UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
PUGET SOUND POWER & LIGHT CO. et. al.	)	Docket Nos. STN 50-522 STN 50-523
	)	
(Skagit/Hanford Nuclear Project, Units 1 and 2)	)	

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REVISED CONTENTIONS OF COALITION FOR SAFE POWER - MAY 24, 1982

Intervenor Coalition for Safe Power hereby submits its revised contentions pursuant to the Board's oral order made at the special prehearing conference held in Richland, Washington on May 5, 1982. In so doing, Intervenor does not in any way admit to the stated objections of the NRC Staff and the Applicant. The revised contentions contained herein meet the requirements of 10 CFR 2.714(b) and the case law which has evolved on this subject. The most important of these is the Appeals Board holding in Mississippi Power & Light Co. (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-130, 6 AEC 423, 424 (1973) which states that a petitioner does not have to "establish that its assertion is well-founded in fact" and that 10 CFR 2.714 "does not require the petitioner to detail the evidence which will be offered in support of each contention."

NEED FOR POWER

Revised Contention 1 (Replaces CFSP 1 and 2)

Petitioner contends that Applicant will not need the power generated by the Skagit/Hanford Nuclear Project, Units 1 and 2, to serve their own loads or the loads of the region as claimed in the Application for Site Certification/Environmental Report (ASC/ER).

Applicant has outlined in Section 1.1 of the ACS/ER forecasts for its member utilities and forecasts for the region. As stated in Section 1.1.1.1, the data for these forecasts was prepared in late 1980. Since that time, numerous events have occured which render Applicant's forecasts

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outdated. These events, which include the increased price of electricity due to the termination and escalating costs of the five Washington Public Power Supply System (WPPSS) nuclear plants, the Bonneville Power Administration (BPA) development of conservation programs and a poor regional economy, have led to a decrease in the forecasted need for additional thermal power plants.

Forecasts issued more recently show the need for the S/HNP to be non-existent. These forecasts include the Washington State Forecast; Washington Energy Research Center, Washington State University/University of Washington (March 1982). The Washington forecast states that "the most likely rate of load growth, as measured by total regional electricity sales, over the period 1980 to 2000 is about 1.5 percent/year." (pg. 4) This projection corresponds closely to the recently released BPA draft forecast, Forecasts of Electricity Consumption in the Pacific Northwest, which shows regional loads growing at an average rate of 1.6 from 1980-1990, and 1.7 from 1990-2000. (pg. 5)

Applicant has relied on the 1981 Pacific Northwest Utilities Conference committee (PNUCC) forecast (See ASC/ER 1.1-20 to 1.1-24). However, since that forecast has been released it has received much critisism for not being accurate. Such was the critisism from the Northwest Power Planning Council, the group responsible under Public Law 96-201 for energy planning in the Northwest. According to staff member James Litchfield, "They were not accurately reflecting the tremendous increases in the cost of the WPPSS plants." (Oregonian, October 22, 1981, "Electric Needs Revised Downward") Furthermore it has been stated by a member of the PNUCC and a Puget Power official (David Hoff) that the computer system used for forecasting "is sort of a Model T that once was useful, but now it is not useful for some purposes." (Pacific Northwest Regional Power Planning Council November 4, 1981 Meeting) At that same meeting Mr. Hoff presented a revised forecast

figure of 2.5 down from the original projection of 2.8. Such a decline would mean a reduction in any energy deficit claimed by Applicant of 1,660 megawatts.

Revised Contention 2 (Replaces CFSP 4 and 56)

Petitioner contends that any decision on the need for the S/HNP must await the regional forecast to be issued by the Northwest Power Planning Council in April 1983.

Under the Pacific Northwest Electric Power Planning and Conservation Act, PL 96-501, 94 Stat.2697, it is the responsibility of the Northwest Power Planning Council (Power Council) and the Bonneville Power Administration of the Department of Energy (BPA) to plan and meet the electrical power needs of the Pacific Northwest. Applicant supported the passage of this bill in Congress. Applicant has stated in its ASC/ER, Section 1.1 and its PSAR, Section 1, that the S/HNP is to considered as a regional resource. Applicant has stated that it will not construct the project unless it is "regionalized" (i.e. included in the Power Council's plan and financed by the BPA) publically since August of 1981. Furthmcre, Applicant has stated that "the Pacific Northwest region is thus the appropriate area" to be considered in evaluating the need for the project. (PSAR, Section 1.1) Given these statements by Applicant it is only logical that this Board await the outcome of the Power Council's planning process. The Nuclear Regulatory Commission has recognized the need to consider forecasts by state agencies. See Rochester Gas and Electric Co., (Sterling Power Project, Nuclear Unit 1) 8 NRC 383, 389 (1978) While the Power Council is not a state agency, it is a regional agency empowered by the Congress of the United States and must receive at least equal consideration with state agencies. For the NRC to ignore the Power Council would be to ignore the intentions of Congress.

Revised Contention 3 (Replaces CFSP 5)

Petitioner contends that no weight should be given to Applicant's projected load forecast as outlined in ASC/ER Section 1.1 and Table 1.1.

Applicant has the "burden of showing that (their) projections of demand are reasonable." Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), 4 NRC 397, 405 (1976). Applicant has presented no basis for such an affirmative decision by the Board in this case. Section 1.1 of the ASC/ER treats us to merely an outline of Applicant's forecast. It is devoid of any data to aid in determining the reasonableness of Applicant's projections. For example, Applicant states, without elaboration, that conservation is figured into the projections. Moreover, each member utility uses a different method in determining what its load will be and each states that its method is the best.

For example, Portland General Electric states that the residential end-use model is more suited than the econometric model. Pacific Power and Light uses a combination of both. Washington Water Power uses traditional and econometric. Thus it is clear that even the member utilities do not agree on which model is the most appropriate.

The Atomic Safety and Licensing Board must also base its decision on more than 'hope'. Dusquene Light Co. (Beaver Valley Power Station, Unit 2), ALAB-240, AEC 829 (1974). Applicant's past record in this proceeding and in the Portland General Electric Dockets 50-514 & 515 (Pebble Springs Nuclear Plants, Units 1 and 2) is one that leaves much to be desired. Applicant originally stated in its ER that Unit 1 of the Skagit project would need to come on line in 1982, assumming that Unit 1 of Pebble Springs, WPPSS Units 1,2,3 and 4 were all on line by that year. None of these plants is presently operational and Unit 1 of the Skagit/Hanford Nuclear Project is projected for 1990 and the devastating consequences portrayed by Applicant in Section 1.3 of the Skagit ER, "Consequences of Delay" are not even remotely imminent. Forecasting is, of course, an uncertain art. However, ten years and five nuclear units amounts to more than mere uncertainty.

