0044916

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

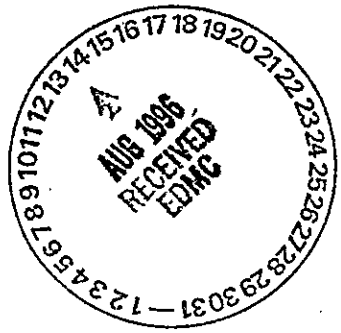
NMWMP - Hanford

DEC 29 1995

Kennewick

DEC 19 1995

95-LMD-243



Mr. Steve M. Alexander
Perimeter Section
Washington State
Department of Ecology
1314 W. 4th Avenue
Kennewick, WA 99336

Dear Mr. Alexander:

MODIFICATION OF HANFORD FACILITY DANGEROUS WASTE PART A PERMIT TO ADDRESS PROCEDURAL CLOSURE OF BIOLOGICAL TREATMENT TEST FACILITIES

The purpose of this letter is to request procedural closure of the Hanford Facility Dangerous Waste Part A Application Biological Treatment Test Facilities at the Pacific Northwest National Laboratory (PNNL). This request is in accordance with Section 6.3.3 of the Hanford Federal Facility Agreement and Consent Order Action Plan. This section of the Tri-Party Agreement (TPA) Action Plan outlines the requirements for obtaining procedural closure for those treatment, storage, or disposal (TSD) units "...which were classified as being TSD units, but were never actually used to treat, store, or dispose of hazardous waste, including mixed waste, except as provided by Washington Administrative Code (WAC)-173-303-200 or WAC-173-303-802..." As discussed with Jeanne Wallace of your staff, submittal of this request and the attached certification information fulfills the completion requirements for TPA Milestone M-20-44.

In accordance with Section 6.3.3 of the Tri-Party Agreement Action Plan, this letter notifies the Washington State Department of Ecology (Ecology) in writing that no regulated activity took place that would have activated the Biological Treatment Test Facilities Part A Application. In addition, a Hanford research and development and demonstration study conducted by the U.S. Department of Energy, Richland Operations Office (RL) did not identify a future need for this Part A Application. Therefore, we request that Ecology inform the U.S. Environmental Protection Agency (EPA) Resource Conservation and Recovery Information System that these TSD Units are now "closed." Please stamp the Part A, Form 3 for this unit with "CLOSED" and reissue with the date when Ecology responds to this letter.

Attached is a Technical Data Synopsis to support the procedural closure of the unit. Included with the synopsis is a signed certification using the wording specified in WAC-173-303-810(13), from RL (owner/operator) and PNNL (co-operator) certifying that the unit was never actually used to treat, store, or dispose of hazardous waste, including mixed waste, except as provided by WAC-173-303-200 or WAC-173-303-802.

Please review the attached information as appropriate. If any further facility field inspections are required beyond those completed by Ecology in October, please contact Mr. Charles R. Delannoy of RL on 373-9017 or Mr. Michael H. Schlender of PNNL on 376-8795. These individuals may also be contacted if you have any questions or need additional information regarding this request.

Sincerely,

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

Kenneth C. Brog, Director
Environment, Safety and Health
Pacific Northwest National Laboratory

Attachment

cc w/attach:
J. Wallace, Ecology
B. Burke, CTUIR
R. Jim, YIN
D. Powaukee, Nez Perce Tribe
D. Sherwood, EPA

Attachment 1

BIOLOGICAL TREATMENT TEST FACILITIES
PROCEDURAL CLOSURE
CERTIFICATION STATEMENT
AND SUPPORTING INFORMATION

Biological Treatment Test Facilities
Procedural Closure
Technical Data Synopsis

1.0 INTRODUCTION

1.1 Purpose

The purpose of this synopsis is to support Department of Energy, Richland Operations Office (RL) and Pacific Northwest National Laboratory's request for procedural closure of the Washington State Hazardous Waste Management Act (Chapter 70.105 RCW) **Biological Treatment Test Facilities** identified in the Part A permit application submitted May 18, 1988. This request is being submitted in accordance with Section 6.3.3 of the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Action Plan. The information summarized below demonstrates that the **Biological Treatment Test Facilities** have never treated, stored, or disposed of dangerous waste, including mixed waste, except as provided by Washington Administrative Code (WAC)-173-303-200 and WAC-173-303-802. No plans exist to manage dangerous or mixed waste at the facilities, except as provided by WAC-173-303-200 or WAC-173-303-802. The procedural closure of the facilities will modify the Hanford Facility Permit Application by eliminating the **Biological Treatment Test Facilities** Form 3 from that document. → RCRIS

