separate actions or regions may simply not be "environmentally inter-related." See Kleppe v. Sierra Club, 427 U.S. at 411 & n.25.

In this proceeding, the "cumulative impacts" issue led to some confusion over the precise scope of the Section 8 hearing. To better describe how the Presiding Officer approached cumulative impacts, the Commission believes it would be helpful here to outline a bit of the relevant procedural history.

When he first bifurcated the proceeding, the Presiding Officer said that, along with challenging Section 8, the intervenors could litigate any of their concerns that "challenge[d] the validity of the license issued to HRI." See Memorandum and Order (Sept. 22, 1998). Intervenors ENDAUM and SRIC accordingly sought to raise concerns over the project's cumulative impacts. They requested, though, that the Presiding Officer clarify how the cumulative impacts issue under NEPA could be resolved within the context of a bifurcated proceeding. See ENDAUM and SRIC's Request for Clarification (Nov. 2, 1998). Specifically, they stressed that the cumulative impacts of the proposed project on any given resource depends upon how the four project sites, considered together, might impact that particular resource. The intervenors therefore sought to include information on project impacts "from all mine sites" as part of their cumulative impacts presentation. Id.

The Presiding Officer appeared to have concurred. Broadly, he replied that:

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[9] A classic example might be that of whales and salmon migrating through different project areas. Simply looking at the potential impacts from each project area and adding these up may not reflect the true overall impact upon these animals, because they would be swimming through the project areas one after another, without respite. Thus, the simultaneous development of several project areas could have a greater impact upon the animals than the simple sum of the impacts of each project area. See generally NRDC v. Hodel, 865 F.2d 288 (D.C. Cir. 1988). Under NEPA, such a "cumulative" effect should be considered.

> ENDAUM and SRIC are free to present any area of concern or portion of an area of concern that may demonstrate that the license at issue in this case was improperly granted. Since these intervenors believe that the cumulative impacts issue may invalidate the license, they may present that issue.

See Memorandum and Order (Nov. 10, 1998)(unpublished). Apparently confused by this ambiguous response, the intervenors did raise arguments encompassing other -- non-Section 8 -- sites in their cumulative impacts brief.

The Presiding Officer, however, declined to consider any argument on impacts from the other sites. Instead, he emphasized that the scope of the initial hearing had been narrowed to "the Church Rock Area." See 50 NRC at 121. He therefore rejected intervenor arguments on the potential impacts of relocating the Crownpoint site's wells as "not ripe for this phase of the proceeding, which is focused on Church Rock Section 8." Id.

What he did consider in the initial hearing were the past, present, and future impacts to Section 8, and whether these impacts considered together would lead to significant cumulative effects. He concluded that they would not. See generally id. at 119-21, 113-15, 109. Ultimately, he determined that there had been an adequate analysis of the "past and future cumulative impacts and segmentation issues associated with licensing HRI to conduct ISL operations at Section 8." Id. at 121 (emphasis added).

The cumulative impacts issue, perhaps more than any other NEPA issue, illustrates the awkwardness inherent in conducting a site-by-site hearing on what has been proposed and licensed as a multi-site project. The Presiding Officer's exclusive focus upon Section 8 does not address any possible inter-regional effects of mining operations on the four proposed sites: Church Rock Section 8, Church Rock Section 17, Unit 1, and Crownpoint. And inter-regional impacts are a key focus of cumulative impacts analyses.

Apparently, the Presiding Officer intended ultimately to consider cumulative, inter-regional impacts as the proceeding progressed to the other sites. See, e.g., id. at 107-08, 116-17. His decision only approves Section 8. Significantly, he retained the ability to disapprove any of the other project sections should their individual or cumulative effects prove unacceptable.

Although the Presiding Officer conducted a limited cumulative impacts analysis, focused only upon those environmental impacts -- past and future -- taking place in Section 8, in the resumed hearing the intervenors will have the opportunity to raise all their cumulative impacts concerns that involve the other project sites, including the effects of moving the Town of Crownpoint's wells, the groundwater impacts from the proposed sequence of mining, and the cumulative groundwater impacts from operations at the four sites. In the resumed hearing, the Presiding Officer must consider the impacts of Section 8 along with those of the other sections, to assure that all potential inter-regional cumulative effects have been adequately considered and discussed in the FEIS.

