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IDENTIFICATION OF MAJOR COMMENTS ON THE DRAFT WASTE WATER PILOT PLANT RESEARCH, DEVELOPMENT AND DEMONSTRATION PERMIT

April 27, 1993

Public Notice: (See attached mark-up)

Technical Fact Sheet: (See attached mark-up)

1. Page 2, First paragraph

Issue/Action: This paragraph states that the Permit is issued to WHC and the DOE-RL. This paragraph should be changed to delete the reference to WHC and to indicate that the "U.S. Department of Energy-Richland Operations Office" is the Permittee.

Justification: This provision mischaracterizes the legal nature of contractor responsibilities and will result in management inefficiencies because it inaccurately portrays the DOE-RL and WHC as equal permittees with no distinction of responsibilities. This approach ignores the functional differences among the DOE-RL and its contractors. The DOE-RL is responsible for overall management and operation of the Hanford Facility, including policy, programmatic funding, scheduling decisions, and general oversight. The contractors, limited by the terms of their contracts and by law, are responsible for certain day-to-day activities such as waste analysis, waste handling, monitoring, container labeling, personnel training, and recordkeeping.

Issuing the permit to the "U.S. Department of Energy-Richland Operations Office" will avoid mischaracterizing the nature of responsibilities under the law.

2. Page 5, 3rd para: trichloroethane and methylene chloride are both halogenated solvents. Recommend deleting the word nonhalogenated. Waste codes should be identified as F002 and F004 rather than F1002 and F1004 (See mark-up).
3. Page 6, 5th para: Waste treatment amount is limited to 5000 gallons per week. This rate does not include waste treatment to be carried out at the LERF filter units as detailed in permit condition V.D.1.b.ii. This second reference allows 152,000 gal/mo to be treated at LERF.

Draft Permit:

1. Pages 1, 3, and 12 (Item h.) of 50

Issue/Action: This page states that the Permit is issued to WHC and the DOE-RL. This paragraph should be changed to delete the reference to WHC and to indicate that the "U.S. Department of Energy-Richland Operations Office" is the Permittee.

Justification: This provision mischaracterizes the legal nature of contractor responsibilities and will result in management inefficiencies because it inaccurately portrays the DOE-RL and WHC as equal permittees

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with no distinction of responsibilities. This approach ignores the functional differences among the DOE-RL and its contractors. The DOE-RL is responsible for overall management and operation of the Hanford Facility, including policy, programmatic funding, scheduling decisions, and general oversight. The contractors, limited by the terms of their contracts and by law, are responsible for certain day-to-day activities such as waste analysis, waste handling, monitoring, container labeling, personnel training, and recordkeeping.

Issuing the permit to the "U.S. Department of Energy-Richland Operations Office" will avoid mischaracterizing the nature of responsibilities under the law.

2. Page 12 of 50, Definition h. "Permittees"

Issue/Action: The definition improperly identifies Westinghouse Hanford Company (WHC) as the "operator" of the Waste Water Pilot Plant. Change this definition to identify WHC as "co-operator."

Justification: RL and WHC have indicated to EPA and Ecology on previous occasions when this issue has arisen that it is not accurate to refer to WHC as an "operator." Within the context of dangerous waste laws, WHC's management responsibilities should more correctly be characterized as "co-operator."

Applicable Dangerous Waste Regulations at WAC-173-303-040 define "operator" as "the person responsible for the overall operation of a facility." (Emphasis added.) The same definition is found in RCRA implementing regulations at Title 40 CFR, Section 260.10.

As WHC is not responsible for the overall operation of either the Hanford facility or any individual unit within the Hanford Facility, it is not an "operator" within the meaning of the dangerous waste law. Rather, RL is responsible for overall management and operations of the Hanford facility with authority over policy, programmatic funding, scheduling decisions, and general oversight. WHC, on the other hand, is responsible for certain day-to-day activities such as waste analysis, waste handling, monitoring, container labeling, personnel training, and record keeping. Consistent with their respective responsibilities, permit applications are signed by RL as the owner and operator, and WHC signs as the co-operator.

The recognition of RL's role is also confirmed by the Tri-Party Agreement in which RL, Ecology, and EPA have agreed as the basis of that Agreement (see e.g. Article VI, paragraphs 22 and 23) that RL owns and operates the Hanford facility. It is incorrect to consider WHC as the operator of the Waste Water Pilot Plant.

