UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:
Charles Bechhoefer, Chairman
Dr. George C. Anderson
Ralph S. Decker

In the Matter of DAIRYLAND POWER COOPERATIVE (La Crosse Boiling Water Reactor, Full-Term Operating License and Show Cause)	Docket No. 50-409 FTOL 50-409 SC August 2, 1982

MEMORANDUM AND ORDER
(Granting NRC Staff's Motion, as Amended, and Applicant's Motion for Summary Disposition of Environmental Contentions and Ruling Upon Other Environmental Questions)

Pending before us are the NRC Staff's motion for summary disposition, as amended, and the Applicant's motion for summary disposition, of all environmental contentions in this full-term operating license proceeding. For the reasons which follow, we are granting those motions and concluding our consideration of various environmental questions which have arisen during the course of this proceeding.

I. Background

The La Crosse Boiling Water Reactor (LACBWR) is a 50 MWe boiling water reactor located on a site on the Mississippi River in Genoa, Wisconsin,

about 20 miles south of La Crosse, Wisconsin. It is owned and operated by Dairyland Power Cooperative (Applicant or DPC). LACBWR is currently permitted to operate by virtue of Provisional Operating License DPR-45, and the Applicant is seeking a full-term operating license (FTOL) for the reactor.1/

LACBWR was built as part of the U.S. Atomic Energy Commission's second-round power reactor demonstration program by Allis-Chalmers Manufacturing Company under a contract with the Commission signed in June 1962.2/ The site for the reactor was provided by DPC.3/ Construction was authorized pursuant to Construction Authorization CAPR-5 dated March 29, 1963,4/ and operation commenced in July, 1967 pursuant to Provisional Operating Authorization No. DPRA-5.5/ In August, 1973, DPC purchased the facility from the AEC, and Provisional Operating License No. DPR-45 was issued on August 28, 1973.6/

1/ The proceeding designated as Docket No. 50-409 FTOL concerns Dairyland's application for such a license.

2/ Final Environmental Statement (FES), § 1.1.

3/ Id.

4/ See 43 Fed. Reg. 15021 (April 10, 1978).

5/ FES, § 1.1; 43 Fed. Reg. 15021 (April 10, 1978). The operating authority was first granted to Allis-Chalmers and, on October 31, 1969, was transferred to Dairyland. Dairyland Power Cooperative (La Crosse Boiling Water Reactor), LBP-80-2, 11 NRC 44, 47 (1980), affirmed (in pertinent part), ALAB-617, 12 NRC 430 (1980).

6/ FES, § 1.1.

Dairyland's provisional operating license had a term of 18 months. On October 9, 1974, prior to the expiration of that term, DPC filed an application to convert its provisional license to a full-term operating license.7/ That application is presently before this Board. Pursuant to 10 CFR § 2.109, the provisional operating license remains in effect until a final NRC determination on the full-term operating license is rendered. DPC has been operating LACBWR under that authority during the pendency of this proceeding.

The Notice of Opportunity for Hearing on the requested full-term operating license was published on April 10, 1978.8/ A timely petition for leave to intervene was filed by the Coulee Region Energy Coalition (CREC) on May 7, 1978.9/ A Licensing Board was established to rule on such petitions.10/ By Memorandum and Order dated June 19, 1978, CREC's petition was granted.

On August 17, 1978, the Board held a Special Prehearing Conference in La Crosse, Wisconsin. Insofar as matters relating to the FTOL proceeding

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7/ LBP-80-2, n. 5, supra, 11 NRC at 47.

8/ 43 Fed. Reg. 15021.

9/ On May 5, 1978, Farmers United for Safe Energy (FUSE) requested a 30-day extension within which to file a petition. By Memorandum and Order dated May 17, 1978, FUSE's request was granted. FUSE did not file any petition.

10/ 43 Fed. Reg. 21955 (May 22, 1978). The same Board was authorized to conduct the hearing. 43 Fed. Reg. 28261 (June 29, 1978). On several occasions it has been reconstituted. 43 Fed. Reg. 37017 (August 21, 1978); 43 Fed. Reg. 46911-12 (October 11, 1978). The same Board was established for a simultaneous spent fuel storage pool expansion proceeding, which has since been concluded, LBP-80-2, n. 5 supra, 11 NRC at 47-48; and for a concurrent show-cause proceeding. 45 Fed. Reg. 52290 (August 6, 1980).

were considered at this conference,[11] we determined to proceed first with the spent fuel pool expansion proceeding, next to consider environmental issues in the FTOL proceeding, and to delay any further consideration of safety issues in this FTOL proceeding until issuance of the Staff's Safety Evaluation Report (SER). (The SER has not at this time been issued, since it is awaiting the completion of the Staff's Systematic Evaluation Program (SEP) review of this reactor.) We identified the contentions which were to be considered as environmental issues, requested the parties to negotiate to determine whether the language and suitability of environmental contentions could be stipulated, called for a further report or reports on these negotiations, and deferred ruling on environmental issues until after our receipt of those reports. Prehearing Conference Orders, dated September 5, 1978.

Reflecting both delays in the projected issuance of the Staff's Final Environmental Statement (FES) and the engagement of the parties in discovery and evidentiary hearings in the companion spent fuel pool expansion proceeding, we postponed ruling on the FTOL environmental contentions until November 30, 1979. At that time, we admitted contentions 2A, 2B, 8, 9, 19 and 22 (with all parties agreeing to the acceptability of the latter three contentions) and established a discovery schedule.

The NRC Staff filed extensive discovery requests during December 1979 and the Spring of 1980. The FES was served by the Staff on the parties and

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11/ The conference was a joint conference concerning both this full-term operating license proceeding and the then-ongoing spent fuel pool expansion proceeding.

