NUCLEAR REGULATORY COMMISSION ISSUANCES

January 1995

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

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

U.S. NUCLEAR REGULATORY COMMISSION

MASTER

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Atomic Safety and Licensing Boards Issuances

ATOMIC SAFETY AND LICENSING BOARD PANEL

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LICENSING BOARDS

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Administrative Judges:

Ivan W. Smith, Presiding Officer
Dr. Peter S. Lam, Special Assistant

In the Matter of

Docket No. 70-364-ML-Ren
(ASLBP No. 94-687-01-ML-Ren)
(Materials License No. SNM-414)

BABCOCK AND WILCOX
COMPANY
(Pennsylvania Nuclear Services
Operations, Parks Township,
Pennsylvania)

January 3, 1995

INITIAL DECISION
(License Renewal)

In the following decision, I resolve all matters placed into controversy by the parties in favor of authorizing the renewal of the license to use nuclear materials at the Babcock & Wilcox Parks Township facility.

I. INTRODUCTION

A. Procedural Background

Babcock & Wilcox Company (B&W or Licensee) is the holder of NRC Special Nuclear Materials License No. SNM-414 which authorizes the use of radioactive materials in an industrial complex located at Parks Township, Pennsylvania (Parks Township facility). On April 14, 1989, Licensee filed an

application to renew its license. This application has been revised several times, and the updated version is Revision 5 (June 1993).

The renewal of this license is necessary if the Licensee is to continue operations at the Parks Township facility. The primary activities conducted at this facility include decontamination, repair, maintenance, and testing of equipment and components contaminated with radioactive materials; the volume reduction of low-level radioactive waste; the decontamination of onsite facilities formerly used for plutonium and uranium processing; and the management of an onsite burial area.

On November 3, 1993, the Commission published in the *Federal Register* a Notice of Opportunity for a Hearing pertaining to the renewal of the license. 58 Fed. Reg. 58,711. The notice stated that any person whose interest may be affected by the license renewal could request a hearing.

Citizens' Action for a Safe Environment (CASE) and the Kiski Valley Coalition to Save Our Children (the Coalition) (together referred to as Intervenors) filed a joint Request for Hearing, dated January 5, 1994.

Both B&W and, initially, the NRC Staff opposed the hearing requests on various grounds. I twice permitted the Intervenors to amend their hearing requests. Finally, after considering the petitions, the amendments, and the responses of B&W and the Staff, I issued a Memorandum and Order dated April 22, 1994, granting the request for hearing and admitting the petitioners as intervenors (Hearing Order). LBP-94-12, 39 NRC 215. Based upon information in the hearing requests, I accepted as issues in this proceeding the following areas of concern:

Broad area of concern:

Whether there has been, and under a license renewal whether there will be, offsite radiation from the Parks Township facility which threatens the health and safety of the nearby population and threatens radiological contamination of nearby residential, agricultural, and business property.

Included subareas of concern:

1. Whether the housekeeping practices (drums, containers, etc.) at the Parks Township facility threaten the offsite release of radiation through water, dust, and air pathways.
2. Whether B&W management practices as manifested by the management of the Apollo facility threaten offsite releases of radiation from the Parks Township facility.
3. Whether transportation of wastes between Parks and Apollo has radiologically contaminated offsite properties.
4. Whether the location of the Parks Township facility waste dump over a mined-out area threatens, through subsidence, the integrity of the dump, and whether the mined-out area creates a threat of offsite release of radiation through a water-migration pathway.

Hearing Order, 39 NRC at 222-23.

B. Rules and Nature of the Hearing

This hearing is informal under Subpart L to 10 C.F.R. Part 2, a portion of the NRC Rules of Practice. Strict rules of evidence do not apply. The relevant parts of the rule were identified and explained to the Intervenor in the Hearing Order and in earlier issuances.

Persons with standing to intervene, such as the Intervenor here, have a right to the commencement of a hearing even if they have no genuine dispute with an applicant for a license. They need only state rational areas of concern germane to the proceeding. In this case it was necessary to examine a large volume of papers submitted by the Intervenor to identify, often by inference, just what areas of concern they wished to have addressed in a hearing.

It is rather easy for persons who are concerned about activities under a proposed licensing action to be admitted as parties to an informal hearing requested by them. But once the hearing is ordered and the issues are identified, intervenors have important responsibilities. The presiding officer has no authority to examine or decide matters not put into controversy by the parties. 10 C.F.R. § 2.1251(d). Therefore, it is the Intervenor's responsibility to place their concerns into controversy with the Licensee and NRC Staff if they want those concerns examined in the hearing. I may not and have not explored the Intervenor's very extensive filings to postulate or infer controversies that have not been clearly placed into issue by them.¹

After the order for a hearing is issued, the next step is for the NRC Staff to make the Hearing File available. The Staff did so on May 23, 1994, in an extensive and apparently complete filing containing the renewal application and attendant key papers. As required by the rule, the Staff since has updated the Hearing File.

After the Hearing File is made available, and in accordance with the schedule set in the Hearing Order, Intervenor may file a written presentation. They may also present in writing, under oath or affirmation, arguments, evidence, and documentary data further explaining their concerns. They must describe any defect or omissions in the application. In the discussion below, I explain that their presentation was deficient in several material respects, including the untimely submittal of matters not approved for hearing in the Hearing Order.

The Licensee, followed by the NRC Staff, filed their presentations in accordance with the schedule previously established. Since it is the Licensee who is seeking a right (license renewal) from the NRC, it has the burden of proof with respect to the controversies placed into issue by the Intervenor.

¹ On the other hand, I am not required to ignore serious safety or environmental matters merely because the Intervenor has not placed them into controversy. In fact, I am *required* by the rule to inform the Commission if I believe that a serious situation exists. I have reviewed the portions of the hearing record brought to my attention by the parties and I find no matter that would warrant informing the Commission.

C. Comments on the Parties' Presentations

1. *Intervenors' Presentation*

a. *Disorganized Filing*

On or about July 27, 1994, the Intervenors filed an undated written presentation, but it was not under oath or affirmation as the rule requires. The Intervenors' presentation does not refer to any deficiency or omission in the application for license renewal. This is a serious failure on their part. Section 2.1233 states that intervenors *must* "describe in detail any deficiency or omission in the license application." Therefore, the sufficiency of the application is not an issue in controversy. I may not evaluate it myself to determine whether it is incomplete or deficient.

Moreover, Intervenors failed to discuss any other documents in the Hearing File. Accordingly, unless the Intervenors constructively challenge particular portions of the application and other documents in the Hearing File by documents filed with their own affirmative presentation, I accept the application and the balance of the Hearing File as uncontroverted proof of the information contained therein.

With the exception of the transportation and mine-subsidence issues, Intervenors have not organized their very extensive presentation around the issues I approved for the hearing. Most of their presentation is not helpful in identifying matters in controversy.

I previously admonished the Intervenors that they must improve upon their "disorganized and unstructured approach" to the proceeding when filing papers. Transcript of March 8, 1994 (Tr. 71-72). They have not improved. Although I have spent many days reading Intervenors' papers, I have not been able to recognize any pattern of organization.

Nevertheless, in papers spread randomly throughout the large volume of documents submitted with their presentation, Intervenors challenge B&W's management competence (by implication) and housekeeping practices sufficiently to keep those respective matters in controversy. Thus all matters approved for hearing have been either expressly or implicitly addressed by the Intervenors in their presentation.

It is also significant that the Intervenors' entire presentation consists of arguments and documents. It contains no affidavits of experts or others with knowledge of the matters in dispute.

b. *Late-Filed Concerns*

Many of the sections in Intervenors' written presentation raise concerns that fall outside the areas of concern set out in the requests for hearing and accepted

for litigation in the Hearing Order. It is necessary at the threshold, therefore, to resolve whether Intervenor may, without leave of the presiding officer, present these late concerns.² For the reasons stated, I conclude below that they may not.

Section 2.1233 of Subpart L, provides for written presentations. It does not by its terms restrict the Intervenor's written presentation to stating concerns falling within the area of concerns raised in the initial request. However, the overall scheme of Subpart L clearly anticipates that specific concerns set out in the written presentation must fall within the scope of the areas of concerns advanced by a petitioner in the request for hearing and accepted as issues in the hearing by the presiding officer.

Requests for hearing, stating areas of concern germane to the proceeding, must be filed within the time set in the notice of opportunity for hearing (10 C.F.R. § 2.1205(c)(1)) or an extension of time granted by the presiding officer. Areas of concern filed afterward are, in effect, untimely amendments to the request for hearing.³

Before untimely requests for hearing may be granted, the presiding officer must find that *the intervenors have established* that any delay was excusable *and* that granting the untimely request will not injure or prejudice other parties. 10 C.F.R. § 2.1205(k)(1).

The Hearing Order clearly stated that the broad area of concern and the included subareas were the issues accepted for hearing. LBP-94-12, 39 NRC at 222. In the February 2, 1994 Memorandum and Order authorizing the Intervenor to amend their hearing request, I cautioned that the order did not authorize them to add new areas of concern. I explained further that "an amended petition containing new areas of concern would have to satisfy the provisions of 10 C.F.R. § 2.1205(k)(1) and (2)." LBP-94-4, 39 NRC 47, 53 n.8 (1994).

The Intervenor does not even refer to the untimely filing of their new areas of concern, let alone try to establish that it is excusable. Nor can I discern on my own that the delay was excusable. None of the late-filed areas of concern appear to be founded upon information contained in the Hearing File. Virtually all of Intervenor's written presentation consists of historical data.

Were I to admit new areas of concern without an opportunity for the other parties to answer, they would be prejudiced in the litigation, perhaps even in its result. If I were to suspend the proceeding pending an amended presentation by

² Licensee has not answered the newly raised concerns, but the NRC Staff has addressed each of them. The Staff, however, did not concede that Intervenor may raise untimely areas of concern. *E.g.*, Staff Presentation at 20, 30-40.

³ The Commission has traditionally required intervenors in formal proceedings to justify late-filed contentions on the same bases as late-filed petitions to intervene, even though the intervention rules do not expressly state this requirement. *See, e.g., Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1045 (1983); 10 C.F.R. § 2.714.

Licensee, the unwarranted delay would also be injurious. In fact, the proceeding would be set back almost to the beginning.

In promulgating Subpart L, the Commission explained:

It would not be equitable to require an intervenor to file its written presentation setting forth all its concerns without access to the hearing file. Of course the intervenor is required to identify the *areas of concern it wishes to raise in the proceeding*, which will provide the presiding officer with the minimal information needed to ensure the intervenor *desires to litigate issues* germane to the licensing proceeding and therefore should be allowed to take the additional step of making a full written presentation under § 2.1233. [Emphasis supplied].

Statement of Considerations, Informal Hearing Procedures for Materials Licensing Adjudication, 54 Fed. Reg. 8269, 8273 (Feb. 28, 1989).

The foregoing is significant because it explains that the areas of concern advanced in the initial request are intended to scope the issues to be heard after the hearing is ordered and the Hearing File is made available.

Accordingly, with respect to those concerns stated in the Intervenors' presentation and which are not within the areas of concern admitted for hearing, I rule that the concerns have not been placed into controversy. In accordance with the provisions of 10 C.F.R. § 2.1251(d), I may not examine or decide them. However, I have read each section to determine whether it is arguably within the areas of concern accepted for hearing. Every section and aspect of Intervenors' presentation is identified and discussed in this decision.

Further, pursuant to the provisions of 10 C.F.R. § 2.1205(k)(2), I am required to treat untimely requests for hearing as petitions under 10 C.F.R. § 2.206, and to refer them to the Executive Director for Operations for appropriate disposition. In the Order below, I do so.

2. Licensee's Presentation

In its August 31, 1994 presentation, Licensee addressed each of the five areas of concern admitted for hearing and has attempted to identify portions of Intervenors' presentation relevant to each of the five issues. As directed, Licensee filed its presentation partly in the form of factual findings and legal conclusions proposed for me to adopt.⁴ Licensee's presentation was supported by affidavits.

3. NRC Staff's Presentation

The NRC Staff filed its presentation on September 22, 1994, also in the form of proposed findings and conclusions. The Staff states that it did not note any

⁴ I have frequently adopted findings proposed by the Licensee and the NRC Staff when supported by the record, especially when the proposals are uncontroverted. This is customary in administrative proceedings.

disagreement with the information submitted by the Licensee in the proceeding. Staff presentation at 7. The Staff's presentation is also supported by affidavits.

II. FINDINGS OF FACT

A. Affidavits

The affidavits placed on the record by the Licensee and the Staff contribute to the resolution of the matters placed into controversy by the Intervenors. Very often these affidavits are necessary to an understanding of what Intervenors mean by their stated concerns. It is helpful at the outset to examine the affiants' interest in the proceeding, their expertise and experience, and their opportunity to know about the subject matter of their respective affidavits. In addition, the resumes of Licensee's affiants provide information about the quality of B&W's management competence.

1. Licensee's Affidavits

Licensee's five affidavits were provided by the following four individuals:

Dr. Richard V. Carlson is General Manager, Nuclear Decommissioning Projects, Government Group of B&W. Dr. Carlson has had overall responsibility for all activities and operations at B&W's Apollo and Parks Township facilities since 1990. In addition, from 1974 to 1982, he served in several positions at B&W's Nuclear Fuel Operations, including service as General Manager, with executive responsibility for four nuclear fuel manufacturing plants at these two facilities. Dr. Carlson has over 20 years' experience in nuclear projects and facilities with emphasis on environmental restoration, facility operations, and waste management. He possesses a Doctorate in Nuclear Chemistry. Dr. Carlson's affidavit (Carlson Aff.) concerns B&W's Parks Township facility management.

Mr. Bernard L. Haertjens is Manager, Safety & Environmental Compliance Engineering, B&W Nuclear Environmental Services, Pennsylvania Nuclear Services Operation. Mr. Haertjens has been responsible for the development and implementation of a comprehensive health physics program, and for oversight of radiation and industrial safety and industrial hygiene operations at B&W's Apollo and Parks Township facilities since 1990. His resume reveals a very broad background of more than 30 years in the health physics aspects of the nuclear industry. He is a professional health physicist and holds a Masters degree in Radiation Biology. Mr. Haertjens provided two affidavits. One relates to housekeeping practices (Haertjens House-

keeping Aff.). The other relates to radioactive effluent releases (Haertjens Effluent Aff.).

Mr. Daniel M. Perotti is Traffic Supervisor, B&W Nuclear Environmental Services, Pennsylvania Nuclear Service Operations. Since 1979, Mr. Perotti has been responsible for directing traffic operations associated with the movement of materials and supplies for B&W's Apollo and Parks Township facilities, and for developing and implementing systems of transportation to conform with the requirements of NRC, Department of Transportation (DOT), and other regulatory agencies. He has received special training in the packaging and shipping of hazardous materials, including accident response operations. Mr. Perotti's Affidavit (Perotti Aff.) relates to the transportation of radioactive materials, particularly transportation between Apollo and Parks Township, the third subarea of concern identified in the Hearing Order.

Mr. Jack A. Caldwell is a civil engineer and Project Manager with Jacobs Engineering Group, Inc. Mr. Caldwell is the Jacobs project manager on the Parks Township Shallow Land Disposal Facility (SLDF) remediation project, and as such, has visited the SLDF site on many occasions, read available information about the SLDF site, and formulated and evaluated alternatives to remediate the trenches at the SLDF site. The SLDF is the "burial site" often referred to in the filings. Mr. Caldwell has over 25 years of experience in project management and engineering for the design, construction, and environmental restoration of hazardous, toxic, and radioactive sites and facilities. He holds a Masters degree in Civil Engineering concentrating on geotechnical and groundwater engineering. His affidavit (Caldwell Aff.) relates to the fourth subarea of concern accepted in the Hearing Order, i.e., mine subsidence.

Each of Licensee's affiants is well qualified to provide the evidence submitted in his affidavit.

2. NRC Staff's Affidavits

The Staff submitted four affidavits by the following four individuals:

Mr. James E. Hammelman is Senior Project Manager employed by Science Applications International Corporation (SAIC), a contractor to the NRC's Office of Nuclear Material Safety and Safeguards (NMSS). Mr. Hammelman has a Masters degree in Chemical Engineering and has worked in the nuclear industry since 1970. He worked at the Atomic Energy Commission's (now Department of Energy's) Hanford site from 1970 until 1976 as a process engineer and a nuclear safety engineer. He has worked for SAIC since 1976 as a project manager, a nuclear chemical process engineer, a nuclear safety analyst, and an environmental analyst. Mr. Hammelman's

affidavit (Hammelman Aff.) covers the broad area of concern and the subareas relating to management, transportation, and housekeeping.

Ms. Heather M. Astwood is employed by the NRC as a geochemist in the Low-Level Waste and Regulatory Issues Section of the Low-Level Waste and Decommissioning Projects Branch, Division of Waste Management, NMSS. Ms. Astwood has a Bachelors degree in Geology and a Masters degree in Radiogeochemistry. She came to the NRC in 1991 and completed a formal intern program in 1993. Ms. Astwood's affidavit (Astwood Aff.) concentrates on the Shallow Land Disposal Facility (SLDF) at Parks Township as it pertains to the broad area of concern, several admitted subareas of concern, and some of the newer concerns submitted with the Intervenor's presentation.

Mr. Michael A. Lamastra is a Senior Project Manager (Health Physics) in the Licensing Branch, Division of Fuel Cycle Safety and Safeguards, NMSS, and has served in this position since February 1993. Mr. Lamastra has a degree in Radiation Science, a Bachelors degree in Physics, and a Masters degree in Radiological Health. Mr. Lamastra joined the NRC in 1976 as a health physicist in the Radioisotopes Licensing Branch, NMSS, and has broad experience in various offices of the NRC in his field. Mr. Lamastra's affidavit (Lamastra Aff.) especially covers the Intervenor's presentation and he relates the presentation to the admitted areas of concern where applicable.

