



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

August 14, 1980

MEMORANDUM FOR: R. L. Spessard, Chief, Projects Section 1
FROM: F. W. Reimann, Reactor Inspector
SUBJECT: TESTING REQUIREMENTS FOR STANDBY GAS TREATMENT
SYSTEMS (SGTS)

This memorandum is to supply the followup information requested by Mr. E. L. Jordan, DROI, IE, during our telephone conversation of July 24, 1980, regarding leakage testing requirements which may apply to BWR 5/6 SGTS systems, particularly the system installed at the LaSalle County Station.

The leakage testing in question is testing to determine that a leakage flow path does not exist from the SGTS filter/absorber trains to the Reactor Building environment during periods of SGTS operation with a large burden of gas contaminated with radioisotopes. On earlier designs the fans which provided motive force for treated gasses were located on the outlet side of their respective filter/absorber trains, resulting in a tendency for pressure within the filter/absorber housing to remain lower than the ambient turbine building atmospheric pressure. In the LaSalle County Station design (and other BWR 5 and 6 designs), the SGTS equipment is located in the reactor building, and has the fans for each filter/absorber train located on the inlet side of each train. As a result of the relocation of the SGTS fans, the potential appears to exist for the leakage of radioactive contamination from the numerous access doors and filter seals in the filter/absorber trains to the Reactor Building during conditions of high airborne radioactivity in the containment and with the SGTS in service. A second condition of concern involves the potential for release of radioactive materials deposited on filter/absorber train elements following a postulated fire caused by heat decay in the charcoal absorbers and subsequent initiation of the deluge system.

Because of the apparent potential for introduction of radioactive contamination into the Reactor Building via the SGTS, it is suggested that a requirement for preoperational leak rate testing of the SGTS be required following system installation. It is also suggested that periodic inservice leak rate testing be required, plus testing following maintenance activities which could degrade the integrity of the SGTS.

There is currently no requirement to perform such testing in the FSAR for the LaSalle County Station. This matter was discussed with the licensee during IE Inspection 50-373/80-25, at which time the licensee stated that he would proceed with such testing only if a regulatory requirement is imposed which requires it.

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