



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

Report Nos.: 50-338/85-30 and 50-339/85-30

Licensee: Virginia Electric and Power Company
Richmond, VA 23261

Docket Nos.: 50-338 and 50-339

License Nos.: NPF-4 and NPF-7

Facility Name: North Anna 1 and 2

Inspection Conducted: October 22, 1985

Inspectors: Stephen W. Elrod
M. W. Branch, Senior Resident Inspector

Nov 29, 1985
Date Signed

Stephen W. Elrod
J. G. Luehman, Resident Inspector

Nov 29, 1985
Date Signed

Approved by: Stephen W. Elrod
S. Elrod, Section Chief
Division of Reactor Projects

Nov 29, 1985
Date Signed

SUMMARY

Scope: This special inspection was performed to evaluate the findings of NRC Office of Investigations Report No. 2-84-015, "North Anna Power Station, Possible Willful Use of Non-Nuclear Qualified Coating Material on Containment Ductwork and Falsification of Quality Assurance Documentation".

Results: One violation was identified in that numerous quality assurance records were deliberately falsified without apparent management knowledge.

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REPORT DETAILS

1. Enforcement Conference Attendees

Licensee Attendees

W. L. Stewart, Vice President, Nuclear Operations
R. J. Hardwick, Jr., Manager, Nuclear Programs and Licensing
N. E. Clark, Director, Safety Evaluation and Control
E. R. Smith, Assistant Station Manager, North Anna
G. L. Pannell, Licensing Supervisor
M. W. Gettler, E&C Project Manager, North Anna
R. F. Driscoll, Manager, Quality Assurance, Surry
A. Carlton Rowe, Manager, Security

NRC Attendees

J. A. Olshinski, Deputy Regional Administrator
J. P. Stohr, Director, Division of Radiation Safety and Safeguards
G. R. Jenkins, Director, Enforcement and Investigation Coordination Staff
V. L. Brownlee, Chief, Reactor Projects Branch 2
D. R. McGuire, Chief, Physical Security Section
A. R. Herdt, Chief, Engineering Branch
G. A. Belisle, Acting Chief, Quality Assurance Programs Section
S. A. Elrod, Chief, Reactor Projects Section 2C
L. P. Modenos, Enforcement Specialist
A. Tillman, Security Inspector
M. W. Branch, Senior Resident Inspector, North Anna
J. G. Luehman, Resident Inspector, North Anna
T. L. Chan, Project Manager, ORB 1, NRR
A. B. Beach, Senior Operations Engineer, OIE

2. Enforcement Conference

On October 22, 1985, W. L. Stewart, Vice President Nuclear Operations, Virginia Electric and Power Company and members of his staff met with J. A. Olshinski, Deputy Regional Administrator and other members of the Region II staff to discuss the findings of NRC Office of Investigations Report No. 2-84-015. The discussion was held in the NRC Region II office and was open and frank; a copy of the licensee's agenda is attached to this report. During the course of the discussion the licensee committed to evaluate whether all processes accomplished as part of maintenance activities and not considered design changes to the facility (e.g., coating applications) are evaluated to determine their impact on plant safety.

3. Non-Nuclear Qualified Paint Inside Units 1 and 2 Containments

Inspection Report 338,339/84-30, dated October 9, 1984, documents the technical issues that, in part, prompted an NRC investigation of activities related to the application of coatings on ductwork in the two containments during late 1982 and early 1983. NRC Office of Investigations Report

No. 2-84-015, issued on August 29, 1985, documents the investigation of the possible willful use of non-nuclear qualified coating materials on containment ductwork and the falsification of related quality assurance records. Two major findings were made:

- a. A North Anna painting supervisor knowingly directed painters to apply a non-nuclear qualified coating over the galvanized steel surface of the ventilation ring ductwork inside Unit 1 containment and directed the improper application of coatings to the Unit 2 ventilation ductwork when design basis accident (DBA) qualified coatings were applied over galvanized steel creating a non-qualified condition;
- b. Quality Control (QC) inspectors assigned to inspect the ventilation ring ductwork coating projects in Units 1 and 2 failed to perform their inspection duties and deliberately certified false and inaccurate entries on the Protective Coating Surface Preparation Records (PCSPR) required by Quality Control Instruction (QCI) 11.1.