Mr. Jerome Roth is currently employed by the Office of Nuclear Material Safety and Safeguards. He was previously employed in the NRC's Region I office beginning in June 1975, and performed inspections of the Parks Township facility beginning in 1976 or 1977. Mr. Roth became the Project Inspector for the Parks Township and Apollo facilities in January 1979 and retained that position until October 1993, when he left Region I and assumed his current position. Mr. Roth's affidavit (Roth Aff.) covers allegations that he had a conflict of interest when inspecting the Parks Township facility because he had previously been employed by former operators of the facility.

I find that each of the Staff's affiants is well qualified to provide the evidence contained in the respective affidavits.

B. Background Facts

The primary activities conducted at the Parks Township facility are the decontamination, repair, maintenance, and testing of equipment and components contaminated with radioactive materials, the volume reduction of low-level radioactive waste, the decontamination of onsite facilities formerly used for

plutonium and uranium processing, and the maintenance and monitoring of the inactive burial area known as the Shallow Land Disposal Facility.

B&W performs a necessary service for the nuclear industry by receiving and processing equipment and components contaminated with byproduct material from nuclear power plants. Services include the decontamination of equipment and components by cleaning and refurbishment, which allows the reuse of still serviceable nuclear power plant equipment and materials. Decontamination and volume reduction facilitate the disposal of equipment and materials that are no longer useful. License Renewal Application at 1-1 to 1-2, 3-6.

Licensee has conducted extensive monitoring and characterization activities at the SLDF site in order to develop a remediation plan for such site. Site Characterization Report (SLDF SCR) (Oct. 1993) (submitted in the NRC Hearing File) and Haertjens Effluent Aff., generally. Such activities have developed information that is relevant to several issues in this proceeding.

C. Matters in Controversy

1. Broad Area of Concern Related to Effluent Releases

Repeating the broad area of concern approved for hearing in this proceeding:

Whether there has been, and under a license renewal whether there will be, offsite radiation from the Parks Township facility which threatens the health and safety of the nearby population and threatens radiological contamination of nearby residential, agricultural, and business property.

a. Previous Radioactive Effluent Releases from the Parks Township Facility

The Licensee urges a legal/evidentiary ruling that the only radioactive effluent releases that can be relevant to a determination on the renewal request are those that occurred after B&W acquired the stock of the company that owned the facility on November 1, 1971. Licensee also argues that the period that would be most relevant to whether the license should be renewed would be the period of recent activities, since that would be the most predictive of future activities under the license. Presentation at 13; Haertjens Effluent Aff. ¶7. As a general rule, I agree with the Licensee, particularly where the releases are seen as an unfavorable reflection upon Parks Township management. However, any exacerbation or continuation of conditions caused by previous operators might also be relevant to a renewal of the license.⁵

⁵ In a "Request for Motion for More Definite Statement," dated September 22, 1993, Intervenor protest any limitation on the relevant period for consideration. As I explain in the order ruling on that motion, issued today, (Continued)

Mr. Haertjens states that B&W submitted detailed information on effluent releases from the Parks Township facility for the past 18 years (1976-93). Haertjens Effluent Aff. ¶8 and Attach. 1-3. Effluent releases originated from Buildings A, B, and C. *Id.* ¶10 and Attach. 4. Building A was a source of limited air and liquid effluent releases from 1976 to 1993. It is a former plutonium fuel processing facility and is currently a nuclear decontamination and refurbishment center. *Id.* ¶11. Building B is a former uranium metals processing facility. It has been a source of low-level liquid effluent emissions originating in residual material in piping and tanks. *Id.* ¶12. Building C is a former high-enriched uranium (HEU) fuel manufacturing facility. Operations in Building C ceased in 1978 and significant decontamination has been performed since that time. *Id.* ¶13.

Liquid and airborne effluent release data from 1976 to 1993, compiled by B&W on an annual basis pursuant to former 10 C.F.R. § 20.106(a), indicate that levels of radioactivity at onsite facility measuring points were consistently below even the most conservatively applied maximum permissible concentrations (MPC) permitted under NRC regulations. *Id.* ¶10. No reportable releases in excess of NRC regulatory limits occurred in the period 1976 through 1993. *Id.*

Although detailed tables were not prepared by B&W for effluent discharges prior to 1976, the record regarding effluent releases during that period is available. Studies conducted by both Licensee and NRC Staff indicate very small doses to the public from effluent releases prior to 1976, amounting to less than 3 millirem per year (mrem/yr) to any organ from airborne effluents, and less than 0.01 mrem/yr to any organ from liquid effluents. *Id.* ¶9. This was equivalent to less than 1% of the total allowable airborne and liquid effluent exposure to individuals over the period of one year as set forth in former 10 C.F.R. § 20.105(a). *Id.*

I find that the relevant history of operation at Parks Township supports in part the conclusion below that the Licensee is fully qualified to maintain radioactive effluent releases within regulatory limits so that the public health and safety and the environment are not threatened.

However, in the Order below I request the NRC Staff to give special attention to Intervenor's newly filed allegation in Section X of their presentation pertaining to the "NUMEC 1966" report on dairy herd contamination in Parks Township.

I have not set any hard and fast time limit on relevance. Each concern and matter discussed in this Decision is assessed in its own time context.

b. Future Radioactive Effluent Releases from the Parks Township Facility

Mr. Haertjens explains that the major active site operations are performed in Building A,⁶ and discharged liquid effluents are now released to the sewer system of the Kiski Valley Water Pollution Control Authority (KVVWPCA). Haertjens Effluent Aff. ¶19. Airborne and liquid effluent emission levels may vary due to the cyclical nature of the nuclear service center work and the effects of remediation projects. However, recent upgrades of the liquid effluent system (including a tank replacement and significant improvements in the recirculation system and filtration system), use of the ventilation controls developed during the active use of the building as a fuel processing facility, the application of job-specific ALARA⁷ controls, and strict adherence to quality control practices and procedures as required by B&W's Quality Assurance Program are expected to maintain airborne and liquid effluent emissions at less than historical activity levels and well below the applicable 10 C.F.R. Part 20, Appendix B, Table 2, col. 1 (airborne effluents) and Table 3 (release of liquid effluents to sewers) release limits that became effective as of January 1, 1994. *Id.*

Building B currently houses administrative offices and a sample preparation and analysis laboratory. Effluent emissions originate from low-level residual activity in the drain lines and laboratory. Alpha and beta air emissions combined are expected to be substantially less than 10% of the applicable 10 C.F.R. Part 20, Appendix B, Table 2 release limits. Building B liquid effluents are combined with those of Building A prior to analysis and subsequent release to the KVVWPCA. *Id.* ¶20.

Building C is not presently in use. Should B&W resume activities that would cause effluents to be generated for release, Mr. Haertjens, on behalf of B&W, assures the parties and the public that the activity levels will be comparable to or less than those seen during the period of active use of the building. Airborne effluent levels (alpha plus beta) are each expected to be less than 1% of the applicable 10 C.F.R. Part 20, Appendix B, Table 2 release limits, and no liquid effluents are anticipated. *Id.* ¶21.

Licensee's control of effluents and effluent monitoring practices has been reviewed by the NRC in its 1993 Environmental Assessment (EA). This document was submitted in the Hearing File and has not been mentioned or controverted by Intervenor. On the basis of the 1993 EA, the NRC issued a Finding of No Significant Impact (FONSI), which states that the "NRC has concluded that the environmental impacts that would be created by the proposed licensing action would not be significant and do not warrant the preparation of an Environmental

⁶ The site activities are described in detail in Chapter 16 of the License Renewal Application.

⁷ ALARA is a frequently used acronym for "as low as reasonably achievable." This concept requires licensees to maintain exposures to radiation as far below regulatory limits as is practical. 10 C.F.R. §20.1003.

Impact Statement.” 58 Fed. Reg. 58,711-12 (Nov. 3, 1993).⁸ In the FONSI, the NRC also states that “[t]he total effective dose equivalent (TEDE) for each year of operation to the hypothesized maximally exposed individual (a person living 220 meters SSW in a prevailing wind direction, eating vegetables from his/her own garden, fishing from the shoreline of the Kiskiminetas River, drinking water from the river near the outfall of the Kiski Valley waste treatment plant, and eating the fish from the river) is calculated to be on the order of 2.5 E-3 mSv (0.25 mrem).” Haertjens Effluent Aff. ¶22.⁹

In its FONSI, the NRC Staff “concludes that the environmental impacts associated with the proposed license renewal for continued operation of the B&W facility are expected to be insignificant.” *Id.*

I conclude, relying principally upon Mr. Haertjens’ affidavit, and the Environmental Assessment that the maintenance of exposure rates to members of the general public from effluent releases at such a low level is evidence of excellent effluent control. Licensee has established that radioactive effluent releases from the Parks Township facility under the license renewal will not pose a radiological threat to the health and safety of the nearby population or to nearby residential, agricultural, and business property within the scope of the broad area of concern admitted as an issue in this hearing.

The Shallow Land Disposal Facility (SLDF) at the Parks Township site is an area where low-level radioactive waste from the Apollo facility was disposed of from 1961 to 1970 in accordance with the requirements of former 10 C.F.R. § 20.304. Haertjens Effluent Aff. ¶ 23.¹⁰

A recent full-scale radiological assessment of the SLDF is documented in the Parks SLDF Site Characterization Report (SCR). During the period 1990 through 1993 a four-phase Ground Water Assessment/Site Characterization was performed as part of the SLDF SCR. It included a comprehensive groundwater and surface water monitoring program, which is continuing. As a result of this comprehensive evaluation of the SLDF, the SLDF SCR concludes that: “The data collected during the site characterization program demonstrated that the site does not pose a near-term threat to human health and safety, nor is it presently impacting the offsite environment.” SLDF SCR at ES-4. In responding to an inquiry from the Pennsylvania Department of Environmental Resources (PADER), the NRC similarly concluded that “there is no indication from the extensive groundwater monitoring data from the SLDF that waste buried there

⁸ The issue of whether an Environmental Impact Statement should be prepared is decided later in this section.

⁹ The National Council on Radiation Protection and Measurements, in NCRP Report No. 93 entitled “Ionizing Radiation Exposure of the Population of the United States,” states (at page 58) that “exposures below 10 microSieverts per year (1 mrem per year) correspond to a negligible risk level (NCRP, 1987b) and should not be considered further.” Haertjens Effluent Aff. ¶21.

¹⁰ The SLDF is described in Section II.C.5 below, which addresses the issue of potential mine subsidence at the SLDF site.

poses a present threat to public health and safety." Letter to Matviya (PADER) from McDaniel (NRC) dated April 28, 1994.

c. Environmental Impact Statement or Environmental Assessment?

Section N of the Intervenor's presentation, entitled "NRC document re: significant adverse effect on environment," provides a copy of an NRC letter to B&W, dated July 13, 1977, discussing the need for an Environmental Impact Statement (EIS) for Apollo. Based upon this letter and a news report of March 27, 1994, relating to puzzling cancer rates in Armstrong County, Pennsylvania, Intervenor apparently request that an Environmental Impact Statement be required for the renewal of the Parks Township license. The issue of whether an EIS is required for the Parks Township site license renewal was not mentioned in the requests for hearing nor specifically admitted as an issue in this proceeding. However, it arguably pertains to the broad area of concern about offsite contamination discussed in this section.

As noted above, the Staff prepared an Environmental Assessment dated September 1993, and a Finding of No Significant Impact. It was the Staff's conclusion, based on the EA, that an EIS was not required. Lamastra Aff. ¶27. This conclusion is consistent with 10 C.F.R. § 51.21, which provides that all licensing and regulatory actions subject to 10 C.F.R. Part 51, Subpart A, require an Environmental Assessment, except for fourteen licensing actions identified in 10 C.F.R. § 51.20(b). The latter require an Environmental Impact Statement. Thirteen of the fourteen categorically do not apply to the licensing action here. However, under section 51.20(b)(14), the preparation of an EIS is required if the Commission determines that renewal of the license is a major Commission activity significantly affecting the quality of the human environment. The EA states that "[t]he environmental impacts associated with the proposed licensed activities would be similar to those during recent years and would not be significant." EA at 9-1. The Intervenor has ignored the Staff's EA which was provided in the Hearing File. Therefore, the Staff's conclusions in the EA remain uncontroverted in this hearing and no EIS is required for the renewal licensing action. This conclusion is also supported by the record as a whole.

2. Housekeeping Practices at the Parks Township Facility

The first subarea of concern:

Whether the housekeeping practices (drums, containers, etc.) at the Parks Township facility threaten the offsite release of radiation through water, dust, and air pathways.

This subissue relates to outside storage practices at the Parks Township facility. The issue derives from the videotape recording presented by the Intervenor in support of their hearing request. Hearing Order, 39 NRC at 220. In addition, Intervenor submitted another videotape taken in April 1994 and some photographs with their presentation.

The April 1994 videotape states Intervenor's basic concern about the issue. The tape is predicated upon the unstated assumption that the area depicted, a part of the Shallow Land Disposal Facility, is heavily contaminated with radioactive materials. The anonymous narrator implies that the contamination is blown offsite by wind blowing across open drums and by vehicles leaving the site onto the public roadway without first being washed off. The narrator also suggests that B&W workers are being exposed to radiation without protective cover.¹¹ Intervenor does not explain what is happening in the videotape, or for that matter, what area is shown. I depended upon B&W and the Staff for explanations.

B&W's Mr. Haertjens explains that radioactive materials licensed under the Parks Township license are not used in activities at the SLDF. Haertjens Housekeeping Aff. ¶11. Drums located at the SLDF are used only for drill cuttings (materials brought to the surface during drilling) resulting from the development of wells and for well-development water, and are held as a precautionary measure while such materials are tested for their radiological contents. If the tests show that any materials are not suitable for release for unrestricted use, the drums are properly marked, maintained in-process, secured in a roped-off and marked outside area or in the present onsite shed inside the SLDF fence, and then transferred offsite to a licensed disposal facility for ultimate disposition. Only a few drums have contained such radioactive materials and they have been shipped offsite for appropriate disposal. *Id.*

In addition, B&W stores only licensed radioactive materials in containers that meet Department of Transportation requirements for classification under 49 C.F.R. § 173.425(b)(1) as "strong, tight" for shipping purposes, and which are all made totally of welded steel construction. Haertjens Housekeeping Aff. ¶9. Therefore, the radioactive materials in the DOT containers, which are stored within fenced-in areas, are essentially inaccessible to the environment and cannot contribute to the liquid and airborne effluents at the site. The threat of offsite radiation from the outside storage of licensed radioactive materials is further mitigated by B&W's standard work practice to survey, at a minimum, all containers of licensed radioactive materials stored outside on a weekly basis to ensure that they continue to meet all guidelines for fixed and removable

¹¹ As it turns out there is no need for protective cover against radiation in the area depicted. Even so, I was puzzled by the statements made by the narrator in the April 1994 videotape. The narrator repeatedly stated that the workers shown there wore no protective clothing whatever. This is simply not true. They wore heavy-duty impermeable gloves, boots, and coveralls. Moreover, the videotape does not support the allegation of sloppy housekeeping. The premises depicted looked neat and consistent with normal industrial activity.

contamination levels. *Id.* Since 1971, it has been site practice not to store radioactive materials outside in 55-gallon drums if the radioactive concentration levels are greater than those set by the NRC for the disposal or storage of soils suitable for unrestricted use. *Id.* ¶ 10.

Mr. Haertjens specifically addresses the videotape and explains that none of the pictured drums was used by Licensee for the storage of radioactive materials. All of the drums were either empty or contained drill cuttings from the development of wells and well-development water, which had been analyzed and found not to contain radiological levels greater than those set by the NRC for unrestricted use of soils or for effluents to unrestricted areas. *Id.* ¶ 13. Since licensed radioactive materials are not used at the SLDF site, and the site is maintained free of contamination that would require the site to be controlled as a controlled contamination area under B&W procedures, the use of protective equipment or the radiological monitoring of personnel and vehicles is not necessary. *Id.* ¶ 14.

The NRC Staff assigned Ms. Heather Astwood to address the housekeeping matter. Her affidavit supports Mr. Haertjens' statements. Ms. Astwood reviewed the videotape and identified the area in question from the Licensee's Site Characterization Report. Astwood Aff. ¶ 18 and Attachs. A-4 and A-5.

Ms. Astwood explained that the surface soils of the SLDF do not contain elevated quantities of radioactive materials. The area of the SLDF shown on the video is not a contaminated area. The materials in the barrels (soil and water) do not contain elevated levels of radioactive materials. She pointed out that no evidence of offsite contamination was presented in the video. Astwood Aff. ¶ 20.

Mr. Haertjens also explained the Intervenor's photographs. They show scenes of the decommissioning of Licensee's Apollo facility, including pictures of the site itself and of railroad cars utilized in transporting low-level radioactive waste away from the site for disposal at a licensed site in Utah. He observes no evidence that these photographs depict any improper radiological health and safety practices. *Id.* ¶ 16. I agree. With the exception of an apparently fresh spill of an unidentified substance, the photographs do not tend to establish poor housekeeping practices. Some of the photographs show activities at the SLDF site of the same type as are shown in the videotapes discussed above. *Id.* ¶ 17.

Intervenors have not identified any deficiency or omission in Licensee's license renewal application relating to the offsite release of radionuclides from the outside storage of radioactive materials. Their area of concern about the housekeeping depicted in the videotapes was based upon a completely mistaken understanding of the activities depicted. This subissue is resolved in Licensee's favor.

The NRC Staff also presented detailed information about the effectiveness of Licensee's contamination control program through Mr. Hammelman's affi-

davit. However, since the Intervenor has been completely mistaken about the housekeeping issue, and because their stated concern is without any foundation, their allegation about outside storage cannot serve as an example to bring into controversy Licensees' overall contamination control program and housekeeping. Therefore, I do not examine the broader housekeeping issue addressed by Mr. Hammelman.¹²

3. *Subarea of Concern Related to Management Practices*

The second subissue approved in the Hearing Order is:

Whether B&W management practices as manifested by the management of the Apollo facility threaten offsite releases of radiation from the Parks Township facility.

This issue was inferred from material presented with the requests for hearing.

