WASHINGTON STATE DEPARTMENT OF ECOLOGY

Issuance Date: February 16, 2005
Effective Date: February 16, 2005
Expiration Date: February 16, 2010

STATE WASTE DISCHARGE PERMIT NUMBER ST 4511

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
RICHLAND, WASHINGTON 99354-1670

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

UNITED STATES DEPARTMENT OF ENERGY
RICHLAND OPERATIONS OFFICE
P.O. BOX 550
RICHLAND, WASHINGTON 99354

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

Facility Location: U.S. Department of Energy Richland Operations Office Hanford Site Richland, Washington	Discharge Location: Hanford Site (Only areas controlled by and discharges of U.S. Department of Energy)
Industry Type: Clean-up Site SIC Code: 9999	Latitude: 46° 33'- 46.4" N Longitude: 119° 35'-57.8" W

Michael A. Wilson
Program Manager
Nuclear Waste Program

TABLE OF CONTENTS

SPECIAL CONDITIONS

TABLE

GENERAL CONDITIONS

ACRONYM LIST

BMPs.....Best Management Practices

BOF.....Balance of Facilities

CERCLA.....Comprehensive Environmental Response, Compensation, and Liability Act

CFR.....Code of Federal Regulations

EPA.....United States Environmental Protection Agency

GWQC .....Groundwater Quality Criteria

HAMMER.....Hazardous Material Management and Emergency Response

HLW .....High Level Waste

LAW .....Low Activity Waste

P2BMPs .....Pollution Prevention and Best Management Practices

PLAN .....Pollution Prevention and Best Management Practices Plan

PLAN AND SCHEDULE.....Plan and Schedule for Disposition and Regulatory Compliance for Miscellaneous Streams

USDOE .....United States Department of Energy-Richland Operations Office

RCRA.....Resource Conservation and Recovery Act

RCW .....Revised Code of Washington

RL .....Richland Operations Office

SWDP .....State Waste Discharge Permit

TEDF.....Treated Effluent Disposal Facility

USDOE .....United States Department of Energy

WAC .....Washington Administrative Code

WTP .....Waste Treatment and Immobilization Plant

DEFINITIONS

Stormwater	Stormwater is defined as that portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of an engineered stormwater drainage system into a constructed infiltration facility.
Industrial Stormwater	Industrial stormwater is a stormwater discharge with the potential to come into contact with an industrial activity or that is collected within an area of industrial activity (i.e., one directly related to manufacturing, processing or raw materials storage at an industrial plant).
Significant Discharge	Significant discharge is any single discharge that exceeds 14,500 gallons in a 24 hour period or any single discharge that exceeds 50,000 gallons total in a calendar year from hydrotesting, maintenance, and construction wastewater discharges.
Upset Condition	For the purposes of this Permit and the Hanford Site, "upset condition" means an exceptional incident in which there is a wastewater discharge that exceeds the limitations of this Permit resulting from factors beyond the reasonable control of the Permittee.

SUMMARY OF SCHEDULED PERMIT REPORT SUBMITTALS

Permit Section	Submittal	Frequency	First Submittal Date
S.5.A.	Draft Pollution Prevention and Best Management Practices Plan	1/Permit Cycle	180 Days after effective date of permit
S.5.A.	Final Pollution Prevention and Best Management Practices Plan	1/Permit Cycle	90 Days after resolution of Ecology's comments
S.5.C.	Revisions to Pollution Prevention and Best Management Practices Plan	Upon Ecology request or voluntarily	Within 90 days of receiving a written request from Ecology or 30 days prior to desired implementation
S.6.	Log of Significant Discharges	Compiled annually by February 15. Submitted to Ecology on request	As Requested
S.7.	Request for case by case additional permit coverage	As needed for instances where the flow will exceed permit condition S1.B.2.	At least 10 work days prior to desired discharge date
G.5.	Application for permit renewal	1/permit cycle	At least 180 days before permit expiration
G.11.	Noncompliance notification written report	As needed	Within 30 days (or sooner if requested by Ecology) upon discovery of noncompliance

