New Cleanup Technology to be Field Tested at 100N Area

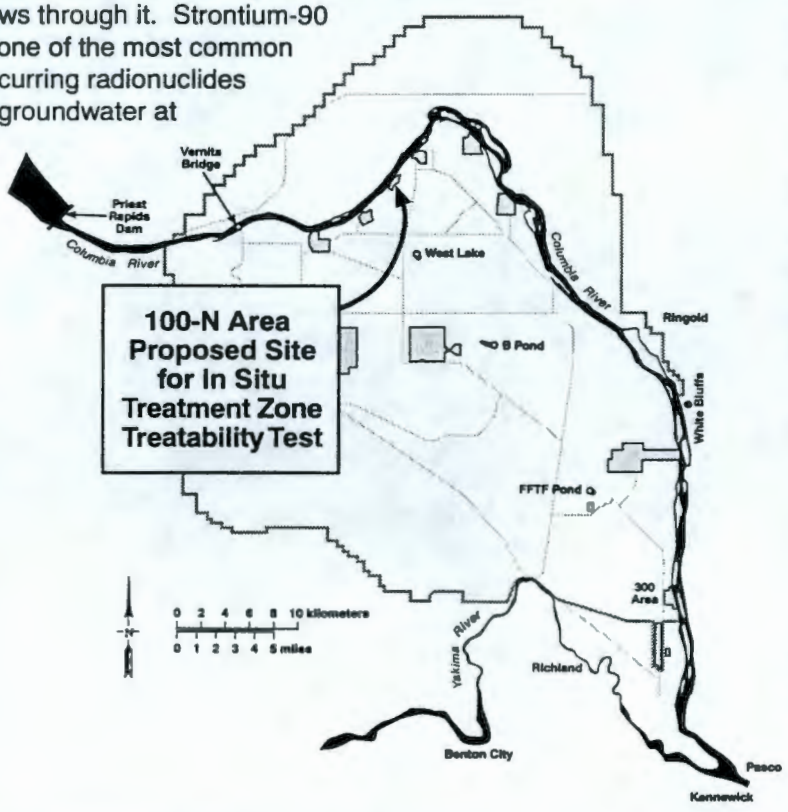
Tri-Party Agreement FACT SHEET

The U.S. Department of Energy (USDOE), the Washington State Department of Ecology (lead regulatory agency), and the U.S. Environmental Protection Agency (EPA) are requesting public comment on the proposed In Situ Treatability Test Plan to be conducted at 100N Area on the Hanford site. This plan describes the scope of a technology demonstration project which uses clinoptilolite (a natural earth mineral) to prevent the discharge of strontium-90 into the Columbia River. ***A public comment period will be held from August 20 through September 19, 1996.***

BACKGROUND

To clean up contaminated groundwater sites within the USDOE complex and at industrial sites, effective low cost technologies are urgently needed as alternatives to conventional pump-and-treat, excavate-and-treat, and containment methods. In situ permeable reactive zones that do not significantly restrict the flow of groundwater, but selectively remove hazardous components, are technically attractive and potentially cost effective.

The focus of this project is on the use of clinoptilolite, a natural mineral, for minimizing the transport of strontium-90 to the river. Clinoptilolite adsorbs strontium-90 when contaminated groundwater flows through it. Strontium-90 is one of the most common occurring radionuclides in groundwater at USDOE facilities across the country. During operation at 100N Area, large volumes of water were disposed of in liquid waste disposal facilities. These facilities consisted of cribs (underground liquid waste disposal facilities) and associated trenches which were designed to allow the waste water to percolate through the soil into the groundwater. This resulted in strontium-90 being carried to the Columbia River by the groundwater.



Because containment of strontium-90 migration at the 100N Area is a high priority at Hanford, this site has been selected for a field treatability test (see map for location). The field treatability test zone will consist of filling a trench, 100 feet long, 3 feet wide, and 30 feet deep, with clinoptilolite (see diagram). The test will monitor the effect of flow of strontium-90 contaminated groundwater through the test zone.

PURPOSE AND OBJECTIVES OF THE TEST

The purpose of conducting the in situ treatment zone treatability test is to evaluate this technology for removal of strontium-90 from groundwater discharging to the Columbia River. The objectives of the test are:

1. To demonstrate that a cost-effective construction method is feasible,
2. To confirm that the test zone does not restrict the flow of groundwater, and
3. To demonstrate that the technology works as intended.

Seven groundwater monitoring wells will be installed adjacent to the trench to collect samples to monitor the effectiveness of the treatment zone. Samples will be collected for strontium-90 analysis at scheduled intervals as part of the test program.

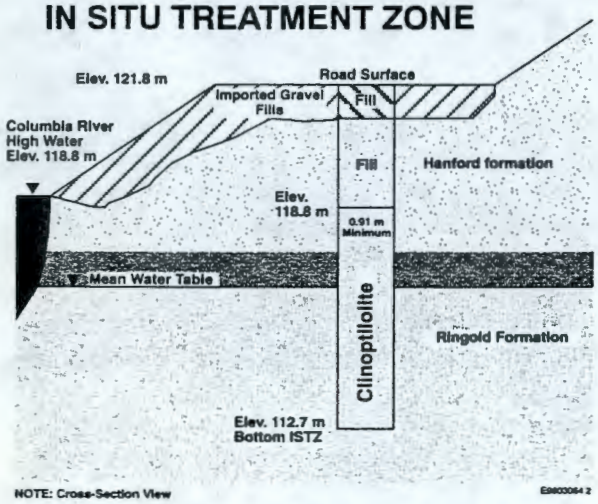
The effectiveness of the in situ treatment zone technology will be evaluated at the conclusion of the field test. The evaluation report will provide data to assess the technology as a long-term remedial action measure.
The test zone will be removed at the conclusion of the treatability test. If it is decided that the test will be conducted, the schedule will be as follows:

In situ trench construction - February to March 1997

Field test monitoring - April 1997 to March 1998

Treatability Test Evaluation Report - July 1998

IN SITU TREATMENT ZONE



Conceptual Diagram of the In Situ Treatment Zone Technology Applied at N-Springs (Cross-Section View).

HOW YOU CAN GET INVOLVED

A 30-day public comment period will be held from August 20 to September 19, 1996. All public comments will be considered before a decision is made to conduct the treatability test. A public meeting will not be held. Written comments may be submitted during the comment period to one of the contacts listed below.

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Copies of the proposed In Situ Treatability Test Plan are available at the following public information repositories, or by calling the Hanford Cleanup toll-free hotline 1-800-321-2008

PORTLAND
Portland State University
Branford Price Millar Library
Science and Engineering Floor
934 SW Harrison
(503) 725-3690
Attn: Michael Bowman or Susan Thomas

RICHLAND
U.S. Department of Energy
Public Reading Room
Washington State University, Tri-Cities
100 Sprout Rd., Room 130 West
(509) 376-8583
Attn: Terri Traub

SEATTLE
University of Washington
Suzzallo Library
Government Publications
(206) 543-4664
Attn: Eleanor Chase

SPOKANE
Gonzaga University
Foley Center
East 502 Boone
(509) 328-4220, ext. 3844
Attn: Tim Fuhrman

If you have special accommodation needs or require this material in an alternative format, please contact Michelle Davis, (360) 407-7126 (voice), (360) 407-6206 (TDD), or e-mail mdav461@ecy.wa.gov.