

U.S. NUCLEAR REGULATORY COMMISSION  
Region I

Report No. 50-410/86-28

Docket No. 50-410

License No. CPPR-112 Category B

Licensee: Niagara Mohawk Power Corporation  
300 Erie Boulevard, West  
Syracuse, New York 13202

Facility Name: Nine Mile Point Nuclear Power Station, Unit 2

Inspection At: Scriba, New York

Inspection Conducted: May 27 - June 13, 1986

Inspectors: C. H. Woodard 7/10/86  
C. H. Woodard, Reactor Engineer date

H. I. Gregg 7/10/86  
H. I. Gregg, Lead Reactor Engineer date

N. J. Butler 7/10/86  
N. J. Butler, Engineering Trainee date

Approved By: C. J. Anderson 7/10/86  
C. J. Anderson, Chief, PSS, DRS date

Inspection Summary: Inspection from May 27 - June 13, 1986 (Inspection Report No. 50-410/86-28)

Areas Inspected: Routine announced inspection of activities related to construction deficiencies, Inspection and Enforcement Bulletins, and outstanding items from previous inspections in the areas of safety-related mechanical, electrical and instrumentation distribution and equipment. This inspection focused on licensee actions taken to resolve these items.

Results: No violations were identified.

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## DETAILS

### 1.0 Persons Contacted

#### 1.1 Niagara Mohawk Power Corporation

- \* T. Lee, Special Projects
- \* R. Fenton, Lead Auditor
- \* M. Ray, Manager, Special Projects
- \* A. Kovac, Audit Supervisor
- \* B. Morrison, Quality Engineering Manager
- \* F. Oszpiewski, Site Quality Assurance Auditor
- \* K. Dahlberg, Site Maintenance Superintendent
- \* K. Sweet, Electrical Maintenance Superintendent
- \* W. Hansen, Manager, Nuclear Operations Quality Assurance
- \* B. Weakley, Special Projects Engineer
- \* E. Klein, Manager, Project Engineering Design

#### 1.2 Stone and Webster

- \* J. Gallagher, Site Licensing Engineer
- \* R. Sowers, Site Engineering Electrical Engineer
- \* A. Pinter, Quality Control Engineer
- \* C. Terry, Project Quality Assurance Manager
- \* G. Smith, Quality Control Inspector
- \* K. Butler, Quality Control Inspector
- \* T. Arrington, Resident Manager
- \* J. Drake, Startup Special Projects Supervisor
- \* S. Agarwol, Senior Licensing Engineer
- \* T. Farrell, Assistant Superintendent of Engineering

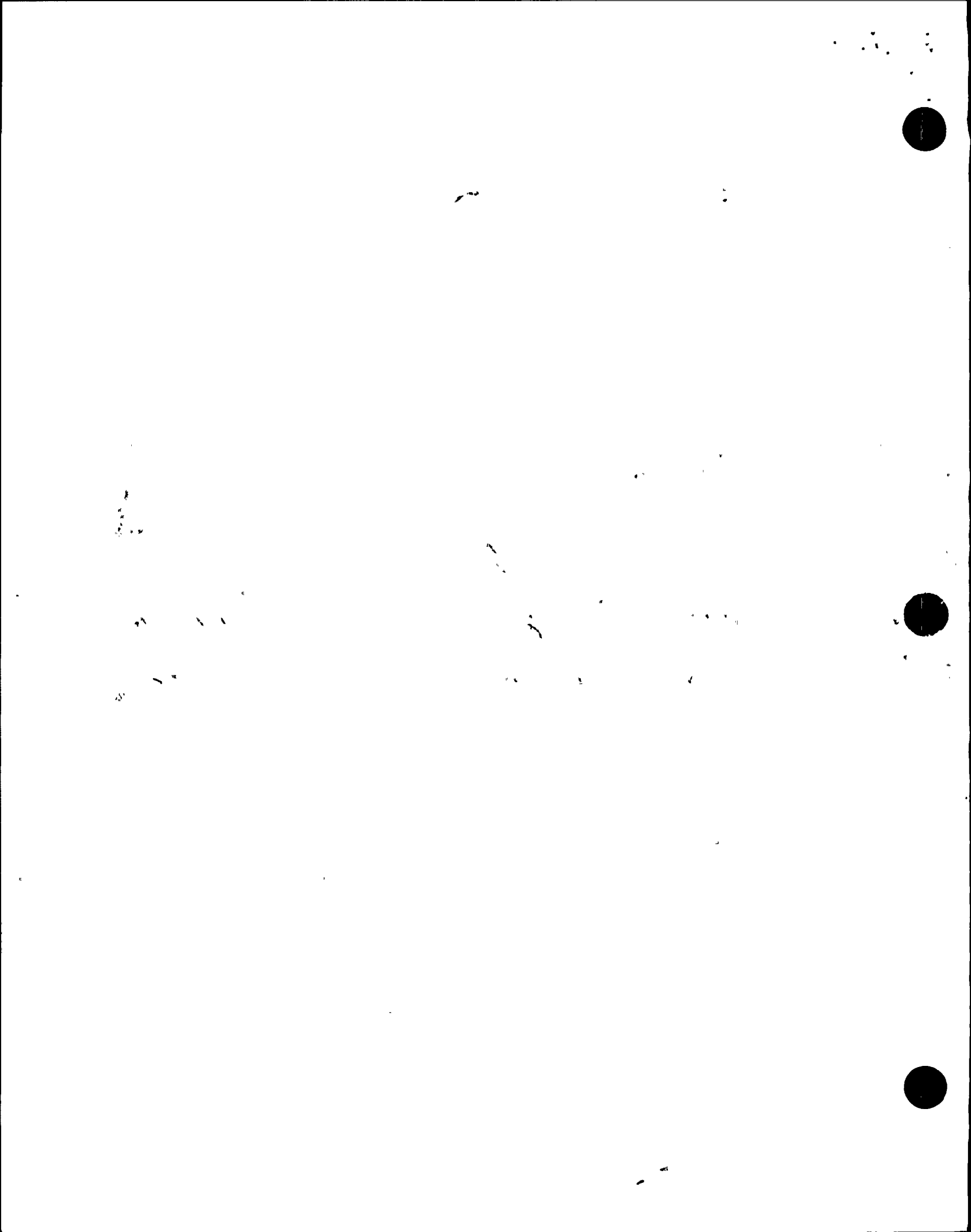
#### 1.3 U.S. Nuclear Regulatory Commission

- R. A. Gramm, Senior Resident Inspector
- \* H. I. Gregg, Lead Reactor Engineer
- \* C. H. Woodard, Reactor Engineer
- \* N. J. Butler, Reactor Engineer Trainee

\* Attendees at Exit Meeting

### 2.0 Licensee Actions on Previous Inspection Findings

(Closed) CDR 80-00-03 concerning insufficient impact data for spent fuel pool cooling water heat exchangers. The specific procurement acceptance parameter "mils lateral expansion", was not provided. The licensee's final report stated: 1) "an analysis was performed which indicates that, with proper heat treatment, brittle fracture is not a credible failure mode for these heat exchangers", and 2) "as corrective action," the heat exchangers will be returned to the vendor for heat treatment to relieve potential residual weld stresses".



The inspector had the licensee's personnel obtain: 1) a copy of the NUS Corporation Brittle Fracture Analysis (NUS-3914) prepared for American Standard, the heat exchanger vendor, and 2) copies of the heat treatment furnace charts for the heat exchangers 2FSC-1EA and 2FSC-1EB. The inspector verified that the failure analysis report was reviewed and approved by SWEC and that the heat exchangers were heat treated by the vendor on 6/10/82.

The inspector observed the installed American Standard spent fuel pool heat exchangers 2SFC-E1A (Serial No. 9-20014-01, National Board No. 34120) and 2SFC-E1B (Serial No. 9-20014-05, National Board No. 9-20014-05).

This item is closed.

(Closed) CDR 82-00-12 concerning 16 Clow Corporation valves that were not heat treated after forming as required by ASME Code.

The inspector reviewed the documentation package and determined that the 16 valves were returned to Clow Corporation for heat treatment rework. The package also contained heat treatment furnace charts showing that the valves were held at a temperature of approximately 950°F - 975°F. The charts also referenced a Clow heat treatment specification which the inspector requested the licensee to furnish.

Upon review of the Clow heat treatment specification, the inspector determined that the 950°F - 975°F heat treatment did not meet the 1100°F - 1250°F specification requirements. It was then determined that the heat treatment specification was an earlier revision of that referenced on the heat treatment charts. When the inspector obtained the correct specification revision, it was verified that a 950°F alternate holding temperature was included as part of the revision.

This item is closed.

(Closed) CDR 84-00-42 concerning failure of Posi-Seal Containment Purge System (CPS) Isolation valves to close within the 5 second requirement without being in the preferred orientation.

The licensee's letter to NRC dated May 20, 1986 stated corrective actions have been completed as follows. Valves 2CPS\*AOV104 and 2CPS\*AOV106 were verified to be in the correct orientation. Valve 2CPS\*AOV108 was reoriented and a 70° limit stop was installed. Valve 2CPS\*AOV111 was reoriented and a 60° limit stop was installed. Valves 2CPS\*AOV107, 2CPS\*AOV109 and 2CPS\*AOV110 were verified to be in proper orientation and 70° limit stops were installed.



The inspector reviewed the Engineering and Design Coordination Reports (E&DCRs) to determine that the work was completed in accordance with the licensee's valve orientation and limit stop matrices. The E&DCRs reviewed (E&DCR 279422C, 70471A, 70471, P13230A, P13230, P93699, C93700 and 79422B) had a clear description of the problem and an accurate problem solution. Each of the E&DCRs was fully completed and appropriately signed.

The inspector verified that generic electrical test procedure EE.GENE 006 entitled Control Circuit Verification is utilized to check the operational circuitry of each valve. Additionally, the inspector verified preoperational procedure N2-POT-83 entitled Primary Containment Isolation has specific test requirements on page 147 that closing times for valves CPS\*AOV104 through 111 have to be measured, verified, and must meet a 5 second maximum closing time.

