



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

MAY 10 1990

MEMORANDUM FOR: John P. Roberts, Section Leader  
Irradiated Fuel Section  
Fuel Cycle Safety Branch  
Division of Industrial and  
Medical Nuclear Safety

FROM: K. C. Leu  
Irradiated Fuel Section  
Fuel Cycle Safety Branch  
Division of Industrial and  
Medical Nuclear Safety

SUBJECT: OCONEE PLANT SITE TRIP REPORT

DATE: April 18-20, 1990

PURPOSE: To observe the Repairs being conducted for the  
Oconee Transfer Cask (TC)

DISCUSSION:

On February 23, 1990, Pacific Nuclear Services, Inc., (PNFS) sent to the Nuclear Regulatory Commission staff some photographs of the damaged Oconee TC. The damages to TC were incurred during a severe storm in the trip from the fabricator in Europe to the United States. PNFS also indicated that activities had been underway to complete necessary inspections and repairs of the TC.

Therefore, the trip to Oconee site was to observe and monitor the TC repairs. I arrived at Oconee's Keowee hydro station in the afternoon of April 18, 1990, where the TC repairs were conducted. I was told that TC neutron shield panels (NSP) had been installed and welded the week before, and that repairs had also been completed for the trunnions, the support ring, and bottom end plate, etc., which were damaged during the accident. In fact, the only remaining important repair was the installation of neutron shield in the TC.

The TC was placed in the rollers in a horizontal position. In order to install the neutron shield, the TC was lifted, rotated, tilted, and finally landed into an upright and plumb position by placing the crane yokes at the top trunnions and belts at the lower trunnions.

Early in the morning of April 19, 1990, the operating crew of the Bisco Products Inc., were on site with mixing and pumping equipment and containers of materials to be used for mixing. The materials were of a dry flowable grey powder, and a low viscosity, milky colored liquid.

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After the drum hopper, the mixer and the pumping system had been assembled, the powder and the liquid were blended in the mixer in accordance with recommended procedures and blending time. Two composite 10-oz cup specimens were taken from each batch in the mixer to check for specific gravity. Acceptance of the batch was based on a minimum average specific gravity of 1.72. Of all the samples taken during the day, the specific gravity values were around 1.75 to 1.76.

The TC was tilted slightly to facilitate filling the trunnions and bottom end of cask with Bisco materials through a pour hole at the bottom. The TC was brought back to the upright position after the filling was completed.

Then the operation of filling the rest of the TC with neutron shield began. A scaffold platform was erected to the height of the TC. The discharging hose was placed in a pour hole at the top of the cask. Bisco neutron shield materials were then pumped into the TC through the hose. Several workers were at the top of the platform to check the level of fill inside the TC by looking through other pour holes with flashlights. Several pour holes were used for pumping the material in order to maintain overall uniform neutron shield distribution in the TC. Finally when the TC had been filled full, all the pour holes were tape sealed, and the excess materials on the TC surfaces were removed and cleaned. Set time for this Bisco material was for five days at a minimum, so the TC was to be left in place undisturbed for at least five days.

At about five o'clock p.m., the neutron shield filling was completed. There were about 8000 pounds of Bisco material installed in the TC.

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