WASHINGTON STATE DEPARTMENT OF ECOLOGY

Issuance Date: June 26, 1995
Effective Date: June 30, 1995
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STATE WASTE DISCHARGE PERMIT

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
OLYMPIA, WA 98504-7775

In compliance with the provisions of
Chapter 90.48 RCW, as amended
authorizes

U.S. Department of Energy
Richland Operations Office
P.O. Box 550
Richland, WA 99352

to discharge in accordance with the special and general conditions which follow.

Plant Location:

200 Area Effluent Treatment Facility (ETF)
(Project C-018H)
200 East Area
Hanford Site, Richland, Washington

Industry Type: None

SIC Code: 9999

Discharge Location:

Infiltration gallery designated as the
State-Approved Land Disposal Site
(SALDS) is located at:

Latitude: 46° 34' 21" N
Longitude: 119° 38' 0" W

Mike Wilson
Program Manager
Nuclear Waste Program
Department of Ecology

TABLE OF CONTENTS

Page

SUMMARY OF REQUIRED DOCUMENTS FOR SUBMITTAL 4

PLANT LOCATION AND BACKGROUND 6

SPECIAL CONDITIONS

S1. Effluent/Groundwater Limitations 7

A. Enforcement Limitations in Groundwater, Discharge 001 Groundwater
B. Effluent Quality Limitations, Discharge 001 Effluent
C. Early Warning Values

S2. Analytical Requirements 12

S3. ETF Influent Criteria 14

S4. BAT/AKART Determination(s), Based on Operating Data 16

S5. Liquid Effluent Retention Facility (LERF) Sampling Plan 16

S6. LERF Sampling Reports 17

S7. Groundwater Monitoring 17

A. Pre-Operational Groundwater Monitoring Report
B. Groundwater Monitoring Plan
C. Groundwater Monitoring Reports

S8. Solid Waste Disposal 18

S9. Spill Plan 19

S10. Operations and Maintenance 19

GENERAL CONDITIONS

G1. Discharge Violations 21

G2. Reduced Production for Compliance 21

G3. Right of Entry 21

G4. Facility Change 21

TABLE OF CONTENTS (cont.)

Page

G5. Plan Review Required 21

G6. Payment of Permit Fees 22

G7. Compliance With Other Laws and Statutes 22

G8. Removed Substances 22

G9. Permit Transfer 22

G10. Duty to Reapply 22

G11. Reporting Requirements 22

G12. Record Keeping Requirements 23

G13. Representative Sampling 23

G14. Test Procedures 24

G15. Flow Measurement 24

G16. Laboratory Accreditation 24

G17. Additional Monitoring by the Permittee 24

G18. Signatory Requirements 24

G19. Noncompliance Notification 25

G20. Permit Termination 26

G21. Permit Modification 26

SUMMARY OF REQUIRED DOCUMENTS FOR SUBMITTAL

Permit Section	Submittal	Frequency	First Submittal Date
S1.C & G11.	Early Warning Report	Upon exceedance of an early warning value	Within 10 calendar days from detection of the Early Warning Value
S3.	Listing of New Influent Streams	Quarterly	Submit with quarterly Discharge Monitoring Reports, starting with first calendar quarter of 1998.
S4.	BAT/AKART Evaluation Report	Upon Ecology request and voluntarily	Within 90 days of receiving written request from Ecology
S5.	LERF Sampling Plan	One time	Within 30 days of the effective date of the permit
S6.	LERF Sampling Report	As specified in LERF Sampling Plan	As specified in LERF Sampling Plan
S7.A.	Pre-Operational Groundwater Monitoring Report	One time	Within 60 days of ETF startup
S7.B.	Draft Groundwater Monitoring Plan	One time	Within 60 days of ETF startup
S7.B.	Final Groundwater Monitoring Plan	One time	Within 30 days of Ecology comments
S7.C.	Groundwater Monitoring Reports	Per final plan	Per final plan

Permit Section	Submittal	Frequency	First Submittal Date
S8.	Solid Waste Control Plan	1/permit cycle	Available upon effective date of permit - updated annually. Revisions require prior approval from Ecology.
S9.	Spill Plan	1/permit cycle, updates should be submitted as necessary	References/plans are due within 60 days of permit effective date
S10.	Operation and Maintenance	1/permit cycle	Plans or plan references due 30 days prior to ETF startup
G10.	Application for permit renewal	1/permit cycle	At least 60 days before permit expiration
G11.	Discharge Monitoring Reports	Quarterly	60 days after each calendar quarter of ETF operations

PLANT LOCATION AND BACKGROUND

The U.S. Department of Energy (DOE) 200 Area Effluent Treatment Facility (a.k.a. the ETF or project C018H) is located near the 200 East Area of the Hanford Site, north of Richland, Washington. The effluent infiltration gallery, also known as the State Approved Land Disposal Site (SALDS) is located north of the 200 West Area of Hanford (see Fact Sheet Figures 1 and 3).

