

June 13, 1982

Chairman
The Nuclear Regulatory Commission
Washington, D.C.

Dear Sir,

The Washington Public Power Supply System recently sent you a copy of their 7000-page report on the safety of their number 3 plant located at Satsop, Washington. I believe the report is called "Final Safety Analysis for WPPSS Nuclear Plant Number 3." According to new information, the Satsop nuclear plant may not be safe because of earthquakes.

By cracking the containment structure around the reactor, an earthquake could release lethal amounts of radiation, rendering parts of Washington State uninhabitable for centuries. State seismologist Linda Nolson states that a "7.5. (Richter) scale (earthquake) could occur anywhere in Western Washington (see attached article)." If the Satsop plant is not designed for a 7.5 Richter scale earthquake, then it should be redesigned to withstand an earthquake of this magnitude.

Mr. Chairman, could you please help me find out if the Satsop nuclear plant is designed for a 7.5 scale earthquake? I suspect the above safety analysis report would answer my question. However, I have not been able to see a copy of their safety study. WPPSS has not answered any of my numerous written requests for information. Could you please help me get a copy of this study, so that I could determine whether the Satsop #3 plant is designed to withstand a 7.5 Richter scale earthquake?

Thank you very much for your help and consideration. I look forward to hearing from you.

Sincerely yours,

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State prime target for major quake

By MIKE WALES
Olympian Staff Writer

If you fled California and came to Washington because you believed that someday an earthquake would cause the sunshine state to slide into the sea, you came to the wrong place.

While no one is predicting this state will shake loose from its foundation, some scientists suggest that Western Washington is in for a devastating quake that could spread death and destruction over a vast area.

Craig Weaver, a U.S. Geological Survey seismologist who works at the University of Washington geophysics laboratory, has said that quakes of a magnitude of up to 6.5 on the Richter scale are possible along a previously undiscovered fault 56 miles long, bisecting Mount St. Helens.

That fault, which runs from a few miles south of Yelm to about 20 miles south of Mount St. Helens, is similar to the infamous San Andreas Fault in California. According to Weaver, previous earthquake hazard assessments failed to detect this fault line.

The earth's crust in the fault zone is being squeezed — a process called stress loading — and pushed toward the northeast.

The direction of the squeeze suggests that Western Washington's land mass is colliding with the offshore Juan de Fuca plate. The offshore plate, in turn, is being forced beneath Western Washington in a process

called subduction, Weaver said.

The instability along the zone where the two plates collide can cause major earthquakes of 7.5 or higher on the Richter scale, Weaver has warned.

Quakes occur when monster shifts of the earth's crust along such fracture lines or cracks release tension. The released energy jerks the earth's crust in a series of hammering shocks that vibrate the surface like a huge bell.

These shocks can travel at speeds up to 8 miles per second.

The Richter scale is a logarithmical measure of earthquakes, which means that a quake of 5.0 is 10 times more powerful than a 4.0 and so on. An earthquake of 3.5 on the Richter scale can cause slight damage. A 5.0 quake would cause considerable damage. A 7 Richter reading would signal a major quake, capable of widespread heavy damage, and an 8 is a cataclysmic quake.

Linda Noson, a state seismologist, said Washington also is prone to quakes that occur beneath the surface, some of them 30 miles deep.

An observable fault line, such as the San Andreas Fault, can be plotted on a map, and precautions can be taken to minimize damage around it. A deep quake, however, can strike anywhere, and there is nothing on the surface to indicate its fault line.

The effect depends on the depth. A 6.5 magnitude

quake at a 10-mile depth can be far more severe than a 7.5 magnitude quake at a 30-mile depth.

The shallower the quake, the more intense it is; the deeper the quake, the broader the area it will cover. That is the reason considerable alarm was raised by the discovery of the relatively shallow St. Helens area fault. But it is not the only worry.

"A 7.5 quake could occur anywhere in Western Washington," Ms. Noson said.

When one asks if there isn't some way to come up with a hint of where the next devastating quake will strike, he discovers he is asking for determinations in a science that is still in three-cornered pants.

The horror of it is that most of the small cadre of scientists attempting to discover the key to quake predictions firmly believe an 8-plus magnitude quake eventually is bound to strike somewhere in the country.

Such a quake could claim tens of thousands of lives, injure hundreds of thousands, and cause property damage in the billions of dollars if it hit a city the size of Seattle, a very real possibility.

What could happen if an earthquake hit and what did happen when one did are described on Page B1.

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