This item is closed.

(Closed) CDR Item 85-00-25 concerning a Velan valve body, valve 2MSS\*MOV112 for which the certified material test report (CMTR) did not document the test coupon heat treatment duration and temperature as required by ASME Section III, NB-2211.

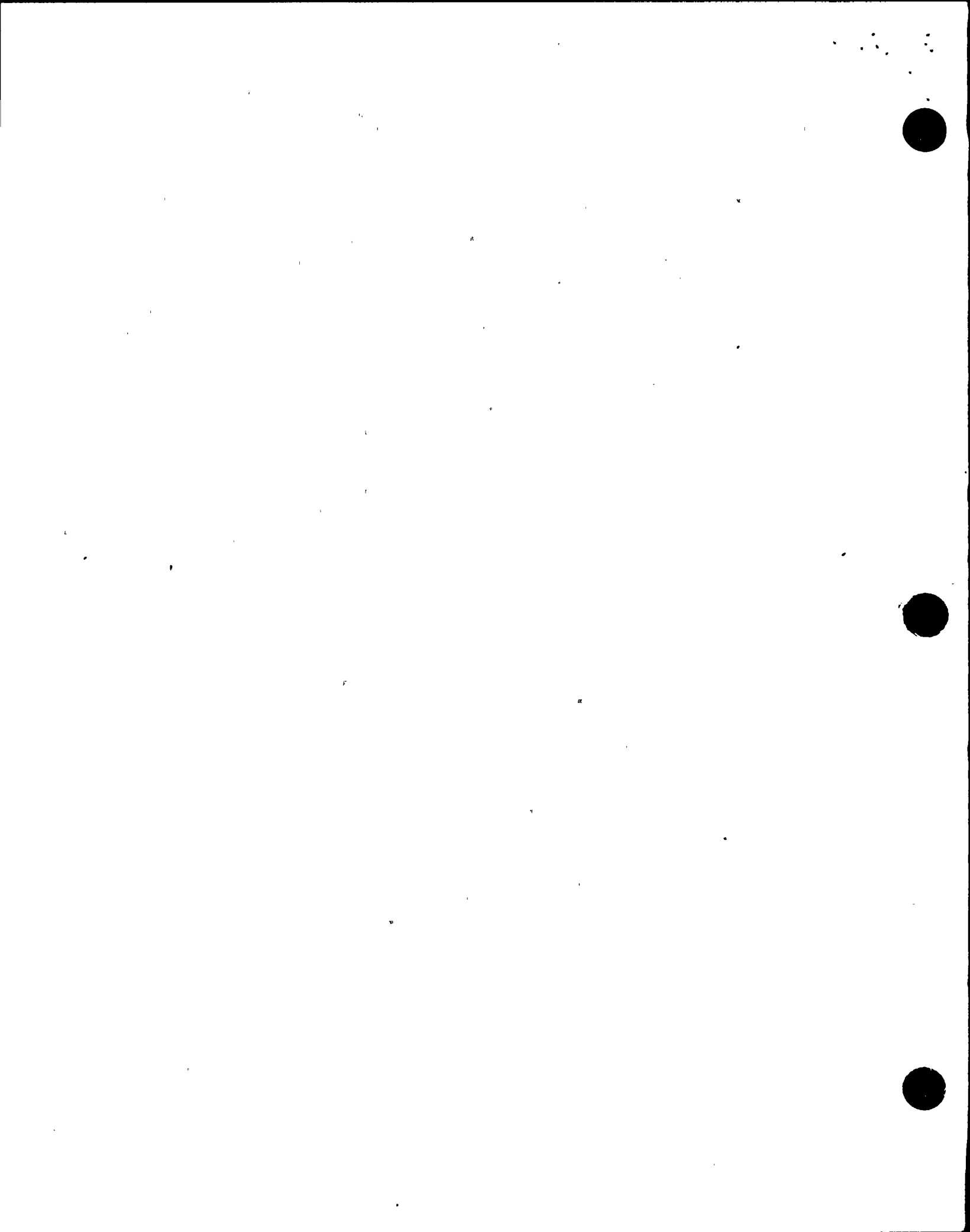
The inspector reviewed the subsequent documentation and verified that a separate test forging coupon of the same heat number as the body was located. The test coupon was then heat treated similar to the heat treatment of the valve and mechanical tests were performed. The vendor resubmitted the CMTR and provided the coupon heat treatment. Additionally, the inspector reviewed the revised weld filler material certification and the supplement to the NPV-1 code data report which clarified weld filler code procurement and certification details.

This item is closed.

(Closed) CDR 86-00-02 concerning 22 stainless steel small bore fittings from Alloy Steel Products Company, with rejectable indications as found by liquid penetrant examination.

The licensee identified 22 rejectable fittings out of a total of 124 fittings. Corrective action taken by the licensee was to scrap the 22 defective fittings. The inspector reviewed the documentation which included SWEC QA Inspection Report P4075871, interoffice correspondence and the material receiving report. The inspector verified that the 22 reject fittings were sent offsite to be scrapped per SWEC Material Credit Slip No. 12290 dated 5/2/85.

This item is closed.





(Open) CDR 84-00-28 concerning the installation of QA Category 1 bolted flanged piping joints by ITT Grinnell without a documented procedure.

The inspector reviewed the documentation package furnished by the licensee. Based on the documentation, the inspector was unable to determine the specifics of: what joints were to be done, what was done, the availability of work completion records and the acceptability of the completed work. The SWEC QA manager was advised of the inadequacies of the data. Upon the QA managers review of the package, he agreed that further information needed to be provided.

This item remains open.

(Closed) Inspection Enforcement Bulletin Item 83-BU-04 Failure of the undervoltage trip function of reactor trip breakers. This Bulletin informed Construction Permit holders of failures by General Electric AK-2 type circuit breakers to trip open during testing of the undervoltage (UV) trip function and required action to assure proper operation of the reactor trip breakers. Similar failures of the General Electric AK-2 circuit breakers to trip open due to failures of the UV trip mechanism were addressed previously in IE Bulletin 79-09.

The inspector determined that the licensee responded to Region I OI&E on IEB 79-09 by letter dated June 18, 1979 and stated that the safety related equipment which might utilize the AK-2 circuit breakers was not compatible with these breakers and further stated that all of the safety equipment for Nine Mile Unit 2 was ordered and did not include any AK-2 circuit breakers and that the licensee would not use the AK-2 circuit breakers in safety related circuits.

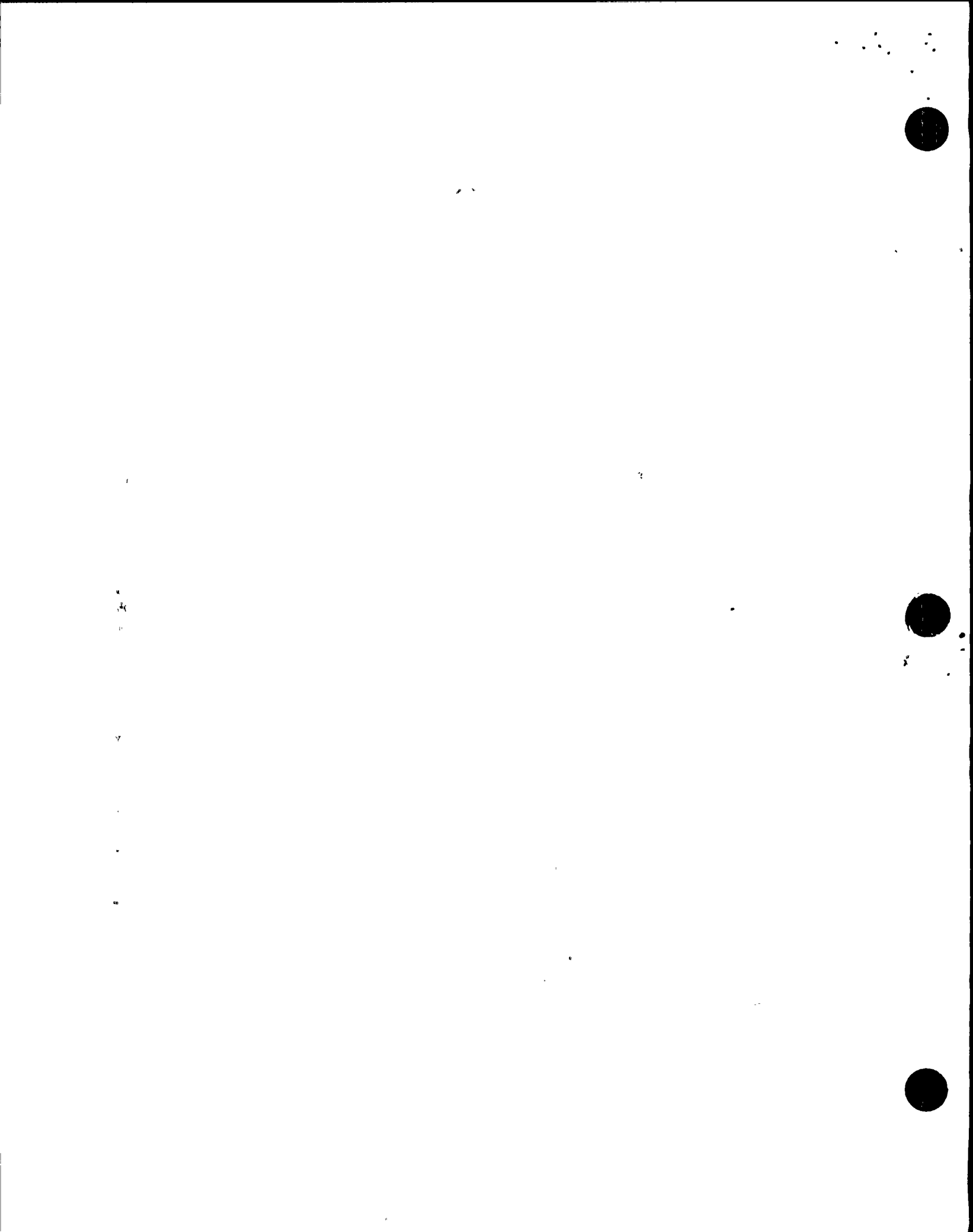
The inspector further confirmed that the licensee does not have or use the GE AK-2 circuit breakers on the Nine Mile Unit #2 site.

