

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

Region I

Report No. 50-410/81-01

Docket No. 50-410

License No. CPPR-112 Priority -- Category B

Licensee: Niagara Mohawk Power Corporation

300 Erie Boulevard East

Syracuse, New York 13202

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

Inspection at: Scriba, New York

Inspection conducted: January 20-23, 1981

Inspectors: *A. A. Varela*
A. A. Varela, Reactor Inspector

2-13-81
date signed

_____ date signed

Approved by: *S. D. Ebnetter*
S. D. Ebnetter, Chief, Engineering
Support Section No. 2, RC&ES Branch

2-17-81
date signed

Inspection Summary:

Inspection on January 20-23, 1981 (Report No. 50-410/81-01)

Areas Inspected: Routine, unannounced inspection by one regional based inspector of concrete placement, cadweld splicing, review of licensee quality assurance field audits of S&W's control of E&DCRs and N&Ds, their incorporation into drawings and specifications and, review of licensee action on previous inspection findings. A construction site tour was also performed. The inspection involved 28 inspector-hours onsite by one regional based inspector.

Results: No items of noncompliance were identified.



DETAILS

1. Persons Contacted

Niagara Mohawk Power Corporation (NMPC)

- * S. E. Czuba, QA Engineer (Site)
- * J. L. Dillon, Senior Site QA Representative
- * C. G. Honors, Construction Engineer
- * R. A. Norman, QA Engineer (Home Office)
- * D. R. Palmer, QA Engineer (Home Office)
- * G. E. Sanford, Construction Manager

Stone and Webster Engineering Corporation (S&WEC)

- * S. W. Crowe, Field QC Engineer
- * C. M. Deban, Document Control
- * E. P. Eichen, Construction Engineer
- * C. E. Gay, Superintendent Field QC
- * M. G. Pace, Assistant Project QA Manager
- * J. E. Rogers, Construction Engineer
- * L. Shea, Head Site Engineering Office
- * R. L. Wagner, Resident Manager

* denotes those present at the exit interview.

The inspector conferred with other licensee, construction managers and contractor personnel during the course of the inspection.

2. Plant Tour

The inspector observed activities in progress, completed work and plant status during a general walk-through inspection of several areas of the plant. Presence of quality control inspectors, quality control records, conformance with procedural requirements and equipment preservation was observed. The inspector conferred with craft personnel, supervision and quality inspection personnel as such personnel were available in the work areas. Specifically, the inspector observed preparations for concrete placement for the drywell floor insulation concrete (addressed in detail in the following paragraph), rebar installation for control building elevation 260' slab, control building structural steel installation at elevation 290', rebar installations for electric tunnel roof and for the primary containment conical section wall above elevation 285' and, observation of the completed primary wall to elevation 250' and erection of forms for next conical wall pour #14.

No items of noncompliance were identified.



3. Containment Drywell Slab Concrete Placement - Work Observation

The inspector witnessed preparations for and observed portions of the concrete placement for the elevation 240' insulation course on the containment drywell slab floor. He checked rebar clearance, location and fastenings, cleanliness of all surfaces, equipment and method of pumpline distribution, adequacy of craft manpower, supervision and equipment, the fixity of embedded items, concrete drop height, concrete distribution and consolidation using vibrators, the availability and activity of QC inspectors and concrete test personnel.

The inspectors also witnessed concrete testing activities to include temperature, slump, air-entrainment tests and the making of concrete cylinders for compressive strength determination. Additionally, he reviewed at the batch plant, the storage of aggregates, the controls exercised in aggregate testing for gradation and moisture content, observed QC verification and batching of concrete ingredients to produce the designated mixture and he verified weight scale calibration, plant certification, validity of plant mixer uniformity test and scale weight check.