1.2 Previous Application Submittal

On May 19, 1988 (see Section 1.1), a Form 3 was submitted based on an RL, Ecology, and Environmental Protection Agency agreement that groups of similar technologies could be permitted together, regardless of the physical location of the technologies and the types of wastes to be treated. As a result of a Research Development and Demonstration Permitting Strategy Study that was conducted by RL, the Laboratory, and Westinghouse Hanford Company, it was determined that there was no future need to obtain a "generic" RCRA permit for demonstrating the biological treatment technologies.

2.0 FACILITY DESCRIPTION

The Part A Permit Application (Form 3) for the biological treatment test had projected activities to occur at the 324, 325, and 331 Buildings in the 300 Area. The application also indicated that biological treatment technologies might be used in other facilities and at radioactive mixed waste remedial action locations.

3.0 PROCESS INFORMATION AND DATA GATHERING

3.1 Operations History

Waste management activities within the facilities have consisted solely of the management of hazardous waste in accordance with the generator requirements of WAC-173-303-200. Biological treatment test activities that have been performed were accomplished with simulated waste streams, purgewater, and/or treatability study samples and samples for characterization. The use of simulated waste streams for treatment testing is not regulated as treatment under WAC-173-303 (see Attachment A). Studies performed with purgewater were conducted under the Small Quantity Treatability Test exemption limits, in accordance with the Strategy for Handling and Disposing of Purgewater at the Hanford Site, dated July 1990, and in accordance with CERCLA. Residues from biological treatment activities were managed in accordance with WAC-173-303 requirements and the Laboratory waste management practices.

3.2 Data Gathering for Biological Treatment Part A Activities

Records review, certification statements, and field inspections were used to establish whether regulated waste treatment, storage, and disposal occurred under the regulatory authorization of the **Biological Treatment Test Facilities** Form 3 between 1988 and 1995 (see the attached Administrative Record Inventory). The approach used and the results of this data gathering effort are described in the following sections.

3.2.1 Approach

Three primary sources of information were used or examined to provide the Laboratory senior management, RL, and Ecology assurance that the certification statement provided is true, accurate, and complete. These information sources included the following:

- Review of administrative controls/records that are used for operations under the permit application portions in question, including the RL Laboratory Memorandum of Agreement dated 8/15/88; PNL-MA-8, Chapter 14, dated 8/88; and the Laboratory internal documents.

- "Management and Implementation Plan for Compliance with RCRA Part A Permits," dated June 1988.
- Memo, W.R. Wiley to Distribution, PNL RCRA Permit Compliance," dated 7/14/88.
- "Environmental Compliance Management Plan," dated February 7, 1990.
- The Laboratory business records that list authorized projects between 1987 and 1995.
- The Laboratory corrective action databases for findings (internal and external) of noncompliance related to treatment activities.
- The Laboratory Environmental Compliance, RL inspection reports.

- Statements from Operations/Project/Program Managers and Principal Investigators that no operations regulated under the permit application occurred. Those individuals receiving requests for certification statements were also advised to conduct the following in support of their certification statements:
  - interviews/consultations with the Laboratory staff who were involved with Part A Application activities;
  - spot checks of operational logs, laboratory notebooks, records, and files of projects of interest;
  - reviews of organizational records, plans, or reports for projects that involved the treatment of purgewater, waste stimulants, or actual wastes (within small quantity exclusion limits).
- An onsite review of facilities/laboratories that were included in the procedural closure requests/Part A Application. Onsite reviews or field evaluations served to verify that the contractor submitted information requesting procedural closure. All of the identified facilities were reviewed by the Laboratory's representatives. Participation in the review of the 331 Building included Ecology and PNL Environmental Compliance/Facilities and Operations personnel. Verification inspections of the 324 and 325 Buildings and the 200 ZP-1 OU were performed by the Laboratory Environmental Compliance Department staff.

3.2.2 Data Gathering

Data gathered for the procedural closure request supported the contention that no activities were conducted which would have activated the May 18, 1988, Part A permit application. Results of this data gathering activity are summarized in the following sections. Attachment B illustrates the overall process used for the data gathering task.

