



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

JUL 2 - 1986

MEMORANDUM FOR: Harold R. Booher, Chief
Maintenance and Training Branch
Division of Human Factors Technology
Office of Nuclear Reactor Regulation

FROM: Robert L. Baer, Chief
Engineering and Generic Communications Branch
Division of Emergency Preparedness
and Engineering Response
Office of Inspection and Enforcement

SUBJECT: HF-02, MAINTENANCE AND SURVEILLANCE PROGRAM PLAN

This memorandum is to inform you of the results of a review by IE and Region I of an event involving low oil level in the essential unit substation transformers at the Oyster Creek Nuclear Generating Station. As we discussed with Mr. Cwalina of your staff, this information is provided as background for your consideration during development of the HF-02 program.

On August 9, 1985, during a thermographic survey of switchgear, an infrared scan was inadvertently made of a substation transformer. The scan showed that many of the cooling tubes on the transformer were cool which indicated that they did not have normal oil flow. Subsequent investigation by the licensee (Ref. Enclosure 1) determined that the oil level in both substation transformers was low and, as a result, the cooling capacity of the transformers has been degraded. The plant was shutdown, the oil level was restored to normal, and the transformer cooling was verified to be functional before plant restart.

Region I performed an inspection (Ref. Enclosure 2) at Oyster Creek and recommended issuance of an information notice. After review of the inspection report a LER search was made which did not reveal any similar problems at other facilities. James Stewart of this branch and Joseph Petrosino of the Vendor Program Branch visited the GE Medium Transformer Manufacturing Facility at Rome, Georgia in June 1986. After we reviewed all of the information we concluded that the event at Oyster Creek was an isolated incident without significant safety impact and therefore an information notice was not required. However, some of the information obtained during this review may be of use in developing future maintenance programs. We do not plan further action at this time. Region I will follow the licensee's corrective actions.

Technical Contact: James C. Stewart, IE
492-9061

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Several items were noted during our review:

- 1) There was no record that the oil level had ever been checked except by the sight gage since it was delivered 17 years ago. Before the event there was no scheduled plan to inspect the oil level for the duration of plant life.
- 2) The oil level gage was apparently trusted as accurate by the licensee without the necessary comparison with the oil temperature gage. Although GE stated that this has not been a major problem, they published an article (Ref. Enclosure 3) in a trade magazine in 1971 on how to properly read transformer gages.
- 3) The licensee did not keep complete records of the amount of oil removed for testing.

Original Signed by Robert L. Baer

Robert L. Baer, Chief
Engineering and Generic
Communications Branch
Division of Emergency Preparedness
and Engineering Response
Office of Inspection and Enforcement

- Enclosure:
1. LER 85-014, Oyster Creek
 2. Inspection No. 50-219/85-28
 3. General Electric reprint GER-2705 from
April 1971 issue of Electrical South