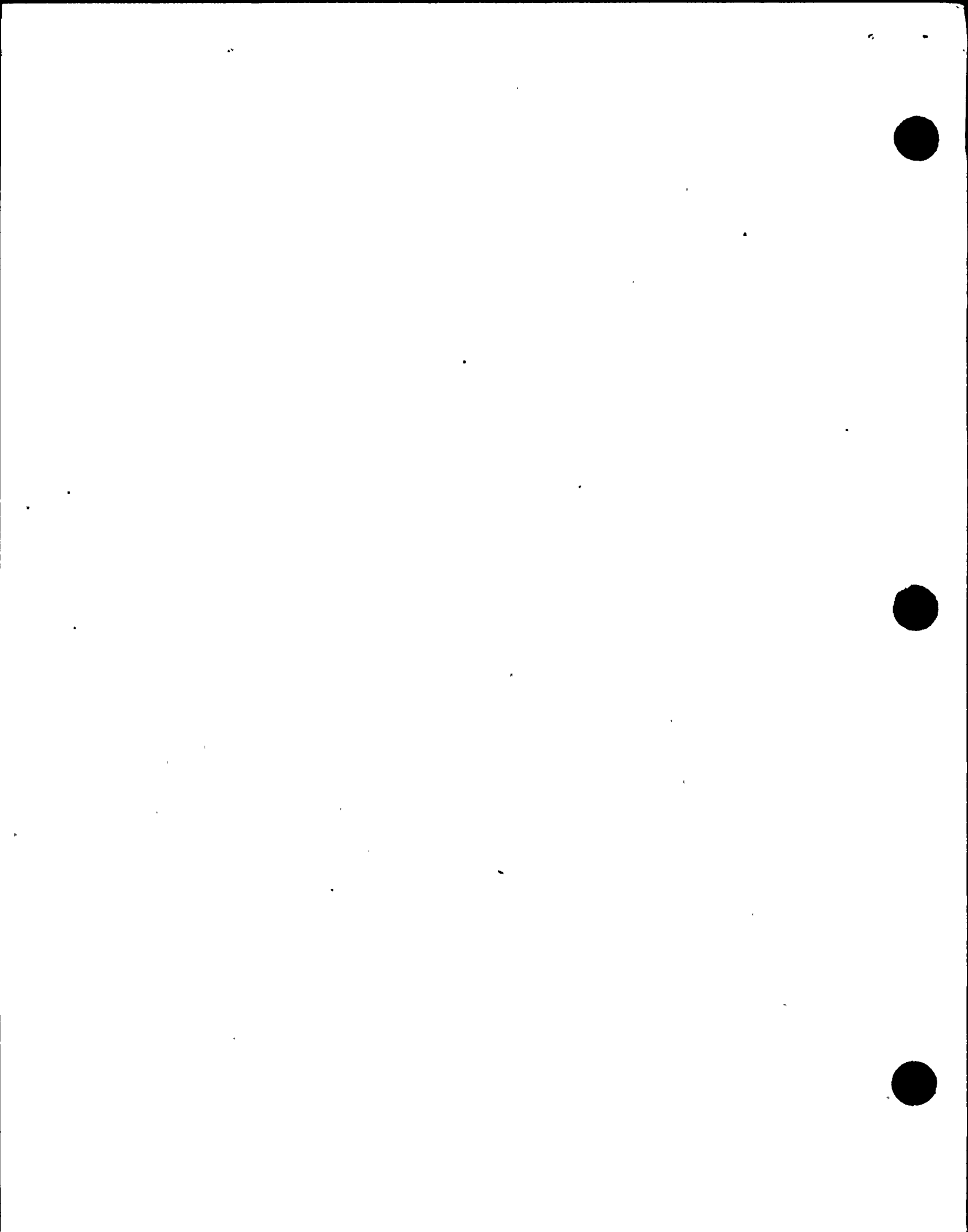
The inspector determined that work and inspection were accomplished according to applicable specifications, codes, standards, drawings and procedures on Pour No. 1-22-051P. Following the placement and finishing, the inspector observed that concrete curing within heated enclosures was temperature controlled. His review of QC inspection records generated during concrete mixing, placing and testing disclosed that all acceptance criteria identified in QC inspection reports were satisfactorily accomplished.

No items of noncompliance were identified.

4. Primary Containment Wall Cadweld Splicing - Work Observation

The inspector witnessed placement of reinforcing steel in the conical section of the primary containment exterior wall and cadweld splicing of #18 rebar at elevation 285'. Vertical splice number EV-58 was observed in preparation and through completion, made by qualified operator #105 and a helper. The inspector verified the sequence of activities and techniques of operation conformed to criteria identified in specification S-203C and as identified in referenced instructions by Erico. The completed splice, after removal of fixtures when cooled, was inspected and found to meet acceptance criteria on filler metal visible in the tap hole and sleeve ends, no voids at sleeve ends and sleeve centered within prescribed limits.