This position has been set out previously for EPA and Ecology in the Hanford Site Comments on the Draft Permit for the Treatment, Storage and Disposal of Dangerous Waste for the Hanford Facility, dated March 16, 1992, and in the letter from R. D. Izatt of DOE-RL to D. B. Jansen of Ecology dated August 7, 1992. The issue has also arisen in discussions with EPA on an informal draft of the Waste Water Pilot Plant RCRA RD&D

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Permit in January 1993 in which EPA recognized DOE-RL as owner and operator and WHC as co-operator of the facility, and in a Compliance Letter from Ecology to DOE-RL and another site contractor dated October 30, 1992, in which the contractor was labeled as operator of the 305-B Storage Facility.

3. Page 28 of 50; Conditions II.H.1.q and r: The VOC analyzer alarms, not the "Carbon Unit- LERF." Also we have only one carbon canister, i.e., there is no primary and secondary carbon units at LERF (there is at 1706-KE, however).
4. Page 29 of 50; Condition II.I.2: The names, addresses, and phone numbers of the building emergency directors will not be provided due to Privacy Act concerns. Regulatory inquiries regarding emergency conditions are handled through a single point-of-contact as identified in the Hanford Facility Contingency Plan (Page 7A-1, lines 33 through 46) that is included as Attachment 8 of the Draft Permit.
5. Page 43 of 50; Condition V.D.1.a.i: The RO Unit must be operated at 12 gpm. This is not a recycle mode.
6. Page 44 of 50; Condition V.D.2.c: The 16 pressure indicators are not interlocked to the high pressure pumps. In fact, none of the "indicators" are interlocked (they are simply pressure gauges). The RO-hps-1, -2, and -3 are the switches that are interlocked to the pumps for high pressure shutdown.
7. Page 45 of 50; Condition V.D.2.g: What does the value of "75 ppm" for the control setpoint mean? The instrument range is set at 0-20 ppm.
8. Page 48 of 50; Condition V.E.3.a: Include RO-hps-3 too.

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ATTACHMENT

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United States Environmental Protection Agency (EPA)
and
Washington State Department of Ecology (Ecology)

PUBLIC NOTICE AND OPPORTUNITY TO COMMENT
DRAFT RESEARCH, DEVELOPMENT, AND ^{AND STORAGE} DEMONSTRATION
HAZARDOUS WASTE TREATMENT PERMIT
US DEPARTMENT OF ENERGY, RICHLAND OPERATIONS OFFICE
EPA I.D. NO; WA 789000 8967

Purpose:

The United States Environmental Protection Agency (EPA) and the Washington State Department of Ecology (Ecology) are seeking public comment on a proposed Research, Development and Demonstration Permit for the United States Department of Energy-Richland Field Office and Westinghouse Hanford Company (the Permittees). EPA and Ecology have made a tentative determination to issue a joint permit under the authority of 40 CFR Section 270.65 and WAC 173-303.

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Overview *200 Area Effluent Treatment Facility*
The purpose of the Permit is to allow for the initial operational test for the ~~242-A Evaporator/Purex Plant Condensate Treatment Facility~~. The permit is temporary in duration and limits quantities of hazardous mixed waste to be treated. (Mixed waste is defined as containing radioactive and hazardous constituents.) The Permit also includes stringent terms to protect public health and the environment.

The treatment process which would be developed under this permit is a key element of the overall treatment system being developed to reduce the volume of mixed waste in as many as 200 underground storage tanks at Hanford's tank farms. The safety and cleanup of these tanks has been a major public concern for some time.

Under the Permit, the Permittees would use existing technologies to demonstrate a mixed waste treatment process for this mixed waste stream of water. The Permit is temporary and limits the quantities of mixed waste to be treated.

Facility Description:

This RD&D permit includes two areas within the Hanford Facility located in Richland, Washington, at (1) the Engineering and ~~(2) the Environmental Demonstration Laboratory, Building 1706-KE and (2) at the Liquid Effluent Retention Facility.~~

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Public Participation:

A forty-five (45) day public comment period will begin on May 17, 1993 and will close on June 30, 1993.

