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SUBJECT: Discusses deficiency due to oversight in correlation of
 "river dilution" parameter used in WNP-2 Offsite Dose
 Calculation Manual.

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MAY

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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Docket No. 50-397

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Subject: WNP-2, OPERATING LICENSE NPF-21
NRC EVALUATION OF OFFSITE DOSE CALCULATION MANUAL,
REVISION 8 FOR THE WASHINGTON PUBLIC POWER SUPPLY
SYSTEM NUCLEAR PROJECT NO. 2

Reference: Letter, PL Eng (NRC) to GC Sorensen (SS),
same subject, dated September 23, 1991

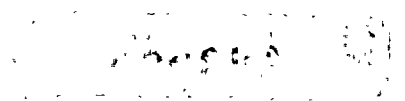
The reference mentions an apparent deficiency due to an oversight in the correlation of the "river dilution" parameter used in the WNP-2 Offsite Dose Calculation Manual (ODCM). It is stated that the "river dilution" of 2000 given in Table 2-3 of the ODCM for use in LADTAP II is inconsistent with the near-field liquid dilution factor of 500 used in Section 2.4 of the ODCM, and results in a calculation of doses due to fish consumption that are a factor of four too low.

NUREG-0133 requires a "near field average dilution factor" that for the WNP-2 blowdown line flow is not to exceed 500. This limit is generic and does not consider the large dilution flow of the Columbia River. LADTAP calculations have used a dilution factor value of 2000 which was based on the locations where fish may actually be caught and the large flow volume of the Columbia River. The difference between the dilution factors yields a factor of four difference.

Although the current LADTAP II dilution factor of 2000 is justifiable based on Columbia River flow, the Supply System will change the LADTAP II parameters to match the NUREG-0133 requirement that the product of the average blowdown flow (2 cfs) to the receiving water body and the dilution factor (500) not exceed 1000 cfs. Liquid effluent doses based on the more conservative NUREG-0133 methodology are still only a very small fraction of allowed limits and changing the LADTAP parameter to 500 will provide greater consistency for the aquatic food pathway calculations without impacting operations.

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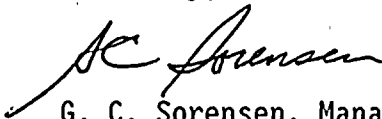


Page Two

NRC EVALUATION OF OFFSITE DOSE CALCULATION MANUAL,
REVISION 8 FOR THE WASHINGTON PUBLIC POWER SUPPLY
SYSTEM NUCLEAR PROJECT NO. 2

The reference also mentioned that the methodology used to calculate the maximum organ dose to an individual due to release of radioactive material in airborne effluent will give conservative results. The reference stated that this conservatism should be noted in the ODCM. This will be done.

Sincerely,



G. C. Sorensen, Manager
Regulatory Programs (Mail Drop 280)

AGH/bk

cc: JB Martin - NRC RV
NS Reynolds - Winston & Strawn
PL Eng - NRC
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