Records Review

A review of the administrative documents that are used for operations under the Part A Permit Application indicated that these institutional controls would have required the Laboratory staff who were involved in treatment technology testing to have approval from the Laboratory Environmental Compliance Department staff who are knowledgeable of WAC requirements before initiating the project. Without administrative approvals in place, funding authorization would be withheld and the project would not proceed. These approvals would also ensure that proper notification of regulated activities would be recorded.

Key word searches of the Laboratory's business records were conducted to identify projects that could have been candidates to activate the treatment component of Part A Permit Application. For this inquiry it was assumed that all Laboratory administrative requirements were met to allow the project to have authorized funding. Therefore, the business records represent the "universe" of all projects that were conducted based on funding authorization.

The records search (business records) included all funded (1830/31 contract type) projects since 1987 (before the May 1988 permit filing). The initial search of the database was conducted using a list of project managers who were known to have been involved in biological treatment testing research, including both current and former employees. The search summarized all records where the payroll number matched that of the list of project managers or principal investigators provided. The second phase of the search involved the use of keywords or keyword strings in the scope statement to look for technology-specific projects. An example of how this works is as follows: string used ==> "% WASTE %," returns project listings with scope statements including hazardous waste, mixed waste, waste evaporation, waste dissolution, waste water, etc. This information was used to retain projects for closer evaluation and to eliminate others from consideration. This database evaluation was also used to identify other Principal Investigators or Project Managers with potential treatment testing under the Part A Permit Application. As a result of reviewing these records in detail, no projects were found which required the Part A Application.

Other databases reviewed included the Corrective Action Tracking System specific to all deficiencies/noncompliances in the Laboratory databases

Other databases reviewed included the Corrective Action Tracking System specific to all deficiencies/noncompliances in the Laboratory databases related to environmental issues. Another internal compliance database inquiry included the following topics (objects): air sample, asbestos abatement, CERCLA, Clean Air Act, Environmental, ES&H, FEMP, NEPA, NPDES, RCRA, Water, and PNL Waste Management and Environmental Compliance. The records are limited to conditions noted between 1990 and 1995. More than 1000 records were reviewed. Neither database had information indicating that treatment activity occurred that would have required the activation of the Part A Permit Application.

Other records reviewed included both external and internal inspection and compliance reports, individual project files and logbooks, project workplans or reports, and state notification files for dangerous waste treatability studies. The compliance reports were selected to isolate the facilities listed in the Part A Permit Application (i.e., the 325, 331, and 324 Buildings).

Certification Requests

Nine individuals received a memorandum requesting a written certification and information related to technology treatment activity. The initial distribution list for the memorandum was based on the recommendations of an adhoc panel comprised of the Laboratory staff and management who have institutional knowledge of and history with the Part A Permit Application. One additional person received the certification information based on his involvement in specific biological research projects. A photocopy of the certification request is shown in Attachment C.

The certification information that was received supported the contention that the Part A Permit Application can be procedurally closed and that no treatment activity took place that would have required the Part A Permit Application. The information provided showed that treatment testing did occur in the Laboratory facilities (324 EDL 101) or Hanford Site field demonstration locations (200 ZP-1 Operable Unit) between 1988 and 1995; however, this activity was either conducted under another regulatory authorization (CERCLA Treatability Study) or within treatability exemption limits. Certifications were also received from two of the originators of the Part A Permit Applications filed in 1988. Information provided with these certifications reaffirmed that the filing of the Part A Permit Application was protective in nature for activities which were largely "anticipated" and not actually planned.

Field Evaluations

Specific buildings on the Hanford Site that were identified in the Part A Permit Application were visited to determine if evidence remained of treatment activity that was regulated under the application. As outlined in the Part A Permit Application, the field inspections included the 324, 325 and 331 Buildings and a 200 Area field demonstration site. No evidence was found during the field evaluations that would suggest the activation of the application. In the case of the 331 Building, the verification field inspection was conducted by the Laboratory with representatives present from RL and Ecology. Verification inspections of the 324 and 325 Buildings and the 200 ZP-1 OU were performed by the Laboratory Environmental Compliance Department staff.

3.3 Waste Designation and Waste Management

Project-specific records were gathered and reviewed to determine if secondary waste streams from existing treatment technologies were regulated under the Part A Permit Application or if proper waste decontamination was performed to preclude waste storage following the completion of treatment testing. Based on the information gathered during and as a result of the field inspections, no treatment activity occurred that would have required the Part A Permit Application.

