

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION



In the Matter of )  
DAIRYLAND POWER COOPERATIVE ) Docket No. 50-409  
(La Crosse Boiling Water ) (Liquefaction)  
Reactor) (Show Cause)

LICENSEE'S RESPONSE TO  
INTERVENORS' INTERROGATORIES  
DATED OCTOBER 2, 1980

Pursuant to 10 C.F.R. § 2.740b(b), Dairyland Power Cooperative (Dairyland or DPC), the holder of Provisional Operating License No. DPR-45 for the La Crosse Boiling Water Reactor (LACBWR) and the licensee in the above-captioned proceeding, hereby submits the following answers and objections <sup>1/</sup> in response to the interrogatories propounded on October 2, 1980 by consolidated intervenors

1/ Dairyland is furnishing these responses in the hope of expediting this proceeding. In doing so, Dairyland has purposefully limited its objections only to the most obvious cases and, unless otherwise indicated, Dairyland does not concede either (a) that the information sought by any of the subject interrogatories is relevant to the issues identified in the Director of Nuclear Reactor Regulation's Order to Show Cause, dated February 25, 1980, and the Licensing Board's Prehearing Conference Order dated September 30, 1980, which have been admitted as matters in controversy in this proceeding and to which the inquiry in this proceeding is limited, or (b) that this information is even reasonably calculated to lead to the discovery of admissible evidence. Cf. 10 C.F.R. § 2.740(b)(1).

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Coulee Region Energy Coalition (CREC) and Frederick M. Olsen,  
III:

Objections to CREC Interrogatories Nos. 1 - 13, 18, 19, and  
22 and Olsen Interrogatories Nos. 4 - 6, 10, 15 and 16

Dairyland objects to CREC Interrogatories Nos. 1 - 13,  
and 19, and Olsen Interrogatories Nos. 5, 6, 10, 15 and 16 on the  
grounds of relevance and materiality in that the information  
sought through these interrogatories concerns issues which go beyond  
the scope of the issues admitted as matters in controversy in this  
proceeding. As noted by the Licensing Board in Allied-General  
Nuclear Services, et al. (Barnwell), LBP-77-13, 5 NRC 489, 492 (1977),  
the NRC Rules of Practice only permit

discovery of information or documents  
'relevant to the subject matter in-  
volved in the proceeding,' and then  
further qualifies and limits the term  
'subject matter' to the contentions  
admitted by the presiding officer in  
the proceeding. See 10 C.F.R.  
§ 2.740(b)(1).

On page 14 of its September 30, 1980 Prehearing Conference  
Order, the Licensing Board specifically stated that discovery in  
this proceeding at this time was "not to include . . . the matter  
discussed in part II of this opinion" (i.e., the magnitude of the  
safe shutdown earthquake (SSE) and the corresponding ground accelera-  
tion design value for the LACBWR site). See also Tr. 65-66. All of  
the above-referenced interrogatories seek information concerning  
the derivation of the SSE and ground acceleration value for the  
LACBWR site. These interrogatories therefore seek information which

goes beyond the scope of discovery permitted under the Board's Order establishing the discovery schedule. Accordingly, under the NRC Rules of Practice and case law precedents, these interrogatories are objectionable and must be denied.<sup>2/</sup>

In addition, Dairyland also objects to Olsen Interrogatory No. 4, CREC Interrogatory No. 22 and part of CREC Interrogatory No. 18. Olsen Interrogatory No. 4 and the second part of CREC Interrogatory No. 18 request information concerning the costs associated with the various liquefaction analyses performed at the LACBWR site and the design and installation of a dewatering system at the site. Consideration of such costs goes beyond the scope of this proceeding. CREC Interrogatory No. 22 requests the "names, titles, and roles of all NRC personnel instrumental in NRC Staff decision not to request a dewatering system for LACBWR." This interrogatory calls for speculation on Dairyland's part and this type of information could more appropriately be obtained from the NRC Staff.

#### Remaining CREC Interrogatories

##### No. 14

The grounds on which Dairyland contested the conclusions contained in the WES study are set forth in (1) Dairyland's Answer to Order to Show Cause (March 25, 1980), (2) the Response to NRC

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<sup>2/</sup> See Boston Edison Co. (Pilgrim 2), LBP-75-42, 2 NRC 159 (1975); Allied-General Nuclear Services (Barnwell), LBP-77-13, 5 NRC 489 (1977). See also Glass v. Philadelphia, 64 F.R.D. 559 (E.D. Pa. 1974) (interrogatories subject to objection when they exceed the scope of discovery suggested in court order).

Concerns on Liquefaction Potential At La Crosse Boiling Water Reactor (LACBWR) site near Genoa, Vernon County, Wisconsin, prepared by Dames & Moore in consultation with Dr. H. Bolton Seed (March 21, 1980), (3) an earlier Dames & Moore Report on the Liquefaction Potential at the LACBWR site (Sept. 28, 1979), (4) the Dames & Moore Report entitled Response to NRC Questions (July 11, 1980), and (5) the Dames & Moore Report entitled Final Assessment of Liquefaction Potential at the LACBWR Site. (July 25, 1980).

