

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

REGION IV

Report No. STN 50-482/80-14

Docket No. STN 50-482

Category A2

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

Facility Name: Wolf Creek

Inspection at: Wolf Creek Site, Coffey County, Kansas

Inspection Conducted: August 1 through September 5, 1980

Inspectors: for *W. A. Crossman* 10/8/80
T. E. Vandell, Resident Reactor Inspector
Projects Section (Paragraphs 1, 2, 3, 4 and 5) Date

for *W. A. Crossman* 10/8/80
C. R. Oberg, Resident Reactor Inspector (Acting)
Projects Section (Paragraph 2.b.) Date

Approved: *W. A. Crossman* 10/8/80
W. A. Crossman, Chief, Projects Section Date

Inspection Summary:

Inspection During August 1 through September 5, 1980 (Report No. STN 50-482/80-14)

Areas Inspected: Routine, announced inspection by the Resident Reactor Inspector (RRI) including review of documentation regarding lifting of stop-work on concrete activities; observations of concrete placements for containment dome lifts 7 and 8; observations and reviews of records for HVAC hanger bracket welding activities; observation of fitups for penetration piping flued head installations; observation of fire protection and control, housekeeping, storage protection of piping; and observations of installed HVAC ducts, electrical cable trays, and piping runs. The inspection involved fifty-one inspector-hours by two NRC inspectors.

Results: Of the five areas inspected, one item of noncompliance was identified in the area of rebar installation for dome placement lift 7 (infraction - failure to follow procedures and instructions - paragraph 2.b).

DETAILS

1. Persons Contacted

Principal Licensee Employees

G. L. Noester, Vice President - Nuclear
G. L. Fouts, Construction Manager
*M. E. Clark, QA Manager, Site
*J. L. Stokes, Construction Supervisor
L. F. Breshears, Health Physics Supervisor
*D. W. Prigel, Assistant QA Manager, Site
D. Plasce, QA Engineer
G. Reeves, QA Engineer
S. Wahmsley, QA Engineer
C. Snyder, Engineer

Daniel International Corporation (Daniel)

W. E. Hitt, Project Manager
B. Seabury, Project Mechanical Engineer
F. Cherry, Concrete Superintendent
B. Tyler, Concrete Technical Superintendent
D. Jones, Quality Control Manager
*V. Turner, Project QA Manager
B. Bullard, Project Weld Engineer
L. Hartsell, Corporate Technical Services
B. Taylor, Level III NDE Inspector
D. Harris, Reactor Building Superintendent
M. Pfeifer, Project Civil QC Engineer
K. Beardon, QC Coordinator
D. Goetz, Field Engineer
*N. Criss, Audit Response Coordinator

Other Personnel

E. Cannon, Hartford Steam Boiler, ANI
P. Manley, Bechtel Site Liaison Engineer, Piping and Hangers

Other licensee and construction personnel were interviewed during the inspection period.

*Denotes those persons with whom the RRI held on-site management meetings during the inspection period.

2. Safety-Related Concrete Activities

The RRI performed review or observation of the following safety-related concrete activities during the reporting period:

a. Lifting of Stop-Work Order

In response to questioning, the RRI was provided documentation relating to the concrete stop-work action and the disposition and close out of the related Nonconformance Report (NCR) No. 1SN 2339-C. A stop-work order was issued on August 13, 1980, to halt all standard power block concrete activity after it was learned that a sample of Holiday Concrete sand, located on site, routinely tested in accordance with ASTM C-289-71, appeared to be out of acceptance limits and was rejected as being deleterious material. NCR No. 1SN 2339-C was issued for the Architect Engineer (Bechtel) to review the results of this test as well as several other tests that had been ordered. Bechtel's review of the results of this test and other tests performed by (1) Law Engineering Testing Company, (2) Erlin, Hime Associates, Inc., and (3) Materials Testing Engineers, concluded that the sand, although borderline, was found to be free of significant quantities of deleterious material. Bechtel also concluded that the sand was acceptable for use. As a result, the stop-work was lifted on August 19, 1980. It is noted though that a corrective action memo increased the frequency of sample testing and committed to review all further questionable test results.