The investigation findings, in conjunction with the initial inspection results and conversations with various levels of licensee management, led the NRC to conclude that there was no management knowledge of the improper coating application nor the QC inspectors' actions until notified by the NRC following the completion of the investigation.

The painting supervisor who directed the improper application of coating materials within the Units 1 and 2 containment buildings has long since terminated his employment with the Virginia Electric and Power Company. The licensee, once having discovered that the coating materials did not meet the applicable quality standards, initiated prompt and appropriate action to correct the adverse conditions. In light of these mitigating circumstances, the licensee will not be cited for finding (a) above.

The following paragraphs address finding (b), the deliberate falsification of quality assurance records:

10 CFR Part 50, Appendix B, requires that activities affecting quality be prescribed by, and accomplished in accordance with, documented instructions, procedures, or drawings, of a type appropriate to the circumstances (Criterion V). A program for inspection of activities affecting quality shall be established and executed to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity (Criterion X). Additionally, procedures shall be established to identify and document items of nonconformance and to assure that conditions adverse to quality are promptly corrected (Criteria XV and XVI). Finally, sufficient records shall be maintained to furnish evidence of activities affecting quality (Criterion XVII).

The Virginia Electric and Power Company Topical Report, Quality Assurance Program, Operations Phase (VEP-1-4A), Amendment 4, implements 10 CFR Part 50, Appendix B and endorses Regulatory Guide 1.33, Revision 2, and American

National Standard ANSI N18.7-1976. The Topical Report states that inspection procedures for activities affecting quality have been established (Section 17.2.10) and that instructions require that individuals discovering a nonconformance identify, describe and document the nonconformance on a Nonconformance Report (Section 17.2.15).

American National Standard ANSI N18.7-1976, as endorsed by NRC Regulatory Guide 1.33, Revision 2 and VEP-1-4A, requires (Section 5.2.17) that inspections, examinations, measurements or tests of material, products or activities be performed for each work operation where necessary to ensure quality. Inspections of safety-related activities shall be performed in accordance with approved written procedures, which set forth the requirements and acceptance limits and specify the inspection responsibilities. Section 5.3.10 states that test and inspection results shall be documented and evaluated by responsible authority to assure that test and inspection requirements have been satisfied. Test and inspection procedures shall require recording the date, identification of those performing the test or inspection, as-found condition, corrective actions performed, if any, and as-left condition. Additionally, Section 5.2.14 requires that measures be provided to control items, services or activities which do not conform to requirements.

Section 3.8.2.7.6 of the North Anna Updated Final Safety Analysis Report (UFSAR) states that protective coatings used within the containment liner boundary must remain intact if subjected to the environment associated with a postulated loss of coolant accident (LOCA).

Site Painting Specification 13075.89, NAS 1016, Part II (Application of Protective Coating Materials Within the Containments), specified requirements to ensure quality of material and workmanship. Additionally, QCI 11.1 specified the inspections and records required to support coating activities within the containment.

The deliberate falsification of quality assurance records associated with an activity important to safety without apparent management knowledge is identified as violation 338,339/85-30-01 and applies to both units.