No. 15

The WES Report caused neither Dairyland nor Dames & Moore to change their original conclusion that the LACBWR site is safe from liquefaction. Any WES studies on the LACBWR site were performed for the NRC Staff, not Dairyland. Copies of "any and all" such studies are presumably available for inspection and copying from the NRC Staff and/or at the NRC Public Document Room in the La Crosse Public Library.

No. 16

Counsel for Dairyland was making the argument that, inasmuch as Dairyland had shown cause to the satisfaction of the NRC Staff, Dairyland and the Staff had effectively agreed to settle the proceeding pursuant to the procedure set forth in Section 2.203 of the NRC Rules of Practice entitled "Settlement and Compromise."

No. 17

Pursuant to 10 C.F.R. § 2.741(a)(1), Dairyland will permit CREC to inspect and copy at the standard per page rate all pertinent reports and correspondence concerning the liquefaction

potential of the LACBWR site at its offices in La Crosse. Please contact Mr. John Parkyn (608-689-2331) to make the necessary arrangements.

No. 18

The Dames & Moore Report to Dairyland (subsequently submitted to NRC) entitled "Preliminary Report, Proposed Measure to Mitigate the Potential for Liquefaction at LACBWR Plant Site near Genoa, Wisconsin" dated November 29, 1979, contains a detailed discussion of the dewatering methods studied and proposed by Dairyland and Dames & Moore.

No. 20

During the course of technical discussions between the NRC Staff (and its consultant, WES) and Dairyland (and its consultant, Dames & Moore) concerning the liquefaction potential at the LACBWR site, Dairyland and Dames & Moore thought that it would be helpful to have the opinion of a third party. Dames & Moore felt that Dr. Seed was an expert whose opinions would be respected by all parties involved in the technical discussions. A review by Dr. Seed was sought only when several aspects of the liquefaction question remained unresolved after lengthy discussions between Dames & Moore and the NRC Staff. The liquefaction question arose in connection with the NRC Staff's systematic evaluation program (SEP) under which all earlier site analyses for LACBWR and ten other operating reactors are being reviewed. The NRC Staff had not questioned Dames & Moore's earlier analyses of the LACBWR site, and

therefore, before the liquefaction question arose in the SEP program there had been no need to consult Dr. Seed.

No. 21

Dr. Seed is regarded as a pioneer in the field of soil liquefaction research by geotechnical engineers, and the procedures developed by Dr. Seed and his co-workers are extensively used to analyze liquefaction potential. Dames & Moore also utilized other independently developed (yet similar) procedures (used by Japanese engineers) in their analyses and arrived at essentially the same conclusions as those arrived at using Dr. Seed's analytical techniques.

No. 23

Dairyland is not familiar with the term "flaring" in this context. Copies of the technical specifications prepared by Sargent & Lundy are available for inspection and copying in accordance with the procedure set forth in Dairyland's response to Interrogatory No. 17.

No. 24

See response to Interrogatory No. 17.

Remaining Olsen Interrogatories

Nos. 1 and 2

Dames & Moore's analyses have shown that there is no potential for liquefaction even in the free-field conditions at the LACBWR plant site, (i.e., the soils around the plant site). However, the potential for liquefaction immediately below and immediately around the plant is of greater concern. Because the

sands at LACBWR are highly pervious and the probable duration of strong motion shaking will be less than 8 to 10 seconds for the SSE, the excess pore pressures that may be generated during the SSE will be dissipated fast enough to preclude any harmful "spreading" effect of liquefaction, even during the highly unlikely event of free-field liquefaction at the LACBWR site.

No. 3

No direct correlation was possible because the predictions were made for N values under the reactor containment of the LACBWR plant and blow count data were obtained under other areas of the plant. However, the data obtained in connection with the samples taken since that report was submitted indicate that the trend predicted by Dames & Moore is correct. See the July 25, 1980 Dames & Moore Report.

No. 7

The methods used by Dames & Moore were developed on the basis of performance of sands during past earthquakes. A direct verification of Dames & Moore's predictions cannot be made until liquefaction can be observed to occur or not to occur during an earthquake. However, such observations have been the basis for the research that has led to the development of the analytical procedures used by Dames & Moore.

No. 8

The Dames & Moore predictions are based upon generally accepted analytical procedures which are employed to predict the

occurrence or non-occurrence of liquefaction. Dairyland believes that these procedures are accurate and that the predictions based upon the use of these procedures are correct.

No. 9

The average groundwater conditions existing at the LACBWR site were used in the various analyses performed to assess the liquefaction potential. If fluctuations in water levels are taken into account, no substantial changes will result in the conclusions drawn.

No. 11

It is unclear what is meant by the area of geologic influence exerted by a driven pile at the LACBWR site. Soil profiles of the LACBWR site obtained through test borings are contained in the Dames & Moore Reports described in Dairyland's Response to CREC Interrogatory No. 4.

No. 12

No.

No. 13

The answer to the first part of the interrogatory is yes. The second part of the interrogatory is not clear, but as shown in the various Dames & Moore Reports, the increased density of the soils at the LACBWR site in the vicinity of the driven piles provides additional assurance against the occurrence of liquefaction in those areas.