ALTERNATIVE ENERGY SOURCES

Revised Contention 4 (Replaces CFSP 6,7,8,9 and 10)

Applicant has misapplied the National Environmental Policy Act (NEPA), 42 USC 4321 by rejecting the following alternatives which are a available, environmentally preferable and more economical than the proposed Skagit/Hanford Nuclear Project: wind power, biomass, solar, conservation, co-generation, low-head hydro, ocean temperature differences and alcohol fuels. Further, Applicant has followed a very narrow view of this Act by considering each alternative seperately. Applicant must also be required to consider combinations of various appropriate technologies as alternatives to the proposed project.

In September 1980, the Oregon Alternative Energy Development Commission issued its Final Report, Future Renewable. The AEDC states on page three of that report that "we believe that Oregon's long term energy interests will best be served by developing a diverse array of energy options." The report states, "no single renewable resource option could be expected to contribute a substantial share of projected demand. Collectively, however, the contributions from all these resources can meet a significant portion of future energy demand." (pg. 25) The AEDC continues: "Using the coal reference in Figure 2 and the low range of costs, the technical economic potential of conservation and renewable resources is large enough to provide 100 percent of the demand growth between 1980 and 2000. Assuming the high range costs, these resources have the potential to provide 75 percent of energy demand growth in this period." The AEDC looked at the following resources: alcohol, bio-mass, hydro, conservation, geothermal, solar and wind.

Bio-mass provides 20 percent of Oregon's energy supply on a per BTU basis. (Future Renewables, pg. 15) Cordwood supplies about 8 to 10 percent of the residential space heating needs. The AEDC estimated that cordwood would continue to grow as a home heating source as efficiency of stoves and weatherization lowered heating demands. The AEDC found that by 1990, the year the S/HNP is due to come on line, that about 400 ave. MW of generation capacity through bio-mass-fired cogeneration could be brought on line. The Rocket Report, January 19, 1979, done for the Bonneville Power Administra-

tion estimated that cogeneration from existing industries could provide 559.2 MW. (pg. 4-25) In its Phase Report issued on February 29, 1980 the economic feasibility of this is stated as "competitive with the 'new source' costs to this region." (pg. 9)

These reports are more representative of the region's ability to supply alternatives to the Skagit/Hanford project than those cited by Applicant which are merely articles from national trade magazines. Therefore Applicant's presentation on biomass clearly does not meet the standards of NEPA and the Commission in a reasonable way. Cogeneration is not even mentioned in the ASC/ER, thus not meeting the "rule of reason" criteria.

Applicant's treatment of geothermal energy shows a similarly misguided use of the "rule of reason". Applicant states "in the Pacific Northwest Region served by Applicants have not produced much hopeful data on the occurence of resources, with sufficiently high temperature and flowrates, to produce electricity at a cost competitive with alternatives." (ASC/ER Section 9.2.1.2.2) In the final paragraph of that section it states that "the amount of geothermal energy available to Applicants is uncertain at this time."

It is clear from these statements that Applicant misunderstands the energy situation. The Oregon AEDC report cited above states that "Oregon has the potential to geothermally generate 800 MW of electricity by 2000." (pg. 18) Clearly if Applicants can move 200 miles out of their service territory to build a nuclear power plant, they could do the same to develop geothermal energy sources. (Common Sense) The AEDC Report goes on to say that 600 MW would be available at a cost of 36-65 mills/Kwh. (pg. 29) This compares favorably to that of the estimated cost of both coal and nuclear. (See Power Plant Cost Escalation, Charles Komanoff, 1981, pg. 282) In sum, Applicant has provided no basis for their state-

ments made in ASC/ER Section 9.2.1.2.2.

Hydro is another area in which Applicant's presentation is lacking in factual basis. Applicant does not project the amount of energy to be produced from small-scale hydro projects. Applicant also fails to state the range of costs of such projects but merely states their conclusion that "There are resources that can be developed for a cost that, although high, will be competative with alternatives." (ASC/ER Section 9.2.2.2.4) Applicant takes the same approach with large-scale hydro projects. The Oregon AEDC, however, concluded in its report that 410 ave. MW was "realistically achievable..." for small-scale hydro in the state of Oregon. This estimate was made after accounting for environmental and economic factors. (pg. 19)

Applicant's statement on passive solar systems is, "Although passive solar energy systems have yet to be proven cost effective in the western portions of Oregon and Washington, it is possible that they will become competative for some applications during the forecast period." This statement show that Applicant has no intention of investigating the solar alternative to the S/WNP or of developing it, regardless of its feasibility. Applicant provides no basis for such an outrageous statement as well as ignoring all the existing literature on this subject and appears blind to the realities of the Pacific Northwest.

In July of 1978, the State of Oregon and the U.S. Department of Energy held the Solar '78 Northwest conference in Portland, Oregon. At the conference it was reported "that solar retrofits could be economically attractive compared with continued reliance on conventional fuels for residential needs". In each case, it was assumed that a solar installation would be economically feasible "if the amount of energy saved by retrofit would pay back the cost of the system in less than 15 years." (Solar Northwest: The Economics are Getting Better all the Time. Light Energy, August

1978, Supplement to Cascade, Eugene, Oregon) This statement when taken together with findings found in Solar Energy for Pacific Northwest Residential Heating, May 1978, an Interagency Report by U.S. Department of Energy and U.S. Environmental Protection Agency) show that solar energy is economically feasible in the Northwest. (pg. 3-8, Executive Summary)

This economic feasibility is being recognized by the people of the Northwest as evidenced by the increasing numberof solar projects being installed on new and existing buildings, for example the McCormack Pier Apartments in Portland and the Far West Federal Savings and Loan Building in Tigard, Oregon. In 1980, Portland Sun was installing solar hot water systems on residences for $1,300.00 and an estimated pay back period of ten years. (Portland.Sun, an organization) Applicants should be retrofitting customers houses instead of building the proposed project and would avoid nuclear waste, cancer and economic instability. Unlike the proposed project, solar power would have greater socio-economic benefits by utilizing more-trades people per professionals, and for the same amount of energy produce 2½ more jobs. (Jobs & Energy and "Working People" prepared by Environmentalists for Full Employment, Washington D.C.)

Applicant's treatment of conservation is no different than the other alternatives. Applicant merely states that conservation is figured into their projections; no amount is quantified and the only discussion provided is a brief summary of Applicant's programs. Over the past several years, numerous studies have examined the potential for energy conservation in the Northwest in residences, businesses and industry. All have reached the conclusion that conservation could render 30 to 60 percent of our future electrical requirements unnecessary and would be cleaner and cheaper than the proposed S/HMP. These include: Bonneville Power Adminstration Electric Conservation Study, Skidmore, Owings and Merrill, July 1976, pg. 8 ; Northwest Energy Policy Project, 1978, pg. 12 ; Energy Futures Northwest, North-

west Energy Policy Project, Final Report, 1978, pg. 12 ; Region at the Crossroads, U.S. Government Accounting Office, August, 1978 , pg. 4.2 ; Natural Resources Defense Council Forecast 'A Model Electric Power Conservation Plan for the Pacific Northwest, Drafts, January and March, 1982; and the Washington State Forecast, Independent Review of Washington Public Power Supply System Nuclear Plants 4 and 5, Final Report to the State Legislature, March 1982, pp. 4-5.