Board by letter dated April 21, 1980.12/ Shortly thereafter, on May 21, 1980, we issued a Memorandum and Order which posed certain questions which arose from our preliminary review of the FES, and we scheduled a prehearing conference for June 19, 1980, to consider, inter alia, the most appropriate manner for our inquiries to be addressed.

On June 6, 1980, the NRC Staff filed a motion for summary disposition covering all environmental contentions admitted to this proceeding. On June 10, 1980, we issued a Memorandum which invited the parties to discuss at the forthcoming prehearing conference their plans for responses to the Staff's motion. That Memorandum also invited comments on the effect, if any, of the Commission's newly issued policy statement concerning the treatment in environmental reviews of the probabilities and consequences of serious (formerly "Class 9") accidents. On June 16, 1980, prior to the prehearing conference, the Staff provided answers to the questions we had posed on May 21, 1980. (The Applicant provided its answers to those questions on July 11, 1980.)

At the prehearing conference, we heard oral argument on the effect (if any) of the Commission's new policy statement on consideration of the likelihood and effects of serious accidents. In particular, we inquired whether there were any "special circumstances" which might dictate that the policy statement be applied to this proceeding, but we deferred any decision on the applicability of the policy statement. See Second Prehearing Conference Order, dated July 8, 1980, pp. 3-4. Later in this opinion (Part

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12/ Public availability of the FES was announced by Federal Register notice published at 45 Fed. Reg. 28549 (April 29, 1980).

IV.A), we conclude that there are no special circumstances which would cause us to invoke the policy statement in this proceeding.

At the prehearing conference, we also discussed the factual presentation which CREC wished to offer on each of its contentions, both in response to the Staff's summary disposition motion and at an evidentiary hearing, if one were to be held. CREC's previous discovery response had been quite limited and in part had led to the Staff's motion. CREC indicated, however, that it possessed additional information of which it had become aware subsequent to its earlier discovery response. As a result, we agreed that CREC would supplement its discovery response and, thereafter, the Staff would revise its summary disposition motion to the extent appropriate. Finally, as a result of portions of the FES which we considered to be of questionable acceptability, we propounded several additional questions to the parties. Second Prehearing Conference Order, supra, pp. 4-6. The Staff provided answers to these questions on August 29, 1980.

CREC provided a lengthy supplemental response to NRC Staff interrogatories on July 17, 1980. In response to second-round discovery requests (which we permitted by our Order dated July 29, 1980), CREC provided additional information on September 10, 1980. Thereafter, in response to CREC's request (which all parties had supported), the Board by Order dated September 29, 1980 granted a postponement of the schedule for the operating license proceeding until the completion of the parties' obligations in the simultaneous show-cause proceeding involving the

potential for liquefaction at the LACBWR site.[13/] That proceeding was before this same Board, and CREC was a party in both proceedings. Mr. Frederick M. Olsen, III was also admitted as an intervenor in the show-cause proceeding and was consolidated with CREC for purposes of participation in that proceeding. On February 24, 1981, we issued a Partial Initial Decision in the show-cause proceeding which disposed of all issues but one. LBP-81-7, 13 NRC 257. Because that remaining issue paralleled one of the safety matters involved in the full-term operating license application, we granted the Staff's request to consolidate the two proceedings by our Memorandum and Order (Consolidating Show-Cause and Operating License Proceedings), LBP-81-31, 14 NRC 375 (August 19, 1981). In doing so, we ruled that the pretrial procedures in the FTOL proceeding which had been suspended by our Order of September 29, 1980 could be resumed.

Shortly thereafter, on September 9, 1981, the NRC Staff filed an amendment to its motion for summary disposition of all environmental contentions. On September 11, 1981, we issued a Memorandum establishing a schedule for responding to the Staff's motion and posing a question concerning the potential applicability of certain proposed Commission regulations. (See discussion of contentions 19 and 22, infra.) The Applicant on October 5, 1981 (corrected on October 7) filed a response in support of the Staff's amended motion which also responded to the Board's inquiry. In its response, the Applicant noted that it was in the process of preparing its own motion for summary disposition of environmental contentions. On October 5, 1981, the Staff filed comments on the Board's

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13/ The show-cause proceeding is designated as Docket No. 50-409 SC.

inquiry. Because of a change of address of CREC's representative (of which the Board had not been informed prior to our receipt of the NRC Staff's letter of October 8, 1981), we extended the time for CREC to respond to the Staff's motion until November 2, 1981. See Memorandum dated October 13, 1981. CREC has failed to respond to the Staff's amended motion.

During a telephone conference call on November 12, 1981, upon being apprised that the Applicant's motion for summary disposition was still forthcoming, we informed the parties that we would await the filing of that motion, and responses thereto, before ruling on either the Staff's or Applicant's motion. We also were advised that the Staff would consider filing affidavits providing certain additional information relevant to the seismic question which remained from the show-cause proceeding. See Memorandum (Concerning Telephone Call), dated November 13, 1981.

The Staff filed this additional seismic information on January 28, 1982. On February 2, 1982, the Applicant filed its motion for summary disposition of environmental contentions. By Order dated February 5, 1982, we established schedules for responding to these filings. The Staff advised us that it did not intend to respond to the Applicant's motion, and the Applicant has advised that it will not respond to the Staff's seismic affidavit. CREC has not responded to the Applicant's motion, and neither CREC nor Mr. Olsen has responded to or commented upon the Staff's seismic affidavit.

As a result of certain apparent internal inconsistencies in the Staff's January 28, 1982 seismic affidavit, we initiated a telephone conference call on July 1, 1982 to identify to the parties certain questions which we had

concerning that affidavit. This call was memorialized in a Memorandum dated July 2, 1982, which posed certain questions and called upon the Staff and other parties to provide additional information. We have not yet received any responses to our inquiries and are thus not able to take further action at this time on the outstanding seismic issue.

