Duke Energy®

OCONEE NUCLEAR SITE

Duke Energy Corporation
7800 Rochester Hwy.
Seneca, SC 29672

864 885 3000

October 17, 2006

Consolidated Pipe & Supply
Consolidated Power Supply Division
3556 Mary Taylor Road
Birmingham, AL 35235

Subject: Duke Power Company LLC d/b/a Duke Energy Carolinas, LLC (Duke)
Oconee Nuclear Station
Part 21 Reportability
PIP O-03-4686

RE: Duke Purchase Order ON 46703

In accordance with 10 CFR 21 (Part 21), Duke Power Company LLC (Duke) is notifying Consolidated Power Supply Division of a material defect in material ordered by Duke under Part 21 and supplied by Consolidated Power Supply Division as the dedicating entity.

The material in question was 3/4 in thick, 32 sq ft (4 ft by 8 ft) A36 steel plate manufactured in accordance with ASTM/ASME Section II by CORUS. Under Duke purchase order ON 46703, dated June 18, 2001, Consolidated Power Supply Division delivered to Oconee Nuclear Station 192 sq-ft (6 plates), of which 128 sq-ft (4 plates), including the defective plate, was designated as heat number A2WT. The order was accepted by Duke following a receipt inspection dated September 15, 2001.

During the summer of 2003, one sheet of heat number A2WT steel plate was issued and cut into smaller pieces for use as pipe hanger support base plates at Oconee Nuclear Station. Fabrication of pipe hangers involves welding a tube steel strut to a base plate for mounting purposes. During fabrication of one of these pipe hangers, Duke personnel observed that the base plate contained a lamination. As a result, the pipe hanger strut had been welded to a thin layer of steel that was visibly separated along the edge of the base plate.

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Duke engineering examined the subject sheet steel and had an Ultrasonic Test (UT) performed on the remainder of the original 4 foot by 8 foot sheet. The UT revealed an area of lamination approximately 15 inches by 36 inches, 1/32 inch to 3/32 inches thick. The area containing the deficiency was cut out and discarded and the remainder of that sheet was considered acceptable for use.

On July 22, 2003, the plate steel defect issue was entered into the Duke corrective action program (PIP) and a 10CFR21 reportability evaluation was initiated. Due to an administrative error, the reportability evaluation was not completed in a timely manner as required by Part 21.

During 2006, work on the open Part 21 reportability evaluation was resumed. The Part 21 evaluation concluded that, if the defective material had been used to fabricate pipe hangers as intended, and if the struts had been welded to the thin lamination side of the plates, the hangers may have failed during a design basis transient or accident due to failure of the thin lamination layer. The material known to be defective was not actually installed, but in accordance with the provisions of 10CFR Part 21, it must be assumed that this defective material may have resulted in a significant safety hazard and therefore must be reported under Part 21.

As a result of this determination, Duke made an initial notification to the Nuclear Regulatory Commission (NRC) on October 9, 2006 as required by 10 CFR 21.21(d)(1) and 21.21(d)(3)(i). The NRC assigned event number 42893 to this notification.

Additional review of Duke records as part of the reportability evaluation revealed that, as indicated above, additional sheets of plate steel with the same heat number were received on the same purchase order. These sheets have been issued and used for a number of purposes with no recorded indication of problems. Duke is developing plans to inspect the field installed material in a timely manner.

The Duke PIP Problem Evaluation performed in 2003 considered only the single sheet of material and concluded that the condition was probably due to an isolated case of a manufacturing deficiency. However, Duke has recently submitted a sample of the material to our materials laboratory, which found that the steel plate contained some foreign material (aluminum oxide) which had been rolled into the plate during manufacture. Duke has no information to support a specific cause of this manufacturing deficiency or the extent of condition with respect to other material manufactured by CORUS and/or supplied by Consolidated Power Supply Division to the nuclear industry. Therefore, Duke recommends that Consolidated Power Supply Division, as the dedicating entity, evaluate this condition with respect to the requirements of Part 21 and notify the NRC and any potentially affected customers as deemed appropriate.

Please direct any questions to R. P. Todd of Oconee Nuclear Station at (864) 885-3418.

Sincerely

B. Graham Davenport
Regulatory Compliance Manager
Oconee Nuclear Station

xc: U.S. Nuclear Regulatory Commission
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Purchase Order ON 46703 file
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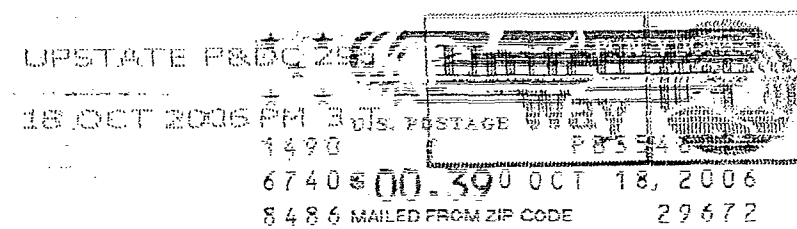


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