

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

REGION IV

This Report Contains Investigation Information
(See Paragraphs 4 and 5)

Report No. STN 50-482/80-09

Docket No. STN 50-492

Category A2

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

Facility Name: Wolf Creek Site, Coffey County, Burlington, Kansas

Inspection Conducted: April 29-May 1, 1980

Inspectors: C. R. Oberg 5/22/80
C. R. Oberg, Reactor Inspector, Projects Section
(Paragraphs 1, 2, 3, 4, 5, 6, 11 & 12) Date

J. I. Tapia 5/22/80
J. I. Tapia, Reactor Inspector., Engineering Support
Section
(Paragraphs 7, 8, 9 & 10) Date

Approved: W. A. Crossman 5/22/80
W. A. Crossman, Chief, Projects Section Date

R. E. Hall 5/22/80
R. E. Hall, Chief, Engineering Support Section Date

Inspection Summary:

Inspection on April 29-May 1, 1980 (Report No. STN 50-482/80-09)

Areas Inspected: Routine, unannounced inspection and investigation of licensee construction activities, including licensee action on previous inspection findings; allegations of construction problems; construction deficiencies; ultimate heat sink dam; and review of nonconformance reports. The inspection involved forty-four inspector-hours on site and in office by two NRC inspectors.

Results: Of the five areas inspected, no items of noncompliance were identified in two areas. Four items of noncompliance were found in three areas. (infraction - improper storage of safety-related items - paragraph 3; infraction - failure to identify nonconforming conditions (2 examples) - paragraphs 2 and 8; infraction - failure to provide adequate test procedures - paragraph 9; and infraction - failure to provide a timely written report for a construction deficiency - paragraph 7).

DETAILS

1. Persons Contacted

Principal Licensee Employees (KG&E)

- M. E. Clark, Manager, Quality Assurance, Site
- *G. W. Reeves, QA Engineer
- *D. W. Prigel, Assistant QA Manager, Site
- S. L. Wamsley, QA Technician
- *G. L. Fouts, Construction Manager, Site
- *R. M. Stambaugh, QA Engineer

Daniel International Corporation (Daniel)

- *W. E. Hitt, Project Manager
- *V. J. Turner, Project QA Manager
- D. L. Jones, Project QC Manager
- V. McBride, Civil Engineer
- *J. M. Ayres, QA Engineer
- T. Damashek, Civil QC Engineer
- C. Mitchell, Civil Engineer

Other Personnel

- R. Seiple, Geotech Consultant, Dames & Moore
- D. F. Fenster, Project Geologist, Dames & Moore

The IE inspectors also talked with and interviewed other licensee employees and contractor personnel including members of the QA/QC and engineering staffs.

*Denotes those attending the exit interview.

2. Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item (STN 50-482/80-06): Verification of Construction Supervisor Experience. On April 30, 1980, an interview with Mr. Watson, Personnel Director, of Daniel International Corporation (Wolf Creek site) disclosed that employment verification had been completed for the two employees whose qualifications were questioned. Mr. Watson provided documents containing information on the employees' past performance and experience, which supports their current positions.

This matter is considered resolved.

(Closed) Unresolved Item (STN 50-482/79-20): Fuel Transfer Canal Concrete. During a site tour on November 28, 1980, the IE inspector identified broken concrete in the fuel transfer canal around Nelson studs and vertical rebar. This discrepancy had not been identified by QA or QC personnel. Based on the number of areas involved, the occurrence of the concrete cracking was determined to be significant and should have been

reported to Quality Control or Engineering. The failure to report is contrary to the requirements of Daniel Procedure AP-IV-02, Section 4.1.1, and to Appendix B of 10 CFR 50, Criterion V.

This unresolved item is thus upgraded to an item of noncompliance.

The IE inspector noted the final disposition of the NCR (1SN1874C dated 3/26/80) had not been determined as of the date of the NRC inspection. Daniel site engineering had initially determined that the event was not reportable under 10 CFR 50.55(e).

This item is considered unresolved and will be reviewed during a subsequent inspection.

3. Site Tour

The IE inspector, accompanied by a licensee representative, conducted a general tour which included all or part of the following areas:

- Ultimate Heat Sink Dam
- General Lake Impoundment
- Containment Building
- Auxiliary Building
- Control Building
- Fuel Building

The following blueprints were checked in the field for control and issuance of proper revisions:

- E-OR 3511 (Q), Rev. 10, issued 11/13/79
- E-OR 3613 (Q), Rev. 1, issued 12/19/79
- E-OR 3713 (Q), Rev. 2, issued 11/6/79

The purpose of the tour was to observe the general state of construction activity and to observe housekeeping practices.

During the tour of the Auxiliary Building, stainless steel spool pieces and fittings, including IEJ-01-S-010/112 and 1PC1-EN-01-S008/112, were observed to be improperly stored. They were found standing in water and dirt, not on cribbing or otherwise protected from physical damage or environmental contamination. ANSI N45.2.2 specifies that items requiring "Level D" storage are to be stored on cribbing or equivalent to allow for air circulation and to avoid trapping water. This condition is in noncompliance with requirements of Appendix B, 10 CFR 50. The specific items identified during the tour were immediately corrected and stored properly.