Because of the bifurcated hearing, it remains unclear whether the intervenors' concerns over the other project sites indeed point to any significant "cumulative impacts," as that expression is understood under NEPA judicial cases. For instance, the impacts to Crownpoint's water supply -- an issue the intervenors tried to raise -- might not have any "cumulative" or "synergistic" relationship with the impacts of Section 8 or any other sites.[10]

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[10] In the event that HRI were to abandon plans to mine the other sections and choose to have the scope of its license narrowed to merely Section 8, no further cumulative impacts review involving the other sites need be litigated. See National Wildlife Fed'n v. FERC, 912 F.2d 1471, 1476-78 (D.C. Cir. 1990)(where applicant withdrew from its application the later phase of a project -- "Phase II" -- FERC did not need to evaluate the environmental effects of Phase II in reviewing the license application for Phase I). If HRI ever later decided to submit an application for a license to mine one or more of the other sites, the impact statement on them would then consider the environmental effects of Section 8 along with the effects of the later-proposed sites, to reach a conclusion on the cumulative impact of the added sites. Id. at 1478; see also Kleppe, 427 U.S. at 415 n.26.

2. Impacts Within Section 8:

Cumulative impacts analysis looks not only to possible inter-regional "synergistic" effects, but also to whether, even at just one site, the proposed action's impacts will be significantly enhanced by already existing environmental effects from prior actions. A cumulative impacts review examines "the impact on the environment which results from the incremental impact of the action, when added to other past, present, and reasonably foreseeable future actions." 40 C.F.R. § 1508.7 (emphasis added).

As to the past, present, and future environmental impacts on Section 8 alone, the Commission finds no basis to overturn the Presiding Officer's findings. The intervenors' vague, largely generalized claims do not identify any "clearly erroneous" factual finding or important legal error requiring Commission correction. It is clear from the record that the Presiding Officer in this proceeding reviewed voluminous filings from the parties and considered the intervenors' concerns, but nonetheless found the FEIS's cumulative impacts discussion adequate. "The NEPA process involves an almost endless series of judgment calls.... It is ... always possible to explore a subject more deeply and to discuss it more thoroughly." Coalition of Sensible Transportation v. Dole, 826 F.2d 60, 66 (D.C. Cir. 1987).

Having considered the intervenors' claims, the Presiding Officer issued a series of partial initial decisions on the impacts to Section 8 and, in light of those decisions, he found no significant cumulative impact to the Section 8 site. Instead, he found that, read as a whole, the FEIS demonstrates sufficient consideration of the potential impacts of past and future impacts to Section 8. The intervenors' claims before the Commission fail to cast doubt on his conclusions. Indeed, the intervenors fail to raise any discrete, supported argument.

One of the intervenor's general concerns, for instance, involves the project's cumulative impacts on radiation levels. See Intervenors' Brief at 47. As the Presiding Officer held,

however, the FEIS addresses this issue adequately. See 50 NRC at 120. The FEIS acknowledges that previous mining and milling activities in the Church Rock area "resulted in large exposures to radioactive materials, especially radon," and that these "exposures were large enough to result in a high incidence of cancer among workers." FEIS at 4-124. It goes on to conclude, though, that the HRI project will only result in a "negligible increase" in radiological impacts. Id. at 4-125; see also id. at 4-73 ("no significant radiological impact to area"). This is because the ISL process HRI will use "does not result in large amounts of tailings or environmental releases of radioactive particulate matter." Id. at 4-125; see also id. at 4-74, 4-82. Any expected exposures from possible sources of radon "are a very small fraction of the allowable limits for exposure of the public." Id. at 4-125; see also id. at 4-83; 4-85, 4-117. Radon exposures and potential concentrations at Church Rock would amount to approximately 0.5% of the applicable regulatory public limit. See id. at 4-83. The Presiding Officer was not persuaded that Section 8's radiological impacts would in any way result in unacceptable cumulative impacts. He therefore agreed with the FEIS's conclusion that the Section 8 project's impacts would not be a significant addition to the overall radiological impacts in the area.

Essentially, the intervenors challenge the FEIS's assessment of current radiation levels at Church Rock, and its calculation of expected radiation releases. The intervenors raised virtually identical arguments in their petition for review of LBP-99-19, 49 NRC 421 (1999)(partial initial decision on radioactive air emissions). After considering the intervenors' arguments, the Commission denied review of LBP-99-19, on the ground the intervenors failed to identify any "clearly erroneous factual finding" or "important legal error." See CLI-00-12, 52 NRC 1 (2000)(denying plenary review). Here, while as a formal matter we are granting review of the NEPA claims in an effort to clear up lingering questions, we affirm the Presiding Officer's ruling on cumulative impacts at Section 8 for the technical reasons given in the prior Presiding Officer

and Commission decisions. At bottom, as the Presiding Officer recognized, the intervenors' various claims of environmental impacts are "a recapitulation of themes already stated by Intervenors and addressed by [the Presiding Officer]" in earlier partial initial decisions dealing with the technical, public health and safety review of the license. See 50 NRC at 109.