Wind energy potantial in the Northwest is greater than Applicant portrays. The Oregon AEDC found that 365 MW could be produced from wind in 1990 and 1,396 in the year 2000. This compares favorably with the amounts stated by the Bonneville Power Adminstration in "Answer to Questions Posed by Chairmen Dingell and Ottinger in their letter of October 13, 1981" at page 13, where they state that 700 ave. MW can be obtained from large-scale wind. This could be done at a cost equal to or lower than that for the proposed project.

In summary we would quote from the AEDC report: "The task forces' combined estimates for physical energy potential in 2000 is approximately 3,700 ave MW of electricity (not including 884 ave MW potential from photovoltaics), the equivelent of 10 Boardman coal-fired plants operating at 70 percent capacity factor; 203 trillion Btu per year of thermal energy from solar, biomass, conservation and geothermal direct heat. This potential represents 100 percent of projected new electrical demand and over 200 percent of new thermal demand, or 150 percent of total combined new demand projected in 2000." (pg. 25) Thus it is clear that Applicant has misapplied the "rule of reason" and that alternatives to the proposed project exist that are available to the Applicant, environmentally preferable, and more economical.

ALTERNATIVE SITES

Revised Contention 5 (Replaces CFSP 12)

Petitioner contends that Applicant conducted the alternative site analysis required by 10 CFR 51.20(a)(3) improperly in concluding that Hanford was the best site.

Bonneville Power Adminstration witness Gens testified in support of the Applicant in the original Skagit proceeding (TR5094-5311) that a site West of the Cascades was preferable to the Eastern side because of the high toll in reserves and reliability created by placing the generating capacity distant from the load. (All the major load centers of the region are along the West Coast.) Applicant now wishes to make the case that this very great cost is mitigated by other circumstances in its alternative site analysis. Petitioner believes that Applicant cannot negate the weight of this testimony and further that Applicant has chosen the Hanford site, not because of its site characteristics but because it is the only area in the region where the local population would accept it. Petitioner realizes that such "socio-economic & cultural" considerations are allowed in the site analysis but contend that Applicant has placed too great a weight on them.

SABOTAGE AND THREATS TO NATIONAL SECURITY

Revised Contention 6 (Replaces CFSP 17)

Petitioner contends that Applicant has failed to provide an assessment of the threat to national security posed by a major accident at the S/HNP which would decrease the government's ability to maintain adequate security on the Hanford Reservation and to continue defense-related activities. 10 CFR 2.104(b)(1)(iv) and 10 CFR 50.40(c) provide that a project must not be inimicable to the common defense and security.

Defenseactivites at Hanford include the operation of facilities such as the N-Reactor and the Purex facility which produce and refine plutonium for the nation's nuclear warheads. In the event of an accident at the S/HNP a certain amount of chaos would exist, as evidenced by the TMI-2 accident. Since, as yet, there exists no evacuation plan even in rudimentary form, there exists no evidence that such chaos would not affect the operation and security of these defense-related activities. For example:

what would be done with the Wye Burial Ground guard post, some three miles away; what provisions exist for additional security for the N-reactor, immediately following an accident and in the long-term; what would the radiobiological impact be upon security guards and personnel at other facilities?

Revised Contention 7 (Replaces CFSP 18)

Petitioner contends that Applicant has not considered the effect of government actions on the Hanford Reservation in times of war on the S/HNP, as required by 10 CFR 100.10 and 100.10(d).

While 10 CFR 50.13 states that protective measures against armed attacks need not be considered this is, we believe, a reference to the design of the plant which, if bombed, would intensify the effects of either a conventional or nuclear explosion. However, the issue we attempt to raise here is one of site suitibility. The Hanford Reservation is, above all, a government installation. It performs the very important task of producing and refining plutonium for nuclear warheads (eg. N-Reactor, Purex facility). The placing of the S/HNP in proximity to these works could have two results: first, in the case of armed attack against the United States, Hanford would be one of the main target areas, thus rendering the project inoperable, and secondly, in the event of a war, the character of the site would change dramatically. For example, the level of security clearances would change and thus affect S/HNP workers. The S/NNP site and environs itself may be needed for future government facilities required for national security which would be precluded if the project were built as well as if it suffered a catastrophic accident.

TECHNICAL ABILITY OF APPLICANT AND ARCHITECT-ENGINEER

Revised Contention 8 (Replaces CFSP 13)

Applicant's architect/engineer, Bechtel Corporation is not technically qualified to engage in the proposed activities and lacks the willingness and desire to carry out a quality assurance program as required by Commission regulations.

Bechtel has been responsible for numerous safety violations including the failure to design and construct the Trojan Nuclear Power Plant

Control Building to NRC requirements. This failure on the part of Bechtel caused the Trojan plant to remain shut down for a period of eight months while hearings were held. Portland General Electric (Trojan Nuclear Power Plant) Docket 50-344 (Control Building). Further, in repairing the control building, Bechtel failed to meet the requirements and commitments made to the Atomic Safety and Licensing Board. See Letters dated February 6, 1981, February 9, 1981, February 25, 1981, April 6, 1981, from Portland General Electric to R.H. Engelken, U.S. NRC Region 5, Docket 50-344 and Licensee Event Report 80-17, September 5, 1980, same docket.

Bechtel was also the architect/engineer on the Humboldt Nuclear Plant and the Dresden, Unit 1, both of which remain shut down to this day. The Humboldt plant was shut down due to seismic problems.

The Board in this matter has the right to ensure that a quality assurance program is met. It is not enough to rely upon what has been submitted on paper. See Carolina Power & Light (Shearon Harris Plant), ALAB-490, 8 NRC 234 (1978) and Deshutes Light Co. (Beaver Valley, Unit 2), ALAB-240 (1974). It was also stated by the Appeals Board in Consumers Power Co. (Midland Plants, Units 1 and 2) ALAB-106, AEC 182,184 (1973) that "The inquiry which the board must make is not necessarily resolved by a determination of whether, in a broad sense, the applicant and its architect/engineer are 'technically qualified'...Unless there is a willingness, -indeed, desire - on the part of the responsible officials to carry it out to the letter, no program is likely to be successful." It is clear from the history of Bechtel that they lack a willingness and a desire to conform to current standards of public safety.

Revised Contention 9 (Replaces CPSP 19, and 21)

Petitioner contends that Applicant does not possess the technical ability to construct the proposed project. Neither does the Applicant have the willingness and the desire to adhere to NRC regulations . Thus, the

Board has no basis to conclude that the Applicant meets the provisions of 10 CFR 2.104(b)(1)(ii) and that the project will be constructed in a safe manner.