Specific to the determination of the activation of the Part A Permit Application is whether simulants used in research activities are regulated as wastes. To clarify this issue, Ecology has provided written concurrence that the treatment of simulants are not regulated as wastes (see Attachment A).

4.0 SUMMARY

Biological treatment test activities that have been conducted at the Hanford Site and that were subject to the Washington State Dangerous Waste Regulations were conducted with simulants, purgewater, or with waste quantities that fall within the treatability study sample exclusion. No activities have been conducted within the scope of the Biological Treatment Test Facilities Part A Permit Application that require the preparation and submission of a Part B Permit Application, nor are any planned. RL and the Laboratory request that procedural closure in accordance with Section 6.3.3 of the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Action Plan be implemented.

5.0 BIOLOGICAL TREATMENT TEST FACILITIES PROCEDURAL CLOSURE TECHNICAL DATA SYNOPSIS CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

John D. Wagoner — 12/19/95

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

[signature] — December 12, 1995

Co-operator — Date
William J. Madia, Director
Pacific Northwest National Laboratory

Administrative Record Summary
for
Procedural Closure of Biological Treatment Test Facilities Part A Permit Application

Volume	Section	Description of Records
1	1	Responses to Certification Requests
1	2	Certification request memorandum
1	3	Business records search printouts and records search parameters
1	4	Description of 324 EDL 101 Pilot Scale system decontamination and disposition
1	4	Hanford Purgewater Strategy Document (Cover memo, title page and Section 3.6)
1	4	Small Quantity Waste Treatability reporting records (1989 to 1995)
1	4	Integrated Test Plan: In Situ Bioremediation Demonstration, BHI-00154, Rev. 0
1	4	Project Management Plan (PMP): Hazardous Waste Degradation Using White Rot Fungus, April 1990 (and follow-on revisions)
1	4	PMP: Bioadsorption of Radionuclides and Heavy Metals, January 1990
1	4	Test Plan: Biosorption of Uranium from Hanford Groundwater, Test Plan # ER-M73306-01, May 1990
1	4	Record Form: Treatability Study Tracking System for (200 Area Ground-Purgewater) Biosorption of Radionuclides, March 1990 and July 1990
1	4	Test Plan: In Situ Biological Treatment of Carbon Tetrachloride in Soil, August 1990
1	4	Safe Operating Procedure: Handling Small Quantities of Trinitrotoluene, 5/90
1	4	Radiation protection documentation for 324 Building, Room 146 experimentation/waste disposition planning
1	4	SQST memorandum (and attachments):

Volume	Section	Description of Records
		Radionuclide Contaminated Groundwater, TM Brouns to J Dickman, April 1990
1	4	SQST Form: Biosorption of Radionuclides, Uranium Adsorption Test, January 1990
1	4	Waste Management documentation for Radionuclide Contaminated Groundwater, August 1990

1	4	Report: Biodenitrofication of U03 Plant Process Condensates, April 1988
1	4	Report: Development of a Biological Treatment System for Hanford Groundwater Remediation: FY89 Status Report, PNL-7290, April 1990
1	4	Biodenitrofication of Hanford Groundwater and Process Effluents: FY88 Status Report, PNL-6917, September 1989

Distribution Lists for Certification Requests for Biological Treatment Test Facilities Part A Permit Application:

Distribution:

List 1	List 2
LA Braby[2]	S Koegler[4]
RA Brouns[2]	
TM Brouns[3]	
JL Buelt[2]	
KL Soldat[1]	
HT Tilden[2]	
MJ Turex[3]	
RA Walters[2,1]	

Legend: [1] - Certification Request Not Applicable to individual identified
[2] - Certification response included
[3] - Combined with certification from RA Brouns
[4] - Not employed by PNL

Attachment A

Ecology Letter (9/11/95) Regarding Regulation of Simulants

42581

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

1315 W. 4th Avenue • Kennewick, Washington 99336-6018 • (509) 735-7581

September 11, 1995

Mr. James E. Rasmussen, Director
Environmental Assurance, Permits and Policy Division
U.S. Department of Energy
P.O. Box 550
Richland, WA 99352

Mr. Kenneth C. Brog, Director
Environmental Safety and Health
Pacific Northwest Laboratories
P.O. Box 999
Richland, WA 99352

Dear Messrs. Rasmussen and Brog:

Re: Regulation of "Simulated Waste"

