Issuance Date: August 1, 2000
Effective Date: August 1, 2000
Expiration Date: August 1, 2005

STATE WASTE DISCHARGE PERMIT NUMBER ST 4500

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
KENNEWICK, WA 99336-6018

In compliance with the provisions of the
State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington, as amended
authorizes

UNITED STATES DEPARTMENT OF ENERGY
RICHLAND OPERATIONS OFFICE
P.O. BOX 550
RICHLAND, WA 99352

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

Facility Location:	Discharge Location:
200 Area Effluent Treatment Facility (ETF) 200 East Area on the Hanford Site Adjacent to Richland, Washington	Infiltration gallery designated as the State-Approved Land Disposal Site (SALDS), located north of the 200 West Area at:
Industry Type: Clean-up Site	Latitude: 46° 34' 21" N Longitude: 119° 38' 0" W
SIC Code: 9999	

Michael A. Wilson
Program Manager
Nuclear Waste Program
Washington State Department of Ecology

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SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions of this permit for additional submittal information and requirements.

Permit Section	Submittal	Frequency	First Submittal Date
S1.C.	Early Warning Report	Once per exceedance of an early warning value	Within 10 calendar days from detection of an exceedance of an early warning value.
S3.A.	Discharge Monitoring Reports (DMR)	Quarterly	45 days following a completed reporting period. (//2000)
S3.E.	Noncompliance Notification Report	Once per noncompliance	Within 30 days (or when requested by Ecology) upon discovery of a noncompliance
S5.A.	Operations and Maintenance Manual Reviews/Updates	Annually	Within one year of effective date of permit. (7/1/2001)
S6.B.	Solid Waste Control Plan Reviews/Updates	Annually	Within one year of effective date of permit. (7/1/2001)
S8.	Spill Plan Review/Updates	Annually	Within one year of effective date of permit. (//2001)
S9.	Influent constituents acceptance envelope	Once per permit cycle and as otherwise requested	Within 60 days of permit effective date and within 30 days whenever otherwise requested. (//2000)
S9.	Listing of new influents accepted	Quarterly	Submit with quarterly DMRs.

SUMMARY OF PERMIT REPORT SUBMITTALS (continued)

Permit Section	Submittal	Frequency	First Submittal Date
S9.	Request for Ecology approval of new influent	Once per each new influent that requires Ecology approval	At least 30 days prior to accepting a new influent.
S10.	Tritium Tracking and Groundwater Monitoring Plan	Once per permit cycle	Within 90 days of permit effective date. (//2001)
S10.	Annual Tritium Tracking and Groundwater Monitoring Report	Once per fiscal year	November 30 of each year.
S10.	Update to Tritium Groundwater Plume Modeling	At least once per permit cycle and each time the tritium plume reaches a new monitoring well	At least 180 days before permit expiration or within 6 months of detection of tritium plume in a new monitoring well.
G7.	Application for Permit Renewal	Once per permit cycle	At least 180 days before permit expiration (//2004)

SPECIAL CONDITIONS

S1. DISCHARGE LIMITATIONS

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any of the following pollutants more frequently than, or at a concentration in excess of, that authorized by this permit shall constitute a violation of the terms and conditions of this permit.

Beginning on the effective date and lasting through the expiration date of this permit, the Permittee is authorized to discharge wastewater to the drainfield known as the State Approved Land Disposal Site (SALDS), the permitted location, subject to the following limitations:

A. EFFLUENT LIMITATIONS

Parameter	Effluent Limitations	
	Average Monthly [a]	Maximum Daily [b]
Acetophenone	10 µg/l	--
Carbon Tetrachloride	5 µg/l	10 µg/l
N-Nitrosodimethylamine	20 µg/l	--
Tetrachloroethylene	5 µg/l	10 µg/l
Total Organic Carbon	1,100 µg/l	--
Arsenic (total)	15 µg/l	30 µg/l
Beryllium (total)	40 µg/l	--
Chromium (total)	20 µg/l	--
Ammonia (as N)	830 µg/l	--
Chloride	250,000 µg/l	--
Nitrate (as N)	100 µg/l	--
Nitrite (as N)	100 µg/l	--
Sulfate	10,000 µg/l	--
Total Suspended Solids	4,000 µg/l	--

[a] The average monthly effluent limitation is defined as the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

[b] The maximum daily effluent limitation is defined as the highest allowable daily discharge. The daily discharge means the discharge of a pollutant measured during a calendar day. The daily discharge is the average measurement of the pollutant over the day.

