

SOUTH TEXAS PROJECT - HISTORY

During the one year period July 1977 to July 1978, five investigations were conducted by the Region IV office of the NRC (Region IV). The July 1977 investigation (Report No. 50-498/77-08) involved allegations that QC inspectors were being threatened if they identified unacceptable items during concrete placements. Of the ten QC inspectors interviewed, six stated they had experienced some harassment, but none stated that the harassment led to overlooking unacceptable items. In December 1977, an investigation (Report No. 50-498/77-14; 50-499/77-14) of an allegation that certain radiographs, mailed to a concerned citizen, revealed faulty welds, was not substantiated as the alleged was apparently the victim of a hoax. In April 1978, an investigation (Report No. 50-498/78-05) was conducted of an allegation from an individual who felt he would become a potential scapegoat for allowing the improper use of procedures; this allegation was not substantiated. In May 1978, an investigation (Report No. 50-499/78-09; 50-499/78-09) was conducted of allegations made by an anonymous individual that Cadweld records involving qualifications of QC inspectors were being falsified and QC inspectors were under pressure to violate inspection procedures and, thereby, not hold up construction work. There was no evidence that Cadweld records had been falsified. Interviews with QC inspectors indicated that while there was normal pressure to get the job done there was no undue pressure to violate procedures. One QC supervisor stated that his "holds" (inspection hold points) had sometimes been overruled by higher authority, but he stated this was management's prerogative and did not result from construction pressure. In July 1978, an investigation (Report No. 50-498/78-12; 50-499/78-12) was conducted of allegations made by an individual that QC Civil inspectors were inadequately trained on new procedures; the nonconformance reporting system was inadequate; QC inspectors were not given adequate support; upper management was inaccessible; and construction personnel placed undue pressure on QC inspectors. The allegations, for the most part, could not be substantiated. The investigation results did indicate apparent low morale of some QA/QC Civil inspectors and some weaknesses in the Civil QA program.

In early August 1978, Region IV re-reviewed the results of the past several investigations and noted that although most of the allegations were not substantiated, low morale of QC personnel was certainly evident during the investigations. This observation prompted Region IV management to conduct a special meeting with licensee corporate management representatives in the licensee's corporate offices in Houston, Texas, on August 15, 1978 (Report No. 50-498/78-13; 50-499/78-13). The specific purpose of the meeting was to not only express concern about the apparent low morale of some Civil QA/QC personnel, but also to discuss apparent weaknesses in the implementation of the site QA/QC Civil program, and the adequacy of the present QA/QC staffing level. In summarizing the several items discussed, Region IV concluded the meeting by stating that they recognized that most of the items discussed were based on allegations, and although the Region IV investigations did not substantiate most of these allegations, there was concern about certain perceived indications. Specifically, there appeared to be a morale problem in the site Civil QA/QC organization; the long QC inspector punch lists would suggest that the construction surveillance inspections by the craft foremen and field engineers were less than adequate and, thereby, placed additional pressures on QC inspectors to complete final inspections; the observations made by Region IV

inspectors that Civil QC inspectors appeared to spend very little time at their desk preparing for inspections could suggest that QC inspectors have too heavy an inspection workload; finally, with regard to the adequacy of staffing, concern was expressed that the staffing plan for the current status of the project indicated that the site was below the specified QA/QC manpower level by some 21 Brown and Root personnel and by some 2 licensee personnel.

One month later, on September 15, 1978, a meeting was held in the Region IV office with licensee and Brown and Root management to further discuss commitments made by the licensee during the August 15, 1978, meeting in Houston. Also discussed during the meeting were findings identified during the September 11-14, 1978, Region IV investigation of Cadweld irregularities which resulted in the issuance of an Immediate Action Letter on September 14, 1978, confirming a licensee imposed stop-work order on placement of concrete in the Unit 1 Reactor Containment Building. The September 15 meeting was followed by a licensee letter dated October 3, 1978, to the Region IV office, which addressed the several allegations that were the subject of the July 1978 Region IV investigation that led to the special meeting with the licensee on August 15, 1978. The actions committed to by the licensee, as set forth in the October 3 letter, to correct the apparent low morale problem and strengthen the QA/QC program were included in the inspection agenda for forthcoming Region IV inspections. The results of Region IV inspections conducted during the next several months indicated that actions were being taken by the licensee to strengthen the on-site QA/QC program and improve the morale of site QC inspectors.