There are three categories of evidence on this issue: (1) Licensee's self-appraisal of its management record; (2) the Staff's appraisal of Licensee's management; and (3) the historical data submitted by the Intervenor.

a. *Licensee's Appraisal of Its Management Competence*

The Licensee presents the affidavit of Dr. Richard Carlson, General Manager of B&W's Nuclear Decommissioning Projects, Government Group and the B&W Nuclear Environmental Services. He points to B&W's record of performance in its most recent activities at the Apollo facility during the implementation of the decommissioning plan approved by the NRC in mid-1992.

Dr. Carlson characterizes it as one of the most extensive commercial nuclear decommissioning projects on record. It included deconstruction of large buildings, excavation and processing of approximately 1,800,000 cubic feet of soil and rubble, and packaging and shipment of almost 800,000 cubic feet of soil containing low concentrations of special nuclear material to a licensed burial site. This \$70 million dollar project is now essentially completed. Carlson Aff. ¶ 8.

According to Dr. Carlson, the high level of B&W's management competence is demonstrated by the most recent activities at Apollo. Throughout this project, emissions from the Apollo site complied fully with the applicable requirements of the NRC regulations in 10 C.F.R. Part 20. Carlson Aff. ¶ 9. In addition, B&W also compiled an industrial safety record during this project

¹² It is worth noting, however, that Mr. Hammelman reported some examples (contained in the Hearing File and ignored by Intervenor) of poor housekeeping at Parks Township in 1989 and 1991. However, "these shortcomings were not associated with a loss of contamination control." Hammelman Aff. ¶¶ 26-29.

without any lost-time injury. Moreover, although 512 workers were badged to work on the decommissioning project and accumulated 275 person-years of effort, radiological exposure of personnel did not exceed a small percentage of allowable limits. *Id.* ¶ 10.

In addition, according to Dr. Carlson, B&W's record of compliance with other NRC requirements at Apollo has been excellent since the decommissioning plan was approved in mid-1992. Although the Apollo decommissioning project has been the subject of frequent NRC inspections, the NRC issued only three notices of violation, none of which was higher than Severity Level IV. *Id.* ¶ 11.

Dr. Carlson believes that B&W's management record regarding effluent releases at the Apollo facility was excellent prior to implementation of decommissioning in mid-1992 and demonstrates that B&W is a capable licensee whose activities are fully protective of the environment. *Id.* ¶ 12. B&W's overall record of compliance with other NRC requirements at the Apollo facility is also favorable and has improved steadily since 1971. The NRC concluded in 1978 that B&W had made improvements at the Apollo facility and that none of the infractions or deficiencies in the previous several years reflected a basic weakness in the program or resulted in measurable adverse effects to the health of employees or to the health and safety of the public. The performance trend has continued to be favorable. There were only five items of noncompliance from 1982 to mid-1992. Since 1974 there has been no health and safety or environmental noncompliance item at a severity level higher than an infraction or Severity Level IV. *Id.* ¶ 13.

As in the case of the Apollo facility, B&W's overall record of compliance with other NRC requirements at the Parks Township facility has been excellent for at least the past 15 years. *Id.* ¶ 17. In 1979, the NRC Staff concluded that the two main problem areas in the earlier years of B&W's operations had largely been resolved.

In a Safety Evaluation Report issued in 1986 in connection with a proposed amendment to authorize a waste compactor and incinerator, the NRC Staff discussed B&W's satisfactory compliance history at the Parks Township facility since 1979, including the fact that most violations had been for minor procedural inadequacies and that all were corrected within reasonable time periods.

In the respective contested hearing, the Presiding Officer concluded that "the evidence shows . . . B&W has become a responsible licensee with a very good record of compliance during the past 10 years." *Babcock and Wilcox* (Parks Township, Pennsylvania, Volume Reduction Facility), LBP-86-40, 24 NRC 841, 867 (1986).¹³

¹³ Mr. John P. Bologna, Chairperson of the Coalition, one of the Intervenor in this proceeding was an intervenor in the 1986 proceeding. The Commonwealth of Pennsylvania also participated. Judge Paris's decision, based upon an oral hearing, is very reliable on this issue.

B&W's good record of compliance at Parks Township has continued since that Presiding Officer's decision. There have been minor violations. None exceeded Severity Level IV and none involved environmental issues or impacts on the general public. Carlson Aff. ¶17.

Thus, Licensee's compliance record supports the decision resolving the management issue in favor of license renewal.

Turning now to staffing, the Parks Township facility is staffed with qualified personnel, most with undergraduate degrees and many with advanced degrees. The majority of the staff has 20+ years' experience in the nuclear industry. The staff is actively involved in the day-to-day operations and provides an organization comprised of checks and balances to ensure that safety and compliance are of a paramount concern. *Id.* ¶19.

The Parks Township site has an active Safety Advisory Board comprised of qualified professionals whose responsibility is to stress ongoing attention to radiological, industrial and chemical safety matters, as well as to review overall safety programs and to advise management on areas that may require attention and improvement. *Id.* ¶21. Operations and maintenance activities that are conducted at the Parks Township facility comply with documented health safety instructions, industrial safety instructions, operating procedures, or engineering releases that carefully plan work that needs to be done. The Parks Township facility is committed to the ALARA principle. All activities are planned, engineered, and practically applied to ensure that any dose to employees, and any emissions to the environment, are ALARA. *Id.* ¶20.

Dr. Carlson's testimony on the Parks facility management is very thorough and convincing. Parks Township facility has a qualified and professional staff, and Dr. Carlson's testimony supports the conclusion below that B&W is a responsible and capable licensee and qualified to operate the Parks Township facility in compliance with all applicable regulations and requirements.

b. NRC Staff's Appraisal of Parks Township Management

The Staff addressed this issue in the affidavits of Messrs. Lamastra and Hammelman. Together they evaluated both past management practices and the organization and qualifications of the Licensee's management, which will have the responsibility for conducting the activities that are the subject of the license renewal application.

To evaluate whether the Licensee's management practices have contributed to significant radiological releases from the Parks Township facility, the practices relating to material confinement or contamination control were examined using information in inspection reports from 1988 to 1993. Hammelman Aff. ¶13.

These reports, contained in the Hearing File, were reviewed for indications of poor management, such as violations related to inadequate contamination con-

trol. The Staff selected this time period because it reflects current management practices responding to current regulatory requirements and plant operations similar to those proposed for license renewal. A combined inspection conducted in 1988 reviewed management organization and controls and found no violations. A combined inspection report from 1993 reviewed the Apollo site's contamination control program and found no inadequacies. This report also reported a failure to cover stored soil as a contaminated-dust control measure, which B&W had committed to implement in its application for Apollo decontamination and decommissioning. This was a Severity Level V violation, the lowest of NRC Severity Levels. Hammelman Aff. ¶14.

A third combined inspection in 1989 alleged a violation, but the notice of violation was later rescinded. *Id.* ¶15.

A fourth combined inspection report alleged a violation that was a Severity Level IV, when the inspector noted that the door between the hot area and the controlled contamination-free area was open. *Id.* ¶16.

A fifth NRC inspection report in 1991 discussed the inadvertent placement of two wells into contaminated areas of the SLDF. Neither of these activities was in violation of NRC requirements. *Id.* ¶17.

A sixth inspection report in 1991 also noted that the airflow direction in a Parks Township building was not always from areas of lower contamination to areas of higher contamination. This was noted as a safety concern, not a violation. This report also reviewed management controls, and concluded that corrective actions were not completed in a timely manner, although no violation was issued. For example, housekeeping deficiencies that were identified at the site during audits conducted in 1988 had still not been corrected at the time of this inspection (June 1991). *Id.* ¶18.

A seventh report in 1993 disapproved of a practice relating to the body frisker but was not cited as a violation. *Id.* ¶19.

The October 12, 1993 combined inspection report (70-135/93-02 and 70-364/93-03) is the most relevant to the issue of management competence. The report noted three minor violations (two Severity Levels IV and one Severity Level V). One of the violations indicated that the "manager of Pennsylvania operations" did not meet the Professional Qualifications Requirements contained in the current Parks Township License (which authorizes nuclear fuel manufacturing). The current license requires a Baccalaureate Degree in Engineering or a technical field and a minimum of 10 years' experience associated with nuclear fuel or associated material. The current manager of B&W has a B.S. degree and only 7 years' experience. *Id.* ¶20; Lamastra Aff. ¶22. The Staff stated that while this appears to be a violation of the license, it is considered minor, since the Licensee does not have the capability to manufacture nuclear fuel. *Id.* In any event, Staff considers the current manager of B&W to have sufficient training for the current operations at the facility. Lamastra Aff. ¶22.

In the Staff's concluding opinion, its review of the inspection records indicates seven instances where there have been deficiencies of the B&W management systems with respect to proper contamination control practices, only three of which resulted in cited violations, and these were relatively minor violations (Severity Level IV or V). They are less severe than Level III, which the NRC associates with a significant regulatory concern. Mr. Hammelman asserts that all of the instances appear to be associated with new or changing operations and continuing decontamination and decommissioning activities at both facilities. He concludes that there is no indication that these management failures resulted in or could have resulted in a significant release of contamination. It is the Staff's opinion that the Licensee's management appears to be capable of directing and controlling proposed activities at the Parks Township site. Hammelman Aff. ¶21. The Staff's expert opinion as to the significance of the violations is entitled to substantial weight.

As part of its review of the Licensee's renewal application, the Staff evaluated the qualifications and organization of the Licensee's management. Lamas-tra Aff. ¶23. The renewal request by the Licensee is limited to a services-type license. In its review of this request, the Staff reviewed the organizational responsibilities and authority of management to ensure: (1) that key positions with responsibilities important to safety were identified and their functions described, (2) that the Licensee's organization provides separate lines of authority for production and safety functions, and (3) the lines of responsibility leading to top management are clearly indicated. The Staff determined that the renewal application identified key positions important to safety and demonstrated that safety functions and production functions were separated. The Staff also determined that the lines of responsibility leading to top management were indicated. Accordingly, the Staff has found the Licensee's proposed organization to be acceptable. *Id.*

The Staff also reviewed the renewal application to ensure that it contained a description of the minimum qualifications and requirements (i.e., education, training, and experience) for all positions that are important to safety. Normally, for the type of license currently being requested by B&W, the Staff stated that it requires at least one individual with experience in radiation protection (3-5 years) using the types and quantities of licensed material being requested, and a second individual with management experience (3-5 years) in supervising the type of requested activities. The Staff stated that it has reviewed the Licensee's proposed minimum training criteria contained in Chapter 2 of the renewal application and found them acceptable. *Id.*

The evidence presented by the NRC Staff supports a finding that the Licensee's management has not engaged in practices that have resulted, or are likely to result, in offsite contamination if this license were to be renewed. I also find that the evidence adduced by the Staff supports the conclusion that

the Licensee's management is capable of conducting the activities that are the subject of the license renewal application.

c. Intervenor's Criticism of Management

As I noted at the outset, the Intervenor's submittals have been poorly organized and lacking in structure. They do not indicate which of the twenty-seven sections of their presentation relate to the management issue. Those that are arguably related to management have been examined in that context.

Section A is described by Intervenor as "Violations, MUFs,¹⁴ incidents and accidents historically." The related Enclosure A, a collection of documents about 1 1/4 inches thick, relates to various NRC inspections and enforcement actions during the period 1974-1976. Intervenor discusses the enclosure briefly without helpful annotations to it. Much of the discussion is argumentative. Apparently Intervenor intends the contents of Enclosure A to discredit Licensee's management, i.e., "negligence, and disregard of health, safety and the environment as well as security." Presentation at 2. However, they have left it to me to evaluate the significance of the enforcement history. Also, I am requested to seek more information. As an impartial judge in the hearing, I cannot construct Intervenor's case for them. I may not decide matters not placed into controversy by the parties.

I have, however, examined the contents of Enclosure A to determine whether there is a clear pattern of enforcement action relevant to B&W's present management. I find none. The pattern that emerges from Enclosure A is that, for every violation and infraction identified by the Staff, there was a corrective action. In other words, every problem was attended by a remedy. It is not feasible to inquire into the violations and the respective corrective actions 20 years after the fact. If one is to assume that the enforcement charges were well founded, one must also assume that the attendant corrective actions were effective.

Section E is entitled "Independent contractors reports & recommendations re: Apollo area." It addresses concerns contained in an enclosed report entitled "ECO¹⁵ Radiation Survey Report, Apollo, Pennsylvania Area, 1993" (ECO Report) and a report from the Center for Hazardous Material Research. Were it not for the Licensee's discussion of Enclosure E, and the Staff's comments, I would not be able to understand the significance and context of these reports. Intervenor has again placed material into the record with sparse comment, apparently with the hope that I will bring it all together in a coherent finding.

¹⁴ MUF is an initialism for "material unaccounted for."

¹⁵ ECO is identified in the report as "Environmental Compliance Organization."

Intervenors' Presentation at 5. I accept the two reports as bringing into question B&W's management capability to control offsite releases.

Licensee explains that the two contractors whose reports are included in Enclosure E were employed by the Pennsylvania Department of Environmental Resources (PADER) as part of oversight activities during the decommissioning of the Apollo facility. Licensee recognizes that Intervenors believe that this information reflects adversely on Licensee's decommissioning of the Apollo facility and thus reflects adversely on B&W's ability to operate the Parks Township facility safely. Licensee, of course, believes that these concerns are unfounded, as discussed below.

The Center for Hazardous Materials Research (CHMR) "conducted off-site radiological surveying and soil sampling of residential properties to determine if radiological constituents have been deposited on these properties." Apollo Oversight Project — Off-Site Radiological Surveying and Soil Sampling (CHMR Interim Report) at 1 (December 1993). Among other things, CHMR concluded that the results for Apollo area properties show radioactivity levels typical of those found in natural soils and rocks in this area, and that some elevated levels of uranium isotopes that are components of nuclear fuels found at several nearby properties are less than NRC release guidance and current EPA standards. Carlson Aff. ¶27, alluding to the CHMR Report at 5. No information presented in the CHMR Report evidences any inadequacy in B&W's performance of the Apollo Decommissioning Plan. *Id.*

ECO was a subcontractor of CHMR, and conducted a separate survey of radiation levels in the Apollo area. Although ECO did not identify any location that exceeded current NRC regulatory guidance, it alleged that under some hypothetical scenarios the levels ECO measured would exceed "EPA's goal" of a risk no more than 1 excess cancer per million. ECO Report at 22 (1993).

ECO's survey results are challenged in the technical criticisms of ECO's instrumentation, methodology, assumptions, and conclusions contained in the independent peer review performed by Dr. Thomas B. Borak of Colorado State University, at the request of Licensee. *See* Attachs. 1 and 2 of Carlson Aff. Dr. Borak's qualifications are excellent and relevant. *Id.*, Attach. 1.

Also relying in part upon Dr. Borak's evaluation, the Staff believes that the ECO report is of poor quality and should be given little weight. Dr. Borak concluded that the information supplied in the report did not support any of the concerns articulated in the conclusion of the report, the report had a profound misunderstanding of many concepts and definitions for radiation quantities and units, and the radiation surveys were conducted with inappropriate instrumentation which was not properly calibrated. The Staff also reviewed the ECO Report and agreed with Dr. Borak's conclusions, and found that the report could not be used to reach a valid conclusion about radiation levels near Apollo,

Pennsylvania. Lamastra Aff. ¶13. Thus, Dr. Borak's opinion is supported by the Staff's expert opinion.

The ECO report and the CHMR Report raise no credible concern about Licensee's management competence.

Intervenors also allege a conflict of interest on the part of CHMR because that organization appears on B&W's emergency response phone list. Since B&W does not rely upon CHMR to establish its management competence, the allegation of a conflict of interest, even if true, is irrelevant.

Section F of Intervenors' presentation entitled "Information re: sewage disposal and sewer line contamination," concerns disposal of radioactive waste by release into Kiski Valley Water Pollution Control Authority sanitary sewerage systems. This information is arguably a reflection upon B&W's management. It is also discussed above in Section II.C.1.b in relation to future releases from the facility.

Enclosure F contains newspaper articles and a single letter dated September 2, 1959, which documents the Licensee's (and predecessors') plan for an on-lot sewage disposal system.

The Licensee lawfully disposed of some licensed material by the sanitary sewerage system and it will continue to dispose of some material in the sewerage system. Prior to January 1994, 10 C.F.R. § 20.303, "Disposal by release into sanitary sewerage systems" authorized such release if certain specific conditions were met, including that the material was readily soluble or dispersible in water.

The Staff discovered that nonsoluble radioactive material in certain cases could become concentrated in sewage sludge. While this reconcentration of radioactive material represents a small radiation risk to workers and the public, the NRC revised its regulations to reduce the risk even further. In the revised 10 C.F.R. Part 20, which became effective January 1, 1994, the Commission revised sanitary sewage disposal regulation (10 C.F.R. § 20.2003) to eliminate nonsoluble biological material from this authorization and reduce the allowed concentration limits for radionuclides released to sanitary sewer systems. The elimination of nonsoluble biological material and lower limits is expected to reduce the concentration of radioactive material in sewage sludge. Lamastra Aff. ¶¶ 16, 17.

In Intervenors' "Request for Motion for More Definite Statement," September 22, 1994, they request that a news report of that date be added to Section F.¹⁶ The report alludes to 57 picocuries of uranium in one of two ash samples at the Kiski Valley Water Pollution Control Authority. Mr. Lamastra of the NRC Staff has evaluated the news report and concludes in an affidavit addressing the "Request" that the ash does not represent "anything other than a small risk to

¹⁶ Other aspects of this multiple-purpose pleading are decided in a separate order issued today.

the public." Mr. Lamastra's opinion is consistent with the information in the news report itself, i.e., there is no basis for concern.

Section G simply reveals the nature of some radioactive isotopes used at Parks Township, in support of Intervenor's complaint that testing should include the listed mentioned isotopes. Presentation at 6. Apparently Intervenor is unaware of Chapter Six of the Staff's Environmental Assessment, contained in the Hearing File, where the Parks environmental monitoring program is described. Having failed to examine and discuss the Environmental Assessment, Intervenor has failed to place this matter into controversy.

