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Department of Energy

Richland Operations Office
P.O. Box 550
Richland, Washington 99352
SEP 22 1995

95-PCA-506

Mr. Moses N. Jaraysi
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 Unit
Nuclear Waste Program
State of Washington
Department of Ecology
P.O. Box 47600
Olympia, Washington 98504-7600

Dear Messrs. Jaraysi and Witczak:

CLOSURE CERTIFICATION FOR THE 2101-M POND (D-2-1)

Enclosed is the completed Closure Certification for the 2101-M Pond. These signatures certify that closure of the 2101-M Pond was implemented in accordance with the specifications of the approved closure plan. These certifications are required by Washington Administrative Code 173-303-610(6) and were prepared in accordance with Section I.C of the 2101-M Pond Closure Plan, and Condition V.7.B.c of the Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit.

The 2101-M Pond is located in the 200 East Area of the Hanford Site. This pond operated from 1981 until 1988 as a RCRA treatment, storage, and/or disposal unit for potentially dangerous waste from the Basalt Waste Isolation Project Laboratory located in the 2101-M Building. Closure activities were completed in 1991 in accordance with the closure plan and included two phases of closure verification soil sampling and analysis. In a letter dated August 5, 1994, the State of Washington Department of Ecology (Ecology) determined that unit soils contained no dangerous waste above regulatory concern and that the unit met the requirements for clean closure. Therefore, we request that Ecology inform the U.S. Environmental Protection Agency RCRA Information System that this TSD unit is now "closed". The Part A, Form 3, will be reissued with "CLOSED" stamped on it along with the date that Ecology responds to this letter.



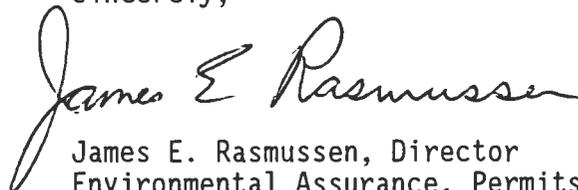
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Messrs. Jaraysi and Witczak
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Should you have any questions regarding this closure certification, please contact Ms. E. M. Mattlin, U.S. Department of Energy, Richland Operations Office, on (509) 376-2385 or Mr. F. A. Ruck III, Westinghouse Hanford Company, on (509) 376-9876.

Sincerely,



James E. Rasmussen, Director
Environmental Assurance, Permits,
and Policy Division
DOE Richland Operations Office

EAP:EMM



William T. Dixon, Director
Environmental Services
Westinghouse Hanford Company

Enclosures:

1. [PE] Closure Certification
for the 2101-M Pond
2. [Co-operator and Owner/Operator]
Closure Certification
for the 2101-M Pond

cc w/encl:

Administrative Record

EDMC, H6-08

D. Duncan, EPA

R. Jim, YIN

D. Powaukee, NPT

S. Price, WHC

F. Ruck III, WHC

D. Sherwood, EPA

J. Wilkinson, CTUIR

cc w/o encl:

W. Dixon, WHC

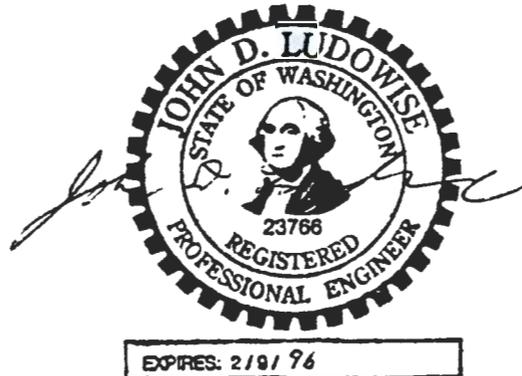
**CLOSURE CERTIFICATION
FOR 2101-M POND**

I, the undersigned, hereby certify that I have reviewed the approved 2101-M Pond Closure Plan, and to the best of my information and belief, closure activities were performed in accordance with the specifications of the approved Closure Plan. This certification is based solely on a review of documents as described in the attached Specifications and Limitation of Professional Engineer's Certification.

The above statements are true and complete to the best of my knowledge and within the limits of professional judgement under the prevailing standards of practice on this 27th day of July, 1995.



John D. Ludowise
Washington # 23766
CH2M HILL, Inc.



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**SPECIFICATIONS AND LIMITATIONS OF
PROFESSIONAL ENGINEER'S CERTIFICATION
2101-M POND CLOSURE PLAN CERTIFICATION**

The 2101-M Pond was closed under the direction of Westinghouse Hanford Company (WHC) employees over a period extending from 1985 through 1994. The *2101-M Pond Closure Plan* (DOE/RL-88-41, Revision 2A) governing RCRA closure of this treatment, storage and/or disposal unit (TSD) unit was approved by the Washington State Department of Ecology (Ecology) and the U.S. Environmental Protection Agency (EPA). A sampling and analysis plan (SAP), analytical data package, and sampling report (Appendices D-1, D-3 and D-4, respectively of DOE/RL-88-41, Rev. 2A) and a field logbook (WHC-N-292) also exist as official WHC records of the closure. Page 3 of this attachment lists the documents provided to John D. Ludowise, certifying P.E. of CH2M HILL, by WHC representatives, Messrs Fred A. Ruck III (RCRA Unit Closures Manager) and Scott N. Luke (RCRA Unit Closures). These documents were reported to be the full, accurate, complete and representative record of closure activities at the 2101-M Pond. The P.E. certification is based on a review of these documents to determine if the subject closure activities were implemented in accordance with the specifications in the approved closure plan. No in-process verification activities were performed (e.g., site visits during sampling, independent data collection and/or validation).

