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Department of Energy

Richland Operations Office
P.O. Box 550
Richland, Washington 99352

NOV 2 1990

90-TPO-002

Mr. Russell Jim, Manager
Environmental Restoration
and Waste Management Program
Confederated Tribes and Bands
of the Yakima Indian Nation
P. O. Box 151, Fort Road
Toppenish, Washington 98948



Dear Sir:

DOCUMENT REQUEST IN SUPPORT OF THE SINGLE-SHELL TANKS

This response is submitted to notify you that, per your verbal request, documents in support of the investigation of the explosive potential for the single-shell tanks have been sent to EWA Incorporated, a subcontractor to the Yakima Indian Nation. The attached includes a listing of documents forwarded to EWA Incorporated.

Should you have any further questions or comments regarding this information, please contact Mr. Gary J. Bracken of my staff on (509) 375-1659.

Sincerely,

Ronald E. Gerton, Manager
Tank Farms Project Office

TPO:JEN

Attachment



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START

DOCUMENTS TO BE TRANSMITTED
TO THE YAKIMA INDIAN NATION

1. T0-060-015, Standard Operating Procedure, "Monitoring and Change Out of Waste Storage Tank Breather Filters." 04/25/88, Westinghouse Hanford Company, Richland, Washington.
2. T0-040-650, Plant Operating Procedure, "Obtain/Record Single-Shell Tank Temperature Data." 05/09/90, Westinghouse Hanford Company, Richland, Washington.
3. ERDA-1538, Final Environmental Statement Waste Management Operations, Hanford Reservation, 1975, Richland, Washington.
4. 89-10, Hanford Federal Facility Agreement and Consent Order, May 1989, Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy.
5. WHC-EP-0249, Implementation Plan for Underground Waste Storage Tank Surveillance and Stabilization Improvements, April 1989, G.T. Dukelow, V.D. Maupin, L.A. Mihalik, and D.J. Washenfelder, Westinghouse Hanford Company, Richland, Washington.
6. RHO-WM-PL-9, Hanford Waste Management Technology Plan, December 1983, Rockwell Hanford Operations, Richland, Washington.
7. WHC-EP-0075, Summary of Single-Shell Tank Waste Characterization: 1985 to 1987, July 1988, L.G. Morgan, M.R. Adams, W.W. Schulz and K.W. Owens, Westinghouse Hanford Company, Richland, Washington.
8. SD-WM-SAR-007, Hazards Identification and Evaluation For Waste Tank Core-Sampling Equipment, June 1985, Rockwell Hanford Operations, Richland, Washington.
9. Letter, "Information Concerning Ferrocyanide in Single-Shell Tanks," November 22, 1988, D.D. Wodrich, Westinghouse Hanford Company, Richland, Washington.
10. SD-WM-SAR-022, Nonstabilized Single-Shell Tank Hazards Identification and Evaluation, August 1986, Rockwell Hanford Operations, Richland, Washington.
11. Letter, "Radiation Stability of Cs₂NiFe(CN)₆", 1984, E.C. Martin and L.L. Burger, Pacific Northwest Laboratories, Richland, Washington.
12. Tank Farm Surveillance and Operations Administration Manual, WHC-CM-5-7, Section 4.6, "Tank Temperature Data Review," November 1989, Westinghouse Hanford Company, Richland, Washington.
13. WHC-MR-0089, "Status of Scavenged Waste from August 1955 to October 1957," General Electric, Richland, Washington.

