

BA Ret NGP

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE---PNO-V-86-93A Date: 1/7/87

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information presented is as initially received without verification or evaluation and is basically all that is known by Region V staff on this date.

FACILITY: Arizona Nuclear Power Project
Palo Verde Unit 3
DOCKET NO. 50-530

Emergency Classification
☐ Notification of Unusual Event
☐ Alert
☐ Site Area Emergency
☐ General Emergency
☒ Not Applicable

SUBJECT: EMERGENCY DIESEL GENERATOR CRANKCASE FAILURE - UPDATE.

The licensee has determined the cause of the crankcase malfunction which occurred during preoperational testing of the Train "B" diesel generator to have been the result of fatigue cracking of the No. 9 master piston rod. Research by the vendor, Cooper Energy Services, determined that at least one rod onsite had been milled out approximately 50-60 mils too much during the manufacturing process and was subsequently built up by iron plating and remachined. Metallurgical analyses have confirmed the failed rod to have undergone the plating process in the area where the fatigue failure occurred. The crack in the rod was initiated at the oil passage hole between the master rod bearing and articulated rod bushing, and propagated outward to the edges of the master rod. Cooper has indicated that a similar failure occurred in 1979 in a machine built for a nonnuclear application and that the plating process was changed in 1981 from one using iron to one using nickel. The licensee indicated that Cooper has researched its quality records and determined that this iron plating process was also used on one other piston rod in the Train "B" diesel, on one piston rod in the "A" diesel in Unit 2, and also in diesels at Byron, Braidwood, and Nine Mile Point. IE Vendor Branch has been informed of this. Unit 2 is scheduled to shut down on Friday, January 9, 1987, for a 55-day maintenance outage. The licensee has already removed Unit 2 diesel "A" from service for evaluation and entered the Technical Specification action statement this morning.

The licensee is proceeding to undertake repairs of the damaged engine. This will include removal of the right engine block, left heads, pistons, and sleeves, the turbocharger and the main bearings for inspection and/or repairs. The licensee does not currently believe the crankshaft will require replacement. The licensee is also continuing to evaluate the need for a replacement engine.

This information is current as of 9:00 AM (MST) January 7, 1987.

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