

October 16, 2003

MEMORANDUM TO: Gary S. Janosko, Chief
Fuel Cycle Facilities Branch, FCSS/NMSS

THRU: Robert Nelson, Chief **/RA/**
Uranium Processing Section
Fuel Cycle Facilities Branch, FCSS/NMSS

FROM: John H. Lusher, Project Manager **/RA/**
Uranium Processing Section
Fuel Cycle Facilities Branch, FCSS/NMSS

Subject: SUMMARY OF URANIUM RECOVERY SITE VISITS PROVIDED
FOR REPRESENTATIVES OF THE CHINA NATIONAL NUCLEAR
CORPORATION

On September 23 and 24, 2003, Robert Nelson and John Lusher (NMSS/FCSS) accompanied representatives of the Peoples Republic of China on a tour of three uranium recovery facilities in Wyoming. The Chinese representatives were: Sun Xianrona, Vice President, and Gao Shangxiong, Division Chief, China National Nuclear Corporation, (CNNC), and Wang Delin, General Director, and Xu Lechang, Senior Engineer, Beijing Research Institute of Chemical Engineering and Metallurgy, CNNC. These individuals were escorted by Dr. Frank L. Parker, International Institute for Applied System Analysis/Austria and Distinguished Professor of Environmental Engineering at Vanderbilt University. On September 23, the group visited the Power Resources, Inc. (PRI), in-situ leach (ISL) uranium extraction facility at the Smith Ranch-Highland Uranium Project. PRI site staff delivered a slide show presentation which included a site overview and a step-by-step description of the ISL process. The Chinese representatives were very interested in this process. Although the Chinese use acid leaching, they have little experience with alkaline leaching. Following the briefing, PRI provided a site tour which included: operating well fields; a well field header house; a well field under development including drilling equipment and procedures, well construction, and well installation procedures; a well mechanical integrity test; the deep well injection facility; and the processing facility. The walk-through of the processing facility included a discussion of all stages of the process and a visit to the chemistry lab and control room.

On September 24, the group visited the UMETCO Gas Hills facility and the Pathfinder-Lucky Mc facility. Both facilities are undergoing reclamation. Staff at both facilities provided information on the history of the site using aerial photographs and provided an extensive site tour. Because of the late stage of the construction season and the nearly complete status of reclamation at both facilities, little actual reclamation activity was observed. However, based on the historical photographs, the documentation provided by the licensees, and the detailed site tour, the Chinese representatives gained a thorough understanding of the nature and scope of the reclamation activities.

The Chinese representatives expressed great appreciation for the site tours and information. There are no actions for NRC staff.

The CNNC is a state-owned conglomerate established in July 1999, and is similar to the TVA. With a complete system of nuclear science, technology and industry, it is mainly involved in the R&D, construction, production, management, foreign economic cooperation, and import and export trade in nuclear and related fields covering nuclear power, nuclear materials, nuclear generation of electricity, nuclear fuels, treatment and disposal of spent fuels and radioactive wastes, uranium exploration, uranium mining and milling, nuclear instrumentation and equipment, isotopes, and application of nuclear techniques. The Beijing Research Institute of Chemical Engineering and Metallurgy (BRICEM) is also part of CNNC.

Attachment: Site Visit Pictures

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Attachment: Site Visit Pictures

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