

PUGET POWER

September 2, 1982
PLN-270

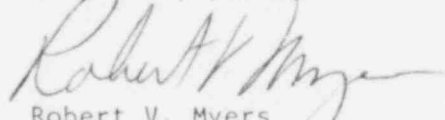
Mr. William H. Regan, Jr., Chief
Siting Analysis Branch
Division of Engineering
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Puget Sound Power & Light Company
Skagit/Hanford Nuclear Project, Units 1 & 2
Docket Nos. 50-522 and 50-523
Draft Environmental Statement
Applicant's Response to Comments

Dear Mr. Regan:

In your letter of July 22, 1982, you requested that the Applicant submit by August 11, 1982, any responses it deemed appropriate to the comments received on the Draft Environmental Statement for the Skagit/Hanford Nuclear Project. The Applicant's comments were provided to the NRC Staff, EFSEC Staff and URS by way of a telephone conversation held on July 30, 1982. Attached to this letter is a written summary of those comments.

Very truly yours,


Robert V. Myers
Vice President
Generation Resources

Attachment

COOL

8209130089 820902
PDR ADOCK 05000522
D PDR

SKAGIT/HANFORD NUCLEAR PROJECT

Attachment to PLN-270

September 2, 1982

Page 1 of 11

APPLICANT'S RESPONSE TO JOHN F. DOHERTY'S, GULF COAST
ENVIRONMENTAL DEFENSE FOUNDATION, COMMENT LETTER DATED JUNE 12, 1982

COMMENT

Ash deposition should be considered in the alternative site analysis (Comment 1).

The DES should provide a probability that construction or operation would affect buried radioactive waste at Hanford (Comment 2).

The DES should include estimates of the number of fatal birth defects, non-fatal birth defects, and non-fatal cancers induced by Radon-222 for the S/HNP fuel cycle (Comment 3).

The DES should have expressed reservations regarding use of the MARCH and CORRAL computer codes for evaluating accident probabilities (Comments 4 and 5).

Section 4.2.2.1 of the DES relies upon general knowledge of the region of interest in considering alternative sites (Comment 7).

RESPONSE

Ash deposition was included as a factor in the Applicant's alternative site analysis under the category of geotechnical factors. The impacts of ash deposition on operation of S/HNP was considered by the Applicant in Amendment 26 to the PSAR for S/HNP. As a result of this consideration, it was concluded that ash deposition would not significantly affect operation. Consequently, consideration of ash deposition would not affect the results of the alternative site analysis.

Groundwater will not be used as a source of water for S/HNP. Given the prevailing groundwater elevations at the Plant Site, dewatering will not be required for the Plant excavation, and discharge of treated sanitary waste water will have no measurable effect on groundwater resources. No other discharges to the groundwater are planned. Consequently, groundwater levels and gradients will not be affected (see p. 4-29 of the DES) and no impact on buried waste at Hanford is expected as a result of construction and operation of S/HNP.

The number of non-fatal cancers and birth defects can be calculated using the factors given on page 4-185 of the DES.

Uncertainties presently inhere in all methodologies for predicating reactor accident probabilities, including the MARCH and CORRAL codes. In fact, the DES recognizes there are "substantial uncertainties" regarding calculation of accident probabilities (DES, p. 4-205). These uncertainties neither invalidate the use of these codes, nor do they cast doubt upon the general conclusions derived from the codes.

The implied premise of the comment is incorrect, the DES not only relies upon general knowledge but also the information provided by the Applicant, as Section 4.2.2.1 of the DES clearly indicates. Additionally, much of the information on alternative sites was developed in the proceeding for the Skagit Nuclear Power Project since September 1974, as indicated on p. 3-9 of the DES.

SKAGIT/HANFORD NUCLEAR PROJECT

Attachment to PLN-270

September 2, 1982

APPLICANT'S RESPONSE TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY'S
COMMENT LETTER DATED JUNE 14, 1982

Page 2 of 11

COMMENTRESPONSE

The minimum river flows used in the DES may increase as a result of recommendations by the Northwest Power Council (Comment 1).

