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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
PUGET SOUND POWER & LIGHT)	Docket Nos. STN 50-522
COMPANY, et al.)	STN 50-523
)	
(Skagit/Hanford Nuclear Project,)	December 20, 1982
<u>Units 1 and 2)</u>)	

APPLICANTS' RESPONSE TO NWF/OEC
DISCOVERY REQUESTS

On December 1, 1982, the National Wildlife Federation/Oregon Environmental Council (NWF/OEC) served seventeen discovery requests upon the Applicants.¹ These included both interrogatories and requests for production of documents. Applicants hereby file their response to these requests.

Several of NWF/OEC's discovery requests have such a tenuous relationship to the contentions admitted in this proceeding that they fall beyond the permissible scope of discovery.

¹ Intervenors National Wildlife Federation and Oregon Environmental Council's Request for Production of Documents and Interrogatories (December 1, 1982).

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Nevertheless, in the spirit of cooperation, Applicants have decided to provide substantive responses to some of these requests. The fact that Applicants have so responded should not be construed as an admission of the relevance of the subject matter of these requests to this proceeding or to contentions in this proceeding, nor should it be construed as a waiver of the right to object in the future to the lack of relevance of the subject matter of these requests.

Applicants' substantive response to NWF/OEC's discovery requests is attached hereto. Applicants' objections to several of the discovery requests are provided below.

Objections to Certain Discovery Requests by NWF/OEC

Section 2.740(b)(1) of the Commission's Rules of Practice explicitly limits the scope of discovery in construction permit proceedings to subjects which "relate only to those matters in controversy which have been identified by the Commission or the presiding officer in the prehearing order." Thus, to the extent that a discovery request is not relevant to contentions that have been admitted by a licensing board, the request exceeds the scope of discovery permitted under the Commission's rules. Allied-General Nuclear Services (Barnwell Fuel Receiving and Storage Station), LbP-77-13, 5 NRC 489, 492 (1977). The Licensing Board's Memorandum and Order of July 6, 1982, p. 8, is fully in accord with this principle, since it only

authorizes discovery "as to the issues raised by the contentions which have been accepted by the Board." Consequently, under the Commission's Rules of Practice and the Licensing Board's order, NWF/OEC is permitted to request discovery only on admitted contentions.

In this case, discovery by NWF/OEC is restricted to Contentions 2 and 7, which are the contentions admitted by the Licensing Board for which NWF/OEC has been designated as lead party.² Contention 7 pertains to alleged environmental impacts from using hydroelectric facilities to provide peaking power. Contention 2 alleges that "[t]he Applicants have used an inaccurately low estimate of the financial cost of the Project in its Cost/Benefit Ratio." Furthermore, Contention 2 was accepted by the Licensing Board only with respect to the bases identified as A through D in the Second Supplement to Petition to Intervene of National Wildlife Federation and Oregon Environmental Council (May 21, 1982), pp. 2-3.³ Thus,

² See Memorandum and Order of November 2, 1982.

³ See Memorandum and Order of July 6, 1982, p. 2. In general, the four bases allege that (A) the Applicants' assumed capacity factor is unduly high; (b) the Applicants have not accounted for decommissioning costs; (C) the Applicants' assumed cost of money in Table 8.2-2 of the ASC/ER is unrealistically low; and (D) the Applicants' total cost figure is low compared to other plants owned by the Applicants.

it is these bases which form the "matters in controversy" with respect to Contention 2, and the scope of permissible discovery is correspondingly limited to requests that are relevant to these four bases.

To the extent that NWF/OEC may be attempting to elicit information regarding construction and operating costs of S/HNP that do not relate to these four bases, its discovery requests are objectionable. A petitioner is required to identify its contentions and bases prior to discovery, and he will not be heard to complain that it is not possible to formulate specific bases without the benefit of discovery. Northern States Power Co. (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-107, 6 AEC 188, 192, aff'd, CLI-73-12, 6 AEC 241 (1973). Thus, NWF/OEC may not propound discovery requests, which are not relevant to the four bases of Contention 2, for the purpose of framing a new basis that could possibly be interpreted as falling under the very general rubric of Contention 2.

It appears that several of the NWF/OEC discovery requests suffer from this infirmity, and the Applicants accordingly object to them. Each of these requests is discussed below.

Discovery Requests 1 and 2

These requests seek information regarding capacity factors and the operating history of Trojan Nuclear Project. The Trojan plant is not the subject of this proceeding; therefore it is not a proper subject of discovery.

