

U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION IV

Report No. STN 50-482/79-21

Docket No. STN 50-482

Category A2

Licensee: Kansas Gas and Electric Company
Post Office Box 208
Wichita, Kansas 67201

Facility Name: Wolf Creek Generating Station, Unit 1

Investigation at: Wolf Creek Site, Burlington, Kansas

Investigation conducted: November 28-30, 1979

Inspector: *for* W. A. Crossman
C. R. Oberg, Reactor Inspector, Projects Section

1/8/80
Date

Approved: W. A. Crossman
W. A. Crossman, Chief, Projects Section

1/8/80
Date

Investigation Summary:

Investigation on November 28-30, 1979 (Report STN 50-482/79-21)

Areas Investigated: Allegations in regard to welding of fuel pool liner plates and a void in the "primary reactor wall." The investigation involved six inspector-hours by one NRC inspector.

Results: The allegation concerning welding of fuel pool liner plates is not within the jurisdiction of the NRC inspection program in that the liner plate in general is not safety-related. The allegation concerning a void in the "primary reactor wall" could not be substantiated.

INTRODUCTION

Wolf Creek Generating Station, Unit No. 1, is under construction in Coffey County, Kansas, near the town of Burlington, Kansas. Kansas Gas and Electric Company, (KG&E), Wichita, Kansas, is the Construction Permit holder with Daniel International Corporation (Daniel) as the Contractor and Bechtel Corporation (Bechtel) as the Architect/Engineer.

REASON FOR INVESTIGATION

The Region IV Reactor Construction and Engineering Support Branch Office was contacted by Region III inspection/investigation personnel and by the I&E Construction Branch office personnel who had knowledge of allegations concerning a possible void in the primary shield wall and welding irregularities in the fuel transfer/storage liner plate.

SUMMARY OF FACTS

On October 11, 1979, Region IV received an allegation through Region III inspection personnel regarding improper welding procedures at Wolf Creek. The following allegations were made:

Allegation No. 1:

Welding is being done to cover defects in the transfer tunnel area liner plate, rather than repair the defects, and then perform the repair welds.

Allegation No. 2:

Daniel Construction Company is performing "open butt welds" without a procedure.

Allegation No. 3:

Daniel Construction Company personnel are performing open butt welds on pieces of metal exceeding 1/8 inch separation.

In a letter from James T. Wigglesworth of the Law Offices of Rainey and Wigglesworth, Overland Park, Kansas, to Dr. Victor Stello, Director, Office of Inspection and Enforcement, U. S. Nuclear Regulatory Commission, dated November 13, 1979, the NRC was questioned concerning any knowledge of a void in the concrete of the primary reactor wall.

Allegation No. 4:

Does the NRC have knowledge of a void in the concrete of the primary reactor wall, the wall closest to the pressure vessel, which was discovered in mid-July 1979?

CONCLUSIONS

Allegations No. 1, 2, and 3:

The following is presented to better understand the conclusions:

The liner systems are not installed to prevent or mitigate the consequences of any of the postulated design basis accidents, but rather are installed to prevent an excessive burden on the liquid waste collection and disposal system and to allow the wall and floor area to be more easily decontaminated after pool usage. The liners, as a functioning element, are, therefore, not considered safety-related and are not normally included in the NRC inspection program.

The liners, as passive elements and parts of the building structure, are usually classified into seismic Category I since if one or more of the liner plates were to become detached from the wall, serious damage could be done to stored fuel assemblies. The plates are, therefore, secured to the concrete supporting structure with a system of welded beams attached to the back of the plate and embedded into the concrete. This welded beam system is not a factor in these allegations.

The IE inspector, based on the evidence seen in the KG&E reports and from discussion with the licensee representatives, is satisfied that welding problems have existed with the liner plates, as well as experiencing difficulties in liner plate fit-up. However, based on the fact that the pool liner plate is considered "non-Q" (not safety-related), the existence of improper welding, welding repairs, and welding of misaligned plates does not have a clear cut safety consideration. Thus, the NRC does not include the liner within the jurisdiction of their inspection program. This matter is known to the licensee and their QA organization is actively involved in the resolution of the problems.

Allegation No. 4:

This allegation could not be substantiated.

The IE inspector found no evidence either through a record search or through a visual inspection that a void had occurred in a shield wall closest to the reactor vessel cavity.

DETAILS

1. Persons Contacted

Kansas Gas & Electric Company

Assistant QA Manager, Site
QA Technologist

Daniel International Corporation (Daniel) Employees

General Foreman, Piping
Welding Engineer
Area Engineer
Civil Engineer

Note: The allegor could not be contacted during the investigation by the IE inspector. (Allegations No. 1, 2, and 3)

2. Investigation

Allegations No. 1, 2, and 3:

The IE inspector held his discussions with KG&E and Daniel personnel and made an inspection of the general area of the fuel pool, fuel transfer canal and cask loading pit. The IE inspector also reviewed an audit conducted by KG&E site QA personnel dated September 24, 1979, "Stainless Steel Liner Plate," and a KG&E Surveillance Report on welding in the refueling pool.

The IE inspector determined that the area in question is classified as "non-Q" or non-safety related. Problems experienced in welding of liner plates are documented in the audit and surveillance report identified above. Discussions with Daniel personnel revealed that problems had been experienced in fitting up the sections of liner plate. These problems were known to Daniel supervision and engineering personnel.

Allegation No. 4:

The IE inspector made an inspection of the reactor building shield walls to determine if voids had occurred. No evidence of voids was found. One small area had been chipped out for repair but was under the allowable limits of the Bechtel specification where a void can be repaired without recourse to engineering. A separate survey was made by the Daniel Civil Engineer. No voids were found.

A review of the nonconformance reports was made to determine if any of the NCR reports made could be identified to the reactor shield wall. Fourteen reports had been made on "voids" that must be reported to the AE. Only two of these were from the reactor building area. Both of these reports were on the secondary shield walls.

The IE inspector therefore concluded that the allegation could not be substantiated.