Because any change would result in an increase in the minimum river flow, the minimum river flow used in the DES is conservative for the purpose of considering aquatic impacts from S/HNP.

Construction of the intake/discharge structures should be scheduled to minimize aquatic impacts, and an intake/discharge location downstream of that presently proposed should be evaluated (Comment 6).

These subjects are discussed in Amendment 6 to the ASC/ER.

Provisions regarding on-site waste disposal, storage and spill contingency plans, open burning, and fugitive emissions should be developed (Page 2).

As indicated in Section 4.5 of the ASC/ER, plans for these subjects will be developed as part of the Construction Impact Control Program for S/HNP and will be submitted to Washington State EFSEC for its review and approval prior to commencement of site construction activities.

SKAGIT/HANFORD NUCLEAR PROJECT

Attachment to PLN-270
September 2, 1982
Page 3 of 11

APPLICANT'S RESPONSE TO THE WASHINGTON STATE DEPARTMENT OF
TRANSPORTATION'S COMMENT LETTER DATED JUNE 15, 1982

COMMENT

RESPONSE

The DES should include specific commitments on highway improvements (Comment 6).

Consultations are still ongoing regarding the exact nature of the highway improvements to be implemented to accommodate the traffic related to S/HNP. Pending completion of these consultations, it is not feasible to provide specific commitments regarding highway improvements. The general program being considered by the Applicant is presented in Sections 8.3.10.2 and 8.5.2 of the ASC/ER.

The DES should quantify increased noise and air pollution from increased traffic (Comment 7).

This subject is discussed in Amendment 6 to the ASC/ER.

SKAGIT/HANFORD NUCLEAR PROJECT

Attachment to PLN-270

September 1, 1982

APPLICANT'S RESPONSE TO THE DEPARTMENT OF HEALTH & HUMAN SERVICES'
COMMENT LETTER DATED JUNE 2, 1982

Page 4 of 11

COMMENT

(Comment 1) implies that the radiological dose standards in 10 CFR Part 20, 10 CFR Part 50 Appendix I, and 40 CFR Part 190 are inconsistent, and it states that the DES should be modified "to clearly state that the annual doses to members of the public will comply with" the standards in 40 CFR Part 190.

It would be helpful for the DES to quantify the health impacts from fallout carried into open bodies of water and release of radioactive material to the groundwater as a result of an accident (Comment 3).

Airborne radio-iodine sampling and analysis program should be examined to make certain that the system is adequate for monitoring radio-halogens (especially radio-iodine) in the presence of radionoble gases in the unlikely event of an accident (Comment 4).

RESPONSE

Although the numerical standards in each of the listed regulations are different, the standards are not inconsistent because each addresses a different category of exposures. Appendix I presents guidelines for design objectives to limit doses in unrestricted areas from the Project during normal operation. 40 CFR Part 190 presents standards for normal operation in order to limit doses to members of the public from all uranium fuel cycle operations. Finally, 10 CFR Part 20 provides standards for inclusion in a license to limit radiation levels in unrestricted areas as a result of a licensee's possession and use of radioactive material and other sources of radiation. S/HNP will comply with each of these regulations. See ASC/ER Section 5.2.

Both the ASC/ER (Section 7.4.8) and the DES (pp. 4-215 to 4-218) analyzed radioactive releases to the groundwater as a result of an accident and found that the consequences of such releases would be "significantly less" than calculated in the Liquid Pathway Generic Study (NUREG-0440) for a large river site and that such releases would present "no uniquely large contribution to risk." In light of these conclusions, further analysis to quantify the consequences of such releases is unnecessary for the purposes of NEPA. Similarly, detailed consideration of health impacts from fallout in water is not warranted, since this pathway does not contribute significantly to predicted doses from accidents.

The radiological monitoring program proposed for S/HNP will be capable of detecting iodine-131 in the atmosphere, including as a result of an accident. See ASC/ER Section 6.1.5.

