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Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

MAR 22 1996

Mr. Moses N. Jaraysi
200 Area Unit Supervisor
Nuclear Waste Program
State of Washington
Department of Ecology
1315 West Fourth Avenue
Kennewick, Washington 99336



Mr. Joseph J. Witczak
Unit Supervisor Regulatory and Technical Support
State of Washington
Department of Ecology
P.O. Box 47600
Olympia, Washington 98504-7600

Dear Messrs. Jaraysi and Witczak:

RECOMMENDED CLOSURE STRATEGY FOR 183-H SOLAR EVAPORATION BASINS

The U.S. Department of Energy, Richland Operations Office (RL) is requesting concurrence from the State of Washington Department of Ecology (Ecology) on a strategy for closure of the 183-H Solar Evaporation Basins (183-H) in light of new information regarding contaminant concentrations in the soil column.

183-H soil analytical results obtained through March 15, 1996, indicate that the soil column cannot be remediated to clean closure standards without extensive removal of soils. The soil column has been successfully remediated to Method B direct soil exposure levels above the 15 foot depth at 183-H. However, fluoride and nitrate contamination are remaining 25 feet down in the soil column at concentrations above the 100 times groundwater protection standard established under Method C of the Model Toxics Control Act (MTCA). Method C cleanup levels are required for a modified closure option (Condition II.K.3. of the Hanford Site Dangerous Waste Permit). Groundwater contamination due to chromium has previously defined 183-H closure under a modified closure option.

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Concentrations of fluorides and nitrates could remain in the soil column above Method C under a modified closure scenario through demonstration that these values are protective on the groundwater (WAC 173-340-740[4][b][ii][A]). RL requests that Ecology concur with a determination that the levels of fluorides and nitrates are protective of the environment in their present concentrations for an interim period of time until actions undertaken pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

Given the complexities and potential costs of remediating the groundwater and soil column, final remedial actions associated with groundwater protection at 183-H need to be analyzed and integrated into the work being performed at the 100-HR-3 groundwater operable unit in accordance with schedules established under the Tri-Party Agreement. Interim institutional controls for modified closure of 183-H would be provided and defined through postclosure permit conditions and would include both physical barriers and periodic assessments as required by Condition II.K.3. of the Hanford Site Dangerous Waste Permit. A survey plat and notice in the deed would be provided 60 days after certification of closure of the unit. A temporary soil cover would be provided at the site as necessary to prevent the downward migration of precipitation into the zone of contamination such that further degradation of the groundwater does not occur during the interim modified closure period.

The above defined strategy for closure of 183-H under an interim modified closure option is highly preferred over landfill closure of the unit. Design and construction of a Resource Conservation and Recovery Act (RCRA) cover would be a costly interim solution which could preclude certain final remedies under CERCLA such as further removal of contaminants from the soil column or controlled leaching of contaminants to groundwater in conjunction with pump and treat actions.

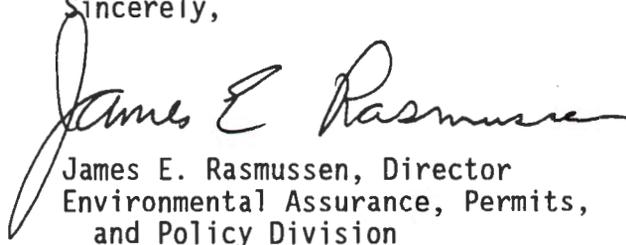
A February 9, 1996, letter from RL to Ecology (J. E. Rasmussen, RL, to M. N. Jaraysi and J. J. Witczak, Ecology, "Notification of Change to Closure Option and Strategy for Compliance with RCRA Permit Conditions for the 183-H Solar Evaporation Basins) stated that final closure would be defined as "only those physical activities needed to close the unit's structure and remediate soils." This letter notified Ecology that a modified closure option would be required at 183-H due to contaminated groundwater. This notification was a requirement of Condition V.I.B.m. of the RCRA Permit. The notification indicated that the soil column would "most likely" be able to be cleaned to clean closure standards. Under the modified closure strategy presented in this letter, RL considers that a revised notification of closure would not be necessary given that modified closure is still the option chosen for this unit upon Ecology's concurrence of this strategy. ✓

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Please provide concurrence with the proposed changes in the 183-H closure strategy by March 28, 1996. If you have any questions regarding this request, please call Mr. Jeffrey M. Bruggeman on (509) 376-7121.

Sincerely,



James E. Rasmussen, Director
Environmental Assurance, Permits,
and Policy Division

DDP:JMB

cc: S. M. Alexander, Ecology
J. W. Badden, BHI
R. E. Cordts, Ecology
M. T. Janaskie, EM-442
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W. W. Soper, Ecology