

Docket No. 50-438
and 50-439

OCT 21 1974

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Mr. James P. Darling, Chief
Power Supply Planning Branch
Tennessee Valley Authority
Chattanooga, Tennessee 37401

Dear Mr. Darling:

The dates proposed in your letter of October 1, 1974 for TVA and AEC staff personnel to meet and begin initial discussions of appropriate fishery studies associated with the Bellefonte Nuclear Plant proposed intake are inconvenient for us. Our alternate date of November 21 and 22 appears to be acceptable to you. Therefore, we will plan to meet with you on that date in the Norris, Tennessee offices of TVA as you suggested.

To sharpen the focus of the meeting I am enclosing the fishery study plan outlined on page 5-42 of the AEC Draft Environmental Statement suitably modified to reflect the discussions that already have taken place between AEC and TVA staff. I suggest that this be the starting point for our discussions.

Original signed by W. H. Regan, Jr.

Wm. H. Regan, Jr., Chief
Environmental Projects Branch 4
Directorate of Licensing

Enclosure:
As stated

OFFICE →	L:EP-4 <i>JLD</i>	L:EP-4 <i>WR</i>				
SURNAME →	GLDittman:sl	WHRegan				
DATE →	10/28/74 <i>31</i>	10/21/74				<i>BN</i>

ENCLOSURE

Fishery Investigation to Assess the Significance of loss of Ichthyoplankton in the Proposed Intake of the Bellefonte Nuclear Plant.

The AEC staff approved investigations will be conducted on selected "key" species of fish and in a stretch of the Tennessee River extending from TRM 397 to TRM 390 for a minimum period of two years. The study will include the following:

- a. determination of the distribution and relative abundance of ichthyoplankton at various depths and various distances from the shore, including the old river bed location;
- b. study of the migratory and/or other movement patterns of the adults and juveniles of the "key" species during various seasons;
- c. determination of the breeding habits and fecundity of the "key" species;
- d. determination of the extent of the spawning and nursery grounds of the "key" species;
- e. determination of the survival rates and age class strengths of the "key" species for various stages from eggs to adults;
- f. determination of the hydraulic flow characteristics in the vicinity of the site for the proposed intake design on the recruitment pattern of near-shore and off-shore waters into the intake openings;
- g. determination of additional ichthyoplankton losses due to present and known potential water uses such as other generating plants, municipal and irrigation water intakes and dam water management on Gunter'sville Reservoir;
- h. selection of sufficient overbank areas for sampling ichthyoplankton abundance to make a comparison between concentrations of ichthyoplankton in the intake area and the other reservoir locations sampled;
- i. based on the above information, determination of the extent of vulnerability of various age groups of the "key" species (from eggs to adults) to entrainment for the proposed location of the intake and its design.

If these investigations show that very small percentages of ichthyoplankton would be entrained by the proposed intake, the staff will reevaluate the need to continue the full scale investigations set forth above.