Region IV continued to receive allegations which were primarily directed toward site QA/QC activities. During the period August 1978 to November 1979, five investigations were conducted by Region IV. In August 1978, an investigation (Report No. 50-498/78-14; 50-499/78-14) was conducted of alleged solicitation of bribes by a former QC inspector. The allegation, involving one man's word against another, was not substantiated. An additional allegation, revealed during the investigation, that QC inspectors would be adversely affected by the termination of the former QC inspector, was not substantiated. In September 1978, an investigation (Report No. 50-498/78-15; 50-499/78-15) was conducted of allegations made by a QC inspector involving installation and inspection of Cadwelds, mislocation of a Unit 2 structure and the inability of some construction foremen to read and write. Four of the thirteen allegations were substantiated, resulting in two items of noncompliance. Allegations that were substantiated included the loss of a field sketch, application of centering marks to rebar after Cadwelds were completed, lack of second shift QC inspector coverage for Cadwelding, and that only three Cadweld QC inspectors were available for Cadweld inspection. The allegation concerning the inability of some construction foremen to read or write was not reviewed. The allegation concerning mislocation of a Unit 2 structure was, in fact, a survey error which resulted in the Mechanical/Electrical Auxiliary Building concrete mat being one foot too narrow. This item had already been identified by the licensee.

In January and February 1979, an investigation (Report No. 50-498/79-01; 50-499/79-01) was conducted of allegations made by a former employee concerning installation and inspection of Cadwelds. Two of the six allegations were substantiated resulting in one item of noncompliance. Allegations that were substantiated included the copying over of dirty Cadweld Examination Checklists and entering the QC inspector's initials on the clean checklists by another person; and the acceptance of a Cadweld with excess voids in the filler metal. In May 1979, an investigation (Report No. 50-498/79-09; 50-499/79-09) was conducted of allegations concerning refusal of a QC inspector to sign a concrete pour card and widespread discrepancies in the Cadweld "as-built" location records. Both allegations were substantiated, but no items of noncompliance were identified. In September 1979, an investigation (Report No. 50-498/79-14; 50-499/79-14) was conducted of alleged intimidation of QC inspectors by construction personnel and QA/QC program irregularities. Four of the ten allegations were substantiated resulting in an item of noncompliance and a deviation. Allegations that were substantiated included the finding that holes were, in fact, left in walls of safety-related structures after removal of form ties; Lift 5 of the Unit 2 Reactor Containment Building contained Cadwelds that were not accounted for; an inspection report contained an unsigned and undated entry by a person other than the QC inspector; and a QC inspector was verbally instructed to disregard a stop-work notice.

In addition to the several investigations of allegations, an investigation of an altercation between a construction engineer and a QC inspector was conducted in May 1979 and was documented in Inspection Report No. 50-498/79-04; 50-499/79-04. The incident was confirmed, but licensee actions were considered appropriate and no items of noncompliance were identified.

Significant civil/structural problems identified and reported to Region IV by the licensee during 1978 and 1979, in accordance with 10 CFR Part 50.55(e), included unconsolidated concrete in the slab under the spent fuel pool in the Unit 1 Fuel Handling Building; a dimensional error in the base mat of the Unit 2 Mechanical/Electrical Auxiliary Building (MEAB-2); placement of Category I backfill over a clay ramp in the MEAB-2 area; concrete voids behind the liner plate in Lift 15 of the Unit 1 Reactor Containment Building (RCB) exterior wall; and concrete voids in Lift 8 of the Unit 1 RCB wall. The voids in Lift 8 and later in other areas of the Units 1 and 2 RCB exterior walls were identified by the licensee as a result of Region IV concerns which were expressed following the discovery of the voids in Lift 15 of the Unit 1 RCB.

Region IV issued five Immediate Action Letters (IAL) to the licensee during the period January 1978 to November 1979. An IAL confirming a licensee imposed stop-work order on concrete placement in the RCB-1 was issued in September 1978. The stop work resulted from problems concerning installation and inspection of Cadwelds identified during the investigation conducted in September 1978. An IAL concerning improper storage of reinforcing steel was issued in April 1979. The IAL was the result of reinforcing steel storage discrepancies identified during an inspection (Report No. 50-498/79-05; 50-499/79-05) conducted in April 1979. An IAL confirming a licensee imposed stop-work order related to placement of safety-related concrete was issued in June 1979. The stop-work order was the

result of the discovery of concrete voids in Lift 8 of the Unit 1 RCB. Another IAL was issued in June 1979 which confirmed the partial release of the stop-work order for safety-related concrete but continued the stop work for RCB exterior shell wall placements. An IAL issued in September 1979 involved release of the stop-work order affecting RCB shell wall placements.

In addition to the ten investigations performed during the July 1977 to November 1979 period, a special Mid-Term QA inspection (Report No. 50-498/79-13; 50-499/79-13) was conducted during the week of August 6, 1979, on an accelerated schedule. NRC participants in the inspection included two Region IV inspectors, the RRI designee from Region III, and an Inspection Specialist from Region II. Five items of noncompliance related to QA program implementation were identified during the inspection.

The first Reactor Resident Inspector (RRI) was assigned to the South Texas Project on August 26, 1979, and assumed resident duties on September 2, 1979. On November 2, 1979, the RRI was contacted on site by a Brown and Root QC inspector who alleged that civil QC inspectors were being harassed and intimidated by Brown and Root construction personnel.