µg/l means micrograms per liter (parts per billion). Report in µg/l.

B. GROUNDWATER LIMITATIONS

Parameter	Groundwater Limitations [c]
Acetone	160 µg/l
Benzene	5 µg/l
Chloroform	6.2 µg/l
Tetrahydrofuran	100 µg/l
Cadmium (total)	10 µg/l
Copper (total)	70 µg/l
Lead (total)	50 µg/l
Mercury (total)	2 µg/l
Sulfate	250,000 µg/l
Total Dissolved Solids	500,000 µg/l
pH	6.5-8.5
[c] Groundwater limitations shall be met in groundwaters collected from the point of compliance monitoring wells numbers 699-48-77A, 699-48-77C, and 699-48-77D.	

C. EARLY WARNING VALUES

The following constituents are to be monitored in the effluent to provide an early warning that groundwater limitations are being approached in the effluent. 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.

The early warning report is due to Ecology, in writing, within 10 calendar days from the detection of a contaminant in the effluent that exceeds an early warning value. The early warning report shall contain, at a minimum, information regarding the concentrations of contaminant(s) that exceeded the early warning value, concentrations of other contaminants monitored, sample date, influent source of the verification tank sampled, an action plan to deal with the exceedance, and other pertinent information.

Parameter	Early Warning Value
Benzene	5 µg/l
Chloroform	5 µg/l
Tetrahydrofuran	100 µg/l
Cadmium (total)	7.5 µg/l
Copper (total)	70 µg/l
Lead (total)	38 µg/l
Mercury (total)	2 µg/l
Total Dissolved Solids	380,000 µg/l

S2. MONITORING REQUIREMENTS

A. EFFLUENT MONITORING

The sampling point for the effluent will be the verification tank recycle line tap (Sample Point 001). The Permittee shall monitor the wastewater according to the following schedule:

Parameter	Units	Sample Point (001)	Sampling Frequency	Sample Type
Acetophenone	µg/l	Verification tank	1 per month	Grab
Benzene	µg/l	Verification tank	1 per month	Grab
Carbon Tetrachloride	µg/l	Verification tank	1 per month	Grab
Chloroform	µg/l	Verification tank	1 per month	Grab
N-Nitrosodimethylamine	µg/l	Verification tank	1 per month	Grab
Methylene Chloride	µg/l	Verification tank	1 per month	Grab
Tetrachloroethylene	µg/l	Verification tank	1 per month	Grab
Tetrahydrofuran	µg/l	Verification tank	1 per month	Grab
Total Organic Carbon	µg/l	Verification tank	1 per tank	Grab
Gross Alpha	pCi/l	Verification tank	1 per tank	Grab
Gross Beta	pCi/l	Verification tank	1 per tank	Grab
Strontium-90	pCi/l	Verification tank	1 per month	Grab
Technetium-99	pCi/l	Verification tank	1 per month	Grab
Tritium	pCi/l	Verification tank	1 per month	Grab
Uranium (total)	µg/l	Verification tank	1 per month	Grab
Arsenic (total)	µg/l	Verification tank	1 per month	Grab
Beryllium (total)	µg/l	Verification tank	1 per month	Grab
Cadmium (total)	µg/l	Verification tank	1 per month	Grab
Chromium (total)	µg/l	Verification tank	1 per month	Grab
Copper (total)	µg/l	Verification tank	1 per month	Grab
Lead (total)	µg/l	Verification tank	1 per month	Grab
Mercury (total)	µg/l	Verification tank	1 per month	Grab
Ammonia (as N)	µg/l	Verification tank	1 per month	Grab
Chloride	µg/l	Verification tank	1 per month	Grab
Nitrate (as N)	µg/l	Verification tank	1 per tank	Grab
Nitrite (as N)	µg/l	Verification tank	1 per month	Grab
Sulfate	µg/l	Verification tank	1 per month	Grab