Section J consists of several hundred pages relating to alleged personnel exposures at the Parks Township or Apollo facilities. Licensee objects on the basis that the issue in this proceeding relates only to threats of offsite releases; thus information relating to personnel exposures is beyond the scope of the proceeding. Licensee's Presentation at 32-33.

I disagree. Just as Licensee pointed with pride to its injury-free decommissioning work at Apollo as a sign of good management, worker exposure could be an indicator of poor management. However, all but two of these documents are too old to be relevant to B&W management, because they relate to events that took place prior to 1971 when B&W took over. *Id.*; Carlson Aff. ¶30. The other two minor incidents almost 20 years ago do not reflect adversely upon B&W's current entitlement to a license. In addition, the NRC approves of the current personnel contamination control program, and believes that it is sufficient to prevent significant radiation contamination from leaving the site on workers. Lamastra Aff. ¶21.

Section K is a one-paragraph allegation of "a continual pattern of violations and bad practices" without analysis. Enclosure K consists primarily of several hundred pages of very old correspondence. According to Intervenor, the enclosure is "voluminous" but incomplete. I am urged to examine this enclosure to "see the magnitude of the problems these plants have unleashed." However, I may not extract a controversy on behalf of the Intervenor from their bulk papers.¹⁷ As is the case in Enclosure A of Intervenor's presentation, the inspection reports in Enclosure K couple violations with corrective actions, producing a neutral impact on the factual record of the management issue.

Section V contains about 100 pages of newspaper articles to support Intervenor's claim that there has been a "long-time controversy," but the controversy and parties to it are not identified in the narrative presentation. I have not analyzed the newspaper stories for the reasons stated in the preceding section and

¹⁷ A small part of Enclosure K is explained in the presentation (at 7) and it relates to the inspection report dated October 12, 1993, about the qualifications of PANSO manager J.J. Cepicka. This report was covered by Mr. Lamastra's affidavit (¶22) and is discussed earlier in this section.

elsewhere in this decision. Moreover, controversy in itself is not relevant to this proceeding.

However, I have identified a portion of Section V as arguably relevant to management because of Intervenor's allegation concerning NRC Inspector Jerome Roth.¹⁸

According to the allegation, as I infer its meaning: (1) In December 1991, Mr. Roth reported that no major problems were found at Apollo during a week-long inspection. (2) But Mr. Roth was a former employee of the facility "and has a vested pension with the company." (3) Therefore there is a conflict of interest. (4) Therefore, I am to infer that major problems were uncovered but not reported. Presentation at 12. This is a very weak syllogism.

Since Licensee has not offered the news article in support of its license renewal application, it is not probative on that issue. Also, since it is favorable to B&W, it is, at worst, neutral to the renewal application.

Moreover, Mr. Roth has never been employed by B&W. Although he was employed by predecessors NUMEC and ARCO, he "does not have and never had any vested pension" from them or B&W. Roth Aff. ¶¶4, 6.

The above allegation is unfounded. Also, I have not examined the irrelevant allegation that a Commonwealth of Pennsylvania employee also has a conflict of interest.

Section W in part accuses B&W of sending mixed waste illegally to the low-level waste site in Utah. The allegation is credibly denied by Dr. Carlson in his affidavit in ¶34. Moreover, even if the allegation is intended to relate to the environment, rather than to B&W's management ethics, Intervenor's in this proceeding have no standing to raise issues pertaining to the environment in Utah.

d. Conclusion on Management Issue

Notwithstanding the requirements in 10 C.F.R. § 2.1233(c), Intervenor's have neither identified nor described in detail any deficiency or omission in B&W's license renewal application relating to its management practices at either the Apollo or the Parks Township facility, or how such alleged deficiency or omission would threaten releases of radiation from the Parks Township facility. I have examined Intervenor's presentation and those enclosures, which arguably could relate to B&W's management competence, and have found no bases advanced by them to controvert the license renewal application or the strong evidentiary presentation by B&W.

¹⁸ Valley News Dispatch article of December 14, 1991.

The reliable evidence presented by B&W and the NRC Staff demonstrates that B&W has had an excellent record of performance at both its Apollo and Parks Township facilities for at least the past 15 years and there is every reason to expect that such performance will continue. B&W's effective programs, practices, and staffing demonstrate that B&W is a responsible and capable licensee and is qualified to operate the Parks Township facility in compliance with applicable NRC regulations and policies.

4. Subarea of Concern Related to Transportation

The third subissue accepted for hearing is:

Whether transportation of wastes between Parks and Apollo has radiologically contaminated offsite properties.

To address this issue, Licensee presented the affidavit of Daniel M. Perotti who is currently Traffic Supervisor of B&W Nuclear Environmental Services. I found that he is well qualified to speak on this matter at the beginning of this decision. His knowledge of transportation issues extends back to 1971.

Mr. Perotti explains that the transportation of any radioactive materials between the Parks Township and Apollo facilities is subject to the same regulatory requirements as is applicable to any other shipment of radioactive materials to or from these facilities. Since 1971, approximately 5,000 shipments of radioactive materials have taken place between these two sites. Perotti Aff. ¶7. Each of these shipments was subject to applicable requirements contained in NRC and DOT regulations, conditions in License No. SNM-414 (for shipments from the Parks Township facility) or License No. SNM-145 (for shipments from the Apollo facility), and B&W's shipping procedures at each site. *Id.* ¶8.

Pursuant to the foregoing requirements, Licensee would have to file a report with the NRC if, for example, a transportation accident occurred resulting in a radiation dose to a member of the public in excess of regulatory limits. In addition, Licensee would have to file a report with the DOT if, for example, a transportation accident occurred resulting in the potential discharge of any radioactive waste. Records are maintained of each radioactive material shipment to or from the Parks Township and Apollo facilities, including records of any event report filed with the NRC or DOT. *Id.* ¶9.

Mr. Perotti's review of records of radioactive material shipments between the Parks Township and Apollo facilities since 1971 and discussions with knowledgeable employees indicate that every one of these shipments was made without accident, incident, or loss of radioactive materials. *Id.* ¶10. No shipment involved any event that required a report to or notification of NRC or DOT, and

there is no evidence of any radiological contamination of offsite properties from such shipments. *Id.*

The Staff approached the issue empirically by assuming that if transportation of wastes between Parks Township and Apollo had radiologically contaminated offsite properties, such contamination would be present near the roadway between the Apollo and Parks Township sites. There was no soil sampling data along the roadway between the sites, except for the area of the roadway adjacent to the sites, but there are a few TLD (thermoluminescent dosimeter) monitoring locations near the road. None of these readings have been above what appears to be normal background variation. No evidence was found by the Staff to indicate contamination along the roadway between Parks Township and Apollo that could be the result of transportation of waste in the late 1960s and early 1970s. Accordingly, the Staff concluded that there is no evidence to indicate that transportation of waste between the Apollo and Parks Township sites has caused offsite contamination. Hammelman Aff. ¶ 22.

Also, there is no basis to be concerned about future shipments between those points because decommissioning at Apollo is nearly complete. Perotti Aff. ¶ 11.

Intervenors' *Section D*, entitled "Transportation of radiologically contaminated waste to offsite area" contains miscellaneous correspondence and a 1980 NRC inspection report concerning the placement of soil from the Apollo facility into a landfill in North Vandergrift, Pennsylvania. This is a matter beyond the scope of this hearing.

I conclude that Intervenors' concern relating to any radiological contamination of offsite properties resulting from transportation of radioactive materials between the Parks Township and Apollo facilities is unfounded.¹⁹ There is no evidence of any incident occurring in the course of radioactive material shipments between the Apollo and Parks Township facilities from 1971 to the present, or of any offsite contamination resulting from such shipments.

5. Subarea of Concern Related to Mine Subsidence

The final subissue accepted in the Hearing Order is:

Whether the location of the Parks Township facility waste dump over a mined-out area threatens, through subsidence, the integrity of the dump, and whether the mined-out area creates a threat of offsite release of radiation through a water-migration pathway.

Intervenors in their presentation in *Section Z* (at 14) state the issue as:

¹⁹ Initially the transportation issue derived from Intervenors' "Illustration" (February 25, 1994) in which they stated "waste was transported between the two facilities . . ." (*Id.* at 6), referring to Parks Township and Apollo. Nothing in their written presentation even alludes to that concern.

- 1) How extensive is the mined-out area?
- 2) Will subsidence occur?
- 3) Will subsidence create a threat of off-site release of radiation?

I accepted this issue for hearing primarily based upon mine maps and a report by Benjamin Ross, dated May 7, 1987, prepared for the United Mine Workers and entitled, "The Burial Grounds at the Parks Township Plant" This report was resubmitted with Intervenor's presentation. Intervenor also submitted a news story concerning subsidence in Leechburg in 1991 in support of their position on the issue.

All parties recognize, and it is well known locally, that extensive underground mining occurred in the area in the early part of this century. Mine maps submitted by Intervenor and in the SLDF Site Characterization Report illustrate this beyond question.

However, it turns out that mine subsidence has very little to do with this license renewal proceeding, particularly from Intervenor's perspective. The only activities at the SLDF authorized by the requested license renewal will be monitoring and maintenance of the site and, possibly, collection of additional site data relating to site characterization and the remediation of the SLDF. Caldwell Aff. ¶7. A remediation plan for the SLDF is being prepared and will be submitted to the NRC for its approval. Review and approval of the remediation plan, and any content thereof relating to mine subsidence at the SLDF, will be part of a separate NRC action and is not part of this license renewal proceeding.²⁰

The real issue in this proceeding is, given the potential for mine subsidence affecting the SLDF, what relief do the Intervenor seek? They don't say. *See* Intervenor's Presentation at 14-15 (Section Z). I must infer that they *do not* want B&W to stop monitoring and maintaining the facility, as is authorized under the license renewal.²¹ Remediation planning leading to decommissioning under NRC supervision is under way in an orderly and thorough manner. Denial of the renewal application as it pertains to the SLDF would not serve the interests of the Intervenor and the public residing near the SLDF.

Another question pertaining to this issue is: what factual aspect of the matter has been placed into controversy by Intervenor? Mr. Ross in his 14-page report (at 9) discusses hydrology and possible chemical and radiological contamination.

²⁰ The decommissioning of the SLDF is not an issue in this proceeding. LBP-94-12, 39 NRC at 220. At the time I accepted the mine subsidence issue for hearing, I did not understand that the SLDF is no longer an operating disposal site and that maintenance, monitoring, remediation, and decommissioning were the only remaining significant aspects of the SLDF management. *See also* note 21.

²¹ In the Memorandum and Order issued today, I discuss Intervenor's "Request for Motion for More Definite Information" as it relates to "splitting" the SLDF license from the balance of the Parks Township facility. Apparently, Intervenor does not understand the facts of this issue, my jurisdiction over the matter, and the scope of this proceeding.

With respect to mine subsidence, he states only that "the burial grounds have not been properly secured for the long term. At present the trenches are infiltrated with water, seem to be subsiding, and are subject to erosion."

While Licensee might not be willing to concede that the trenches seem to be subsiding, there is no dispute that potential subsidence is a matter that must be addressed in the final remediation of the SLDF. The Hearing File contained the SLDF Site Characterization Plan, the Site Characterization Report (SCR), and two volumes of appendices to the report. The potential for mine subsidence is discussed in these documents, as is the potential for radiological and chemical releases from the site. In particular, Appendix K to the SCR contains a straightforward discussion of the potential for subsidence and mitigation options. B&W's affiant, Mr. Caldwell, describes this information as noted below. These papers are the best, and probably the only reliable, source of information on the issue. Yet, Intervenor's do not even mention the SCR or related papers in their presentation.²²

At the least, the Intervenor's had the duty to state the relief they seek and to address the SCR. They have not fairly placed the mine subsidence matter into controversy. They have contributed nothing to the record; there is no purpose to be served in further examining the facts of the matter as a part of this Decision. I resolve the issue in favor of license renewal.

I recognize that there is concern in the community about the short-term risks attendant to the integrity of the SLDF. Therefore, as a convenience, I restate the following information provided by the Licensee in this hearing because it may be of interest.

B&W's Mr. Caldwell explains that, in the course of characterizing the SLDF site in order to select and develop a remediation plan, extensive information has been gathered and developed regarding the mine workings underlying the SLDF site and adjacent areas. Much of that information is contained in the SLDF SCR and its Appendix K, "Assessment of Potential for Coal Mine Subsidence and Subsidence Mitigation Options" (Assessment of Mine Subsidence) (August 1993).²³ As described in the SLDF SCR, low-level radiological wastes were disposed of in the SLDF site in a series of trenches from 1961 to 1970, in

²² Intervenor's Sections C and Mc also relate to burials in the waste dump trenches. Issues raised in Sections C and Mc were not included in the hearing requests or in the Hearing Order. Even if these issues had been timely raised by Intervenor's, they have not been fairly placed into controversy. The SLDF Site Characterization Report (SCR) deals squarely with the burial there. Intervenor's have not challenged the SCR, except to include a March 1994 NRC document in Enclosure Mc alluding to the Staff's continuing review of the SCR. Moreover, even if the concerns raised in Intervenor's Sections C and Mc were well pleaded and timely, the effect would be to support licensing the SLDF for maintenance, monitoring, and continued characterization.

²³ The Hearing File (including the SLDF SCR) and the presentations of all parties is available for inspection by the public at the NRC Local Public Document Room, Apollo Memorial Library, 219 N. Pennsylvania Avenue, Apollo, Pennsylvania. Appendix K, entitled "Assessment of Potential for Coal Mine Subsidence and Subsidence Mitigation Options," prepared in August 1993 by GAI Consultant of Monroeville, Pennsylvania, and discussed in Mr. Caldwell's affidavit, can be found in Document G of the Hearing File.

accordance with the requirements of former 10 C.F.R. § 20.304. Prior to these disposals, a coal seam (the Upper Freeport Coal Seam) was strip-mined and deep-mined at and adjacent to the SLDF site. Caldwell Aff. ¶ 10. The coal seams beneath and adjacent to the SLDF site were mined from the turn of the century until about the 1920s. People have built their homes and businesses over the mine workings, and there is no record that any have been affected by the workings. There is no evidence in the form of topographic depressions either at the SLDF site or in the adjacent community that any surface movement has occurred as a result of mine subsidence. *Id.* ¶ 13.

Mine subsidence has occurred for many years at Leechburg, which is located down the Kiskiminetas River from the SLDF site. *Id.* ¶ 14. However, there are differences between the two sites; and there is no technical basis to conclude that because subsidence has occurred at one site, it will occur in another. The correct way to evaluate the potential for mine subsidence is to undertake a site-specific evaluation of the potential for mine subsidence, which has been done for the SLDF site. *Id.*

The SLDF SCR describes in detail the geology, hydrogeology, and groundwater conditions at the site, and provides all the information necessary to evaluate the impact of potential subsidence on the groundwater at the SLDF site in the vicinity of the trenches. In addition, the SLDF SCR describes the conditions at the SLDF site that control and limit erosion of the site and the covers over the trenches. *Id.* ¶ 15.

The Assessment of Mine Subsidence (Appendix K) discusses the site conditions and concludes that conditions at the SLDF are not conducive to the development of sinkhole-type subsidence in either the short or long term. *Id.* ¶ 16.²⁴ However, SLDF site conditions may in the long term lead to the development of trough-type subsidence. *Id.* ¶ 17. Even if a trough were to develop at the SLDF site, the waste in the trenches would not be adversely affected for a number of reasons: the limited deformation of the surface and the soil surrounding the trenches; the relative flexibility of the waste and its ability to respond to limited deformation; the absence of sinkhole or other larger voids or passages in the rock beneath and the soil surrounding the trenches; and continued presence of the soil over the trench materials. *Id.* ¶ 19. In particular, migration of solid wastes from the trenches is neither possible nor feasible even if mine subsidence occurs, because no significant openings in the soil or rock immediately adjacent to or beneath the trenches would occur as a result of subsidence and trough development, i.e., there would not be any practical passageway by which solid materials could exit the trenches. *Id.*

²⁴ Site conditions that make sinkhole development improbable include the significant depth of the mine workings beneath the upper trenches (between 55 feet and 100 feet), the two thick sandstone sequences, and the small height of the mine workings (generally less than 3 feet, and up to 6 feet in the adits and old access tunnels). *Id.* ¶ 16.

III. MATTERS NOT DECIDED

Each of the matters identified below is a section of Intervenor's presentation not included in their initial hearing requests and are not within the scope of the issues accepted for hearing in the Hearing Order. As I ruled at the outset, each of these matters is late without excuse and therefore may not be examined or decided. In addition, some are beyond the scope of the proceeding, and have other defects. I discuss them briefly to explain my rulings and to identify those that are referred to the Executive Director for Operations in accordance with the provisions of 10 C.F.R. § 2.1205(k)(2).

Section B of the Intervenor's presentation is entitled "Preoperational monitoring surveys." Intervenor believes that a preoperational testing survey should have been required by the AEC/NRC prior to the issuance of the original license. Lamastra Aff. ¶ 10. Even if this were so, no relief can now be afforded and the matter is irrelevant to the renewal proceeding.

Section H, entitled "Historical documents re: Parks with a 20 year time flow," provided an unidentified Licensee document which appears to provide information on probable radionuclides that would be involved in an accident. I am unable to determine what the original purpose of the document was from the information provided in Enclosure H, nor can the NRC Staff. Staff Presentation at 28-29. I do not understand what Intervenor would have me make of this information and, therefore, I rule that it is irrelevant to this proceeding.

Section I is entitled "Historical documents re: burials." Intervenor states a concern that in 1969 NUMEC did not have a permit from the Commonwealth of Pennsylvania to bury low-level radioactive waste at the Parks Township site. The Staff stated that it is not aware of whether a permit was issued by the Commonwealth or even whether such a permit was required at the time the materials were buried. Astwood Aff. ¶ 13. In addition, assuming that a permit was required, and that none was issued, I cannot find any relevance in that circumstance to this license renewal proceeding.