No. 14

No significant movements are expected to occur as a result of the occurrence of the SSE at the LACBWR site.

No. 17

Dairyland and its consultant do not believe that the liquefaction potential at the LACBWR site will be affected by the water chemistry of the Mississippi River.

No. 18

No.

Respectfully submitted,

*Kevin P. Gallen*

for O. S. Hiestand  
Attorney for  
Dairyland Power Cooperative

OF COUNSEL

Kevin P. Gallen

Morgan, Lewis & Bockius  
1800 M Street, N.W.  
Washington, D.C. 20036

Dated: October 27, 1980

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

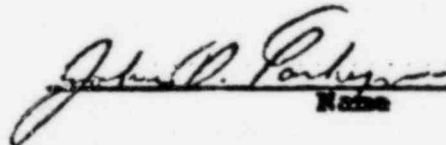
In the Matter of	)	
DAIRYLAND POWER COOPERATIVE	)	Docket No. 50-409
(La Crosse Boiling Water Reactor)	)	Liquefaction
	)	(Show Cause)

AFFIDAVIT OF JOHN D. PARKYN

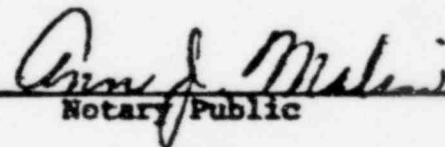
State of Wisconsin: County of Vernon:

John D. Parkyn, being first duly sworn, on oath says as follows:

1. That he is employed by Dairyland Power Cooperative, 2615 East Avenue South, La Crosse, Wisconsin, as Assistant Superintendent.
2. That he is duly authorized to answer the Interrogatories numbered CREC 14, 15, 17, and OLSON 18, propounded by Consolidated Intervenors on October 2, 1980, on behalf of the Applicant Dairyland Power Cooperative.
3. That the above-mentioned and attached answers are true and correct to the best of his knowledge and belief.

  
\_\_\_\_\_  
Name

Subscribed and sworn to before me this 24<sup>th</sup> day of October, 1980.

  
\_\_\_\_\_  
Notary Public

My Commission Expires: Feb 26, 1984

POOR ORIGINAL

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of )  
DAIRYLAND POWER COOPERATIVE )     Docket No. 50-409  
(La Crosse Boiling Water Reactor) )     Liquefaction  
  )     (Show Cause)

AFFIDAVIT OF HUGH A. TOWSLEY

State of Wisconsin: County of Vernon

Hugh A. Towsley, being first duly sworn, on oath says as follows:

1. That he is employed by Dairyland Power Cooperative, 2615 East Avenue South, La Crosse, Wisconsin, as Quality Assurance Supervisor.

2. That he is duly authorized to answer the Interrogatory numbered CREC 23, propounded by Consolidated Intervenor on October 2, 1980, on behalf of the Applicant Dairyland Power Cooperative.

3. That the above-mentioned and attached answers are true and correct to the best of his knowledge and belief.

Hugh A. Towsley  
Name

Subscribed and sworn to before me this 24<sup>th</sup> day of October, 1980.

Alvin J. Melvin  
Notary Public

My Commission expires: Feb 26, 1984

POOR ORIGINAL

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of  
DAIRYLAND POWER COOPERATIVE  
(LaCrosse Boiling Water  
Reactor)

}  
Docket No. 50-409  
Liquefaction  
(Show Cause)  
}

AFFIDAVIT OF Dames & Moore

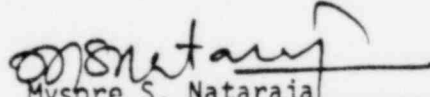
State of Maryland: County of Montgomery:

Mysore S. Nataraja, being first duly sworn, on oath says as follows:

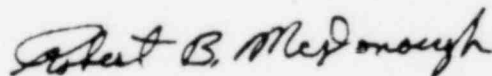
1. That he is employed by Dames & Moore, 7101 Wisconsin Avenue, Washington, D.C. 20014, as Principal-in-Charge (Acting).

2. That he is duly authorized to answer the Interrogatories numbered 18, 20, and 21 by CREC and 1, 2, 3, 7, 8, 9, 11, 12, 13, 14, and 17 by Frederick M. Olsen, propounded by Consolidated Intervenors on October 2, 1980, on behalf of the Applicant Dairyland Power Cooperative.

3. That the above-mentioned and attached answers are true and correct to the best of his knowledge and belief.

  
Mysore S. Nataraja  
Name

Subscribed and sworn to before me on this twenty-fourth day of October, 1980.

  
Robert B. McDonough  
Notary Public

My Commission expires July 1, 1982.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of )  
DAIRYLAND POWER COOPERATIVE ) Docket No. 50-409  
(La Crosse Boiling Water ) (Liquefaction)  
Reactor) (Show Cause)

CERTIFICATE OF SERVICE

Service has on this day been effected by  
personal delivery or first class mail on the following  
persons:

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for O. S. Hiestand

October 27, 1980