Applicant has not participated, either in whole or in part, in a project of this size, nuclear or otherwise. The NRC Staff has recognized that such inexperience leads to many problems which affect the public health and sfaety. Working Paper, SALP Staff Summary-WNP-2, February 1981, pp4-5. Statements made by Puget Power's management further indicate that there is not much enthusiasm for NRC regulations. Puget Power president John Ellis has stated publically since August, 1981 that the NRC would have to relax its regulations if the utility intended to pursue the construction of the S/NHP. A more recent statement appeared in the Seattle Post-Inteligencer on May 12, 1982: unless "...we get federal assurances that its construction can be completed in six or seven years" the utility would not build the plant. Again, the Board is left with little more than hope. See Consumers Power Co., supra.

Revised Contention 10 (Replaces CFSP 14 and 15)

Petitioner contends that the work force and contractors relied upon by the Applicant for the construction of the project (ASC/ER Section 8.3.7) are not capable of, and do not desire to, constructing the project's units in conformance with NRC regulations.

There exists no reason to believe, or even hope, that the workforce and the contractors, including supervisors and quality assurance inspectors, will perform to necessary standards based on the numerous safety violations at WPPSS Nuclear Projects 1,2 and 4 for which they have been responsible. These contractors include: J.A. Construction Co., H.P. Foley/Wismer and Becker, United Engineers and Constructors, Bechtel Power Corporation and WBG. Failures by this work force include: SALP, supra, pp3-5; U.S.NRC Office of I & E, Region V, Report Nos. 50-460/80-08 (pp. 2-5)..50-460/80-14 (pp.9, 15), 50-460/81-01 (pg. 2), 50-460/81-04 (pp. 3,4), 50-397/80-08 and Notice of Violation, June 17, 1980, Docket

Revised Contention 11 (Replaces CFSP 22 and 23)

Petitioner contends that Oregon state law prohibits co-applicants, Portland General Electric and Pacific Power and Light from participating in this project and thus any facts pertaining to these two utilities should be dismissed.

In November 1980, Oregon voters passed into law Ballot Measure #7. This measure prohibits Oregon-based utilities from participating in nuclear projects outside the state of Oregon. Neither utility has attempted to contest this law.

SOCIO-ECONOMIC EFFECTS OF THE PROJECT

Revised Contention 12 (Replaces CFSP 24 and 25)

Petitioner contends that Applicant has not correctly weighed the socio-economic and other benefits required by 10 CFR 51.20(b) and thus has overstated the benefits of the proposed project.

In the first instance Applicant-Puget's survey on the Socio-Economic Cost of Electrical Energy Shortages (ASC/ER Section 9.1) is entirely outdated and cannot be relied upon in any decision-making process. Events have occured in the Northwest regarding nuclear power, in particular the five WPPSS projects, that have changed the attitudes of a majority of the region's residents. This is to say that if the population were offered a choice between possible electrical shortages and the costs of yet another nuclear facility the results would be different today than a year ago. In that time, the region's residents have realized that they were paying for cost overruns of 600% for the WPPSS projects and in the case of at least two (WPPSS 4 and 5) for plants that would not operate. In the face of escalating electric bills organizations called "Irate Ratepayers" have formed all across the state of Washington and many are calling for default on their Public Utility District debts to WPPSS.

Furthermore Applicant has not included a discussion of surveys done by member utilities (eg. Pacific Power & Light) that have sought to determine ratepayers' prefered energy sources. Such surveys should be consi-

dered under the "other benefit" provision of 10 CFR 51.20(b). For example, a more recent survey done by Applicant-Puget shows its customers prefer conservation to nuclear power.

NRC STAFF ABILITY TO ADEQUATELY EVALUATE THE PROJECT

Revised Contention 13 (Replaces 28, 29, 30, 31, 32, 33, 34 and 35)

Petitioner contends that NRC Staff has not completed its review of the proposed project and that the current Safety Evaluation Report is inadequate and thus there exists no basis for the Board to make a determination on the application.

At present, the SER has nothing in it to reflect the site change from Skagit to Hanford. This affects, for example, all issues related to the seismic capability of the project. The Board in Commonwealth Edison (Byron Plant) 12 NRC 683 (1980) held that it "is normal to plead the inadequacies of documents as yet unavailable".

ENVIRONMENTAL EFFECTS OF CONSTRUCTION AND OPERATION OF THE PROJECT

Revised Contention 14 (Replaces CFSP 36)

Petitioner contends that the Applicant has underestimated the environmental cost of the S/HNP in such a way as to change the cost-benefit balance required by NEPA and 10 CFR 51.20 in favor of the project.

This has been done by: underestimating the existing radiological burden on the Hanford area environment and the Columbia River and their respective terrestrial and aquatic biota; underestimating the cumulative effect of the S/HNP and WPPSS plants 1,2 and 4; and failing entirely to consider the effect of a major accident on the terrestrial and aquatic biota of the area and the Columbia River and especially upon rare, threatened and endangered species.

The Applicant is required by 10 CFR 51.20(b) to quantify, to the fullest extent practicible, the factors considered in calculating the environmental effects of the project. It is well known that the effect of low-level radiation on living organisms is cumulative. Radiation & Human Health, John.W. Gofman, M.D., San Francisco: Sierra Club Books, 1981,

pg. 47. Therefore the Applicant should be required to provide a complete and accurate analysis of the existing radiological burden. Section 2.8 of the ASC/ER does not. This section fails to discuss the results of innumerable studies done since the 1950's on aquatic life of the Columbia River and Pacific Ocean, a partial listing of which is available from the Department of Energy - Richland Office. These studies show that radiation from artificial sources, ie. Hanford, exists in fish and oysters (eg. Federal Water and Pollution Control Agency, May, 1964), birds (eg. COO-1514-3, "Distribution of Mallards from the Columbia Basin Region as Indicated by the Presence of 65Zn in Birds Shot By Hunters in the Pacific and Central Flyways", June 1967, Fred A. Glover, et al. Colorado State University) and river sediment (eg. TID-25895 "Radionucleides in Transport in the Columbia River from Pasco to Vancouver, Washigton, W.L. Hauschild, Battelle-Northwest, 1971). Additionally news articles (eg. "Rolling Across the Desert...Radioactive Tumbleweed", Seattle P-I, May 3, 1979) refer to numerous occurance reports made to the DOE regarding radioactive mice, tumbleweed, snakes, wasp nests, coyote and rabbit feces and migratory birds. Applicant's Section 2.8 of ASC/ER does not discuss, for example, the artificial radiation in the Columiba River sediment downstream of the plant. Thus, there is reason to conclude that Applicant has underestimated the effect of past and present Hanford operations on the environment and underestimates, additionally, the effect of the project.