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14. BNWL-CC-376, Techniques for Calculating Tank Temperatures and Soil Temperatures Near Leaks-Application to PUREX Waste Tank 105-A, G. Jensen, W.E. Willingham, and W.V. DeMier, Pacific Northwest Laboratories, Richland, Washington.
 15. IAEA, PR 89/19, "USSR Provides Details of Accident in 1957 at Military Nuclear Plant in Southern Urals", July 26, 1989, International Atomic Energy Agency Information Circular.
 16. Internal Memo, "Potential Exothermic Reactions In the Single-Shell Tank Waste", D.M. Nguyen to K.J. Moss, March 29, 1989.
 17. Letter, "Plan to Update and Issue PNL-5441, Complexant Stability Investigation, Task 1, Ferrocyanide Solids", D.D. Wodrich to R.E. Gerton, January 18, 1989.
 18. Letter, "Expected Drill Bit Temperature During Sample Taking in Single-Shell Tanks", August 1, 1985, R.L. Koontz and D.C. Riley, Rockwell Operations, Richland, Washington.
 19. Internal Memo, "Inflammability of Tank 103-C Head Space Vapors", August 4, 1989, K.G. Carothers, Westinghouse Hanford Company, Richland, Washington.
 20. RL-SEP-630, 105-A Waste Storage Tank Model Test, August 20, 1989, D.D. Wodrich, Westinghouse Hanford Company, Richland, Washington.
 21. PNL-5441, Complexant Stability Investigation, Task 1, Ferrocyanide Solids, 1984, L.L. Burger, Pacific Northwest Laboratories, Richland, Washington.
 22. PNL-5356, Potential Radiological Impacts of Upper-Bound Operational Accidents During Proposed Waste Disposal Alternatives for Hanford Defense Waste, 1986, J. Mishima et. al., Pacific Northwest Laboratories, Richland, Washington.
 23. SD-WM-SAR-006, Single-Shell Tank Isolation Safety Analysis Report, August 2, 1989, Westinghouse Hanford Company, Richland, Washington.
 24. SD-WM-SAR-034, Safety Analysis Report - Stabilization of Single-Shell Waste Storage Tanks by Salt Well Jet Pumping, March 8, 1989, Westinghouse Hanford Company, Richland, Washington.
 25. LA-9217-MS, An Analysis of the Alleged Kyshtym Disaster, January 1982, Diane M. Soran, Danny B. Stillman, Los Alamos National Laboratory, Los Alamos, New Mexico.
 26. WHC General Administration Manual, WHC-CM-5-5, Section GA-2-18, "Waste Tank Anomaly Analysis and Reporting", September 1988, Westinghouse Hanford Company, Richland, Washington.
 27. Presentation, "Single-Shell Tank Waste Stability", by D.D. Wodrich, October 1989.

28. Photograph for Tank 105-A showing the bulge, August 20, 1986, Westinghouse Hanford Company, Richland, Washington.
29. ARH-LD-123, Sodium Nitrate Combustion Limit Tests, 1976, G.A. Beitel, Atlantic Richfield Hanford Company, Richland, Washington.
30. ARH-LD-163, Exothermic Potential of Sodium Nitrate Salt Cake, 1977, G.A. Beitel, Atlantic Richfield Hanford Company, Richland, Washington.
31. ARH-LD-126, Final Report on Investigation of Stability of Organic Material in Salt Cake, 1976b, G.A. Beitel, Atlantic Richfield Hanford Company, Richland, Washington.
32. Unusual Occurrence Reports concerning the 22 single-shell tanks containing ferrocyanide. The Report Numbers are 87-04, WHC-UO-88-028-TF-03, WHC-UO-88-034-TF-05, WHC-UO-89-04-TF-02, WHC-UO-89-009-TF-03, WHC-UO-89-014-TF-04, WHC-UO-89-023-TF-05, WHC-UO-89-043-TF-06, WHC-UO-89-044-TF-07.
33. Westinghouse Hanford Company Quality Assurance Audit Report, AUD-89-16, "Liquid Waste Management-Tank Farms," October 31, 1989.
34. Purex Tk-105-A Waste Storage Tank Liner Instability and Its Implications on Waste Containment and Control, ARH-878, October 31, 1967.
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37. RHO-RE-ST-10-P, Tank Assessment Studies for Continued In-Tank Storage of Hanford Defense Waste, August 1983, C. Defigh-Price and H.J. Dahlke, Rockwell Operations, Richland, Washington.
38. HW-48832, Cesium Packaging Studies-Conversion of Zinc Ferrocyanide to a Cesium Chloride Product, 1957, J.L. Hepworth, E.D. McClanahan, and R.L. Moore, General Electric, Richland, Washington.
39. DOE/EIS-0113, Final Environmental Impact Statement, Disposal of Hanford Defense High-Level, Transuranic and Tank Wastes, Hanford Site, 1987, Richland, Washington.
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41. PNL-5453, Complexant Stability Investigation, Task 2-Organic Complexants, June 1985, E.C. Martin, Pacific Northwest Laboratories, Richland, Washington.
42. Interim Hanford Waste Management Technology Plan, September 1985, Rockwell Hanford Operations, Richland, Washington.

