August 6, 2008

MEMORANDUM TO: Michael Tschiltz, Deputy Director
Fuel Facility Licensing Directorate
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

THRU: Brian W. Smith, Chief **/RA/**
Enrichment and Conversion Branch
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

FROM: Timothy C. Johnson, Senior Project Manager **/RA/**
Enrichment and Conversion Branch
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

SUBJECT: JULY 17, 2008 PUBLIC MEETING SUMMARY: GENERAL ELECTRIC - HITACHI MEETING ON THE LICENSING PROCESS

On July 17, 2008, U.S. Nuclear Regulatory Commission (NRC) staff conducted a public meeting in Wilmington, North Carolina, to discuss its licensing process for the proposed General Electric-Hitachi (GEH) laser-based uranium enrichment plant project. I am enclosing the meeting summary for your use. This summary contains no proprietary or classified information.

Docket No.: 70-7016

Enclosure: General Electric-Hitachi Meeting Summary

cc: William Szymanski/DOE
Patricia Campbell/GEH
Robert Brown/GEH
Albert Kennedy/GEH
Doug Springer/CFRW
Stephen Rynas/NCDENR
Bruce Shell/New Hanover County
Marty Lawing/Brunswick County
George Brown/Pender County
Bill Saffo/Wilmington
Cameron Weaver/NCDENR
Malissa Talbert/Wilmington
Jennifer Frye/USACE
Wanda Lagoe/NCOSH
Tammy Orr/GEH
Mike Giles/CFC
Tom Clements/FOTE

CONTACT: Timothy Johnson, NMSS/FCSS
301-492-3121

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GSuber/FSME	PBubar/FSME	GKulesa/FSME	DRich/Reg II
LRakovan/EDO	GEH Website-Yes		

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OFC	ECB		ECB		FSME		ECB	
NAME	TCJohnson		VWilliams		CRidge		BSmith	
DATE	08/01/08		08/05/08		08/05/08		08/06/08	

OFFICIAL RECORD COPY

Summary of
General Electric-Hitachi Public Meeting on the Licensing Process

Dates: July 17, 2008

Place: Burney Center, University of North Carolina at Wilmington
Wilmington, North Carolina

Attendees: See Attachment 1

Purpose:

The purpose of this meeting was to discuss the U.S. Nuclear Regulatory Commission's (NRC's) licensing process for the General Electric-Hitachi laser-based uranium enrichment plant project.

Discussion:

Following introductions of the NRC staff, Mr. Brian Smith discussed the NRC's overall responsibilities (Attachment 2). Mr. Smith stated that the NRC is an independent agency responsible for ensuring the protection of public and worker health and safety in the commercial use of radioactive materials. He said NRC's responsibilities also include security of nuclear materials and sensitive and classified information. Mr. Smith emphasized that NRC is not a promoter of any nuclear facility. He also stated that NRC accomplishes its mission by developing regulations, licensing nuclear facilities, and performing inspections to verify compliance with regulatory requirements.

Mr. Timothy C. Johnson then discussed the NRC's licensing process for the GEH uranium enrichment facility (Attachment 3). He first provided project background information stating that GEH had announced a proposed laser-based uranium enrichment plant to be located in Wilmington, North Carolina, at the site of its current fuel fabrication facility. He said the fuel fabrication facility has been in operation for nearly 40 years.

Mr. Johnson then explained that uranium is mined from natural deposits and is milled and chemically converted to uranium hexafluoride before going to an enrichment plant. He stated that enrichment is needed to increase the isotopic concentration of U-235 from its naturally occurring concentration of 0.7 percent to 3 to 5 percent for use as fuel for the nuclear reactors used in the United States. Mr. Johnson said that GEH is planning on enriching uranium to up to 10 percent U-235, which is well below the enrichment levels in weapons-grade uranium. Following enrichment, the uranium is shipped to a fuel fabricator for producing the fuel rods used in nuclear power plants.