EFFLUENT MONITORING (continued)

Parameter	Units	Sample Point (001)	Sampling Frequency	Sample Type
Total Dissolved Solids	µg/l	Verification tank	1 per month	Grab
Total Suspended Solids	µg/l	Verification tank	1 per month	Grab
Specific Conductivity	µmhos/cm	Verification tank	1 per tank	Grab
Flow	Gallons per month	Verification tank	1 per tank	Grab
A sampling frequency of "1 per tank" means one (1) sample from each verification tank prior to discharge of the contents of the verification tank.				
A sampling frequency of "1 per month" means one (1) sample per month from a verification tank.				
pCi/l means picoCurie per liter.				

B. GROUNDWATER MONITORING

The sampling points for groundwater will be monitoring wells 699-48-77A (downgradient), 699-48-77C (downgradient), and 699-48-77D (downgradient). The Permittee shall monitor the groundwater according to the following schedule:

Parameter	Units	Monitoring Well	Sampling Frequency	Sample Type
Acetone	µg/l	699-48-77A, C, & D	Quarterly	Grab
Benzene	µg/l	699-48-77A, C, & D	Quarterly	Grab
Chloroform	µg/l	699-48-77A, C, & D	Quarterly	Grab
Tetrahydrofuran	µg/l	699-48-77A, C, & D	Quarterly	Grab
Gross Alpha	pCi/l	699-48-77A, C, & D	Quarterly	Grab
Gross Beta	pCi/l	699-48-77A, C, & D	Quarterly	Grab
Strontium-90	pCi/l	699-48-77A, C, & D	Quarterly	Grab
Tritium	pCi/l	699-48-77A, C, & D	Quarterly	Grab
Cadmium (total)	µg/l	699-48-77A, C, & D	Quarterly	Grab
Copper (total)	µg/l	699-48-77A, C, & D	Quarterly	Grab
Lead (total)	µg/l	699-48-77A, C, & D	Quarterly	Grab
Mercury (total)	µg/l	699-48-77A, C, & D	Quarterly	Grab
Sulfate	µg/l	699-48-77A, C, & D	Quarterly	Grab
Total Dissolved Solids	µg/l	699-48-77A, C, & D	Quarterly	Grab
pH	units	699-48-77A, C, & D	Quarterly	Grab/Field
Specific Conductivity	µmhos/cm	699-48-77A, C, & D	Quarterly	Grab/Field

GROUNDWATER MONITORING (continued)

Parameter	Units	Monitoring Well	Sampling Frequency	Sample Type
Temperature	°C	699-48-77A, C, & D	Quarterly	Grab/Field
Water Level	Meters	699-48-77A, C, & D	Quarterly	Field
Quarterly is defined as one sample per calendar quarter: January-March, April-June, July-September, and October-December.				
Monitoring well water level, pH, conductivity, and temperature should be measured in the field, at the time of well sampling.				

C. SAMPLING AND ANALYTICAL PROCEDURES

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.

Groundwater sampling shall conform to the latest protocols in the *Implementation Guidance for the Ground Water Quality Standards*, (Ecology 1996).

Sampling and analytical methods used to meet the water and wastewater 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 or to the latest revision of *Standard Methods for the Examination of Water and Wastewater* (APHA), unless otherwise specified in this permit or approved in writing by the Department of Ecology (Ecology).

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, 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 may be substituted by the Permittee provided the same PQL value(s) is achieved for each constituent or parameter.