The ETF has been constructed pursuant to an agreement among DOE, U.S. EPA and Ecology, the Hanford Federal Facility Agreement and Consent Order (the Tri-Party Agreement), and specifically it is required via Ecology Consent Order No. DE-91NM-177. The 242-A Evaporator has been restarted and the ETF has been constructed to abate any release of hazardous and radioactive waste by leakage from the underground storage tanks.

The SALDS effluent infiltration gallery is a 116 foot by 200 foot rectangular drainfield with 4 inch diameter porous pipe laterals coming off an 8 inch diameter header at 6 foot intervals. The drainfield pipes are 6 inches below the surface of a 6 foot deep gravel basin. The gravel basin is covered by a minimum of 12 inches of natural, compacted cover soil.

Please refer to the Fact Sheet for more extensive background information relating to ETF, SALDS, and other facilities covered by this permit.

SPECIAL CONDITIONS

S1. EFFLUENT/GROUNDWATER LIMITATIONS

Beginning on the effective date of this permit and lasting through the expiration date, the U.S. Department of Energy (Permittee) is authorized to discharge to ground via land application and infiltration, treated wastewater at the permitted location subject to the following limitations and monitoring requirements. No hazardous/dangerous waste designated pursuant to RCRA or to the Washington State Dangerous Waste Law and Regulations, Chapter 70.105 RCW and Chapter 173-303 WAC respectively, shall be discharged to ground, at the SALDS infiltration gallery (Discharge 001 groundwater), via this permit.

A. Enforcement Limitations in Groundwater, Discharge 001 Groundwater

ENFORCEMENT LIMITS IN GROUNDWATER[1]

Constituent or Characteristic	Highest Allowable Concentration, PPB, Unless Noted Otherwise[2,3]
Acetone	160[4]
Ammonia	1,100[4]
Benzene	5
Cadmium, total	10
Chloroform	6.2[4]
Copper, total	70[4]
Lead, total	50
Mercury, total	2
pH, in pH units	6.5 - 8.5
Sulfate	250,000
Tetrahydrofuran	100[4]
Total Dissolved Solids	500,000

Constituent or Characteristic	Highest Allowable Concentration, PPB, Unless Noted Otherwise
Gross Alpha	(pCi/L)[3] Monitor Only[5]
Gross Beta	(pCi/L)[3] Monitor Only[5]
Strontium-90	(pCi/L)[3] Monitor Only[5]
Tritium	(pCi/L)[3] Monitor Only[5]

[1] Enforcement limits shall be met in groundwaters collected from sampling point monitoring wells numbers 699-48-77A, 699-48-77C and 699-48-77D.

[2] Defined as the average of all measurements from a well during a quarterly reporting period. The four quarters are defined as January through March, April through June, July through September, and October through December. At least one (1) sample shall be analyzed and reported for each of the above constituents during each quarter.

[3] Parts per billion (micrograms per liter). pCi/l (picroCurie per liter).

[4] Noncompliance with these permit limits, up to the water quality based limit per Chapter 173-200 WAC if one exists, are not subject to penalty but are subject to the requirements of Special Condition No. 4.

[5] Constituents which require "Monitoring Only" have not been assigned permit limits or early warning values but must be sampled, analyzed, and reported by the Permittee pursuant to this permit.

B. Effluent Quality Limitations, Discharge 001 Effluent

ETF effluent (Discharge 001 Effluent) shall not exceed the following highest allowable concentrations.

ENFORCEMENT LIMITS IN EFFLUENT[6]

Constituent Or Characteristic	Highest Allowable Concentration, PPB, Unless Noted Otherwise	Highest Allowable Concentration, PPB, Unless Noted Otherwise
	Average Monthly[7]	Daily Maximum[8]
Arsenic, total	15	30
Carbon Tetrachloride	5	10
Chromium, total	20[4]	--
Dimethylnitrosamine	20[4]	--
Nitrate (as N)	100[13]	--
Sulfate	10,000[4]	--
Specific Conductivity	Monitor Only[5]	--
Tetrachloroethylene	5	10

[4] Noncompliance with these permit limits, up to the water quality based limit per Chapter 173-200 WAC if one exists, are not subject to penalty but are subject to the requirements of Special Condition No. 4.

