



December 28, 1973

Mr. Norman C. Moseley, Director
Region II Regulatory Operations Office
U.S. Atomic Energy Commission
230 Peachtree Street, NW.
Atlanta, Georgia 30303

Dear Mr. Moseley:

Subject: TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT
UNIT 1 - DOCKET NO. 50-259 - FACILITY OPERATING LICENSE
DPR-33 - ENVIRONMENTAL ABNORMAL OCCURRENCE REPORT
BF EAO-7381W AND 7384W

The purpose of this report is to provide written notice of fish killed when impinged on the Browns Ferry Nuclear Plant unit 1 intake screens. This report is required by section 4.1.2(f) of our environmental technical specifications.

These incidents were reported to the Region II Regulatory Operations Office by telephone or telegram within a short time after each occurrence. Each of these incidents occurred while washing the circulating water pump traveling screens at the pumping station and was similar to the occurrences which were reported for BF EAO-732W-7380W. The tabulation below gives the date of each occurrence and the estimates of the fish impinged.

Fish Impingement Estimates

<u>Item</u>	<u>Date</u>	<u>Shad</u>	<u>Other Species</u>	<u>Total</u>
BF EAO-7381	December 19	1,228	128	1,356
BF EAO-7382	December 21	105,500	390	105,890
BF EAO-7382	December 22	3,312	124	3,436
BF EAO-7382	December 23	4,492	172	4,664
BF EAO-7382	December 25	8,094	1,278	9,372
BF EAO-7383	December 26	10,224	120	10,344
BF EAO-7384	December 27	12,196	232	12,428

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The number of shad impinged on December 21 was the largest daily number experienced since operation of the intake began. The cause of this increased number is not known, however, it is our belief that the greater number of shad impinged was related to a sudden drop in ambient air temperatures and a resultant drop in water temperature which may have affected the fish prior to their impingement on the intake screens. Previous species counts made during studies at Browns Ferry indicated that most shad caught on the intake screens were threadfin shad, a specie which is known to be adversely affected by low water temperatures. Air temperatures for December 20 dropped rapidly from above 45° F. to below 20° F. and remained low through December 22. The water temperature to a depth as great as 13 feet dropped approximately 5° F. on December 20 and reached a minimum of approximately 41° F. at 10 p.m. on December 20. This reading was made in an overbank area approximately halfway between the reservoir shoreline and the navigation channel. It is expected that shallower overbank areas would have experienced an even greater temperature drop.

A correction to the number of impinged fish reported for BF EAO-7380 reported in our letter of December 20 is necessary. The number reported was for one screen washing and did not include results from a second washing. The second washing estimate of impinged fish was 992 shad and 136 nonshad. This gave a total for the day of 3,192 shad and 296 nonshad.

A proposed change to the environmental technical specifications which would modify the specification and end the requirement for daily reports of fish impingement as well as provide for continuing reports on studies into this problem has been transmitted to the Directorate of Licensing.

Very truly yours,



J. E. Gilleland

Assistant to the Manager of Power

CC: Mr. Gerald R. Hooper
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