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Department of Energy
Richland Operations Office
P.O. Box 550
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DEC 12 1997

97-EAP-806

Mr. Moses N. Jaraysi
200 Area Section
Nuclear Waste Program
State of Washington
Department of Ecology
1315 West Fourth Avenue
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Mr. Steven M. Alexander
Perimeter Area Section Manager
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1315 West Fourth Avenue
Kennewick, Washington 99336-6018

Dear Messrs. Jaraysi and Alexander:

RESPONSE TO CLOSURE CERTIFICATION REJECTION FOR THE 3718-F ALKALI METAL TREATMENT AND STORAGE FACILITY

References: (1) Ltr., J. J. Wallace, Ecology, to J. E. Rasmussen, RL and W. D. Adair, FDH, "Closure Certification for the 3718-F Alkali Metal Treatment and Storage Facility (AMTSF)," dtd. November 7, 1997.

(2) Ltr., J. E. Rasmussen, RL, to J. J. Wallace, Ecology, "Closure Certification for the 3718-F Alkali Metal Treatment and Storage Facility," (97-EAP-688), dtd. September 24, 1997.

The U.S. Department of Energy, Richland Operations Office (RL) and Fluor Daniel Hanford, Inc. (FDH) have reviewed the State of Washington Department of Ecology's (Ecology's) November 7, 1997, letter (Reference 1) responding to RL's September 24, 1997, letter (Reference 2) requesting Ecology's certification of the 3718-F Alkali Metal Treatment and Storage Facility (3718-F) Closure Plan. Our closure certification request was based on: (1) our discussions (and meetings) with Ecology documented in the

Administrative Record for the 3718-F RCRA closure; (2) our interpretation of the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) and the Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit (HF Permit); and (3) Ecology's 1994 "Guidance for Clean Closure of Dangerous Waste Facilities."

We respectfully disagree with Ecology's rejection of our request for closure certification. We believe relevant data and information, contained in the Administrative Record for the 3718-F RCRA closure, shows no evidence that the contamination from the polychlorinated biphenyl (PCB), Aroclor 1254, in the drain sump resulted from past operations and waste management activities at 3718-F. Therefore, we believe that our September 24, 1997, request to Ecology for closure certification of 3718-F under the HF Permit (Reference 2) is still valid. As such, we believe no special post-closure care is required under RCRA and that the remediation of the Aroclor 1254 contamination under this regulatory process is not warranted. Additionally, we request that the 3718-F sump, due to the Aroclor contamination, be identified as a solid waste management unit in the Hanford Site's Waste Information System. This would allow the remediation of the Aroclor 1254 to be conducted under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) in accordance with the Tri-Party Agreement. We are also concerned about Ecology's serious allegations regarding HF Permit violations, and the restrictive compliance schedule stipulated.

We believe the above issues have Tri-Party Agreement implications for other Hanford Site HF Permit closures and CERCLA cleanup actions. Therefore, we are requesting that resolution of the 3718-F closure certification be pursued as soon as possible in a meeting with Ecology and the U.S. Environmental Protection Agency (EPA). As such, we are requesting a stay of Ecology's corrective action schedule until resolution is achieved. We also believe that a stay is appropriate because the Aroclor 1254 contamination with the 3718-F sump is below the Toxic Substances Control Act regulatory limit of 50 parts per million and is stabilized in the soil matrix, thereby posing a minimal risk to human health and the environment.

The attachment to this letter presents our position relative to the HF permit violations alleged by Ecology in Reference 1, and summarizes our prior discussions (and meetings) with Ecology relative to the Aroclor 1254 contamination at 3718-F. Again, these discussions are documented in the Administrative Record for the 3718-F closure.

Please contact us at your earliest convenience to set up a meeting to discuss these issues. If you have any questions, please call Ellen Mattlin, of my staff, on 376-2385, or Fred Ruck, of FDH, on 376-9876.

Sincerely,

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

William D. Adair, Director
Environmental Protection
Responsible Party for
Fluor Daniel Hanford, Inc.

Enclosure:
3718-F Review Information

cc w/encl:
W. D. Adair, FDH
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D. R. Sherwood, EPA
J. C. Sonnichsen, WMH
C. D. Stuart, Ecology
J. J. Wallace, Ecology
J. R. Wilkinson, CTUIR

ATTACHMENT TO LETTER FROM J. E. RASMUSSEN, RL AND W. D. ADAIR, FDH, TO M. N. JARAYSI AND S. M. ALEXANDER, ECOLOGY, "RESPONSE TO THE STATE OF WASHINGTON DEPARTMENT OF ECOLOGY REJECTION OF THE U.S. DEPARTMENT OF ENERGY, RICHLAND OPERATIONS OFFICE CLOSURE CERTIFICATION REQUEST FOR THE 3718-F ALKALI METAL TREATMENT AND STORAGE FACILITY," (97-EAP-806), DATED DECEMBER 12, 1997.

RL and FDH have provided the following information for Ecology's use in reviewing their position on the closure certification of 3718-F. The information has been divided into two major areas: (1) Compliance with permit conditions, and (2) Investigation into possible treatment or use of the PCB, Aroclor 1254, at 3718-F and its potential regulation.