Applicant's analysis that the effects of low-level radiation from S/HNP will be nonexistent is inconsistent with our own reading of the literature. See Revised Contention 30). There is no reason to believe that Applicant would have applied more stringent standards to calculating the doses and effects of radiation from WPPSS 1,2 and 4, currently under construction. Thus we conclude that Applicant has underestimated the cumulative effects of S/HNP and WPPSS 1,2 and 4.

Petitioner believes that there is no reason to conclude under NEPA or Section 51 of 10 CFR that the effects of a major accident on the terrestrial and aquatic biota of the area is a "secondary impact", as stated by the Applicant. The Applicant should be required to assess the impact of an accident on rare, threatened and endangered species which depend on the area, for example, the Chinook salmon and the bald eagle. Since Petitioner believes that Applicant's analysis that the primary impact of an accident is small is entirely wrong (Revised Contention 32), it is not inconsistent to conclude that the Applicant has vastly underestimated, in this case by ommission, the so-called "secondary impacts" which Petitioner believes to be significant.

Revised Contention 15 (Replaces 37, 38, 39 and 40)

Petitioner contends that Applicant incorrectly concludes that "none of the areas to be disturbed by the proposed project have significant value" thus understating the environmental cost in the analysis required by 10 CFR 51.20(b).

This statement made in Section 4.1.3 of Applicant's ASC/ER is contradicted by Applicant's own admission that the riparian area and the Old Hanford Townsite are important to many species (eg endangered raptors, Oregon Swallowtail butterfly). Applicant has stated that construction of the proposed intake/discharge system in the riparian area will remain within one acre, (ASC/ER 4.1) but has not shown that either: 1) containing the construction to one acre will not have a significant negative impact upon the area or 2) that the means presently exist to ensure that construction will indeed affect only one acre. Moreover, Petitioners believe that the proposed construction will do irreversible harm to the biota of the riparian community through direct destruction and loss of habitat.

Revised Contention 16 (Replaces 38 and 39)

Petitioner contends that Applicant has failed to show that there are adequate measures to ensure that damage to the environment and living

organisms is minimized during construction, a position Applicant uses to meet the requirements of NEPA and 10 CFR 51.20(a).

Applicant relies on assertions such as "construction of the S/HNP will have no significant effect on wildlife" (ASC/ER 4.3) and that contractors and subcontractors will take every effort to minimize damage of habitat and biota. (ASC/ER 4.5) There is no reason to believe that such efforts will occur or be satisfactory without evidence of a concrete plan. The sensitivity of certain species can be very great with regard to changes in their environment and Applicant has not drawn on similar experiences nor projected with any specificity (as rerequired by 10 CFR 51.20(b)) what the effects will be. A plan needs to exist to analyze the real effects before irreversible harm is done.

Revised Contention 17 (Replaces 37, 41, 43, and 44)

Petitioner contends that Applicant has failed to provide evidence that construction and operation of the Skagit/Hanford Project will not irreperably harm rare, threatend and endangered species of vegetation namely Rorippa calycina var. columbiae, Astragalus sclerocarpus and Cryptantha leuconhae as required for a finding of the environmental cost under NEPA and 10 CFR 51.20 (b).

Applicant does not, in the first instance, adequately quantify the location of these in ASC/ER section 4.1. Neither does it provide evidence, See CFSP Revised Contention 16, to substantiate its claim that Rorippa "should not be threatened." (ASC/ER section 4.1.1) Without stating where this vegetation is found and how contractors and subcontractors will avoid destroying them there is reason to believe that this vegetation will not be protected.

Additionally the Oregon Swallowtail butterfly, a "species of interest," depends on tarragon in the Old Hanford Townsite for which no detailed data has been provided. Applicant has also failed to provide any indication of its ability to detect if irreperable harm is being done and to act accordingly.

Revised Contention 18 (Replaces 41,43 and 44)

Petitioner contends that Applicant has not provided evidence to show that the construction and opertion of the Skagit/Hanford Project will not cause irreperable harm to avifauna of the area directly and by the destruction of habitat as required by 10 CFR 50.20(b).

Section 2.2 of the ASC/ER does not identify with any specificity where all species of raptors and other birds are located. Neither does Applicant provide substantiation for statements made in the ASC/ER that the effect on raptors is "expected to improve" (section 4.1.1) and on curlews will "probably be not lasting".(section 4.2.4) The destruction of habitat and the operation of transmission systems is know to cause harm to species now threatened and endangered such as the bald eagle and peregrine falcon (although the primary reason for their dimintive numbers is the use of DDT). Applicant has not provided a plan, including scheduling, refered to in ASC/ER section 4.1.1,that will minimize negative effects on the avifauna or detect them if they occur. Absent these showings Petitioner has reason to conclude that construction activities which Applicant admits will depress certain species,and transmission lines will harm the avifauna of the area, including rare, threatened and endangered species.

Revised Contention 19 (Replaces 37, 38, 41, 43, and 44)

Petitioner contends that Applicant has not provided evidence to show that the construction and operation of the Skagit/Hanford Project will not irreperably harm the aquatic life of the Columbia River, most notably the anadromous salmon, and thus have underestimated the environmental cost of the plants as required by NEPA and 10 CFR 50.21(b).

The Applicant has not provided adequate quantitative data on the location of all aquatic species in the area affected in ASC/ER section 2.2. Furthermore their description of the swimming and migratory habits of salmon along the Hanford Reach in the same section only refers to the "preference" of the fish without providing even a percentage. Without adequate quantitative data as required by 10 CFR 51.20(b), the effect of

the plant is difficult to gauge.

The Applicant states that scheduling will be used to minimize damage to aquatic life. This plan is not provided in any detail nor is there a showing of the extent of their ability to minimize the harmful effects that are projected. For example, if the population is destroyed 25% instead of 35%, the damage has been minimized yet the information itself, rather than the conclusion, is necessary to determine the cost - benefit ratio of the action. Applicant is similarly vague on the issue of impingement of the Chinook Salmon fry by the intake structure. In sum Applicant does not provide any basis for the conclusion stated in ASC/ER section 4.1 that the effects of river construction on salmon "is not expected" or that the harm to aquatic life caused by the operation of the Skagit/Hanford will out weigh the benefits of the project.

Revised Contention 20 (Replaces CFSP 37, 38, 41 and 44)

Petitioner contends that Applicant has failed to show that construction and operation of the proposed project will not do irreperable harm to the giant Columbia River limpet and the great Columbia River spire snail pursuant to the requirements of 10 CFR 51.20(b).

Section 2.2.2.9 of the ASC/ER states that these species used to inhabit the entire Columbia River and at present are found solely, and thus depend on, the Hanford Reach. Since the construction and operation of the intake/discharge structure is in this area it stands to reason that Applicant would have examined the potential effects upon these diminished populations. However, the ASC/ER contains nothing to show that this is true, thus Petitioners have reason to conclude that the thermal, chemical and radioactive discharges may negatively impact on the great Columbia River spire snail and the giant Columbia River limpet thus affecting the cost-benefit ratio in favor of the project.

