



An Exelon/British Energy Company

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**Clinton Power Station**

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U-603459

February 22, 2001

Docket No. 50-461

Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Subject: Non-Routine Report on Clinton Lake Fish Kill

Dear Madam or Sir:

In accordance with the Clinton Power Station (CPS) Environmental Protection Plan (Non-Radiological), Section 4.1, "Unusual or Important Environmental Events," AmerGen Energy Company (AmerGen) LLC, is submitting this non-routine report on a fish kill that occurred on Clinton Lake.

On January 23, 2001, the Illinois Department of Natural Resources (IDNR) District 10 Fisheries Manager notified the CPS Midwest Regional Operating Group (MWROG) of a reported fish kill on Clinton Lake in the vicinity of the Route 48 bridge that is located upstream from the discharge flume for CPS. IDNR had been made aware of the fish kill from a local fisherman. Consistent with IDNR reporting policy, IDNR also notified the Illinois Environmental Protection Agency (IEPA) Office of Emergency Response of the fish kill. On January 24, 2001, the CPS Environmental Staff, the Exelon Corporation MWROG, IDNR, and IEPA personnel began investigating the cause of the fish kill.

On January 29, 2001, representatives from the IEPA and the IDNR, in conjunction with the CPS Environmental Staff and the MWROG, concluded that the fish most likely died from cold shock following a reactor scram that occurred at CPS on December 18, 2000. The predominant species of fish involved were those attracted to the warm current where the CPS discharge canal enters the Clinton Lake. (Attachment 1 contains the approximate number and species of fish that were killed.) These fish would have experienced the greatest thermal shock. Although approximately 7,000 fish were killed, the predominant species were rough fish including buffalo, shad, freshwater drum, and quillback. The number of fish killed are small in comparison to the total fish population in Clinton Lake and did not have a significant impact on the overall fish population in the lake.

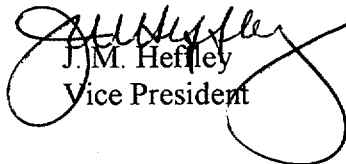
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On December 18, 2000, CPS was in Mode 1, at 100 percent reactor power. The plant had been running for over 30 days with a flume discharge temperature of between 59 and 73 degrees Fahrenheit. At about 1329 hours, while performing surveillance testing of the Division 2 Main Steam Line Tunnel Leak Detection System, a Group 1 Containment Isolation occurred. The Group 1 Isolation caused the Main Steam Isolation Valves (MSIVs) and main steam line drain valves to automatically close, resulting in an automatic scram. (Details of the reactor scram are contained in CPS Licensee Event Report (LER) 2000-007.) Subsequent to the reactor scram, because the MSIVs were closed, decay heat was removed through the suppression pool instead of the main condenser and discharge flume to Clinton Lake. With the sudden loss of heat input into the discharge flume, a rapid drop in lake temperature in the vicinity of the flume discharge occurred. This rapid drop in temperature was the most likely cause of the fish kill.

Corrective actions to address the scram that occurred on December 18, 2000, are contained in LER 2000-007. A historical review of scrams occurring at CPS during winter months did not reveal any other fish kills caused by thermally shocking fish in the vicinity of the discharge flume.

For additional information concerning this event please contact David Siebert of my staff at (217) 937-3245.

Sincerely yours

  
J.M. Hefley  
Vice President

JRF/krk

Attachment

cc: NRC Clinton Licensing Project Manager  
Regional Administrator, USNRC Region III  
NRC Resident Office, V-690  
Illinois Department of Nuclear Safety

<b>Species</b>	<b>Approximate Number</b>	<b>Percentage of Total</b>
Buffalo	3459	49.4%
Gizzard Shad	800	11.4%
Freshwater Drum	750	10.7%
Quillback	670	9.5%
White Bass	340	4.8%
Crappie	285	4.0%
Hybrid Striped Bass	245	3.5%
Flathead Catfish	155	2.2%
Channel Catfish	85	1.2%
Striped Bass	85	1.2%
Walleye	60	< 1%
Carp	50	< 1%
Largemouth bass	10	< 1%
Bluegill	6	< 1%
<b>TOTAL</b>	<b>7,000</b>	<b>100.0</b>