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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

PO Box 47775 • Olympia, Washington 98504-7775 • (206) 407-6300

June 26, 1995

CERTIFIED MAIL

Mr. John Wagoner, Manager
Richland Operations Office
U.S. Department of Energy
P.O. Box 550, A7-50
Richland, WA 99352-0550

Dear Mr. Wagoner:

Enclosed is your State Waste Discharge Permit No. ST-4500, which has been issued in accordance with RCW 90.48. Also enclosed is the Department of Ecology's (Ecology) Response to Comments received during the public comment period of the draft permit.

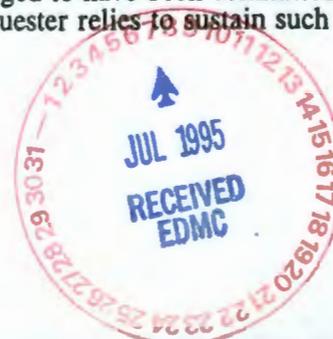
Ecology, in response to passage of Initiative 97, adopted a wastewater discharge permit fee regulation (Chapter 173-224 WAC). You will be receiving, from our Headquarters Office, periodic bills for your permit.

Submission of an application for permit renewal or continued discharge must be received by Ecology no later than 60 days prior to your permit expiration date (see General Condition 10 of your permit). Please contact the Ecology permit coordinator for an application form.

This permit may be appealed. Your appeal must be filed with the Pollution Control Hearings Board, P.O. Box 40903, Olympia, Washington 98504-0903 within 30 days of the receipt of this permit. At the same time, your appeal must also be sent to the Department of Ecology, c/o The Enforcement Officer, P.O. Box 47600, Olympia, Washington 98504-7600 and to Ecology's Nuclear Waste Program, 1315 West Fourth, Kennewick, Washington 99335-6018. Your appeal alone will not stay the effectiveness of this permit. Stay requests must be submitted in accordance with RCW 43.21B.320. These procedures are consistent with Chapter 43.21B RCW.

Any appeal must contain the following in accordance with the rules of the hearings board:

- A. The appellant's name and address;
- B. The Coverage date and number of the permit appealed;
- C. A description of the substance of the permit coverage that is the subject of the appeal;
- D. A clear, separate, and concise statement of each error alleged to have been committed;
- E. A clear and concise statement of facts upon which the requester relies to sustain such statements of error; and
- F. A statement setting forth the relief sought.



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Mr. John Wagoner
June 26, 1995
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If you have any questions on this action, please contact Dom Reale at (360) 407-6266 or Melodie Selby at (509) 736-3021.

Sincerely,


Mike Wilson
Program Manager
Nuclear Waste Program
Department of Ecology

MW:DR:cg(1\tcp)
Enclosures

cc: Don Flyckt, Westinghouse Hanford Corporation
James Rasmussen, U.S. Department of Energy
Randal Krekel, U.S. Department of Energy
June Hennig, U.S. Department of Energy
Tanya Barnett, AAG
Melodie Selby, Ecology
Dom Reale, Ecology
Dave Dougherty, Ecology

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RESPONSIVENESS SUMMARY FOR THE
DRAFT STATE WASTE DISCHARGE PERMIT
U. S. DEPARTMENT OF ENERGY
200 AREA EFFLUENT TREATMENT FACILITY (ETF)
PROJECT C-018H
200 EAST AREA, HANFORD SITE
RICHLAND, WASHINGTON
June 22, 1995

The following comments were received during the Public Notice of Draft period held for the draft State Waste Discharge Permit No. ST 4500. The public notice lasted from May 1 through June 1, 1995. A public hearing was held on May 30, 1995.

The Permittee, USDOE, and two private citizens, Catherine Allison and Gordon Rogers, provided comments. Below is a listing of comments received (some are paraphrased or consolidated for clarification or brevity). Each comment is followed by the corresponding permit change (or lack of change) and the Ecology justification for the change:

1. USDOE Comment: Revise the Table of Contents and the Summary of Required Documents for Submittal Table based on permit changes.