The Washington State Department of Ecology (Ecology) is conducting an inspection at various U.S. Department of Energy facilities operated by Pacific Northwest Laboratories (PNL) as part of the procedural closure process for Thermal Treatment Test Facilities and Physical/Chemical Test Facilities. During this inspection, questions have arisen as to management requirements for simulated waste streams. After researching this issue, I offer the following guidance:

Simulated waste is created using prescribed chemical constituents for the purpose of performing treatability tests. This material is not considered a dangerous waste, but rather should be managed as product. Resultant waste streams, i.e., those created as a result of applied treatment, are subject to conditions of Chapter 173-303 WAC. Simulated waste cannot be created using actual dangerous waste. If dangerous waste is used to create a simulated waste, the entire mixture is subject to conditions of Chapter 173-303 WAC.

The above guidance supersedes Ecology's April 30, 1990, letter on management of simulated waste used during a pilot-scale underground tank in-situ vitrification (ISV) test.

Further, the material used to perform the referenced ISV test is not deemed a solid waste at the onset of the test. However, as noted above, waste streams resulting from applied treatment are subject to conditions of Chapter 173-303 WAC.

Do not hesitate to call me at (509) 736-3019 if you have any questions regarding this letter.

Sincerely,

Jeanne Wallace, Unit Manager
Nuclear Waste Program

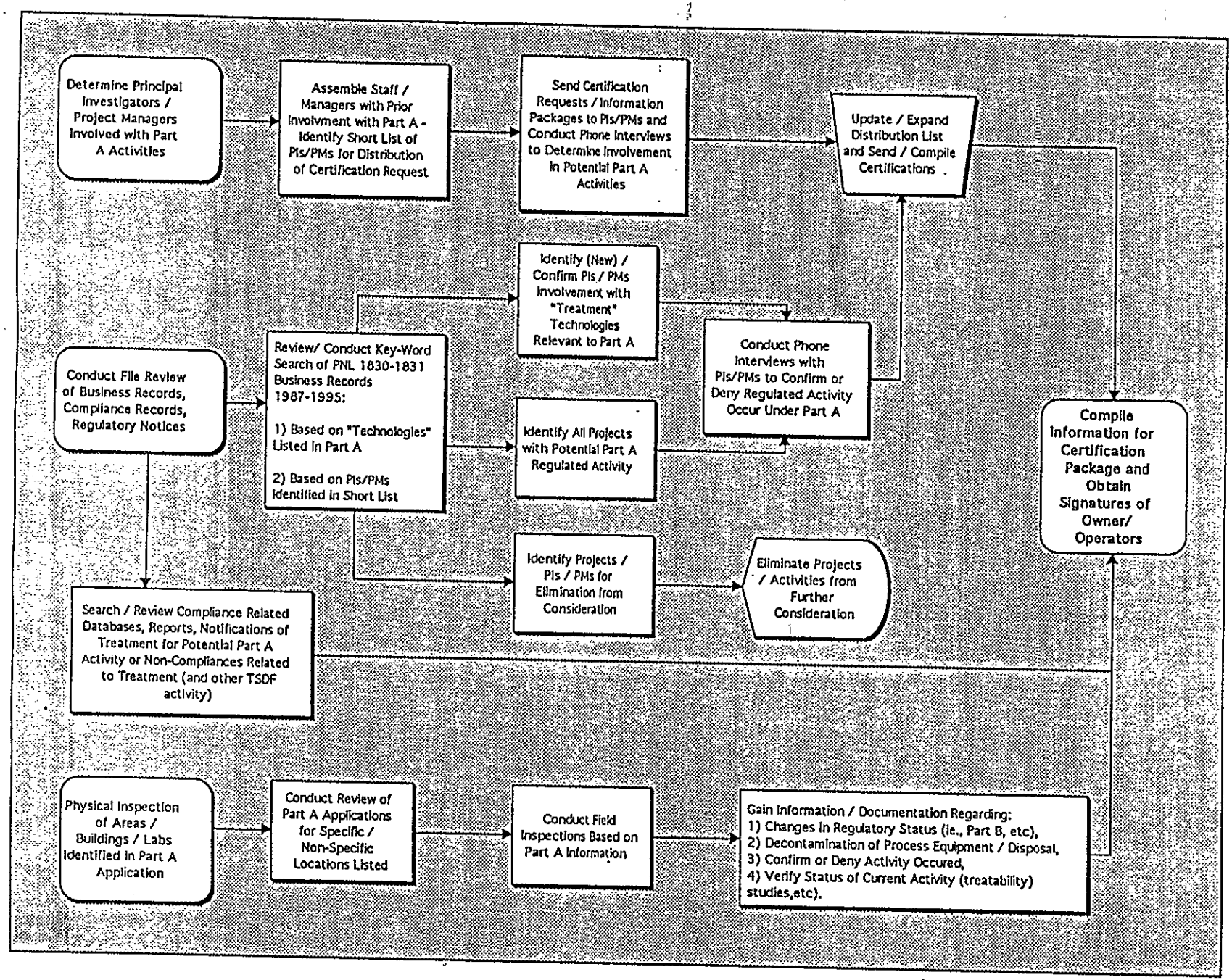
JW:sl

cc: Cliff Clark, USDOE
Bob DeLannoy, USDOE
Bet Flores, PNL
Mike Schlender, PNL
Harold Tilden, PNL

Attachment B

Data Gathering Process Flow Diagram

Part A Application Review / Data Gathering Process



Attachment C

Certification Request Memorandum and Distribution

Distribution Lists for Certification Requests for Biological Treatment Test Facilities Part A Permit Application:

Distribution:

List 1

LA Braby[2]
RA Brouns[2]
TM Brouns[3]
JL Buelt[2]
KL Soldat[1]
HT Tilden[2]
MJ Turex[3]
RA Walters[2,1]

List 2

S Koegler[4]

Legend: [1] - Certification Request Not Applicable to individual identified
[2] - Certification response included
[3] - Combined with certification from RA Brouns
[4] - Not employed by PNL

Battelle
Pacific Northwest Laboratories

Project Number _____

Internal Distribution

LA Braby
RA Brouns
TM Brouns
JL Buelt
KL Soldat
HT Tilden
MJ Truex
RA Walters
KCB:File/LB

Date October 5, 1995

To Distribution

From KC Brog KCB

Subject PROCEDURAL CLOSURE OF THE BIOLOGICAL TREATMENT TEST FACILITIES

You have been selected to establish whether certain biological treatment activities were conducted in specified Pacific Northwest Laboratory (PNL) facilities. Your selection is based on