II. Standards for Summary Disposition

The Commission's Rules of Practice provide for summary disposition of certain issues on the pleadings, where "the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law." 10 C.F.R. § 2.749(d). The Commission and Appeal Board have encouraged the use of summary disposition to resolve contentions where an intervenor has failed to establish that a genuine issue exists. Northern States Power Co. (Prairie Island Nuclear Generating Plant, Units 1 & 2), CLI-73-12, 6 AEC 241, 242 (1973), aff'd sub nom. BPI v. AEC, 502 F.2d 424 (D.C. Cir. 1974); Houston Lighting and Power Co. (Allens Creek Nuclear Generating Station, Unit 1), ALAB-590, 11 NRC 542, 550-51 (1980); Mississippi Power & Light Co. (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-130, 6 AEC 423, 424-25 (1973). The "summary disposition rule (10 C.F.R. § 2.749) provides an ample safeguard against an applicant or the * * * staff being required to expend time and effort at a hearing on any contention advanced by an intervenor which is manifestly

unworthy of exploration." Gulf States Utilities Co. (River Bend Station, Units 1 and 2), ALAB-183, 7 AEC 222, 228 (1974).

The Commission's summary disposition procedures have been analogized to Rule 56 of the Federal Rules of Civil Procedure. Cleveland Electric Illuminating Co. (Perry Nuclear Power Plant, Units 1 and 2), ALAB-443, 6 NRC 741, 753-54 (1977); Alabama Power Co. (Joseph M. Farley Nuclear Plant, Units 1 & 2), ALAB-182, 7 AEC 210, 217 (1974). Decisions arising under the Federal Rules thus may serve as guidelines to licensing boards in applying 10 C.F.R. § 2.749. Perry, ALAB-443, supra at 754; Public Service Co. of New Hampshire (Seabrook Station, Units 1 & 2), LBP-74-36, 7 AEC 877, 878-79 (1974). Under both Federal and NRC rules, the record is to be reviewed in the light most favorable to the party opposing the motion. Poller v. Columbia Broadcasting System, Inc., 368 U.S. 464, 473 (1962); Crest Auto Supplies, Inc. v. Ero Manufacturing Co., 360 F.2d 896, 899 (7th Cir. 1966); United Mine Workers of America, Dist. 22 v. Roncco, 314 F.2d 186, 188 (10th Cir. 1963); Pennsylvania Power & Light Co. (Susequehanna Steam Electric Station, Units 1 and 2), LBP-81-8, 13 NRC 335, 337 (1981), directed certification denied, ALAB-641, 13 NRC 550 (1981); Seabrook, LBP-74-36, supra, 7 AEC at 879.

Finally, the burden of proof lies upon the movant for summary disposition, who must demonstrate the absence of any issue of material fact. Adickes v. Kress and Co., 398 U.S. 144, 157 (1970); Perry, ALAB-443, supra, 6 NRC at 753. Thus, if a movant fails to make the requisite showing, its motion may be denied even in the absence of any response by the proponent of a contention. Id. Nonetheless, where a proponent of a contention fails to

respond to a motion for summary disposition, it does so at its own risk: for, if a contention is to remain litigable, there must at least be presented to the Board a sufficient factual basis "to require reasonable minds to inquire further". Pennsylvania Power and Light Co. (Susquehanna Steam Electric Station, Units 1 and 2), ALAB-613, 12 NRC 317, 340 (1980).

Under the NRC Rules of Practice, there is required to be annexed to a motion for summary disposition a "separate, short and concise statement of the material facts as to which the moving party contends that there is no genuine issue to be heard." 10 C.F.R. § 2.749(a). Where such facts are properly presented and are not controverted, they are deemed to be admitted. Id. The Staff's original motion for summary disposition failed to include the requisite statement. Hence, under Perry, ALAB-443, supra, the motion could have been dismissed as procedurally defective. Instead, we chose to permit CREC to supplement its discovery responses and to allow the Staff to refile its motion if that course of action were appropriate in light of the supplemented discovery. When the Staff filed its amended motion, it included a statement which is intended to comply with the requirements of 10 C.F.R. § 2.749(a). The Applicant's motion also includes such a statement.

In our view, the Staff's statement is marginal, at best. It is clearly "short" and "concise"--consisting of six cursory sentences which are largely negatives of the six contentions which they address. But the sentences are generally more in the nature of legal conclusions which, if accepted, would justify our dismissing the contentions under review. The statement does not for the most part include the facts which, if undisputed, would lead us to

reach those legal conclusions. For that reason, we might be justified in dismissing the Staff's motion for lack of adequate support.

Instead, we have taken into account both the substance of the affidavits provided by the Staff and the failure of CREC to have responded to the Staff's motion. Moreover, we are considering the Staff's and Applicant's motions together, on a contention-by-contention basis, and we have taken into account the considerably more detailed statement which accompanied the Applicant's motion. Insofar as the Staff's motion is concerned, however, we will decline to apply that portion of 10 C.F.R. § 2.749(a) which provides that "[a]ll material facts set forth in the statement required to be served by the moving party will be deemed to be admitted unless controverted * * *". To the extent we consider contentions on the basis of the Staff's motion, we will limit our consideration to the affidavits and other documentary material before us (including the FES) and the statements made by CREC or the Staff in response to discovery requests. We turn now to the particular contentions to which the motions are directed.

III. Rulings on Motion

The Staff's original motion for summary disposition was supported by the affidavits of Dr. Edward F. Branagan, Jr. (contentions 2A and 8),[14/]

14/ Affidavit of Dr. Edward F. Branagan, Jr., Environmental Scientist, Radiological Assessment Branch, Division of Systems Integration, Office of Nuclear Reactor Regulation (NRR), NRC, dated May 20, 1980 (hereinafter "Branagan Aff.").