This item is closed.

(Closed) Inspection Report Item 85-42-03 Installation of safety-related neutron monitoring system cables without using documented instructions or procedures approved and authorized by responsible engineering personnel to control and provide inspection criteria to ensure the acceptability of the work performed. These coaxial cable installations were determined to be a violation of 10 CFR 50, Appendix B, Criterion V.

The installations involved a combination of pushing and pulling coaxial cable through flexible conduit which was more than 25 feet in length and exceeded 270° in bends without monitoring tension. The methods used in the installation violated the licensee's Electrical Installation Specification E-061A.

The licensee provided letter responses to the Notice of Violation (including corrective and preventive actions) to the NRC on March 3, 1986 as follows:



Response:

The following is submitted in response to the apparent violation:

We agree with the Commission that no specific instructions addressing "pushing" cable in conduit were included with the electrical specification. We also agree that tension monitoring devices were not used for the cable "push" installation. Although no specific instruction was provided regarding this unique installation, Engineering, QC and contractor representatives participated in the field discussions and initial field trial methods. A specification revision, however, was not prepared.

Corrective Action:

Mock up tests, witnessed by an NRC inspector, were performed to confirm the quality of the installation. Based on the results of these tests, we feel no further corrective actions are required.

Preventative Action:

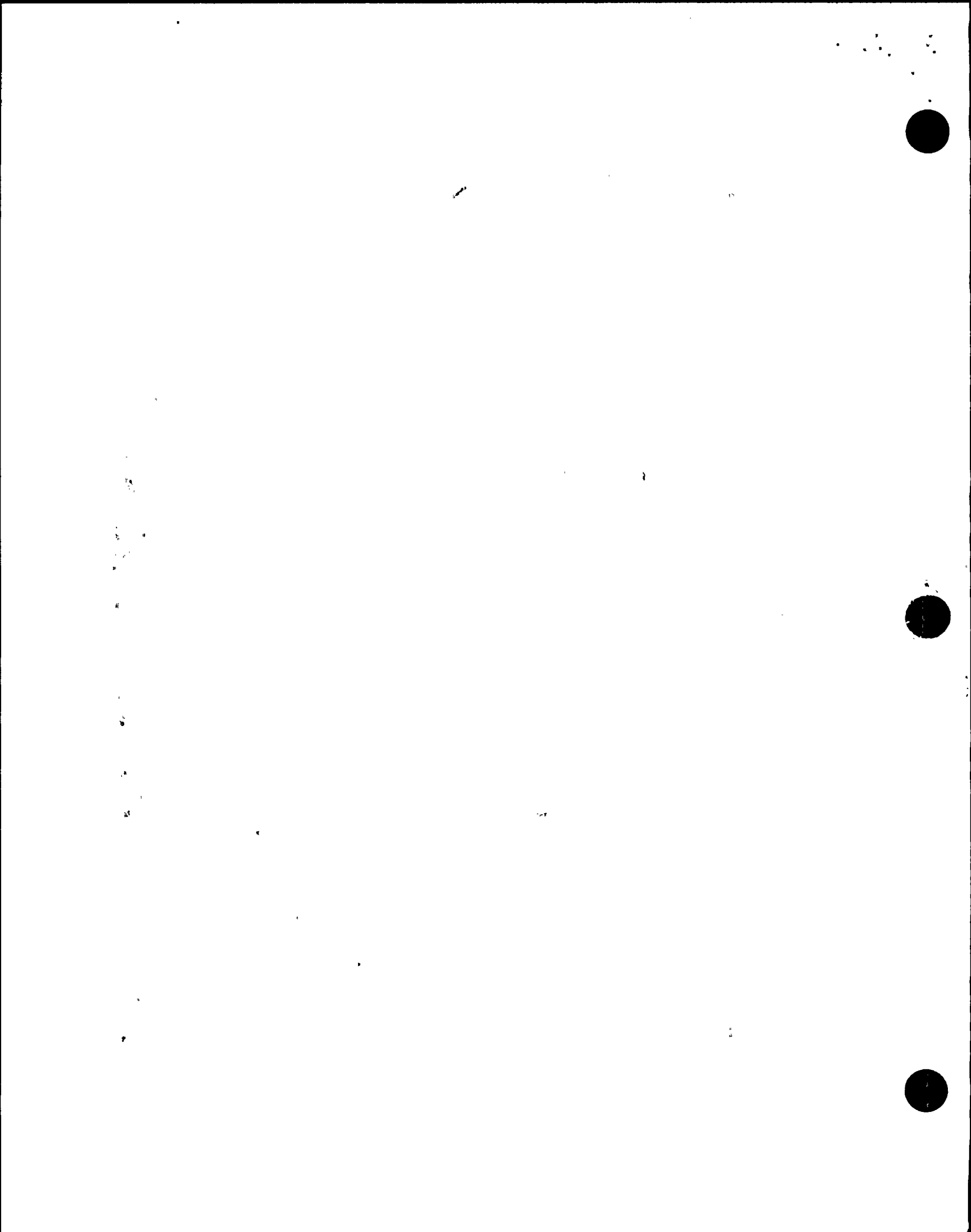
As additional clarification to the electrical installation specification, a cable "push" method has been established. This method will be incorporated in the electrical installation specification by an Engineering and Design Change Request Number F02608.

The inspector reviewed the procedural violation, the licensee's responses, the mock-up test report data, and preventative actions and had no further questions in this area. This item is closed.

(Closed) Construction Deficiency 84-00-18 High Pressure Core Spray (HPCS) Diesel Generator Control Panels (2CES\*IPNL413 and 2CES\*IPNL414) Wiring Deficiencies.

These panels were furnished by General Electric (GE) as a part of the HPCS system. GE's supplier for this equipment was Stewart and Stevenson. Approximately 30% of the wiring in these panels was found to be improperly crimped to its termination lug or it was damaged. The corrective actions taken by the licensee are documented in GE Field Deviation Disposition Request (FDDR) Report #KGI-1015 and are implemented by Nonconformance and Disposition Report (NC&DR) #6367, 8997, 9108, 9792 and 10572. The inspection of the work was performed in accordance with Stone & Webster Quality Assurance Inspection Procedure QAIP N20E061AFA026/B/6.

This work was completed with QA verification and test verification #2-85-0871, 2-85-1043, 2-85-1477 and accepted January 29, 1986.



The inspector performed a random sample inspection of the wiring and terminations within panel 2CES\*IPNL413 for conformity in the inspection and acceptance criteria contained in both GE FDDR report KG1-1015 and S&W QA1PN20\*E061AFA026/B/6. No discrepancies were observed.

This item is closed.

(Closed) Construction Deficiency Item 85-00-01 Deficient wiring in Division I and II Emergency Diesel Generator Control Panels 2CES\*IPNL406, 407 and 412 as reported by the licensee under 10 CFR 50.55(e) on February 25, 1985.

These panels were furnished by Cooper Energy Services Company as a part of the Division I and II Emergency Onsite Power System. The specific wiring deficiencies are identified in Stone & Webster Nonconformance & Deficiency Reports #8568, 8569, 9436, 11415, 12844 and 04873. The NC&DRs require correction of the wiring deficiencies in accordance with Stone & Webster Electrical Installation Specification NMP-2-E061A. Quality Assurance Acceptance Inspection were required in accordance with QAIP N20\*E061A.

The work was completed with final QA verification (QCIR) Quality Control Inspection Report #2-86-1206. In addition to a review of all of the documents, the inspector performed a random sample inspection of the wiring and termination in panel 2CES\*IPNL406 for conformance with the inspection criteria of QAIPN20\*E061A. No discrepancies were observed.

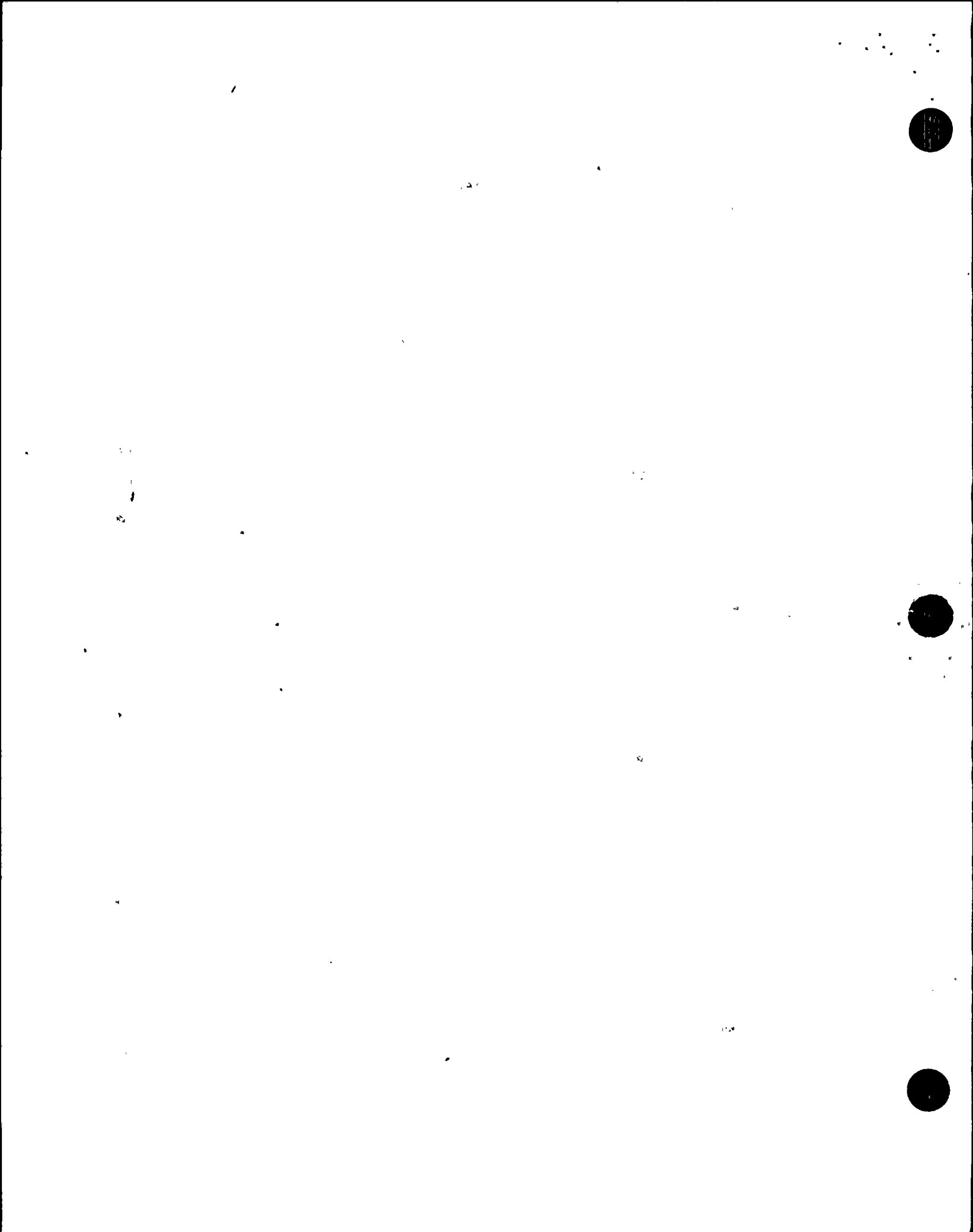
This item is closed.

