

PRIORITY ATTENTION REQUIRED MORNING REPORT - REGION I MAY 19, 1994

Licensee/Facility:

Notification:

Gpu Nuclear Corp.
Oyster Creek 1
Forked River, New Jersey

MR Number: 1-94-0058
Date: 05/19/94
SRI PC

Dockets: 50-219
BWR/GE-2

Subject: WHITING CRANCE COUPLING DEFECT

Reportable Event Number: N/A

Discussion:

During recent modifications to the turbine building crane (Whiting, 150 ton main hoist, 40 ton auxiliary hoist) the license identified a casting defect in the main hoist motor to gear box coupling. The coupling is two sections, the driver and the driven, the face section is (all numbers approximate) 10.5 inches in diameter with a thickness of 1.75 inches on the outer rim, the raised center portion (shaft collar) is an additional 1.5 inches thicker than the face portion and 6 inches in diameter with a shaft hole of 2.75 inches in diameter. The coupling is 'sand cast' to the approximate size and shape then machined to specifications specified on a drawing for a specific (by serial No.) crane. The coupling defect identified started at the machined edge where the collar joins the large diameter face section and penetrated through the collar into the keyway. There was no evidence of propagation of the defect and the crane had passed all previous load tests. The defect appears to be an original casting defect dating back to the 1960s. The coupling was replaced by

a
forged steel coupling machined by American Crane Co.

As a result the licensee inspected the reactor building crane (Whiting
,
100 ton main hoist, 5 ton auxiliary hoist) main hoist to gear box
coupling (same approximate size as turbine building crane coupling). T
he
licensee identified a defect in a location (machined edge where the sh
aft
collar joins the face section) similar to the turbine building crane.
The
licensee examined the coupling using magnetic particle testing and
identified defect propagation of about 2 inches on both sides of the
defect. The licensee on discovery of the defect on the reactor buildin
g
crane issued directions not to use the heater bay crane (Whiting) unti
l
its coupling could be inspected. They also ordered two new sets (4
sections) of motor to gear box couplings from Whiting Crane for the
reactor building crane. Both sets of new couplings were rejected by th
e
licensee due to minor and major surface pitting identified during rece
ipt
inspection. Whiting has agreed to machine new couplings for the reacto
r
building crane and will perform radiography tests to ensure the coupli
ngs
are acceptable.

Information obtained by the licensee indicates that the main hoist to
gear box coupling for each crane is uniquely identified by a drawing
associated with the specific crane's serial No. The couplings identifi
ed
with defects were all 'sand castings' that had been machined to size.
The
licensee is preparing to submit information to the nuclear network and

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a
voluntary licensee event report.

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Regional Action:

Resident Inspection Followup

Contact: John Rogge

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