Dr. John V. Nehemias (contention 2B),[15] Dr. Reginald L. Gotchy (contention 9),[16] Dr. Darrel A. Nash (contention 19),[17] and Dr. Sidney E. Feld (contention 22).[18] The Staff's amended motion included no additional affidavits. The Applicant's motion was supported by the affidavits of Thomas A. Steele (contentions 8 and 19),[19] Irving L. Chait (contention 19),[20] and Larry H. Thorson (contention 22).[21] The Staff's response to the Board's questions of May 21, 1980 was supported by the affidavit of Dr. Robert P. Geckler.[22] The

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15/ Affidavit of Dr. John V. Nehemias, Senior Health Physicist, Radiological Assessment Branch, Division of Site Safety and Environmental Analysis, NRR, dated May 15, 1980 ("Nehemias Aff.").

16/ Affidavit of Dr. Reginald L. Gotchy, Senior Radiobiologist, on assignment with the Radiological Assessment Branch, Division of Systems Integration, NRR, dated June 5, 1980 ("Gotchy Aff.").

17/ Affidavit of Dr. Darrel A. Nash, Section Leader, Utility Section, Utility Finance Branch, Division of Engineering, NRR, dated May 21, 1980 ("Nash Aff.").

18/ Affidavit of Dr. Sidney E. Feld, Regional-Environmental Economist, Utilty Finance Branch, Division of Engineering, NRR, dated May 16, 1980 ("Feld Aff.").

19/ Affidavits of Thomas A. Steele, Director of Environmental Affairs, Dairyland Power Cooperative, dated December 1, 1981 and December 11, 1981 ("Steele Aff. 2 and 3").

20/ Affidavit of Irving L. Chait, Manager, Power, Environmental and Electrical Systems Planning Group, Power Technology Division, Burns and Roe, Inc., dated December 18, 1981 ("Chait Aff.").

21/ Affidavit of Larry H. Thorson, Manager of Energy Conservation and Load Management, Dairyland Power Cooperative, dated December 4, 1981 ("Thorson Aff.").

22/ Affidavit of Dr. Robert P. Geckler, Senior Environmental Project Manager, Environmental Engineering Branch, Division of Engineering, NRR, dated June 16, 1980 ("Geckler Aff.").

Applicant's response to those questions was supported by the affidavit of Thomas A. Steele.[23] The NRC Staff's answers to the questions we posed at the June 19, 1980 prehearing conference were supported by the Affidavit of James J. Shea.[24] In addition, in response to a request for admissions by CREC, the NRC Staff presented the affidavit of Ralph Caruso.[25]

We will now address each of CREC's contentions, seriatim.

A. Contention 2A reads as follows:

> 2A. CREC contends that the excessive off-gas emissions from LACBWR are inimical to public health and safety, and fail to comply with the restrictions set forth in 10 C.F.R. Part 50, Appendix I.

Contrary to CREC's assertion that off-gas emissions from LACBWR are excessive, both the Applicant's and Staff's motions for summary dispostion point out that the plant complies with design objectives set forth in 10 C.F.R. Part 50, Appendix I. These regulations set numerical design objectives for limiting the doses to offsite individuals to as low as reasonably achievable (ALARA). Thus, a showing that a facility's releases are within Appendix I design objectives establishes conformance to the ALARA requirement (see 10 C.F.R. §§ 20.1(c), 50.34a and 50.36a) and it follows

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23/ Affidavit of Mr. Steele (see n. 19) dated July 11, 1980 ("Steele Aff. 1").

24/ Affidavit of James J. Shea, Project Manager for LACBWR, dated August 29, 1980 ("Shea Aff.").

25/ Affidavit of Ralph Caruso, Project Manager for LACBWR, dated August 21, 1981 ("Caruso Aff.").

that the emissions are therefore neither excessive nor inimical to public health and safety.

The dose levels set forth in the FES show that operation of LACBWR falls within the design objectives of Appendix I (FES §§ 3.6.3; 5.5.2; 5.5.3). This is further substantiated by Dr. Branagan in his affidavit where he explains that the noble gases released are less than 75% of the design objectives of Appendix I and particulate releases are less than one-fifth of the objectives (Branagan Aff., pp. 2-3).

The Board inquired into the method of computing offsite doses from airborne effluents in accordance with Reg. Guide 1.109, which the Staff had used in estimating radiation doses to individuals near the plant (FES, § 5.5.1). Dose models in Reg. Guide 1.109 are independent of the type of terrain, whereas the area surrounding LACBWR is not flat. In response, James Shea stated that the effect of changes in topography on dose estimates are taken into account in the atmospheric transport and dispersion model described in Reg. Guide 1.111 (Shea Aff., p. 2). This model was used in conjunction with the terrain heights in the LACBWR region to determine the dilution factor used in the dose assessment (FES, Appendix E).

CREC has not presented any factual basis or explanation for its allegation that off-gas emissions from LACBWR are excessive and fail to comply with Appendix I restrictions. It has provided no information, evidence, data or knowledge to raise any issue of fact concerning off-gas emissions from LACBWR, nor did it respond to either the Applicant's or the Staff's motion for summary disposition. Indeed, from its responses to discovery, it is clear that what CREC is really claiming is that off-gas

emissions from LACBWR are more than 0 and hence are excessive. Given the provisions of 10 C.F.R. Part 50, Appendix I, as described above, such a claim cannot be entertained by us. See 10 C.F.R. § 2.758(a). We agree with the Applicant's and Staff's showing that LACBWR operation meets Appendix I design objectives. Summary disposition is therefore granted.

B. Contention 2B reads as follows:

> 2B. CREC contends that the excessive off-gas levels at LACBWR are inimical to the health and safety of plant employees, and fail to comply with the restrictions set forth in 10 C.F.R. Part 20.

Similar to contention 2A, CREC in contention 2B asserts that LACBWR off-gas emissions are excessive. In addition CREC alleges the emissions fail to comply with the radiation protection standards for plant employees as set forth in 10 C.F.R. Part 20. Again, both the Applicant and Staff cite evidence that CREC's claims are unsupported, LACBWR off-gas emissions are not excessive, and are less than the standards set forth in 10 C.F.R. Part 20.

