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SEP 25 1987

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Docket No. _____
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Distribution: _____

MEMO FOR: Hugh L. Thompson, Jr. Director
Office of Nuclear Material Safety and Safeguards (Return to WM, 623-SS)

FROM: Robert E. Browning, Director
Division of High-Level Waste Management
NMSS

SUBJECT: IODINE-129 GROUNDWATER DATA AT THE HANFORD, WASHINGTON SITE

This is to inform you about the staff's position on the relevance of historical Iodine-129 groundwater data, collected at the Hanford site, to Hanford's suitability as a potential location for a high-level waste (HLW) geologic repository.

During past operations at Hanford, waste waters were discharged directly to the ground at various locations on the Hanford site, including some within several miles of the site for the proposed HLW repository. These waste waters have introduced to the groundwater system varying amounts of contaminants, including Iodine-129, Tritium, and Technicium-99.

In January 1985, the U.S. Nuclear Regulatory Commission (NRC) On-Site Licensing Representative (OR) at Hanford was made aware of historical (circa early 1970's) data on Iodine-129 and other radionuclides from water samples collected from wells in and around the Hanford Reservation. NRC staff considered that, although this monitoring was not designed to assess the adequacy of the Hanford site for a HLW repository, it could help to understand the groundwater system.

The staff's evaluation of the data, available to the OR, indicated the data were not conclusive and did not show that the site should be disqualified as a possible repository site. However, the staff considered that all of the historical monitoring data, along with other hydrochemical data that would be collected as part of the repository site characterization program, would be useful in studying the groundwater flow system at Hanford.

Accordingly, the staff's view of the potential uses of Hanford's historical monitoring data was provided to the U. S. Department of Energy (DOE) in a June 26, 1985 letter. Since that time, DOE has identified and reviewed the historical data on Iodine-129 and prepared a report entitled "Data Compilation: Iodine-129 in Hanford Groundwater" dated August, 1987. This report compiles data from past and present Iodine-129 groundwater monitoring at Hanford.

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Based on our review of DOE's August, 1987 report, the NRC staff position continues to be that none of the historical Iodine-129 groundwater data identified to date indicates the site should be disqualified as a repository site. The historical Iodine-129 data collected is from aquifers at depths of about 2,000 feet or less. The repository is located at approximately 3,000 feet (Enclosure 1). These data are therefore not sufficient to resolve the issue of the potential for upward migration from the repository horizon to shallower aquifers. The data needed to support regulatory conclusions about the adequacy of the Hanford site will be obtained by DOE through testing near the proposed site and at the proposed depth of the repository. In an April, 1987 meeting at the Hanford site the NRC staff agreed with DOE's approach for this testing. The historical groundwater monitoring data will be considered by the NRC staff along with data from the program of deep groundwater testing as part of the DOE site characterization effort.

It should be noted that there has been recent press and Congressional interest regarding the relevancy of historical Iodine-129 groundwater monitoring data to Hanford's acceptability as a location for a high-level waste repository. Newspaper articles have incorrectly implied that NRC officials have indicated that the Hanford nuclear reservation does not meet nuclear waste repository siting criteria. In order to correct the press inaccuracies, I transmitted a letter (Enclosure 2) to the editor of the Seattle Post-Intelligencer dated August 26, 1987.

