December 11, 2003

MEMORANDUM TO: Martin J. Virgilio, Director

Office of Nuclear Material Safety

and Safeguards

THRU: Robert C. Pierson, Director /RA/

Division of Fuel Cycle Safety and Safeguards, NMSS

FROM: Wilkins R. Smith, Quality Assurance Scientist /RA/

Special Projects Section

Special Projects and Inspection Branch Division of Fuel Cycle Safety, NMSS

SUBJECT: OCTOBER 29 - NOVEMBER 7, 2003, TRIP REPORT ON

QUALITY ASSURANCE IN-OFFICE REVIEW OF DUKE COMEMA STONE & WEBSTER'S MIXED OXIDE FUEL

FABRICATION FACILITY PROJECT ACTIVITIES IN FRANCE

Attached is the trip report for travel to France on October 29 - November 7, 2003, to conduct an in-office review of the Duke Cogema Stone and Webster (DCS) Mixed Oxide (MOX) Fuel Fabrication Facility (MFFF) project activities. The purpose of the review was to assess the DCS implementation of the MFFF quality assurance (QA) program at the DCS Cogema/Mecachimie/Societe Generale Pour les Techniques Nouvelles (SGN) offices in Beaumont - LaHague and Bagnols-sur-Ceze, France.

During the in-offfice review, DCS conducted a QA audit of the manufacturing design and software design activities performed in France by the DCS team members. The U.S. Nuclear Regulatory Commission reviewer observed and evaluated the conduct of the audit by DCS, and audited the QA program implementation in France. The in-office review was in support of the review of the DCS Construction Authorization Request for the MFFF at the U.S. Department of Energy Savannah River Site.

The Division of Fuel Cycle Safety and Safeguards believes the content of this report is not likely to be of interest to the Commission.

Attachments: Foreign Travel Trip Report \*/attachment

cc: W. Dean, OEDO

J. Dunn Lee, OIP

T. Rothschild, OGC

L. Silvious, NSIR/INFOSEC

T. Sherr, NMSS

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## **Foreign Travel Trip Report**

### SUBJECT:

Trip Report On In-Office Review of Mixed Oxide (MOX) Fuel Fabrication Facility (MFFF) Quality Assurance (QA) Program Implementation at Duke Cogema Stone & Webster's (DCS) Offices in France

## **DATES OF TRAVEL AND COUNTRIES/ORGANIZATIONS VISITED:**

Dates of travel: October 26 - November 10, 2003

Countries visited: France

Organizations visited: DCS; Cogema Mecashimie and Societe Generale Pour les Techniques

Nouvelles (SGN)

## **AUTHOR/TITLE**:

Wilkins R. Smith, Quality Assurance Scientist, Office of Nuclear Material Safety and Safeguards (NMSS)

## **BACKGROUND/PURPOSE:**

The travel activities were to conduct an in-office review of the DCS MFFF project activities being conducted by DCS and Cogema personnel in France. The purpose of the review was to assess the implementation of the DCS QA program by observing an internal DCS audit and by performing independent reviews. DCS project activities in France include the MFFF process design, manufacturing integration, and software design. The designs of the MFFF processes are based on the designs of the Cogema MELOX and LaHague facilities.

### ABSTRACT/SUMMARY OF PERTINENT POINTS/ISSUES:

Meetings in France with DCS to Review the MFFF QA Program Implementation

On October 29 - November 7, 2003, Wilkins Smith conducted an in-office review of the MFFF QA program implementation by DCS at Cogema Mecachimie and SGN offices in France. During that period, DCS conducted a QA audit of the manufacturing design and software design activities performed in France by DCS team members. The in-office review observed and evaluated the conduct of the audit by DCS as well as the QA program implementation in France. The in-office review was in support of the review of the DCS Construction Authorization Request for the MFFF at the U.S. Department of Energy Savannah River Site. No significant deficiencies or findings resulted.

## **DISCUSSION**:

Review of DCS Manufacturing Design Group (MDG) at Cogema subsidiary Mecashimie in Beaumont-LaHague and Software Design Group (SDG) at SGN in Bagnols-sur-Ceze

On October 29 - November 7, 2003, NMSS staff conducted an in-office review of the MFFF QA program implementation at DCS offices in France. The review of DCS activities was conducted at offices at Cogema Mecashimie in Beaumont-LaHague and at Cogema SGN in Bagnols-sur-Ceze, France. Mechshimie and SGN are wholly owned subsidiaries of Arreva Cogema, a DCS consortium team member. DCS MDG is responsible for the manufacturing design integration on the MFFF. SDG is responsible for developing the complete MFFF software programs and systems to operate and control the MFFF, including instrumentation and control, manufacturing information systems, safeguards systems, and production control.

The in-office review was conducted to assess SGN's implementation of DCS' QA program. All DCS design activities are to be performed in accordance with U.S. Nuclear Regulatory Commission (NRC) approved MFFF Project QA Plan (MPQAP). The review was accomplished by observing an internal DCS audit and by performing independent reviews.

The DCS auditors and NRC reviewer reviewed training, design control, configuration control, control of documents and records, responses to deficiency action requests and corrective action, and design analysis software QA. The DCS audit of MDG and SDG appeared to be thorough and in accordance with the MPQAP commitments and MFFF project procedures requirements. Numerous procedures and their implementation were reviewed by DCS auditors. Design products, including in-process and approved documents, were reviewed by the auditors and the NRC reviewer. These included basis of design documents, specifications, drawings, and component classification lists. Several observations for improvement of DCS US or France activities, procedures, or documentation were identified by the DCS auditors. In particular, training implementation for design personnel and training records control were not in accordance with all project procedure requirements. There were no significant deficiencies found by the DCS auditors or the NRC reviewer that raised a concern for the adequate quality of the design activities and products. The NRC reviewer noted that the DCS QA program was efffective and adequately implemented for the activities reviewed.

A separate report documents the results of the in-office review in France in more detail and also documents an in-office review of DCS activities in Charlotte, North Carolina, on November 17-21, 2003.

#### PENDING ACTIONS/PLANNED NEXT STEPS FOR NRC:

No new actions by NRC were identified. NRC will continue to periodically evaluate the adequate implementation and effectiveness of the MFFF QA program.

### POINTS FOR COMMISSION CONSIDERATION/ITEMS OF INTEREST:

None

## **Attachments:**

In-Office Review Participants and Personnel Contacted

# IN-OFFICE REVIEW PARTICIPANTS AND PERSONNEL CONTACTED

NRC Wilkins Smith

DCS QA Donald Dalton

Robert Justice

SGN QA Amelia Jennequin

QA LHDO Bernard Janssens

MDG FPC Serge Claraz

MDG BDO Eric Belton

MDG TR Laurence Bourachat

MDG LHDO Eric Lestournel

Stephane Meslin David Audonnet David Lohier

PDG Marie-Paul Brossard

Jean-Marc Belmont

SDG Gary Bell

Daniel Raynaud Philippe Besselievre

Alain Grippay

Laurent Delale
Bruno Ferrand
Philippe Guerre
Olivier Poirson
Christophe Leonard
Laurence Brun-Seuzaret