The Applicant and Staff cite the FES (§ 5.5.2) to show that employee exposure levels at LACBWR are below 10 C.F.R. Part 20 limits. Furthermore, Dr. Nehemias in his affidavit explains that the 11-year occupational exposure record at LACBWR has been in compliance with Part 20, except for one incident (Nehemias Aff., p. 2). This incident, admitted to by the Applicant, indicated that two individuals had been exposed to airborne concentrations of radioactive materials in excess of 10 C.F.R. Part 20 limits on May 13, 1975 when the reactor vessel head was raised. (We do not understand this incident to represent an exposure resulting from off-gas

emissions.) Both the Applicant and Staff deny that this one incident either indicates a significant departure from a good radiation protection program or that it supports the contention that LACBWR fails to comply with the Part 20 restrictions.

The Applicant makes the following additional point. Because annual average exposure to LACBWR employees has been well below the limits in 10 C.F.R. Part 20, the Staff concluded that "there will be no measurable[26/] radiological impact on man from routine operation" (FES § 5.5.3). Therefore, occupational radiation exposures from any source can not be deemed excessive and, from this, it follows that occupational exposures from off-gas emissions can not themselves be excessive. Motion, p. 14.

Both the Applicant and Staff assert that CREC has produced no factual basis for the existence of excessive off-gas emissions or occupational exposure levels. As in the case of contention 2A, the heart of CREC's claim appears to be that any occupational exposures are excessive, even though they are within the limits of 10 C.F.R. Part 20. We cannot entertain that claim. 10 C.F.R. § 2.758(a). Moreover, CREC (in responses to discovery) provided no support for its apparent claim that worker exposure calculations are insufficiently precise. Its references to information concerning

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26/ The Board questions the statement that the radiological impact from routine operation is not "measurable." Releases are measurable, and the exposure of individuals to such releases itself creates an impact. We are reading the Staff's statement to mean that adverse health impacts from routine operation which complies with Part 20 standards are not measurable.

dosimeter inaccuracies are essentially irrelevant, inasmuch as off-gas emissions (the subject of this contention) by definition occur outside the plant and are monitored there, primarily through means other than dosimeters. Occupational exposures occur mainly within the plant. Off-gas emissions measured outside the plant near the stack are not large enough to contribute a significant fraction of the annual dose to a worker entering, leaving or walking among plant locations. Nehemias Aff., pp. 2-3.

Given the factual information provided by the Applicant and Staff and the failure by CREC to respond to the motion for summary disposition, the Board agrees that off-gas emissions from LACBWR operations comply with the restrictions set forth in C.F.R. Part 20 and that the plant is not inimical to the health and safety of its employees as a result of such off-gas emissions. We therefore grant summary disposition.

C. Contention 8 reads as follows:

8. CREC contends that LACBWR's radiological environmental monitoring program is inadequate in terms of:

   (a) the methodology of the testing,

   (b) the size and distribution of the sample, and

   (c) the frequency of the sampling, in the light of the off-gas levels, the geography of the area to the east of the plant, and the fact that the area is primarily a dairy region.

Dr. Branagan, in his affidavit, explains the requirement by NRC that two types of monitoring are necessary to ensure that radioactive effluents are within acceptable limits: radiological effluent monitoring and radiological environmental monitoring (Branagan Aff., pp.3-4). The latter

type of monitoring, which is in controversy in this contention, is necessary to assess the build-up, if any, of measured releases of radioactivty to the environment. In considering the adequacy of the LACBWR radiological environmental monitoring program, the Board was unclear as to what standard had been used in the FES to evaluate that program. Specifically, we requested the parties to address the requirements of recent NRC guidelines on this subject, set forth in a Branch Technical Position (BTP, Revision 1, November, 1979), and whether the present LACBWR program is in compliance with those guidelines. See Board Question 3, May 21, 1980. (Those guidelines were not mentioned in the FES.)

The Staff's analysis (Branagan Aff., pp. 4-6, and related Tables) shows that the LACBWR radiological environmental monitoring program complies with the requirements of the BTP.27/ The methodology of the program considers the principal pathways of exposure to radioactivity and ensures that they are monitored. Furthermore, the size and distribution of samples collected, as compared with the requirements of the BTP, are adequate to monitor the principal pathways of exposure. DPC is required to participate in an Interlaboratory Comparison Program to ensure the precision and accuracy of the measurements of radioactive material in environmental samples. The frequency of sampling, in compliance with the requirements of

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27/ After the Licensee applied for conversion of its Provisional Operating License to a FTOL, the BTP was updated to increase the number of direct radiation monitors to 40. The Licensee will be required to meet this standard.

the BTP, ranges from weekly to annual depending upon the type of sample, e.g., milk samples are collected more frequently during the grazing season.

The Applicant's motion for summary disposition states that LACBWR's radiological environmental monitoring program complies with all requirements of the NRC Staff Regulatory Guide 4.1 and the U.S. Environmental Protection Agency (Steele Aff. 2, ¶¶ 1-3 and Exh. 1) and also to the Staff BTP (Steele Aff. 1). The program employs standard methodology and its performance over the past ten years indicates that the size, frequency and distribution of samplings are in compliance and that exposure pathways are adequately monitored. It is tailored to the local meteorology, growing seasons, topography, population distribution and argicultural and human activities in the LACBWR area. (See also our discussion of contention 2A, pointing out that dose assessments from atmospheric and dispersion models take into account the effect of changes in topography.)