[5] Constituents which require "Monitoring Only" have not been assigned permit limits or early warning values but must be sampled, analyzed, and reported by the Permittee pursuant to this permit.

[6] As measured in the verification tank recycle line or in a composite sample prior to the verification tanks.

[7] The average monthly effluent limitation or Early Warning Value is defined as the highest allowable average of individual discharges over a calendar month, calculated as the sum of all individual discharges measured during a calendar month divided by the number of individual discharges measured during that month. Three (3) monthly average values (one per month) are to be reported for each quarterly reporting period, except for nitrate, which may require two monthly average values per month (one monthly average for each influent).

[8] The daily maximum discharge limitation is defined as the highest allowable individual analytical result. This includes results from the verification tank. The daily maximum value reported during each quarterly reporting period shall be the highest value recorded for the constituent in that calendar quarter.

[13] During the treatment and discharge of 200-UP-1 groundwater, this limit is raised to 3,800 ppb.

C. Early Warning Values

The following constituents are also to be monitored in the effluent, along with the Enforcement Limits Constituents listed in S1.B. above, to provide an early warning that allowable limits in groundwater are being approached. Exceedance of an Early Warning Value does not constitute a violation of this permit. However, exceedance of an Early Warning Value requires the Permittee to submit an Early Warning Report per the reporting requirements of G11.

After evaluation of any Early Warning Report, Ecology will respond per the alternative provision of Chapter 173-200-070(6)(b). Specifically, if Early Warning Value(s) are exceeded, Ecology may require the Permittee to increase monitoring, modify the monitoring plan or evaluation procedures, develop a trend analysis, and/or prepare and submit a report that documents any changes to the groundwater regime and proposes alternative operational methods to reduce the potential impacts to the groundwater. Such modifications may include installation of additional monitoring wells or computer modeling of the groundwater regime in the vicinity of the infiltration gallery. Finally, per Chapter 173-200-070(6)(b)(vi), the Permittee must take such actions as Ecology deems necessary, if Ecology determines that there is a likelihood of exceeding an enforcement limit at the sampling point wells.

EARLY WARNING VALUE(S) IN EFFLUENT

Constituent Or Characteristic	Average Monthly Concentration, PPB, Unless Noted Otherwise[7]
Acetophenone	10
Ammonia	830
Benzene	5
Beryllium, total	40
Cadmium, total	7.5
Chloride	250,000
Chloroform	5
Copper, total	70
Gross Alpha	Monitor Only[5]
Gross Beta	Monitor Only[5]

Constituent or Characteristic	Average Monthly Concentration, PPB, Unless Noted Otherwise
Lead, total	38
Mercury, total	2
Methylene Chloride	Monitor Only[5]
Nitrite (as N)	100
Nitrogen (TKN)[9]	600
Strontium-90	Monitor Only[5]
Tetrahydrofuran	100
Total Dissolved Solids	380,000
Total Organic Carbon	1,100
Total Suspended Solids	4,000
1,1,2 Trichloroethane	5
Tritium[10]	Monitor Only[5]

[5] Constituents which require "Monitoring Only" have not been assigned permit limits or early warning values but must be sampled, analyzed, and reported by the Permittee pursuant to this permit.

[7] The average monthly effluent limitation or Early Warning Value is defined as the highest allowable average of individual discharges over a calendar month, calculated as the sum of all individual discharges measured during a calendar month divided by the number of individual discharges measured during that month. Three (3) monthly average values (one per month) are to be reported for each quarterly reporting period, except for nitrate, which may require two monthly average values per month (one monthly average for each influent).

[9] TKN (Total Kjeldahl Nitrogen)

[10] The total curies of tritium released to the ground per monthly reporting period as well as the running total curies released since the beginning of ETF operations shall be reported in each Discharge Monitoring Report per General Condition G11.

S2. ANALYTICAL REQUIREMENTS

Practical Quantification Level (PQL) means the lowest concentration of a substance that can be reliably measured, within specific limits of precision, during routine laboratory operating conditions. The Permittee is required to analyze all constituents and parameters specified as enforcement limits, early warning values, or other monitoring requirements so as to discern levels as low as the following PQL values. In addition, the required analytical method is indicated as follows. Another analytical method can be substituted by the Permittee provided the same PQL value(s) is achieved.

