

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
CONSUMERS POWER COMPANY)	Docket No. 50-155
(Big Rock Point Plant))	(Spent Fuel Pool Modification)

NRC STAFF RESPONSES TO
INTERROGATORIES OF JOHN O'NEILL, II

Interrogatory 1 (a), (b), (c)

1. For each spent fuel pool that has been granted an extension of capacity, supply the information requested below:
 - a) Name of the spent fuel pool.
 - b) Facility that above spent fuel pool serves.
 - c) Operator of above.

Response

Table 1 provides the requested information. The operator of the facility was interpreted as the licensee. The documents relied upon were:

1. NRC records available in the Public Document Room; and
2. NUREG-0380, "Program Summary Report".

WPaulson
Project Manager

8011060384.

TABLE 1

SPENT FUEL STORAGE CAPACITY

<u>Licensee</u>	<u>Date of Original Operating License</u>	<u>Original Capacity</u>	<u>Requested Expansion</u>	<u>Date of Request</u>	<u>Approval</u>
Arkansas Power & Light Company	5/21/74	253	590	10/76	12/76
Arkansas Power & Light Company	7/18/78	486	---	-	-
Duquesne Light Company	1/30/76	272	833	12/76	5/78
Consumers Power Company	8/30/62	193	441	4/79	-
Tennessee Valley Authority - Unit 1	6/26/73	1080	3471	8/77	9/78
- Unit 2	6/28/74	(each)	(each)		
- Unit 3	7/2/76				
Carolina Power & Light Company - Unit 1	9/8/76	720	1386	9/76	10/77
- Unit 2	12/27/74	(each)	(each)		
Baltimore Gas & Electric Company - Unit 1	7/31/74	190	528	8/77	1/78
- Unit 2	8/13/76	(each)	(each)		
		528	830	7/79	9/80
		528	930	1/80	9/80
Indiana Michigan Electric Company - Unit 1	10/25/74	500	2050	11/78	10/79
- Unit 2	12/23/77				
Connecticut Yankee Atomic Power Company	6/30/67	336	1172	12/75	6/76
Nabraska Public Power District	1/18/74	740	2366	7/77	9/78
Florida Power Corp.	12/3/77	256	1163	1/78	-
Toledo Edison Company	4/22/77	260	735	12/77	8/79

TABLE 1 (Cont.)

<u>Licensee</u>	<u>Date of Original Operating License</u>	<u>Original Capacity</u>	<u>Requested Expansion</u>	<u>Date of Request</u>	<u>Approval</u>
Commonwealth Edison Company	9/28/59	672	---	-	-
Commonwealth Edison Company - Unit 2	12/22/69	1160	1440	12/75	7/78
- Unit 3	1/12/71	(each)	(each)		
		1440	3537	5/78	-
		(each)	(each)		
Iowa Electric Light & Power Co.	2/22/74	510	2050	10/77	7/78
Alabama Power Company	6/25/77	675	---	-	-
Power Authority of the State of New York	10/17/74	760	2244	7/78	-
Ohio Public Power District	5/23/73	178	483	4/75	7/76
Chester Gas & Electric Corp.	9/19/69	210	595	1/76	11/76
Georgia Power Company	8/6/74	840	3181	7/79	4/80
Georgia Power Company	6/13/78	1120	2845	7/79	4/80
Consolidated Edison Company	10/19/71	264	482	3/75	12/75
		482	980	5/80	-
Power Authority of the State of New York	12/12/75	264	840	6/76	3/78
Wisconsin Public Service Corp.	12/21/73	176	990	11/77	3/79
Maryland Cooperative Power	7/3/67	84	134	12/74	3/76
		134	440	4/78	-
Line Yankee Atomic Power Co.	9/15/72	318	953	3/75	10/75
		953	1545	9/79	-
Northeast Nuclear Energy Company	10/6/70	880	2184	7/76	6/77

Facility

Arkansas Nuclear One

Arkansas Nuclear One

Beaver Valley 1

Big Rock Point

Browns Ferry 1, 2 & 3

Brunswick 1 and 2

Calvert Cliffs 1 and 2

Calvert Cliffs 1

Calvert Cliffs 2

Cook 1 and 2

Connecticut Yankee
(Haddam Neck)

Cooper

Crystal River 3

Davis Besse

Facility

Dresden 1

Dresden 2 and 3

(Second)

Duane Arnold

Farley 1

FitzPatrick

Fort Calhoun

Ginna

Hatch 1

Hatch 2

Indian Point 2
(Second)

Indian Point 3

Kewaunee

La Crosse
(Second)

Maine Yankee
(Second)

Millstone 1

Facility

Millstone 2

Monticello

Nine Mile Point 1
(Second)

North Anna 1 (shared
North Anna 2 pool)

Oconee 1 and 2* (shared
(Second) pool)

Oconee 3

Oyster Creek

Palisades

Peach Bottom 2/3

Pilgrim 1

Point Beach 1 and 2
(Second) (shared pool)

Prairie Island 1 and 2
(Second) (shared pool)

Quad Cities 1 and 2

Rancho Seco

1/ Originally requested

TABLE 1 (Cont.)