(Closed) Construction Deficiency Report Item 83-00-14 Vendor wiring and component deficiencies in safety related 125 volt d-c battery chargers 2BYS\*CHGR2A1, 2BYS\*CHGR2A2, 2BYS\*CHGR2B1 and 2BYS\*CHGR2B2. These chargers are Model No. 3S-130-300CE as supplied by Power Conversion Products Company.

The licensee found that during initial testing, the charger units would not generate a d-c output voltage when energized. This problem was found to be due to vendor wiring errors. In addition, the licensee discovered that both meters and the high voltage printed circuit board were defective and required replacement. These deficiency conditions of the power conversion battery chargers were reported under 10 CFR 50.55(e) to the NRC on July 12, 1983.

This deficiency, its causes and licensee actions to be taken to correct the deficiencies and to prevent their recurrence are addressed in detail in previous NRC Inspection Report 50-410/84-18.

The inspector reviewed the licensee's documentation of findings, reports, modifications, inspections, and acceptance, and current vendor quality assurance program. Documents reviewed included the following:



- Engineering and Design Coordination Reports F40537
- Nonconformance and Disposition Reports 4920, 5203, 4894, 4868, 4926 and 6114
- NMP2-E061A, Revision 11, Specification for Electrical Installation
- NMP2-N020E061A026, Revision D, Quality Assurance Inspection Plans

The inspector also reviewed the licensee's final evaluation and verification report dated January 2, 1985. There were no outstanding items in question.

This item is closed.

(Closed) Construction Deficiency Item 82-00-10 This deficiency concerns the incorrect "wipe setting" of contacts on some GE HFA relays in the PGCC panels after disassembly/reassembly. Qualifications of the relay was performed with calibrated contacts; therefore, a relay with less than a minimum wipe setting does not fall within the component qualification limits. GE reported this problem to the NRC under 10 CFR 21 on July 27, 1982.

General Electric provided documentation by letter June 21, 1983 that all HFA relays in the PGCC equipment were corrected/calibrated prior to shipment. General Electric also provided the licensee with Field Disposition Instruction TYGZ, Service Information Letter 44, Supplement 4 for adjustment of the balance of plant IE HFA relays (12 relays), and test verification (QCIR) Quality Control Inspection Reports #2-86-046 and 2-85-1555.

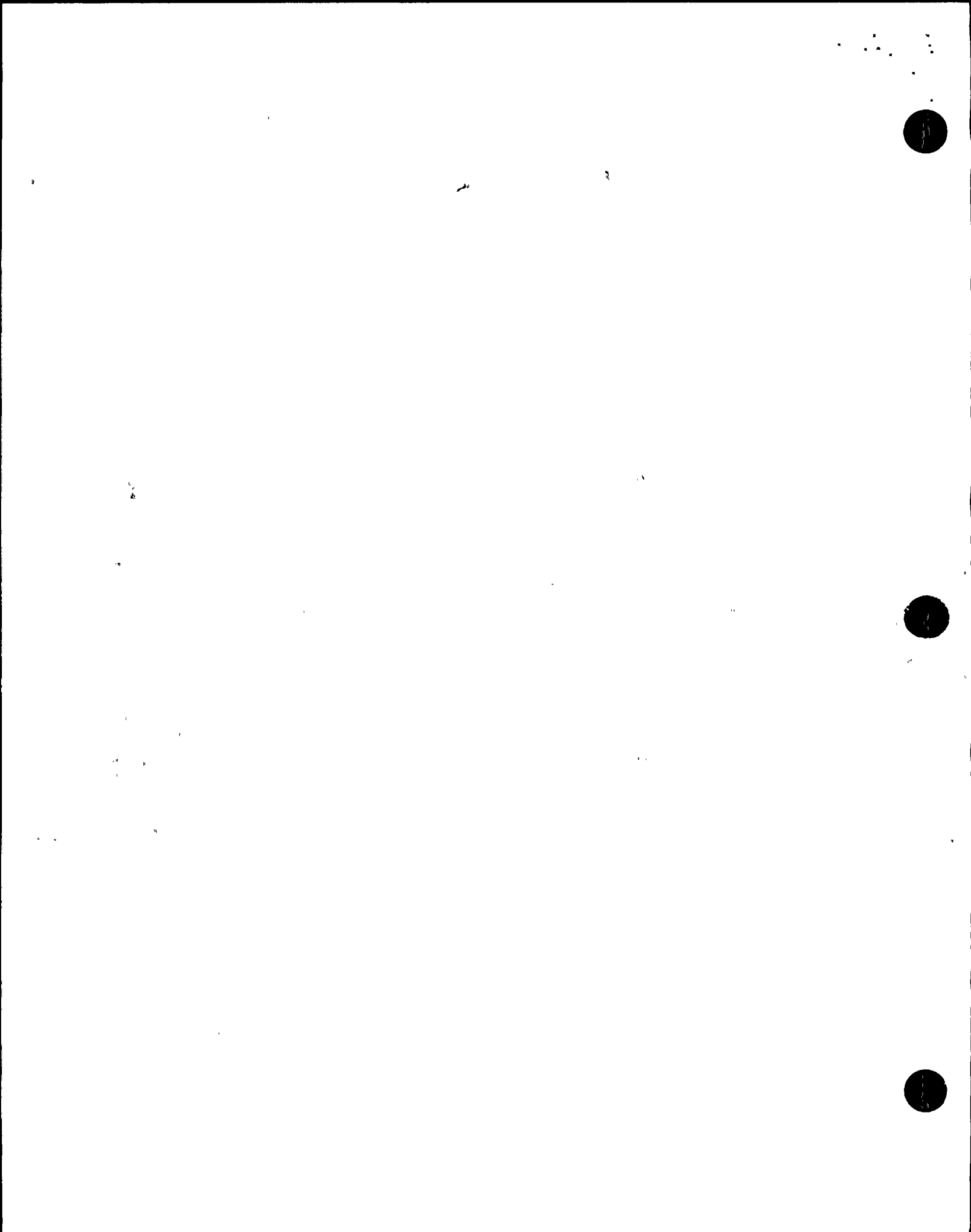
The licensee performed the adjustment of the balance of plant HFA relays under E&DCR #42915. This work was completed with final verification by the licensee on May 7, 1986.

The inspector reviewed the procedures, their implementation and the licensee's documentation and verifications. No discrepancies were observed.

This item is closed.

(Closed) Construction Deficiency Report Item 84-00-34 Potential deficiencies were reported under 10 CFR 50.55(e) on August 28, 1984 concerning the Rosemount Master Trip Units used in the Nuclear Steam Supply System safety-related systems.

The licensee discovered this deficiency during the acceptance test. There were erratic operation of setpoints during trip unit calibrations. Diagnosis of the problem revealed that the potentiometer wiper contact which was made of silver, oxidizes; causing erratic operation during calibration of trip setpoints. Therefore, the master trip failed its acceptance test.





GE submitted a letter dated 11/8/74, #NMP2-6397 which contains the description of the Rosemount Master Trip and concluded that "the erratic adjustment behavior represents only a minor calibration/maintenance procedure inconvenience, not a safety concern. Once the trip point is set, the oxidation is not detrimental to the accuracy of the safety trip point; therefore, no safety hazard to safe shutdown of the plants exists. However, NMPC decided to improve calibration and maintenance of the trip units by replacing the trip unit potentiometers with units having gold contact wipers.

The inspector reviewed the licensee's documentation of the problem including E&DCR F42074; Field Deviation Disposition Request (FDDR) KGI-2943 Rev. 6; Deficiency Reports (DR) I-01487, I-02280; test verifications; and Quality Control Inspection Reports #2-85-249, 2-85-5518, 2-85-5669. The QCIRs included all replacements and spare parts.

The inspector also reviewed the schematic diagram 510DU Master Trip Unit with Analog Output, to verify the function of the potentiometer in the circuit. No discrepancies were discovered.

