



CONFEDERATED TRIBES  
of the  
*Umatilla Indian Reservation*

P.O. Box 638  
73239 Confederated Way  
PENDLETON, OREGON 97801

Phone (541) 966-2400  
Fax (541) 278-5380

January 15, 2003

Keith Kline  
Department of Energy  
Richland Operations Office  
P.O. Box 550  
Richland, WA 99352  
Fax: 509-376-4789

RECEIVED  
MAY 19 2003

EDMC

SUBJECT: 116-N-1 TRENCH EXPLANATION OF SIGNIFICANT DIFFERENCE  
- TRIBAL COMMENTS TO HAB RIVER AND PLATEAU  
COORIDOR MEETING

Dear Mr. Kline

On January 8, 2003, CTUIR - ESTP staff and the Chairman from the CTUIR Board of Trustees (BOT) met at the Hanford Advisory Board (HAB) River and Plateau Committee to discuss the latest direction proposed for the 116-N-1 trench and an Explanation of Significant Difference (ESD) for the Record of Decision (ROD) for the soil and ground water cleanup. The CTUIR was disappointed in the tone of the meeting and DOE's position relating to the contamination under the 100-N site. The following are some points of divergence between the CTUIR position and that of DOE.

- The Sr-90 contamination is proposed by DOE to have spread out evenly underground and now forms a "pancake" of contamination. However, there is no such thing as a homogeneous geologic environment that would create a "pancake" of contamination. This is especially true for the region near the Columbia River because of the fluvial and lacustrian depositional environment. Nature abhors a homogeneous environment. Water instead has preferred pathways of flow. The contamination in wells appears to show that there may be a minimum of two preferred pathways that have reached the Columbia River since these zones have higher levels of contamination.
- DOE only investigated three alternatives for cleaning up the sediments below the 116-N trench 1) a large open pit with a 2-to-1 slope walls that would involve workers using bulldozers, 2) an open pit that would cover the ground with a subsurface barrier, and 3) no action. DOE should investigate other technologies

to excavate and cleanup the contaminated soils. This includes freeze walls, shoring up excavations, and especially the use of modern remote mining technology such as drag lines. These would preserve surface features, limit the size of the excavation, and pose the least risk to the workers on-site.

- DOE is proposing to leave all contamination located deeper than 15 feet below the ground surface and allowing it to degrade (or migrate) naturally. CTUIR believes the excavation should continue all the way to the depth of the contaminated soil and even below, to the contaminated ground water, if this site is to be made safe for future generations. Leaving the Sr-90 contamination in place in the vadose zone creates a continuing threat to the environment for hundreds to thousands of years.
- In DOE's model, they do not account for fluctuations in the Columbia River nor the ground water adjacent to the river having any affect on the mobilization of the Sr-90 contamination. The Columbia River is currently at a relatively low level and has been for the past several years. When the Columbia River rises during a flood event, the ground water will also rise into the contaminated vadose zone. This will remobilize some of the contamination that is currently "locked" up in the soils above the ground water table.
- DOE states that this area has been thoroughly characterized and does not need any further studies to define the geology, the ground water, nor the state and location of the Sr-90 contamination. CTUIR feels this area has not been thoroughly characterized as indicated by wells that had a very high detect level of Sr-90, now have a no detect since the ground water has dropped below the bottom of the well.
- As was stated in the meeting, DOE feels the Sr-90 that is currently in the ground and in the ground water is totally immobile and poses no threat to the Columbia River. High levels of Sr-90 contamination that exceeds drinking water standards have already been found in near-shore wells and seep-wells in the 100-N area that are discharging to the Columbia River. DOE even stated that some of the Sr-90 is under the Columbia River. This would place the contamination in the hyporheic zone used by many of the invertebrates eaten by the salmonids. CTUIR believes that this is contamination is mobile and will continue to be a threat to the environment as long as it is present.
- DOE would like to only use institutional controls to limit the application of surface water that could drive additional contamination from the vadose zone into the ground water. CTUIR believes that institutional controls can not guarantee that, at any time in the future, irrigation or any other sources of surface water wont be applied on this site that will remobilize shallow (but greater than 15 feet) contamination into the ground water. Institutional controls would also limit Tribal access and use of this site.

I would like to reiterate the memo dated January 7, 2003 from the CTUIR BOT Chairman Burke to Ms. Jessie Roberson where the DOE has a trust responsibility to the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and a responsibility to clean up the Hanford site. Leaving the Sr-90 contamination in the ground and walking away from the site will be a direct threat to the Native Americans who have rights to the resources or who live in this area and wish to practice their Native American lifestyle. This lifestyle includes the use of plants along the banks of the Columbia River and the use of spring water for religious, ceremonial, and everyday uses. DOE needs to be held accountable for what is left behind and is responsible for removing the waste. This site should be made safe for all future generations who may live here, or use resources from this site.

Most Respectfully,



Rick Gay,  
Acting Program Manager,  
Confederated Tribes of the Umatilla Indian Reservation  
Environmental Sciences and Technology Program

cc.

Shelley Cimon,  
Oregon Office of Energy's Nuclear Safety Division

Kevin Richland Clark, Indian Nations Program Manager  
U.S. DOE/Richland Operations

John Price, Project Manager for Environmental Restoration  
WA State Dept. of Ecology Hanford Project Office

Nicholas Ceto, Hanford Project Manager  
USEPA Region 10 - Hanford Project Office

Ken Niles, Administrator  
Oregon Office of Energy's Nuclear Safety Division

**RL COMMITMENT  
CONTROL**

**JAN 24 2003**

**RICHLAND  
OPERATIONS OFFICE**