Revised Contention 21 (Replaces CFSP 42)

Petitioner contends that Applicant has failed to consider the

cumulative effect of additional intake and discharge structures or the cumulative thermal and radiological effects of other facilities, presently non-operational, on the Columbia River and its biota.

These facilities include WPPSS 1,2 and 4 and Pebble Springs, Units 1 and 2. The Staff has expressed in the Pebble Springs docket that there is a limited number of intake structures that the Columbia River can support with no negative effect. The Applicant has not provided any discussion of this issue in its ASC/ER.

Revised Contention 22 (Replaces CFSP 45)

Petitioner contends that Applicant has underestimated the environmental effects of decommissioning such that the cost-benefit balance required by 10 CFR 51.20(b) is improperly weighed.

Applicant fails to support its allegation that decommissioning "does not usually invoke environmental impacts which are unique to a specific project." ASC/ER 5.8 As with the construction of the plant, the environmental costs of decommissioning, whether by dismantling, entoumbment or mothballing, should be weighed with the site-specific characteristics in mind. As decommissioning represents an equal or greater undertaking and is an act that cannot be avoided once the plant is constructed, its impact on the environment and biota must be addressed. For example, if a particular species runs the risk of a setback during construction it runs the risk of significant harm during the process of decommissioning as well. Applicant has stated that there are species in the vicinity which depend on the area for survival.

INTERACTIVITY BETWEEN THE PROJECT AND INDUSTRIAL FACILITIES

Revised Contention 23 (Replaces CFSP 46 and 48)

Petitioner contends that the Applicant has failed to conduct an assessment of the potential impact of surrounding nuclear and chemical facilities on the S/WNP and its ability to continue operation in the case of an event at these facilities and the consequences of loss of operability as required by 10 CFR 100.10.

Section 100.10 of 10CFR is a discussion of factors to be considered when evaluating sites and states that these include "those rela-

ting both to the proposed reactor design and the characteristics peculiar to the site." For example, the Applicant would not want to site the reactor near a liquid natural gas facility. The industrial facilities near the proposed site include the Fast Flux Test Facility (FFTF), four miles from the site, which, according to Richard Webb (The Accident Hazards of Nuclear Power Plants, Amherst: The University of Massachusetts Press, 1976, chapter 10) has the potential for a 1,160 TNT explosive nuclear accident Dr. Webb states further that its containment is only capable of withstanding up to 150-300 lbs. TNT. Applicant has not analyzed the project's ability to withstand this event, nor demonstrated that the project conforms to10 CFR 100.10(d) with "appropriate and adequate compensating engineering safeguards."

Applicant has not conservatively analyzed the other chemical and nuclear facilities within fifty miles which include the development of a hazardous waste dump (3 miles away) and the N-reactor which has no containment building.

Revised Contention 24 (Replaces CFSP 47)

Petitioner contends that the Applicant has failed to conduct an assessment of the potential impact of the S/HNP on nuclear facilities and activities located on the Hanford Reservation and the ability of these operations to continue in the event of a major accident at the S/HNP as required by 10 CFR 51.20 and 10 CFR 100.10.

These facilities include the Wye Burial Ground (three miles away), the FFTF (four miles away) and WPPSS plants 1, 2 and 4. A catastrophic accident and steam explosion would, according to WASH-740, affect the operation of these facilities and would cause significant expense.

GEOLOGY OF PROPOSED SITE

Revised Contention 25 (Replaces 49, 50 and 51)

Petitioner contends that the present geology and seismic studies presented by Applicant in Section 2 of the PSAR are inadequate and do not meet the requirements of 10 CFR 100 Appendix A. Applicant has not

changed the seismic design of the project to reflect the local geology and seismology and thus the S/HNP is not properly designed to withstand the potential seismic events of the site.

Applicant has not considered the safety significance of all linements within a five-mile radius of the site. See NRC Staff Question 231.1 Applicant has not adequately assessed the Cold Creek syncline. See NRC Staff Question 231.2. A recent report by the Department of Energy (Rockwell Hanford Operations, 1981, Subsurface geology of the Cold Creek Syncline, RHO-BWI-ST-14, Myers, C.W. and Price) suggests that several structures and geophysical anomalies within the Pasco Basin may be faults. Applicant has made no determination if these are indeed faults. See NRC Staff Question 231.3. Lacking such a determination and review of Applicant's findings, one must conclude that faults do exist which would have a significant impact on the proposed project.

The design has not been changed to reflect the change in site. In a Memorandum to Elinor Adensam, Chief, Licensing Branch No. 4 from George Lear, Chief, Hydrologic and Geotechnical Engineering Branch, Division of Engineering, dated March 10, 1982, Mr. Lear states that "The Skagit/Hanford Nuclear Project, Units 1 and 2, has been moved from an area having hard rock essentially at ground surface to an area having sand to a depth of 200 ft. The plant foundation design details, however have not been changed." (emphasis added) Further evidence of this matter can be found in the answer to NRC Staff Question 220.10.

Revised Contention 26 (Replaces 49, 50 and 51)

Petitioner contends that electrical equipment, other than that supplied by General Electric, will not be qualified to IEEE 344-1975 and Regulatory Guide 1.100, and thus the plant will not conform to current standards of safety and regulations.

Revisions 1 and 2 to the NRC Standard Review Plan Section 3.10 state that qualffication of electrical equipment should be in accord with IEEE 344-1975 and Regulatory Guide 1.100. However, Applicant states

in Section 3.10 of the PSAR that the seismic qualification of electrical equipment other than that provided by General Electric will be in accord with IEEE 341-1971.

WASHINGTON PUBLIC POWER SUPPLY SYSTEM PLANTS 4 AND 5

Revised Contention 27 (Replaces 52)

Petitioner contends that Applicant has not considered the take-over and completion of the terminated nuclear projects 4 and 5 of the Washington Public Power Supply System as an environmentally, economically preferable alternative to the proposed project as required under NEPA and 10 CFR 51.20(a).

These plants are under NRC jurisdiction and thus easily considered as a viable alternative to the proposed project. Applicant's response to NRC Staff Question 230.01 in the ASC/ER is wholly inadequate because it fails, for example, to discuss Applicant-Pacific Power & Light's opportunity to purchase WPPSS 5 in February, 1982. Most importantly, the discussion provided in response to this question makes it very clear that Applicant has not investigated this alternative.

EMERGENCY PLANNING

Revised Contention 28 (Replaces CFSP 51)

Petitioner contends that Applicant has failed to meet the requirements of 10 CFR 50 Appendix E (II) in not supplying the necessary information.

