



UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON NUCLEAR WASTE
WASHINGTON, D.C. 20555

November 8, 2006

**(Reissued to include
attachment)**

MEMORANDUM TO: John T. Larkins, Executive Director, ACRS/ACNW
FROM: *Michael R. Snodderly* for
Michael R. Snodderly, Chief, Technical Support Branch, ACRS/ACNW
SUBJECT: SITE VISIT-U.S. DEPARTMENT OF ENERGY'S HANFORD SITE,
RICHLAND, WASHINGTON

On October 17-20, 2006, an ACNW team including three Committee members (Mike Ryan, Allen Croff, and Ruth Weiner) and three ACNW staff members (Antonio Dias, Derek Widmayer, and Latif Hamdan) conducted a 3-day visit to the U.S. Department of Energy (DOE) Hanford site in Richland Washington. The ACNW team was accompanied by Mike Fuller from NRC staff, and a member of the public representing Clarke County, Nevada. The purpose of this site visit was to gather information about the deactivation and decommissioning activities at the Hanford site, including nuclear radioactive waste treatment, management, and disposal. Primary interest was in lessons learned both for decommissioning of existing fuel cycle facilities, and for improved design and decommissioning of new facilities.

The site visit included a 1-day tour of facilities, and two days of meetings with DOE and DOE contractors staff at DOE offices in Richland. Representatives of the State of Washington participated in the meetings. The site tour included visits to the following facilities:

- Cold Test Facility
- Bulk Vitrification Test Facility
- C Tank Farm
- Waste Treatment Plant
- B Reactor
- C Reactor
- T plant
- Waste Encapsulation and Storage Facility

The meetings included presentations by DOE and DOE contractors staff and discussions that covered the following topics:

- Tank cleanup program, including site characterization, tank waste retrieval, tank closure, and supplemental treatment.
- Tank cleanup R&D program.
- Fuel cycle facilities (reprocessing nuclear material handling) and reactors.
- Technical and safety issues regarding the Waste Treatment Plant.

The agenda for the site visit is provided in Attachment 1. Printed background materials about the site, pictures taken during the site visit, and a CD on experience at decommissioning of uranium reprocessing plant from a January 2005 workshop are available on file. In addition, information on DOE's decommissioning and R&D activities, and other information about the site are posted on DOE and Washington State websites (e.g., <http://www.hanford.gov/>; <http://www.tanks.org/>; <http://www.ecy.wa.gov/features/hanford/>).

Comments and Observations:

- The ACNW team obtained first-hand information and benefitted from both the site tour as well as the dialog with DOE and DOE contractors staff, as well as discussion with the representatives of the State of Washington who participated in the meetings.
- The drivers for the decommissioning program at Hanford are waste classification, worker dose, and cost.
- DOE welcomed the ACNW team visit and showed interest in continuing a dialog with ACNW and NRC with regard to safety and technical issues.
- Although DOE is self-regulating and DOE work at Hanford is not currently licensed by NRC, cooperation and exchange of technical information (on decommissioning and R&D activities by DOE) is potentially very useful to both government agencies, and should be encouraged.

Recommendations:

- The ACNW and NRC should maintain a dialog with DOE with regard to safety and technical waste determination issues.
- ACNW should continue and maintain interest in obtaining updated technical reports and information concerning decommissioning and R&D activities at the Hanford site by DOE.

Attachment: Agenda for the Hanford site visit

cc: ACNW Committee members
ACNW staff
S. Jones/NMSS/PBPA
B. Sosa/EDO/AO/TRPS
M. Fuller/FSME/DWMEP/EPPAD/LLWB
M. O'Sahaugnessy/FSME/DWMEP/EPPAD/LLWB

Visit to Hanford

By

October 17-19, 2006

Nuclear Regulatory Commission

Michael Ryan, Chairman, Advisory Committee on Nuclear Waste
Latif Hamdan, Senior Staff Scientist, Advisory Committee on Nuclear Waste
Ruth Weiner, Member, Advisory Committee on Nuclear Waste
Derek Widmayer, Senior Staff Scientist, Advisory Committee on Nuclear Waste
James Clarke, Member, Advisory Committee on Nuclear Waste
Allen Croff, Member, Advisory Committee on Nuclear Waste
Anotonio Dias, Team Leader, Advisory Committee on Nuclear Waste
Engelbrecht von Tiesenhausen, Engineering Specialist, Clark County, Nevada

REMINDER: FOR THE WTP TOUR, LEATHER BOOTS ARE REQUIRED. THE BOOTS MUST BE AT LEAST ANKLE-HIGH WITH A SUBSTANTIAL SOLE AND FLAT HEEL. NO DRESS BOOTS ARE ALLOWED. YOU MUST ALSO HAVE AT LEAST 4" SLEEVES ON YOUR SHIRTS, AND LONG PANTS.

		<u>Participants</u>	
		<u>DOE</u>	<u>Others</u>
<u>Tuesday Oct. 17th</u>			
8:00 a.m.	Meeting in Federal Building Lobby for badging	Wiegman	Hewitt
8:15 a.m.	Board mini-bus at back ramp of Federal building For transportation to the Cold Test Facility		
8:30 a.m.	Arrive the Cold Test Facility for a briefing and tour with Rick Raymond.		Raymond
9:00 a.m.	Travel to the Bulk Vitrification Test Facility		
9:10 a.m.	Arrive Bulk Vitrification Test Facility for a briefing and Tour with PK Brockman.		Brockman
10:00 a.m.	Travel to C Tank Farm.		
10:30 a.m.	Arrive C Tank Farm for a briefing on retrievals by Ryan Dodd.		Dodd
11:00 a.m.	Travel to the Waste Treatment Plant		
11:10 a.m.	Arrive WTP briefing trailer for a safety briefing and Lunch.	Furlong	
	Box lunch cost: \$10.00		
11:40 a.m.	Walking tour of WTP	Furlong	
12:30 p.m.	Travel to B Reactor		

- 12:50 p.m. Arrive B Reactor for a briefing and tour.
- 1:45 p.m. Travel to T Plant, stop at C Reactor for a road side discussion on cocooning reactors.
- 2:15 p.m. Arrive T Plant for a briefing and tour.
- 3:00 p.m. Travel to the Waste Encapsulation and Storage Facility (WESF)
- 3:15 p.m. Arrive WESF for a briefing and tour.
- 4:00 p.m. Travel back to Richland
- 4:45 p.m. Arrive Federal Building. End of Tour

Wednesday Oct. 18th (Meetings Only)

- 8:00 a.m. Meet at 2440 Stevens Conference Room #1600. Schepens Jaraysi
 For discussions on Tank Cleanup program: Quintero
- Site Characterization
 - Tank residuals
 - Soil Characterization
 - Retrievals
 - Tank Closure
 - Supplemental Treatment
- 1:00 p.m. Lunch
- 2:00 p.m. Discussion on Tank cleanup R&D program Raymond Honeyman
- 4:00 p.m. Adjourned

Thursday Oct. 19th (Meetings Only)

- 8:30 a.m. Meet in **Federal Building (RL) conference room #142.**
 Topics to include: Fuel cycle facilities (reprocessing nuclear material handling) and reactors. Primary interests is what design features facilitated D&D and what design features need to be changed.
- 11:30 a.m. Lunch (on your own)
- 12:30 p.m. Meet in 2440 Steven Center (ORP) conference room #1200. Miller Holton
 Basic introduction into flowsheet and technical/safety issues regarding the Waste Treatment Plant.
- 4:30 p.m. End of Visit