(1) Compliance With the Permit Conditions

RL and FDH disagree with Ecology's position that we are potentially in violation of the HF Permit. Ecology states in their November 7, 1997 letter that the following conditions from the HF Permit, Chapter V, Unit 13, for 3718-F Treatment, Storage, and/or Disposal (TSD) unit are in dispute. These permit conditions state:

"V.13.A The operation of this facility resulted in the release of material, which may classify as dangerous waste and/or dangerous constituents, to the soil surrounding the building and the concrete pad. A closure plan must address the full extent of operation and release to the environment. Therefore, the Department requires the owner/operator to conduct soil sampling to determine the extent of releases. The 3718-F Alkali Metal Treatment and Storage Facility can not be released from interim status until it can be demonstrated that the unit has been closed in accordance with closure requirements of the State of Washington Administrative Code (WAC) 173-303, or corrective action has been completed.

V.13.B.b The Department shall be provided for review and approval, a soil sampling and analysis plan at least 30 days prior to initiating actual sampling. Such a plan shall include a schedule for conducting the sampling events. The analytical results of the sampling events will be used to determine if corrective action will be required to close the 3718-F Alkali Metal Treatment and Storage Facility.

V.13.B.1 The Department will consider removal and decontamination complete when the concentrations of dangerous waste, dangerous waste constituents, and dangerous waste residues, which originated from the 3718-F Alkali Metal Treatment and Storage Facility, throughout the areas affected by releases from this unit do not exceed numeric cleanup levels for soils, groundwater, surface water, and air, determined using residential exposure assumptions according to the MTCA 173-340, method A or B."

RL and FDH do not believe that the above-stated permit conditions have been violated. This difference in opinion may result from interpretation of the phrase "... which originated from the 3718-F Alkali Metal Treatment and Storage Facility ... ". In February 3 and August 7, 1997 meetings, RL and FDH discussed with Ecology their concerns regarding the possibility that PCBs could have been inadvertently managed at the 3718-F and concluded that there is no evidence that PCBs were used, managed, or disposed of at 3718-F (See Number 2 for a more detailed discussion). Our position was discussed again in

an August 20, 1997 meeting with Ecology and EPA. Since we conclude that PCBs did not originate from 3718-F, we believe that we are not required to remediate them under this RCRA closure.

The basis for soil sampling at 3718-F was agreed to by RL, FDH, and Ecology in January 14 and February 3, 1997 meetings, and incorporated in the following permit condition:

"V.13.B.d The soil samples shall be analyzed for all dangerous waste constituents documented to have been potentially spilled or released at the 3718-F Alkali Metal Treatment and Storage Facility during its operating life. .....

In both the unit closure plan, *The 3718-F Alkali Metal Treatment and Storage Facility Closure Plan* and the soil sampling and analysis plan, *Soil Sampling and Analysis Plan for the 3718-F Alkali Metal Storage Facility Closure Plan*, a list of dangerous waste constituents managed and treated at the facility was provided. In both cases the list did not contain PCBs as constituents of concern, and was approved by Ecology.

Prior to developing and submitting the soil sampling and analysis plan for approval, Ecology had questions concerning the completeness of the list. Three meetings were held with Ecology on January 14, February 3, and March 13, 1997 to discuss soil sampling at 3718-F. A record of these meetings is included in the Administrative Record for the 3718-F RCRA. During these meetings, Ecology expressed a concern that steel components treated at the facility may have been machined with oils containing PCBs, and that heavy metals may have been leached from the steel components during treatment with 2-butoxy ethanol. Since the components were designed to be used in a high temperature sodium environment, efforts were made to minimize the potential for corrosion by chlorine compounds, which precluded the use of machine oils containing PCBs. This information was presented to Ecology during January 14 and February 3, 1997 meetings. Based on these meetings and Ecology's approvals of the meeting minutes and the soil sampling and analysis plan, we concluded that a correct list of dangerous waste constituents associated with 3718-F had been identified and agreed to for soil sampling and analysis. Ecology stated that they intended to obtain split samples at the same time that we sampled, and that they would be analyzed for heavy metals and PCBs, in addition to the constituents of concern, i.e., sodium carbonate, potassium carbonate, and lithium carbonate, given in the sampling and analysis plan. Samples were obtained on April 24, 1997, with Ecology in attendance.

On June 3, 1997, RL was notified by Ecology that laboratory analysis of their sample collected from the 3718-F sump sediment indicated the presence of Aroclor 1254 at a concentration of 15 mg/kg or parts per million (ppm). On June 4, 1997, Waste Management was requested by us to analyze our split samples taken for PCBs. On June 23, 1997, the laboratory analysis of our split sample confirmed the presence of Aroclor 1254 at the same levels as detected by Ecology in their sample. Our research for potential sources of PCBs and the analytical results of our soil samples were presented to Ecology in the August 7, 1997 meeting. Based on the information discovered during our previous research, we concluded that the presence of Aroclor 1254 could not be traced to any known waste management activity at 3718-F.