Section M, entitled "NRC's Authority and Responsibility over non-radiological hazards," provides a snippet of a very large December 17, 1986 *Federal Register* notice (51 Fed. Reg. 45,124) concerning the Material Safety Regulation Review Study Group Report. Intervenor apparently argues that NRC should regulate chemical hazards. *Section O* raises the same issue with respect to the Apollo decommissioning, but in a series of rhetorical questions.

The issue of whether the NRC has the authority and/or should regulate chemical hazards at NRC-licensed sites is not relevant to the broad issue of offsite radioactive contamination from the Parks Township facility or the other subareas of concern that I admitted as issues in this proceeding. See Hearing Order, 39 NRC at 219.

Furthermore, I can find no NRC regulation expressly covering the regulation of purely chemical contamination or evidence that the recommendations of the Study Group were adopted. Nor does any Memorandum of Understanding between the NRC and the EPA cover the matter.

Section P alludes to chemicals listed as "CLASSIFIED" at Apollo in 1975, and Intervenor wants someone to tell them what the chemicals are and why they are classified. I don't know the answer. The point is clearly beyond the scope of the Parks Township license renewal proceeding.

Section Q is entitled "Experimental Out-of-plant program; Environmental Monitoring." *Section R* is a part of Section Q. In Enclosure Q, the Intervenor supplied documents dated in 1966, 1968, and 1969 concerning the Apollo NUMEC plant exhaust emission of radioactive materials. Intervenor points to the wind rose and allude to cancer cluster areas. Apparently Intervenor believes that the population was exposed to very high levels of radiation in an Apollo experiment.

The Staff's Mr. Lamastra explains the historic and regulatory significance of the concern. This was not an experiment in the classical sense, but a gathering of data in support of an amendment request made in accordance with 10 C.F.R. § 20.106, "Radioactivity in effluents to unrestricted area." Lamastra Aff. ¶¶ 20, 21.

In any event, since the amendment related to the Apollo license and not to the Parks license, this concern is not related to the issues admitted in this proceeding.

Section S is entitled "Former Top Secret FBI document." In Enclosure S, the Intervenor provided an FBI document dated October 23, 1979. The FBI interviewed Mr. Earle Hightower, a former Assistant Director, Policy and Plans, Office of Safeguards and Security, Atomic Energy Commission (AEC). The document suggests that the purpose of the investigation was about diversion. Mr. Hightower is reported to have stated that the material accountability at NUMEC during the early 1960s was sloppy, and that the "[t]rees and bushes (surrounding NUMEC) were covered by a white residue," which information he heard from those he supervised.

Staff stated in its response to this section, as well as to Section A of the Intervenor's presentation, that the Staff does not dispute that violations of AEC/NRC regulations occurred with regard to material accountability, and corrective actions by NUMEC were required. Lamastra Aff. ¶ 34.

It is not clear how Intervenor would have me apply this information to this hearing. Its ethereal implications about NUMEC's management of Apollo in "the early 1960s" is too far removed to relate to B&W's management of Parks Township today. Whatever the white residue referred to by Mr. Hightower was, the effects of it have not been reported in this hearing with respect to Parks

Township, although there has been a great volume of monitoring and reporting of radiological effluents. See Section II.C.1.a, above.

Section T is entitled, "Document re: serious health, safety, and operational problems dated March 29, 1968 (Company confidential) & Document dated May 12, 1967, re: personnel turnover." In the related enclosure, the Intervenor provided an internal memorandum dated March 28, 1968, from R. Caldwell, apparently of NUMEC, to F. Cain, and a Commonwealth of Pennsylvania internal memorandum dated May 12, 1967, from Joel Lubenau to Thomas M. Gerusky, a Pennsylvania Radiological Health official.

Mr. Caldwell was requesting plant modifications to reduce worker radiation exposures and to reduce the concentration of radioactive material in laundry wastewater discharge. The issue of worker dose does not pertain to the broad concern of offsite contamination or to any of the subareas of concern in this proceeding with the possible exception of the management issue. Even there the connection is too remote in time. In any event the documents show affirmative action by the operator of Apollo to correct the problem.

One document alludes to the apparent high turnover of operating personnel (as high as 100%) and plant worker health and safety. The Intervenor does not explain how these concerns pertain to the current situation at the Parks Township facility.

Section U is entitled "Documents dated 1992-1993 re: B&W's misuse of EPA identifier numbers." The allegation begins with the "misuse of EPA Identifier numbers," then, by a route I cannot follow, wanders off to charges against the NRC for its leniency and the negligence of all responsible entities. Without the Staff's explanation, I would not understand the concern.

According to the Staff, EPA identifier numbers are required by 40 C.F.R. § 262.12. Each generator of hazardous material is assigned a unique identification number. Without this number, the generator is barred from testing, storing, disposing of, transporting, or offering for transportation any hazardous waste. Enclosure U contains the results of a Resource Conservation and Recovery Act (RCRA) inspection conducted by the Commonwealth of Pennsylvania Department of Environmental Resources and other related documents concerning EPA identifier numbers. *Lamastra Aff.* ¶¶ 38-39.

It is not apparent to me how RCRA violations and EPA identifier numbers violations pertain to the broad concern of offsite contamination or to any of the subareas of concern admitted as issues in this proceeding. I cannot see the relationship of these concerns to NRC decommissioning/release criteria, which, in itself, is a premature concern.

Section W is entitled "Documents re: Pa.D.E.R.s controversial involvement at both sites." Presentation at 12. Enclosure W contains a variety of Pennsylvania Department of Natural Resources (PADER) documents concerning general chemical safety issues at the Licensee's facilities. The Intervenor is concerned

that PADER is not enforcing its regulations and "down-plays" Intervenor's request for EPA involvement. Intervenor urge that EPA should regulate mixed waste at the site.

The issue of PADER's or EPA's involvement or regulatory authority is beyond the scope of this hearing. I have no authority over either agency.²⁵

Section X is entitled "Letters from U.S. Congressman Murtha to Sec. of Agriculture, Espy." The enclosure to *Section X* contains two letters from Congressman John P. Murtha. One is to the Secretary of Agriculture, requesting a copy of a report on Farmers Delite Dairy Farm (apparently located in Parks Township), entitled NUMEC-1966. Intervenor claim that the report pertains to radionuclides in cows' milk and thyroid problems in the cows at the farm, but the report has suspiciously vanished from the U.S.D.A. library. Apparently, Intervenor want me to find the document. I cannot do this. But given the implications of the concern, and the specificity with which it is stated, I am emphasizing this concern in the referral to the Executive Director for Operations.

The other letter was from Congressman Murtha to Mr. Sprout on the independent oversight for the Apollo Project. It is offered by Intervenor to debunk the independence of the oversight committee, which, by the way, it doesn't do. The issue is beyond the scope of this hearing.

Section Y is entitled "Info re: recent lawsuits filed in Federal Court about these sites." The enclosures to *Section Y* include a copy of the lawsuit filed against the Licensee by plaintiffs, including the Intervenor, Ms. Ameno, and news articles concerning the lawsuit. I have not analyzed the complaint for issues admitted in this hearing because the information is apparently offered as a comment on a failing system of accountability in overseeing the Apollo and Parks sites. Intervenor seek no relief in this hearing with respect to their complaint in the lawsuit.

IV. REFERRAL TO THE EXECUTIVE DIRECTOR FOR OPERATIONS

I have found that the concerns discussed in the foregoing section should not be entertained in this hearing because they are untimely filed and for other reasons stated. Therefore, pursuant to the provision of 10 C.F.R. § 2.1205(k)(2), the concerns are treated as requests for action under 10 C.F.R. § 2.206 and are constructively referred to the Executive Director for Operations for appropriate disposition.

²⁵ A portion of *Section W*, alleging the illegal shipment of mixed waste, was arguably related to the management issue and is discussed above in that section.

This referral is a ministerial act, mandated by regulation. The referral carries no presumption that a determination has been made in this hearing that the concerns require any action. Some of the concerns seek no relief. I also note that technical members of the NRC Staff and the legal counsel representing the Staff have already evaluated these concerns and reported on them in the Staff's presentation in this hearing.

The concern raised in Section X of the Intervenor's written presentation, pertaining to possible radiological contamination of a Parks Township dairy herd in 1966, is worthy of note. I request that it be given special attention, and that the Staff reconsider its stated view that the concern falls outside the issues of this hearing.

The implications of the concern are too tenuous and too old to suspend this hearing while they are explored. Reliable and probative evidence adduced in this hearing provides adequate assurance that the public health and safety are not threatened by radiation from continued operation of the Parks Township facility. The concern is newly raised but, were it not for the passage of time, it seems to fall within the broad area of concern accepted as an issue in this hearing.

V. CONCLUSIONS OF LAW

Based upon the entire evidentiary record in this proceeding and upon the factual findings set forth above, I make the following conclusions of law:

- A. Notwithstanding the requirements of 10 C.F.R. § 2.1233(c), Intervenor's have not identified any omission or deficiency in B&W's application for renewal of License No. SNM-414, and I have not found in the record of this proceeding any evidence of such omission or deficiency relating to any issue in this proceeding.
- B. Taking into account (1) previous effluents from the Parks Township facility, (2) future effluents under a renewed license, (3) previous and present B&W management, (4) previous and future housekeeping practices under a renewed license, (5) previous transportation of radioactive materials between the Parks Township and Apollo facilities, (6) future transportation of radioactive materials from the Parks Township facility under a renewed license, and (7) the potential for mine subsidence at the SLDF, B&W has demonstrated that it has an excellent record of compliance with NRC requirements, that there is reasonable assurance that such compliance will continue, and that activities under a renewed license will be conducted in a manner consistent with regulatory requirements that protect health and safety and minimize danger to life and property.
- C. The broad area of concern and four subareas of concern accepted as issues in this proceeding are resolved in favor of issuing the renewal of

License No. SNM-414 for the Parks Township facility as requested by Licensee.

VI. ORDER

The Director of Nuclear Material Safety and Safeguards, upon making findings on all requisite matters not decided in this Initial Decision, is authorized to issue to Babcock & Wilcox the requested renewal of License No. SNM-414 for the Parks Township facility.

This Initial Decision shall become effective immediately unless the Commission directs otherwise. Pursuant to 10 C.F.R. § 2.1251(a), this Decision constitutes the final action of the Commission thirty (30) days after the date of issuance, unless any party petitions for Commission review in accordance with 10 C.F.R. § 2.786 or the Commission takes review of the decision on its own.

In accordance with 10 C.F.R. § 2.786(b), any petition for review must be filed within fifteen (15) days after service of this Decision and must satisfy the requirements of that section. Any other party to the proceeding may file an answer supporting or opposing Commission review within ten (10) days after service of a petition for review.

Ivan W. Smith, Presiding Officer
ADMINISTRATIVE JUDGE

Rockville, Maryland
January 3, 1995

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Chief Administrative Judge
B. Paul Cotter, Jr., Presiding Officer

Administrative Judge
Thomas D. Murphy, Special Assistant

In the Matter of

Docket No. 40-8968-ML
(ASLBP No. 95-706-01-ML)

HYDRO RESOURCES, INC.
(12750 Merit Drive, Suite 1210 LB12,
Dallas, TX 75251)

January 9, 1995

INTERVENTION: SUBPART L REQUIREMENTS

Subpart L, by its own language, demands precision from the outset of both the applicant and the petitioners. The initial petition must set forth standing arguments and areas of concern and is extremely important because it shapes the course of the proceeding.

INTERVENTION: PRESIDING OFFICER'S AUTHORITY

Under the provisions of 10 C.F.R. § 2.1209 (1994) and in the interest of fairness to all potential parties, the Presiding Officer in a Subpart L informal proceeding established a new schedule for filing amended petitions for hearing and initial answers by the Applicant and the Staff.

INTERVENTION: NATIVE AMERICANS

While the NRC has for years recognized a unique relationship with Native American peoples and considered this special status in adjudicative decisions and while that status is not of itself sufficient foundation for ignoring the

Commission's rules, every precaution should be taken to ensure that Native Americans are not excluded from the proceeding simply because of ignorance of the ingredients of a legally complete petition to intervene, citing, *Puget Sound Power and Light Co.* (Skagit Nuclear Power Project, Units 1 and 2), ALAB-552, 10 NRC 1, 10 (1979).

MEMORANDUM AND ORDER

(Setting Schedule for Filings)

BACKGROUND

On November 14, 1994, the Commission published in the *Federal Register* a "Notice of Availability of Draft Environmental Statement; Notice of Opportunity for Hearing" as part of the evaluation process in the application of Hydro Resources, Inc. ("Applicant"), for a license to conduct in-situ leach uranium mining in the vicinity of Crownpoint and Church Rock, New Mexico. 59 Fed. Reg. 56,557 (Nov. 14, 1994). Within the 30-day time limit imposed by the Commission's regulations, 10 C.F.R. § 2.1205(c), no less than seven individuals or groups petitioned for a hearing on the pending application.¹ Subsequently, the undersigned presiding officer was designated to rule on the petitions for a hearing under the provisions of 10 C.F.R. Subpart L and, if necessary, to serve as the presiding officer to conduct the hearing.

Under the provisions of 10 C.F.R. § 2.1205(f), Applicant's Answer to the hearing petitions was due on December 24, 1994, and the Staff's decision to participate in the hearing, if one is held, was due on December 31, 1994. For separate reasons, neither the Applicant² nor the Staff³ met their filing dates. Accordingly, upon review of the Petitioners' filings in this proceeding and the fact that both the Applicant and the Staff have yet to join the proceeding in a substantive manner, I am directing the potential parties to adhere to a new filing schedule.

¹ Zuni Mountain Coalition (Dec. 12, 1994); Ms. Bernadine Martin (Dec. 13, 1994); Water Information Network, Dine' CARE, Southwest Research and Information Center, Mr. Mervyn Tilden, and Grace and Marilyn Sam (Dec. 14, 1994).

² Telephone conversations with Mr. Mark Pelizza, Environmental Affairs Officer for Hydro Resources, Inc., and Jep Hill, Esquire, Counsel for Hydro Resources, Inc., disclosed that appropriate service was made on Hydro Resources in Dallas in a timely manner. However, the hearing materials were not received by regular mail at Mr. Hill's office until the evening of December 24, Christmas Eve. Compounding this late delivery, Mr. Hill's law office was being moved to a new location over the last week of December. Mr. Hill did not open the package from the Applicant until January 3, 1995.

³ The Staff requested a delay in filing its answer to the hearing petitions due to the absence of key Staff personnel during the holiday period.

DISCUSSION

The importance of gaining a fresh start in the proceeding is mandated by several considerations. First, the provisions of 10 C.F.R. § 2.1200 *et seq.* ("Subpart L"), which would control the conduct of any hearing on this matter should it be held, specifically set forth pleading requirements that Petitioners must meet in order to obtain an informal hearing. The two most important requirements are: (1) the recitation of an individual's or organization's legal standing to request a hearing; and (2) the recitation of the areas of concern that the petitioner seeks to litigate if the standing requirements are met.

It is evident from a review of the pleadings that due either to haste or to lack of experience with the provisions of Subpart L, most of the petitions are in some regard deficient. Most do not set forth information or arguments concerning whether the individual petitioner meets the judicial concepts of standing. Standing means that "they must show that the intended action will cause injury in fact to petitioner's interests . . ." which are protected by the Atomic Energy Act or the National Environmental Policy Act. *Umetco Minerals Corp.*, LBP-94-18, 39 NRC 369, 370 (1994). Similarly, some petitioners do not specifically address their interest in the proceeding and how that interest may be affected by the results of the proceeding, among other considerations germane to Subpart L. Since Subpart L by its own language demands precision from the outset of both the Applicant and the Petitioners, the initial petition setting forth standing arguments and areas of concern is extremely important because it shapes the course of the proceeding. This is the only opportunity a petitioner has to explain how the proposed licensing action will adversely affect the petitioner. If those concerns are not articulated, they will not be litigated.

Second, several of the Petitioners are either Native Americans or groups representing the interests of Native Americans. The NRC has for years recognized a unique relationship with Native American peoples and this special status should be considered in adjudicative decisions. See *Puget Sound Power and Light Co.* (Skagit Nuclear Power Project, Units 1 and 2), ALAB-559, 10 NRC 162, 173 (1979). While this special status is not of itself sufficient foundation for ignoring the Commission's rules, "every reasonable precaution should be taken to insure that [Petitioners are] not excluded from this proceeding simply because of ignorance of the ingredients of the demonstration required . . ." *Puget Sound Power and Light Co.* (Skagit Nuclear Power Project, Units 1 and 2), ALAB-552, 10 NRC 1, 10 (1979).

Therefore, under the provisions of 10 C.F.R. § 2.1209 and in the interest of fairness to all potential participants to this proceeding, a new schedule is established below for the filing of amended petitions for hearing and initial answers from the Applicant and the Staff. See *Virginia Electric and Power*

Co. (North Anna Power Station, Units 1 and 2), ALAB-146, 6 AEC 631 (1973) (petitioners are usually permitted to amend petitions containing curable defects).

ORDER

For all the foregoing reasons and upon consideration of the entire record in this matter, it is, this 9th day of January 1995, ORDERED

1. That Petitioners Zuni Mountain Coalition, Bernadine Martin, Water Information Network, Dine' CARE, Southwest Research and Information Center, Mervyn Tilden, and Grace and Marilyn Sam shall file amended hearing requests with the presiding officer, the Applicant, and the Staff setting forth arguments concerning standing and areas of concern as prescribed by 10 C.F.R. § 2.1205 to be *received* by the other participants no later than close of business on January 25, 1995;

2. That Applicant Hydro Resources, Inc., shall file its answer to Petitioners' hearing requests with the presiding officer and the other participants so that it is *received* by the other participants no later than close of business on February 6, 1995;

3. That, if it chooses to participate, the Staff shall file its answer to Petitioners' hearing requests with the presiding officer and the other participants, so that it is *received* no later than close of business on February 13, 1995.

4. That motions to file responses pursuant to 10 C.F.R. § 2.730(c) and responses to the Applicant's and Staff's filings shall be filed with the presiding officer and the other participants to be *received* by the other participants no later than close of business on February 24, 1995.