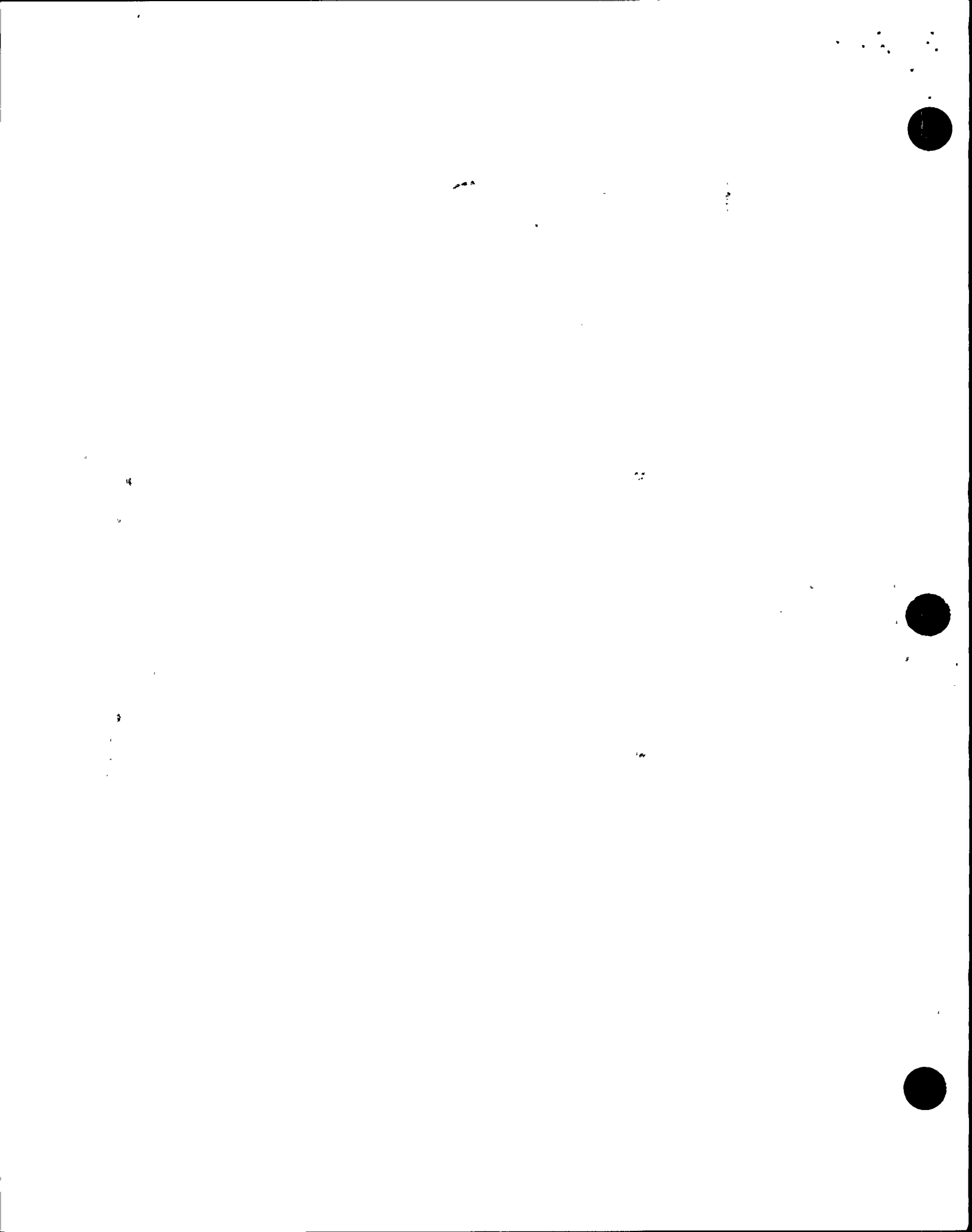
This item is closed.

(Closed) Construction Deficiency Report Item 85-00-27 Design Deficiency in the (Division I and II) emergency diesel generator starting circuits which led to unsuccessful starting attempts. This deficiency was reported under 10 CFR 50.55(e) on September 30, 1985.

The licensee discovered this deficiency during preliminary testing of the Division II, Cooper-supplied emergency generator. A unit failed to start when given an emergency start signal. Diagnosis of the problem revealed that an electrical noise signal from the 125 volt dc power supply to the unit was being received into the speed sensing circuit and was interpreted as a signal of engine speed (the engine is running). This circuit normally receives a speed signal from an electro-magnetic pick-up mounted adjacent to an engine driven gear such that a pulse signal is generated each time a gear tooth passes the pick-up. This pulse signal activates follower circuits including relays which disable the air start system since the signal is interpreted to be that the engine is running.

The licensee solved the noise problem from the power supply into the unit by installing a dc-to-dc converter in the 125 volt dc power supply feed to the speed sensing circuit and by the installation of appropriate shielding and grounding.

This circuit noise problem and its solution was coordinated by the licensee with the EDG supplier, Cooper.



The inspector reviewed the licensee's documentation of the problem E&DCR C46280A, DRs 08021, 09064 and 09065, the investigation, the modification E&DCR C46281, test verifications, and Quality Control Inspection Reports #2-86-01090, 2-85-1495 and 2-85-1494 to assure that the electrical noise isolation/suppression was sufficient to assure solution of the false run signal problem.

The inspector also reviewed both the environmental and seismic qualifications of the modification. No discrepancies were discovered.

This item is closed.

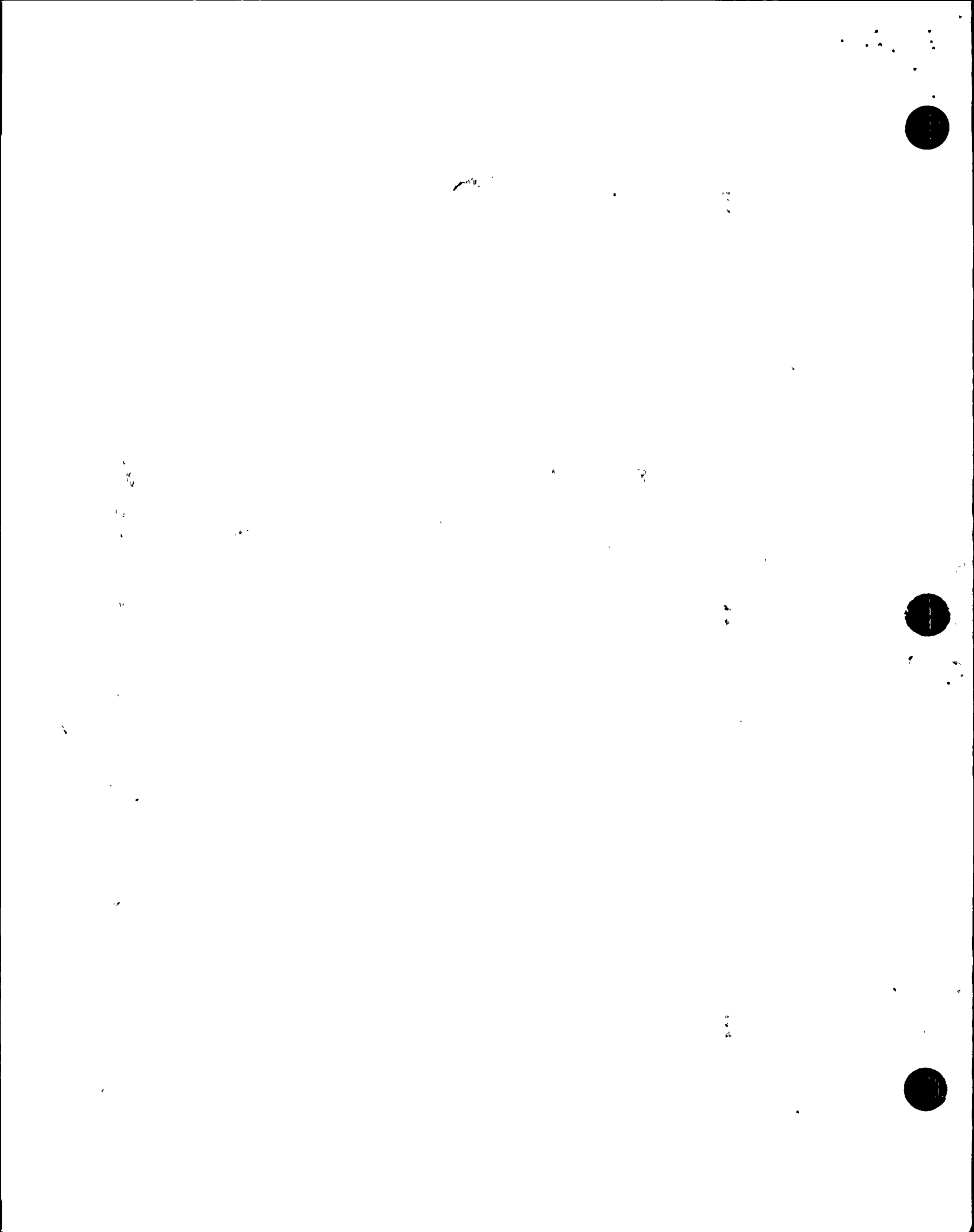
(Closed) Construction Deficiency Report Item 85-00-14 Deficient Westinghouse TD-5 relay contact circuitry for interrupting high discharge currents in the load shedding mode in 4160 volts IE switchgear units 2ENS\*SWG101, 2ENS\*SWG102, and 2ENS\*SWG103. This deficiency was reported to NRC by the licensee under 10 CFR 50.55(e) on May 13, 1985.

The defective circuit design of the load-shedding scheme could result in malfunction of the TD-5 relays, rendering them inoperative, thus affecting the design function of the diesel generator load shedding system. If this condition remained uncorrected, it could have adversely affected the safety of operations of the plant.

The nature of the problem and corrective actions required are contained in Niagara Mohawk Deficiency Reports 08426 and 08427, General Electric Field Deviation Disposition Request KG1-4079-0 and in Stone & Webster Engineering and Design Change Request C45455 and C45502. Basically, the change consisted of providing an arc suppression network around the affected TD-5 relay contact to protect it from successive transient currents. This arc suppression circuit is protected from inadvertently shorting-out and energizing the trip relay by a series contact of the trip relay itself. This design does not degrade the safety or reliability of this circuit. This work was completed, inspected, verified and accepted by the licensee on December 26, 1985.

The inspector conducted a review of the problem, its solution and test verification, Quality Control Inspection Reports #2-85-1178 and #2-85-1180; and all other pertinent documents. The inspector also confirmed that the work had been performed by inspection of the modification and by interview of appropriate Stone and Webster and Nine Mile Unit 2 personnel.