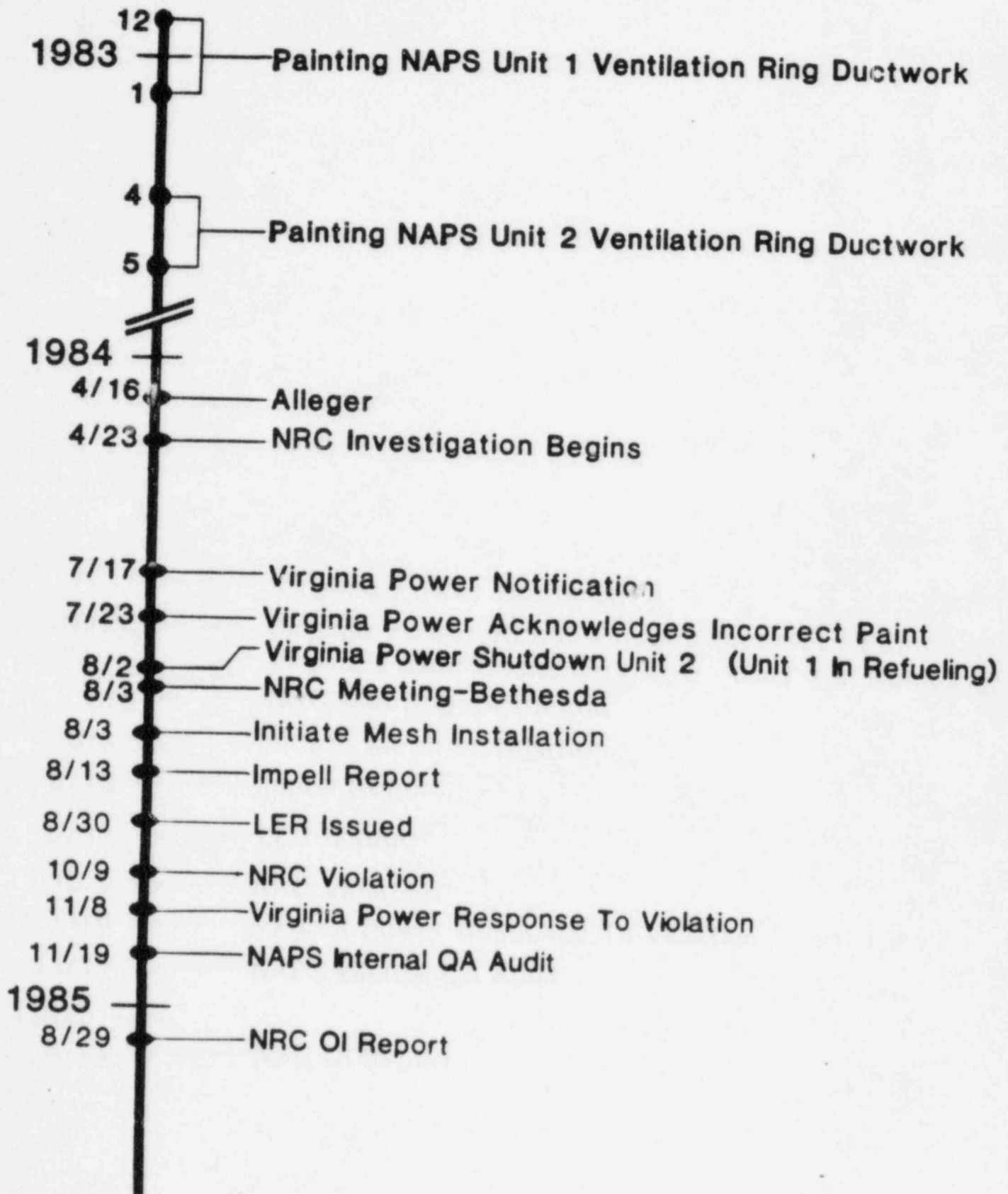
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AGENDA

- I Introduction**
- II Sequence of Events**
- III Root Causes**
- IV Short Term Corrective Actions**
- V Long Term Corrective Actions**
- VI Conclusions**

INTRODUCTION

SEQUENCE OF EVENTS



ROOT CAUSES

- **Improper Classification of Work**
- **Personnel Performance**
- **Failure to Follow Procedures**
- **Inadequate Procedures**
- **Training of Station Personnel**
- **Qualification of QC Personnel**
- **Inadequate Communications**

SHORT TERM CORRECTIVE ACTIONS

- **Evaluated and Tested Paint**
- **Shutdown NAPS Unit 2**
- **Design and Install Modification**
- **Specification Review and Revision**
- **Procedure Review and Revision**