Cumulative impacts analysis looks to whether the impacts from a proposed project will combine with the existing, residual impacts in the area to result in a significant "cumulative" impact -- where, in other words, the new impact is significantly enhanced by already existing environmental effects. The intervenors simply have not credibly suggested how the relatively minor radiological impact of Section 8 will in fact prove significant even when added to already existing radiological conditions. They have not cast doubt on the FEIS's conclusion that the Church Rock Section 8 mining will make only a minor, insignificant addition to overall pre-existing radiological impacts.[11]

Overall, the Commission finds that the Presiding Officer sufficiently supported his conclusions on the FEIS cumulative impacts discussion. When he reviewed the intervenors' cumulative impacts claims, the Presiding Officer already had issued partial initial decisions encompassing a host of issues pertaining to cumulative impacts -- air emissions, liquid waste disposal, historic preservation, groundwater impacts, and other issues. He had, in short, already given in-depth consideration to many of the arguments underlying the intervenors' cumulative impacts claims. His cumulative impacts discussion, accordingly, refers back to

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[11] The intervenors are correct that even minor impacts may prove significant when considered together with other individually minor impacts. "Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. 1508.7. The Presiding Officer's statement that Section 8's impacts are not the "the straw that breaks the camel's back" simply reflects his conclusion that the future "small incremental increases" HRI's operations will bring to Section 8 will not add up to a significant cumulative impact when added to the current and past impacts to Section 8. He found Section 8's impacts "acceptable" and insignificant from the perspective of cumulative impacts analysis. See 50 NRC at 119.

several of these earlier decisions, none of which the Commission found cause to overturn or even to seriously question. We find no basis for reversal of the Presiding Officer's technical findings.[12] We again stress, however, that the possibility of inter-regional cumulative impacts remains to be dealt with in the resumed hearing.

3. Radiological Information in DEIS

More extensive background information on Church Rock's existing radiological characteristics was provided in the DEIS, referenced by the Presiding Officer. 50 NRC at 120. The intervenors suggest that the Presiding Officer committed "legal error" by finding the FEIS adequate merely "because information omitted from it on cumulative impacts was set forth in the DEIS and in a Staff affidavit." Intervenors' Brief at 48. The Commission disagrees.

First, the Presiding Officer's conclusions do not turn on his references to the DEIS. The Presiding Officer found the FEIS's discussion of cumulative impacts adequate. See 50 NRC at 120-21 (finding that FEIS adequately treats radiological, groundwater, liquid waste disposal, cultural, and other impacts). While he noted that the DEIS provided a relevant, more detailed assessment of Church Rock background characteristics, he nonetheless concluded that the FEIS sufficiently acknowledges the "existence of elevated levels of radioactivity from previous mining and milling activities near Church Rock." See id. at 120 (citing FEIS at 4-72, 4-73, and 4-125).

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[12] The intervenors frequently mischaracterize the Presiding Officer's findings. The Presiding Officer never stated, for instance, that "adequate treatment in the License constitutes a sufficient evaluation of cumulative impacts." Intervenors' Brief at 48. While at times he notes applicable license conditions, these references relate to relevant FEIS discussions of staff-imposed monitoring and other mitigative measures. See, e.g., 50 NRC at 120-21 (citing FEIS and earlier Partial Initial Decisions covering liquid waste disposal and cultural resources).

Ideally, the FEIS might have included all of this additional, detailed background data made available in the DEIS. But none of this background data earlier provided in the DEIS casts any doubt on the FEIS's cumulative impacts conclusions. For instance, the DEIS concludes that previous mining and exploration activities at Church Rock "have probably slightly elevated" the area's background radiation levels, a point the FEIS fully recognizes. In some respects, the FEIS provides a greater acknowledgment of the earlier mining's impacts, even though its discussion is more qualitative than quantitative. See, e.g., FEIS at 4-124 (describing legacy of "high incidence of cancer" among mine and mill workers, and high incidence of congenital abnormalities among Navajo babies born to mothers who live near mine waste sites).

In any event, the failure to include in the FEIS the detailed figures on background radiation did not prejudice the intervenors. This information was made publicly available in the DEIS, was considered by the NRC staff in its licensing decision, and was used and referenced by the intervenors in the hearing. Moreover, to the extent that the Presiding Officer's decision in any respect differs from the FEIS, the FEIS is deemed modified by the decision. See supra p. 30.