Mr. Johnson also stated that the uranium enrichment plant to be proposed by GEH would use a classified laser-based technology originally developed by the Australian company, Silex. The process involves using lasers to excite U-235 atoms, which can then be separated from the U-238 isotopes. Mr. Johnson indicated that the physics of this process has been demonstrated by the Australians, but a commercially viable process has not yet been demonstrated at an industrial level. He said that GEH is preparing to do this in a small-scale test loop that was licensed in May 2008 by NRC. He stated that the test loop is currently under construction with operations scheduled to occur at the end of 2008. He also stated that GEH plans to submit a commercial-scale facility application to NRC by the end of 2008.

Mr. Johnson then explained how NRC would review the commercial-scale application. He stated that NRC will perform a technical review of the application and will also prepare an environmental impact statement (EIS). He said that the technical review is expected to take 18 months and will consider accidents, air and water emissions, worker and public radiological safety, criticality safety, chemical safety, physical and information security, waste management issues, and decommissioning funding. He said that the review will be documented in a Safety Evaluation Report (SER).

Mr. Johnson stated that because NRC does not have authority over laser safety, the State of North Carolina Department of Labor will be responsible for these issues. He said that the State of North Carolina has been delegated regulatory responsibility for laser safety by the Federal Occupational Safety and Health Administration.

Mr. Johnson indicated that for uranium enrichment facilities, a hearing is required and that there may also be a contested hearing for the facility. He said that the mandatory hearing will be before a panel of administrative law judges who will decide if the NRC staff's technical and environmental evaluations are adequate. Mr. Johnson stated that shortly after the GEH license application is submitted, an Order will be issued by the Commission offering members of the public an opportunity to petition for a contested hearing. The contested hearing is a formal adjudicatory process conducted under formal procedures under NRC regulations. Mr. Johnson stated that the hearing differs from public meetings where in public meetings anyone can comment and make statements. To be admitted as a party to the hearing, an individual must demonstrate standing, that is, be able to demonstrate injury from the proposed activity, and have at least one admissible contention. An admissible contention would be a specific disagreement in fact or law related to an NRC licensing issue that can be litigated.

Besides an opportunity to petition for a hearing, Mr. Johnson indicated that the public would also have opportunities to provide input in the EIS scoping process and in commenting on the draft EIS. NRC will also conduct public meetings to explain its determinations in its Final EIS and SER. If GEH is ultimately granted a license, NRC will also conduct a public meeting to discuss its inspection program.

Mr. Johnson then provided contact information for the project and provided web site addresses for obtaining further information on the GEH project and uranium enrichment.

Dr. Christianne Ridge provided information on the process for preparing an EIS (Attachment 4). She explained the purpose of the EIS and that it is intended to describe potential environmental impacts of proposed federal actions. She noted the federal action in this case would be to determine whether to grant a license and that NRC will not build or in any way fund the proposed facility. She stated that the information in the EIS would be available to the public and would be used by decision-makers in licensing the proposed plant. She said that the EIS would address the proposed action, alternatives to the proposed action, the affected environment, environmental impacts from the proposed action and alternatives, and measures that could mitigate the impacts.

Dr. Ridge discussed the scope of the EIS stating that the EIS would address issues such as: (1) impacts to air, water, soils, plants, and animals; (2) radiological and non-radiological impacts to public and worker health; (3) impacts on historical and archeological resources; (4) socioeconomic and cultural impacts; and (5) environmental justice. She indicated that the EIS would address the impacts of construction, operation, and decommissioning of the proposed facility, and would address direct, indirect, and cumulative impacts. She indicated that public

input is an important part of the scoping process. She stated that, if NRC accepts the application for a technical review, NRC will conduct a public meeting in Wilmington to obtain public input on areas that should be included in the scope of the environmental evaluation. She indicated that both oral and written comments would be accepted.

Dr. Ridge also explained that after completion of the scoping process, NRC would prepare a draft EIS. She stated that the public would also be invited to comment on the draft EIS. Again, a public meeting would be conducted to take public comments. Both written and oral comments would be accepted. Following consideration of comments on the draft EIS, NRC staff will prepare a final EIS.