The RRI indicated that he had no further questions regarding this subject.

b. Concrete Placement OC281-W07

(1) Observations Performed

On August 4, 1980, the RRI observed the placement of concrete for Containment Building dome lift No. OC281-W07. The placement began about 6:00 a.m. in order to take advantage of the cooler morning temperatures. Shortly after concrete began to be placed, the RRI (Acting) identified to the licensee representative several shear bars that were either not secured with tie wire on one end or were not secured at all. The preplacement check list had been completed by the QC inspection force. The shear ties could be easily moved by hand beyond placement tolerance. Approximately twenty-five shear ties were so identified in the inspection.

Prompt action was taken by Quality Control and construction personnel to inspect and securely fasten all loose shear ties in order to permit the placement of concrete to continue.

10 CFR 50, Appendix B, Criterion V states, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings."

Daniel Construction Procedure WP-IV-101, "Reinforcing Steel Placement," paragraph 3.3 states, "that reinforcing steel will be secured and supported adequately to prevent displacement beyond the specified tolerances by construction loads or the placing of concrete."

Daniel Construction Procedure WP-IV-101, paragraph 3.4 states, "that reinforcing steel shall be secured by mechanical means or with wire ties."

The failure to adequately secure the shear ties is considered to be in noncompliance with 10 CFR 50. This event was discussed with licensee personnel. A Notice of Violation was issued to the licensee on August 6, 1980. (50-482/80-14-02)

(2) Records and Documents Reviewed

- Concrete Placement Card
- Deficiency Report 1NN 2253C
- Preplacement Check List QCP-IV-106 (Exhibit A, Rev. 4)
Rebar signed August 4, 1980 "WAC"
"Supported and Anchored"
DR 4052C - Pacal Print Error, July 31, 1980
- Special Instruction (3 pages Pour 0C281-W07)
- Tendon Sheathing and Embedded Anchorages Inspection Check List
- Concrete Placement Check List
Exhibit B1, Rev. 2
Start 0605 - Completed 1300

c. Concrete Placement 0C281-W08

(1) Observations Performed

The RRI witnessed the beginning of the placement No. 0C281-W08 (the last vertical lift) which began at approximately 7:00 a.m. on August 26, 1980. A fitup concern, pointed out by the licensee QA representative, was observed regarding a tendon trumpet embed not fitting up squarely to the concrete placement form. This was promptly corrected, and a second preplacement inspection and sign-off was performed as required. The RRI considered the placement activities as being acceptable with the following type activities being observed during the course of the pour:

- preplacement inspection

- proper mix specified and delivered
- piping material for pumped concrete
- testing at placement location
(including temperature checks) with calibrated equipment
- crew size and equipment
- proper use of vibrators, chutes and deflectors
- placement inspections activity

(2) Placement Document Review

Documents reviewed by the RRI before, during, and after the placement activity included the following:

- Specification for Materials Testing
10466-C-191 Q, Rev. 16
- Specification for Forming, Placing, Finishing, and
Curing of Concrete 10466-C-103(Q), Rev. 20
- Specification for Batching and Furnishing Concrete
10466-C-101(Q), Rev. 23
- Special Instruction for Placement and Consolidation
of Concrete for Pour No. 0C281-W08, dated August 20,
1980
- A Nonconformance Report (NCR) No. 1SN 2371 C issued
August 26, 1980, regarding an error in batching
(incorrect admixture, amount of water reducing agent
below design mix)

In discussions with licensee representatives regarding the NCR, it was learned that, for the first seven batches (12 cubic yards of specified grout and 50 cubic yards of concrete mix design 66-E-1AN), an improper setting for admixture Master-Builders pozzolith 300N (a water reducing admixture) occurred. This provided only 7 oz. per yard of concrete instead of 8 oz. The setting was then discovered and the proper setting made.