B. Paul Cotter, Jr., Presiding Officer
CHIEF ADMINISTRATIVE JUDGE

Rockville, Maryland
January 9, 1995

**Directors'
Decisions
Under
10 CFR 2.206**

DIRECTORS' DECISIONS

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF STATE PROGRAMS

Richard L. Bangart, Director

In the Matter of

STATE OF UTAH
(Agreement Pursuant to
Section 274 of the
Atomic Energy Act of 1954,
as Amended)

January 26, 1995

The Director of the Office of State Programs denies the petition submitted pursuant to 10 C.F.R. § 2.206 by US Ecology, Inc. (Petitioner), requesting action with regard to Utah's Agreement State Program.

Petitioner requested NRC to initiate appropriate proceedings, including relevant hearings, to suspend or revoke Utah's Agreement State status under section 274j of the Atomic Energy Act of 1954, as amended (AEA), for Utah's failure to require state or federal government land ownership in regulating the commercial disposal of low-level radioactive waste at the Envirocare of Utah, Inc. The Petitioner's request was denied because the Director did not find that the Petitioner had raised a sufficient issue of Utah's compliance with one or more requirements of section 274 of the AEA or any substantial health and safety issues to warrant the action requested.

DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206

I. INTRODUCTION

By a letter dated September 21, 1992, and supplemented in a letter of December 8, 1992, to James M. Taylor, Executive Director for Operations of the U.S. Nuclear Regulatory Commission (NRC or Commission), US Ecology, Inc.

(Petitioner) filed a "Petition of US Ecology, Inc. for Review and Suspension or Revocation of Utah's Agreement State Program for Failure to Require State or Federal Site Ownership at the Envirocare of Utah, Inc. Low-Level Radioactive Waste Facility." Petitioner alleges that —

- (1) Under both Utah's Agreement State program and the federal low-level radioactive waste (LLRW) regulatory program, LLRW may not be disposed of on privately owned land unless the state in which the site is located or the federal government has formally expressed a willingness to accept title to the facility at site closure;
- (2) The Envirocare site is located on privately owned land; and
- (3) Neither Utah nor the U.S. Department of Energy has agreed to or expressed any willingness to accept title to the site.

The Petitioner requested that in view of these allegations the NRC initiate appropriate proceedings, including relevant hearings, to suspend or revoke Utah's Agreement State status under section 274j of the Atomic Energy Act of 1954, as amended (AEA). The receipt of this petition was noticed in the *Federal Register* on November 13, 1992 (57 Fed. Reg. 53,941). For the reasons set forth below, Petitioner's request is denied.

II. BACKGROUND

Section 274 of the AEA, as amended, provides the statutory basis under which the NRC can relinquish portions of its regulatory authority to the states. This makes it possible for states to license and regulate the possession and use of byproduct material, source material, and special nuclear material in quantities not sufficient to form a critical mass.

The mechanism for the transfer of NRC authority to a state to regulate the radiological health and safety aspects of nuclear materials is an agreement between the governor of the state and the Commission. Before entering into such an agreement, the governor is required to certify that the state has a regulatory program that is adequate to protect the public health and safety. In addition, the Commission, by statute, must perform an independent evaluation and make a finding that the state's radiation control program is compatible with the NRC's, complies with the applicable parts of section 274 of the AEA, and is adequate to protect the public health and safety.

The AEA was amended in 1978 to require, among other things, that the NRC periodically review Agreement State programs to determine the adequacy of the program to protect the public health and safety and compatibility with NRC's regulatory program. Section 274j of the AEA provides that the NRC may suspend or terminate its agreement with a state if the Commission finds that such suspension or termination is necessary to protect the public health

and safety. As mandated by the AEA, NRC conducts periodic, onsite, in-depth reviews of each Agreement State program. The results of these reviews are documented in a report to the state. The report indicates whether the state's program is adequate to protect the public health and safety and also whether the program is compatible with NRC's regulatory program. (In some cases, the state is informed that the findings on adequacy and compatibility are being withheld pending further review by NRC and the resolution of outstanding issues.)

The State of Utah originally became an Agreement State on April 1, 1984. At that time, the State chose not to include authority for commercial LLRW disposal in the Agreement. However, on July 17, 1989, Governor Norman H. Bangerter of Utah requested that the Commission amend the Agreement to provide authority for Utah to regulate commercial LLRW disposal. As part of the amendment process, the Governor certified that the State had a program for control of radiation hazards with respect to LLRW disposal that is adequate to protect the public health and safety. The NRC conducted an independent review of this program and determined that the State met the requirements of section 274 of the AEA and that the State's statutes, regulations, personnel, licensing, inspection, and administrative procedures were compatible with those required by the Commission and were adequate to protect the public health and safety. The amendment to the Utah Agreement became effective on May 9, 1990. 55 Fed. Reg. 22,113 (May 31, 1990).

Part of the State's program involved the adoption of regulations compatible with the NRC regulations for the licensing of land disposal of radioactive waste (10 C.F.R. Part 61), including section 61.59 (Institutional requirements). Section 61.59 states:

(a) *Land ownership.* Disposal of radioactive waste received from other persons may be permitted only on land owned in fee by the Federal or a State government.

As part of its regulation of LLRW, Utah also adopted a provision similar to the exemption provision at 10 C.F.R. § 61.6, which states:

The Commission may, upon application by any interested person, or upon its own initiative, grant any exemption from the requirements of the regulations in this part as it determines is authorized by law, will not endanger life or property or the common defense and security, and is otherwise in the public interest.

In September 1990, Envirocare of Utah, Inc. (Envirocare), requested the State to amend its license to authorize receipt of LLRW for disposal. On March 21, 1991, Utah granted the request authorizing LLRW disposal. In granting this authorization, the State extended a previously granted exemption from the State's land ownership requirements for Naturally Occurring Radioactive Material (NORM) and Naturally-Occurring and Accelerator-Produced Radioactive

Material (NARM) disposal to LLRW disposal at the Envirocare facility. (NORM and NARM are outside the NRC's regulatory authority.) Utah issued the exemption pursuant to its regulations, which provide that the State may grant "such exemptions or exceptions from the requirements of these regulations as it determines are authorized by law and will not result in undue hazard to public health and safety or property."

On September 21, 1992, US Ecology, Inc., filed this petition with the NRC requesting that the Commission revoke or suspend the Utah Agreement Program for regulating the commercial disposal of LLRW because of Utah's failure to require state or federal government land ownership. The Petitioner requested the NRC to review the adequacy and compatibility of Utah's Agreement State Program in light of this failure and alleged that the State had not adequately justified the granting of an exemption from the land ownership requirement.¹ In a letter of October 26, 1992, acknowledging receipt of the petition, Mr. Carlton Kammerer, Director, Office of State Programs, informed the Petitioner that the NRC Staff was in the process of reviewing the licensing action of Utah as it related to the granting of the exemption in the course of NRC's periodic review of the Utah Agreement State program pursuant to section 274j of the AEA. Furthermore, the NRC Staff's review of the Utah program would of necessity address the issues raised in the US Ecology petition. As will be set forth in greater detail below, the NRC has determined that the State of Utah's rationale of exercising effective control of the waste disposal site without state or federal ownership is not unreasonable and would not warrant revocation or suspension of the Utah agreement.

III. DISCUSSION

The NRC Staff has examined the Petitioner's claims in the original petition of September 21, 1992, and the supplement dated December 8, 1992:

Petitioner requests that the NRC begin proceedings to revoke or suspend Utah's Agreement State status under section 274 of the Atomic Energy Act because of alleged flaws in Utah actions on the licensing of Envirocare of Utah, Inc., to receive LLRW for disposal.

Pursuant to section 274 of the AEA, NRC relinquished its regulatory authority over the licensing of LLRW to Utah and therefore has no direct authority over licensing of LLRW facilities in Utah. However, NRC does have authority to terminate or suspend Utah's Agreement State program under section 274j of the AEA. Section 274j states:

¹ On December 8, 1992, the Petitioner also submitted a supplemental legal analysis in support of the petition.

The Commission, upon its own initiative after reasonable notice and opportunity for hearing to the State with which an agreement under subsection b. [of this section] has become effective, or upon request of the Governor of such State, may terminate or suspend all or part of its agreement with the State and reassert the licensing and regulatory authority vested in it under this Act, if the Commission finds that (1) such termination or suspension is required to protect the public health and safety, or (2) the State has not complied with one or more of the requirements of this section. The Commission shall periodically review such agreements and actions taken by the States under the agreements to insure [sic] compliance with the provisions of this section.²

Based upon these periodic reviews, or upon special reviews conducted for cause, the Commission must find that (1) termination or suspension of a state's program is required to protect the public health and safety or (2) that the state has not complied with one or more requirements of section 274 of the AEA (e.g., the requirement for the state program to be compatible with the NRC program).

The revocation of Utah's Agreement State status, as requested by the Petitioner, hinges on whether Utah's regulatory scheme of providing an exemption from state or federal ownership of the site was compatible with NRC's regulatory requirements and whether Utah's action in granting the exemption provided for adequate protection of the public health and safety. The NRC regulations contain an exemption provision in 10 C.F.R. § 61.6 that allows the Commission to grant any exemption from the requirements in Part 61 provided that the exemption is authorized by law, will not endanger the public health and safety or the common defense and security, and is otherwise in the public interest. The land ownership provision in section 61.59 is subject to this exemption provision. Although NRC has not exercised its authority under the exemption provision in Part 61 as Utah has exercised, Utah's regulatory scheme contains an exemption provision similar to the NRC's. Although NRC has not granted (nor has any person requested) any similar exemption, it has not adopted any particular policy or practice precluding this that might be identified to the states as a matter of strict compatibility. In this regard, Utah's regulatory program is not incompatible with the NRC's.

The issue then becomes whether the exercise of the exemption provision poses a sufficient safety problem as to require the NRC to revoke or suspend Utah's Agreement State program. The reasons for the exemption Utah issued for LLRW originally were derived in part from the reasons for the exemption it had issued for NORM and NARM, which the NRC Staff found not to be sufficient. Upon the NRC's request, Utah provided additional explanation of

² As required by this section, the NRC Staff has conducted periodic reviews of the Utah Agreement State program since Utah became an Agreement State in 1984. The purpose of these periodic reviews is to determine the adequacy of the State's program to protect the public health and safety and the compatibility of the State's program with that of the NRC.

the reasons for the exemption with regard to LLRW (described below), and also imposed deed restrictions on Envirocare's title to the site, as explained below. Specifically, the State of Utah provided the following justifications for its concept of providing for a degree of State control of the disposal site that would be equivalent to the control provided by the requirement in the regulations for the disposal site to be located on state or federal land:³

- Tooele County has zoned the area that the Envirocare site is in as heavy manufacturing-hazardous (MGH) designation
- Because of the mixed waste licenses held by Envirocare, Envirocare has recorded in the public records of Tooele County an Affidavit which refers to and incorporates the land use restrictions of 40 CFR 264.117(c) which controls post closure activities at the site.
- Envirocare is required under License Condition 36 to provide "as built" drawings every six months. Because of Envirocare's construction techniques, each generator's waste is segregated from other waste, and site records to be provided after closure will be detailed.
- The transfer of site records is specifically directed by UAC R313-25-33, particularly subparagraph (4).
- To be licensed, radioactive waste disposal facilities must meet siting criteria established in UAC R313-25-3, previously R447-25-3.
- Utah regulations require that after closure there be a 5-year post closure and maintenance period by the licensee until the site is transferred to the site owner for institutional control.
- Utah's regulations require licensees to establish a financial surety in the form of a trust agreement which gives the State exclusive control of the trust fund. The State requires that "financial or surety arrangements shall remain in effect until the closure and stabilization program has been completed . . . and the license has been transferred." Until a transfer of the license occurs, the surety arrangement remains in effect and will continue to be reviewed to determine the amount necessary to protect public health, safety, and property.
- The State and Envirocare entered into an Agreement Establishing Covenants and Restrictions which identifies the site and the purpose of the licensed operations at the site.

The license "Transfer and Termination" sections of the State regulations indicate that the site operator will transfer and/or terminate its license and turn over the site to a governmental agency for the active institutional control period. The exemption in controversy here is an exemption from those sections of

³ From a letter dated February 12, 1993, from Dianne R. Nielson, Ph.D., Executive Director, Utah Department of Environmental Quality, to Mr. Carlton Kammerer, Director, Office of State Programs, U.S. Nuclear Regulatory Commission.

the regulations. Since Envirocare is the site owner and operator and no governmental agency is or has been authorized to take title to the site, transfer and termination of the Envirocare license would not occur prior to the active institutional control period. Therefore, Envirocare would remain responsible for the site under the license and the institutional control phase would be implemented by Envirocare.

In order to determine the adequacy of the Utah regulatory framework for protecting the public health and safety, the NRC Staff analyzed the control of the disposal site for the three major phases in the life of a low-level waste disposal site (operations, closure, and post-closure observation and maintenance; active institutional control; and passive institutional control). This analysis was conducted to determine which mechanisms, if properly constructed, could provide adequate control in lieu of government ownership of the land. In addition, the NRC Staff considered the special circumstances posed by the Envirocare site.

Operations, Closure, and Post-Closure Observation and Maintenance Period

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

One Hundred-Year Active Institutional Control Period

The State proposed that it is exercising control and can continue to exercise control of the site in such a manner that land ownership is not necessary to protect the public health and safety from the material that is being disposed of at the site. In particular, the State points to its control of the trust fund that includes the money for the active institutional control period. If the site owner is not capable of conducting the activities required during the active control period, the State will carry out the activities by using the money in the trust fund. Under the control mechanisms, the State would not need to own the site to carry out these activities.

Passive Institutional Control Period

The State proposed the use of deed annotation as a method of informing individuals who may wish to use the site in the future that the land was used for waste disposal and should not be disturbed.

The Staff found that the mechanism submitted by the State lacked specificity needed to implement the requisite degree of control because the land annotation did not provide sufficient restrictions on the future use of the site. As a result of this deficiency, the Staff suggested a proposed "restrictive covenant" that the State of Utah could use to implement the requisite degree of control.

In brief, the provisions of the restrictive covenant suggested by the NRC Staff were in addition to any restrictions on the title already recorded in the Tooele County records, and, *inter alia*, proposed to restrict Envirocare and its successors and assigns with respect to the property as follows: (1) No excavation or construction, except as necessary to maintain the premises, shall be allowed after the LLRW is disposed of and the facility is closed; (2) no uses of the property shall be made that may impair its integrity; (3) any change in use of the property following closure of the facility shall require the prior written consent of the Utah Department of Environmental Quality; (4) Envirocare and its successors or assigns, shall erect and continuously maintain monuments and markers, approved by the Department, to warn of the presence of radioactive material at the site; (5) Envirocare shall not convey the property without the prior written approval of the Department, nor shall Envirocare consummate any conveyance of any interest in the property without adequate and complete provision for continued maintenance of the property; and (6) any state or federal governmental agency affected by any violations of these restrictive covenant may enforce them by legal action in the District Court for Tooele County. As the proposed restrictive covenant made clear, the State of Utah will have the power to control the ownership, use, and maintenance of the Envirocare property after closure of the facility to a degree equivalent to ownership of the site. Moreover, both Utah and the NRC, in particular, would have the right to enforce the covenant.

The Commission, after careful consideration, came to the conclusion that the institutional controls, such as the proposed restrictive covenant, could be used in this case to achieve the same safety result as site ownership by state or federal authorities. The Commission's decision was conveyed to the State in a June 28, 1993 letter from Mr. Kammerer to Dr. Nielson. The purpose of the federal or state government land ownership requirement is to provide a higher degree of assurance that through state or federal government ownership of the site, institutional control of the site will continue to exist for longer periods of time than under private ownership. Regarding the similarity between land ownership and a restrictive covenant, in each case there is an entity in existence to take

action to remedy any onsite difficulty. With land ownership, the State can take action with regard to its ownership of the land, and with a restrictive covenant, the State can take action to enforce the restrictive covenant. The State of Utah executed a restrictive covenant with the terms described above with Envirocare on June 29, 1993.

In addition, the NRC is required by law to continue to review the Utah Agreement State program for adequacy and compatibility. If at any time in the future during these reviews the NRC determines that the public health and safety is not being protected, the Commission will begin proceedings for taking necessary action, including, if appropriate, the suspension or termination, of the Utah program.

In summary, the requirement in 10 C.F.R. § 61.59(a) regarding land ownership specifies that disposal of radioactive waste received from others may only be permitted on land owned in fee by the federal or a state government. The State of Utah issued an exemption from its state or federal land ownership requirement pursuant to Utah's regulations, which provides that the State may grant "such exemptions or exceptions from the requirements of these regulations as it determines are authorized by law and will not result in undue hazard to public health and safety or property." This Utah exemption provision is similar to the Commission's exemption in 10 C.F.R. § 61.6. On June 28, 1993, the Commission approved this approach as acceptable, with the proper implementing mechanisms put in place. On the day of the Commission's decision, the State was informed that the Commission decided that the State's rationale of exercising effective control of the waste disposal site without state or federal land ownership was acceptable and was equivalent to the control that would be provided by state or federal land ownership. The letter to the State also attached a suggested restrictive covenant intended to provide sufficient restrictions on the future use of the site. On June 30, 1993, the State of Utah provided the NRC with a recorded copy of the executed restrictive covenant between Envirocare of Utah, Inc., and the Utah Department of Environmental Quality.

A followup review of State actions and documentation was performed by the NRC Staff during a review visit of the Utah Agreement State program on August 30 through September 2, 1993. The question of control of the site after the period of post-closure observation and maintenance was addressed by the State's extension of the license term through the institutional control periods. The authorization to receive and dispose of waste will expire at closure of the disposal facility, but the responsibility of the Licensee to maintain the site will continue through these control periods. As a result, the trust funds required for the license now and in the future will not be released to the Licensee until the Licensee has satisfied the license termination requirements. The amount of surety as of September 30, 1994, was approximately \$4.1 million. The surety is reviewed and adjusted annually. The Commission expects that Utah will require

an amount of funds necessary to ensure protection of the public health and safety through the active control period.