4. Burden of Proof

Lastly, we reject the intervenors' general claim that the Presiding Officer "erred as a matter of law by shifting the burden of proof on the cumulative impacts" issue to them. Intervenors' Brief at 48. As we already have said in this proceeding, "it is incumbent upon the Intervenors to identify, with some specificity, what the alleged deficiencies are." CLI-99-22, 50 NRC 3, 13 (1999). Throughout this proceeding, the Presiding Officer frequently has rejected the various claims of deficiency raised by the intervenors. See, e.g., LBP-99-1, 49 NRC 29, 35-

36 (repeatedly finding that intervenors have "incorrectly" or "erroneously" read FEIS discussions of liquid waste disposal issues and that "FEIS has not been brought ... into question by the arguments of the intervenors"); see also CLI-99-22, 50 NRC at 12 & n.33 (affirming Presiding Officer's liquid waste disposal decision, and agreeing that intervenors' claims about FEIS liquid waste discussion were erroneous). Ultimately, the Presiding Officer was persuaded by "HRI and the staff, by a preponderance of the evidence," that the FEIS adequately discusses the Section 8 site's impacts and that Section 8 would have "no substantial inimical impact." 50 NRC at 110.

The Commission finds no indication that the Presiding Officer misplaced the burden of proof or conducted anything but a fair and unbiased review of Section 8's cumulative impacts. While his discussion at times is a bit short, it is because he relies upon earlier decisions whose extensive findings rejected the same key arguments underlying the intervenors' cumulative impacts claims. The Presiding Officer gave sufficient reason -- based upon the FEIS and earlier decisions -- for his cumulative impacts conclusions.

G. Environmental Justice

1. Introduction

The intervenors claim that the NRC failed to adequately assess the environmental justice implications of the HRI project. Environmental justice concepts call for each agency to identify and address, as appropriate, any "disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," 59 Fed. Reg. 7629 (Feb. 16, 1994), codified at, 3 C.F.R. 859 (1995).

Any number of impacts, including health, ecological, or economic, may pose a disproportionately adverse burden upon a minority or Native American population. Environmental justice considerations therefore call for agencies to consider those "interrelated cultural, social, occupational, historical, or economic factors that may amplify the natural and physical environmental effects of the proposed agency action." See Council on Environmental Quality's Guidance Under NEPA (Mar. 1998)("CEQ Guidance")(Exhibit 1-C, attached to Intervenors' Env. Justice Brief, Vol. 1). The NRC integrates environmental justice considerations into its NEPA review process. See Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 100-110 (1998). We expect NRC EISs, and presiding officers in adjudications, to inquire whether a proposed project has disparate impacts on "environmental justice" communities and whether and how those impacts may be mitigated. See id. at 106-110.

2. FEIS Environmental Justice Discussions

We begin this section by acknowledging that the Presiding Officer's statements on environmental justice may seem cursory or dismissive of the project's potential risks. See Intervenors' Brief at 51. The Presiding Officer's statements, though, reflect merely his overall conclusion -- and that of the FEIS -- that with proper mitigative measures the Section 8 portion of the project is not expected to cause any severe health or environmental impacts to the Church Rock population. Yet, because the Presiding Officer's statements are brief and do not reference the numerous environmental justice discussions in the FEIS, the Commission adds the following discussion.

Simply put, environmental justice considerations are infused throughout this FEIS. The Commission therefore believes it is appropriate to begin this discussion by outlining some of the various environmental justice topics addressed in the FEIS.

First, while the FEIS finds that with proper mitigative measures the project is acceptable, it does not fail to reveal potential environmental risks. Both the FEIS as a whole and the particular FEIS section on environmental justice make clear that there are inherent risks involved in ISL mining and that significant geological information for the region has yet to be determined. These risks and unknowns underlie the various staff-imposed license conditions, requiring HRI to conduct extensive additional testing, analysis, and monitoring.

