



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
101 MARIETTA STREET, N.W.  
ATLANTA, GEORGIA 30303

Report No.: 50-332/78-4

Docket No.: 50-332

License No.: CPCSF-4

Licensee: Allied-General Nuclear Services  
P. O. Box 847  
Barnwell, South Carolina

Facility Name: Barnwell Nuclear Fuel Plant

Inspection at: Barnwell, South Carolina

Inspection conducted: August 22-25, 1978

Inspectors: G. P. Coryell

Reviewed by:

*J. P. Potter*  
J. P. Potter, Chief  
Fuel Facilities and Materials Safety Section  
Fuel Facility and Materials Safety Branch

*9/28/78*  
Date

Inspection Summary

Inspection on August 22-25, 1978 (Report No. 50-332/78-4)

Areas Inspected: Announced inspection to observe demonstration run in progress; review test procedures, audit program, safety committee activities and audit facility modification records.

Results: No apparent items of noncompliance were identified in the areas inspected.

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## DETAILS I

Prepared by:

G. P. Coryell  
 G. P. Coryell, Fuel Facilities Inspector  
 Fuel Facilities and Materials Safety  
 Section  
 Fuel Facility and Materials Safety Branch

9/29/78  
 Date

Dates of Inspection: August 22-25, 1978

Reviewed by:

J. P. Potter  
 J. P. Potter, Chief  
 Fuel Facilities and Materials Safety  
 Section  
 Fuel Facility and Materials Safety Branch

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1. Persons Contacted

- \*A. L. Ayers, Director, Safeguards Technology
- \*E. P. Maddox, Manager, PE&M Acting Plant Manager
- \*W. F. Kelly, Specialist License Compliance
- \*K. E. Goad, QA Manager
- \*H. Hawkins, SEC manager
- \*J. Murphy, Supervisor, Production
- \*J. E. Ellis, Supervisor Production Engineering
- \*K. E. Plummer, Separations, Production Engineering
- \*A. L. Olsen, Separations, Production Engineer
- \*A. S. Lamprey, QA Engineer
- \*C. E. Walker, License Compliance Engineer
- \*G.K. Hovey, Plant Manager
- M. L. Rogell, Welding and Materials Engineer
- W. G. Fields, Electrical Engineer
- C. R. Summer, Supervisor Electrical Maintenance Operators, Eight

\*Denotes those present at the exit interview.

2. Licensee Action on Previous Inspection Findingsa. Noncompliance (50-332/78-2):

Failure to obtain required approval of a design document. The applicant has reviewed Change Authorizations issued since November 1, 1977. Identified deficiencies were identified on a nonconformance report. Corrective action has been completed. (Closed)

3. Preoperational Test Run

- a. The inspector, on August 22-25, 1978, witnessed the integrated process operation in progress. The integrated Uranium Run,

S-COP-88-7, was started on August 12, 1978 following completion of the 1978 Integrated Chemical Run, S-COP-88-6. The campaign with natural uranium involves four test sequences. Test sequence number two "Integrated startup and operation at flowsheet" was in progress during the inspection period.

b. The following conditions were verified:

- (1) Test prerequisites were met.
- (2) Separations facility utility and process systems are in service or are available for operation.
- (3) Current revision of the run plan, preliminary operating procedures, flow sheet diagrams, parameter sheets and run plan data sheets are available.
- (4) Operations are conducted in accordance with approved procedures.
- (5) Special test equipment (primarily related to nuclear materials control and accounting measurements) is calibrated and in service.
- (6) Operations and service crew actions appear to be correct, timely and well coordinated.

c. Test results during this period did not achieve normal flow sheet rates due to operational problems in the HA contractor. Initial corrective action that involved modifications of one process line was completed. Verification was made that the line modification was made in conformance with requirements of administrative procedure A-ODAP-17 "Work Requests" and A-ODAP-4 "Change Authorizations."

No items of noncompliance or deviations were identified.

#### 4. Management Audits

- a. Operational Safety Committee (OSC) meeting minutes and selected QA and License Compliance audit records were reviewed. OSC meetings were held on June 29 and July 28, 1978. Meeting records verify that Committee actions conform with frequency, attendance and scope requirements of proposed Technical Specification 16.6.3 and administrative procedures.

- b. Internal audit records are maintained as Quality Assurance Activity Reports (QAAR). The selected audit records were reviewed for conformance with Procedure QAP-7 "Audit Procedure" and QAP-4 "Quality Assurance Activity Report." The inspector had no further questions in this area.
- c. The Executive QA Committee performed the required annual audit of the AGNS Quality Assurance program in the period May 15-19, 1978. Audit scope included required followup of the 1977 audit findings and recommendations (QAAR-3474) and review of policy commitment and procedural implementation for 10 CFR Part 21 requirements and audit of QA and QC programs for maintenance of the Barnwell Nuclear Fuel Plant facilities.

No items of noncompliance or deviations were identified.

#### 5. Procedure Review

- a. The inspector reviewed the following Administrative and Operating Procedures:
  - S-COP-88-7, 1978 Integrated Uranium Run
  - S-POP-33-1, Third Plutonium Cycle Operation
  - S-POP-83-41, Intermediate Level Liquid Waste Measurement and Transfers
  - A-ODAP-3, Revision 4-1, AGNS Operations Lock and Tag Procedure
- b. Verification was made that procedure format and management reviews and approvals are as specified by Administrative Procedure A-ODAP-1 which implements Section 14.3.2.2 of the FSAR. The inspector had no further questions relating to the procedures.

#### 6. Control of Modifications

- a. The inspector reviewed documentation and quality control records covering modification and new equipment installation for the LS system covered by Change Authorization 77-119, AGNS Work Order 11741. Verification was made that authorizations and design documents were reviewed and approved prior to implementation. Records verify conformance to materials specifications and design requirements including pipe support design review by Design Engineering and QC verification and documentation of welding and NDT examination. No items of noncompliance were identified.
- b. The applicant has completed an audit of design documents issued since November 1, 1977. Identified deficiencies are documented on

nonconformance reports and corrective actions completed. Principle engineers and designers were reinstructed regarding approval requirements as specified in Procedure D-SOP-91-18. This item is closed (50-332/78-2).

7. Exit Interview

The inspector met with management representatives (denoted in paragraph 1) at the conclusion of the inspection on August 25, 1978. The inspection scope and findings were summarized and corrective actions relating to a previously identified item of noncompliance were reviewed in detail.