PERMIT CONDITIONS

S.1. PERMIT COVERAGE

S.1.A. TYPES OF ACTIVITIES AUTHORIZED

This Categorical State Waste Discharge Permit and the Permit Conditions authorizes the wastewater discharges from the following activities of the United States Department of Energy (USDOE)-Richland Operations (RL) Office (Permittee) on the Hanford Site:

S.1.A.1. Hydrotesting, Maintenance, and Construction Wastewater Discharges

S.1.A.1.a. Hydrotesting discharges such as system and component testing, research and development testing, and other experimental discharges.

S.1.A.1.b. Maintenance discharges such as drainage, flushing, and wash down activities.

S.1.A.1.c. Construction discharges such as concrete curing, concrete cutting, including rinsate and etching solutions, and pressure washing activities.

S.1.A.2. Cooling Water, Condensate, and Miscellaneous Wastewater Discharges

S.1.A.2.a. Cooling water discharges from parts and components of heating, ventilation, and air conditioning systems, air compressors, engines, and ice machines that are discharged to an engineered structure.

S.1.A.2.b. Condensate discharges from heating, ventilation, and air conditioning systems, air compressors, and ice machines that discharge to an engineered structure. Steam condensate discharges from steam lines that do not discharge to an injection well.

S.1.A.2.c. Other miscellaneous discharges such as water tank overflows, and incidental releases from facilities on the Hanford Site. Miscellaneous discharges does not include noncompliance to the extent caused by operational error, lack of preventive maintenance, or careless and/or improper operation.

S.1.A.3. Industrial Stormwater Discharges

The only stormwater requiring a state wastewater discharge permit is industrial stormwater that discharges to ground and is collected in an engineered structure and is subsequently discharged to an engineered disposal structure. These terms are explained below. Stormwater discharges that meet all three of the following criteria are subject to the requirements of this Permit. Stormwater discharges that do not meet all three of the following criteria do not require permit coverage:

S.1.A.3.a. Industrial stormwater is a stormwater discharge with the potential to come into contact with an industrial activity or that is collected within an area of industrial

activity (i.e., one directly related to manufacturing, processing or raw materials storage at an industrial plant).

S.1.A.3.b. Collected in an engineered structure means that the industrial stormwater must be collected in a structure such as a lined trench, basin, retention structure, secondary containment, tank, sump, roof, and other impervious surfaces directly associated with industrial activities.

S.1.A.3.c. Discharged to an engineered structure means that the industrial stormwater must be discharged to an engineered disposal structure such as an injection well, dry well, catch basin, infiltration basin, infiltration trench, lined trench, or retention basin.

S.1.B. CONDITIONS ON ACTIVITIES AUTHORIZED

To be authorized by this Permit, each wastewater discharge as specified in Permit Condition S.1.A.1, S.1.A.2, and S.1.A.3 must meet the following conditions, or comply with Permit Condition S.7;

S.1.B.1. Each individual discharge event must be less than 10 gallons per minute averaged annually. Annual average flow is calculated for each discharge as total gallons discharged in a calendar year, divided by the number of minutes in that year. For industrial stormwater discharges, the Permittee shall not use this permit condition.

S.1.B.2. Each individual discharge event must be less than 150 gallons per minute instantaneously. For industrial stormwater discharges, the Permittee shall not use this permit condition.

S.1.B.3. Hydrotesting, maintenance, construction wastewater, cooling water, condensate, and miscellaneous discharge(s) as identified in Permit Conditions S.1.A.1 and S.1.A.2, must meet the Groundwater Quality Criteria (GWQC) pursuant to Washington Administrative Code (WAC) 173-200 unless;

S.1.B.3.a. The discharge is expected to have a contaminant that exceeds the GWQC solely because the source water has a contaminant that exceeds one or more of the GWQC; or

S.1.B.3.b. The discharge is expected to exceed the GWQC at the point of discharge, but is prevented from impacting groundwater quality as determined by Permit Condition S.2.B.2.