PRACTICAL QUANTIFICATION LEVELS AND REQUIRED ANALYTICAL METHODS

Constituent Or Characteristic[11]	PQL	Analytical Method
Acetone	40	8260
Acetophenone	10	8270
Ammonia	40	EPA 350.3, 350.1
Arsenic, total	15	7060 GFAA/200.8
Benzene	5	8260
Beryllium, total	40	6010/200.8
Cadmium, total	5	7131A, 200.8
Carbon Tetrachloride	5	8260
Chloride	1000	9056/300
Chloroform	5	8260
Chromium, total	20	7191 GFAA, 200.8
Copper, total	70	6010 ICP, 200.7, 200.8
Dimethylnitrosamine	20	8270
Gross Alpha	3 pCi/l	Laboratory Specific
Gross Beta	4 pCi/l	Laboratory Specific
Lead, total	10	7421, 200.8
Mercury, total	2	7470/7471

Constituent Or Characteristic	PQL	Analytical Method
Methylene Chloride	5	8260
Nitrate (as N)	100	300 IC, 9056
Nitrite (as N)	100	300 IC, 9056
Nitrogen (TKN)	600	TKN[9], 351.1, 351.2
pH	Sensitivity .1 pH units	150.1 (in lab.), 9040A
Specific Conductivity	10 umho/cm[12]	120.1 (in lab.)/ 9050
Strontium-90	5 pCi/l (72 hour)	Laboratory Specific
Sulfate	10,000	300 IC, 9056
Tetrachloroethylene	5	8260
Tetrahydrofuran	100	8260
Total Dissolved Solids	10,000[12]	160.1
Total Organic Carbon	1,000[12]	9060A
Total Suspended Solids	4,000[12]	160.2
1,1,2 Trichloroethane	5	8260
Tritium	460 pCi/l	Laboratory Specific

[11] Units are in ppb (parts per billion or microgram per liter) unless otherwise noted. pCi/l (pico Curie per liter)
[12] These constituents have no PQL. The values listed in this table are reporting limits.

Check standards at concentrations equal to the PQL shall be analyzed alongside all compliance monitoring samples. Check standards shall be produced independently of calibration standards and maintained as a part of the Permittee's records. All check standard recovery data and duplicate measurements shall be available to Ecology. Ecology's precision goal is +/- 20%. The quality control/quality assurance (QA/QC) requirements of "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846, Supplement 1990," EPA-600/4-79-019 U.S. EPA, shall be followed during all analytical procedures.

If the measured effluent concentration is below the PQL, the Permittee shall report NQ for non-quantifiable. Average values shall be calculated as follows: measurements below the PQL equal the Method Detection Limit (MDL); measurements equal to or greater than the PQL equal the measurement.

Field sampling procedures (such as sample collection, field handling/preservation, holding requirements) shall follow the requirements found in the "Manchester Environmental Laboratory, Lab Users Manual, Washington State Department of Ecology, 4th Edition, January 1994." For field QA/QC measures, the procedures of SW 846, volume 2, Section 1.2, "Field Manual for Physical and Chemical Methods" is to be followed. All samples collected for metal analyses shall be unfiltered.

S3. ETF INFLUENT CRITERIA

Discharge of treated wastewater from the ETF to the SALDS infiltration gallery is permitted for the following wastewaters:

1. 242-A Evaporator process condensate
2. 200-UP-1 groundwater
3. Quantera 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
8. West Area Tank Farm's Wastewater
9. 100-N Reactor Wastewater

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

1. The Permittee will maintain a list of approved influent constituents and their approved concentrations. This listing is to be derived from the characterization studies of the above listed streams, and shall be provided to Ecology when first developed and thereafter upon request. Constituents that have limits in this permit shall be included on the list of approved influent constituents, but are not required to have approved influent concentrations.

2. When considering a new influent for treatment in the ETF, the Permittee will compare the chemical constituents which exist in the proposed influent source(s), to the list of approved influent constituents. Chemical constituents that need to be compared are any contaminants in the new influent that could potentially impair a beneficial use. These constituents of concern include, but are not limited to, any contaminant with a maximum concentration that is greater than the following: any limit in this permit, any groundwater quality standard (WAC 173-200), any delisting level established in the Final Delisting (60 FR 31115), or any background concentration as measured or reasonably expected in the groundwater at the SALDS.

3. If the proposed influent contains only constituents that are on the list of approved influent constituents, and the constituent concentration levels do not exceed the approved influent constituent concentrations by greater than 20% or the constituent has a limit in this permit, then Ecology approval will not be required to treat the new influent at ETF and discharge the new effluent to SALDS. New influent streams will be reported to Ecology each calendar quarter, at the same time as the Discharge Monitoring Report (DMR) for that calendar quarter is submitted.