To the extent that NWF/OEC may be attempting to use information regarding the capacity factors for Trojan as basis for supporting its allegation that the capacity factors for S/HNP are unduly high (i.e., Basis A of Contention 2), such information is not probative of this allegation. Trojan is only one plant and its operating history may or may not be indicative of the industry as a whole. Moreover, Trojan is a pressurized water reactor which was built in the early 1970s, and thus it is dissimilar to S/HNP, which is a boiling water reactor which is scheduled to be constructed during the latter half of the 1980s. Consequently, the history of Trojan and hence these requests are not relevant to Contention 2.

Discovery Requests 5 (in part) and 6

Discovery requests 5 (in part) and 6 seek documents, information and explanations regarding every item found on Table 8.2-2 of the ASC/ER. This table contains financial information for a wide spectrum of different types of costs of S/HNP, some of which have no relevance to Bases A, B and C of Contention 2 (i.e., capacity factors, decommissioning costs, and the cost of money). Furthermore, an explanation of the difference between S/HNP and WNP Unit 3 for each type of cost in Table 8.2-2 is not relevant to the explanation of the difference between S/HNP and WNP Unit 3 for the total cost, which is a subject of Basis D of Contention 2. Consequently,

to the extent that these requests seek information which is not relevant to the four bases of Contention 2, the requests are objectionable. Responses will be provided to these requests to the extent that they do relate to the four bases of Contention 2.

Discovery Request 7

This request seeks information and documents regarding a comparison of the cost of S/HNP with the cost of completing WNP Units 4 and 5. However, the cost of completion of WNP Units 4 and 5 (as differentiated from the total cost of these units) is not relevant to Basis D of Contention 2, and it has no discernable relevance to the other three bases of Contention 2.

Discovery Request 9

This request seeks information and documents regarding any quantification of environmental costs of S/HNP. This request is not relevant to Contention 2, which pertains to economic costs. In fact, the Licensing Board expressly reworded this contention to exclude environmental costs. See Memorandum and Order of October 29, 1982, p. 2, n. 2.

Discovery Request 11

This request seeks documents regarding the Applicants assumed interest rate during construction of 9% as set out in Table 8.2-2 of the ASC/ER or any other potential interest rate. However, Table 8.2-2 does not refer to an interest rate of 9% or to any other interest rate. Presumably, NWF/OEC was

intending to refer to the 9% annual interest rate during construction which appears in Table 8.2-1. In any case, the requested information is not relevant to Bases A through D of Contention 2, which pertain to capacity factors, decommissioning costs, cost of money used in Table 8.2-2, and comparisons of the total costs of S/HNP and other facilities owned by the Applicants.

Discovery Requests 13-16

These requests seek information and documents regarding costs of transmission facilities and transmission line losses. These requests are not relevant to Bases A through D of Contention 2, which pertain to capacity factors, decommissioning costs, cost of money, and comparisons of the total cost of S/HNP and other facilities owned by the Applicants.

* * *

For the reasons discussed above, Applicants object to providing responses to the identified discovery requests. Responses to the remaining interrogatories are attached, and Applicants will provide the documents sought in the remaining production requests. As requested, these documents will be made available for inspection by NWF/OEC at 9:00 a.m. on January 5, 1983 at the corporate headquarters of Portland General Electric Company in Portland, Oregon. Specific arrangements for such inspection should be made with Warren G.

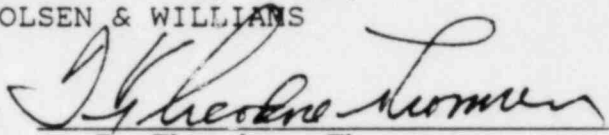
Hastings, Esq., Associate Corporate Counsel, Portland General Electric Company, 121 S.W. Salmon Street, Portland, OR 97204 (Phone (503) 220-3000. Upon request by NWF/OEC, Applicants will provide at cost copies of any of these documents to NWF/OEC.

DATED: December 20, 1982.

Respectfully submitted,

PERKINS, COIE, STONE,
OLSEN & WILLIAMS

By


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Attachment: Applicants' Substantive Responses
to NWF/OEC's Interrogatories

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

OFFICE OF SECRETARY
REGULATORY & SERVICE
BRANCH

In the Matter of)

PUGET SOUND POWER & LIGHT COMPANY,)
et al.)