4. Investigation of Allegations Made by a Reporter Regarding Wolf Creek Construction Problems

On March 21, 1980, Region IV received a telephone call from a newspaper reporter who stated that three allegations had been made to him by an anonymous individual. The allegations and the result of the investigation made by the IE inspector are given below:

Allegation No. 1: A number of construction supervisors were dismissed as a result of some primary cooling system piping being damaged on site. The anonymous individual did not believe this was reported to proper supervisors.

Investigation Results: Three supervisors had been dismissed but for reasons other than what the allegation stated and which are not related to the safety of plant construction. There were not any reports of damaged primary coolant piping. No additional information could be obtained from the source of the allegation on this item.

Allegation No. 2: An employee had stated that he was fired by Daniel because he reported construction problems caused by poorly qualified supervisors.

Investigation Results: The IE inspector reviewed the charge and action taken on a case filed with the National Labor Relations Board (dated February 28, 1980) by the discharged employee. The case (#17-CA-9483) was investigated by the NLRB and an action filed on April 8, 1980. The results of the investigation indicated that no further proceedings were warranted because of insufficient evidence to show that the employee was terminated in violation of Section 8(a)(1) of the National Labor Relations Act. No appeal was made on this action.

Allegation No. 3: Some sequence of parts in the Auxiliary Building and Turbine Building were installed backwards. The informant believed (emphasis provided) that this was covered up by employees and not reported to proper supervisory levels.

Investigation Results: Several nonconformance reports (NCRs) and deficiency reports (DRs) were reviewed by the IE inspector indicating that the sequence of installation of some specific items were not correct. However, they were reported to the proper level of supervision, and were corrected in accordance with the QA program. More specific information could not be obtained from the source of the allegations.

Based on the information made available on these allegations and the results of the investigation, the IE inspector concluded that although the allegations had some basis, they have no merit. Since more specific information could not be obtained, the items are considered closed.

5. Allegation Regarding Wrong Weld Rod Being Used in Fuel Transfer Canal Liner Plate

An allegation was received by Region IV on April 25, 1980, in regard to improper welding of the Fuel Building transfer canal liner plate. The allegor stated that the plates were welded with carbon steel rods and finished with stainless steel rods. The welds were rusting after the stainless steel was ground off. A specific seam was identified.

The IE inspector determined that the fuel pool and fuel transfer canal liner plate is nonsafety-related. The allegation information was given to the KG&E QA Site Manager for verification and follow-up action. On May 9, 1980, the licensee QA Manager contacted the IE inspector and reported that the discrepant weld had been located. Corrective action for the specific weld will be taken as well as action to correct any generic problem for control of weld rod issue. They also reported that the weld had been previously identified and reported by a QC inspector. (Deficiency Report No. 1ND3864M dated April 29, 1980)

No items of noncompliance or deviations were identified.

6. Potential Construction Deficiency - Essential Service Water (ESW) Spool S011

On April 24, 1980, a 42" ESW spool, ICK 205 - S011, was rejected by QC due to the large number of unacceptable linear indications found as a result of visual and magna-flux examinations.

The IE inspector examined the spool on May 1, 1980. Subsequently, the IE inspector was informed on May 8, 1980, that the licensee considered this deficiency to be potentially reportable under 10 CFR 50.55(e). The licensee is currently evaluating the event for safety/generic significance.

This item is considered unresolved and will be reviewed during a subsequent inspection.

7. Review of 50.55(e) Construction Deficiency. Reactor Cavity Concrete

An inspection was conducted of the physical condition of the construction deficiency addressed in paragraph 4 of NRC Inspection Report No. STN 50-482/80-07. The deficiency concerns the spalling of concrete in the reactor cavity collector trench. This condition is identified in Nonconformance Report No. 1SN1808C. The concrete has been chipped back to sound material and awaits the engineering evaluation of required repairs.

The KG&E Quality Assurance Site Manager notified the IE principal inspector on March 7, 1980, of the determination by the licensee that the spalling of concrete in the reactor cavity was reportable within the context of 10 CFR 50.55(e).

10 CFR 50.55(e)(3) states that: ". . . . The holder of a construction permit shall also submit a written report on a reportable deficiency within thirty (30) days to the appropriate NRC Regional Office" An interim final report was, therefore, due on April 7, 1980. As of the date of this inspection no report had been submitted.

This is an infraction in that it is a failure to satisfy conditions of the construction permit.