4. If the proposed influent contains a new constituent(s) of concern, or a concentration of a constituent(s) that is 20% greater than the approved influent constituent concentration list, 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 chemical constituents of concern which exist in the proposed influent source(s), along with the expected range of concentration of each constituent.

   b) A listing of constituents that exceed previously approved levels and,

   c) An Engineering Evaluation which shows that ETF can adequately process the proposed influent source(s) such that violation of this permit will not occur, water quality violations related to any constituents not listed in the original permit will not occur and that will demonstrate the ETF treatment process constitutes BAT/AKART for the proposed influent source(s).

Upon receipt of the above item 4 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, then the new constituents will be added to the list of approved influent constituents that is being maintained by the Permittee. On a case by case basis, Ecology reserves the right to approve a new influent, but may require that some of the new constituents or their new concentrations not to be added to the list of approved constituents and concentrations.

A permit modification may be required if the proposed influent will result in ETF effluent which contains significant concentrations of additional constituents of concern or significantly higher concentrations of constituents of concern already listed in this permit. Ecology will determine whether a permit modification, with public review and comment, is appropriate

The Permittee is required to screen each new influent to assure ETF can still achieve all discharge limits and requirements when the new influent is combined with the other ETF influents. The Permittee should track the constituent loadings on the ETF and is at no time allowed to overload the ETF with a high concentration, multiple constituent mixture of influents that cannot be effectively treated.

The Permittee may submit any appropriate documents or portions of documents prepared outside of the requirements of this permit to satisfy all or part of this permit condition.

S4. BAT/AKART DETERMINATION(S), BASED ON OPERATING DATA

Best Available Technology (BAT) and All Known Available and Reasonable Treatment (AKART) effluent concentrations for the ETF have thus far been established mathematically from constituent removal efficiencies. Please refer to the Fact Sheet Section 14, which lists constituents which have limits based on BAT/AKART. These constituents also have the Footnote 4 in Special Condition No. 1 of this permit. Constituent removal efficiencies (based on pilot scale treatment of simulated/surrogate influent water) have been applied to typical constituent concentrations found in several batches of 242-A Evaporator Process Condensate to calculate a theoretical BAT/AKART level for constituents for which such data were available prior to permit issuance.

Within 90 days of receiving a written request by Ecology (at Ecology's discretion), or voluntarily at any time, the Permittee shall submit to Ecology a report which reviews, calculates or recalculates BAT/AKART effluent concentrations for specified ETF effluent constituents.

If calculated/recalculated BAT/AKART values are approved by Ecology then a major permit modification, including public comment, may be needed to amend the permit to include these values as effluent limits if the revised limit is less restrictive than the original.

S5. LIQUID EFFLUENT RETENTION FACILITY (LERF) SAMPLING PLAN

Within 30 days of permit effective date, the Permittee shall submit a draft plan to Ecology to sample LERF for:

Strontium 90
Iodine 129
Ammonia
Total Kjeldahl Nitrogen (TKN)

The intent of the plan is to determine if Strontium 90 and Iodine 129 are present in detectable concentrations in the range of LERF contents likely to be processed through ETF. Also the intent of the plan is to assess the range of ammonia concentrations likely to be present in LERF and processed through ETF.

The plan shall specify the frequency of samples to be taken and the timing of the samples. In general, the sampling shall begin as soon as possible and shall continue until a sufficient amount of data has been gathered to adequately assess the variability of the above-referenced constituents in LERF. Ecology shall attempt to provide written comments, if

any, to the Permittee within 30 days of receipt of the draft plan. The Permittee shall submit a final plan within 30 days after receiving written resolution of comments from Ecology.

The plan shall include submission of reports to Ecology which present the results of the approved LERF sampling effort. Reports shall also include the ten tentatively identified compounds (TICs) of highest concentrations. The Permittee may submit any appropriate documents or portions of documents prepared outside of the requirements of this permit to satisfy all or part of this permit condition.

S6. LERF SAMPLING REPORTS

These reports shall be submitted to Ecology per the Ecology-approved LERF sampling plan (S.5). The Permittee may submit any appropriate documents or portions of documents prepared outside of the requirements of this permit to satisfy all or part of this permit condition.

S7. GROUNDWATER MONITORING

The Permittee shall sample and maintain the four Ecology-approved groundwater monitoring wells (Wells 299-W8-1, 699-48-77A, 699-48-77C, and 699-48-77D) located adjacent to the infiltration gallery to determine background groundwater quality prior to ETF startup, and to provide permit compliance validation for the permitted effluent discharge. The Permittee shall also sample and maintain other groundwater monitoring wells, described below, for the purpose of tracking the tritium plume created by the permitted effluent discharge.