The FEIS fully discloses, for instance, that "[s]ignficant adverse effects to groundwater quality would result if an excursion (either horizontal or vertical) occurs or if, after routine mining, water quality is not restored." FEIS at 4-113. It further emphasizes that "[s]ucessful restoration of a production-scale ISL well-field has not previously occurred," and that "site-specific tests conducted by HRI have not demonstrated that the proposed restoration standards can be achieved at a production scale." Id. Nevertheless, after assessing the risks of horizontal and vertical excursions at Church Rock, the FEIS determines that HRI's monitoring program should be able both to detect and correct any excursions. See generally id. at 4-54 to 4-58. The FEIS thus ultimately concludes that the "previously identified impacts of this project can be mitigated." Id. at 4-60; see also id. at 4-60 to 4-63 (outlining mitigative measures to protect groundwater -- including well integrity tests, effluent monitoring programs, and a maximum allowable production flow rate). These staff-imposed mitigative measures will reduce the "likelihood" and "severity" of any adverse impacts. Id. at 4-127.

Secondly, the FEIS outlines special areas of concern involving the Native American population. The FEIS acknowledges that the population near the proposed sites is almost

entirely Navajo, and largely lives at a poverty level. Id. at 4-112; 3-79; 3-56. Those living in the 50-mile area surrounding the Hydro project comprise, "[b]y nearly any definition," an "environmental justice population." Id. at 3-79. Approximately 75% of the population within 50 miles of Church Rock is Native American. Within 10 miles of Church Rock, the percentage of Native Americans rises to approximately 97%. Id. In 1990, per capita income in the county was under $10,000. Id. at 3-56.

The FEIS provides extensive health data on the Navajo population, obtained from the Indian Health Service (IHSO), including its regional office for New Mexico and Arizona. See id. at 3-80 to 3-85. This information indicates that, compared to the general U.S. population, the Navajo population suffers disproportionately from fatal accidents, alcoholism, diabetes, tuberculosis, and pneumonia. Id. at 3-83 to 3-85.

Infant mortality also is higher for the Navajo population. Id. at 3-80, 3-84, 3-85. Moreover, the FEIS highlights that there is a significantly higher rate of congenital anomalies among Navajo infants than for U.S. infants generally. Id. at 3-84, 3-85. As the FEIS explains:

> This difference is noteworthy because there is some evidence to indicate that radiation exposure may be related to the incidence of congenital anomalies. Researchers investigated the birth outcomes of Navajo infants born between 1964 and 1981 at the IHS hospital in Shiprock. The research concluded that there were trends in occurrences of adverse birth outcomes that lend limited support for the hypothesis that adverse genetic outcomes are related to radiation exposure. The associations were weak between unfavorable birth outcomes (including congenital anomalies and stillbirths) and radiation exposure of the parents. The only statistically significant association was identified when the mother lived near uranium mill tailings or mine waste sites. However, when placing these conclusions in context, the researchers state that given the extensive uranium mining operations that have gone on for decades, including radiation exposures at levels greatly exceeding what would be allowed today, the lack of clear evidence for increased risk of adverse outcomes should be reassuring.

FEIS at 3-85 (citations omitted). Thus, while acknowledging that the data are not conclusive, the FEIS nonetheless emphasizes that the high level of congenital abnormalities may in fact be the direct result of past uranium mining operations in the area.

The FEIS further discusses this adverse legacy of previous uranium mining in the Church Rock region. This was a time when "miners were exposed to radiation levels greatly exceeding what would be allowed today and were poorly informed of the potential health effects of radon gas." Id. at 3-87. The FEIS duly notes this "long history of uranium mining and milling." Id. at 4-124. It describes how:

> The Church Rock facility as proposed would mine an area previously mined by underground mining....Uranium mining was a large employer in the area and many individuals worked in the mining and milling operations. Early mines and mills operated under much less stringent standards than exist today, and this resulted in large exposures to radioactive materials, especially radon and its daughters. The exposures were large enough to result in a high incidence of cancer among workers, and information gathered on these workers resulted in development of risk factors on radon.
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> In addition, the methods used to mine and mill the uranium (i.e., "conventional" mining) resulted in very large amounts of radioactively and chemically contaminated sands and slimes, also known as tailings. In 1978, the U.S. Congress passed the Uranium Mill Tailings Control Act, which required standards to be developed to control exposures from tailings and clean up past sites of uranium milling.

Id. at 4-124 to 4-125. This site of former underground mining at Church Rock has been decommissioned and the tailings pile is being stabilized. Id. at 4-121.

In addition, the FEIS reveals that a United Nuclear Corporation's uranium mill tailings dam broke in 1979, contaminating the local Rio Puerco River. The dam break released ninety-four million gallons of tailings liquid and 1100 tons of tailings solids into the Rio Puerco. Id. at 4-125. As a result, livestock that drank the river water were found to have high radionuclide

levels. FEIS at 3-86. The contaminated area was later cleaned subject to the standards of the New Mexico Environmental Improvement Division. Id. at 4-125.