Comments on the draft permit or a request that a public hearing be held should be submitted in writing to:

Daniel Duncan
Hanford RCRA Program Manager
US Environmental Protection Agency, Region 10, HW-105
1200 Sixth Avenue
Seattle, Washington 98101

or to *management*

Toby Michelena
Nuclear and Mixed Waste Program, Section Supervisor
Washington State Department of Ecology
Post Office Box 47600
Olympia, Washington, 98504-47600

Comments should include all reasonably available references, factual grounds and supporting material.

A Public Hearing will be held:

7:00 PM
Wednesday, June, 16, 1993

Hawk Union Building
Columbia Basin College
2600 North 20th Street
Pasco, Washington
(509) 547-0511

Prior to issuing the permit, EPA and Ecology will consider all *and* written comments received during the public comment period, *and* any oral or written statements received during the public hearing.

Availability of Documents for Public Review:
EPA's administrative record, including all data submitted by the applicant, the fact sheet, the draft permit and maps showing the exact location of the activity, may be reviewed at EPA and Ecology between the hours of 8:30 am and 4:30 pm, Monday through Friday at the following locations:

U.S. Environmental Protection Agency Region 10
Hazardous Waste Division
Region 10, 1200 Sixth Avenue
Seattle, Washington 98101

Washington State Department *management* of Ecology
Nuclear and Mixed Waste Program
719 Slater Kenney Road #200
Lacey, Washington 98503-1138

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In addition, copies of the RD&D permit fact sheet, a listing of the RD&D permit administrative record, and the draft RD&D permit are available for public review at the following public information repositories:

University of Washington - Suzzalo Library
Mailstop FM-25 - Government Publications
Seattle, Washington 98915
(206) 543-4664

U.S. Department of Energy- Richland ^{operations} Field Office
Washington State University Library, Tri-Cities
100 Sprout Road, Room 210
Richland, Washington 99352
(509) 376-8583

Portland State University
Branfor Price Millar Library
Science and Engineering Floor
Corner of Harrison and Park
Portland, Oregon 97207
(503) 464-4617

Gonzaga University
Foley Center
E. 502 Boone
Spokane, Washington 99258
(509) 328-4220, ext. 3125

Joe S. Stohr, Acting Program Manager
Nuclear and Mixed Waste Program
Department of Ecology *Management*

Randall F. Smith, Director
Hazardous Waste Division
Environmental Protection
Agency

Date _____

Date _____

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ATTACHMENT

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AND STORAGE

DRAFT RESEARCH, DEVELOPMENT, AND DEMONSTRATION
HAZARDOUS WASTE TREATMENT PERMIT
US DEPARTMENT OF ENERGY, RICHLAND OPERATIONS OFFICE
EPA I.D. NO; WA 789000 8967

Purpose

The United States Environmental Protection Agency (EPA) and the Washington State Department of Ecology (Ecology) are seeking public comment on a proposed Research, Development and Demonstration Permit for the United States Department of Energy-Richland Field Office and Westinghouse Hanford Company (the Permittees). EPA and Ecology have made a tentative determination to issue a joint permit under the authority of 40 CFR Section 270.65 and WAC 173-303.

Sections

RCRA Area Effluent Treatment Facility.

The purpose of the Permit is to allow for the initial operational test for the ~~242-A Evaporator/Purex Plant Condensate Treatment Facility~~. The permit is temporary in duration and limits quantities of hazardous mixed waste to be treated. (Mixed waste is defined as containing radioactive and hazardous constituents.) The Permit also includes stringent terms to protect public health and the environment.

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The forty-five (45) day public comment period will begin on May 17, 1993 and will close on June 30, 1993.

Comments on the draft permit or a request that a public hearing be held should be submitted in writing to:

Daniel Duncan
Hanford RCRA Program Manager
US Environmental Protection Agency, Region 10, HW-106
1200 Sixth Avenue
Seattle, Washington 98101

or to *management*

Toby Michelena
Nuclear and Mixed Waste Program, Section Supervisor
Washington State Department of Ecology
Post Office Box 47600
Olympia, Washington, 98504-47600

Comments should include all reasonably available references, factual grounds and supporting material.

