

NRC INTERNATIONAL TRAVEL TRIP REPORT

Traveler, Office, Division, Phone Number:

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Subject:

To observe the inspection exit meeting for a Mixed Oxide Fuel Fabrication Facility (MFFF) vendor Inspection, Observations and Tour of the Atelier de Chaudronnerie du Petit Parc (ACPP) Facility in Beaumont-Hague Cedex, France, and to participate in site visits to the Melox and La Hague mixed oxide (MOX) fuel fabrication facilities and hold discussions with AREVA and U.S.-based AREVA MOX Services representatives related to the construction inspection and operational readiness review activities at the MFFF. The MFFF facility is under construction at the Savannah River Site in Aiken, SC, and is modeled after the technology used in the Melox and La Hague facilities.

Also to participate in a site visit to the Georges Besse II facility, to observe the operation and construction of a gas centrifuge facility. The Georges Besse II facility is similar in design to the proposed Eagle Rock facility, which will be constructed outside of Idaho Falls, Idaho.

Dates of Travel and Countries/Organizations Visited:

Dates of Travel: October 24 through November 4, 2011

We traveled to Cherbourg, France, for an ACPP facility orientation tour, to perform observations of an NRC vendor inspection, and to attend the NRC exit for the ACPP inspection. We also toured the La Hague facility. Travel to Avignon, France, to tour the Melox, and Georges Besse II facilities. During these tours, we visited with representatives of AREVA.

Desired Outcome:

The desired outcomes were the observations of the aqueous polishing process at the La Hague facility in Cherbourg, and of the (dry) mixed oxide fuel fabrication process at the Melox facility in Avignon. Both of these processes are similar in design to portions of the Mixed Oxide (MOX) Fuel Fabrication Facility (MFFF) under construction at the at the Department of Energy's Savannah River Site. The observation of these processes provided the Region II staff valuable information on the equipment that will be installed at the MFFF, and on challenges that may be encountered during the NRC construction and preoperational inspections.

In addition, the desired outcome was the observation of the construction and operation of the Georges Besse II facility near Avignon provided key insights on the differences between the Louisiana Energy Services National Enrichment Facility, located in Eunice, New Mexico, and the proposed Eagle Rock Facility. The tour helped us better understand the level of inspection resources that may be needed for the proposed operating facility

Results Achieved:

A number of presentations were given by the AREVA to the NRC, during which meaningful exchanges took place regarding key inspection issues and challenges associated with the startup of operations at the facilities. The travel and interactions with the AREVA representatives was worthwhile, achieved the desired outcomes, and substantially increased the staff's understanding of what will be required in terms of inspection resources during operational review inspections at the MFFF and the proposed Eagle Rock Facility.

Summary of Trip:

Thursday, October 27, 2011: Inspection Observations and Tour of the Atelier de Chaudronnerie du Petit Parc (ACPP) Facility in Beaumont-Hague Cedex, France

The ACCP Facility is located near Cherbourg France. An NRC inspection team was onsite to observe and evaluate Shaw AREVA MOX Services' programs for oversight of supplier fabrication activities related to principle structures, systems, and components (PSSCs). The inspection included a review of quality assurance (QA) activities related to design, procurement, material control, test control, special processes, and 10 CFR 21 reporting requirements. The inspection team observed fabrication activities associated with PSSC 024 (gloveboxes) to verify that the fabrication activities were performed in accordance with MOX Services specifications; to determine if the applicant was providing acceptable oversight of the vendor's activities related to the supply of PSSCs for future installation at the MFFF; to review applicable material, design, and procurement specifications to verify that the applicant was adequately communicating the applicable code and quality requirements to the vendor; and to determine that the vendor established measures to ensure that the supply of and the shop fabrication of IROFS components were performed in accordance with the MOX Project Quality Assurance Plan (MPQAP) and applicable technical requirements.

During the NRC management visit on October 27, NRC management received an orientation tour, performed NRC inspection observations, and attended the NRC exit meeting with ACPP. It was noted that the inspection team accomplished their inspection objectives and that they represented the agency in a professional and competent manner. The results of this inspection will be documented in NRC Inspection Report 70-3098/2011-004.

Friday, October 28, 2011: Tour of the AREVA La Hague Recycling Plant and HRB Facility

The La Hague facility is located near Cherbourg France. The La Hague facility is the reference plant for the Aqueous Polishing Plant at the MFFF. The NRC team toured various parts of the La Hague facility, including the spent fuel receiving, storage, and processing facilities, portions of the Purex™ processing facility, the mixed oxide powder shipping area, and the facility control room. Overall, the facility was clean and basic operations were highly automated. Plutonium processing activities were contained in glove boxes. The facility was designed to allow for efficient maintenance of equipment. The staff noted no major maintenance activities during the tours. These tours helped the NRC staff better understand the level of inspection resources that may be needed for the aqueous polishing plant at the proposed MFFF at the Savannah River Site. In addition, the NRC staff visited AREVA's Beaumont-Hague Research Hall (HRB Facility) to observe a mock-up of an electrolyzer. The electrolyzer being fabricated at Mechagest is based on the mock-up at the HRB facility. There was an open and meaningful exchange of information during the meeting with AREVA representatives

Monday, October 31, 2011: Tour of AREVA Melox Facility

The NRC visited the AREVA's Melox facility, located near Avignon, France. This included a short orientation and safety presentation including a film that briefly described the mechanical processing activities associated with the MOX fuel fabrication process. After the orientation, the NRC team toured AREVA's Melox facility. The facility was in operation during the tour and the NRC staff noted that the facility was clean and basic operations were contained in glove boxes and highly automated. The tour included observations of the powder master blend and final blend processing areas, pellet production, sintering and grinding areas, rod production, and fuel assembly and storage areas. This tour helped the NRC staff better understand the level of

inspection resources that may be needed for the proposed mixed oxide fuel fabrication facility at the Savannah River Site. There was an open and meaningful exchange of information during the meeting with AREVA representatives.

Wednesday, November 2, 2011: Tour of the Georges Besse II Facility

The NRC visited the Georges Besse II facility, located near Avignon France. We toured various parts of the facility, including cylinder processing and other process support areas such as waste treatment and electrical service and control equipment. We did not get to tour those areas of the facility where the centrifuge machines were installed and/or in operation. We toured the control room, and discussed computer control of the process and the computer interface with control room operators. We also toured the area of the new building currently under construction. This included the area where additional centrifuge machines will be installed and the cylinder pre-staging area and the cylinder shipping and receiving area.

Pending Actions/Planned Next Steps for NRC:

There were no open actions or unresolved problems/issues assigned to NRC.

Points for Commission Consideration/Interest:

It is not likely that the topics covered above are of special interest to the NRC Commissioners

“On the Margins”:

During discussions on November 2 with AREVA management, they expressed some uncertainties regarding construction of the Eagle Rock facility. AREVA continues to assess the need for additional enriched uranium capacity with their next meeting scheduled for November 2011.