No items of noncompliance were identified.



5. Licensee Action on Previous Inspection Findings

- a. Noncompliance Item No. 80-11-01/Deficiencies in controlling, implementing and incorporating design changes and nonconformance dispositions into drawings. The inspector reviewed Licensee Audit Reports No. 21 and 37 of November 17-21 and December 9-11, 1980, the purpose of which was to access the effectiveness, adequacy and timeliness of S&W system at the site and at S&W's Cherry Hill Operations Center. The inspector was informed that S&W responses to these audits were not complete. Additionally, the inspector was informed by the licensee that an extension of time to the 30 day reply to the NRC noncompliance item had been requested to provide licensee time to include in his response the S&W responses to Audit Reports No. 21 and 37. This item remains open.

Licensee Audit No. 21 of S&W at the site was observed to result in the following:

<u>Finding</u>	<u>Description</u>
Open Item 1	E&DCR questions
Open Item 2	N&D questions
Open Item 3	Use of IOC's to reverse E&DCR Info. Lists
Open Item 4	E&DCR Info. Lists not signed by FQC Leads
Open Item 5	Timely inspection and closure of E&DCR's
Open Item 6	FQC transmittals not proceduralized
Open Item 7	Consistent use of IR "Drawing" block
Open Item 8	Combining FQC and Const. E&DCR tracking
CAR 0295	Drwgs. and specs. overdue for update
CAR 0296	Posting errors on drwgs. and specs.
CAR 0297	Possible premature closure of NA E&DCR's
CAR 0298	IR's referencing void drawings

Licensee Audit No. 37 of S&W at Cherry Hill was observed to result in no CAR's on apparent violations. However, these Open Items require S&W response.

1. Spec. P301B - 3 E&DCRs Errors
2. Apparent processing errors in N&D 1377, EDCR P30034



3. E&DCR/N&D Procedural Modification (No response required)
4. Max time limit for incorporation of changes
5. Changes to control documents issued as uncontrolled documents
6. Attaching changes to revised drawings during review and approval cycle
7. Formalization of update controls for drawings and specs.
8. Compilation of S&W EA & QA audits of incorporation control.

The above licensee findings are the result of his action taken in response to noncompliance item 80-11-01. They indicate that deficiencies in S&W's QA/QC program found in a small sample by the NRC were not isolated cases. Further NRC review and evaluation will be made when the licensee submits his formal response and indicates his corrective action for S&W's noncompliance in controlling, implementing and incorporating design changes and nonconformance dispositions into as built drawings/specifications.

- b. Closed Unresolved Item 80-05-02/Dimensional Control of Cadweld Splices. The inspector reviewed licensee/S&W correspondence on investigation of questionable production work performed by one cadwelder. Re-inspection of splices produced by this man, mock-up testing of splices with centers offset 1", 1 1/2" and 1 3/4" and, radiographic examination of three production splices established confidence that the sleeve centering and end gap of his production splices (not in-process inspected by QC) were within acceptable limits. UNR Number 80-05-02 is considered closed.

6. Unresolved Item No. 81-01-01

The inspector's evaluation of licensee audits No. 21 and 37 indicates an apparent underlying cause of the deficiencies found in S&W QA/QC program is the lack of finalizing instructions/guidelines identified by S&W in PG-22, Documentation of As-Built Conditions. Individual instructions on preparation, review, approval and control of E&DCRs and of N&Ds, QC instruction on status of E&DCRs and incorporation of E&DCRs and N&D's into drawings and specifications are identified for clarification and interpretation. Some are scheduled for revision in 1981. The inspector identified at the exit interview his concern that project guidelines PG-22, Documentation of As-Built Conditions, was not finalized. The approved procedure should provide clear definition of what documents will become permanent plant file. This is an unresolved item, #81-01-01.

7. Status of Construction

The inspector was informed at the exit interview that the facility is approximately 31% complete, the work force is presently 585. Work on the horizontal lake tunnels suspended in December, 1980 when within 30' of completion will be resumed in February, 1981, overall tunnel work is estimated 40% complete.



8. 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. Unresolved items discussed during this inspection are detailed in Paragraph 5.

9. Exit Interview

The inspector met with licensee and AE representatives at the conclusion of the inspection on January 23, 1981. The inspector summarized the findings of the inspection. The licensee acknowledged the inspectors comments.

