

MAY 20 1975

R. C. DeYoung, Assistant Director
for LWR's, Group 1, RL

**SITE SUITABILITY INPUT FOR FOUNDATION ENGINEERING SECTION, SITE
ANALYSIS BRANCH**

PLANT NAME: WPPSS Nuclear Projects 3/5
LICENSING STAGE: CP
DOCKET NUMBERS: 50-508/509
RESPONSIBLE BRANCH: LWR 1-3
REQUESTED COMPLETION DATE: 5/23/75
APPLICANTS RESPONSE DATE NECESSARY FOR
NEXT ACTION PLANNED ON PROJECT: N/A
DESCRIPTION OF RESPONSE: N/A
REVIEW STATUS: CP

Enclosed is the site suitability testimony input for the foundation
engineering aspects of the subject station for your use. This
testimony was prepared by John Graevs, SAB.

Original Signed by
H. R. Denton

Harold R. Denton, Assistant Director
for Site Safety
Division of Technical Review
Office of Nuclear Reactor Regulation

Enclosure:
As stated

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DATE →	5/19/75	5/19/75	5/19/75	5/19/75		

WPPSS NUCLEAR PROJECT UNITS 3 & 5
DOCKET NOS.: STN 50-508/509
SITE SUITABILITY BY: J. T. GREEVES

There are no known foundation hazards such as bearing capacity failures, excessive differential settlement, slope failure or liquefaction at the WPPSS Nuclear Project Units 3 & 5 or immediate vicinity presenting a risk to the proposed power facilities.

The site is located on a ridge at the northern edge of the Willapa Hills approximately 1.5 miles south of the confluence of the Chehalis River and Satsop River in the Grays Harbor County in the State of Washington. The ridge at the plant location is presently at approximately elevation 480 feet (msl). The general plant grade will be graded to elevation 390 feet (msl) and the plant foundation will be located at elevation 320 feet (msl).

The fresh sandstone of Astoria formation is the bearing stratum for all Category 1 foundations. The Astoria formation is divided into four material types: residual soil, weathered sandstone, fresh sandstone and tuff. Residual soil extends from the ground surface to the top of the weathered sandstone. Weathered sandstone grades to fresh sandstone with increasing depth and can be differentiated on the basis of color change. Tuff beds have been encountered in some areas and are identified by color, hardness and mineralogy.

The foundation of the Category I structures will be on the fresh sandstone. The fresh sandstone under the proposed foundation is gray coarse to fine grained sandstone with low to moderate hardness. The bearing capacity and settlement analyses indicate that the fresh sandstone will provide adequate foundation support.

Slope stability analysis presented in Section 2.5.5 and the landslide investigations presented in App. 2.5.L show there is adequate safety against slope failure in the plant area.

Surface and subsurface investigations by the applicant include geologic mapping, drilling, trenching, geophysical surveys, remote sensing techniques, aerial photography, comprehensive literature search, as well as extensive laboratory and field testing. Subsurface investigations have been utilized by the applicant in order to define the foundation conditions within the site area.

From our analysis and evaluation of available foundation engineering data, including the results of investigations performed by the applicant, we have concluded there are no foundation considerations that would preclude the acceptability of the site.