PRACTICAL QUANTIFICATION LEVELS
AND ANALYTICAL METHODS

Parameter	PQL	Analytical Method	Additional Clarification
Acetone	40 µg/l	SW-846 8260	
Acetophenone	10 µg/l	SW-846 8270	
Benzene	5 µg/l	SW-846 8260	
Carbon Tetrachloride	5 µg/l	SW-846 8260	
Chloroform	5 µg/l	SW-846 8260	
N-Nitrosodimethylamine	20 µg/l	SW-846 8270	
Methylene Chloride	5 µg/l	SW-846 8260	
Tetrachloroethylene	5 µg/l	SW-846 8260	
Tetrahydrofuran	100 µg/l	SW-846 8260	
Total Organic Carbon		SW-846 9060	
Gross Alpha	(3 pCi/l)*	Laboratory Specific	
Gross Beta	(4 pCi/l)*	Laboratory Specific	
Strontium-90	(8 pCi/l)*	Laboratory Specific	
Technetium-99	(15 pCi/l)*	Laboratory Specific	
Tritium	(2,000 pCi/l)*	Laboratory Specific	
Uranium (total)	30 µg/l	EPA-600 200.8	
Arsenic (total)	15 µg/l	EPA-600 200.8	
Beryllium (total)	40 µg/l	SW-846 6010	
Cadmium (total)	5 µg/l	EPA-600 200.8	
Chromium (total)	20 µg/l	EPA-600 200.8	
Copper (total)	70 µg/l	EPA-600 200.8	
Lead (total)	10 µg/l	EPA-600 200.8	
Mercury (total)	2 µg/l	EPA-600 200.8	
Ammonia (as N)	40 µg/l	EPA-600 300.7	
Chloride	1,000 µg/l	EPA-600 300	
Nitrate (as N)	100 µg/l	EPA-600 300	
Nitrite (as N)	100 µg/l	EPA-600 300	
Sulfate	10,000 µg/l	EPA-600 300	
Total Dissolved Solids		EPA-600 160.1	
Total Suspended Solids		EPA-600 160.2	
pH		SW-846 9040A/ EPA-600 150.1 (in laboratory)	Groundwater-calibrate and measure pH in field. Report to nearest 0.1

PRACTICAL QUANTIFICATION LEVELS AND
ANALYTICAL METHODS (continued)

Parameter	PQL	Analytical Method	Additional Clarification
Specific Conductivity,		SW-846 9050/ EPA-600 120.1	Groundwater-calibrate and measure conductivity in field. Report all readings ≥ 10 µmhos/cm.
Temperature, degrees Celsius		EPA-600 170.1	Groundwater-measure temperature in field. Report to nearest 0.1 ^{o}C.
* Radioactive analysis does not require a check standard; however, the count time and sample volume must be capable of quantifying the specified activity level.			
Note: µg/l means micrograms per liter (parts per billion). pCi/l means picoCurie per liter.			

Check standards should be analyzed at least once per day on any machine used for analysis of monthly and quarterly compliance monitoring samples. Check standards shall be at concentrations equal to the PQL. Check standards shall be from sources that are independent of those used for calibration standards, and the resulting data are 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 assurance/quality control (QA/QC) requirements of 40 CFR 136 and/or the standard analytical procedures shall be followed during all analytical analysis.

If the measured effluent or groundwater concentration is below the method detection limit (MDL), the Permittee shall report <[MDL value of parameter]. Average values shall be calculated as follows: measurements below the MDL equal zero; measurements equal to or greater than the MDL equal the measurement.

Sample handling in the field and laboratory must conform to the requirements of 40 CFR 136, including the specifics in 40 CFR 136.3, Table II. However, variances and alternate approvals are subject to Ecology review and approval. For field QA/QC measures, the procedures of the latest revision of SW 846, volume 2, Section 1.2, "Field Manual for Physical and Chemical Methods" are to be followed. All samples collected for metal analyses shall be unfiltered. Samples are subject to chain-of-custody procedural requirements and documentation.

D. Flow Measurement

Appropriate 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 quantity of monitored flows. 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 and at a minimum frequency of at least one calibration per year. Calibration records shall be maintained for at least three years.

E. Laboratory Accreditation

All monitoring data required by Ecology shall be prepared by a laboratory registered or accredited under the provisions of *Accreditation of Environmental Laboratories*, Chapter 173-50 WAC. Flow, temperature, conductivity, pH, and internal process control parameters are exempt from this requirement. Conductivity and pH shall be accredited if the laboratory must otherwise be registered or accredited.

S3. REPORTING AND RECORDKEEPING REQUIREMENTS

The Permittee shall monitor and report in accordance with the following conditions. The falsification of information submitted to Ecology shall constitute a violation of the terms and conditions of this permit.

