

November 13, 1979



Atomic Safety Commission  
Mr. V. Deale  
101 Commerce Ave. N. W.  
Washington, D.C. 20036

Subject: Skagit Power Plant - Environmental Statement

Gentlemen:

Reference the E. I. Statement for the Skagit plant, Sect. 5.1.3.4. states: "No impact on the demography, agriculture, or industry because the increase in moisture will be slight."

I wish to give my opinion; as a meteorologist, I should like to point out the serious error here.

As I understand it, the plan is to evaporate 24 million gallons of water per day out the cooling towers, dumping it at 1,000 ft. mean sea level, where frequently it will drift westward to a calm, stagnant, and humid atmosphere over the greater Mt. Vernon farm area.

Had the impact statement contained actual lapse rate and wind data taken daily at 7 A.M. and 5 P.M. over Mt. Vernon during the April through October growing season, it would have shown that the above area could not handle even 12 million gallons per day dumped at 1,000 feet M.S.L. because of frequent inversions, highly stable, and stagnant conditions in the greater Mt. Vernon area.

Such lapse rate data (temperature, pressure, humidity, wind direction and velocity) up to 2,000 ft. M.S.L. would have shown the following for April through October:

Base of inversions 500 meters or less:	10 times per growing season
Very stable conditions (0 to 5°C lapse rate):	9.8 " " " "
(Portage Bay Seattle total)	19.8 " " " "

This is 19.8 times during a growing season that the plant should be shut down with the present cooling tower design. The error is in dumping cooling tower moisture at 1,000 feet rather than 1,650 feet mean sea level where it would not be readily trapped.

During June, for example, corn and strawberries need maximum solar radiation. Dumping 24 million gallons of water per day in the form of moisture will bring cloudiness and hours or days of heavy drizzle to greater Mt. Vernon area farmers. Harvesting strawberries in drizzle could wipe out farmers' income. Heavy drizzle during haying or wheat harvesting can be costly to farmers, etc.

Why didn't the Puget Power study Portage Bay, Seattle, radio soundings as well as thousands of old Seattle Weather Bureau soundings and include some of this data in a statement on the lower atmosphere? These records would clearly show the necessity for dumping the cooling towers above 1,650 feet elevation M.S.L. where moisture would not be trapped easily, rather than the proposed 1,000 ft. M.S.L. level. Seattle data is valid for Mt. Vernon, in many cases.

The E.I.S. also failed to point out that much of the plant winds are mountain and valley type - shallow and very limited in horizontal travel.

There are no A.E.C. or other formulas, that can replace simple lapse rate data over Mt. Vernon.

Sincerely,

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cc: Puget Sound Power  
Skagit. Concerned About Nuclear Power  
Interested Citizens

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