

June 2, 1980

In reply, please
refer to LAC-6961

DOCKET NO. 50-409

Director of Nuclear Reactor Regulation
ATTN: Mr. Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

SUBJECT: DAIRYLAND POWER COOPERATIVE
LA CROSSE BOILING WATER REACTOR (LACBWR)
PROVISIONAL OPERATING LICENSE NO. DPR-45
HEALTH SYSTEMS DIVISION, EQUIFAX CONTRACT
(NO. NRC-01-79-010) - EPIDEMIOLOGIC STUDIES

Reference: (1) NRC Letter, Ziemann to Linder,
dated March 4, 1980.

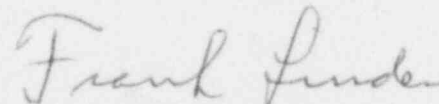
Gentlemen:

In response to your letter, Reference 1, enclosed is the completed questionnaire containing information relevant to epidemiologic studies to determine the feasibility of performing such a study on the health effects of exposure to low-level ionizing radiation.

If you have any questions regarding this response, please contact the LACBWR Health & Safety Supervisor, Leo J. Krajewski, at (608)-689-2331.

Very truly yours,

DAIRYLAND POWER COOPERATIVE



Frank Linder, General Manager

FL:LJK:af

Enclosure

cc: J. Keppler, Reg. Dir., NRC-DRO III

La Crosse Boiling Water Reactor
 Facility (LACBWR)
 Name of Respondent Leo J. Krajewski
 Department Health and Safety Dept.
 Title of Record Administrative Records

FIELD VISIT - OCCUPATIONAL

A. Individual Identification (Personnel and Medical Depts.)

1. Please indicate which of the following are part of an individual's record and the form in which they are maintained.

			FORM OF RECORD			
	<u>Yes</u>	<u>No</u>	<u>Paper</u>	<u>Microfilm/ Fiche</u>	<u>Magnetic Tape</u>	<u>On Line Data</u>
Name						
Last	X	---	X	---	---	---
First	X	---	X	---	---	---
Middle Initial	X	---	X	---	---	---
Maiden Name	---	X	---	---	---	---
Address	X	---	X	---	---	---
Telephone	X	---	X	---	---	---
Social Security Number	X	---	X	---	---	---
Employee or ID Number	X	---	X	---	---	---
Date of Birth	X	---	X	---	---	---
Place of Birth	---	X	---	---	---	---
Sex	---	X	---	---	---	---
Race	---	X	---	---	---	---
Marital Status	---	X	---	---	---	---
Military Service	X	---	X	---	---	---
Next of Kin	X	---	X	---	---	---
Father's Last Name	---	X	---	---	---	---
Mother's Maiden Name	---	X	---	---	---	---
Present Occupation or Job Title	X	---	X	---	---	---
Present Employer	X	---	X	---	---	---
Date of Death	X	---	X	---	---	---

2. How far back do these records go? 1940

3. Are inactive records maintained? Yes X No ---
 If yes, in what form? (please check) Where are inactive records located? (please check)

Paper <u>X</u>	On site <u>X</u>
Microfilm/fiche <u>---</u>	Off site <u>X</u>
Magnetic Tape <u>---</u>	Destroyed <u>X</u>
On Line Data <u>---</u>	If destroyed, which years? <u>Terminated prior to 1978.</u>

OCCUPATIONAL FIELD VISIT

4. Have there been any major changes in your record keeping procedures in past years?

Yes _____ No X

If so, how do prior records differ from the format indicated above?

5. Can a complete roster of all those employed at any time in the facility be obtained?

Yes X No _____

6. Can you estimate roughly how many people are employed full time in the facility now?

70

7. How many employees would you estimate have ever been employed full time at this facility?

300

8. What proportion of those employed are monitored for radiation exposure?

99%

9. What proportion of those monitored are exposed to over:
 a) 100 mrem/yr.

95%

b) 200 mrem/yr.

90%

10. Please indicate which of the following are included in an individual's record and the form in which they are maintained.

	Yes No		Paper	Form of Record		On Line Data
				Micro fiche	film/ Magnetic Tape	
Date(s) of Hiring	<u>X</u>	_____	<u>X</u>	_____	_____	_____
Date(s) of Termination	<u>X</u>	_____	<u>X</u>	_____	_____	_____
Past Job Titles	<u>X</u>	_____	<u>X</u>	_____	_____	_____
Notes on Pre-Employment Exam	<u>X</u>	_____	<u>X</u>	_____	_____	_____
Regular Medical Exams	<u>X</u>	_____	<u>X</u>	_____	_____	_____
Exit Exam	_____	<u>X</u>	_____	_____	_____	_____
Unusual Medical Exams	_____	<u>X</u>	_____	_____	_____	_____
Lab Tests	_____	<u>X</u>	_____	_____	_____	_____
Work Restrictions or Disability	<u>X</u>	_____	<u>X</u>	_____	_____	_____
Workers Compensation Claims	<u>X</u>	_____	<u>X</u>	_____	_____	_____
Health Insurance Claims	_____	<u>X</u>	_____	_____	_____	_____
Pension Benefits	<u>X</u>	_____	<u>X</u>	_____	_____	_____
Records of Death	<u>X</u>	_____	<u>X</u>	_____	_____	_____

11. How far back do these records go? 1940

OCCUPATIONAL FIELD VISIT

12. Are inactive records maintained? Yes X No

If yes, in what form? (please check)

Where are inactive records located? (please check)

Paper X
Micro Film/Fiche
Magnetic Tape
On Line Data

On Site X
Off Site X
Destroyed X
If Destroyed, which years?
Those terminated prior to 1978.