This item is closed.



(Closed) Inspection Report Item 85-42-02 This item pertains to the violation of established procedures. 10 CFR Appendix B, Criterion V states that activities affecting quality shall be prescribed by documented instructions and procedures and shall be accomplished in accordance with these instructions and procedures.

During inspection 50-410/85-42, it was observed that the bend radius of flexible conduits exiting out of the top of junction box 2JB0790 were smaller than the required bend radius for the cable in the flexible conduit. Licensee Specification E-061A specifies a bend radius of 3 inches for the NJP-29 cable installed in the flexible conduit. The following conduits were reported to have less than their respective minimum bend radius 2CS998GA, GB, GC, GD, GE, GF, GG, GH, GJ, GK, GM, GP, GO, GP, 2CK997YMI, 2CK997YF, 2CC996YCS, 2CK999YD, 2CK997YG.

The inspector also observed that there were no protective barriers installed to protect the flexible conduits inside the primary containment from damage.

The licensee provided a letter 6/12/86 that states the barriers were only necessary during the construction phase. Since the construction phase is complete, the wood barriers were removed 3/1/86 for operations. The primary containment is now treated as a controlled access area.

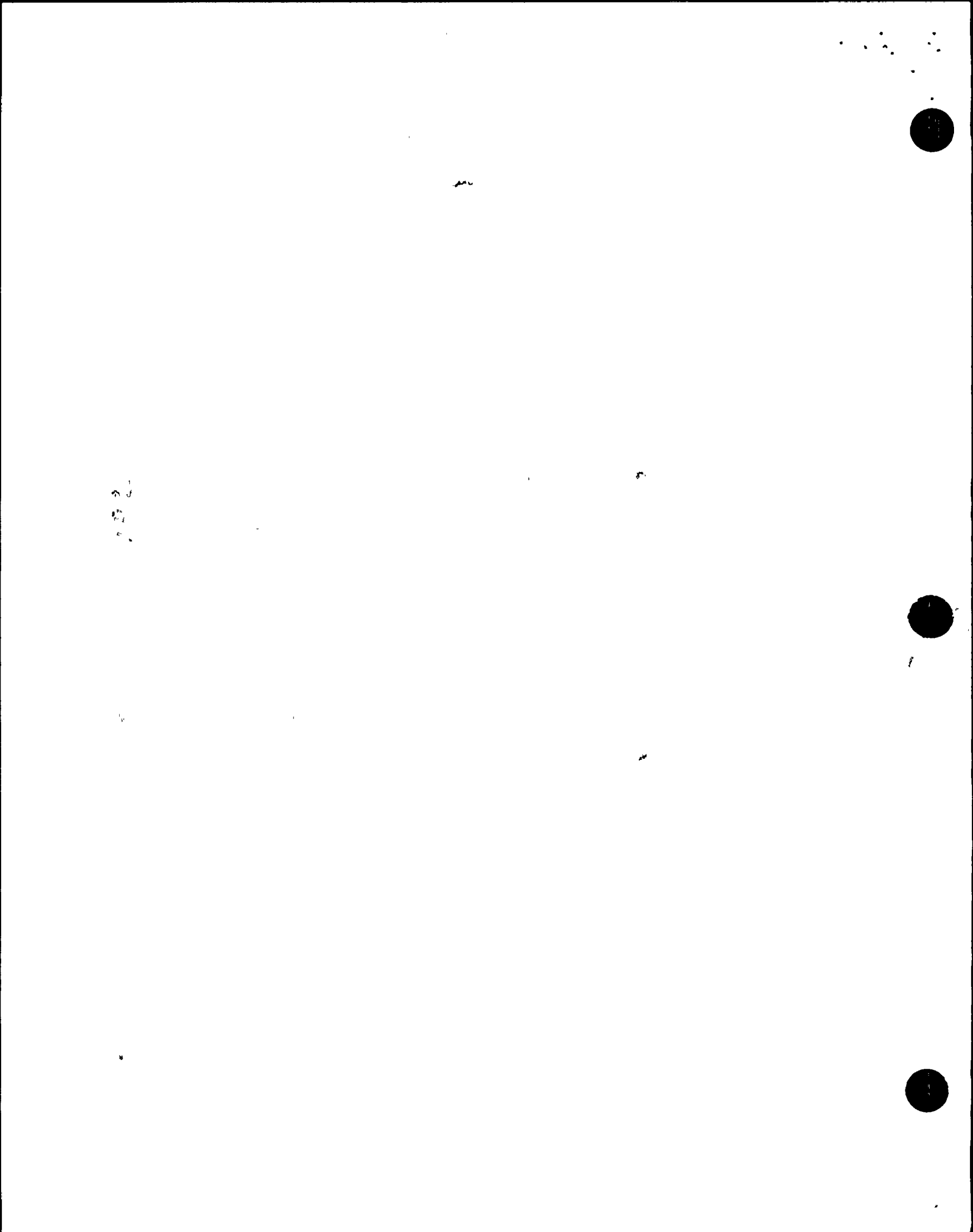
Upon inspection of the conduit in question out of junction box 2JB0790, the inspector found that all the cables were retrained to obtain proper bending. The licensee provided documentation N&D14 and 270, DR09201; electrical meggering and continuity test reports to verify that the cables were not damaged. The inspector also inspected junction box 2JB0794 and all of the flexible conduits from it. No deficiencies were found.

This item is closed.

(Closed) Inspection and Enforcement Bulletin Item 84-BU-02 Premature aging of GE type HFA 51 series relays coil material (Lexan) led to failure of these relays in Class 1E circuit as reported in IE Bulletin 84-02.

The inspector verified the program implemented by the licensee to replace or modify all of the HFA series 51 relays for Nine Mile Unit #2. General Electric confirmed modification or replacement of all relays in the PGCC Panels prior to shipment and further confirmed that all future design/changes will use the qualified relay replacement.

GE also supplied the licensee with Engineering Design and Coordination Report F41338 and Field Disposition Instruction FDI-TYGZ for instructions in the replacement/modification of the balance of the HFA series 51 relays other than those in the PGCC equipment. These replacement/modifications are covered in Nonconformance and Disposition Report NC&DR 6587.



The inspector verified the work performed by the licensee including the modification and replacement of defective relay spools in Brown Boveri load center cubicles 2, 9 and 10 and also verified the documentation which included the HFA series 51 relays on the excluded equipment list to prevent their future procurement. Warehouse spares were also inspected; no deficiencies were discovered.

All work was completed and verified by the licensee on February 6, 1986.

This item is closed.

(Closed) Construction Deficiency Item 85-00-15 Missing wiring connection in motor operated valve 2CSL\*MOV107 manufactured by the Limatorque Corporation.

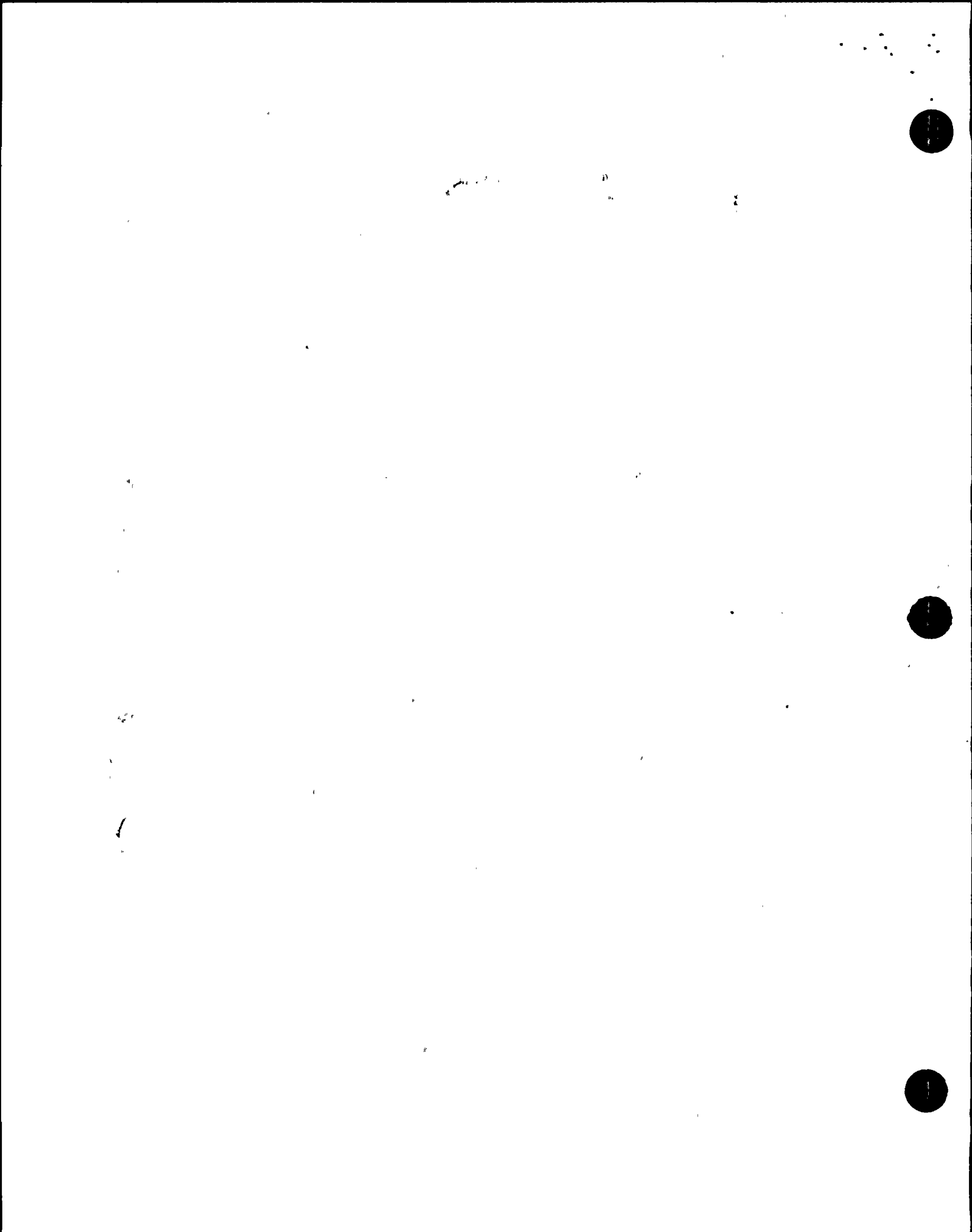
The missing wire connections were discovered by the licensee during inspection of the valve on January 18, 1985. The internal jumpers are required for opening and closing operation of the valve as well as for protecting the valve motor during overload conditions. This construction deficiency was reported under 10 CFR 50.55(e) to the NRC on May 17, 1985.