- your involvement in the development of biological treatment technologies at PNL
- your support role with projects, programs, and/or facilities that planned to conduct biological treatment activities at PNL
- your involvement in the hazardous waste permit application that specified the biological treatment activities and PNL facilities

Background

In 1987, the Department of Energy, Richland Operations (RL) became subject to permitting under the Resource Conservation and Recovery Act (RCRA) for all activities involving mixed waste. Mixed Waste is a waste stream that contains both hazardous and radioactive components. At that time, several PNL programs were developing proposals to evaluate innovative waste treatment technologies, using actual wastes (as opposed to surrogates) in pilot-scale testing.

In early 1988, PNL and RL were led to believe that all treatment testing activities would be subject to permitting under RCRA, even bench and pilot-scale studies. The number and variety of technologies and laboratory/research facilities PNL planned to use would have made the standard permitting options too costly. The Environmental Protection Agency (EPA), the State of Washington Department of Ecology (Ecology), and RL agreed with PNL that a means of allowing research on a larger scale would benefit the environmental cleanup. As a result, three (3) treatability study based Interim Status RCRA Permits were established: Thermal Treatment Test Facilities, Biological Treatment Test Facilities, and Physical/Chemical Treatment Test Facilities. Current RCRA regulations allow treatability studies on actual hazardous waste above bench scale, but less than 1000 kg per waste stream, without a RCRA hazardous waste permit.

In 1993, all PNL departments involved in waste treatment technologies participated in a research, development and demonstration (RD&D) study conducted jointly by RL, PNL, and Westinghouse Hanford Company. The study concluded that there were no programs in need of the treatability study permits.

Closure

Units and activities operating under interim status are required to obtain a final status permit or close. Permits can be closed in one of two ways: 1) formal RCRA closure plans for each technology and each laboratory/facility listed on the Biological Treatment Test Facilities Part A Permit Application, Rev 0, dated May 18, 1988 (the Application); or 2) procedural closure under Section 6.3.3 of the Tri-Party Agreement (TPA) is the second option which is more cost effective and less burdensome but requires proof that the technology listed in the Application did not conduct treatment on actual hazardous waste or mixed waste. Actual biological hazardous waste treatment under the small quantity treatability exemption (less that 1000 kg/waste stream) must be identified. PNL will close the permit according to the second option.