S.2. DISCHARGE LIMITATIONS

S.2.A. All discharges and activities authorized by this Permit shall be consistent with the terms and conditions of this Permit. The discharge of any pollutant 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.

S.2.B. Beginning on the effective date and lasting through the expiration date of this Permit, the Permittee is authorized to discharge to ground via infiltration, wastewater from all activities listed and described under Permit Condition S.1.A subject to the following limitations:

S.2.B.1. All discharges shall follow appropriate Pollution Prevention and Best Management Practices (P2BMPs) described in this Permit and/or in the required permit submittals such as the Pollution Prevention and Best Management Practices Plan (Plan). P2BMPs in the required permit submittals are not required to be implemented until the submittal is reviewed and approved by Ecology. No sampling and analysis of the permitted discharges are required as long as the appropriate Ecology approved P2BMPs are complied with. If Ecology determines that the Permittee has failed to comply with the Plan, Ecology may require sampling and analysis of a particular discharge.

S.2.B.2. At the point of discharge, contaminants in all wastewater covered under these activities and Permit shall not exceed either the GWQC levels or 110% of the contaminant levels of the designated source water(s) unless approved permitted discharge P2BMPs are implemented. Implementation of approved P2BMPs to prevent impacts to groundwater is considered appropriate demonstration of compliance under this Permit for discharges authorized under Permit Conditions S.1.A.1 and S.1.A.2. For industrial stormwater discharges, the Permittee shall not use this permit condition.

S.2.B.3. For the wastewater discharges authorized under Permit Condition S.1.A.1, the total volume of all permitted discharges shall not exceed 2,000,000 gallons per day. This condition will be considered to be met as long as the total volume of all measured significant discharges (as defined in Permit Condition S.6) is below 1,500,000 gallons per day.

S.2.B.4. For all wastewater discharges authorized under Permit Condition S.1.A.2, the total volume of all permitted discharges shall not exceed 100,000 gallons per day. Each discharge must also meet the requirements of Permit Condition S.1.B.

S.2.B.5. For industrial stormwater discharges authorized under this Permit and pursuant to Permit Condition S.1.A.3, contaminants in the permitted discharges shall not exceed the GWQC levels. For an industrial stormwater discharge, compliance with P2BMPs requirements in the Permit (Permit Condition S.4) and the P2BMPs Plan shall be considered an appropriate demonstration of compliance unless the potential for contamination exists. Compliance with this permit condition may also be confirmed by sampling and analyzing the industrial stormwater discharged.

S.3. SOURCE WATER LIMITATIONS

S.3.A. For the purposes of this Permit, source waters allowed to be used for hydrotest, maintenance, construction discharges as defined in Permit Condition S.1.A.1, are

raw Columbia River water, potable water which consists of Treated Columbia River Water or Groundwater, or demineralized water (Treated Potable Water).

S.3.B. For the purposes of this Permit, the source waters allowed to be used by cooling water, condensate, and miscellaneous wastewater permitted discharge activities as defined in Permit Condition S.1.A.2, are raw Columbia River water, raw groundwater, potable water (Treated Columbia River Water or Groundwater) or condensed water vapor from ambient air.

S.3.C. For the purposes of this Permit, the only permit condition allowed source water for the industrial stormwater discharges is as described in Permit Condition S.1.A.3. Stormwater is defined as that portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of an engineered stormwater drainage system into a constructed infiltration facility.