In response to discovery requests, CREC has failed to produce any factual basis for the contention that DPC's radiological environmental monitoring program is inadequate. CREC's claims to the contrary in its discovery responses are either irrelevant to the adequcy of DPC's monitoring program (e.g., alleged deficiencies in the State of Wisconsin monitoring program) or unsupported allegations which do not raise any genuine issue of material fact. Furthermore, CREC failed to respond to both the Staff's and Applicant's motions for summary disposition and the affidavits included therein or to file a statement of facts to which it claims there is a genuine issue. Accordingly, the Board grants summary disposition of contention 8.

D. Contention 9 reads as follows:

> 9. CREC contends that the exposure of the population to the combined and synergistic health effects of the airborne effluents released by LACBWR and the Genoa 3 coal plant is inimical to public health and safety.

The starting point for this contention is, of course, the presence of the Genoa 3 coal-fired generating plant on the same site as the LACBWR facility. Apparently CREC is contending that airborne effluents from LACBWR and Genoa 3 somehow combine synergistically to produce harmful effects greater than the sum of the separate effects of the effluents from each plant.

In support of its synergism thesis, CREC, in responding to discovery, has referenced three scientific papers. The Staff has pointed out, however, that data on combined and synergistic health effects of airborne effluents from coal and nuclear power plants is essentially non-existent; that there is some experimental data and theoretical bases (such as the three articles in question) to suppose that the airborne effluents from Genoa 3 and LACBWR will interact; but that there is no definitive data to show that such interaction "will have a synergistic effect on the distribution of radiation dose (and therefore health effects) among members of the public" (Gotchy Aff., pp. 1-2). The Staff's affiant concludes that "the radiological and toxic impacts [of LACBWR and Genoa 3] would be additive and not synergistic, and would not be 'inimical to public health and safety'" (id., p. 4).

In its motion, the Applicant points out that LACBWR complies with all applicable regulations regarding protection of the public from radiation

(FES, §§ 5.5, 10.4.1). In its Statement Of Material Facts As To Which There Is No Genuine Issue To Be Heard, the Applicant adds that Genoa 3 attains all applicable air quality standards adopted by the U.S. Environmental Protection Agency (1979 Annual Air Quality Monitoring Summary (Dairyland Power Cooperative)) and that the air quality standards issued pursuant to 40 C.F.R. § 81.350, which apply to Genoa 3, were developed in the presence of the background radiation from LACBWR.

Given the foregoing factual background, including the failure by CREC to demonstrate any credible basis for believing that any particular synergistic effects would occur at LACBWR and the lack of any response by CREC to the summary disposition motions, we agree with both the Applicant and Staff that the alleged synergistic effects, and their impact on public health and safety, are too remote and speculative to warrant consideration at an evidentiary hearing. More must be shown than that these effects are theoretically possible. See, e.g., Northern States Power Co. (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-455, 7 NRC 41, 48 (1978). In our view, CREC's showing does not satisfy these requirements. Summary disposition is therefore granted.

E. Contention 19 reads as follows:

> CREC contends that the economic cost-benefit balance does not favor issuance of a full-term operating license due to LACBWR's small size, relative obsolescence and retrofitting requirements; its low operating efficiency as evidenced by low megawatt hours of cumulative output, low unit capacity factor, and substantial downtime; the costs of spent fuel storage; the rising costs of fuel and maintenance; and the eventual costs of decommissioning.

The Applicant and Staff each claim that this contention involves only the economic consideration of the expense of the power produced by LACBWR and whether LACBWR is the most financially advantageous way for DPC to produce power. Hence, they assert, the contention is beyond the purview of both NRC's authority and this proceeding. They cite the line of cases exemplified by Consumers Power Co. (Midland Plant, Units 1 and 2), ALAB-458, 7 NRC 155, 161-63 (1978); Tennessee Valley Authority (Hartsville Nuclear Plant, Units 1A, 2A, 1B, 2B), ALAB-367, 5 NRC 92, 102-03 (1977); Illinois Power Co. (Clinton Power Station, Units 1 and 2), ALAB-340, 4 NRC 27, 48 (1976); and Northern States Power Co. (Praire Island Nuclear Generating Plant, Units 1 and 2), ALAB-244, 8 AEC 857, 862 (1974).

That line of cases holds, in essence, that unless a nuclear plant has environmental disadvantages in comparison to reasonable alternatives, differences in financial cost do not enter into the NEPA process and, hence, into NRC's cost-benefit balance. Only after an environmentally superior alternative has been identified do economic considerations become relevant.

In our Second Prehearing Conference Order, dated July 8, 1980, we expressed our tentative conclusion that we would not dismiss Contention 19 on legal grounds. It was our view that CREC was seeking an alternative with differing environmental impacts than full-term operation of LACBWR--i.e., plant shutdown, with the difference in supply made up by conservation and, to the extent necessary, power produced by other means (such as coal). Cf. LBP-80-2, supra, n. 5, 11 NRC at 73-74, 80. Accordingly, financial costs could be an element in our consideration of those alternatives.

As elaborated in our discussion of Contention 22, infra, a new rule recently put into effect by the Commission precludes the consideration in an operating license proceeding of issues concerning alternative energy sources. 10 C.F.R. § 51.53(c). By virtue of this rule, we cannot consider whether conservation, together with such power as may be needed from other than nuclear sources, constitutes a preferable alternative to continued operation of LACBWR. All that remains of Contention 19 is the claim that the financial costs of LACBWR--including the particular costs listed in the contention, all of which are economic rather than environmental--tilt the cost-benefit balance against authorizing further operation of LACBWR. We agree with the Applicant and NRC Staff that, as so limited, the contention is barred by the cases cited earlier. We grant summary disposition on that basis.

F. Contention 22 reads as follows:

> 22. CREC contends that DPC has not sufficiently promoted energy conservation programs to decrease electrical demand, such as flat rate structure, higher peak usage rates, and elimination of electrical usage promotion, which would eliminate the need for LACBWR, as the least cost-effective unit in the DPC system.