Applicant has not provided the information required by Paragraph B: Appendix A which Applicant claims fulfills this purpose, states "To be provided subsequently." Applicant has not provided the information required by Paragraph C as it fails to describe the proceedures on how an evacuation will be carried out. Applicant states in Section 7.4.2.1 of the PSAR that "if evacuation is deemed necessary, it will be carried out in accordance with detailed evacuation plans which will be contained in Benton and Franklin Counties Emergency Response Plan." This is inadequate. Applicant has failed to provide features of the facility to be provided for onsite emergency firstaid as required by paragraph D.

Applicant merely states in ASC/EP section 7.5.1 of the PSAR that "further description of the facility will be provided in the FSAR."

Applicant continued by failing to discuss the major impediments to the evacuation or the taking of protective actions. Applicant does not consider the pro-nuclear attitudes of local residents and their disregard for exposure to radiation. Thus Applicant has not meet the requirements of paragraph G. Applicant has not done a preliminary analysis reflecting the need to include facilities, systems and methods for identifying the degree of seriousness and potential scope of radiological consequences of emergency situations with in and outside the site boundary. Applicant in this instance has failed to meet paragraph H.

Revised Contention 29 (Replaces 57)

Petitioner contends that the cost-benefit analysis performed by the Applicant is wholly falsified. This cost-benefit analysis does not represent an analysis "conducted fully and in good faith" (See Calvert Cliff Coordinating Committee v. U.S.A.E.C.,D.C. Cir., 1971 at p 11). In doing so Applicant has wrongfully concluded that the proposed project benefits outweigh the cost, and that the proposed project is cheaper then other alternatives such as coal.

Applicant has failed to account for the cost of design changes due to the TMI requirements and other required safety changes. Komonoff surpa at Chapter 6. Applicant overestimates the reliability of the proposed project. One way Applicant has done this overestimation is by assigning a capacity factor of 70 percent to the project when it should have a capacity factor of no more then 60 percent. Komonoff supra p 246-7. Further Applicant has failed to account for the unreliability, due to its location. Applicant will be required to acquire more reserve capacity to make up the deficiet thus increasing the cost of the project.

Applicant underestimates the effects of low-level radiation emmissions on the health of the popluation near the project and facilities related to the fuel cycle. (See Revised Contention 30) Applicant fails to include the chemical and radiation hazards of the zirconium cladding

production in Albany, Zirconium Hazards & Nuclear Profits (A Report on Teledyne Wah Chang, Albany, Pacific Northwest Research Center, 1979) details the chemical discharges (eg. 6,000 lbs. ammonia, 1-2 tons sulfer oxide and 1 ton MIBK, each day) and nuclear wastes (eg. 2,000lbs/day Radium-226.).

Applicant has underestimated dewatering, erosion control and soil stablization techniques and the cost of the methods thereof due to underestimaton of the anticipated excavation level. (See NRC Staff Question 241.1) Applicant also has grossly underestimated the cost of nuclear waste disposal and storage. Effective 1/15/82 the cost of low-level waste burial at the U.S. Ecology dump went up 625 percent partially to cover the expenses for increased surveillance and a site closure fund. This example will not only affect the projections of Applicant's cost for low-level waste disposal but also illustrates how unpredictable and expensive the costs can be. Applicants projections do not take these into account. Komonoff supra p 264-5 Applicant misrepresents reprocessing as current and viable technology and therefore cannot adequately assess the cost of using the technology.

Applicant fails to adequately assess the cost of decommissioning a reactor as large as the S/HNP units. Applicant fails to consider the potential cost of decommissioning the project in the case of an accident. Applicant provides no basis for the assumption in ASC/ER,section 5.8 that "at the present time decommission can be performed safely and at reasonable cost." Komonoff supra p 272-3

Applicant, in stating that seven years will be sufficient to construct each unit (ASC/ER), ignores present construction times for nuclear power plants. Applicant should use a time frame of 8.9 years. (This is an average based on NUREG 0030 Vol. 5 Nos 1,2,3, pp 1-008 to 1 1-015. See Komonoff p. 246-7.)

Applicant has also misstated the fixed charge rate for nuclear to be 13.88% and coal 14.58%. Komanoff shows theseto be higher for nuclear. (pp170-2) Applicant has also failed to consider higher interest rates that it would have to pay for building a nuclear power plant. See Komanoff pg. 271. And lastly, Applicant has underestimated the capital cost escalation for the project compared to a coal project. See Komanoff, Section 10.2.

SOMATIC AND GENETIC EFFECTS OF RADIATION RELEASES

Revised Contention 30 (Replaces CFSP 58, 59 and 62)

Petitioner contends that Applicant underestimates the somatic and genetic effects of radiation released from the proposed project during normal and abnormal operating conditions thus entirely underestimating the cost of the plant in the cost-benefit analysis required by 10 CFR 50.21(b).

Applicant fails to accurately portray: 1) the radiation dose to nuclear workers at the project, whether permanent or temporary ("sponges") including from the decommissioning process and the effect such workers will have on the overall human genetic pool; 2) the effect of routine and accidental releases of radiation of children in utero; 3) the existing radiological and other health burdens of people residing in and around the Hanford area and Columbia River without which it is impossible to accurately assess the radiobiological impact of the proposed project; 4) the complete history of artificial radiation in the land, water, and biota of the Hanford area and the Columbia River without which it is impossible to accurately assess the radiation doses caused by the proposed project; and 5) the complete meterological and other characteristics of the site necessary to determine the radiation exposure pathways.

The health effects of ionizing radiation, whether somatic or genetic, are cumulative, thus existing radiological burdens must be considered. (Gofman, supra, pg. 47) Furthermore, the age of irradiation is all-important (ibid. pg. 48) with in utero doses the most potent (ibid

pp. 126, 729). Applicant does not provide projections of children in utero in its population projections in the ASC/ER. Dr. Rosalie Bertell states that radiation has an enhancing effect on existing health burdens and that such information is necessary to correctly determine the impact of a proposed project. See X-Ray Exposure and Premature Aging, Journal of Surgical Oncology, 1977, pg. 379. and Radioactive Effluents: Pebble Springs Nuclear Plants, testimony before the Oregon Energy Facility Siting Council, April 3, 1978. Gofman discusses the implications of occupational exposures to the human genetic pool (ibid. pg 584) and calculates the the radiation exposure and effects to temporary workers (ibid.pg.586)

Applicant relies on models which underestimate both the dose and the effect of radiation that would be released from the project by failing to incorporate the findings of "The Heidelberg Studies" (Radioecological Assessment of the Whyl Nuclear Power Plant) 1978, Department of Environmental Protection of the University of Heidelberg, University of Heidelberg, NRC Translation 520, U.S. NRC.

Revised Contention 31 (Replaces CFSP 60)

Petitioner contends that the radiation monitoring system is inadequate and thus will understate the dose to the public received from routine and abnormal releases of low-level radiation from the proposed project. Applicant should be required to use the "Spiderwort Strategy" which would provide significantly improved information.