S.3.D. The State Waste Discharge Permit Application, documentation for *Renewal of State Waste Discharge Permits ST 4508, ST 4509, and ST 4510* (DOE/RL-2001-60, Rev. 0) describes the quality of source waters and lists potential contaminants contained in each source water. No sampling and analysis of the source water is required by this Permit, however potable water is routinely sampled as required under WAC 246-290-300. Based on this potable water monitoring, if new contaminants or levels of previously identified contaminants are detected at or above the GWQC, the Permittee shall notify Ecology and Ecology will evaluate if the water should still be used as source water. The Permittee is not required to notify Ecology of changes in concentration for those contaminants already identified in the permit application that exceed the GWQC.

S.4. POLLUTION PREVENTION AND BEST MANAGEMENT PRACTICES (P2BMPS) FOR PERMITTED DISCHARGES

S.4.A. For all wastewater discharges authorized by this Permit as identified in Permit Conditions S.1.A.1 (hydrotesting, maintenance, and construction); S.1.A.2 (cooling water, condensate, and miscellaneous); S.1.A.3 (industrial stormwater), the Permittee shall implement at a minimum the following P2BMPs where appropriate:

S.4.A.1. No discharge shall be allowed within a surface contaminated area (areas with dangerous waste and/or radioactive contaminants).

S.4.A.2. No discharge shall be allowed within a 300 foot horizontal radius of a known active or inactive crib, ditch, or trench used for disposal of dangerous and/or radioactive contaminants.

S.4.A.3. Except as authorized by a wastewater discharge permit, no discharge or runoff of wastewater is allowed to any surface waters of the state or to any land not owned by or under control of the Permittee.

S.4.A.4. Reasonable efforts shall be taken to prevent ponding due to discharge flow rates above the expected soil infiltration capacity.

S.4.A.5. For discharges authorized by this Permit as identified in Permit Conditions S.1.A.1 and S.1.A.2, if the discharge meets the waste acceptance criteria for the Hanford 200 Area Treated Effluent Disposal Facility (TEDF), and the discharge is near a connection to the TEDF collection system, all reasonable attempts will be made to discharge to the TEDF. Discharge to other permitted wastewater treatment facilities, such as the 300 Area TEDF, is also acceptable, provided the discharge meets the waste acceptance criteria of that facility.

S.4.A.6. For discharges authorized by this Permit as identified in Permit Conditions S.1.A.1 and S.1.A.2, the Permittee shall recycle, store, and reuse the wastewater where practical.

S.4.A.7. The collection of stormwater in any tank, sump, pit, or other engineered structure that is contaminated from past or present operations and could potentially contaminate the stormwater with dangerous and/or radioactive contaminants shall be avoided where practicable. If such collection occurs, then field screening or analysis of the industrial stormwater for contaminants of concern, based on process knowledge, is required prior to discharge. Only industrial stormwater that meets Permit Condition S.2.B.5 can be discharged under this Permit. For industrial stormwater where tests indicate it has become contaminated, the industrial stormwater shall first require appropriate treatment followed by discharge under this Permit or another wastewater discharge permit, or other appropriate disposal.

S.5. POLLUTION PREVENTION AND BEST MANAGEMENT PRACTICES (P2BMP) PLAN REQUIREMENTS

S.5.A. PLAN ELEMENTS

The Permittee will implement an approved Ecology P2BMP (Plan) for all discharges authorized by this Permit. This Plan shall provide guidance on appropriate handling for wastewater discharge activities in accordance with Permit Condition S.1. The Plan shall at a minimum incorporate terms and conditions of this Permit. The Plan should be usable as a training document for those responsible for all wastewater discharges discussed under this Permit.

S.5.A.1. The Plan should be broken down by categories and sub-categories so that each individual discharge authorized by this Permit can point to a specific section in the Plan for the appropriate P2BMPs for the particular discharge. If an individual permitted discharge cannot point to a specific section of the Plan for the appropriate P2BMPs, then such discharge is not authorized by this Permit until an appropriate section is added to the Plan(s).