Although this contention is stated in terms of DPC's alleged lack of adequate energy conservation programs, it essentially amounts to a challenge to the need for the power which LACBWR produces. As such, it represents a contention which may no longer be considered in a proceeding of this type.

On March 26, 1982, the Commission published in the Federal Register a final rule which amends 10 C.F.R. Part 51 to provide that, for purposes of

the National Environmental Policy Act (NEPA), need for power and alternative energy source issues are not to be considered in operating license proceedings for nuclear power plants. 47 Fed. Reg. 12940. The rule became effective April 26, 1982 and applies to ongoing licensing proceedings such as this one.

When this rule was issued in proposed form, we invited the parties to comment on its potential effect (were it to be adopted) in this proceeding. Memorandum dated September 11, 1981 (unpublished). CREC did not respond. The Staff and Applicant, in filings dated October 5, 1981 (DPC's filing was corrected on October 7), each opined that the then proposed rule would preclude litigation of need for power and alternative energy source issues in this proceeding.

The Staff and Applicant each acknowledged an exception for "special circumstances," in accordance with the provision of 10 C.F.R. § 2.758. As an example of "special circumstances," the Applicant points to unusual or extraordinary environmental impacts of a particular facility, whereas the Staff suggests that the circumstance that LACBWR was never subject to a need-for-power review at the construction-permit stage might constitute a special circumstance. The Staff stresses, however, that a party wishing to invoke 10 C.F.R. § 2.758 must file an appropriate petition, and it notes that CREC had not then done so. (Although CREC might not have had an occasion to do so at that time, it still has not done so and has not filed any response to our inquiry which might suggest that it was planning to seek a special circumstances exemption from the new rule.)

The adopted rule is similar to the proposed rule in all respects pertinent to our evaluation of this contention. Moreover, insofar as we are aware, there are no unusual or extraordinary environmental impacts which have resulted from or will attend the operation of LACBWR. And the lack of a previous need-for-power review is not unique to this facility; rather, since it encompasses a number of reactors--including many of those subject to the SEP program--it does not appear to be the type of special circumstance to which the 10 C.F.R. § 2.758 procedures are directed. In any event, we are faced with no petition to invoke 10 C.F.R. § 2.758. That being so, we conclude that contention 22 should be dismissed on the basis of newly amended 10 C.F.R. § 51.53(c).

We further note that, in proposing the new rule, the Commission made the following statement (which it endorsed in the Statement of Considerations for the new rule):

> In all cases to date, and in all foreseeable future cases, there will be some benefit in terms of either meeting increased energy needs or replacing older less economical generating capacity. Experience shows that completed plants are in fact used to their maximum availability for either purpose. Such facilities are not abandoned in favor of some other means of generating electricity.

46 Fed. Reg. 39440, 39441 (August 3, 1981), endorsed at 47 Fed. Reg. 12940, 12941, 12942 (March 26, 1982). The affidavits filed in support of the Applicant's summary disposition motion provide ample support for the proposition that LACBWR is being used--and will continue to be used--as an integral part of DPC's system. (Chait Aff., ¶ 1; Steele Aff. 3, ¶ 2). The FES, as augmented by the Staff's affidavit, also indicates that DPC has and will continue to have a need for the power to be produced by LACBWR (FES,

§§ 8.2.6 and 8.3; Feld Aff., pp. 3-4). See also our own decision in the spent-fuel-pool expansion proceeding, LBP-80-2, supra, n. 5, 11 NRC at 77-100. Moreover, that decision, as well as the FES and one of the Staff's affidavits, demonstrate that LACBWR is more economical to operate than many of DPC's other facilities (id., 11 NRC at 93-94; FES, § 8.1; Nash Aff.). A major premise of the Commission in issuing the new rule thus appears to be borne out by the facts of this case.

Finally, both the Applicant and Staff indicate that CREC's assertions concerning DPC's alleged lack of an energy conservation program are not well founded (Thorson Aff.; Feld Aff., pp. 2-3). In these circumstances, given the lack of any response by CREC, we would have a sufficient basis for granting summary disposition of contention 22 even had the new rule not been put into effect.

IV. Other Environmental Questions

Apart from CREC's contentions, several other environmental questions have entered into our consideration during the course of this proceeding. We discuss these matters here.

A. At the prehearing conference on June 19, 1980, we discussed with the parties the effect (if any) on this proceeding of a then newly enunciated interim policy statement of the Commission on the consideration of the likelihood and effects of serious (formerly "Class 9") accidents. See Second Prehearing Conference Order, dated July 8, 1980 (unpublished). Under the interim policy statement (which, we understand, is still in effect), it is clear that for proceedings of this type, which were ongoing

at the time the policy statement was issued, "special circumstances" would have to be shown in order for the effects of those serious accidents to be included in our environmental review. 45 Fed. Reg. 40101 (June 13, 1980). At the conference, CREC advanced three different reasons which it claimed were "special circumstances". We deferred ruling on them at that time. Second Prehearing Conference Order, supra, p. 4.

We now conclude that none of the reasons advanced by CREC would constitute a special circumstance warranting our consideration of the effects of serious accidents in this proceeding. In its interim statement, the Commission equated the special circumstances which would invoke the application of the new policy to ongoing proceedings as comparable to the special circumstances which previously had caused the Commission to depart from its existing general practice (sanctioned by a proposed Annex to Appendix D of 10 C.F.R. Part 50) of not considering the effects of serious accidents. Those circumstances were present where a reactor (such as the Clinch River Breeder Reactor Plant) was "very different" from more conventional light water reactor plants for which the safety experience base is much broader, or where the environmental risk of some serious accidents warranted special consideration (as in the case of floating nuclear power plants).28/ The circumstances advanced by CREC are not comparable.

28/ The Commission's examples of special circumstances in connection with the interim policy statement appear to connote a somewhat different meaning to "special circumstances" than would attend the use of that term in conjunction with 10 C.F.R. § 2.758. See discussion at pp. 25-26, supra.