(Skagit/Hanford Nuclear Project,)
Units 1 and 2))

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STN 50-522

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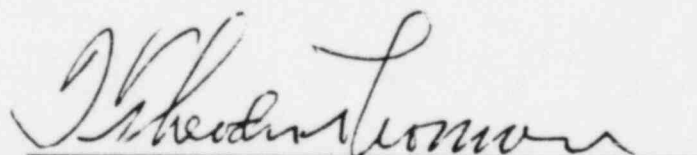
CERTIFICATE OF SERVICE

I hereby certify that the following:

APPLICANTS' RESPONSE TO NWF/OEC DISCOVERY REQUESTS

in the above-captioned proceeding have been served upon the persons shown on the attached list by depositing copies thereof in the United States mail on December 20, 1982 with proper postage affixed for first class mail.

DATED: December 20, 1982.



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SKAGIT/HANFORD NUCLEAR PROJECT
NRC Service List
Docket Nos. STN 50-522 and STN 50-523

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Applicants' Substantive Responses to NWF/OEC InterrogatoriesDiscovery Requests 1 and 2

1. For each year since its commercial operation, provide the yearly "plant capacity factor" for the Trojan Nuclear Project. For purposes of this question, plant capacity factor means the net kilowatt hours generated by the Plant (total generation less amounts needed at the plant itself) divided by the product of the number of hours in the year times the rated capacity of the plant. For each year, indicated the "rated capacity" used in the calculation and explain how it was derived.
2. For each year for which figures are provided in Response to Interrogatory 1, indicate what fraction of total potential plant output (rated capacity times the number of hours in each year), was lost due to each of the following factors: (1) routine maintenance; (2) refueling; (3) plant malfunction or safety related shutdowns or reductions; (4) the displacement of Trojan power production by other power sources for economic or system-wide operational reasons. In each case, the answer should be based on equivalent hours of full load operation.

Response

The documents to be produced on January 5, 1983 will include the Operation Data Reports for the Trojan plant, from which most of the requested information can be ascertained.

Discovery Request 3

Explain in detail the basis for the assumption displayed in the Application for Site Certification/Environmental Report (ASC/ER) that the Skagit/Hanford Project (S/HNP) will operate during its life at a 70% capacity factor.

Response

The Applicants base the assumption that S/HNP will operate at a 70% capacity factor in part upon historical data and in part upon engineering judgment.

The historical data indicate that the cumulative capacity factor for all light water power reactors is approximately 60%. However, extrapolation of past performance does

not necessarily yield reliable predictions of future performance. Future performance of nuclear plants, particularly those such as S/HNP which are in the design or construction phase, will be affected by measures which have been and will be taken to improve plant performance. In this regard, changes have been made in the industry following the TMI accident which should increase the safety and reliability of nuclear power reactors.

A comprehensive study on the projected costs of nuclear plants was issued by the Department of Energy in August of 1982. This study assumed that a capacity factor of 65% is achievable for nuclear plants. The Nuclear Energy Cost Data Base issued by DOE in October, 1982 also determined that 65% is an attainable capacity factor for both nuclear and coal plants. It noted further that, for a base loaded facility (such as S/HNP), the capacity factor is expected to approach the equivalent availability. Historical data for nuclear plants from 1971-1980 as reported by NERC indicate an equivalent availability of 67.8%.

The trend of BWR performance in 1978 and 1979 also demonstrate that it is reasonable to assume a 70% capacity factor for S/HNP. In 1979, the combined capacity factor for the twenty-one BWR's rated at more than 400 MWe was 66.9%, and in fact ten of twenty-one plants had a capacity factor greater than 70%. Although, capacity factors have generally declined since 1979, this decline is in part attributable to plant shutdowns to implement modifications recommended in the TMI studies and other backfits to improve designs. Consequently, it may be expected that this decline will be temporary and that capacity factors will again approach and exceed the 1978 - 79 levels as soon as these modifications and backfits are completed. Therefore, the Applicants believe that a 70% capacity factor is a reasonable and achievable average over the design life of S/HNP.

Discovery Request 5

Applicant Pacific Power and Light has estimated that its share of the Washington Public Power Supply System's Project No. 3 (WNP No. 3) will produce power at a cost of 191.4 mills per kilowatt hour in 1987 dollars. (Letter from James F. Pienovi to Mr. Kramer, Oregon Public Utility Commission, December 22, 1981.) Explain in detail how and why S/HNP is expected to cost less per kilowatt hour than WNP No. 3. At a minimum, itemize the explanation pursuant to the cost break-down found in Table 8.2-2 of the ASC/ER and explain fully the difference in cost between the two plants for each item.

