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

JUL 24 1997

97-EAP-578

Mr. David S. Dougherty
Nuclear Waste Program
State of Washington
Department of Ecology
1315 West Fourth Avenue
Kennewick, Washington 99336-6018

Dear Mr. Dougherty:

REQUEST FOR MODIFICATION TO STATE WASTE DISCHARGE PERMIT ST 4500, CONDITION S3

With this letter, the U.S. Department of Energy, Richland Operations Office (RL) requests the modification of the subject permit condition.

Enclosure 1 to this letter contains the proposed language for modification of State Waste Discharge Permit ST 4500 (Permit), Condition S3. The Permit allows the discharge of treated wastewater from the 200 Area Effluent Treatment Facility (ETF) to a State Approved Land Disposal Site. Specifically, Condition S3 currently requires RL to submit a characterization study to the State of Washington Department of Ecology (Ecology) for approval whenever a new influent stream, regardless of constituent content, is proposed for treatment in ETF. Ecology's approval for the treatment of new wastewaters has been acquired in compliance with Condition S3. This proposed modification would allow the ETF to accept new waste streams for treatment, under specific conditions, without submitting additional characterization information to Ecology for the approved constituents. Enclosure 2 contains an approved list of constituents of concern by Ecology. The proposed modification would also require RL to develop, maintain, and submit a list of approved influent constituents of concern to Ecology. Enclosure 2 contains the list of currently approved constituents of concern.

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The ETF has demonstrated that it is capable of treating the wastewater constituents of concern associated with the seven Ecology accepted waste streams, identified in Enclosure 1, to below Permit and Washington Administrative Code 173-200 levels. The ETF has also demonstrated that it is the Best Available Technology/All Known, Available, and Reasonable Treatment for treatment of these wastewater constituents of concern.

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If you have any questions, please contact Alex Teimouri, of my staff,
on 376-6222.

Sincerely,



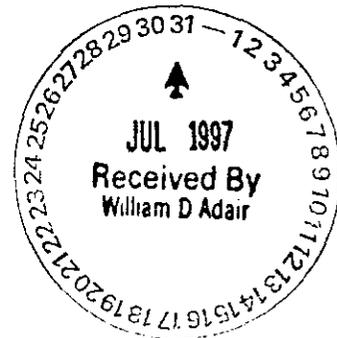
James E. Rasmussen, Director
Environmental Assurance, Permits,
and Policy Division

EAP:AET

Enclosures: 2

cc w/encls:

W. Adair, FDH
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R. Jim, YIN
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C. Strand, FDH
J. Wilkinson, CTUIR
J. Winterhalder RFSH



Enclosure 1

REQUEST FOR MODIFICATION TO STATE WASTE DISCHARGE
PERMIT ST 4500, CONDITION S3

Consisting of 2 pages,
including cover page

Proposed Language for Modification of
State Waste Discharge Permit ST 4500, Condition S3

S3. EFFLUENT TREATMENT FACILITY INFLUENT CRITERIA

The State of Washington, Department of Ecology (Ecology) has approved the discharge of treated wastewater from the Effluent Treatment Facility (ETF) to the state-approved land disposal structure infiltration gallery from the following treated wastewaters:

1. 242-A Evaporator process condensate
2. 200-UP-1 groundwater
3. Quanteria Wastewater
4. Waste Sampling and Characterization Facility Wastewater
5. Plutonium Uranium Extraction Facility Basin Wastewater
6. Solid Waste Landfill Leachate
7. Environmental Restoration Disposal Facility Leachate

If the permittee proposes to run a different influent source(s) (other than those previously listed) through the ETF, the following process shall be followed:

1. The permittee will maintain a list of approved influent constituents of concern. A constituent of concern is defined as any contaminant with a maximum concentration greater than one of the following:
 - Any limit in the 200 Area Effluent Treatment Facility State Waste Discharge Permit ST 4500
 - The groundwater quality standards (WAC-173-200)
 - Delisting levels established in the Final Delisting (60 FR 31115)
 - Background concentrations as measured in groundwater at the 200 Area ETF SALDS

The list will be provided to Ecology when first developed and thereafter upon request.

2. When considering a new influent for treatment in the ETF, the permittee will compare the constituents of concern which exist in the proposed influent source(s), to the list of approved influent constituents of concern.
3. If the proposed influent contains only constituents of concern previously approved by Ecology, then Ecology approval will not be required to treat the new influent at ETF. A listing of such influent streams that are to be treated at ETF will be provided to Ecology each calendar quarter at the same time as the Discharge Monitoring Report submittal.

4. If the proposed influent contains a new constituent(s) of concern, then Ecology approval is required prior to treatment in the ETF. Ecology approval will require the following information.
- a) A description of the proposed influent that includes a listing of all new chemical constituents of concern which exist in the proposed influent source(s), along with the expected range of concentration of each constituent.
 - b) An engineering evaluation which shows that the ETF can adequately process the proposed influent source(s).

Upon receipt of the above information, Ecology will determine if the proposed influent constituents can be accepted into the ETF for treatment and discharge. If the proposed constituents are acceptable for treatment, it should be added to the listing required in Condition S3.(1).

Enclosure 2

LIST OF APPROVED CONSTITUENTS OF CONCERN

Consisting of 3 pages,
including cover page

List of Approved Constituents of Concern

Constituent	CASN
Aluminum	7429-90-5
Ammonia (as N)	7664-41-7
Antimony	7440-36-0
Arsenic	7440-38-2
Barium	7440-39-3
Calcium	7440-70-2
Chloride	16887-00-6
Chromium	7440-47-3
Copper	7440-50-8
Cyanide	57-12-5
Fluoride	16984-48-8
Iron	7439-89-6
Lead	7439-92-1
Magnesium	7439-95-4
Manganese	7439-96-5
Mercury	7439-97-6
Nickel	7440-02-0
Nitrate (as N)	14797-55-8
Nitrite (as N)	14797-96-0
Silver	7440-22-4
Sodium	7440-23-5
Sulfate	14808-79-8
Uranium	7440-61-1
Vanadium	7440-62-2
Zinc	7440-66-6
Total Dissolved Solids	TDS
Total Suspended Solids	TSS

Constituent	CASN
Total Organic Carbon	TOC
1-Butanol (1-butyl alcohol)	71-36-3
1,1 Dichloroethane	75-34-3
1,4 Dioxane	123-91-1
4,4' DDD	72-54-8
4,4' DDT	50-29-3
Acetone	67-64-1
Aldrin	309-00-2
Bis(2-ethylhexyl)phthalate	117-18-7
Benzene	71-43-2
Carbon tetrachloride	56-23-5
Chloroform	67-66-3
Dieldrin	60-57-1
Endrin	72-20-8
gamma - BHC (Lindane)	58-89-9
Heptachlor	76-44-8
Methylene chloride	75-09-2
Tributyl phosphate	126-73-8
Trichloroethene (trichlorethylene)	79-01-6