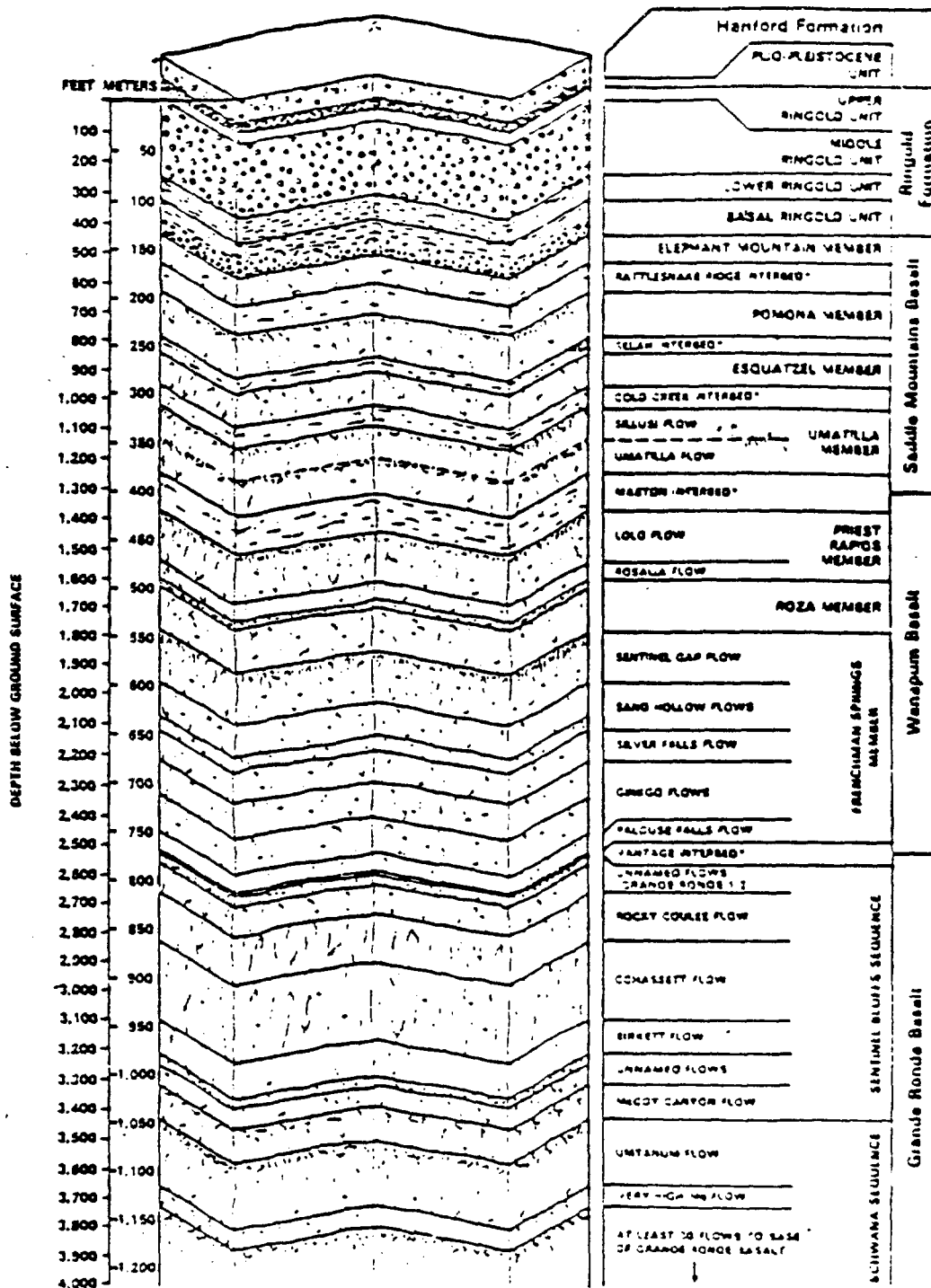
Another aspect of the press interest involves an allegation that DOE deliberately withheld the historical Iodine-129 data. This allegation was referred by DOE's Hanford Operations Office to DOE's Inspector General for investigation in 1985. The NRC's Office of Investigation (OI) was informed. They in turn informed each Commissioner. DOE's Inspector General has investigated the allegation and furnished a copy of their report to OI. In August, 1987, Representatives Wyden (Oregon) and Swift (Washington) requested this matter be further investigated by DOE's Inspector General and independently investigated by GAO.

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Robert E. Browning, Director
Division of High-Level Waste Management
NMSS

Enclosures:

1. Geologic Section
2. Letter to Seattle Post Intelligencer
from R. E. Browning dated 8/26/87

ENCLOSURE 1



*INTERBEDS ARE STRATIGRAPHICALLY CONTAINED IN THE ELLENSBURG FORMATION

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Enclosure 1

ENCLOSURE 2



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

AUG 26 1987

The Editor
Seattle Post-Intelligencer
P.O. Box 1909
Seattle, Washington 98111

Dear Sir:

A report in your August 8 edition (page D1) suggests that the Nuclear Regulatory Commission staff has reached certain conclusions regarding the suitability--or lack thereof--of the Hanford site in Washington for a repository for the disposal of high-level radioactive waste. This is not the case.

The NRC staff has taken no position regarding the suitability of the Hanford site and will not be in a position to do so until the Department of Energy has completed a site characterization program. The suggestions to the contrary in your August 8 edition reflect the personal views of one member of the NRC staff and one NRC contractor regarding certain specific technical matters. These personal views are part of the public record and were available in our Public Document Room.

Further, contrary to your report, the NRC staff does not expect to receive an application from the Department of Energy for construction authorization for a high-level radioactive waste repository until the mid-1990's, not the end of 1988.

Sincerely,

RE Browning
Robert E. Browning, Director
Division of High-Level Waste Management
Office of Nuclear Material Safety
and Safeguards

Enclosure 2

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FROM REAlexander		DATE OF DOCUMENT 8/28/87		DATE RECEIVED 8/28/87		NO WM-87383	
TO REBrowning		LTR		MEMO		REPORT	
		ORIG.		CC		OTHER	
		ACTION NECESSARY <input checked="" type="checkbox"/>		CONCURRENCE <input type="checkbox"/>		DATE ANSWERED	
CLASSIF		POST OFFICE		FILE CODE:		BY 9/30	
REG. NO.		DESCRIPTION (Must Be Unclassified)		414.2			
Notification of Federal Agencies of Inconsistencies between New Federal Guidance and Existing Part 20		REFERRED TO		DATE		RECEIVED BY	
		JOBunting		8/28			
		DFehringer					
ENCLOSURES							
REMARKS							

*Classified by memo to
K. Alexander R.E.
by RLB 9/20/87*