Permit Change: As requested.

Justification: Change is appropriate and necessary.

2. USDOE Comment: Delete all references regarding the Fact Sheet from the permit. The permit should be a stand-alone document.

Permit Change: All references to the Fact Sheet were deleted from the permit except on page six where a reference is made to the Fact Sheet as a document that contains more detailed background information on the permitted facilities.

Justification: In general, the permit should be a stand-alone document with respect to permit compliance. It was felt that one reference to the Fact Sheet was appropriate to alert future Ecology permit managers and other interested parties of the location of background information to facilitate permit renewals, etc.

3. USDOE Comment: The following language should be added to permit condition S7A2: "The ETF Groundwater Monitoring Plan shall also include the Permittee's plan, required by USDOE Orders 5400.1 and 5400.5, for tracking the discharge of tritium and should include items such as a description of the system of monitoring wells, a description of plans to update and maintain tritium travel computer models, and a description of reports that will be developed and issued." This change should supersede and replace permit sections S7B, S11, and S12.

Permit Change: The proposed language was used as a base to append the substantive requirements of permit sections S7B, S11, and S12 onto section S7A (Groundwater

Monitoring Plan). S7B, S11, and S12 were deleted. References to specific USDOE Orders were not included.

Justification: This change was believed to be acceptable once language was found (see final permit) that provided assurance to Ecology that an adequate system of tritium tracking wells and adequate computer model(s) for tritium plume travel time and concentration predictions would be used. USDOE is encouraged to use applicable existing wells, equipment, studies, etc., to satisfy permit requirements. Direct references to USDOE Orders were not included since these Orders or their reference numbers may change over time.

4. USDOE Comment: Permit condition S13 (Tritium Treatment Technology Search) should be deleted since it duplicates a requirement of the Tri-Party Agreement (TPA) which is already in progress, namely, TPA Interim Milestone M-26-05A.

Permit Change: S13 has been deleted from the permit. Reference to TPA Interim Milestone M-26-05A and to a tritium treatment technology search has been retained in the Fact Sheet.

Justification: Deletion of S13 was appropriate since M-26-05A covers the same substantive requirements. Reference to M-26-05A and to a tritium treatment technology search has been retained in the Fact Sheet to remind future permit managers/writers and the public of this requirement, currently satisfied by the TPA milestone, to ensure continuous coverage should the TPA milestone be changed or deleted.

5. USDOE Comment: Clarify what is meant by "Discharge 001".

Permit Change: No change.

Justification: It was explained verbally to USDOE that effluent discharges are assigned numbers; e.g., 001, 002, etc., for ease and consistency of entry of monitoring data into Ecology's computer data files.

6. USDOE Comment: Section S2, second to last paragraph: The calculation for developing an average value in this permit is established by "...measurements below the PQL equal the Method Detection Limit (MDL);..." however the 200 Area TEDF Permit No. ST 4502 established the average value using zero for values less than the PQL. USDOE recommends Ecology use the method used in ST 4502 for consistency.

Permit Change: No change.

Justification: Average values must be calculated in the same way the technology based limits were calculated to make an accurate comparison. The technology based limits for this permit were calculated using measurements below the PQL as the MDL. Therefore, the average values must be calculated the same way. The technology based limits in the W-049 permit were calculated using zero for values less than the PQL. After the W-049 permit was developed, the Nuclear Waste Program chose to begin using the MDL rather

than zero because it is more statistically defensible. USDOE was informed at that time that we would be using the MDL in all future permits.

7. USDOE Comment: Section 3 item 3: Recommend deletion. This item is addressed in the RCRA Part B Permit Application and Delisting documents. This requirement is redundant with the requirements of these documents.

Permit Change: No change.

Justification: Ecology is required by law to ensure the Permittee does not discharge dangerous waste. USDOE may simply reference applicable RCRA documents to satisfy this requirement.