The FEIS also depicts how some Navajo Indians lack "adequate or reliable wage work to provide for themselves and their family," and thus must "rely on their livestock and gardens" for subsistence. See id. at 3-86. Their sheep, goats, and cattle graze on the land and obtain water from shallow wells on the Rio Puerco. The FEIS identifies the local Navajos' reliance on agriculture-based activities since these "could introduce exposure pathways ... that potentially affect a population's exposure to -- and health consequences of -- contamination." Id. at 3-85. Accordingly, the models used to predict the project's radiological impacts "account[] for exposures possible from being outdoors much of the time and for consuming vegetative matter and animals affected by the project." Id. at 4-117; 4-75.

In addition, the FEIS acknowledges that one possible land use impact may be the "temporary disruption of livestock grazing at project sites." Id. at 4-94. This would "adversely affect Navajo who have grazing permits for the land and rely on livestock as an important economic resource." Id. The FEIS deems these land use interruptions an environmental justice impact, and calls for appropriate mitigative measures, including providing compensation to grazing rights permitees "for the temporary loss of their grazing permits." Id. at 4-118. These interruptions are expected to be temporary, given the sequential nature of ISL mining operations. Id. at 4-92.

One of the most significant environmental and health impacts possible from Section 8 mining may occur if HRI uses surface water discharge as a liquid waste disposal method for Section 8. While this is only a possibility -- for HRI has not determined whether it will use surface water discharge and it would need appropriate approvals and permits -- the FEIS does not shirk from revealing the potential consequences of this waste disposal method, and its

potentially amplified consequences for the local Navajo population. If HRI were to discharge wastewater into surface water, the uranium concentration of the wastewater would exceed NRC regulatory standards. Id. at 4-115. As the FEIS explains, "exposures to individuals who drink the [river] water prior to full mixing in the stream could result in an individual dose that exceeds the 1 mSv (100 mrem) limit. Exceeding a regulatory limit is considered a significant adverse effect. This alternative would, therefore, result in a significant environmental justice impact." Id. at 4-116; see also id. at 4-87.

The FEIS elaborates further:

> The conservative scenario that results in the individual dose is a highly unlikely occurrence because individuals are not likely to drink from the river at the wastewater discharge site. However, the local population is known to drink directly from the Rio Puerco and to water livestock there. The livestock provide milk and meat for their owners. Because of these subsistence activities, it is possible that individual doses could be much higher to the Navajo population than they would be to another population that did not participate in such subsistence activities. Further, this same stream has elevated background levels of naturally occurring uranium and has been contaminated further by a mill tailings dam break and mine dewatering effluent discharge. Cumulative exposures to the population using the water are an important consideration under NEPA. This alternative must be fully analyzed before receiving further consideration.

Id. at 4-116. Indeed, HRI is not currently authorized to go forward with this waste disposal option. At a minimum, it would have to request and obtain an exemption to our regulatory requirements. The FEIS fully recognizes that the additional, significant incremental radiation from surface water discharge at Section 8 might combine with existing levels of radiation in the river to cause a significant cumulative impact for the Navajo population. Further technical and environmental analysis would be needed to determine this, if and when HRI ever proposes this liquid waste disposal option.

In addition, the FEIS points out disagreement within the Navajo community over the HRI project. Due to the adverse impacts of former uranium mining activities in the region, the Navajo Nation in 1983 issued a moratorium on uranium mining, renewed by tribal executive order in 1992. Id. at 3-87. The FEIS points out, however, that there are conflicts between the Navajo Nation's moratorium and the views of particular Navajo chapters. "Referenda held at the Church Rock and Crownpoint chapters, where the proposed project would be located, supported the HRI proposal despite the moratorium." Id. Similarly, while some Navajo organizations have denounced the HRI project, others support it. Id. at 3-84. The project does have the secondary benefit of creating jobs in the local community. Id. at 5-3 to 5-4; 50 NRC at 126-27.

In light of these conflicts, the NRC's role in reviewing the license application has been to determine what health and environmental impacts could result from the project. FEIS at 4-120. The licensing decision, "which will be based on the FEIS, the Safety Evaluation Report, and the hearing record ... will be the NRC staff's determination of whether the local community's safety and health can be assured." Id. at 4-120.

3. Analysis

The Commission believes that the FEIS sufficiently identified this project's environmental justice implications, at least insofar as Section 8 is concerned. With the exception of the potential radiological impact of surface water discharge, the FEIS concludes that overall cumulative impacts to the local population will be minor, even considering the particular circumstances of the environmental justice population. The intervenors' arguments do not point to any serious deficiency in the environmental justice analysis, which, at bottom, is

similar to a cumulative impacts analysis but also takes into account relevant features of the minority community.