A. Reporting

The first monitoring period begins on the effective date of the permit. Monitoring results shall be submitted quarterly. Monitoring results obtained during the previous three (3) months shall be reported on the monthly forms as provided, or otherwise approved, by Ecology, and be received no later than the 45th day following the completed reporting period, unless otherwise specified in this permit. Duplicate copies of Discharge Monitoring Reports (one set of originals and one set of copies), signed and certified, and all other reports (one set of originals) required by this permit shall be sent to the Department of Ecology, Nuclear Waste Program, Water Quality Permit Coordinator, 1315 W. 4th Avenue, Kennewick, Washington, 99336-6018.

Discharge Monitoring Report forms must be submitted quarterly whether or not the facility was discharging. If there is a no discharge event at any of the monitored outfall(s) during a given monitoring period, place an “X” in the “NO Discharge” box located in the upper right corner of the Discharge Monitoring Report. Discharges shall be reported during the month when discharge from the tank begins.

B. Records Retention

The Permittee shall retain records of all monitoring information for a minimum of three (3) years. Such information shall include 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. 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.

C. Recording of Results

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

D. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit using test procedures specified by Condition S2. of 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.

E. Noncompliance Notification

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

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

2. Repeat sampling and analysis of any violation and submit the results to Ecology within thirty (30) days after becoming aware of the violation;

3. Immediately notify Ecology’s designated Water Quality Permit Coordinator, Kennewick Office at (509) 735-7581 of the failure to comply; and

4. Submit a detailed written report to Ecology within thirty (30) days, or within another timeframe requested by Ecology, describing the nature of the violation, corrective action taken and/or planned, steps to be taken to prevent a recurrence, results of the resampling, 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.

S4. FACILITY LOADING

Flows or waste loadings of the following criteria for the permitted discharge facility shall not be exceeded:

Maximum daily discharge flow:	670,000 gallons per day
Maximum average monthly discharge flow:	250,000 gallons per day

The average monthly flow is defined as the highest allowable average of the daily discharges over a calendar month, calculated as the totals gallons discharged during a calendar month, divided by the number of days in that month.

S5. OPERATION AND MAINTENANCE

The Permittee shall at all times be responsible for the proper operation and maintenance of any facilities or systems of control installed to achieve compliance with the terms and conditions of the permit.

A. Operations and Maintenance Manual

An Operations and Maintenance (O&M) Manual shall be maintained by the Permittee in accordance with WAC 173-240-150 and be submitted to Ecology if requested. The O&M Manual shall be reviewed by the Permittee at least annually. The Permittee shall confirm the review by letter and/or a manual update to Ecology. All substantive manual changes or updates shall be submitted to Ecology whenever they are incorporated into the manual. The approved operation and maintenance manual shall be kept available at the permitted facility.

The operation and maintenance manual shall contain the facility process control monitoring schedule. All operators shall follow the instructions and procedures of this manual.

The manual shall include:

1. Emergency procedures for facility shutdown and cleanup in event of wastewater system upset or failure;

2. System operational controls and procedures;

3. Protocols and procedures for ground water monitoring network sampling and testing, and;

4. Facility maintenance procedures.

B. Bypass Procedures

The Permittee shall immediately notify Ecology of all spills or overflows to the environment, or bypass from any portion of the treatment system.

The bypass of wastes from any portion of the treatment system is prohibited unless one of the following conditions (1, 2, or 3) applies:

1. *Unavoidable Bypass* -- Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.

   If the resulting bypass from any portion of the treatment system results in noncompliance with this permit the Permittee shall notify Ecology in accordance with condition S3.E "Noncompliance Notification."

2. *Anticipated Bypass That Has The Potential to Violate Permit Limits or Conditions* -- Bypass is authorized by an administrative order issued by Ecology. The Permittee shall notify Ecology at least thirty (30) days before the planned date of bypass. The notice shall contain a description of the bypass and its cause; the duration of the bypass, including exact dates and times; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass. Ecology will consider the following prior to issuing an administrative order:

   a. If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of the permit.

   b. If there are feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.

   c. If the bypass is planned and scheduled to minimize adverse effects on the public and the environment.

   After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, Ecology will approve or deny the request. The public shall be notified and given an opportunity to comment on bypass incidents

of significant duration, to the extent feasible. Approval of a request to bypass will be by administrative order issued by Ecology under RCW 90.48.120.