8. USDOE Comment: Section S3, second to last paragraph, second sentence: Recommend that Ecology commits to a time frame for issuing response by deleting "attempt to" from the sentence.

Permit Change: No change to Section S3. Page 16, 1st paragraph, next to last sentence the words "attempt to" have been inserted after the word "shall".

Justification: Ecology understands the Permittee's desire for firm response times. However, the permit is issued only to USDOE. Since the Permittee is responsible for complying with all terms of the permit, Ecology does not believe that the permit should impose requirements on anyone other than the Permittee.

9. USDOE Comment: Delete sections S5 and S6 or reference the RCRA Waste Analysis Plan (WAP). These constituents will be addressed in the more comprehensive WAP that is required under the RCRA Part B permit application that will be approved by Ecology. This WAP will also coordinate influent concentrations with effluent concentrations to assess the operating efficiency of the ETF. The WAP will be in place to support the startup of the ETF.

Permit Change: No change.

Justification: S5 and S6 were created to determine whether these constituents are constituents of concern and whether permit monitoring is required. However, if timely and sufficient data is generated in the WAP study it may be used to satisfy corresponding S5 or S6 requirements.

10. USDOE Comment: Section S10, Operations and Maintenance, Second Bullet: Delete. This condition was intended for the 200 Area TEDF permit No. ST 4502 because treatment for this waste stream was provided by upstream "effluent-associated facilities", unlike the ETF. Additionally, this condition would require the generation of an enormous amount of documentation for the 242-A Evaporator and LERF, much of which already exists at these facilities in accordance with RCRA and is available for Ecology's review. The emergency operational and maintenance requirements identified in the O & M matrix

for the ETF already identifies those requirements and procedures that would ensure the safe operation and contingencies at the ETF.

Permit Change: S10 first paragraph, 4th sentence (that references Permit No. ST 4502) was deleted. In the second bullet the word "ETF" was inserted after the first word, "all".

Justification: The changes remove any erroneous reference to the ST 4502 Permit, while retaining the requirement to submit to Ecology a list or matrix of applicable O & M manuals. No "generation of an enormous amount of documentation" is needed. Ecology simply requires submission of a listing of applicable, existing, or developed O & M documents, and the availability for review and updating of those documents.

11. USDOE Comment: Section S10, Operations and Maintenance: Delete the last sentence of this section "The operations and maintenance manual for ETF shall also define discharge levels expected to be maintained in order to meet BAT/AKART design criteria". This language was intended to address the low-level wastewater treatment facility located at PFP and identified in the 200 Area TEDF Permit No. ST 4502.

Permit Change: This sentence has been deleted.

Justification: Request is reasonable.

12. USDOE Comment: Section G5: This section requires engineering plans and specifications to be submitted to Ecology for approval before construction or modifying any wastewater control facilities. This section should specify that Ecology's approval would only be required for those modifications that will have an impact on the quality of the treated effluent. After startup there will be numerous modifications to the ETF. These modifications may include: more handrails, dryer room access, modification or valves, etc. It is recommended that Ecology limit the applicability of this general condition to those systems that impact the quality of the discharge.

Permit Change: The words "constructing or modifying any wastewater control systems" have been replaced by the words "modifying the ETF in a way that would impact the quality of the treated effluent".

Justification: The generic permit language has been replaced with applicable language specific to this permit. The rationale is that in general, permits deal with the wastewater treatment component of a more extensive industrial process, whereas the ETF is, in and of itself, a wastewater treatment process. Furthermore only changes to ETF that affect effluent quality are of concern with respect to permit plan review.

13. USDOE Comment: Section G11: The first and second paragraphs are redundant.

Permit Change: G11 has been rewritten to remove the redundancy.

Justification: Straightforward.

14. USDOE comment: Section G18. Signatory Requirements: In section G18.3 change "paragraph I.2.b." to " paragraph G18.2.b."

Permit Change: Changed as requested.

Justification: Typographic error correction.