Response

The Applicants have not performed an evaluation to determine whether S/HNP will cost more or less than WNP-3. Consequently, the Applicants cannot explain how or why S/HNP may be expected to cost less than WNP-3, if in fact that is the case. In any event, the Applicants maintain that the total bus bar cost estimate for S/HNP in Table 8.2-2 of the ASC/ER is a reasonable estimate for purposes of the National Environmental Policy Act even if it should be demonstrated that WNP-3 is expected to cost more than S/HNP.

Discovery Request 8

What is the estimated levelized mills per kilowatt hour cost of decommissioning S/HNP?

Response

The Applicants have not determined a specific cost for decommissioning S/HNP. However, the Applicants believe that it is reasonable to estimate the cost of decommissioning S/HNP by using the generic cost estimates for decommissioning which are contained in NUREG-0586, "Draft Generic Environmental Impact Statement on Decommissioning on Nuclear Facilities," U. S. Nuclear Regulatory Commission (January 1981).

As NUREG-0586 discusses, decommissioning costs vary depending upon the method of decommissioning. Table 5.3-1 in NUREG-0586 presents cost estimates (in 1978 \$) for various methods of decommissioning a reference BWR. That table is reproduced below:

TABLE 5.3-1. Summary of Estimated Costs for Decommissioning the Reference BWR in \$ Millions (a,b)

Decommissioning Element	DECON	SAFSTOR After				ENTOMB with	
		10 Years	30 Years	100 Years		Internals Included	Internals Removed
DECON	43.6	NA	NA	NA		NA	NA
Entombment	NA	NA	NA	NA		35.0	40.6
Safe Storage							
Preparation	NA	21.3	21.3	21.3		NA	NA
Continued Care	NA	0.6	2.1	7.4		\$40 k/yr	\$40 k/yr
Deferred Decon- tamination	NA	35.5	35.5	20.4		NA	NA
TOTAL	43.6	57.4	58.9	55.0	35.0+\$40 k/yr	40.6+\$40 k/yr	

(a) All entries are from Reference 1. NA means not applicable.

(b) Values exclude cost of disposal of last core, exclude cost of demolition of non-radioactive structures and include cost of deep geological disposal of dismantled, highly activated components.

As is discussed in Section 5.8 of the ASC/ER, the Applicants have not selected a method for decommissioning of S/HNP. However, if it is assumed that DECON is utilized, the cost of decommissioning of both units of S/HNP would be \$275.6 million (1992 \$), which if capitalized, would yield a cost of 2.4 mills/kwh.

Discovery Request 9

Have the applicants calculated or attempted to calculate the quantifiable environmental costs (as that term is used in the Pacific Northwest Electric Power Planning and Conservation Act, P.L. 96-501, Para. 3(3)(B)) of construction and operation of S/HNP? If so, what are the calculated quantifiable environmental costs of construction and operation of S/HNP in levelized mills/kilowatt hour?

Response

To the extent that the Applicants have quantified potential environmental impacts resulting from construction and operation of S/HNP, that quantification appears in the ASC/ER. In general, the Applicants have not attempted to translate environmental impacts into economic costs. Such a conversion is not required by the National Environmental Policy Act, and the Applicants do not believe that such a conversion is appropriate in this case.

Discovery Request 17

How do the applicants desire or anticipate that S/HNP will be operated in conjunction with the regional power system operated by and through the Bonneville Power Administration, the Pacific Northwest Coordination Agreement, and/or the Northwest Power Pool's "Coordinated Operation Principles and Procedures."

Response

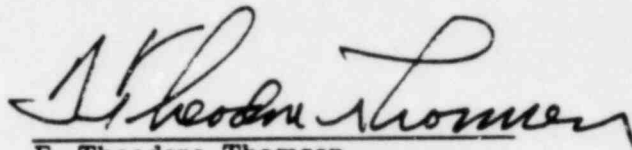
As is stated in Section 1.0.4 of the ASC/ER, the applicants anticipate that S/HNP will be operated as a baseload facility.

December 20, 1982

AFFIRMATION

The undersigned affirms that he is one of the attorneys for Applicants in this proceeding, that the foregoing substantive responses were prepared under his supervision, and that these responses are true and correct to the best of his knowledge and belief.

DATED: December 20, 1982

A handwritten signature in cursive script, reading "F. Theodore Thomsen".

F. Theodore Thomsen
Attorney for Applicants
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Seattle, Washington 98101