

INTERIM REPORT

Accession No. 7912190546
Contractor's Report No. _____

Contract Program or Project Title: Threadfin Shad Impingement:
Population Response

Subject of this Document: Quarterly Progress Report

Type of Document: Interim Contractor Report (Technical)

Author(s): W. Van Winkle, R. B. McLean

Date of Document: _____

Responsible NRC Individual and NRC Office or Division: Phillip R. Reed,
Env. Effects Res. Branch, Div. of Safeguards, Fuel Cycle and Env. Research,
Office of Nuclear Regulatory Research

This document was prepared primarily for preliminary or internal use. It has not received full review and approval. Since there may be substantive changes, this document should not be considered final.

Oak Ridge National Laboratories
Oak Ridge, Tennessee

Prepared for
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

NRC FIN No. B0406

NRC Research and Technical
Assistance Report

INTERIM REPORT

271
1624 240

QUARTERLY PROGRESS REPORT FOR
NUCLEAR REGULATORY COMMISSION

Reporting Period - April-June 1979

PROJECT (189 No.): B0406 Threadfin Shad Impingement: Population Response

PERSON IN CHARGE: W. Van Winkle

PRINCIPAL INVESTIGATOR: R. B. McLean

MAJOR ACCOMPLISHMENTS:

An interagency agreement with the Department of Interior has been established that allows them to work with us using the down scan sonar equipment to assess larval population numbers. The work will begin the second week of July. Rich McLean and Paul Singley took part in a four day training session in Fayetteville, Arkansas, to learn to use the boat and electronic gear involved in the sonar technique.

Larval tows are being done by us at four sites in the reservoir. These samples will include the time period May through August and will establish the density of larvae and length of the spawning season in the areas sampled. Comparison of this data with the survey of the entire reservoir in July, using the sonar equipment, will greatly improve our estimate of the total size of the summer population of larvae. This estimation will be used when we attempt to understand how the size and size class distribution of the threadfin population in the fall, was established. An understanding of the establishment of threadfin populations is essential in determining if the number of threadfin killed by any perturbation is significant in terms of extinction of the population.

Electrofishing and gill nets are being used to determine the relative population size of threadfin at the time of spawning. To date, the estimate of the population numbers is low, although it is obvious that a remnant of the population survived through the winter.

PUBLICATIONS AND PRESENTATIONS:

McLean, Richard B. and Paul T. Singley. 1979. Causes and ecological consequences of impingement of threadfin and gizzard shad at a southeastern power plant. Environmental Sciences Division Annual Information Meeting.

NRC Research and Technical
Assistance Report

272
1624-24T

PUBLICATIONS AND PRESENTATIONS: (continued)

McLean, Richard B. 1979. Causes and ecological consequences of impingement of threadfin and gizzard shad at a southeastern power plant. Fifth Annual EEI Biologist Workshop, April 10-13, 1979.

McLean, Richard B. 1979. Ecological effects of fish impingement in a southeastern reservoir. Lecture to The University of Alabama, Huntsville, Alabama. May 25, 1979.

273
1624 242