15. USDOE Comment: The permit has no limits and/or conditions for the discharge of the cooling tower blowdown. This is acceptable to RL/WHC. However, RL/WHC would like it to be documented that this was a decision made by Ecology to not include this effluent in the discharge because difficulty in sampling due to the intermittent nature of the stream; the low volume; the nature of the waste stream, etc. The cooling tower blowdown is presented in the permit application and we discussed this during the last review.

Permit Change: No change.

Justification: USDOE's statement that this effluent is not included in the permit because of sampling difficulty is incorrect. Cooling tower blowdown and its associated constituents have already been factored into the determination of constituents of concern and permit limited constituents. This is evidenced by Fact Sheet section 12, "Effluent Constituents of Concern". Sampling will be performed in the groundwater monitoring wells.

16. USDOE Comment: Revise the Fact Sheet to reflect any permit changes resulting from USDOE comments 3 and 4 above.

Permit Change: The Fact Sheet has been revised to reflect the above permit changes and all other changes made pursuant to this public input process.

Justification: Straightforward.

17. Catherine Allison Comment: Commenter raises objection to the release of tritium untreated to the ground since tritium is radioactive and highly mobile in the groundwater. Recommends monthly monitoring for tritium in the Columbia River for 18 months, both at the outfall location and near the closest population center. Anything less would be irresponsible, and extremely dangerous in relationship to the health and well being of all those residing in the Columbia River Basin.

Permit Change: No change at this time.

Justification: As detailed in the Fact Sheet section 7, ground/groundwater disposal had been previously selected during the SEPA process in 1993, with public input considered, to be the preferred effluent discharge option available, and to be in "the overriding public interest". Operation of the ETF is needed to treat the leakage of much more highly toxic and radioactive wastewaters from the 57 million gallon storage tanks. Since no currently

feasible tritium treatment process exists, disposal of tritium to the ground was favored over direct discharge to the river or evaporation into the air.

The permit is designed to allow Ecology to monitor the tritium groundwater movement, and to verify the predicted 105 year travel time and ultimate concentration of the tritium at the place where the groundwater will discharge to the river. A list of contingency measures that can be used in case significant exceedences occur is also included.

Regarding the monitoring of tritium at the Columbia River "outfall" and at the closest population center: There is no Columbia River outfall for ETF effluent. ETF effluent will flow into the ground 8 miles (by groundwater flow path) to the river. USDOE is currently conducting tritium studies in the Columbia River per its Surface Environmental Surveillance Project. Tritium monitoring results are found in annually issued reports entitled Hanford Site Environmental Report for each calendar year. The 1994 Report, issued June 1995, PNL-10574, Pacific Northwest Laboratory, Richland Washington, Editors: Mr. R.L. Dirkes, Mr. R. W. Hauf, and Mr. R. W. Woodruff. USDOE contacts regarding this program and these reports are Mr. John Hall, Mr. Dana Ward, and Mr. Douglas Hildebrand (Fax: 509-373-6100).

In a related project, EPA and Ecology are requiring USDOE to perform a Columbia River Comprehensive Impact Risk Assessment. This project will evaluate current risks to the river from Hanford-related contaminants. Public input is encouraged. To get more information and to provide input, Contact Dave Holland, Ecology, at (509) 736-3027.

18. Gordon Rogers Comment: I am a member of the Hanford Advisory Board, holding one of the public at large seats. I want to make it clear for the record that the Hanford Advisory Board has not taken any action, has not considered this particular project, and further, I am not an authorized spokesman for the Board on this topic. However, I would like to give my own views as a private citizen.

I support the approval of this permit and urge its prompt action to permit use of the disposal facility as soon as possible. I believe this is a significant step forward in the protection of the public and the environment from the disposal of contaminated liquid effluents. The monitoring, evaluation, and reporting seem reasonable to achieve these ends. It appears to me that you have considered workable schemes to provide protection in the event of unexpected potential upsets or above permissible monitoring results.

Permit Change: No change.

Justification: No change requested.