<u>Licensee</u>	<u>Date of Original Operating License</u>	<u>Original Capacity</u>	<u>Requested Expansion</u>	<u>Date of Request</u>	<u>Approval</u>
Northeast Nuclear Energy Company	8/1/75	301	667	11/76	6/77
Northern States Power Company	9/8/70	740	2237	8/77	4/78
Niagara Mohawk Power Corp.	8/22/69	1140 1984	1984 3009	12/76 3/78	1/78 -
Virginia Electric & Power Company - Unit 1	11/26/76	400	966	5/78	8/79
- Unit 2	4/11/80				
Duke Power Company - Unit 1	2/6/73	336	750	2/79	6/79
- Unit 2	10/6/73	750	1312	7/80	-
Duke Power Company	7/19/74	216	474	9/75	12/75
New Jersey Central Power & Light Company	4/9/69	840	1800	3/76	3/77
Consumers Power Company	3/24/71	276	798	11/76	6/77
Philadelphia Electric Company - Unit 2	8/8/73	1100	2816	1/78	11/78
- Unit 3	7/2/74	(each)	(each)		
Boston Edison Company	6/8/72	900	2320	1/76	8/78
Wisconsin-Michigan Power Company - Unit 1	10/5/70	296	351	3/75	10/75
- Unit 2	11/16/71	351	1502	3/78	4/79
Northern States Power Company - Unit 1	8/9/73	198	687	11/76	8/77
- Unit 2	10/29/74	687	1120 <u>1/</u>	1/80	-
Commonwealth Edison Co. - Unit 1	10/1/71	1140	1460	12/75	1/78
- Unit 2	3/31/72	(each)	(each)		
Sacramento Municipal Utility District	8/16/74	244	579	12/75	6/76

Facility

Robinson 2

Salem 1

Salem 2

St. Lucie 1

San Onofre 1

Sequoyah 1

Surry 1 and 2

Three Mile Island 1

Three Mile Island 2

Trojan

Turkey Point 3 and 4

Vermont Yankee

Yankee Rowe
(Second)

Zion 1 and 2 (shared
(Second) pool)

* On site fuel transfer

TABLE 1 (Cont.)

<u>Licensee</u>	<u>Date of Original Operating License</u>	<u>Original Capacity</u>	<u>Requested Expansion</u>	<u>Date of Request</u>	<u>Approval</u>
Carolina Power & Light Company	7/31/70	236	272	9/75	2/76
Public Service Electric & Gas Co.-Unit 1	8/13/76	264	1170	11/77	-
Public Service Electric & Gas Co.-Unit 2	4/18/80	264	1170	11/77	4/80
Florida Power & Light Co.	3/1/76	310	728	8/77	3/78
Southern California Edison Co.	3/27/67	216	---	-	-
Tennessee Valley Authority	2/29/80	800	---	-	-
Virginia Electric & Power Co. - Unit 1	5/25/72	464	1044	5/77	3/78
- Unit 2	1/29/73				
Metropolitan Edison Co.	4/19/74	174	496	2/77	12/77
Metropolitan Edison Co.	2/8/78	442	---	-	-
Portland General Electric Co.	11/21/75	280	651	1/77	11/78
Florida Power & Light Co. - Unit 3	7/19/72	217	621	1/76	3/77
- Unit 4	4/10/73	(each)	(each)		
Vermont Yankee Nuclear Power Corp.	3/21/72	600	2000	11/76	9/77
Yankee Atomic Power Co.	7/9/60	172	391	9/75	12/76
		391	721	7/78	-
Commonwealth Edison Co.- Unit 1	4/6/73	340	868	10/75	8/76
- Unit 2	11/14/73	868	2112	5/78	2/80

Requested and approved as part of action taken for other units on site.

Interrogatory 1 (f)

i. For each spent fuel pool that has been granted an extension of capacity, supply the information requested below:

f) Is mixed oxide, plutonium/uranium spent fuel stored in this pool?

Response

Our records indicate that the following facilities have irradiated mixed-oxide fuel assemblies:

Saxton

San Onofre

Dresden 1

Big Rock Point

Quad Cities 1

Genoa

Our current information does not indicate how many of the irradiated mixed-oxide fuel assemblies are in the respective spent fuel pool storage facilities.