An additional issue identified as part of the NRC Staff review of this petition relates to liability for remediation and corrective measures in the event of an offsite release of radioactive materials from the disposal facility. The NRC Staff requested the State of Utah to identify actions that the State could take to identify and compel a responsible party to perform remediation and necessary corrective measures in the event that no licensee exists and significant offsite releases occur. The State responded that it has the authority to identify and compel responsible parties to perform remediation and, in defined circumstances, the State may perform cleanups. Specific measures identified by the State were:⁴

- The Radiation Control Board has the authority to establish rules and issue orders to enforce laws and rules [Utah Code Annotated (UCA) Section 19-3-104 (9)]. Additionally, the Executive Secretary of the Board is authorized to enforce rules through the issuance of orders [UCA Section 19-3-108(2)(c)(iii)].
- To the extent that the release is of a "hazardous substance (under CERCLA) or hazardous material" as defined in UCA Section 19-6-302, the Executive Director of the Department of Environmental Quality may issue an abatement order if there exists a direct and immediate threat to the public health or the environment and may use environmental mitigation fund monies established by the Utah legislature to investigate and abate the release (UCA Section 109-6-309).
- The Executive Director of the Department of Environmental Quality may issue mitigation orders where conditions exist which create a clear and present hazard to the public health or the environment and which requires immediate action [UCA Section 19-1-202(2)(a)].
- The Attorney General or the county attorney has authority to bring any civil or criminal action requested by the Executive Director of the Department of Environmental Quality or the Utah Radiation Control Board to abate a condition which exists in violation of or for enforcement of laws or standards, orders, and rules of the Department [UCA 19-1-204].
- The Governor is authorized to respond to technological hazards which include radiation incidents under the Disaster Response and Recovery Act [UCA 63-5a-1 to 11].

IV. SPECIAL CONSIDERATIONS

The Envirocare LLRW disposal facility (co-located with the NORM disposal facility) is located in Clive, Tooele County, Utah, approximately 85 miles west

⁴ From a letter dated September 6, 1994, from Dianne R. Nielson, Ph.D., Executive Director, Utah Department of Environmental Quality, to Mr. Richard L. Baigart, Director, Office of State Programs, U.S. Nuclear Regulatory Commission.

of Salt Lake City, Utah. This facility is located adjacent to: (1) the U.S. Department of Energy's (DOE) South Clive disposal cell containing uranium mill tailings from the former Vitro South Salt Lake facility that was cleaned up and moved to this site pursuant to the Uranium Mill Tailings Radiation Control Act of 1978; (2) an NRC-licensed facility operated by Envirocare to receive, store, and dispose of uranium and thorium byproduct material (as defined by section 11e(2) of the AEA, as amended); and (3) an Envirocare facility licensed under the State of Utah's authority for disposal of Resource Conservation and Recovery Act (RCRA) material as delegated by the U.S. Environmental Protection Agency (EPA) for those radioactive wastes that have been mixed with, or contain, hazardous material. These facilities are located within the Tooele County Hazardous Waste Zone, approximately 20 miles from any residents. On January 12, 1988, the Tooele County Commission established the West Desert Hazardous Industry Area, which limits the future uses of land in the vicinity of the site by prohibiting residential housing. The facilities are located in the extreme eastern margin of the Great Salt Lake Desert which is part of the Basin and Range Province of North America. The groundwater quality at these disposal sites is extremely poor due to a very low annual precipitation, high evaporation, low infiltration, and an abundance of evaporate materials in the near surface sediments in the Great Salt Lake Desert. According to EPA classifications, the two aquifers beneath the site are considered Class III since they both have a total dissolved solids content in excess of 10,000 mg/L. The NRC Staff has concluded that the groundwater in the disposal site area is of a poor quality and is not suitable for most known uses without significant treatment.

Under these circumstances, it cannot be said that the Utah regulatory program for the Envirocare site, including the control periods, surety provision, restrictive covenant, and Utah remedial action powers fails to provide adequate protection of the public health and safety. Moreover, the NRC's governmental site ownership provision is directed at ensuring control over potential releases over very long periods of time (in excess of 100 years), and the Utah program, especially the restrictive covenant and remedial action powers, should likewise achieve an adequate level of control. NRC Staff recognizes that, under other circumstances, a state's ownership of a site as contrasted with private land ownership of the site might, in theory, carry with it some greater legal or "moral" obligation by the State to take affirmative action to ensure safety. However, given the nearby presence of the RCRA facility, the proximity of two other radioactive waste disposal activities under federal land ownership requirements, and the remoteness of the site, the Commission does not believe private site ownership poses a sufficient real safety issue to warrant revocation or suspension of the Utah regulatory program.

V. CONCLUSION

The NRC has carefully reviewed the issues raised by the Petitioner in the Staff's review of the Utah program. For the reasons discussed above, I find no need for taking such action. Rather, on the basis of the review efforts by the NRC Staff, I conclude that the Petitioner has not raised a sufficient issue of Utah's compliance with one or more requirements of section 274 of the AEA or any substantial health and safety issues to warrant the action requested. Accordingly, the Petitioner's request to suspend or revoke the Utah Agreement State program for failure to require State or federal site ownership at the Envirocare of Utah, Inc. LLRW disposal site is denied.⁵ A copy of this Decision will be placed in the Commission's Public Document Room, Gelman Building, 2120 L Street, NW, Washington, DC 20555. A copy of this Decision will also be filed with the Secretary for the Commission's review as stated in 10 C.F.R. § 2.206(c) of the Commission's regulations. The decision will become the final action of the Commission twenty-five (25) days after issuance unless the Commission on its own motion institutes review of the decision within that time.

FOR THE NUCLEAR
REGULATORY COMMISSION

Richard L. Bangart, Director
Office of State Programs

Dated at Rockville, Maryland,
this 26th day of January 1995.

⁵In a letter of July 8, 1993, to NRC Chairman Ivan Selin, the Petitioner claimed that the Commission's decision of June 28, 1993, denied the Petitioner an opportunity for a hearing on its petition for the revocation of Utah's Agreement State status to argue the policy issues associated with the land ownership exemption. Neither the AEA nor the Commission's regulations provides for a hearing on the evaluation of an Agreement State program. The Commission's review of the Agreement State program incorporated a review of the issues raised in the petition.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

William T. Russell, Director

In the Matter of

**ALL PRESSURIZED WATER
REACTORS**

January 26, 1995

The Director, Office of Nuclear Reactor Regulation, has denied a petition filed by John Willis on behalf of Greenpeace International requesting that action be taken regarding all pressurized water reactors (PWRs) currently operating in the United States. The Petitioner requested that the NRC immediately and fully inspect all vessel head penetrations in these reactors for cracking, publish the results, shut down affected reactors, and "relicense" reactors that must be closed. As grounds for these requests, the Petitioner alleged that: (1) certain foreign PWRs are cracking; (2) testing in France revealed incipient circumferential cracking of some VHPs, which could lead to a through-wall break in the primary pressure boundary without fulfillment of the leak-before-break criterion; and (3) this could cause ejection of the control rod drive mechanism, with resulting loss of control of the reactor. The reasons for the denial are fully set forth in the Decision.

NRC: COMMUNICATION WITH LICENSEES

The NRC Staff conducts meetings periodically with affected owners groups to discuss emerging and existing generic, technical issues rather than meeting with each individual licensee.

TECHNICAL ISSUE DISCUSSED

The following technical issue is discussed: primary water stress corrosion cracking in vessel head penetrations.

DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206

I. INTRODUCTION

On March 24, 1993, Mr. John Willis, on behalf of Greenpeace International (Petitioner), filed a letter with the U.S. Nuclear Regulatory Commission (NRC) requesting that action be taken regarding all of the pressurized water reactors (PWRs) currently operating in the United States. The Petitioner requests immediate, full inspection of all vessel head penetrations (VHPs) in these PWRs for cracking, and publication of the results by the NRC. The letter is being treated as a petition for enforcement action, pursuant to 10 C.F.R. § 2.206, because the Petitioner also requests that the NRC shut down affected reactors, whether the cracking is longitudinal or circumferential. The Petitioner also requests that the NRC Staff "relicense" reactors that must be closed due to VHP cracking, based on the assertion that the repair or mitigation program for such cracks may negatively affect the configuration and effectiveness of safety systems.

The Petitioner seeks relief based on allegations that: (1) some VHPs in PWRs in France, Belgium, Switzerland, and Sweden are cracking; (2) testing in France revealed incipient circumferential cracking of some VHPs, which could lead to a through-wall break in the primary pressure boundary without fulfillment of the leak-before-break criterion; and (3) this phenomenon could cause the ejection of the control rod drive mechanism, with resulting loss of control of the reactor. The Petitioner describes the bases for its request in more detail in "Vessel Head Penetration Cracking in Nuclear Reactors," Greenpeace International and Greenpeace Sweden, March 1993, which is attached to its petition.

As more fully described in a letter from Dr. Thomas E. Murley, then Director of the Office of Nuclear Reactor Regulation (NRR), dated June 7, 1993, acknowledging receipt of the petition, the Petitioner's request for immediate relief was denied. By letter dated January 27, 1994, Dr. Murley further informed the Petitioner that a final decision on its Petition would be issued after the Staff had reviewed the findings of the first three inspections at PWRs that were completed by the licensees of those plants.

II. DISCUSSION

The first instances of primary water stress corrosion (PWSCC) of Alloy 600 in PWRs occurred in the early 1970s in steam generator tubing. In 1990, the NRC Staff identified to the Commission primary water stress corrosion cracking (PWSCC) of Alloy 600 in components other than steam generator tubing as an emerging technical issue after cracking was noted in pressurizer heater sleeve

penetrations at a domestic PWR facility. At that time, the Staff reviewed the safety significance of the cracking as well as the repair and replacement activities at the affected facility. The Staff determined that the safety significance of the cracking was low because the cracks were axial, had a low growth rate, were in a material with an extremely high flaw tolerance (high fracture toughness) and, accordingly, were unlikely to propagate very far. These factors also demonstrate that any cracking would result in a detectable leak before a penetration broke. Nevertheless, the NRC Staff issued Information Notice 90-10, February 23, 1990, to inform the industry of the issue.

In addition, the NRC Staff met with the Combustion Engineering Owners Group (CEOG) in February 1990 to discuss a program initiated by the CEOG in January 1990 to assess the potential for, and the effects of, PWSCC of susceptible Alloy 600 components other than steam generator tubing in the reactor coolant pressure boundary. This meeting was held at the request of the NRC Staff since the Staff had identified this issue as an emerging technical issue.¹

In December 1991, cracks were found in an Alloy 600 VHP in the reactor head at a French plant; therefore, an action plan was implemented by the NRC Staff to address PWSCC of Alloy 600 VHPs at all U.S. PWRs. As explained more fully below, this action plan included a review of safety assessments by owners groups, the development of VHP mockups by the Electric Power Research Institute (EPRI), the qualification of inspectors on the VHP mockups by EPRI, the review of proposed generic acceptance criteria from the Nuclear Utility Management and Resource Council (NUMARC), and VHP inspections. As part of this action plan, the NRC Staff met with the Westinghouse Owners Group (WOG) on January 7, 1992, the CEOG on March 25, 1992, and the Babcock & Wilcox Owners Group (B&WOG) on May 12, 1992, to discuss their respective programs for investigating PWSCC of Alloy 600 and to assess the possibility of cracking of VHPs in their respective plants since all of the plants have Alloy 600 VHPs.² Subsequently, the Staff asked the Nuclear Utility Management and Resources Council (NUMARC) to coordinate future industry actions because the issue was applicable to all PWRs. Meetings were held with NUMARC and PWR owners on the issue on August 18 and November 20, 1992, and March 3, 1993. In addition, the Electric Power Research Institute (EPRI) is engaging in ongoing research on methods for PWSCC mitigation. EPRI also developed a qualification program to ensure that inspections performed on VHPs are highly reliable in detecting and measuring flaws. The qualification

¹ The NRC Staff conducts meetings periodically with affected owners groups to discuss emerging and existing generic, technical issues rather than meeting with each individual licensee.

² Summaries of the meetings are available in the Commission's Public Document Room, 2120 L Street, NW, Washington, DC 20037.

program includes standard, mockup VHPs containing known flaws that are axial, circumferential, off-axis, and clustered (closely spaced) flaws. The inspector is required to identify the location, orientation, and depth of all of the flaws in the EPRI mockup VHPs to be named a qualified inspector. The NRC has been following this program and has reviewed the qualification results for all of the inspectors that have been qualified by EPRI.

CEOG submitted the detailed findings of its Alloy 600 component PWSCC program initiated in 1990 to the Staff in a proprietary report on February 26, 1992. The conclusions of the report, which focused primarily on pressurizer heater sleeves and instrument nozzles, in part, follow:

- (1) Circumferential cracking of the heater sleeves and the instrumentation nozzles is not a credible failure mode.
- (2) Axial cracks 2 inches in length, which are longer than any cracks observed in the field, will not exhibit unstable crack growth. Some PWSCC may continue, which could result in increased gradual leakage with time that can be detected by visual inspection.
- (3) Visual inspection is the best method for detecting a leaking sleeve or nozzle, or for detecting damage to the pressurizer shell as a result of boric acid corrosion, and scheduled detailed visual inspection of the pressurizer lower head should continue at a fixed interval. The inspection interval was determined on the basis of experimental results from the program.

The Staff has reviewed the report, and finds that its results and the recommended inspections, coupled with field experience, provide a sufficient basis to conclude that loss of structural integrity and ejection of components with respect to pressurizers are highly unlikely.

The NRC Staff met with the B&WOG, CEOG, and the WOG to discuss the PWSCC of PWR VHPs on several occasions during 1992 and 1993. Each of the owners groups submitted a safety assessment through NUMARC to the NRC on this issue and the NRC submitted a safety evaluation of the safety assessments to NUMARC on November 16, 1993. After reviewing the industry's safety assessments and examining the overseas inspection findings, the Staff concluded in the safety evaluation sent to NUMARC that VHP cracking is not a significant safety issue at this time. The bases for this conclusion are that if PWSCC occurred at VHPs: (1) the cracks would predominantly be axial in orientation; (2) the cracks would result in detectable leakage before catastrophic failure; and (3) the leakage would be detected during visual examinations performed as part of surveillance walkdowns before significant damage would occur to the reactor vessel head. In addition, the Staff had concerns related to unnecessary occupational radiation exposures associated with eddy current or other forms of nondestructive examinations if done manually. Field experience in foreign countries has shown that occupational radiation exposures could be significantly

reduced if the industry would use remotely controlled or automatic equipment to conduct the inspections. The U.S. nuclear industry has developed such equipment for inspection and possible repairs.

As a followup to the safety assessments, NUMARC submitted proposed generic acceptance criteria for flaws identified during inservice examinations of VHPs to the NRC in July of 1993. The NRC accepted the acceptance criteria for axial flaws above and below the J-groove weld (the weld that holds VHP to the vessel head and is part of the primary pressure boundary), and circumferential flaws below the J-groove weld, but rejected the criteria for circumferential flaws above the J-groove weld. Cracks below the J-groove weld do not violate the reactor vessel pressure boundary even if they are through wall, and axial and circumferential cracks below the J-groove weld were determined to be acceptable by the NRC Staff. Axial cracks above the J-groove weld may result in a leak that would be detected by surveillance walkdowns before significant damage could occur. Circumferential cracks above the J-groove weld could result in the ejection of a control rod drive mechanism resulting in a large-break loss-of-coolant accident. Furthermore, the stress analyses conducted as part of the owners groups safety assessments predicted that it would be very unlikely that circumferential cracks would form due to the stress distributions in the VHPs. For these reasons, the NRC requested that circumferential crack-like indications above the J-groove weld be reported to the NRC for disposition.

Three licensees volunteered to conduct VHP inspections during 1994 as part of the NUMARC program. As stated above, on January 27, 1994, Dr. Murley informed the Petitioner in a letter that a final decision would be issued on its petition after the Staff had reviewed the findings of these three inspections. The eddy current inspection conducted by the Wisconsin Electric Power Company vendor (Westinghouse) at the Point Beach Nuclear Generating Station in April 1994 uncovered no crack-like indications in any of the forty-nine VHPs. The eddy current inspection by the Duke Power Company vendor (Babcock & Wilcox) at the Oconee Nuclear Generating Station in October and November 1994, revealed twenty crack-like indications in one penetration. Ultrasonic testing (UT) could not quantify the depth of these indications because they were shallow. (UT cannot accurately size defects that are less than one mil deep (0.03 mm).) These indications may be associated with the original fabrication and may not grow. Even if they do grow, the analysis conducted on the indications by the licensee indicates that they will not grow such that they exceed the acceptance criteria before the next outage. During the next outage, the affected VHP will be reexamined and analyzed to see if the indications will exceed the acceptance criteria before the next outage. This cycle of reexaminations will continue until no growth occurs for two cycles, or until the indications are projected to exceed the acceptance criteria before the next inspection cycle. In the latter case, the VHP will be repaired or replaced. An examination of the

VHPs by the Indiana & Michigan Electric Company vendor (Westinghouse) at D.C. Cook revealed three clustered crack-like indications in one penetration. The indications were 46 mm, 16 mm, and 6-8 mm in length and the deepest flaw was 6.8 mm deep. The tip of the 46-mm flaw was just below the J-groove weld. The acceptance criteria permits a through-wall, axial crack of any length below the J-groove weld since such a crack does not violate the primary pressure boundary. An analysis by the Indiana & Michigan Electric Company licensee at D.C. Cook indicates that these flaws will not grow to exceed the acceptance criteria before the next outage when a reinspection will occur. During the next outage, the affected VHP will be reexamined and analyzed to see if the indications will exceed the acceptance criteria before the next outage. This cycle of reexaminations will continue until no growth occurs for two cycles, or until the indications are projected to exceed the acceptance criteria before the next inspection cycle. In the latter case, the VHP will be repaired or replaced. These results are consistent with the owners groups' analyses, the NRC Staff safety evaluation sent to the Petitioner on January 27, 1994, and the PWSCC found in the CRDMs in European reactors. The results observed during these three VHP inspections do not pose a threat to safe plant operation.