A Public Hearing will be held:

7:00 PM

Wednesday, June, 16, 1993

Hawk Union Building
Columbia Basin College
2600 North 20th Street
Pasco, Washington
(509) 547-0511

Prior to issuing the permit, EPA and Ecology will consider all written comments received during the public comment period, any oral or written statements received during the public hearing, the requirements of the hazardous waste regulations of 40 CFR Parts 124, 260-265, and 270, and the Agency's and State's permitting policies under WAC 173-303.

When EPA and Ecology make the final decision to issue or deny the permit, notice will be given to the applicant and each person who has submitted written comments or requested notice of the final decision. If no comments are requested a change in the draft permit, the final permit shall become effective immediately upon issuance.

* * * * *

This fact sheet has been developed jointly by EPA, Region 10, and Ecology in accordance with the Resource Conservation and Recovery Act (RCRA) and the requirements of 40 CFR § 124.8.

Overview

The treatment process which would be developed under this permit is a key element of the overall treatment system being developed to reduce the volume of mixed waste in as many as 200 underground storage tanks at Hanford's tank farms. The safety and cleanup of these tanks has been a major public concern for some time.

Liquids from the underground tanks contain mixed waste: water and hazardous substances including some low-level radioactive materials. The liquids are pumped from the underground tanks into Evaporator 242-A where water is removed by condensation within the evaporator, thus separating the water from the suspended solids in the liquid. The resulting water is contaminated with low level radionuclides and hazardous substances resulting in a mixed waste stream. Currently, this waste water is discharged in a large pond-like impoundment.

called 242-A Evaporator process concisely,

Under the Permit, the Permittees would use existing technologies to demonstrate a mixed waste treatment process for this mixed

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waste stream of water. The Permit is temporary and limits the quantities of mixed waste to be treated.

The Permit includes stringent terms to protect public health and the environment. Filters are designed to prevent any contamination from being released into the atmosphere. It is possible that the treated water may still contain some contaminants. The treated water resulting from the operation will be returned to the holding pond. The final disposal of the treated water will be addressed separately from this permit.

This RD&D project is a key step in the design of a full scale treatment facility. The permitted RD&D activity would take place at two locations within the Hanford Facility and is a critical step in the design of the full scale ~~242-A Evaporator/PUREX Plant Process Condensate Treatment Facility~~. In addition, this RD&D project will provide data to evaluate a petition for the delisting of the effluent from the 242-A evaporator under RCRA authority. This Research Demonstration and Development project is identified as milestone M-17-14 in the Hanford Federal Facility Agreement and Consent Order.

*200 A/c
Effluent
Treatment
Facility*

Facility Description:

This RD&D permit includes two areas within the Hanford Facility located in Richland, Washington, at (1) the Engineering and (2) ~~the~~ Environmental Demonstration Laboratory, Building 1706-KE and (2) ~~at~~ the Liquid Effluent Retention Facility.

The Permittees will demonstrate a waste treatment process to decontaminate 242-A Evaporator ~~Condensate Waste~~. This is a mixed waste containing both radioactive and ~~dangerous materials~~ *hazardous substances* (organic and inorganic contaminants as suspended and dissolved solids). This demonstration will utilize existing technology through pilot-scale treatability testing on pH adjustment, organic removal (granular activated carbon adsorption and ultraviolet light mediated oxidation), inorganic removal (ion exchange and reverse osmosis), and suspended solids removal (filtration). This demonstration and testing is required to support the design of the ~~242-A Evaporator/PUREX Plant Process Condensate Treatment Facility~~. *Effluent Treatment Facility*

The purpose of the systems which make up the treatment train will be to treat the process condensate from the 242-A Evaporator. The 242-A Evaporator concentrates various liquid wastes ~~generated on the Hanford Facility~~. ~~The liquid waste is stored in underground double-shell tanks (DTSs).~~ The liquid waste in the DSTs will be piped to the 242-A Evaporator, concentrated through evaporation, and returned to the underground ~~double-shelled storage tanks~~ for storage until final disposal. The condensate derived from this evaporation process, called 242-A Evaporator process condensate,

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*The
and/or
Facility*

is the waste water that will be treated under this RD&D permit. The 242-A Evaporator process condensate will be stored in the pond-like Liquid Effluent Retention Facility (LERF) until a treatment unit is operational.

The 242-A Evaporator condensate is a dangerous waste as defined by WAC 173-303 because the waste is derived from listed dangerous waste as defined in WAC-173-303-080 and listed in WAC 173-303-9903 and 9904. This waste also qualifies as a toxic waste under the state of Washington criteria WAC 173-303-010 and 084(5) for toxicity.