Mr. Daniel W. Rich, from NRC's Region II inspection office, provided an overview of NRC's inspection responsibilities (Attachment 5). He stated that Region II is responsible for inspecting all the fuel cycle facilities in the United States. He explained Region II's construction inspection activities currently underway for two uranium enrichment facilities and a mixed oxide fuel fabrication facility. He stated that NRC conducts inspections during construction, prior to the start of operations to ensure that the licensee is ready to begin operations, and during operations to ensure that the licensee operates its facility in accordance with NRC regulations and its license. Mr. Rich stated that the scope and frequency of inspections can be expanded if needed to address any identified problem areas to ensure that they are corrected.

Mr. Rich indicated that NRC inspectors conduct periodic licensee performance reviews. In these reviews, NRC communicates to licensee management any areas that need improvement. He stated that a public meeting is conducted in conjunction with the performance reviews. He also stated that the NRC also conducts reactive inspections in response to specific issues or events.

Mr. Rich then discussed the NRC's processing of allegations by workers or members of the public that the licensee is not complying with regulatory or license requirements. He stated that allegations are evaluated and whether licensee corrective actions are needed. The results of the evaluations are then communicated to the individual making the allegation.

Mr. Rich discussed the NRC enforcement policy and that it is based on safety significance and the severity of the violation.

Mr. Rich provided contact information to report safety concerns and web site addresses for obtaining enforcement information and inspection reports.

NRC staff then responded to public questions. In a question on the qualifications of NRC staff, NRC provided information on the formal education and experience of key project staff and stated that other reviewers have technical backgrounds and degrees applicable to their review areas.

One questioner asked how NRC's inspection program related to licensing. Staff responded that licensing requirements are verified by inspection and that prior to authorizing operations, inspectors must verify that the uranium enrichment plant is constructed in accordance with license commitments.

One questioner asked about waste management issues and how wastes are shipped. Staff explained that depleted uranium wastes will be produced at the plant and GEH has indicated that it will take advantage of the legal requirement for the U.S. Department of Energy (DOE) to

dispose of the depleted uranium tails at DOE costs. Staff stated that other low-level radioactive wastes will be generated from operations and will be disposed of at commercial disposal facilities. Staff said that wastes are shipped in accordance with U.S. Department of Transportation and NRC requirements with shipments expected to be made primarily by truck. One questioner asked about the need for the facility. Staff discussed the current need for enrichment capacity and the fact that an agreement with Russia for downblending uranium from weapons material will expire in 2013. The Russian agreement currently provides about half the enrichment needs for U.S. nuclear power plants. Staff stated that GEH believes that there will be a market for its services.

One questioner stated that he was impressed with the NRC staff credentials and felt the licensing process was good. He asked if there were lessons learned in the construction of the Louisiana Energy Services and USEC Inc. facilities. Staff responded that the primary lesson learned is the need for an excellent quality assurance program. Staff indicated that it is a challenge for nuclear companies to find individuals with nuclear construction experience.

One questioner asked if the new technology proposed by GEH would require changes in the licensing process. Staff responded that the Integrated Safety Analysis required to be performed by the applicant would identify any new hazards. Staff also stated that the principal hazards are expected to be associated with the handling of uranium hexafluoride and, regardless of the method of separation, uranium hexafluoride handling issues would be expected to be similar for all uranium enrichment plants.

One questioner asked about laser safety. Staff stated that laser safety will be the responsibility of the State of North Carolina Department of Labor. Staff stated that because of the good safety record of laser operations in thousands of industrial, medical, and research applications, the North Carolina program is focused primarily on random inspections and investigations of complaints and incidents. Staff stated that there is also a federal requirement for certification of laser systems.

One questioner asked how the facility could be stopped. Staff responded that the facility could be stopped through the hearing process if a safety contention could be supported before the hearing board. Staff also stated that granting a license is not a foregone conclusion and the GEH will need to demonstrate it can meet NRC's safety requirements before NRC will issue it a license.

Action Items:

None

Attachments:

1. Attendee list
2. Handout on NRC responsibilities
3. Handout on NRC licensing process
4. Handout on NRC EIS development process
5. Handout on NRC inspection program