Documents relied upon:

NUREG-0002, Vol. 3, Final Generic Environmental Statement on the Use of Recycle Plutonium in Mixed Oxide Fuel in Light Water Cooled Reactors. This entire document is available in the Local Public Document Room at Charlevoix, Michigan.

WPaulson
Project Manager

Interrogatory 1 (i)

1. For each spent fuel pool that has been granted an extension of capacity, supply the information requested below:
 - i) What is the spent fuel pool's age?

Response

Table 1 indicates the date of the initial operating license which provides the best information we have regarding the age of the spent fuel pool. See Interrogatory 1 (a-c) response.

WPaulson
Project Manager

Interrogatory 1 (j), (k)

1. For each spent fuel pool that has been granted an extension of capacity, supply the information requested below:
 - j) What was the capacity of the spent fuel pool before the modification? (Answer in number of fuel assemblies stored.)
 - k) What is (or will be) the capacity of the spent fuel pool after the modification?

Response

Table 1 provides the requested information.

WPaulson
Project Manager

Interrogatory 1 (r)

1. For each spent fuel pool that has been granted an extension of capacity, supply the information requested below:
 - r) If this particular pool modification was (or will be) effected by any method other than the installation of new storage racks, explain.

Response

The provision for storage of additional spent fuel assemblies was by the addition of new racks in all cases.

Documents relied upon: None.

WPaulson
Project Manager

Interrogatory 2

2. Answer all question, "a" through "e", each spent fuel pool modification denied.

Response

To my knowledge, there have been no denials of spent fuel pool expansion applications to date.

WPaulson
Project Manager

Interrogatory 3

3. Supply the information requested in question "a" through "r" and "z" through "ee" each requested spent fuel pool modification that is still passing.

Response

See response to Interrogatory 1 (a-c).

WPaulson
Project Manager

Interrogatory 4

4. On October 9, 1980 there was a plutonium fire in the Hanford Washington Nuclear reservation. Was the plutonium that ignited in the spent fuel?

Response

The NRC has no first-hand information on the fire that occurred at the Hanford, Washington facility on October 9, 1980. The Hanford reservation is a Department of Energy (DOE) facility. However, as the result of your interrogatory, we contacted DOE by telephone. We were told that a can of repackaged plutonium scrap ruptured and caught fire.

WPaulson
Project Manager

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In the Matter of

CONSUMERS POWER COMPANY

(Big Rock Point Plant)

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Docket No. 50-155

(Spent Fuel Pool Modification)

AFFIDAVIT OF WALTER A. PAULSON

I, Walter A. Paulson, being first duly sworn, do depose and state:

1. I am the Nuclear Regulatory Commission Project Manager for the Big Rock Point Plant, Division of Licensing, Office of Nuclear Reactor Regulation, Nuclear Regulatory Commission, Washington, D. C. 20555.
2. My Professional Qualifications are attached heretc.
3. I prepared the responses to the Interrogatories of John O'Neill, II.

I hereby certify that the information given by me is true and accurate to the best of my knowledge and belief.

Walter A. Paulson

Walter A. Paulson

Subscribed and sworn to
before me this 4th day of November, 1980.

Elizabeth Ann Lytton
Notary Public

My Commission expires: July 1, 1982

PROFESSIONAL QUALIFICATIONS
OF
WALTER A. PAULSON

I am the Nuclear Regulatory Commission Project Manager for the Big Rock Point Plant as well as one other nuclear power plant. As a Project Manager I manage and participate in the review and evaluation of safety and environmental considerations associated with the design and operation of nuclear power facilities, especially those licensed for operation. I also currently manage and participate in the Systematic Evaluation Program which involves a comprehensive review and evaluation of older operating facilities to determine and document the acceptability of departures from current licensing requirements.

I received a Bachelor of Chemical Engineering Degree from Pratt Institute in 1957. In 1959, I received a Master of Science Degree in Nuclear Science and Engineering from Rensselaer Polytechnic Institute.

From 1958 to 1962 I was employed by E. I. duPont de Nemours at the Savannah River Plant and held the position of Chemical Engineer with responsibilities in the areas of heat transfer, fluid flow, instrumentation, and fuel element operational performance. From 1962 to 1973 I was employed by the National Aeronautics and Space Administration at the Lewis Research Center in Ohio. I held positions as nuclear engineer in heat transfer, fluid flow and shielding design, and supervisory nuclear engineer in these areas.

In May 1973, I joined the Nuclear Regulatory Commission (formerly AEC) as a Licensing Project Manager. I have also held the positions of Research Analyst, Technical Assistant, and Operating Reactors Project Manager.