S.5.A.2. Recommendations and guidance for this Plan may be taken from appropriate Ecology publications [e.g., Stormwater Pollution Prevention Planning for Industrial Facilities (WQ-R-93-015)], industrial association publications, guidance from the Associated General Contractors of Washington or other sources with additional Hanford Site specific details added.

S.5.A.3. In addition, to the extent practicable, the Plan will address how impacts to groundwater quality will be prevented. Similarly, when new or replacement chemical additives are added to a process, the Plan will address how the Permittee shall ensure that appropriate actions are taken to protect the environment and quality of the groundwater.

S.5.B. PLAN COMPLIANCE

Activities authorized by this Categorical State Waste Discharge Permit must, at all times, comply with the terms and conditions of the Plan. The discharge of any wastewater not done as specified in the Plan shall constitute a violation of the terms and conditions of this Permit.

S.5.B.1. Every permitted discharge shall have an assigned responsible person onsite who is familiar with the section of the Plan that applies to the discharge. This responsible person should confirm compliance with the Plan and be prepared to answer any question from Ecology in the event of an inspection, investigation, non-compliance or other circumstance.

S.5.C. PLAN REVISIONS

If Ecology determines the need for a revision to the Plan, Ecology will notify the Permittee in writing of the need for a revision. The Permittee must then complete a draft revision to the Plan and submit it to Ecology for approval within 90 days of receiving the written notification. The revision will become effective after Ecology has reviewed and approved the draft revision. If Ecology rejects any portion of the draft revision, Ecology will notify the Permittee of the rejection and the required changes. If the Permittee does not object to the required changes within 21 days from receiving the rejection notification, then the required changes will become effective at that time. If the Permittee decides to dispute or challenge Ecology's approved final version, a request for reconsideration by Ecology shall be filed within 21 days of receiving the rejection notification and required changes. If the Permittee and Ecology are thereafter unable to agree upon revised Plan language, Ecology will issue their final version of the Plan as a permit modification. The Permittee may then appeal the permit modification in the appropriate administrative or judicial forum. The appeal alone will not stay the effectiveness of the permit modification. A stay will only be granted in accordance with the procedures set forth in Revised Code of Washington (RCW) 43.21B.320.

If the Permittee determines the need for revisions to the Plan, the Permittee must send a written request to Ecology at least 30 days prior to the desired

implementation date of the revision. Ecology may approve, approve with modification, or disapprove the Permittee's draft revision. If Ecology does not act within 30 days of receiving the request for revision, the revision will become effective as notified by the Permittee in the written request.

S.6. MONITORING AND REPORTING REQUIREMENTS

S.6.A. A significant discharge is any single discharge that exceeds 14,500 gallons in a 24 hour period or any single discharge that exceeds 50,000 gallons total in a calendar year from sources identified in Permit Condition S.1.A.1. These significant discharges, authorized by this Permit, shall be recorded in a log. The Permittee has the responsibility of maintaining the significant discharge log. The information required to be kept in this log will include, at a minimum, the following:

S.6.A.1 Date and type of discharge

S.6.A.2. Location of discharge

S.6.A.3. Source water

S.6.A.4. Additives

S.6.A.5. Total volume (gallons)

S.6.A.6. Discharge rate (gallons/minute)

S.6.A.7. Soil loading rate (gallons/minute/square feet)

S.6.A.8. Name of assigned responsible person

S.6.A.9. Any other information necessary to fully evaluate the situation

S.6.B. The significant discharge log for each calendar year shall be provided to Ecology upon request. Each calendar year begins January 1st and ends December 31st. The falsification of information submitted to Ecology shall constitute a violation of the terms and conditions of this Permit. The information required to be kept in this log will be maintained for a minimum of five years. This time period may be extended by the Director in the event of enforcement action or notification of investigation/inspection. The Permittees will not be required to keep the records longer than one year past the normal timeframe unless an enforcement action is issued.