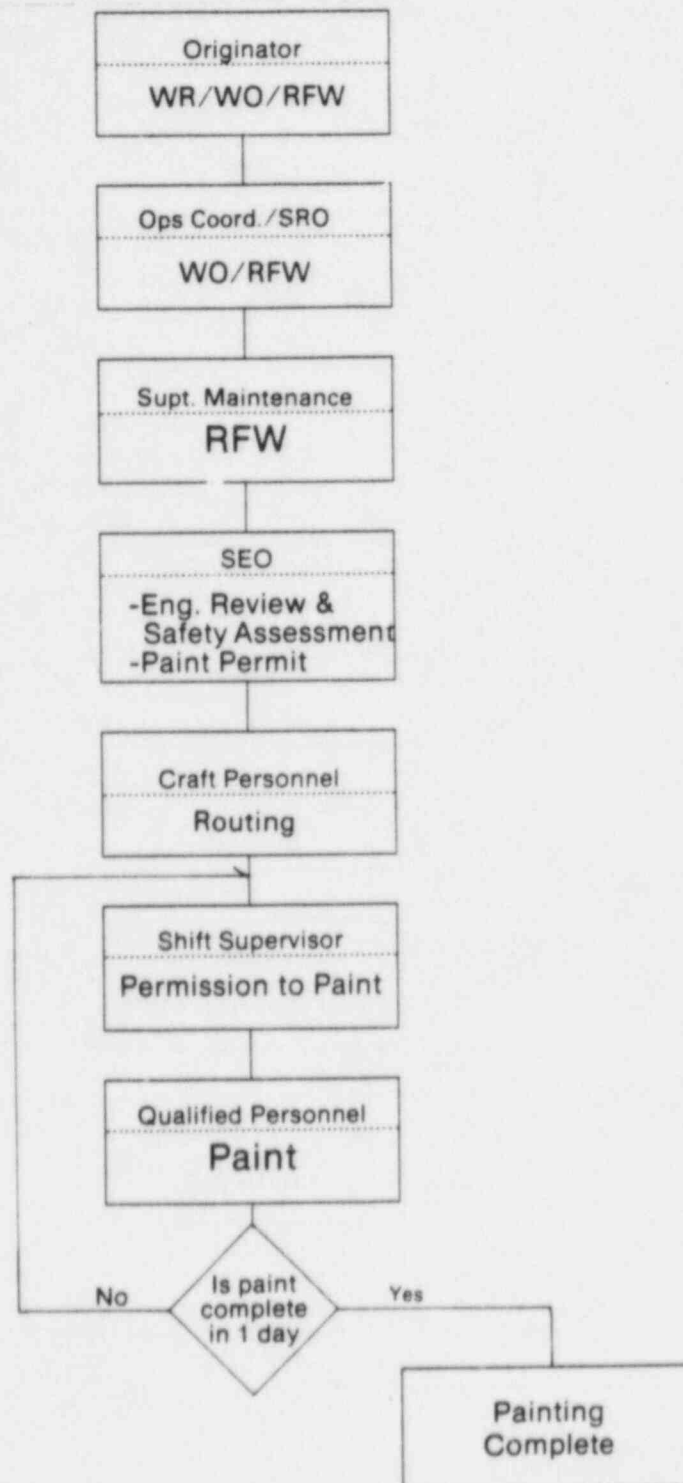
SHORT TERM CORRECTIVE ACTIONS

- **Review and Upgrade
QC Certification**
- **Craft Training**
- **Supervisory Training**
- **Independent Evaluation by
Consultant**
- **QA Audit of Coating Issue**
- **Personnel Actions**

LONG TERM CORRECTIVE ACTIONS

- **Evaluate Work Classification
for Consumables & Special
Processes**
- **Validate QC Inspectors'
Other Work**
- **Implement Policy Statements
and Standards**

Coating Flow Chart



CONCLUSIONS

- **Prompt Management Attention
When Discovered**
- **Resolved Technical Issue**
- **Resolved Programatic Concerns**