



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE

Services Division  
Habitat Protection Branch  
14 Elm Street  
Gloucester, MA 01930

September 7, 1984

Ms. Elizabeth L. Doolittle  
Division of Licensing  
Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Ms. Doolittle:

The National Marine Fisheries Service (NMFS) has reviewed the Draft Environmental Impact Statement (DEIS) concerning the operation of Millstone Nuclear Power Station, Unit No. 3, at Waterford, Connecticut, and has the following comments:

Section 5: Environmental Consequences and Mitigation Actions

The NMFS finds that the document inadequately discusses the potential impacts of entrainment/impingement and particulate erosion of the copper/nickel condenser tubes and their associated sacrificial zinc blocks.

Unit 3's consumptive water use increase is noted on page 5-9 of the DEIS as constituting approximately 4% of the tidal exchange. Since average water flows are reported to be 57 m<sup>3</sup>/sec (2,000 cfs), it can be concluded that with all three units operating and consuming 118 m<sup>3</sup>/sec, the total on-line use would be slightly more than 8% of the tidal exchange of the area. Thus, full operation of Unit 3 would virtually double the consumptive use of water removed from this corner of Niantic Bay. We recommend that the cumulative consumptive use value of 8% and its subsequent impact value be used in the discussions of topics such as entrainment and impingement, not the isolated 4% value routinely used in the present EIS.

The isolation of impacts at Unit 3 from those of other operating units at Millstone is also found in the specific assessment discussions of entrainment and impingement of fish such as the winter flounder (Pseudopleuronectes americanus). The DEIS reports at page 5-11 that population modeling of winter flounder reveals a potential 5% to 6% reduction of the population due to larval entrainment. The next discussion focuses on future impingement impacts. These impacts are reported as being held stable at existing levels by having the intake systems of Units 1 and 3 either retro-fitted or initially installed with fish return systems.

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The Clean Water Act (the Act) (33 U.S.C. 466 et seq.) has two relevant sections that bear on these two topics: Section 402 regarding the National Pollutant Discharge Elimination System permits, and Section 316 regarding thermal discharges. Section 402 is heavily cross-referenced to other sections of the Act. At each cross-referencing, the Act requires the protection and propagation of a balanced population of shellfish, fish, and wildlife in and on the subject water body. Section 316 of the Act makes the same demand. The NMFS believes that the Nuclear Regulatory Commission and the applicant should be aware of and responsive to the federal mandates related to operation of a power generation facility that presently does, and apparently will continue to, affect adversely the protection and propagation of a balanced population of shellfish, fish, and wildlife in Niantic Bay. In this regard, we believe the authors should discuss these issues and the applicant should be required to undertake steps to further lessen the entrainment- and impingement-related impacts at all three units of Millstone. Such action would help the operator of Millstone Units 1-3 comply fully with the mandates of the Clean Water Act.

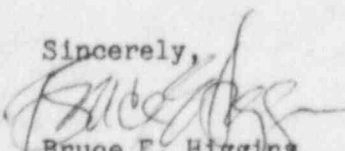
Additionally, the NMFS is concerned about the method used on page 5-11 to evaluate plant-related fishery losses. In the case of winter flounder, the impacts associated with adult-equivalent losses are compared with the 1979 State of Connecticut recreational and commercial catches. It is well known that the winter flounder is a parochial species; as such, winter flounder tend to occur in rather distinct localized populations, not in commingled masses that "rapidly" react to losses in one portion of their overall habitat. Therefore, it is not appropriate to apply state-wide statistics to a problem that will be virtually confined to the winter flounder of the Niantic Bay and Estuary complex.

Page 5-4 of the DEIS discusses the impact of copper, nickel, and sacrificial zinc losses from the condenser tubes. In that discussion, it is noted that the majority of the increases in discharges were of particulate fractions. The sampling, however, was directed toward water samples. Such a sampling would provide instantaneous metal levels but do nothing toward providing insights regarding cumulative, long-term deposition levels. This deficiency should be corrected in future versions of the EIS.

#### Section 6: Evaluation of the Proposed Action

The intentional destruction of an identifiable portion of a living marine resource population and the unquantified impacts associated with depositing toxic particulates of copper, nickel, and zinc in the thermal plume of the three Millstone units is both an unavoidable adverse impact and an irretrievable commitment of resources. The resident and migratory resources of the Niantic Bay/Two Tree Island region of Long Island Sound are reported to be impacted to some degree by the facility. Because of that impact, those resources merit some consideration at this point in the EIS, particularly in light of our previous comments on the operation of the nuclear units at Millstone.

Sincerely,

  
Bruce E. Higgins  
Acting Branch Chief