

Oregon

January 30, 1997

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DEPARTMENT OF
GEOLOGY AND
MINERAL
INDUSTRIES

ADMINISTRATIVE
OFFICE

SUBJECT: Response to Portland General Electric Re: Ash Fall at the Trojan Site

This is in response to your letter of January 8, 1997 (attached) in regards to Portland General Electric's (PGE) position regarding potential for ash fall at the Trojan site. We appreciate the opportunity to provide these comments which are intended to add information and clarification in regards to the request by PGE to move their spent nuclear fuel into dry storage casks at the Trojan site, and the potential to have the air flow cooling vents clogged by an ash fall event from the Mt. St. Helens volcano.

The Attachment III to VPN-085-96 includes Question 8-8 (b) regarding the effects of the potential for ash accumulation at the Trojan site from an eruption of Mt. St. Helens. In the response to this question, PGE makes several comments that need clarification. The first of these is that PGE indicates that, because of the removal of much of the summit and north flank of the volcano during the eruption of May 18, 1980, there is little ash material available.

It should be clarified that the total volume of ash material available during an eruption is not completely controlled by the volume of material in the summit and flank of the volcano. I refer you and PGE to the report, Seismic and Volcanic Hazard Evaluation of the Mt. St. Helens Area, Washington, Relative to the Trojan Nuclear Site, Oregon, DOGAMI Open File Report 0-81-9, by John Beaulieu. Starting on page 61 of the report, there is a comprehensive discussion of ash fall volumes associated with eruptions of Mount St. Helens and controlling factors such as the open conduit within the volcano. The report points out there is a history of large and small volumes of ash from numerous eruptions of the volcano and that, although the chance is quite small, there is potential that a significant volume of ash fall from an eruption of Mt. St. Helens may not be completely ruled out. Nowhere is the shape of the summit linked with the potential size of future ash falls.

A second point in need of clarification is PGE's statement that because of the shape of the existing crater eruption products would be largely directed to the north. In the DOGAMI Open File Report Report OF 0-81-9 cited above, it is pointed out on page 63 that maximum credible ash fall at Trojan from Mt. St. Helens is a function of volume of



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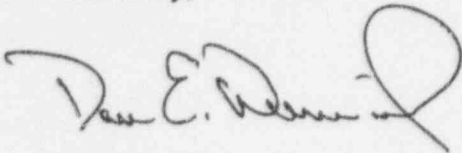
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ash erupted and direction of transport which includes wind direction as a controlling factor. The report indicates that winds flow from Mt. St. Helens toward Trojan a minor portion of the time and that the five largest ash falls in the last 4,500 years of life of the volcano follow the statistically favored wind direction to the north and east of the volcano. However, there remains a very small chance for ash fall from an eruption of Mt. St. Helens to impact the Trojan Site. In earlier analyses, PGE has properly noted that even if ash were to begin to accumulate at the site, removal would certainly be a response exercised by staff.

In conclusion, PGE indicates that there is a low probability of significant ash fall impacting the Trojan site which might clog the cooling vents, and we have no disagreement with this statement. However, the above cited reference should be utilized to provide clarity to the question of potential for ash fall to impact the Trojan site.

Please contact me with questions or comments in regards to this matter.

Sincerely,

A handwritten signature in dark ink, appearing to read "Dan E. Wermiel", with a large, stylized loop at the end of the signature.

Dan. E. Wermiel
Geologist

c: John Beaulieu