8. Identification of Construction Damage

During the inspection of spalled concrete (paragraph 7) on April 29, 1980, the IE inspector observed that cracking had occurred in the area adjacent to the spalling. Closer observation disclosed that the refueling cavity stainless steel seal ring had been pulled away from the concrete. The plate was pulled away by means of a force apparently transmitted through a mild steel plate lug which had been welded to the seal ring. This lug showed a gouge mark on the outside edge of the eye. Another mild-steel plate lug was welded to the reactor vessel cover and oriented directly opposite the lug on the seal ring. It too showed a gouge on the outside edge of the lug's eye.

Through discussions with the Daniel QA Manager, it was determined that the purpose of the lugs was to provide lateral restraint of the reactor vessel as it hung in place prior to final setting. This precaution was intended to prevent swaying of the vessel. During the process of setting the vessel wear plates, a come-along was apparently left attached to the two lugs as the vessel was lifted. The resulting damage to the concrete, although visible, had not been reported by any construction or licensee personnel who were present and were aware of the damage.

Daniel International Construction Procedure No. AP-VI-02, Revision 8 "Nonconformance Control and Reporting," Section 4.1.1 requires that all project personnel identify any material nonconformance or nonconformance activity and bring it to the attention of Quality Control or Engineering. The damaged concrete was not brought to the attention of responsible personnel, but rather, was identified by the IE inspector.

This represents an infraction in that it is a failure on the part of project personnel to follow approved reporting procedures as required by 10 CFR 50, Appendix B.

9. Ultimate Heat Sink (UHS)

a. Observation of Surface Feature

A tour of the Ultimate Heat Sink area was conducted with the Dames & Moore Project Geologist for the purpose of observing the Plattsmouth limestone surface which showed signs of separation of the interbedded shale layers along joints parallel to the surface. Through discussions held by the Dames & Moore Project Geologist with a representative

of the Kansas Geologic Survey the day prior to the beginning of this inspection, it was agreed that this geologic feature was a result of mechanical weathering. This conclusion is supported by the fact that this portion of the UHS excavation has undergone repeated cycles of inundation and drying. The affected area has been mapped and a report will be submitted to the NRC by KG&E.

b. Ultimate Heat Sink (UHS) Dam

This portion of the inspection involved observation of the completed construction and a review of randomly selected quality control documentation. The construction controls and field density test requirements are delineated in:

- (1) Sargent & Lundy Specification A-3854, Amendment 2, "Lake Work"
- (2) Sargent & Lundy Specification A-3853, Amendment 3, "Earthwork Testing"

The IE inspector reviewed fifty-six randomly selected Civil QC Daily Inspection Reports covering the period from September 6, 1979, to April 21, 1980. In addition, twenty-four Moisture and Density of Soil In-Place Reports from April 9-17, 1980, were reviewed along with four Proctor Density determinations dated between October 11, 1978, and April 9, 1980.

During in-place relative density testing of the UHS Dam, the referenced acceptance criteria (based on ASTM D698A, "Moisture-Density Relations of Soils Using 5.5-lb Rammer and 12-in. Drop") on a second retest (Field Test No. LQ 223) of an in-place density test was found to be different from that of the original test (Field Test No. LQ 220) and the first retest (Field Test No. 222). In addition, the referenced acceptance criteria were based on material used in nonsafety-related Baffle Dike "A".

Field Tests No. LQ 220 and LQ 222 referenced Proctor Density No. LW-60, while Field Test No. LQ 223 referenced Proctor Density No. LW-81. Proctor Density No. LW-60 was performed on material sampled from the UHS stockpile whereas No. LW-81 come from material taken from Baffle Dike "A". Since the specification for compaction requires that the dry density of the compacted soil mass be a stated percentage of the laboratory Standard Proctor Compaction for that material, the referenced Proctor Density Number would not be expected to change to reflect nonsafety-related material on a retest of a safety-related material after reworking.

Discussions with cognizant QC personnel revealed that the change in criteria was due to a visual interpretation of change in the soil composition and therefore the acceptance standard by the Level I-Soils QC inspector.

A review of the Quality Control procedures and specifications applicable to the UHS relative density testing program was conducted by the IE inspector. No reference was identified which allowed for the changing of in-place density test acceptance criteria by a Level I - QC Soils inspector. Neither was reference identified which permitted the visual interpretation of soil composition by a Level I - QC Soils inspector.

The above activities represent an infraction in that they are a departure from those documented procedures which require that testing is accomplished to the requirements and acceptance limits contained in applicable design documents.

10. Nonconformance Report (NCR) Review

The IE inspectors reviewed seventy-two randomly selected nonconformance reports for the purpose of validating conformance to the construction deficiency reporting requirements of 10 CFR 50.55(e) and with Daniel Procedure No. AP-VI-02, Revision 8, "Nonconformance Control and Reporting."

No items of noncompliance or deviations were identified.

11. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of non-compliance, or deviations. Unresolved items disclosed during the inspection are discussed in paragraphs 2 and 6.

12. Exit Interview

The IE inspector met with the licensee representatives (denoted in paragraph 1) at the conclusion of the site inspection on May 1, 1980. The IE inspector summarized the scope and findings of the inspection. The items of non-compliance were acknowledged.