Closure activities consisted of sampling. These activities were conducted in accordance with the approved closure plan and substantially in accordance with the SAP. Further, the conclusions documented in Appendix D-4 of the closure plan (DOE/RL-88-41, Rev. 2A) appear to be a true and accurate representation of the data gathered during the Phase II sampling activities conducted between June 6, 1991 and June 18, 1991. However, P.E. review identified technical errors in some closure text tables and a lack of pond water samples identified as required within the SAP. Although, these exceptions are detailed below, none would materially effect the clean closure conclusion drawn in Appendix D-4.

Note: Discrepancies in Tables 6 and 10, relating to data interpretation, are shown for information only because P.E. certification is concerned with completion of closure activities in accordance with the closure plan (i.e., sampling), not with the achievement of the closure plan objectives (i.e., regulatory clean closure).

1. Table 6 on page APP D4-24 presents threshold values for sitewide background from WHC-MR-246. Sitewide threshold values should be taken from DOE/RL-92-24, Rev. 2, April 1994. 36842
2. Table 10 on page APP D4-39 presents Model Toxics Control Act (MTCA) limits.
 - a. The method (Method A or B) should be indicated on the table.
 - b. The values shown for Pb, Ag, and Zn are incorrect. They should be 250, 400 and 24,000 ppm, respectively. However, except for lead, these values are less stringent than those identified in Table 10 and therefore pose no concern. The maximum lead concentration (160

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ppm) found at the pond still does not exceed the more stringent level
(250 ppm).

- c. The residential limits are identical with the MTCA B limits. The column labeled residential should be eliminated.
3. Tables 2, 3, and 4 in Appendix D-4:
 - a. The laboratory data packages have qualifiers attached to many of these data. The qualifiers should be included in these tables.
 - b. The value for TI for sample BOOZJ1, obtained from Background Sample Site #2 (Appendix D-4, Table 3) is reported as "ND" (not detected). The value reported by the laboratory was actually 20 µg/g (ppm) (page D3-330).
 - c. All Sb data from the Data Chem laboratory was marked "R" (unusable due to low matrix spike recoveries) during the validation process, not "ND" as listed in the tables.
 4. The Sampling and Analysis Plan, Appendix D-1, required samples of surface water to be collected, "if there is sufficient water present." The field log (WHC-N-292, page 63, dated June 6, 1991) notes that "a considerable amount of rain had fallen the previous evening resulting in areas which had previously been dry in 2101-M pond now having a few inches of standing water and areas where 2-3 inches of water had been previously, were now inundated with water 12-14 inches deep." The field log (page 77, dated June 12, 1991) also remarked "We also determined at this time that the ditch was receiving a very small amount of influent from the effluent pipe." Appendix A of the Certifying Engineer's statement regarding sampling activities (Letter L. Spitz to W. G. Cox) indicates that "Pond water will not be sampled (Pond is dry now)." The UMM minutes (from September 19, 1990) show that Ecology recognized that sufficient pond water may not exist for sampling. It is also clear that only shallow rainwater existed in the pond at the time of sampling. However, a lack of water was nowhere identified as the sole reason that pond water sampling required by the SAP was not performed.

Soil sample B00GQ9 (taken at the upper sample at point G, in the vicinity of the outfall area), was analyzed for the same contaminants of as the pond water samples would have been analyzed for. The results of this analysis tend to compensate for the fact that the pond water was not sampled.

DOCUMENTS REVIEWED FOR PROFESSIONAL ENGINEER'S
CERTIFICATION OF 2101-M POND CLOSURE
PLAN CERTIFICATION

2101-M Pond Closure Plan, DOE/RL-88-41, Rev. 2A:

- Vol. 1: I. General Closure Requirements
- Vol. 1: B. Content of Closure Plan
- Vol. 2: Appendix D-1, Phase II Sampling Plan for 2101-M Pond and Adjacent Rainwater Run-off Ditch
- Vol. 2: Appendix D-2, Quality Assurance Project Plan for Near Surface Soil Sampling and Surface Water Sampling at the 2101-M Pond and Rainwater Run-off Ditch
- Vol. 2: Appendix D-3, Phase II Data Package for Analysis of 2101-M Pond Soil Samples and Background Samples
- Vol. 2: Appendix D-4, Phase II Sampling Report for 2101-M Pond and Rainwater Run-off Ditch

2101-M Pond Soil Sampling, WHC-N-292, Issued 7-13-89, Pages 1 through 85, inclusive, dated March 23, 1988 to June 18, 1991.

Meeting Minutes Unit Managers Meeting: 2101-M Pond, Meetings held on:

- September 19, 1990
- January 10, 1991
- February 12, 1991
- March 12, 1991

Certification of Phase II Soil Sampling at 2101-M Pond, Task Order B-91-13, Letter from Leon Spitz, P.E. (Bovay Northwest, Inc.) to William G. Cox (Westinghouse Hanford Company), letter number 9102873, dated July 11, 1991.

CLOSURE CERTIFICATION
FOR
2101-M POND

Hanford Site
U.S. Department of Energy, Richland Operations Office

We, the undersigned, hereby certify that all 2101-M Pond closure activities were performed in accordance with the specifications in the closure plan as approved by the State of Washington Department of Ecology.

John D. Wagoner

9/22/95

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

Date

A. LaMar Trego

9/5/95

for
Co-operator
A. LaMar Trego, President
Westinghouse Hanford Company

Date