

RESOLUTION NO. 249

WHEREAS, Condition G2 of the WNP-2 National Pollution Discharge Elimination System (NPDES) Permit requires that "The discharge of water treatment additives which were not identified in the permit application shall be subject to the Energy Facility Site Evaluation Council (Council) approval;" and

WHEREAS, The Supply System by letter dated February 16, 1990, requested the Council approve a test use of sodium bromide in the WNP-2 recirculating cooling water system for a period of one year, and

WHEREAS, Council Resolution No. 240 adopted a Review Process for Circulation Water Additive Requests as the Council's guidelines for the review and approval of circulating water additives, and

WHEREAS, The guidelines state the Council shall consider that the additive must meet three conditions:

1. No PCB's, or detectable priority pollutants,
2. Meet state water quality criteria, and
3. Meet toxicity requirements

and,

WHEREAS, The review process calls for the Council to review the need, the degradability, persistence and toxicity of an additive, and

WHEREAS, The Council finds the following:

Need: The Supply System has been experiencing problems with build-up of algae in the WNP-2 cooling towers and screens within the circulating water building. Severe algae build-up significantly decreases the cooling towers efficiency by plugging the holes on the tower decks where the cooling water drains through and is dispersed throughout the tower. Within the circulating water building screens designed to trap debris in the water become clogged with algae thereby decreasing flow.

Degradability: Bromine is chemically similar to chlorine, decaying rapidly after use.

Persistence: Sodium bromide will chemically alter into constituents of salt and hypobromous acid, the active biofouling agent. Neither will persist in the environment after use.

Toxicity: Discharge of the recirculating water (blowdown) will not occur until levels of the additives are equal to or less than 0.1 mg/l for at least 15 minutes. These chemicals are time dependent for their effectiveness. After discharge the chemicals will continue to reduce toxicity, and

WHEREAS, The Department of Ecology has reviewed the Supply System's request and finds no objection to the one year trial test, and

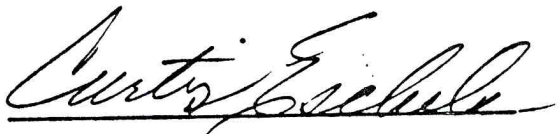
WHEREAS, The Departments of Fisheries and Wildlife have no objection to the trial tests;

NOW, THEREFORE, BE IT RESOLVED, The Council has approved the use of sodium bromide in addition to the currently used sodium hypochlorite as biofouling agents for a one year test period to begin following the refueling outage of 1990 subject to the following conditions:

- The total discharge of sodium bromide and sodium hypochlorite shall not exceed the NPDES permit limits for residual chlorine of equal to or less than 0.1 mg/l for at least 15 minutes before discharge.
- Results of a flow through bioassay shall be used to evaluate the effects of use on salmonid test organisms before the one year test period is complete.
- A greater than 80% survival rate for at least 96 hours in 100% effluent water during the bioassay test will be the criteria for continued use of the sodium bromide.


Dated this 14th day of May 1990.

Washington State Energy Facility  
Site Evaluation Council

BY 

Curtis Eschels  
Chairman

ATTEST:

BY   
William L. Fitch  
Executive Secretary