SKAGIT/HANFORD NUCLEAR PROJECT

Attachment to PLN-270

September 2, 1982

Page 5 of 11

APPLICANT'S RESPONSE TO NATIONAL OCEANIC AND ATMOSPHERIC
ADMINISTRATION'S COMMENT LETTER DATED JUNE 14, 1982COMMENT

The proposed water inlet openings do not meet NMFS criteria for the protection of juvenile anadromous fish.

The DES should discuss the range of actual temperatures which might result from thermal discharge to the Columbia River.

The thermal plume area should be monitored for predation rate under operational conditions during the downstream migration period in order to document losses, if any, of juvenile salmonids.

RESPONSE

As is discussed in Section 5.1.3.1 of the ASC/ER, no significant impact upon juvenile anadromous fish is expected as a result of operation of the intake for S/HNP. This conclusion is attributable to the fact that the intake will be located in the deep water approximately 600 feet offshore where juvenile fish are not expected to frequent and to the fact that the swift river current at the intake location will tend to sweep juveniles away from the intake. Testing of a similar intake for WNP-2 confirms the absence of any significant adverse effects. In the absence of any significant adverse impacts, compliance with the NMFS criteria is unnecessary to provide protection for juvenile anadromous fish.

The temperature of the Columbia River varies from approximately 32°F to 70°F. The temperature of the Project discharge will vary from less than 60°F to 84.5°F. For an unrealistic worst case of maximum discharge temperature and flow and minimum river temperature and flow, the increase in river temperature at the edge of the dilution zone boundary would only be 0.28°F. Thus, it may be seen that the actual river temperature at the edge of the dilution zone boundary will be approximately the same as ambient river temperatures under all operating conditions.

Available data indicate that migrating juvenile salmonids primarily travel in shoreline areas, and they are not expected to frequent the proposed discharge area. Furthermore, it is not expected that the Project discharge will have any significant affect upon predation rates due to the relatively small size of the discharge plume and differential temperatures. Consequently, even if it assumed that a reasonable monitoring program for predation rates could somehow be devised, such a program would not be expected to provide much useful information at S/HNP.

SKAGIT/HANFORD NUCLEAR PROJECT

Attachment to PLN-270

September 2, 1982

APPLICANT'S RESPONSE TO THE WASHINGTON STATE DEPARTMENT OF GAME'S
COMMENT LETTER DATED JUNE 28, 1982

Page 6 of 11

COMMENT

Monitoring and mitigation plans should be developed for habitats which will be impacted by construction.

RESPONSE

Habitats in those areas which will be utilized for the Plant facilities and for such other activities as parking, will be lost during the life of the Plant. Thus, it is not possible to mitigate these losses. Since the converted areas are relatively small and do not have any ecological features of significance, the losses are not expected to have any adverse impact on wildlife communities as a whole. With respect to other areas disturbed during construction of the Plant, restoration programs are planned to return those areas not landscaped or utilized or other activities essentially to their natural conditions. (See Section 4.1, 4.1.1, 4.5.4.3, 4.5.5.4 and 4.5.5.5 of the ASC/ER).

SKAGIT/HANFORD NUCLEAR PROJECT

Attachment to PLN-270
September 2, 1982
Page 7 of 11

APPLICANT'S RESPONSE TO THE NRDC, NWF, OEC AND SIERRA CLUB'S
COMMENT LETTER DATED JUNE 28, 1982

COMMENT

The analysis of need-for-power and alternatives to S/HNP is inadequate (Sections III and IV).

The DES does not consider aquatic impacts from increased use of hydro power for peaking purposes. (Section V).

The DES does not adequately assess the uranium fuel cycle (Section VI).

RESPONSE

Need-for-power and alternative energy sources discussions will be supplemented by Amendment 7 to the ASC/ER for the S/HNP which is scheduled to be filed near the end of September.

This comment is the subject of NWF/OEC Contention 4 to which the Applicant has previously expressed its objections and on which the Licensing Board has deferred acceptance.

This comment is the subject of NWF/OEC Contention 5 which was rejected by the Licensing Board in its Memorandum and Order dated July 6, 1982.