CREC first claimed that the existence of the liquefaction question which had been raised by the Staff in its show-cause order of February 25, 1980 indicated that the risk of a serious accident at LACBWR was greater than would normally be anticipated. In our February 24, 1981 Partial Initial Decision (LBP-81-31, supra), we found that liquefaction was not a problem for safety structures at the LACBWR site if the assumed safe shutdown earthquake (SSE) produced peak ground acceleration at the site of 0.12g or less. We left open the question of the size of the SSE and the peak ground acceleration which it would produce at the site. The January 28, 1982 affidavit submitted by the Staff takes the position that the peak ground acceleration at the site would be less than 0.12g. Although we have raised certain questions about this affidavit, we note that, should the peak acceleration at the site be found to exceed 0.12g, and if as a result liquefaction were found to be likely to affect safety structures in the event of an SSE, we would require that steps be taken--e.g., dewatering--to preclude the occurrence of liquefaction under safety structures. That being so, we do not consider the liquefaction question as constituting a special circumstance which would cause us to consider the effects of serious accidents in this proceeding.

The other two "special circumstances" cited by CREC were the absence of a full-term operating license for this facility, and the fact that LACBWR is an older reactor assertedly of unique design. The fact that LACBWR (and a number of other reactors) are older reactors which operate under provisional operating licenses does not mean that they are necessarily less safe or have had a less thorough AEC or NRC review than reactors which have received

full-term licenses. One of the purposes of this proceeding is to determine whether any changes to LACBWR's operating authority are warranted. But the absence of a final determination on this question, or the mere fact that LACBWR was constructed at an earlier date under earlier standards, does not import greater risk to LACBWR's current operation or create a special circumstance for examining the effects of serious accidents. Nor does LACBWR's design, which is not so different from other boiling water reactors as to be comparable to the exceptions from the general rule earlier authorized by the Commission.

In short, CREC has not proffered any special circumstances which would warrant our applying the interim policy statement to an ongoing proceeding. We accordingly decline to do so.

B. During the second prehearing conference, we pointed out to the parties that the discussion of alternatives in the FES failed to include any consideration of the environmental impact of alternatives. Rather, the discussion was exclusively in terms of the economic costs of those alternatives. FES, § 8.1 and Table 8.1-1. For that reason, the discussion of alternatives in the FES was inadequate under standards spelled out in decisions such as Tennessee Valley Authority (Hartsville Nuclear Plant, Units 1A, 2A, 1B, 2B), ALAB-367, 5 NRC 92, 102-105 (1977). We called upon the Staff and other parties to supplement the record in this regard (Tr. 1097-99; Second Prehearing Conference Order, supra, p. 5).

In response, the Staff, on August 29, 1980, provided copies of NUREG-0332 ("Health Effects Attributable To Coal and Nuclear Fuel Cycle Alternatives," draft dated September 1977) and an article appearing in the

Journal of the American Medical Association entitled "Health Evaluation of Energy-Generating Sources." The Board has examined these articles and determined that, if the FES were supplemented by their addition, the governing standards for evaluation of alternative energy sources would be satisfied. In addition, these articles are not inconsistent with the conclusions with respect to the relative merit of various energy alternatives reached in the FES. FES, Summary and Conclusions, pp. i and ii, ¶¶ 4 and 7.

For the reasons discussed in conjunction with contentions 19 and 22, supra (i.e., the recently revised rules on the consideration of energy alternatives), it now is not necessary for an operating-license FES to treat energy alternatives. 10 C.F.R. §§ 51.23(e), 51.26(a). However, as set forth above, the FES in this case already discusses those alternatives, albeit incorrectly (when judged by standards in effect at the time of the document's issuance). If the discussion of alternatives is to be used to favor issuance of the FTOL (as in the present FES), it must include elements requisite to such a discussion. Thus, the FES should be modified either to include the additional material on energy alternatives supplied by the Staff or, alternatively, at the discretion of the Staff, to delete any discussion of the cost or other aspects of those alternatives. We direct that the FES be so modified. 10 C.F.R. § 51.52(b)(3).

C. We have examined the responses to our questions concerning the FES and are satisfied with those responses. Where errors in the FES have been identified, we direct the Staff to take the necessary action to correct the FES. For example, see the Staff's response dated June 16, 1980, to our question 4 (Geckler Aff., p. 9).

V. ORDER

For the reasons stated, it is, this 2nd day of August, 1982

ORDERED

1. That the NRC Staff's and the Applicant's motions for summary disposition of environmental contentions are hereby granted; and

2. That the NRC Staff's Final Environmental Statement (NUREG-0191) be modified as provided in Parts IV.B and C of this Memorandum and Order.

In accordance with 10 C.F.R. §§ 2.760, 2.762, 2.764, 2.785 and 2.786, this Memorandum and Order shall be effective immediately upon issuance and shall constitute the final action of the Commission on the matters considered herein forty-five (45) days after issuance, subject to any review pursuant to the above-cited Rules of Practice. (Because this proceeding will authorize no new operation but merely is considering the conversion of an existing provisional operating license to a full-term operating license, we do not regard the provisions of 10 C.F.R. § 2.764(f) as applicable.)

Exceptions to this Memorandum and Order may be filed by any party within ten (10) days after its service. A brief in support of the exceptions shall be filed within thirty (30) days thereafter (forty (40) days in the case of the NRC Staff). Within thirty (30) days of the filing and service of the brief of the appellant (forty (40) days in the case of

the NRC Staff), any other party may file a brief in support of, or in opposition to, the exceptions.

ATOMIC SAFETY AND
LICENSING BOARD

Charles Bechhoefer, Chairman
ADMINISTRATIVE JUDGE

Dr. George C. Anderson, Member
ADMINISTRATIVE JUDGE

Ralph S. Decker, Member
ADMINISTRATIVE JUDGE