The following submissions are required:

A. Pre-Operational Groundwater Monitoring Report

Within 60 days of ETF startup, the Permittee shall submit a report listing analytical results of previously agreed sampling done prior to ETF startup at Wells 699-48-77A, 699-48-77C, and 699-48-77D.

B. Groundwater Monitoring Plan

Within 60 days of ETF startup, the Permittee shall submit a plan to Ecology for review and comment that includes:

- The location and construction of Wells 699-48-77A, 699-48-77C, and 699-48-77D.
- The Permittee's plans, based on the Permittee's departmental monitoring program, for tracking the tritium plume created by this discharge, including

well numbers, locations, construction details, and tritium sampling frequency. The Permittee shall report tritium sampling results to Ecology at least annually.

- The Permittee's plans for updating and maintaining the computer model(s) that predict the travel time of the tritium plume created by this discharge and also predict the concentration of the tritium plume at the area of the plume's discharge to the Columbia River. Model update and reports to Ecology should occur at least once per permit cycle. The plans should include the proposed reporting format, e.g., maps, tables, etc.

- A commitment to submit a list of applicable contingency measures in the event that the concentration of the tritium plume at the area of discharge to the Columbia River is predicted by the computer model(s) to exceed the surface water standard for tritium.

A finalized Groundwater Monitoring Plan addressing Ecology comments shall be submitted by the Permittee within 30 days after receipt of Ecology comments.

C. Groundwater Monitoring Reports

The Permittee shall sample Wells 299-W8-1, 699-48-77A, 699-48-77C, and 699-48-77D at least once per calendar quarter for the constituents listed in Section S1.A of this permit. These sample results shall be reported in the quarterly Discharge Monitoring Reports per the requirement of Section G11.

Other reports and submissions required by the Ecology approved Groundwater Monitoring Plan shall be submitted to Ecology per the schedule included in the plan.

S8. SOLID WASTE DISPOSAL

The Permittee shall develop a plan to handle and dispose of all solid waste materials in such a manner as to prevent their entry into state ground or surface waters. This plan includes all solid waste generated at the facility with the exception of those solid wastes regulated by Chapter 173-303 WAC (Dangerous Waste Regulations). The plan includes at a minimum a description, source, generation rate, and disposal methods for said included solid wastes. This plan shall not differ from any approved local solid waste management plan. The plan shall be available at the facility upon the effective date of the permit and shall be updated annually as needed. Any proposed revision or modification of the solid waste control plan must be submitted to Ecology for prior approval. The Permittee shall comply with the solid waste control plan and any modifications thereof. The Permittee shall make available an update of the solid waste control plan with the application for permit renewal at least 60 days prior to the expiration date of the permit. The Permittee may submit any appropriate

documents or portions of documents prepared outside of the requirements of this permit to satisfy all or part of this permit condition.

S9. SPILL PLAN

The Permittee shall provide for Ecology approval a spill plan for the ETF facility and effluent piping systems, including:

- Spill or leak detection equipment and alarms.
- Spill or leak detection/prevention inspections; frequency of inspections, what will be inspected, what inspectors will look for, inspector responses, and maintenance procedures.
- A list of responsible officials, cleanup contractors, emergency responders including contact names and telephone numbers.
- An analysis of the types of leaks or spills which may be expected from the ETF and effluent pipelines along with corresponding prevention and response systems and procedures.
- A description of the reporting system which will be used to alert responsible managers, Ecology, and legal authorities in the event of a spill.

For the purpose of meeting this requirement, plans and manuals required by 40 CFR Part 112, and contingency plans required by Chapter 173-303 WAC may be submitted. Applicable existing plans may be referenced and kept on file at the facility. The Permittee shall submit to Ecology a reference of existing plans and any additional plans (including plans relating to the effluent pipeline) within 60 days of the permit effective date. The Permittee may submit any appropriate documents or portions of documents prepared outside of the requirements of this permit to satisfy all or part of this permit condition.

S10. OPERATIONS AND MAINTENANCE

The Permittee shall at all times be responsible for the proper operations and maintenance of the equipment and systems of control installed by them to achieve compliance with the terms and conditions of this permit. Where design criteria have been established, the Permittee shall not permit flows or waste loadings to exceed approved design criteria. The ETF's Operations and Maintenance Manuals shall be listed in a matrix and reported to Ecology within 30 days prior to ETF startup. These Operation and Maintenance Manuals shall be reviewed and updated by the Permittee at least annually. The Permittee shall confirm the review by letter to Ecology. All manuals and manual updates shall be available to Ecology for review. The manuals shall include the following:

- Emergency procedures for effluent rerouting, storage, and subsequent treatment and disposal in the event of system upset or failure.