The above proposed action is consistent with Ecology's 1994 guidance for clean closure under the heading "3.7 Pre-Existing Contamination":

".. In other cases, hazardous substances may have migrated to the unit from another, unrelated source. In these cases, clean closure of individual units may occur provided:

(1) All dangerous wastes, constituents, and waste residues which originated from the unit or waste management activities associated with the unit are removed to appropriate clean closure levels; ....

... If pre-existing contamination remains at the clean-closed unit in concentrations above appropriate MTCA cleanup levels, the unit is subject to additional remediation under RCRA corrective action, MTCA, or CERCLA, as appropriate." .....

As discussed in the August 7, 1997 meeting, and in a draft letter from RL to Ecology that was handed out at the August 20th meeting with Ecology and EPA, we proposed providing the information regarding PCBs in the soil at 3718-F to the 300-FF-2 Operable Unit for additional remediation and possible post-closure care. This proposed action was supported by the Professional Engineer's (PE's) certification attached to RL's September 24, 1997 letter to Ecology, "... The contamination associated with PCBs should be addressed as part of the remedial process to be conducted under .... CERCLA."

(2) Investigation Into Possible Use or Treatment of Aroclor 1254 at 3718-F and its Potential Regulation

The sample collected at the bottom of the separator drain sump was found to contain 15 ppm Aroclor 1254. The Toxic Substances Control Act (TSCA) regulates PCBs in excess of 50 ppm. According to 40 Code of Federal Regulations (CFR) 761.1(b) [Applicability], "Most of the provisions of this part apply to PCBs only if PCBs are present in concentrations above a specified level. For example, subpart D [Storage and Disposal] applies generally to materials at concentrations of 50 parts per million (ppm) and above." According to WAC 173-303-9904, state source code W001 may be assigned to "Discarded transformers, capacitors or bushings containing PCBs at concentrations of 2 parts per million or greater (except when drained of all free flowing liquid) and the following wastes generated from the salvaging, rebuilding, or discarding of transformers, capacitors or bushings containing polychlorinated biphenyls (PCB) at concentrations of 2 parts per million or greater: Cooling and insulating fluids and cores, including core papers." Based on the lack of any known source for the PCB contamination, the material in the sump is not regulated under WAC 173-303-9904.

Our research for potential sources of Aroclor 1254 in connection with the operation of the 3718-F Alkali Metal Treatment and Storage Facility was discussed with Ecology at the July 10, 1997 meeting to determine if the PCB-contaminated soils are regulated by the state. This research involved a search for any known use of Aroclor 1254, which involved consulting the Hazardous Substance Data Bank, a CD ROM-based commercial information source. According to this source, Aroclor 1254 was not manufactured or sold after 1977. As indicated in the data bank, Aroclor 1254 had been used in a variety of applications, including hydraulic fluids, adhesives, dedusting agents, cutting oils, pesticides, sealants, caulking compounds, electrical capacitors, and transformers. Aroclor 1254 is also extremely stable in the environment, and will tightly adsorb to soil particles.

We also investigated the type of oils used for machining components cleaned at 3718-F. B&W Hanford Company (FFTF Engineering) contacted personnel who were formerly workers at the 328 Building's machine shop where many of the components treated at 3718-F were manufactured. Material Safety Data Sheets (MSDS) were obtained for cutting fluids used at this facility and in the 272 Building's machine shop from the late 1970's to the present time. Our review of the MSDSs indicates that no PCBs are present in the cutting fluids. Due to concerns with chloride stress corrosion of stainless steel in a high temperature environment, the presence of chlorides is strictly controlled on these components. Therefore, the presence of PCBs in the cutting oils used is extremely unlikely.

The results from the search for potential sources and the soil sampling analysis was presented to Ecology in an August 7, 1997 meeting. As stated in the minutes for this meeting:

> "Based on the information presented, it is concluded that although Aroclor is present in low concentrations, its presence was not traced to any known activity at the 3718-F Alkali Metal Treatment and Storage Facility and should not be addressed during the closure of this facility."

In conclusion, we believe that the history of the past operations and waste management activities at 3718-F warrants its clean closure under the HF Permit and RCRA. We believe that this action is consistent with both the HF permit conditions for the 3718-F and Ecology's 1994 clean closure guidelines. Since we have found no evidence of treatment, storage, or use of Aroclor 1254 at 3718-F, we conclude that this PCB contamination represents a "pre-existing" condition. Therefore, we request that Ecology approve our closure certification request for the 3718-F and that no special post-closure care is required under RCRA. Furthermore, we request that the 3718-F sump be identified as a solid waste management unit in the Hanford Site's Waste Information Data System due to the presence of Aroclor 1254, and that the Hanford Site Environmental Restoration contractor and 300-FF-2 project manager be notified of the Aroclor 1254 contamination in the 3718-F sump so that they can remediate it under CERCLA. Because the Aroclor 1254 contamination with the 3718-F sump is below the Toxic Substances Control Act regulatory limit of 50 parts per million, and is absorbed and stabilized in the soil matrix, we also conclude that its potential for migration is low thereby posing a minimal risk to human health and the environment.