In this proceeding, the intervenors have had the opportunity to litigate whether Section 8's radiological, groundwater, and other impacts pose any significant risk of public health or environmental damage. Essentially, the intervenors' environmental justice arguments -- like so many of their NEPA claims -- are rooted in these earlier technical arguments raised unsuccessfully before the Presiding Officer. In a series of Partial Initial Decisions, the Presiding Officer considered but rejected their numerous challenges. The Commission, also, has had the opportunity to consider the intervenors' various claims of adverse impacts, both when we considered their earlier petitions for review and, now, in our review of the Presiding Officer's NEPA decision and the FEIS. We, like the Presiding Officer, have not found the intervenors' arguments on health and safety and environmental impacts persuasive, at least insofar as Section 8 is concerned.

The intervenors claim that the FEIS "ignore[s] data showing that poverty, geographic isolation, poor health conditions, and ongoing radiological contamination from earlier uranium mining activities make the Church Rock community especially vulnerable." See Intervenors' Brief at 52. While it is always possible to provide more detail and more analysis, the Commission believes that the FEIS adequately considers the environmental justice population. The reality of adverse impacts from former mining in the region does not require the conclusion that any additional increment of radiation from Section 8 is unacceptable, even if negligible in amount. The intervenors understandably and appropriately focus upon the adverse effects of former mining, but they have not explained why the additional, and expected to be negligible, radiation impact from Section 8 would have any public health and safety significance.[13]

[13] Indeed, the long-term radiological impact from the Section 8 project may in fact prove beneficial because HRI will need to clean up the area to standards needed for

The intervenors would have preferred all manner of additional details, including specific health data on the immediate Church Rock community, to the FEIS's reliance upon information provided by the regional office of the U.S. Indian Health Service. See Intervenors' Brief at 53. They do not specify, however, how the absence of additional details makes a crucial difference given the negligible radiological impact of Section 8. Again, the focus of the FEIS is not merely on existing radiological conditions at Section 8, but on whether the Section 8 mining will make an appreciable additional impact. The FEIS expressly recognizes that the local population largely lives at a poverty level, suffers disproportionately from various ailments, and may suffer from radiation-caused health effects. The intervenors, though, point to no specific facet of the Church Rock population's health that conceivably would alter the FEIS's cumulative impacts/environmental justice conclusions, given the negligible incremental impacts from Church Rock Section 8.

The intervenors would have liked the Presiding Officer to have required additional mitigative measures, but he found additional measures unnecessary. The FEIS and HRI's license already describe a host of protective, mitigative measures, many of which specifically address environmental justice considerations. See generally FEIS at 4-113 to 4-119; see also id. at 4-105, 4-14, 4-61 to 4-63, 4-66, 4-87 to 4-88, 4-95, 4-111 to 4-112. In none of their various presentations have the intervenors persuasively depicted a need for additional mitigative measures.

In conclusory fashion, the intervenors call for "mitigative measures for the cumulative effects of potential HRI radiological emission with the ongoing ambient radiation doses to the public in the vicinity of the Church Rock mine." Intervenors' Brief at 54. But the radiological

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decommissioning the site. Some of the areas currently have higher levels of residual radioactivity than would be permitted for decommissioning, and these areas "may be cleaned up as part of the well field decontamination." FEIS at 4-117.

doses from operations at Section 8 are a small fraction of allowable exposures to the public. The intervenors simply have not raised a credible argument on how this additional increment would be of health and safety significance to the area.

. The intervenors also fault the Presiding Officer for saying that the Church Rock community lives more than four miles from Section 8. See Intervenors' Brief at 54. Instead, the intervenors state, there are at least 350 residents located within two and a half miles of Section 8. The intervenors, however, do not provide any reason for why this distinction would be material. Moreover, the FEIS itself acknowledges that 575 people live within about 3 miles of Church Rock. FEIS at 4-83. Modeling for radiological dose considerations was based upon the nearest residence downwind and on residences located on lease areas. Again, the intervenors have not pointed to any error of consequence in either the Presiding Officer's decision or the FEIS.[14]

Environmental justice issues, however, "may arise at any step of the NEPA process and agencies should consider these issues at each and every step of the process, as appropriate." See CEQ Guidance at 8. When the hearing resumes to consider the potential impacts to the other project sites, the topics must include environmental justice, as well as the full panoply of technical and environmental issues raised by ISL mining at those sites. If, for example, the intervenors raise their concerns about the adequacy of the secondary groundwater restoration