- All ETF effluent-associated treatment equipment, including: tanks', pipelines', sampling and monitoring stations', and pump stations' routine and emergency operational and maintenance requirements.

The Permittee may submit any appropriate documents or portions of documents prepared outside of the requirements of this permit to satisfy all or part of this permit condition.

GENERAL CONDITIONS

G1. DISCHARGE VIOLATIONS

The Permittee shall at all times be responsible for continuous compliance with the terms and conditions of this permit. Failure to comply with the terms and conditions of this permit constitutes a violation of RCW 90.48.144. Such violations may result in orders, directives or penalties being issued by Ecology.

G2. REDUCED PRODUCTION FOR COMPLIANCE

The Permittee shall control production or discharge to the extent necessary to maintain compliance with the terms and conditions of this permit upon reduction of efficiency, loss, or failure of its treatment facility until the treatment capacity is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power for the treatment facility is reduced, lost, or fails.

G3. RIGHT OF ENTRY

Representatives of Ecology shall have the right to enter at all reasonable times in or upon any property, public or private, for the purpose of inspecting and investigating conditions relating to the pollution or the possible pollution of any waters of the state. Reasonable times shall include normal business hours; hours during which production, treatment, or discharge occurs; or times when Ecology suspects a violation requiring immediate inspection. Representatives of Ecology shall be allowed to have access to, and copy at reasonable cost, any records required to be kept under terms and conditions of the permit; to inspect any monitoring equipment or method required in the permit; and to sample the discharge, waste treatment processes, or internal waste streams.

G4. FACILITY CHANGE

The Permittee may be required to submit a new application, or a supplement to the previous application, along with required engineering reports and engineering plans and specifications, whenever a new or increased discharge or change in the nature of the discharge is anticipated which is not authorized by this permit as described in Section S3. The application shall be submitted at least 60 days prior to any proposed changes. Submission of the application does not relieve the Permittee of the duty to comply with the existing permit until it is modified or reissued.

G5. PLAN REVIEW REQUIRED

Prior to modifying ETF in a way that would impact the quality of the treated effluent, an engineering report and engineering plans and specifications shall be submitted to Ecology

for approval in accordance with Chapter 173-240 WAC. Systems shall be constructed and operated in accordance with the approved plans.

G6. PAYMENT OF PERMIT FEES

The Permittee shall pay the required wastewater discharge permit fees assessed in accordance with Chapter 173-224 WAC. Ecology may terminate this permit for nonpayment of fees or late-payment penalties.

G7. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in the permit shall be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G8. REMOVED SUBSTANCES

Collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall not be resuspended or reintroduced to the effluent stream for discharge.

G9. PERMIT TRANSFER

This permit is automatically transferred to a new owner or operator if:

A. A written agreement between the old and new owner or operator containing a specific date for transfer of permit responsibility, coverage, and liability is submitted to Ecology; and

B. Ecology does not notify the Permittee of the need to modify the permit.

Unless this permit is automatically transferred according to Section A. above, this permit may be transferred only if it is modified to identify the new Permittee and to incorporate such other requirements as determined necessary by Ecology.

G10. DUTY TO REAPPLY

The Permittee must reapply, for permit renewal, at least 60 days prior to the specified expiration date of this permit.

G11. REPORTING REQUIREMENTS

Monitoring results shall be submitted at a quarterly frequency. Monitoring data obtained during the previous calendar quarter (i.e., January, February, March) shall be summarized

and reported on a form approved by Ecology, to be submitted no later than 60 days following the completed reporting period, unless otherwise specified in this permit. The reports shall be sent to the Washington State Department of Ecology, Nuclear Waste Program, Water Quality Permit Coordinator, 1315 West 4th Avenue, Kennewick, Washington 99336-6018. The first monitoring period shall be started on the first day of ETF operations.

Monitoring results shall be summarized and reported on the Discharge Monitoring Report (DMR) Form (EPA 3320-1) or on an Ecology approved reasonable facsimile of this form.

If a contaminant is detected in the effluent and an Early Warning Value is attained or exceeded, then the Permittee shall submit the following Early Warning Report that notifies Ecology, in writing, within 10 calendar days from detection of the Early Warning Value. The notification shall contain, at a minimum, information regarding the concentration of contaminant(s) that attained or exceeded the early warning values, concentrations of other contaminants monitored, the location(s) and sampling date(s), and concentrations of other contaminants determined during previous events.

G12. RECORD KEEPING REQUIREMENTS

The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by the Director of Ecology.