Your assistance is requested to establish, to the satisfaction of RL and Ecology, that biological treatment activities did not take place. This assurance must be sufficient that the RL manager, John Wagoner, must certify under penalty of law that the Biological Treatment Test Facilities never treated hazardous or mixed wastes. Ecology will seek satisfaction based on an examination and inspection of the facilities and the applicable research records.

Biological Treatment

Activities listed on the Application as specific waste treatment technologies are as follows:

- suspended growth reactor
- fluidized bed reactor

In general, the Application included the use of micro organisms (naturally present or environmentally enhanced) to treat various chemical constituents, such as organics, nitrates, chromium, and cyanide.

Biological Treatment Test Facilities

Facilities named in the Application are selected laboratories in the following buildings:

- 325 Building
- 324 Building
- 331 Building

The application documentation also indicated that biological treatment testing may have occurred at specific radioactive mixed waste remedial action locations.

Actions

You are requested to perform the following actions to determine whether or not the listed biological treatment activities were conducted in the specified PNL facilities:

- Determine your involvement in the biological treatment RD&D activities at PNL.
- Fill out the attached checklist. Use the attached questionnaire to assist in identifying and collecting the appropriate documentation.
- Sign the attached certification. If you feel that you will not be able to sign the attached certification statement, contact Mike Schlender at 376-8795 as soon as possible.
- Return the completed checklist and signed certification statements by October 19, 1995.

Your prompt attention to and completion of the above action items is critical to support a procedural closure certification statement from the PNL director and the RL manager to Ecology and EPA. The submittal will satisfy a TPA milestone action with a December 31, 1995 completion date.

If you know of a project manager or researcher who is responsible for one of the named programs, but is not on the distribution for this memo, or if you need a copy of the Biological Treatment Test Facilities Part A Permit Application, Form 3, please contact Mike Schlender at 376-8795.

BIOLOGICAL TREATMENT TEST FACILITIES
PROCEDURAL CLOSURE CHECKLIST
AND
CERTIFICATION STATEMENT

I. Identify potential treatment process, activities, operations, projects, or functions that have been planned, conducted, or managed under your purview from May 18, 1988 until the present.

II. Were biological treatment activities listed below including activities conducted under the treatability study exemption, conducted on hazardous or mixed waste in operations/projects under your purview?

III. Are any of the biological treatment activities in the list below?

- suspended growth reactor
- fluidized bed reactor

IV. For each treatment activity from the list, provide the following information:

1. Was the treatment process conducted after May 19, 1988?

2. What was the actual location of the treatment process?

3. How often did the treatment process operate (give details of operation)?

4. What materials were used in the treatment process?

5. Where did the waste originate? Who provided the waste?

6. Was the waste a mixed waste?

7. Was the biological treatment process conducted on the Hanford Site at CERCLA units?

8. List the available documents (and their location) that support the information supplied above. Useful records include (but are not limited to) program/project plans, proposals, schedules, meeting minutes, financial plans, contracts, laboratory record books, inspection reports, logs showing quantities of hazardous or mixed

waste removed from research locations and any other PNL documents addressing biological treatment studies that were:

- planned but never conducted
- conducted using surrogates
- conducted under small quantity treatability studies (any studies under this exemption require the production of documentation required by regulations).

9. How were any resultant waste streams, including those conducted under the treatability study exemption, managed (for example, returned to generator or managed as hazardous waste in accordance with PNL waste management procedures)? Please be as specific as possible.

PACIFIC NORTHWEST LABORATORY
BIOLOGICAL TREATMENT TEST FACILITIES:
PROCEDURAL CLOSURE CERTIFICATION

I, the undersigned, hereby certify based on my personal knowledge and participation in or support to the program/project titled _____, in (bldg/location)_____, (lab/suite#)_____:

That under said program/project, no biological treatment activities have been conducted with actual hazardous or mixed wastes; and that any other biological treatment activities conducted under this program used simulants.

That under said program/project, where actual hazardous or mixed wastes were used, no biological treatment activities were conducted that exceeded the limitations for Treatability Studies; and that samples treated under the Treatability Study exemption were conducted in compliance with applicable regulations.

The supporting information attached was collected under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered, evaluated and verified the information submitted. Based on my inquiry of the persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate, and complete.

_____/s/_____
(Witness)

_____ _____
(Print Name/Title) (Print Name)

_____
(Date)