3. *Bypass For Essential Maintenance Without the Potential to Cause Violation of Permit Limits or Conditions* -- Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limitations or other conditions of the permit, or adversely impact public health as determined by Ecology prior to the bypass.

C. Best Management Practices/Pollution Prevention Program

1. There shall be no runoff or spill of wastewater discharged to the drainfield to any surface waters of the state or to any land not owned by or under control of the Permittee.

2. The Permittee shall use recognized good practices, and all available and reasonable procedures.

3. The wastewater shall not be discharged to the drainfield in quantities that significantly reduce or destroy the long-term infiltration rate of the soil or that would alter groundwater quality in amounts that would affect current and future beneficial uses.

S6. SOLID WASTE DISPOSAL

A. Solid Waste Handling

The Permittee shall handle and dispose of all solid waste material in such a manner as to prevent its entry into state ground or surface water.

B. Solid Waste Control Plan

The Permittee shall maintain a solid waste control plan. This plan shall include all solid wastes with the exception of those solid wastes regulated by Chapter 173-303 WAC (Dangerous Waste Regulations). The plan shall include, at a minimum, a description, source, generation rate, and disposal methods of these solid wastes. This plan shall not be at variance with any approved local solid waste management plan. The Permittee shall submit any substantive proposed revision or modification of the solid waste handling plan to Ecology. The Permittee shall comply with the plan and any modifications thereof. The Permittee shall submit an update of the solid waste control plan with the application for permit renewal 180 days prior to the expiration date of the permit.

S7. NON-ROUTINE AND UNANTICIPATED DISCHARGES

Beginning on the effective date of this permit, the Permittee may discharge non-routine wastewater on a case-by-case basis if approved by Ecology. Prior to any such discharge, the Permittee shall contact Ecology and **at a minimum** provide the following information:

1. The nature of the activity that is generating the discharge.

2. Any alternatives to the discharge, such as reuse, storage, or recycling of the water.

3. The total volume of water expected to be discharged.

4. The results of the chemical analysis of the water. The water shall be analyzed for all constituents limited for the Permittee's discharge. The analysis shall also include hardness, any metals that are limited by water quality standards, and any other parameter deemed necessary by Ecology. All discharges must comply with the effluent limitations as established in Condition S1. of this permit, water quality standards, sediment management standards, and any other limitations imposed by Ecology.

5. The date of proposed discharge and the rate at which the water will be discharged, in gallons per minute. The discharge rate shall be limited to that which will not cause erosion of ditches or structural damage to culverts and their entrances or exits.

The discharge cannot proceed until Ecology has reviewed the information provided and has authorized the discharge. Authorization from Ecology, if granted, will be by letter to the Permittee or by an Administrative Order.

S8. SPILL PLAN

The Permittee shall maintain an updated Spill Control Plan for the prevention, containment, and control of spills or unplanned releases. The Permittee shall review the plan at least annually and update the Spill Plan as needed. Substantive changes to the plan shall be sent to Ecology. The plan and any supplements shall be followed throughout the term of the permit. The updated spill control plan shall be made available upon request and shall include the following:

1. A description of operator training to implement the plan.

2. A description of the reporting system which will be used to alert responsible managers and legal authorities in the event of a spill.

3. A description of preventive measures and facilities (including an overall facility plot showing drainage patterns) which prevent, contain, or treat spills of these materials.

4. A list of all oil and petroleum products; materials, which when spilled, or otherwise released into the environment, are designated Dangerous (DW) or Extremely Hazardous Waste (EHW) by the procedures set forth in WAC 173-303-070; or other materials which may become pollutants or cause pollution upon reaching state's waters.

5. Plans and manuals required by 40 CFR Part 112, contingency plans required by Chapter 173-303 WAC, or other plans required by other agencies which meet the intent of this section may be submitted.

