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MAR 14 1983

Docket 50-332

MEMORANDUM FOR: Leland C. Rouse, Chief
 Advanced Fuel and Spent Fuel Licensing Branch
 Division of Fuel Cycle and Material Safety, NMSS

FROM: John P. Colton
 Advanced Fuel and Spent Fuel Licensing Branch
 Division of Fuel Cycle and Material Safety, NMSS

SUBJECT: VISIT TO ALLIED-GENERAL NUCLEAR SERVICES (AGNS) FACILITY,
 BARNWELL, SOUTH CAROLINA -- FEBRUARY 28 - MARCH 4, 1983

A familiarization visit was made to the AGNS facilities located in Barnwell, South Carolina. The visit was made jointly with Gene Coryell from Region II.

The primary purposes were to review the current status of the facility, witness a demonstration run in process, meet the responsible individuals, and to review the Ray Miller Company investigation. Enclosure 1 lists the primary discussion agenda. Enclosure 2 lists those individuals contacted and who participated in the many discussions. Martin Rogell, the QA and Compliance Manager, acted as primary contact and made arrangements for the various discussions.

The review of the current status of the plant consisted of detailed visits and discussions relating to most areas of the plant. These included the Fuel Receiving and Storage Station (FRSS), Separations Facility, Plutonium Storage Area, Uranium Hexafluoride (UF₆) Facility, and the various waste management areas. In addition to the specific process areas, the various spent fuel and cask handling programs were reviewed. The cold uranium run which was in process during the visit was being used to demonstrate various safeguard accountability techniques was being funded by DOE. It also served as a process parameter demonstration run. Finally a number of additional discussions were held related to supporting operations, QA control procedures, training and certification procedures, safeguard systems, health physics procedures and equipment maintenance procedures.

A primary discussion evolved around the investigation of Ray Miller, Inc. and what effect the fraudulent actions had on the safety of the AGNS plant. QA has investigated all purchase orders from Ray Miller and in every case were unable to find indications of modification to the original certification or receipt of substandard products. Over 90 percent of the purchases were delivered direct from the manufacturer and not through Ray Miller warehouses. The vast majority of remaining 10 percent most likely came directly from the manufacturer but could not be determined by the record system. All remaining unused items are isolated and will not be used in safety-related systems.

A report will be issued by AGNS concerning the investigation. Additional

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MAR 14 1983

information is needed relating to Ray Miller's other customers from 1972-1978 to determine if other AGNS suppliers were involved. I&E is attempting to get this information and transmit it to AGNS.

The current AGNS feeling is that no safety system has been compromised by the fraudulent actions. However, until the investigation is complete a final conclusion will not be given.

The visit to the various operation areas pointed out the large number of modifications which have been made to the plant for the various development and demonstration activities. Upon expressing concern, it was explained that all items are being documented on either an "exception" list or a capital item "punch" list. The exception list documents all approved procedures where changes or exceptions to the approved procedures are made. An example may be a weld in a pressure line made but without a helium leak check. The list records that no leak test was made and at some future time must be made before the line can be used. The various tests have demonstrated that changes in the FSAR approved process or procedures must be made that would involve capital modifications. These changes are documented in the capital punch list.

The intentions of the two lists is to document all changes or irregularities which would need to be corrected or resolved prior to completion of the licensing of the facility. The items number in the hundreds.

The QA document and activity control program was reviewed and found to be very adequate. A large amount of effort and development funds have created a very effective system.

The Uranium run, while hindered by occasional mechanical problems, proceeded in a controlled manner. The natural uranium, approximately 12 tons, was continually recycled in a closed system during the run. The feed preparation, uranium-plutonium co-decontamination and partition, and uranium purification and concentration portions of the Separations Facility were used. The liquid effluent was discharged to the liquid waste tanks. Eventually it will be removed and processed into concrete for eventual disposal.

The FRSS facility was currently been modified and is being used for cask handling tests. The GNS and REA dry storage casks are expected to be received in the near future for handling demonstrations. AGNS has been contracted by DOE to write the Operations Manual to be used at Browns Ferry for the handling and loading of the GNS dry storage casks. All pools including the large pool have been emptied of water except one of the cask unloading pools.

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MAR 14 1983

Leland C. Rouse

- 3 -

The UF₆ conversion facility has been mothballed and no activities take place in the building. Several years ago the front end of the process--Uranyl Nitrate, through concentration, calcination and reduction, was operated in a demonstration run. The facility was never operated the fluorination portions of the process due to the extreme corrosiveness of HF once it is introduced into the system.

The final discussion with the plant management indicated that they felt that they had a viable licensable process in which they had confidence and hoped could be eventually demonstrated. It was stressed to AGNS that while IE, Region II had the primary inspection responsibility; NMSS, HQ's was responsible for licensing actions and must be informed of any licensing action requirements. The point of contact is L. C. Rouse, Chief, Advanced Fuel and Spent Fuel Licensing Branch, or J. P. Colton.

The AGNS management was extremely cooperative during the visit.

/s/

John P. Colton
Advanced Fuel and Spent Fuel
Licensing Branch
Division of Fuel Cycle and
Material Safety

Enclosures:

- 1. Visit Agenda
- 2. Persons Contacted

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Distribution:

✓ Docket 50-332, 70-1729, 70-1327
70-1821

NMSS R/F PDR

FCAF R/F LPDR

LCRouse

IE Reg II

GCoryell

GTerry

FBrown-LA

JGDavis

DBMausshardt

GBeveridge/SCornell

RECunningham

DRCape11

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Enclosure 1

Visit Agenda (Feb. 28 - March 4)

Monday, February 28

- Introduction and Preliminary Discussions

Tuesday, March 1

- QA program
- Process Description
- General Plant Layout
- Process Design Model
- Ray Miller, Inc.

Wednesday, March 2

- Fuel Receiving and Storage Station (FRSS)
- Separation Facility
- Demonstration Run (cold uranium)
- Physical Protection
- Effluent Control Programs

Thursday, March 3

- UF₆ Conversion Facility
- Spent Fuel Storage and Transport Cask Projects
- QA Records System
- H. P. Procedures
- High-Level and Intermediate-Level Waste Storage Facility

Friday, March 4

- Operator Training and Certification Program
- Pu Nitrate Storage Facility
- Close out meeting with AGNS

Persons Contacted

J. A. Buchham	- President
G. T. Stribling	- V.P., Regulatory and Public Affairs
A. K. Williams	- V.P., Operations and Technical
M. L. Rogell*	- Manager, QA and Compliance
J. H. Ellis	- Director, Operations
M. Hawkins	- Manager, Safety and Environmental Control
C. E. Walker	- Specialist, License Compliance
L. G. Johnson	- QA Engineer
K. E. Plummer	- Production Superintendent, Separations Facility
J. H. Mestepey	- Manager, Plant Maintenance (formerly UF ₆ Super)
G. A. Townes	- Project Manager
R. T. Anderson	- Staff Engineer
P. N. McCreery	- Staff Engineer
L. Barnes	- Manager Project Development
J. Cottrell	- Process Engineer
W. G. Redwood	- Quality Control Engineer

*Primary contact