SKAGIT/HANFORD NUCLEAR PROJECT

Attachment to PLN-270

September 2, 1982

Page 8 of 11

APPLICANT'S RESPONSE TO THE U.S. DEPARTMENT OF THE INTERIOR'S
COMMENT LETTER DATED JULY 8, 1982

COMMENTRESPONSE

Downstream transport of fine sediments could adversely affect salmon spawning gravels.

The nearest known spawning areas are located more than seven miles downstream from the proposed location for the intake/discharge structures. Significant transport of fine sediments is not expected to occur over such a great distance. Studies conducted during construction of the intake and discharge from WNP-2 indicated that increased levels of suspended solid concentrations were only infrequently observed 500 ft. downstream of the excavation.

The intake/discharge should be relocated.

This subject is discussed in Section 10.10 of Amendment 6 to the ASC/ER.

Fish will be attracted to the Project discharge and thus will be continuously exposed to elevated mercury concentrations.

Anadromous fish are not expected to be attracted to the warm water of the Project discharge. Although warm water species may be so attracted, they are not expected to remain for significant periods of time in the discharge plume because of the significant expenditures of energy required to maintain position in the swift current of the Columbia River. (See Section 5.1.3.2.4.1 of the ASC/ER). These considerations, together with the slight increase in concentrations, indicate that no significant impact upon fish is expected as a result of discharge of mercury.

Sodium hypochlorite should not be used as an anti-fouling agent in order to prevent serious biological consequences.

The DES does not reflect the Applicant's decision to reduce concentrations of total residual chlorine in the blowdown of 0.14 mg/l. Amendment 6 to the ASC/ER, Section 5.3.1.2 and Appendix L, will provide a revised and expanded discussion of potential impacts from the discharge of chlorine and will demonstrate that no significant impacts are expected.

Revegetation should be used as a means of controlling wind erosion of soil.

This subject is encompassed with the Construction Impact Control Program which will be submitted to Washington State EFSEC for its review and approval prior to commencement of construction.

SKAGIT/HANFORD NUCLEAR PROJECT

Attachment to PLN-270

September 2, 1982

APPLICANT'S RESPONSE TO THE U.S. ENVIRONMENTAL PROTECTION AGENCY'S
UNDATED COMMENT LETTER

Page 9 of 11

COMMENTRESPONSE

Health impacts associated with electric field intensities from transmission lines should be discussed.

No adverse health impacts from electric field intensities are expected due to the remote location of the transmission lines (See Section 3.9.2 of Amendment 6 to the ASC/ER).

The DES should discuss any adverse impacts upon agriculture from salt deposition during operation of the cooling towers.

This subject is discussed in Section 5.1.3.2 of the ASC/ER. Additionally, it should be noted that no agricultural activities are conducted within five miles of the Plant Site.

Discuss alternative locations for the intake/discharge structures.

This subject is discussed in Section 10.10 of Amendment 6 to the ASC/ER.

SKAGIT/HANFORD NUCLEAR PROJECT

Attachment to PLN-270

September 2, 1982

APPLICANT'S RESPONSE TO THE COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION'S
COMMENT LETTER DATED JULY 16, 1982

Page 10 of 11

COMMENT

Each of the comments corresponds to proposed contentions submitted by CRITFC.

RESPONSE

The Applicant's objections to these proposed contentions are set forth in Applicant's Response in Opposition to Columbia River Inter-Tribal Fish Commission's Motion for Admission of Second Supplement to Petition to Intervene dated July 30, 1982. In some cases, the subject matter of the proposed contentions are encompassed within Amendment 6 to the ASC/ER.

SKAGIT/HANFORD NUCLEAR PROJECT

Attachment to PLN-270
September 2, 1982
Page 11 of 11

APPLICANT'S RESPONSE TO THE U.S. DEPARTMENT OF ENERGY'S
COMMENT LETTER DATED JUNE 30, 1982

COMMENT

The DES should include a discussion of the 1982 Northwest Regional Forecast by PNUCC and the BPA forecast on electricity consumption.

RESPONSE

These will be discussed in Amendment 7 to the ASC/ER which is scheduled to be filed near the end of September.