13. Have there been any major changes in your record keeping procedures in past years? Yes No X

If so, how do prior records differ from the format indicated above?

14. How many years of employment are required before receiving benefits? None

15. Have any epidemiologic studies of radiation health effects been carried out at the facility before? Yes No X

If yes, please note by whom and briefly describe each one.

16. What is the procedure for obtaining access to these records?

Employee and supervisor have access. All others only through legal petition.

La Crosse Boiling Water Reactor
 Facility (LACBWR)
 Name of Respondent Leo Krajewski
 Department Health and Safety Dept.
 Title of Record Radiation Records

FIELD VISIT - OCCUPATIONAL

B. Exposure Data

1. Please indicate which of the following part of an individual's record and the form in which they are maintained.

	FORM OF RECORD					
	<u>Yes</u>	<u>No</u>	<u>Paper</u>	<u>Microfilm/ Fiche</u>	<u>Magnetic Tape</u>	<u>On Line Data</u>
Name						
Last	X	---	X	---	---	---
First	X	---	X	---	---	---
Middle Initial	X	---	X	---	---	---
Maiden Name	---	X	---	---	---	---
Address	---	X	---	---	---	---
Telephone	---	X	---	---	---	---
Social Security Number	X	---	X	---	---	---
Employee or ID Number	X	---	X	---	---	---
Date of Birth	X	---	X	---	---	---
Place of Birth	---	X	---	---	---	---
Sex	---	X	---	---	---	---
Race	---	X	---	---	---	---
Marital Status	---	X	---	---	---	---
Military Service	---	X	---	---	---	---
Next of Kin	---	X	---	---	---	---
Father's Last Name	---	X	---	---	---	---
Mother's Maiden Name	---	X	---	---	---	---
Present Occupation or Job Title	X	---	X	---	---	---
Present Employer	X	---	X	---	---	---
Date of Death	---	X	---	---	---	---

2. How far back do these records go? 1965

3. Are inactive records maintained? Yes X No ---
 If yes, in what form? (please check) Where are inactive records located? (please check)

Paper <u> X </u>	On site <u> X </u>
Microfilm/fiche <u> ---</u>	Off site <u> ---</u>
Magnetic Tape <u> ---</u>	Destroyed <u> ---</u>
On Line Data <u> ---</u>	If destroyed, which years? <u> ---</u>

OCCUPATIONAL FIELD VISIT

4. Have there been any major changes in your record keeping procedures in past years? Yes _____ No X

If so, how do prior records differ from the format indicated above?

5. Can you roughly estimate the number of full time employees monitored this year? _____ 70

6. Can you roughly estimate the number of full time employees monitored since the facility opened? _____ 300

7. Please indicate the type of dosimeters and procedures currently used at this facility and answer the questions in the table.
(If you monitor neutron dose separately from γ , β , and x-rays please fill out the separate second sheet as well.)

Method of Dosimetry

	Film		TLD		Pocket		Bioassay		Whole Body		Other	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
a. Which of these methods are used?	Until 1972		Since 1972				Until 1978					
	<u>x</u>		<u>x</u>		<u>x</u>		<u>x</u>		<u>x</u>			
b. Which year did this use begin?	<u>1967</u>		<u>1972</u>		<u>1966</u>		<u>1967</u>		<u>1968</u>			
c. Are records of dose kept for each employee?	<u>x</u>		<u>x</u>		<u>x</u>		<u>x</u>		<u>x</u>			
d. If not, are any records kept of their exposures (e.g. an exposure log)? If yes, please fill out Part C-Exposure Log.												
e. How frequently are these read?												

OCCUPATIONAL FIELD VISIT

	Film		TLD		Pocket		Bioassay		Whole Body		Other _____	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No

- f. Are these read in-house? X X X X X
- g. If not, name either the company or individual responsible. Landauer Eberline Eberline
- h. For quality control do you ever submit dosimeters or samples exposed to a know level? X X X X X
- i. Are quality control records kept? X X X X X
- j. Approximately what proportion of full time employees are monitored by each method?
 Until 1972 100% Since 1972 95% 80% 20% 90%

8. Have there been any major changes in your dosimetry or dosimetric procedures in past years? Yes _____ No X _____
 If yes, please note how they differ from the above. _____

7.A. Neutron Dosimetry

Method of Dosimetry

	Film		TLD		Pocket		Other <u>Time/Doserate</u>	
	Yes	No	Yes	No	Yes	No	Yes	No

- a. Which of these methods are used?
 Until 1972 X X X X
- b. Which year did this use begin? 1967 1972
- c. Are records of dose kept for each employee? X X X X

OCCUPATIONAL FIELD VISIT

7.A. Neutron Dosimetry (cont.)