Based on the owners groups safety assessments, a leak in a VHP would be detected before significant damage could occur to the VHP or the reactor vessel. This would result in the deposition of boric acid crystals on the vessel head and surrounding area that would be detected during surveillance walkdowns. Consequently, the concerns raised by the Petitioner do not raise any immediate safety concerns.

The NRC Staff continues to meet with the Nuclear Energy Institute (NEI) (the former NUMARC) to establish a plan for the inspection of the remaining PWRs. Immediate inspections are not required since there is no immediate safety concern. Furthermore, there is no reason to grant the Petitioner's request that the NRC shut down or "relicense" reactors with VHP cracking because there is adequate protection to the public health and safety as long as the cracking does not violate the acceptance criteria. If VHP cracking violated the acceptance criteria, the NRC would require that the licensee repair or replace the VHP, but neither shutdown nor relicensing of the reactor would be required.

III. CONCLUSION

The institution of proceedings pursuant to section 2.206 is appropriate only if substantial health and safety issues have been raised. See *Consolidated Edison Co. of New York* (Indian Point, Units 1, 2, and 3), CLI-75-8, 2 NRC 173, 175 (1975); *Washington Public Power Supply System* (WPPSS Nuclear Project No. 2), DD-84-7, 19 NRC 899, 924 (1984). This is the standard that has been

applied to the concerns raised by the Petitioner to determine whether the action requested by the Petitioner is warranted.

With regard to the requests made by the Petitioner, I find no basis for taking such actions. Rather, as explained above, I conclude that no substantial health and safety issues have been raised by the Petitioner. Accordingly, the Petitioner's requests for action pursuant to section 2.206 are denied.

A copy of this Decision will be filed with the Secretary for the Commission's review as provided by 10 C.F.R. § 2.206(c) of the Commission's regulations. The Decision will become the final action of the Commission 25 days after issuance unless the Commission, on its own motion, institutes review of the Decision in that time.

FOR THE NUCLEAR
REGULATORY COMMISSION

William T. Russell, Director
Office of Nuclear Reactor
Regulation

Dated at Rockville, Maryland,
this 26th day of January 1995.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

Robert M. Bernero, Director

In the Matter of

Docket Nos. 50-313

50-368

72-1007

ENTERGY OPERATIONS, INC.
(Arkansas Nuclear One)

SIERRA NUCLEAR CORPORATION

January 31, 1995

The Director of the Office of Nuclear Material Safety and Safeguards grants in part and denies in part a petition submitted pursuant to 10 C.F.R. § 2.206 by Mr. Dennis Dums, on behalf of the Wisconsin Citizen's Utility Board (Petitioner), requesting action with regard to Arkansas Nuclear One (ANO) operated by Entergy Operations, Inc. (Entergy or the Licensee).

Petitioner requested that the Chairman exercise his authority to: (1) determine the applicability of 10 C.F.R. § 72.48 to 10 C.F.R. Subparts K and L; (2) determine whether Entergy is in violation of any NRC regulations regarding use of section 72.48 to make modifications to the VSC-24 cask for use at ANO; (3) order ANO to cease using section 72.48 until NRC determines whether or not it is applicable; (4) order Sierra Nuclear Corporation to cease construction of VSC-24 casks for use at ANO that are being constructed based on ANO's section 72.48 evaluation.

With regard to the Petitioner's request for NRC to (1) determine the applicability of section 72.48 to 10 C.F.R. Subparts K and L, and (2) determine whether Entergy is in violation of any NRC regulations regarding use of section 72.48, the Director grants the petition in part and determines that section 72.48 is applicable to the general license found in 10 C.F.R. Part 72, Subpart K, of the Commission's regulations and that ANO can make use of this authority as

a Subpart K licensee in accordance with the terms and limitations of section 72.48.

With regard to the Petitioner's request for NRC to (3) order ANO to cease using section 72.48 until NRC determines whether or not it is applicable and (4) order Sierra Nuclear Corporation to cease construction of VSC-24 casks for use at ANO, the Director finds, in accordance with the foregoing determination, that ANO can make use of section 72.48, and accordingly denies those portions of the petition.

DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206

INTRODUCTION

By petition dated July 5, 1994 (petition), Dennis Dums, on behalf of the Wisconsin Citizen's Utility Board (Petitioner), filed a request pursuant to 10 C.F.R. § 2.206 that the U.S. Nuclear Regulatory Commission (NRC): (1) determine the applicability of 10 C.F.R. § 72.48 to 10 C.F.R. Part 72, Subparts K and L; (2) determine whether Entergy Operations, Inc. (Entergy), is in violation of any NRC regulations regarding use of section 72.48 to make modifications to the VSC-24 cask for use at Arkansas Nuclear One (ANO); (3) order ANO to cease using section 72.48 until NRC determines whether or not it is applicable; (4) order Sierra Nuclear Corporation (SNC) to cease construction of VSC-24 casks for use at ANO that are being constructed based on ANO's section 72.48 evaluation.

By letter to Mr. Dennis Dums, dated August 16, 1994, I acknowledged receipt of the petition. Notice of receipt was published in the *Federal Register* on August 24, 1994 (59 Fed. Reg. 43,594). For the reasons given below, I have now concluded that the Petitioner's request should be granted in part and denied in part.

BACKGROUND

The Petitioner submitted its July 5, 1994 request to NRC in connection with an earlier letter to NRC dated June 2, 1994, from Entergy, an NRC licensee under 10 C.F.R. Part 50, which operates ANO Units 1 and 2 near Russellville, Arkansas. In its June 2 letter, Entergy had briefly described its plans for spent nuclear fuel storage at ANO, involving use of the VSC-24 dry cask, in accordance with the general license of 10 C.F.R. Part 72, Subpart K. Entergy had also stated in the June 2 letter that its use of the VSC-24 would involve minor changes to the cask design. According to Entergy's July 2 letter, the specific

changes involved lengthening the approximately 18-foot VSC-24 by about 11 inches in order to accommodate the slightly longer ANO Unit 2 fuel.

The June 2 letter went on to advise NRC of Entergy's conclusions that section 72.48 of the Commission's regulations applied to the changes Entergy proposed to make to the cask for use at ANO. It was this statement by Entergy regarding the applicability of section 72.48 that apparently prompted the petition that is the subject of this Decision.

Section 72.48 of the Commission's regulations covers "Changes, tests, and experiments" that may be made by the "holder of a license issued under this part" without prior Commission approval.¹ Specifically with regard to its determination to use section 72.48, Entergy's June 2 letter contended that the minor changes proposed for the VSC-24 cask were covered by a "plain reading" of the regulations. It argued that the general license issued under 10 C.F.R. Part 72 was a license "issued under this part," and that the minor changes to the VSC-24 by Entergy, as the license "holder," could therefore be made to address site-specific considerations "as determined necessary" by Entergy. It also contended that its approach was consistent with the regulatory background of the general license, particularly the Commission's objective to provide for "a regulatory framework allowing on-site spent fuel storage 'without, to the maximum extent practicable, the need for additional site-specific approvals by the Commission.'" (55 Fed. Reg. 29,181)." Entergy Letter at 2.

It is the foregoing determination by Entergy with which the petition takes issue.

The petition asserts as bases for its requests that: Entergy is currently pursuing spent fuel storage at ANO through use of 10 C.F.R. Subparts K and L; ANO currently intends to utilize the VSC-24 constructed by vendor SNC under an SAR submitted in October 1991, and safety evaluation report (SER), issued by the NRC in April 1993; an NRC response, dated January 31, 1994, to an October 13, 1993 public request for information, stated that Subparts K and L of 10 C.F.R. Part 72 are silent on cask SAR and certificate changes after the final rule; an ANO request for a rule exemption to 10 C.F.R. § 72.234(c) was granted by the NRC to allow for the fabrication of four VSC-24 casks to the longer length prior to NRC approval of SNC's June 14, 1993 submittal of Revision 1 to the 1991 VSC-24 Cask SAR; a February 14, 1994 memorandum

¹ In particular, section 72.48(a)(1) provides in pertinent part as follows:

(a)(1) The holder of a license issued under this part may:

(i) Make changes in the ISFSI [i.e., independent spent fuel storage installation] . . . described in the Safety Analysis Report,

(iii) . . . without prior Commission approval, unless the proposed change . . . involves a change in the license conditions incorporated in the license, an unreviewed safety question, a significant increase in occupational exposure or a significant unreviewed environmental impact.

to NRC Assistant General Counsel Treby requested a legal interpretation of the applicability of section 72.48 to general licenses issued under 10 C.F.R. § 72.210; a May 19, 1994 meeting was held regarding SNC's revisions to the VSC-24 SAR and the applicability of section 72.48 to general license users, as well as a June 3, 1994 memorandum regarding this meeting which stated that "the licensee can make its own interpretation of the regulations"; and a letter, dated June 2, 1994, from Entergy to the NRC which stated that Entergy has directed SNC to fabricate all fourteen planned casks with the increased length and that Entergy plans to continue to conduct evaluations in accordance with section 72.48.

Entergy has not filed any comments with the NRC following publication of the petition.

DISCUSSION

As the discussion that follows will set forth in detail, we have determined that ANO, as a general licensee under 10 C.F.R. § 72.210, can make use of section 72.48. This determination is based first on the words of section 72.48 itself which are fully consistent with use of the authority in that section by a general licensee. Second, the determination is based on regulatory policy considerations. These include the extensive NRC safety review at the time of cask approval, the limited nature of the subsequent changes permitted under section 72.48, and the fact that NRC regulations in other contexts and over many years have permitted utilities such as ANO to make similar types of changes to nuclear facilities that involve safety issues previously reviewed by NRC.

This approach is well suited to the Part 72 general license framework, especially given the congressional purpose underlying the Nuclear Waste Policy Act of 1982 that directed the NRC to establish a licensing framework for spent fuel storage technologies that can be approved by the Commission for use at reactor sites "without, to the maximum extent practicable, the need for additional site-specific approvals by the Commission" (55 Fed. Reg. 29,181). Because section 72.48 permits certain changes by a licensee *without* Commission approval, making it available to general licensees will further this congressional purpose.

A. The Language of Section 72.48

An analysis of the pertinent NRC regulations regarding use of section 72.48 by a general licensee shows that ANO's use of that authority is covered by the regulations. The relevant regulations and our analysis of them are given below.

Section 72.48(a)(1) provides as follows:

- (a)(1) *The holder of a license issued under this part may:*
(i) *Make changes in the ISFSI . . . described in the Safety Analysis Report,*

(iii) . . . without prior Commission approval, unless the proposed change, test or experiment involves a change in the license conditions incorporated in the license, an unreviewed safety question, a significant increase in occupational exposure or a significant unreviewed environmental impact. [Emphasis added.]

Further section 72.210 provides as follows:

A general license is hereby issued for the storage of spent fuel in an independent spent fuel storage installation at power reactor sites to persons authorized to possess or operate nuclear power reactors under Part 50 of this chapter. [Emphasis added.]

In order to determine whether section 72.48 can be interpreted to cover the general license in section 72.210, the first question is whether the general licensee is "the holder of a license issued under this part," as required for the application of section 72.48. We think the language of section 72.210 answers this question. The phrase "[a] general license is hereby issued," leaves no doubt the general license is "a license issued under this part." Because a general licensee is "the holder of a license issued under this part," section 72.48(a)(1) therefore applies.

The second question, in order to determine if section 72.48 can be interpreted to apply to a general license, is whether changes to a certified cask by a general licensee can appropriately be termed "changes in the ISFSI . . . described in the Safety Analysis Report," as required for the application of section 72.48. We think the language of section 72.210 also resolves this issue. Specifically, the regulatory language of the general license authorizes "storage . . . in an independent spent fuel storage installation . . . in casks approved under the provisions of this part."² (Emphasis added.) The ISFSI under the general license incorporates the NRC-approved casks. Further the NRC's approved casks under the general license are ISFSI components described in a safety analysis report and, specifically, in the cask vendor safety analysis report (SAR).³ Therefore, changes to an NRC-approved cask, used in an ISFSI, by the general licensee literally are "changes in the ISFSI . . . described in the Safety Analysis Report," and therefore are reasonably covered by the words of section 72.48(a)(1).⁴

² See 10 C.F.R. § 72.212(a)(2) ("This general license is limited to storage of spent fuel in casks approved under the provisions of this part.")

³ See 10 C.F.R. § 72.230(a) ("A safety analysis report describing the proposed cask design and how the cask should be used to store spent fuel safely must be included with the application.")

⁴ Commission policy already permits changes to a cask design approved by NRC in a site-specific licensing proceeding; this determination results in similar treatment for designs approved in rulemaking.

B. Regulatory Policy Considerations

The foregoing analysis of the applicable regulations is fully supported by the policy underlying NRC's program for generic cask approvals. In particular, NRC generic approval of a cask certifies the cask for use under a range of environmental conditions sufficiently broad to encompass most sites within the United States, by using conservative requirements that make safety of an approved cask independent of the effects of site-specific phenomena. During the review of the SAR, NRC considers all credible accidents that could harm the cask. We analyze: drops, tipovers, lightning, floods, high and low temperatures, tornadoes, explosions, and other conditions. Using the safety analyses relied on by the NRC for the generic approval, a general licensee must thereafter establish that the cask is suitable for the environmental conditions of the licensee's site. However, use of the generically approved cask does not require additional NRC site-specific approvals, provided the conditions in the general license and the cask certificate are met.

The NRC's generic approval of a dry cask, without any site-specific approval, fulfills the express intent of the Congress. In the Nuclear Waste Policy Act of 1982, Congress directed the government (NRC and the Department of Energy) to establish a program allowing the NRC to approve spent fuel storage technologies "by rule . . . without, to the maximum extent practicable, the need for additional site-specific approvals by the Commission." 42 U.S.C. § 10198(a). If NRC were to require site-specific Commission approval of *every* change to an approved cask by a general licensee — even changes that did not involve any site-specific unreviewed environmental condition or safety issue — then its action could be viewed as seriously undermining the statutory policy supporting general cask approvals without, *to the maximum extent practicable*, requiring additional NRC site-specific approvals.

Section 72.48 is limited to changes that do not involve "a change in the license conditions incorporated in the license, an unreviewed safety question,⁵ a significant increase in occupational exposure or a significant unreviewed environmental impact." If the proposed change involves a generic change to the certificate of compliance or any of the certificate's conditions, then an application must be filed with the Commission for approval for this generic change.

The general licensee must also satisfy other requirements under section 72.48. For example, section 72.48 requires that a licensee must permanently "maintain

⁵ Under section 72.48(a)(2), a proposed change involves an unreviewed safety question:

- (i) If the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the Safety Analysis Report (SAR) may be increased;
- (ii) If a possibility for an accident or malfunction of a different type than any evaluated previously in the [SAR] may be created; or
- (iii) If the margin of safety as defined in the basis for any technical specification is reduced.

records of changes in the ISFSI" which "include a written safety evaluation that provides the bases for the determination that the change . . . does not involve an unreviewed safety question." The NRC may examine these records during an inspection and take appropriate action if the changes made by the licensee do not comply with the regulations. Additionally, section 72.48 requires that the licensee must annually furnish the NRC a report containing a brief description of the changes.

The decision whether a proposed change involves an unreviewed safety question is made initially by the licensee but can be reviewed by the NRC. If the NRC disagrees with the licensee's decision, the agency may, upon review, take appropriate enforcement action. To facilitate review of a licensee's decision during subsequent inspections, the NRC promulgated the recordkeeping and reporting requirements described above, thus requiring the licensee to maintain records related to the licensee's decision under section 72.48.

There is a similar rule under 10 C.F.R. Part 50 for production and utilization facilities. Section 50.59 allows utilities to make changes to their power plants under circumstances comparable to those circumstances covered by section 72.48. In particular, section 50.59 specifically allows a reactor licensee to modify its facility without prior NRC approval unless the modification involves a change in the technical specifications incorporated in the facility license or involves an unreviewed safety question. The definition and criteria in section 50.59 for identifying whether a proposed change involves an unreviewed safety question are identical to those in section 72.48. If the proposed change does involve either an unreviewed safety question or a change in the technical specifications, then the licensee must apply for an amendment to its license. For decades the NRC has allowed its licensees in the first instance to review proposed changes in their facilities to determine whether changes in technical specifications are involved or unreviewed safety questions are presented. The NRC would not be sensibly allocating its limited resources if the agency itself were to expressly review and approve every single facility change, whether or not it raises an unreviewed safety question. Rather, NRC retains an oversight function for enforcement purposes, supported by requirements for licensees to retain and preserve all records of section 50.59 changes, just as they must retain all records of section 72.48 changes. *See Kelley v. Selin*, No. 93-3613, Slip op. at 11 (6th Cir., Jan. 11, 1995) ("NRC's historical method of regulation . . . has long allowed licensees to make initial determinations about changes to their facilities and has enabled the agency to retain its enforcement power. 10 C.F.R. § 50.59.")

Thus, for all of the foregoing reasons, we have determined that ANO, and any other general licensee under Subpart K, can make use of the authority in section 72.48 to make changes that comply with the requirements of that section. We accordingly have no basis and therefore are declining to take enforcement action

against ANO at this time. However, in our continuing regulatory oversight of ANO and other general licensees, we reserve the right to review any change made under section 72.48 and take appropriate followup action.

CONCLUSION

Based on a review of the regulations and taking into account the relevant policy considerations, NRC Staff have determined that section 72.48 can be used by all Part 72 licensees. Therefore, the Petitioner's request to (1) determine the applicability of section 72.48 to Part 72, Subparts K and L; and (2) determine whether Entergy is in violation of any NRC regulations regarding use of section 72.48 has been granted. Further, in light of the foregoing determination that Entergy can make use of section 72.48, the Petitioner's request to (3) order ANO to cease using section 72.48 until NRC determines whether or not it is applicable, and (4) order Sierra Nuclear Corporation to cease construction of VSC-24 casks for use at ANO has therefore been denied.

FOR THE NUCLEAR
REGULATORY COMMISSION

Robert M. Bernero, Director
Office of Nuclear Material Safety
and Safeguards

Dated at Rockville, Maryland,
this 31st day of January 1995.