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[14] The Presiding Officer's statements, however, can at times be confusing. At one point he states that there is "no reason to consider, in the context of a new project, the highly regrettable impacts of prior projects." 50 NRC at 123. We agree with the intervenors that the statement, read literally, is wrong. There certainly could be major cumulative impacts if new impacts either add appreciably to or otherwise significantly enhance the adverse effects of existing conditions. Both the FEIS and the Presiding Officer properly considered this issue in their cumulative impacts and environmental justice analyses. The Commission believes the Presiding Officer merely meant to emphasize that the FEIS need not extensively recount all details of the historical mining in the region. This likely was the case since, immediately following his statement, he cites to a page in the intervenors' brief which called for a more "descriptive summary" of past mining.

standard for uranium, they will also be able to cite any specific health data pertinent to whether the local Navajo population -- because of existing local health conditions -- might face an amplified health risk to kidneys or other organs due to the restoration standard provided in the license.

In conclusion, the Commission finds the FEIS's discussion on environmental impacts adequate. One can always flyspeck an FEIS to come up with more specifics and more areas of discussion that conceivably could have been included. There is no "standard formula for how environmental justice issues should be identified or addressed." CEQ Guidance at 8. Here, though, the FEIS comes to grips with all important considerations at the Section 8 sites. The Commission finds that the FEIS: (1) sufficiently highlights issues pertinent to the environmental justice community, including those factors that might amplify the environmental effects of the project, (2) recommends appropriate mitigative measures, and (3) provides adequate information for effective public participation.[15]

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[15] In CLI-00-12, 52 NRC 1 (2000), the Commission declined to review the Presiding Officer's technical findings on the groundwater impacts to Church Rock Section 8. We did, however, note that the Presiding Officer in three places in LBP-99-30 had referred to an aquifer exemption HRI obtained in 1989 for Section 8, but that a recent Tenth Circuit decision leaves unresolved the ultimate validity of that aquifer exemption. We therefore asked the parties to address the significance to this case of the 1989 exemption and its now yet-unresolved status. Our careful review of the parties' responses leads us to conclude, with the NRC staff, that "the technical merits of LBP-99-30's groundwater findings ... would be the same, regardless of whether or not HRI's Section 8 is covered by a current valid aquifer exemption." NRC Staff's Answers (Aug. 9, 2000) at 8. While it seems that the Presiding Officer sought to buttress his findings with the occasional reference to the Section 8 aquifer exemption, we agree with the NRC staff that the Presiding Officer's conclusions on groundwater and drinking water hinged not upon the aquifer exemption, but upon a long list of technical reasons given for rejecting the intervenors' claims. See generally NRC Staff's Answers at 8-13; LBP-99-30, 50 NRC 77, 101-109 (1999). We therefore concur that the Presiding Officer's "technical groundwater findings would not be undermined should the 1989 aquifer exemption prove not to be valid." NRC Staff's Answers at 7. Quite apart from the existence -- or not-- of the Section 8 aquifer exemption, the Presiding Officer was satisfied that "the underground geology of this area and the monitoring programs that HRI will implement carefully attend to the protection of drinking water." See 50 NRC at 109.

Of course, HRI's license requires it to obtain all necessary permits from the appropriate regulatory authorities. See License Condition 9.14. If HRI proves unable to obtain a current

IV. Conclusion

For the foregoing reasons, the Commission grants review of LBP-99-40 and reverses the decision. The Commission remands the proceeding to the Presiding Officer for further proceedings, which shall resume approximately six months from the date of this order. The Commission grants review of the NEPA/environmental justice portions of LBP-99-30, and affirms the decision.

IT IS SO ORDERED.

For the Commission

/RA/

Annette L. Vietti-Cook
Secretary of the Commission

Dated at Rockville, Maryland,
this 31st day of January, 2001.

valid aquifer exemption and Underground Injection Control (UIC) permit for Section 8, no mining can take place in Section 8.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
HYDRO RESOURCES, INC.	)	Docket No. 40-8968-ML
	)	
	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing COMMISSION MEMORANDUM AND ORDER (CLI-01-04) have been served upon the following persons by U.S. mail, first class, as indicated by an asterisk (*) or through deposit in the Nuclear Regulatory Commission's internal mail system as indicated by double asterisks (**), with copies by electronic mail as indicated.

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Office of the Secretary of the Commission

Dated at Rockville, Maryland
this 31st day of January 2001