For each measurement or sample taken, the Permittee shall record the following information: (1) the date, exact place, and time of sampling; (2) the dates the analyses were performed; (3) who performed the analyses; (4) the analytical techniques or methods used; (5) the results of the analyses reported to the Method Detection Limit; and (6) the name of the individual who performed the sampling or provided the measurement.

G13. REPRESENTATIVE SAMPLING

Samples and measurements taken to meet the requirements of this permit shall be representative of the volume and nature of the monitored parameters, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets and maintenance-related conditions affecting effluent quality.

G14. TEST PROCEDURES

All sampling and analytical methods used to meet the monitoring requirements specified in this permit shall conform to the latest revision of the "Guidelines Establishing Test Procedures for the Analysis of Pollutants" contained in 40 CFR Part 136, unless otherwise specified in this permit or approved in writing by Ecology.

G15. FLOW MEASUREMENT

Appropriate effluent discharge flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements are consistent with the accepted industry standard for that type of device. Frequency of calibration shall be in conformance with manufacturer's recommendations or at a minimum frequency of at least one calibration per year. Calibration records should be maintained for a minimum of three years.

G16. LABORATORY ACCREDITATION

All monitoring data, except for flow, temperature, conductivity, pH, and internal process control parameters, shall be prepared by a laboratory registered or accredited under the provisions of: Accreditation of Environmental Laboratories, Chapter 173-50 WAC.

G17. ADDITIONAL MONITORING BY THE PERMITTEE

If the Permittee monitors any pollutant more frequently than required by this permit, using test procedures specified by this permit, then the results of this monitoring shall be included in calculation and reporting of the data submitted in the Permittee's self-monitoring reports.

G18. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to Ecology shall be signed and certified.

1. All permit applications shall be signed by either a principal executive officer of at least the level of vice president of a corporation, a general partner of a partnership, or the proprietor of a sole proprietorship, or a principal executive officer or ranking elected official for a municipal, state, federal or other public facility.

2. All reports required by this permit and other information requested by Ecology shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described above and submitted to Ecology, and

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

3. Changes to authorization. If an authorization under paragraph G18.2.b is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of G18.2.b must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under this section shall make the following 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 person or persons who manage the system, or those persons directly responsible for gathering 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 a fine and/or imprisonment for knowing violations."

G19. NONCOMPLIANCE NOTIFICATION

In the event the Permittee, upon discovery of the circumstances, is unable to comply with any of the permit terms and conditions due to any cause, the Permittee shall:

A. Immediately take action to stop, contain, and cleanup unauthorized discharges or otherwise stop the violation, and correct the problem;

B. Immediately notify Ecology's designated water quality permit coordinator, Kennewick Office at (509) 735-7581 of the failure to comply; and

C. Submit a detailed written report to Ecology within 30 days, unless requested earlier by Ecology, describing the nature of the violation, corrective action taken and/or planned, planned steps to prevent a recurrence, and any other pertinent information.

Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply.

If the Permittee is in compliance with the terms and conditions of this permit, but its activities have been shown to violate the groundwater protection provisions of WAC 173-200, Ecology is electing to precede any civil or criminal penalty with a compliance order or permit modification per the provisions of WAC 173-200-100(5).

G20. PERMIT TERMINATION

A permit shall be subject to termination upon 30 days notice in writing if Ecology finds:

A. That it was procured by misrepresentation of any material fact or by lack of full disclosure in the application;

B. That there has been a violation of the conditions thereof; or

C. That a material change in quantity or type of waste disposal exists.

G21. PERMIT MODIFICATION

This permit may be modified in whole or in part for the following causes:

A. Violation of any permit term or condition;

B. Obtaining a permit by misrepresentation or failure to fully disclose all relevant facts;

C. A material change in quantity or type of waste disposal; or

D. A material change in the condition of the waters of the state affected by this permit.

Ecology may also modify this permit if it determines good and valid cause exists, including promulgation or revisions of categorical standards.

Ecology may modify the terms of this permit if the effluent characteristics are later documented by the Permittee, and accepted by Ecology, that reveal errors in best professional judgement by Ecology due to data limitations in existence at the time of permit development. Such a permit modification that results in a higher concentration for a constituent's enforcement limit shall not constitute backsliding on the part of the Permittee.

Per the allowed provisions of WAC 173-216-110(5), the Permittee may submit a new application, or supplement to this permit's previous application which requests modification

of this permit, when the Permittee has refined data or believes conditions have changed since issuance of this permit. Said submittal shall include supporting documentation and a statement of the proposed permit modification. Said submittal shall be submitted at least 60 days prior to any proposed changes. Ecology shall respond to said request for permit modification, by either accepting, accepting with modification, or denying said request within 60 days of its receipt.