S9. INFLUENT CRITERIA

Discharge of treated wastewater from the ETF to the SALDS infiltration gallery is permitted for the following wastewaters: 242-A Evaporator Process Condensate, 200-UP-1 Groundwater, Quantera Wastewater, Waste Sampling and Characterization Facility Wastewater, Plutonium Uranium Extraction Facility Basin Wastewater, Solid Waste Landfill Leachate, Environmental Restoration Disposal Facility Leachate, West Area Tank Farm's 242-S-302-C Wastewater, 100-N Reactor Wastewater, Well Purgewater, T-Plant Tank 241-TX-302C Wastewater, Well Drilling Decontamination Wastewater, 107-N/1314-N/1310-N Wastewater, 105-N Lift Station Wastewater, 100 HR-3 & KR-4 Field Test Wastewater, 105-C Lift Station Wastewater, FFTF Rinse Wastewater, 100-D Area Wastewater, Railcar Cleanout Contaminated Stormwater, K Area Well Test Water, 327 Building Sanitary Water Overflow, and Grout Testing Project 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. An updated list shall be provided to Ecology within sixty (60) days of the permit effective date 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 that 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 any of 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, that 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.

S10. TRITIUM TRACKING AND GROUNDWATER MONITORING PLAN

Within ninety (90) days of the permit effective date, the Permittee shall submit a Tritium Tracking and Groundwater Monitoring Plan to Ecology for review and comment that includes:

1. The location and construction of Wells 699-48-77A, 699-48-77C, and 699-48-77D.

2. 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 for each fiscal year to Ecology at least annually, by November 30th of the following fiscal year.

3. 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(s) and reports to Ecology should occur at least once per permit cycle and within six (6) months of detection of the tritium plume in a new monitoring well. The plan should include the proposed reporting format, e.g., maps, tables, etc.

4. 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.

The Permittee shall submit a finalized Tritium Tracking and Groundwater Monitoring Plan addressing Ecology comments within thirty (30) days after receipt of Ecology comments.

The Permittee shall sample Wells 699-48-77A, 699-48-77C, and 699-48-77D at least once per calendar quarter for the constituents listed in Section S2.B of this permit. These sample results shall be reported in the quarterly Discharge Monitoring Reports (DMRs) per the requirement of Section S3.

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

GENERAL CONDITIONS

G1. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to Ecology shall be signed as follows:

A. All permit applications shall be signed by either a principal executive officer or ranking elected official.

B. 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:

1. The authorization is made in writing by the person described above and is submitted to Ecology at the time of authorization, and

2. The authorization specifies either a named individual or any individual occupying a named position.

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

D. 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."

G2. 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; and to sample the discharge, waste treatment processes, or internal waste streams.

G3. PERMIT ACTIONS

This permit shall be subject to modification, suspension, or termination, in whole or in part by Ecology for any of the following causes:

A. Violation of any permit term or condition;

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

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

D. A material change in the condition of the waters of the state; or

E. Nonpayment of fees assessed pursuant to RCW 90.48.465.

Ecology may also modify this permit, including the schedule of compliance or other conditions, if it determines good and valid cause exists, including promulgation or revisions of regulations or new information.

G4. REPORTING A CAUSE FOR MODIFICATION

The Permittee shall submit a new application, or a supplement to the previous application, along with required engineering plans and reports, whenever a new or increased discharge or change in the nature of the discharge is anticipated which is not specifically authorized by this permit. This application shall be submitted at least sixty (60) days prior to any proposed changes. Submission of this application does not relieve the Permittee of the duty to comply with the existing permit until it is modified or reissued. Discharges that are authorized by this permit are described in the fact sheet.

G5. PLAN REVIEW REQUIRED

Prior to constructing or modifying any wastewater control facilities, an engineering report and detailed plans and specifications shall be submitted to Ecology for approval in accordance with Chapter 173-240 WAC. Engineering reports, plans, and specifications should be submitted at least 180 days prior to the planned start of construction. Facilities shall be constructed and operated in accordance with the approved plans.

G6. 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.

G7. DUTY TO REAPPLY

The Permittee must reapply for permit renewal at least 180 days prior to the specified expiration date of this permit.

G8. 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 the 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.

G9. PAYMENT OF FEES

The Permittee shall submit payment of fees associated with this permit as assessed by Ecology. Ecology may revoke this permit if the permit fees established under Chapter 173-224 WAC are not paid.

G10. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars ($10,000) and costs of prosecution, or by imprisonment at the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be and be deemed to be a separate and distinct violation.

G11. 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.