The RRI was assured that the NCR would be reviewed by the Architect Engineer for adequacy.

No items of noncompliance or deviations were identified.

3. Plant Tours

One or more plant areas were observed during tours several times each week of the reporting period. The tours are conducted to observe general construction practices, storage of material, installation activities, area cleanliness and fire protection.

Listed below are some of the specific areas and/or items observed and the results of specific review effort.

a. Reactor Building HVAC Welding Activity

The RRI observed HVAC support bracket welding activity. This was a support bracket to be welded to a structural member as detailed on drawing S-R104-2321(Q), sheet H-10. The following specific items were reviewed or inspected:

- Weld rod control: Issue ticket for E-7018 weld electrode heat 2E 027Q02 and portable weld oven
- Welder stamp No. D-56: Qualified to welding process N-1-1-A-4 welding of carbon steel plate and pipe which qualifies the welder for the specific procedure (N-1-1-A-6A, Rev. 5) for fillet welding to AWS D1.1
- Completed weld: visually inspected

No items of noncompliance or deviations were identified.

b. Containment Penetrations, Piping

The RRI visually inspected two piping penetration flued heads in process of installation. Penetrations P-7 (AEO 4) and P-8 (AEO 5) were visually inspected for fitup and observed for QA/QC control. A QC hold was noted on penetration P-8 with an inspector's notation for lack of preheat. No activity was in progress at the time of the RRI's observations.

No items of noncompliance or deviations were identified.

c. Fire Protection/Housekeeping

A tour was conducted during Crew No. 1 work week and a second tour was conducted during Crew No. 2 work week for fire protection provisions and for good housekeeping. The results of the tours are as follows:

- No excessive build up of combustibles was noted.

- Combustibles were stored in approved containers and in designated locations.
- Adequate ventilation was provided.
- Post indicator valves checked were found to be open as required.
- Fire extinguishers were located throughout plant with current inspection stickers in place (most checked on August 14, 1980).
- "No smoking" signs were in place at appropriate locations.
- Warehouse area was considered to be very clean.

No items of noncompliance or deviations were identified.

d. Observed Installed Piping, Electrical Cable Trays, and HVAC Ducts

During the course of several tours through the Auxiliary Building and the Control Building, it was observed that instances of nonsafety-related piping passing over and in the proximity of safety-related cable tray and HVAC air ducts.

Several examples of piping and cable tray mixing, as identified above, are cited here, all located at el 2000 of the Control Building in rooms 3301 and 3302. Specifically:

- Oily waste line LE-11-P123/331 passing over yellow channels cable trays marked 4V1 B59 and AG1 B61
- Floor drains 1-LF-11-P142/331 passing over HVAC air handling ducts and electrical conduits marked 6V3 H1A and 6V3 H1B
- Piping system EF07-5015 supported by all thread pipe supports passing over yellow channel cable trays
- Three inch pipe painted red but unmarked is placed along side cable trays and is supported by cable tray supports

In discussions with Wolf Creek site personnel, it was pointed out to the RRI that this problem has been previously identified by the NRC in inspection report No. STN 50-482/80-08 and classified as II/I. This II/I concern is being reviewed by and is to be responded to by the AE. Review of the inspection report, Deviation Notice, and the licensee response requested by the NRC limited the problem to electrical cable tray installations and did not intend to include non-safety-related piping concerns.

This item is considered to be unresolved and further review will be conducted in the future. (STN 50-482/80-14-03)

4. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. One unresolved item disclosed during this inspection is discussed in paragraph 3.d.

5. Management Interviews

The RRI met with one or more of the persons identified in paragraph 1 on August 7, 14 and September 4, 1980, to discuss the various inspection findings.