The inspector reviewed the NMP Report of the deficiency, the disposition of the deficiency in accordance with Drawing 12177-EE-95L-4, verification and quality assurance inspection of the correction in Quality Control Inspection Report QCIR-Z-85-0013, Initiation and Closure of Corrective Action Report CAR-85-1000 for similar jumper problems in plant, and SWEC revised inspection plan N20\*E061AFA040, Item 9 covering jumpers and internal wiring. Licensee actions resolved the reported problem; provided additional inspections to detect any similar problems; and provide a mechanism to prevent recurrence.

The inspector had no further questions. This item is closed.

(Closed) Construction Deficiency Item 84-00-55 This item relates to a defect in the Topaz inverters supplied by General Electric in the adjustment provisions for low voltage shutoff and turn on of the inverters. The defect was initially reported by GE as a 10 CFR 21 report dated December 21, 1984. Through engineering error GE had accepted these inverters with a low voltage setting of 105 volts. With this low voltage setting and with the GE specified input voltage operating range from 108 to 132 volts with momentary dips to 105 volts during startup of large d-c loads, the inverter could trip off and fail to restart. This failure during a design basis accident could cause loss of power to vital instrument buses which initiate the HPCS initiation trip logic and annunciators.

GE provided the licensee with Field Disposition Instruction TWDS dated December 4, 1984 and Field Deviation Disposition Request KG1-3452 dated June 10, 1985 which contained instruction for performing readjustment and tests of automatic shutoff and turn on of the Topaz inverter.





Stone and Webster performed this work under E&DCR F42436 which was reviewed and revised from F42784 and C46473. This work was inspected and accepted under Quality Control Inspection Request #2-86-5142, 2-86-5375, and 2-86-5369 and it received final site QA evaluation and verification on March 31, 1986.

The inspector confirmed that the licensee currently uses only one Topaz inverter and that it is in HPCS Panel H13-P625. Two units in panels H13-P618 and H13-P629 had been replaced previously with higher capacity power supplies manufactured by others.

The inspector confirmed the licensee modifications by review of GE modification and test procedures, review of the S&W modification E&CDR and QCIR and Niagara Mohawk evaluation, verification and acceptance of the modification. The inspector also reviewed the licensee scrap disposition instructions for the two units removed from panels H13-P618 and H13-P629 that had burned out during a test which overloaded the units. No discrepancies was observed.

This item is closed.

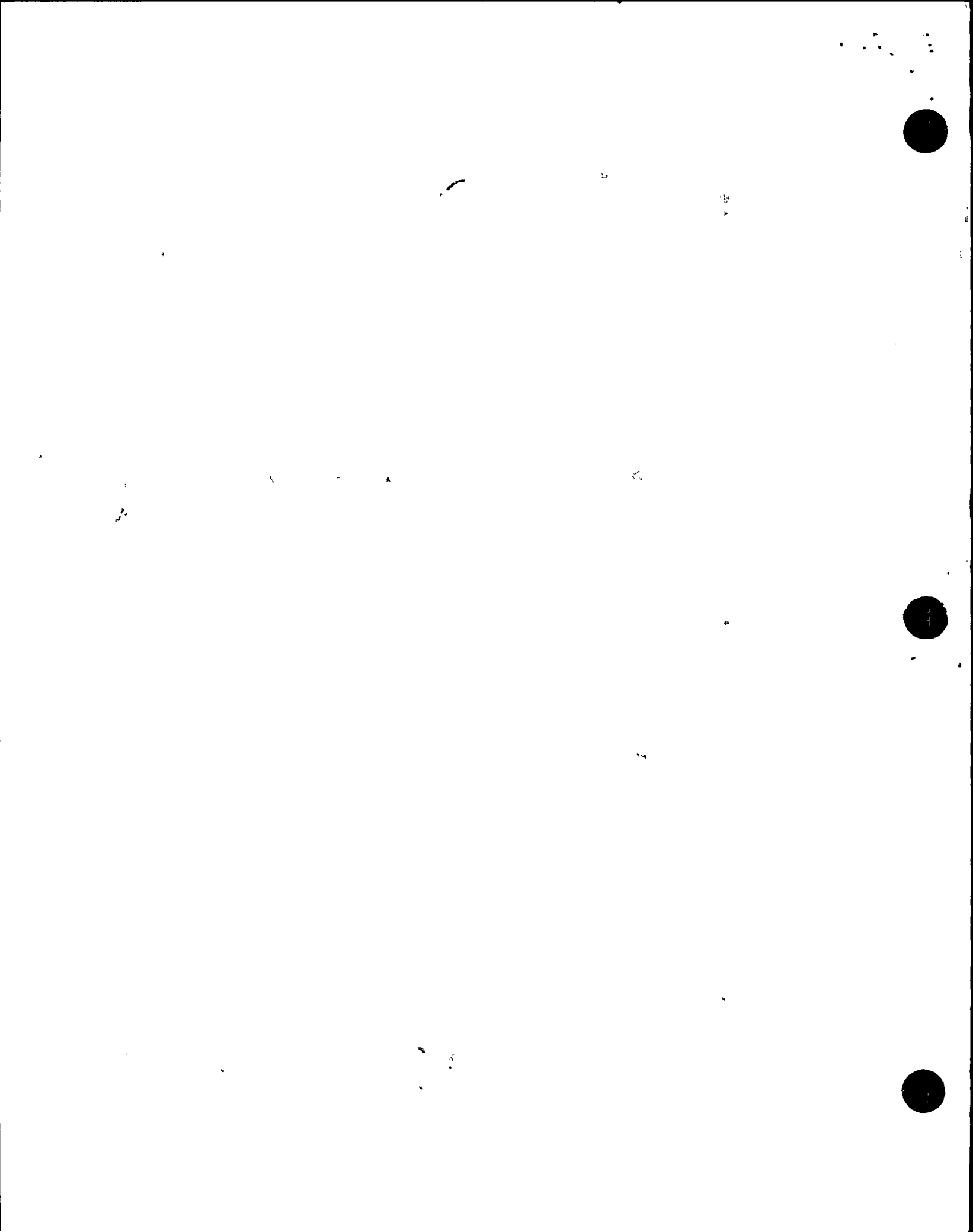
(Closed) Inspection Report Item 86-13-07 This item pertains to violation of licensee's Electrical Installation Specification E061A-0-11, Section 3.47, Paragraph 3.2.4.7 which states "that instrumentation and control cables with vertical lengths over 25 feet should be supported every 25 feet by Kellems Grips. This violation was reported and is described in Inspection Report 50-410/86-13.

Upon reinspection, the cables in the vertical cable trays 2TK522G and 2TK5676 which exceeded 25 feet were found to be properly supported. Numerous other cable trays were inspected and showed proper installation of Kellems Grips. The licensee corrective actions are in accordance with specification E061A-0-11, therefore, this item is closed.

(Closed) Inspection Report Item 86-13-05 This item pertains to violations of licensee electrical installation procedure contained in specification E061A, Paragraph 3.1.5.18 which stipulates that where an electrical duct terminates with an above ground extension, identification markers shall be applied.

Upon reinspection of the violation, it was noted that electrical ducts in the service water pump areas and the diesel generator areas were identified properly. The markings are in accordance with Specification E061A.

This item is closed.



(Closed) Violation 82-11-09 Pertaining to improper implementation of the Quality Assurance Program by Stone & Webster Engineering Company (SWEC) at NMP-2. The violation identified that under the cognizance of the lower tier supervision, numerous safety-related installations were inspected by unqualified SWEC electrical inspectors. In addition, some inspection reports were inappropriately signed off by SWEC Level I and Level II QA inspectors on behalf of inspectors-in-training without verification of such inspections. The licensee made commitments to conduct 100% re-inspection of the questionable inspected work and established preventive measures to eliminate such errors in the future. These preventive measures included:

1. To establish special Field Quality Control Training Programs to train QC inspectors prior to conducting specialty inspections;
2. To establish FQC inspector functional certificate matrix to indicate certification level, validity, and discipline of certification;
3. To provide directions to all FQC personnel in the completion of inspection reports by Level I and II inspectors and trainees; and
4. To update and distribute the inspector's functional certification to the cognizant disciplines.