The waste is designated dangerous due to the presence of ~~nonhalogenated~~ spent solvents [RCRA Waste Codes (F001, ~~F~~002, F003, ~~F~~004 and F005) as defined in WAC 173-303-070(2)] and because of the concentration of ammonia [State Waste Code (WT02) under WAC 173-303-084(5)]. Spent 1,1,1 trichloroethane (F001) and methylene chloride (F002) were used as solvents in decontamination activities and were discarded to ~~Double Shelled Tanks~~ (DSTs). X

Spent acetone (F003) was generated by laboratories where it was ~~is~~ used to dry glassware and was discarded through drains to DSTs. Spent methyl isobutyl ketone (F003) was generated in the solvent extraction process and was discarded to Single Shell Tanks (SSTs) and eventually transferred to DSTs. Spent cresylic acid (F004) was used as a solvent in decontamination and was discarded to DSTs. Spent methyl ethyl ketone (F005) was generated in past chemical processing operations. The 242-A Evaporator condensate is also designated a state toxic dangerous waste (WT02) due to the concentration of ammonia.

Small levels of radioactive materials are also present in the waste stream, however radionuclides are not specifically regulated under the proposed permit. Radioactive materials in the waste stream are at or below levels requiring regulation under the Department of Energy or EPA.

Authority for Permitting Research and Development Activities

On November 4, 1984, the President signed into law the Hazardous and Solid Waste Amendments of 1984 (HSWA), which amended the Resource Conservation and Recovery Act (RCRA) to allow EPA to permit research, development, and demonstration (RD&D) activities utilizing an innovative and experimental technology or process for which permit standards have not been promulgated.

Key provisions of the law (Section 270.65 of HWSA) include:

an RD&D Permit shall provide for the receipt and treatment of only those types and quantities of mixed waste that are necessary

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to determine the efficacy and performance capabilities of the technology or process and its effects on human health and the environment.

An RD&D permit shall include any conditions that the Agency believes are necessary to protect human health and the environment, and such requirements the Agency may find necessary regarding testing and information with respect to facility operation.

An RD&D permit shall provide for the construction of the RD&D Activity and for its operation for a period not exceeding 365 operating days. Permits may be renewed up to three times, with each renewal not to exceed 365 operating days. (Note: 365 operating days may extend beyond one calendar year)

The permittees are required to submit to EPA and Ecology RD&D Test Plans which include a summary of the experiment, including quantities and types of mixed waste, date(s) of experimental results, and any operational problems encountered.

EPA and Ecology propose to issue a permit for this RD&D project. The wastes will be obtained from the 242-A Evaporator condensate waste stream. The wastes will be stored in the Liquid Effluent Retention Facility and the 1706-KE Facility. The experiments will be conducted at both these locations. The maximum amount of mixed waste to be received and treated ~~under this permit~~ will not exceed 5,000 gallons per week. This RD&D permit will be jointly issued by EPA and Ecology. Ecology will make a final determination. *at the 1706-KE Facility*

Requirements and authorities established pursuant to HSWA will be enforced by EPA until the State of Washington receives authorization to administer and enforce such authorities and requirements. Washington has adopted RD&D Permitting, but the state is not yet authorized by EPA to enforce RD&D permits.

This RD&D permit will be jointly issued by EPA and Ecology. During the lifetime of the RD&D Permit the State of Washington may become authorized to issue and enforce Dangerous Waste Research, Development and Demonstration permits. This authorization will not change the conditions of the proposed RD&D permit. Any citations to federal statutes or regulations will become citations to the equivalent state statutes or regulations (references available upon request).

The EPA will maintain its oversight role of the state authorized program and will enforce any condition based on state requirements if EPA judges the state has not adequately enforced the RD&D permit conditions.

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*** ACTIVITY REPORT ***

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RESULT	OK

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FAX COVER SHEET

Date:

Page 1 of 13 Pages (Coversheet included)

Fax Number To: <i>(206) 553-0957</i>	Fax Number From: 376-2816
Name: <i>DAN DUNCAN</i>	Name: <i>ROGER BOWMAN</i>
Phone Number/Location:	Phone Number/Location:
Organization:	Organization:

Message



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