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43. Analysis of the Medvedev Report of a Soviet Radioactive Waste Incident, April 7, 1978, Professor Frank L. Parker, Vanderbilt University, Nashville, Tennessee.
 44. ORNL-5613, Analysis of the 1957-58 Soviet Nuclear Accident, December 1979, J.R. Travaalka, L.D. Eyman, and S.I. Auerbach, Oak Ridge National Laboratory, Oak Ridge, Tennessee.
 45. HW-43066, Metal Recovery Waste Scavenging Process, 1956, R.B. Abrams, General Electric, Richland, Washington.
 46. SD-WM-TI-057, Preliminary Estimation of the Waste Inventories in Hanford Tanks Through 1980, 1984, F.M. Jungfleish, Rockwell Operations, Richland, Washington.
 47. WHC-MR-0090, "Single-Shell Tank 104-BY 3-D Surface Temperature Plot," Westinghouse Hanford Company, Richland, Washington.
 48. Draft FY-1988 Statement of Work PNL Support to Single-Shell Tank (SST) Safety Analysis Report, SST-TP-FECN-1, July 1988, Pacific Northwest Laboratories, Richland, Washington.
 49. 1984 Contractor approval papers for PNL-5441 - Clearance form, "Complexant Stability Investigation, Task 1, Ferrocyanide Solids," PNL-5441, November 1984, L.L. Burger, Pacific Northwest Laboratories, Richland, Washington.
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 51. High Efficiency Particulate Air Filter System Test results, Westinghouse Hanford Company, Richland, Washington.
 52. Temperature data in the BY Tanks containing ferrocyanide, Westinghouse Hanford Company, Richland, Washington.
 53. "Volume Reduction of Radioactive Waste by Carrier Precipitation," R.E. Burns and M.J. Stedwell, Chemical Engineering Progress, February 1957 (Vol. 53, No. 2).
 54. "Interim Report on Cyanide Safety Studies," September 30, 1988, L.L. Burger and R.D. Scheele, PNL, Richland, Washington.
 55. RHO, "Heat Transfer Analysis for In Situ Disposal of Nuclear Wastes in Single and Double Shell Underground Storage Tanks," RHO-LD-171, 07/88, RHO.
 56. Internal Memo, "Data Analysis of Conditions in Single Shell Tanks Suspected of Containing Ferrocyanide," From D.M. Nguyen to N.W. Kirch, March 2, 1989.
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61. Technical Safety Appraisal of the Hanford Tank Farm Facility, 8901781B R2, R.J. Baumhardt, May 1989.
62. Thermal Data, "Survey of the Single-Shell Tank Thermal Histories," RHO-CD-1172, December 1981.
63. Thermal Data, "Temperature and Surface Level Data Plots for Tank 241-SY-101," Internal Memo, From E.I. Husa to Distribution, July 31, 1990.
64. HRC Report 3808-1, Explosion Hazard Potential of Simulated Salt Cakes, 1977, R.C. Putnam, Atlantic Richfield Hanford Company, Richland, Washington.
65. The May 26, 1989, Ferrocyanide Safety Study Test Plan which describes the scope of work to be performed by the Los Alamos National Laboratory.
66. Internal Memo, "Analysis of Archive Samples from Tanks 241-TY-101 and 241-TY-103 for Total Cyanide," December 29, 1988, W.I. Winters, Westinghouse Hanford Company, Richland, Washington.
67. Thermal Data of the 22 single-shell tanks that contain ferrocyanide.

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DISTRIBUTION COVERSHEET

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RE Gerton/DOE-RL

Addressee
R Jim/Yamima Indian Nation

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