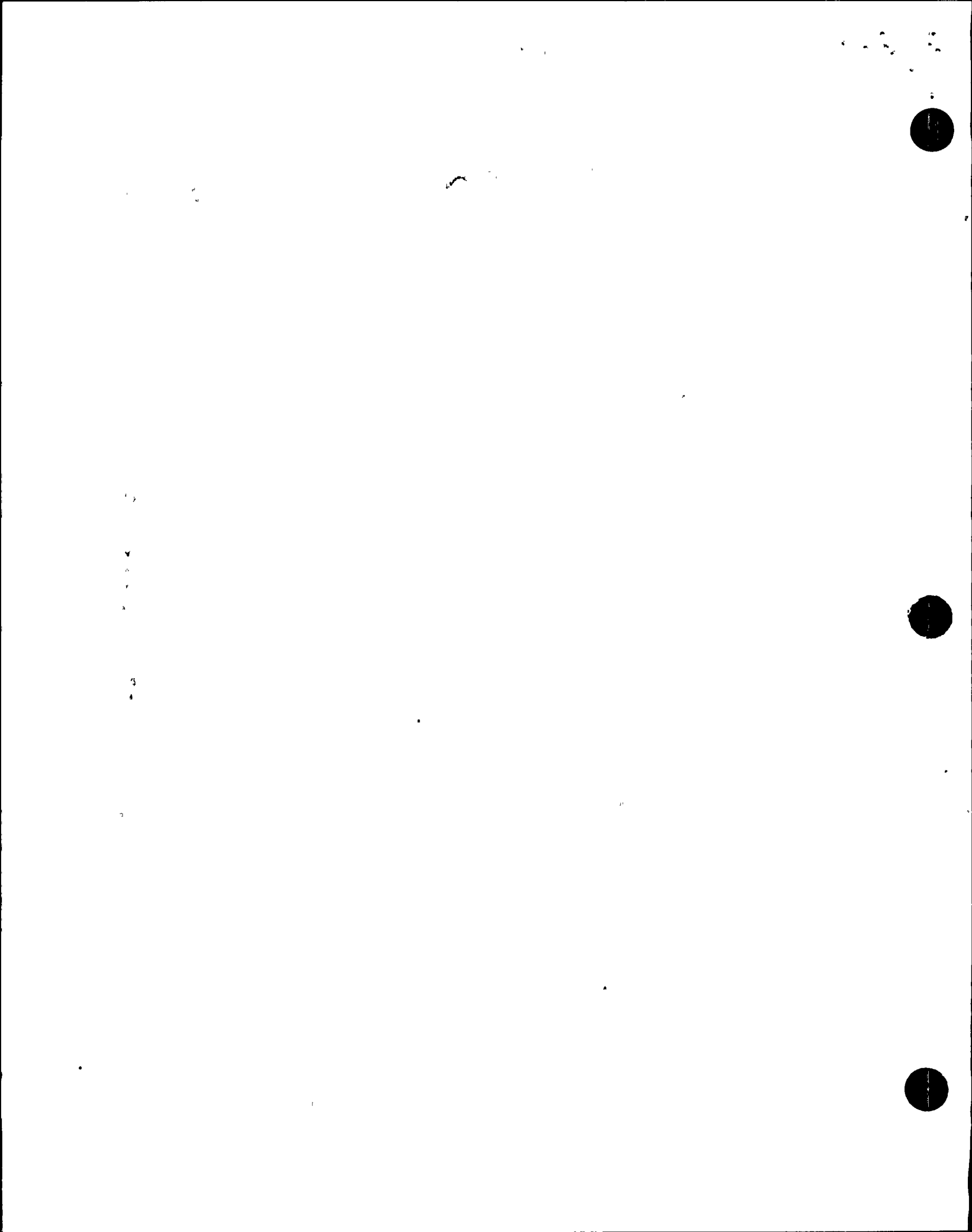
SWEC conducted 100% reinspection of all accessible Category I work accepted by the unqualified electrical QC inspectors. No unsatisfactory conditions were identified. Reinspection of 2014 Category I studwelds and structural welds identified 9 unsatisfactory welds which were reported for the management evaluation and corrective action.

SWEC FQC also reviewed the inspection reports of civil, mechanical and receiving inspection discipline; associated corrective action; and the certification and qualification of the inspectors performing quality control activities. All necessary reinspections were completed and documented on inspection report or N&D.

SWEC had developed and provided specialized training program; instituted inspector's functional certification matrix; issued directive to delineate requirements and responsibilities of inspectors and supervision to conduct inspection activities; and provided updated list of employee's functional certification to the cognizant disciplines.

The licensee conducted an audit of SWEC to verify qualification, training and certification of the QC inspectors in accordance with ANSI N45.2.6-1978 and SNT-TC-1A-1975. No deficiencies were identified in the area of inspectors qualification.

Based on the above, the NRC inspector determined that the licensee has adequately addressed the concerns identified in the NRC Notice of Violation and Enforcement Action (EA) 83-16. This item is closed.



(Closed) Construction Deficiency Report 84-00-51 - CAT I Spare Parts

Traceability: This item pertains to a potential 10 CFR 50.55(e) concern regarding control of spare parts and replacements. An inspection by the Institute of Nuclear Power Operations (INPOs) classified the concern in the following categories:

1. Control of parts/documentation after issuance from the warehouse
2. Control of parts with expired shelf-life
3. Identification of parts
4. Segregation of parts with different Quality Assurance categories

The licensee conducted an investigation and found no evidence of unqualified parts installed in the safety-related equipment.

The licensee procedure CSI 20.17 required Engineering Services Division to review and verify shelf-life requirements on all store requisitions and orders, as applicable. For those parts allocated from the warehouse with an unknown shelf-life determination, Stone & Webster Engineering Company determined the shelf-life in accordance with Project Procedure-126, Shelf-Life Evaluation and Control, and found that no parts had been installed with expired shelf-life. The licensee verified that the stored items were in compliance with the shelf-life requirements, as applicable.

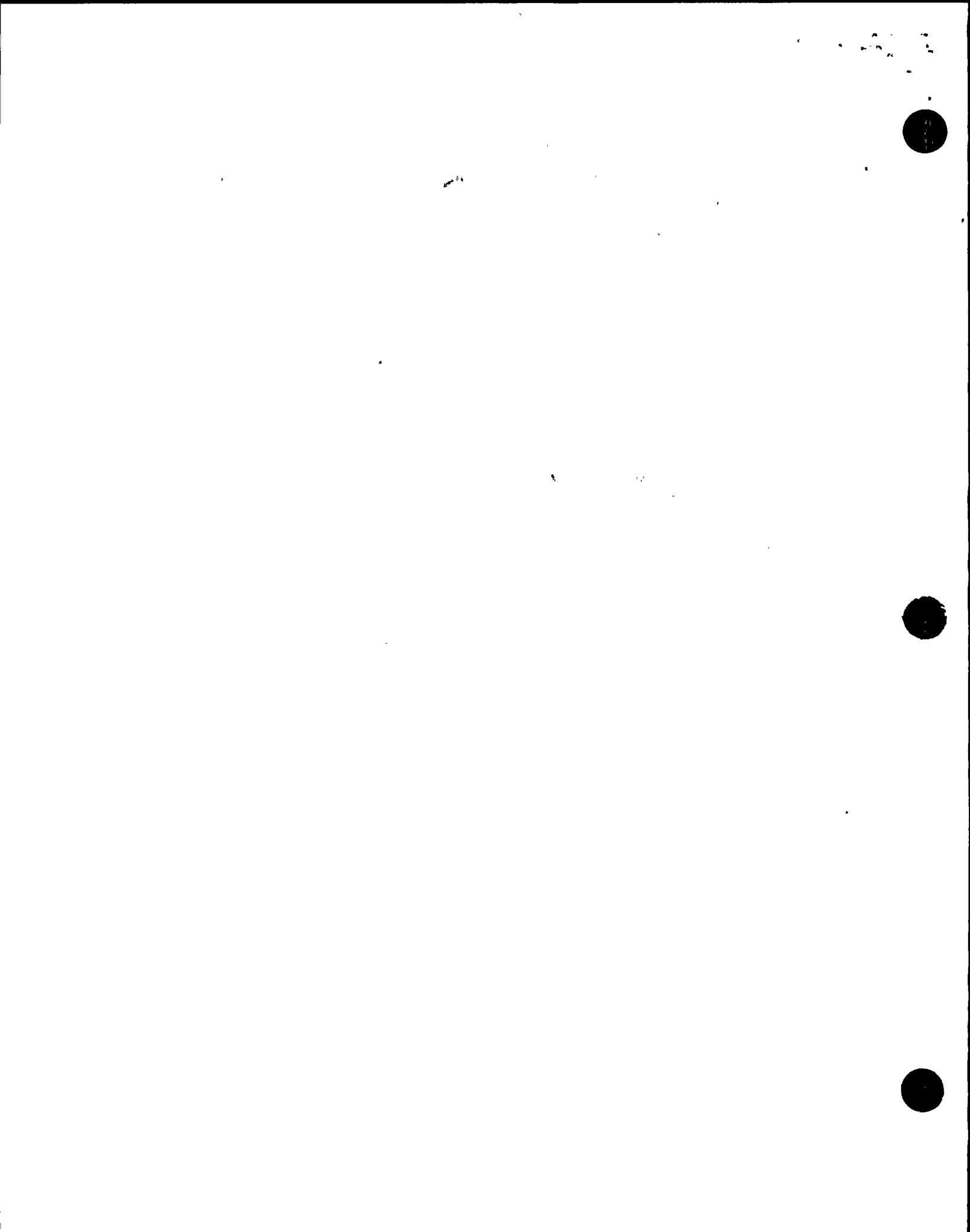
The licensee investigation also, did not identify any improper installation in safety-related equipment. The licensee indicated that none of the stored items were issued for installation, and as such installation of non-safety related parts in the safety-related equipment was not credible.

The licensee's QA independently verified the licensee's actions pertaining to the forementioned INPOs concerns.

Based on the above, the licensee concluded that the concerns previously identified did not warrant reportability under 10 CFR 50.55(e). This item is closed.

### 3.0 Independent Verification

During the review of CDR Item 85-00-25, the inspector recorded the SA 182, Gr. F22 (Cr-Mo Steel) chemical analysis and mechanical properties from the vendor furnished CMTRs for the valve body material. The ASME Code, Section II, Part A, Specification SA 182 Gr. F22, 1974 edition through Summer 1976 Addenda were reviewed to verify that the final, as received material was within the specification requirements.



The inspector had one area of concern, that of the hardness readings of some of the body forgings that were as high as 207 BHN. Upon review of each of the SA 182 F22 specifications 1974 through summer 1976 Addenda, the inspector determined that the SA 182 F22 Summer 1976 Addenda revision allowed hardnesses up to 207 BHN and the item of concern was reconciled.

No violations were identified.

#### 4.0 Exit Interview

The inspector met with licensee and construction representatives (denoted in Paragraph 1.0) at the conclusion of the inspection on June 13, 1986, at the construction site. The inspector summarized the findings of the inspection and the licensee acknowledged the inspector's comments.

At no time during this inspection was written material provided to the licensee by the inspector.

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