Method of Dosimetry

	Film		TLD		Pocket		Other <u>Time/Doserate</u>	
	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
d. If not, are any records kept of their exposures (e.g. an exposure log)? If yes, please fill out Part C-Exposure Log.	___	___	___	___	___	___	___	___
e. How frequently are these read?	<u>Monthly</u>		___	___	___	___	<u>Quarterly</u>	
f. Are these read in-house?	___	<u>X</u>	___	___	___	___	___	<u>X</u>
g. If not, name either the company or individual responsible.	<u>Landauer</u>		___	___	___	___	___	___
h. For quality control do you ever submit dosimeters or samples exposed to a know level?	___	<u>X</u>	___	___	___	___	___	___
i. Are quality control records kept?	___	<u>X</u>	___	___	___	___	___	___
j. Approximately what proportion of full time employees are monitored by each method?	<u>80%</u>		___	___	___	___	<u>100%</u>	

8.A. Have there been any major changes in your neutron dosimetry or dosimetric procedures in past years? Yes X No

If yes, please note how they differ from the above. Neutron exposure via pocket dosimeter and TLD have been attempted with poor results. TLD use for neutron will continue to be studied.

OCCUPATIONAL FIELD VISIT

9. Is there a standard location for wearing the dosimeter? (e.g. at the neck, at the belt, inside apron, etc.) Yes _____ No X
 If yes, please note _____

10. We would like to know if you have any other recorded information about radiation exposure, please indicate if the following information is recorded for individual employees, and, if so, where and in what media.

Data			LOCATION				
	Yes	No	Employees Record	Paper	Separate File Microfilm/ Fiche	Magnetic	On Line Tape
a. Dosimeter reading known to be inaccurate (e.g. badge left in radiation area during a procedure)	X		X	X			
b. Radiation accident or incident.		X					
c. Annual external exposure, present year	X		X	X			
d. Annual external exposure, past years by year	X		X	X			
e. Annual internal exposure, present year		X					
f. Annual internal exposure, past years by year		X					
g. Cumulative lifetime external exposure	X		X	X			
h. Cumulative lifetime internal exposure		X					
i. Previous occupational radiation exposure	X		X	X			
j. Medical radiation exposures		X					
k. Exposure to toxic chemicals		X					
If yes, which ones?							

OCCUPATIONAL FIELD VISIT

11. Do the cumulative external dose measurements include neutron dose? Yes X No
12. Is there some exposure level below which personnel are not monitored? If yes, what is that level? Yes No X
13. How are exposures at "less than minimum detectable levels" reported? (please check)
As equal to the "minimum detectable level"
As "less than minimum detectable level" X
At zero
Other (specify)
14. Is there an industrial hygiene group in the facility? If yes, whom may we contact? Yes No X
15. Do industrial hygiene records exist? If yes, which years do they cover? Yes No X
16. What is the procedure for obtaining access to employee records? Request to Health & Safety Supervisor by employee or legal requirement.

Facility _____
 Name of Respondent _____
 Department _____
 Title of Record _____

FIELD VISIT

C. Exposure Log

1. Please indicate which of the following are part of an individual's record and the form in which they are maintained.

	FORM OF RECORD					
	Yes	No	Paper	Microfilm/ Fiche	Magnetic Tape	On Line Data
Name						
Last	___	___	___	___	___	___
First	___	___	___	___	___	___
Middle Initial	___	___	___	___	___	___
Maiden Name	___	___	___	___	___	___
Address	___	___	___	___	___	___
Telephone	___	___	___	___	___	___
Social Security Number	___	___	___	___	___	___
Employee or ID Number	___	___	___	___	___	___
Date of Birth	___	___	___	___	___	___
Place of Birth	___	___	___	___	___	___
Sex	___	___	___	___	___	___
Race	___	___	___	___	___	___
Date of Notation	___	___	___	___	___	___

Please note any other items included in this log.

_____	___	___	___	___	___
_____	___	___	___	___	___
_____	___	___	___	___	___
_____	___	___	___	___	___
_____	___	___	___	___	___

2. How far back do these records go? _____

3. Are inactive records maintained? Yes _____ No _____
 If yes, in what form? (please check) _____ Where are inactive records located? (please check)

Paper _____	On site _____
Microfilm/fiche _____	Off site _____
Magnetic Tape _____	Destroyed _____
On Line Data _____	If destroyed, which years? _____

EXPOSURE LOG

4. Have there been any major changes in your record keeping procedures in past years?

Yes _____ No _____

If so, how do prior records differ from the format indicated above?