Appliant relies on models that are outdated and obsolete and therefore will render their milk-monitoring system inadequate. See "The Heidelberg Studies" supra. Moreover, Steve Given of the Spiderwort Committee, Portland, Oregon has stated that the Spiderwort Strategy would be a significant improvement over current monitoring methods proposed by Applicant because, "it is the most readily quantifiable means of estimating all biologically significant forms or radiation released from a nuclear power plant". Spiderwort, Tradescantia, is

a highly sensitive indicator of somatic mutations which yeilds results within 8 to 12 days from exposure. It has been used extensively in Japan. See "The Spiderwort Strategy", Sadoa Ichikawa, PhD, Laboratory of Genetics, Saitama University, Japan. KOGAI Newsletter, Vol. 6 No. 3, 1978.

PROBABILITY AND EFFECT OF AN ACCIDENT

Revised Contention 32 (Replaces CFSP 63 and 64)

Petitioner contends that Applicant underestimates the doses and effects caused by the release of radiation in the event of an accident at the S/HNP and thus wrongly concludes the benefits of the facility outweigh the costs under 10 CFR 51.20(b).

Applicant fails to include an assessment of early illnesses and attendant early morbidity which would be significant contributors to the human toll in the event of an accident at the project. These include: respiratory impairment, hypothyroidism, temporary sterility in males, permanent sterility in females, in utero effets, genetic effects, and the synergistic effects of one or more of the above illnesses and existing chronic diseases. Petitioner challenges the findings of Applicant's ASC/ER Section 7.4 which find the so-called primary effects of an accident would be negligible. See Risk Assessment: Pebble Springs Nuclear Plant, testimony before Oregon Energy Facility Siting Council, March 31, 1978, by Richard B. Hubbard.

Furthermore, Applicant underestimates the doses and effects by using as a receptor the standard man, the least susceptible form of human life, as stated in Revised Contention 30. Applicant also fails to consider the radiological effects of accidental releases of liquid effluent on the surface and groundwater supply of the downstream population in ASC/ER Section 7.4.8. which assumes such releases will not occur.

Revised Contention 33 (Replaces 65)

Petitioner contends that Applicant has not met the requirements

of 10 CFR 50.34(f)(1)(i), NUREG 0718 Rev. 1 Action Item II.B.8(1) requirements.and has no intention of meeting these requirements.

Action Item II.B.8(1) states. "demonstrate how the risk assessment program will be scheduled so as to influence system designs as they are being developed." Applicant's response to this requirement merely states that 70 percent of the nuclear supply system components have already been fabricated and delivered into storage and that two-thirds of engineering design has been completed.

Applicant goes on to state that any desing changes will be made on a judgemental basis and not be license requirements. Clearly this Board has no basis, and not even the hope, to believe the plant will be constructed in a manner to adequately protect the public health and safety. Beaver Valley, supra.

Revised Contention 34 (Replaces CFSP 16, 67 and 68)

Petitioner contends that Applicant underestimates the probability and effects of an accident at the S/HNP thus falsly concluding that the benfits outweigh the costs in the analysis required by NEPA and 10 CFR 51.20(b).

Applicant underestimates the probability of an accident by relying upon the Reactor Safety Study (RSS) which , according to the testimony of Richard Hubbard, supra, incorrectly assess: 1) the contribution of BWR accident sequences to the probability of a major radiation release, 2) the ability of the Emergency Core Cooling System to perform its intended functions; 3) the effect of aging on reactor safety; 4) the effects of sabotage; 5) the impact of unresolved safety issues on overall risk; and 6) relies excessively on "single failure" events when it is know that multiple failures exist. Applicant underestimates the effects of an accident further by overemphasizing the effectiveness of evacuation, using outdated bio-effect models and understating the effect of common-cause failures such as sabotage, fire, earthquake etc. which according to the Lewis Report, NUREG/CR 0400 are important inadequacies

of the RSS. Until the Applicant demonstrates that these inadequacies have been resolved in their "rebaselining" of the RSS these is reason to conclude that the risks of an accident are significantly underestimated by the Applicant.

Revised Contention 35 (Replaces CFSP 70)

Petitioner contends that Applicant underestimates the potential and significant costs of an accident in section 7.4 of the ASC/ER as required by 10 CFR 51.20.

The costs Applicant does not assess include: 1) the effects upon commercial river traffic on the Columbia River, 2) the temporary or permanent closure of adjacent nuclear and industrial facilities; 3) the cost of clean-up and decommissioning; 4) the long-term contamination of water supplies within and without the fifty-mile radius dependent on the Columbia River and 5) the cost of preventing the liquid pathways of radioisotopes to the Columbia River as discussed in ASC/ER Section 7.4.8.

Petitioner alleges these costs would be significant. The Columbia River is a major waterway, supplying an avenue of river traffic, hydroelectric power, recreation, water and fish. An accident at the S/HNP would seriously contaminate the water, silt and fish of the river, negatively impacting upon the health of those using the river for recreation, drinking and food for many years to come. The impact of this would far exceed the 50-mile radius of the plant as is evidenced by studies refered to in Revised Contention 14 which show that Hanford is the source of artificial radionucleides to the Pacific Ocean.

The cost of clean-up and decommissioning for even a non-catostrophic accident would be enormous, as shown by the TMI-2 experience where, three years later, it is still too early to assess the total cost. The cost of replacement power is also significant as evidenced by the Trojan Control Building proceeding where every hour of the shutdown cost PGE

$40,000.00. Similarly, other significant investments such as the FFTF, four miles away, would be jeopardized in case of an accident at the S/HNP.

CONCLUSION

CFSP Contentions 3, 20, 26, 27, 53 and 55 have been dropped. CFSP Contentions 11, 28, 29, 30, 31, 32, 33, 34, 35, 61, 66 and 69 have been withdrawn pending the issuance of the NRC Staff's Safety Evaluation Report. Intervenor, Coalition for Safe Power, hereby submits the remaining thirty-five revised contentions to the Board to accept under 10 CFR 2.714.

Respectfully submitted,

Nina Bell

Nina Bell, Staff Intervenor
Coalition for Safe Power

Dated this day, the 24th
of May, 1982.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
PUGET SOUND POWER & LIGHT COMPANY, et al.	)	DOCKET NOS. STN 50-522 STN 50-523
	)	
(Skagit/Hanford Nuclear Project, Units 1 and 2)	)	
	)	

WEH

CERTIFICATE OF SERVICE

I hereby certify that Coalition For Safe Power's REVISED CONTENTIONS, dated May 24, 1982, has been served by placing true copies of said document, in the U.S. Mail, first class, postage prepaid, on May 25, 1982, in Portland, Oregon on the following:
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Dated this 25th day of May 1982. Portland, Oregon