S.7. ADDITIONAL PERMIT COVERAGE

S.7.A. CASE BY CASE ADDITIONS

If a planned discharge meets Permit Condition S.1.A, S.1.B.1, and S.1.B.3, but fails to meet Permit Condition S.1.B.2, the discharge may be authorized under this Permit if the following conditions are met:

S.7.A.1. The Permittee submits to Ecology a written request that the planned discharge be authorized under this Permit. This request must be submitted to Ecology at least ten (10) business days prior to the proposed planned discharge. The request will provide at a minimum the following information:

S.7.A.1.a. Proposed date and type of discharge

S.7.A.1.b. Location of discharge

S.7.A.1.c. Source water

S.7.A.1.d. Additives

S.7.A.1.e. Total Volume (gallons)

S.7.A.1.f. Discharge rate (gallons/minute)

S.7.A.1.g. Soil loading rate (gallons/minute/square feet)

S.7.A.1.h. Name of assigned responsible person

S.7.A.1.i. Specific section of the P2BMP Plan that applies

S.7.A.1.j. The reason why this proposed discharge should be authorized by this Permit and any other information necessary to fully evaluate the situation and to develop an appropriate course of action.

S.7.A.2. If Ecology determines that the proposed planned discharge submittal information and this Permit are appropriate to regulate and authorize the planned discharge, Ecology will give written authorization to the Permittee to discharge (the planned discharge) under the terms and conditions of this Permit. Some discharges may require a revision to the Plan (P2BMP) before the discharge can be authorized by this Permit.

S.7.A.3. Discharges that exceed 1,000 gallons per minute or discharges that fall outside of the scope of this Permit will not be authorized by this Permit and the Permittee will need to submit to Ecology a Hanford Specific Permit Application for a One Time/Limited Duration Discharge Permit.

S.7.B. BLANKET ADDITION FOR WATER LINE FLUSHING

Drinking water line flushing performed on the Hanford Site may exceed Permit Condition S.1.B.2 of this Permit (each individual discharge event must be less than 150 gallons per minute instantaneously). Drinking water line flushing activities include opening hydrants to flush contaminants from drinking water lines, flushing of drinking water lines which have been sanitized by the addition of chlorinated water, flushing of drinking water lines for flow testing, and flushing after hydrotesting of drinking water lines. These flushing activities are still appropriate to be authorized by this Permit as long as the activities are carried out according to all the other terms and conditions of this Permit and the required P2BMP. The P2BMP, as specified in this Permit and permit submittals, should protect the environment from contaminants flushed from these lines. These flushing activities will be allowed to exceed the 150 gallons per minute limit for up to 60 minutes, and at no time will be allowed to exceed 1,000 gallons per minute.

S.7.B.1. Another category of water line flushing activities performed on the Hanford Site which may exceed Permit Condition S.1.B.2 of this Permit, is flushing of raw water lines to remove contaminants (e.g., microbes or sediment) and flushing of newly installed pipe lines for flow testing, after hydrotesting, after disinfection or to remove construction debris. These flushing activities are still appropriate to be authorized by this Permit as long as the activities are carried out according to the other terms and conditions of this Permit and permit submittals. The proper P2BMPs, as specified in this Permit and permit submittals, should protect the environment from contaminants flushed from these lines. These flushing activities will be allowed to exceed the 150 gallons per minute limit for up to 60 minutes, and at no time will be allowed to exceed 3,500 gallons per minute.

S.7.C. HAZARDOUS MATERIAL MANAGEMENT AND EMERGENCY RESPONSE (HAMMER) POND DISCHARGE ADDITION

The recycle pond at the HAMMER training facility has, or potentially has, a discharge to the ground. The pond collects water that has been used during training activities. Most of this water is stored for reuse in Hammer's training activities. Some of the pond water may leak/discharge to the ground. The source water is Richland city water (potable water) and it is treated at the pond to maintain an acceptable water quality for use in training activities.

S.7.C.1. While this discharge may not appear to be in one of the categories authorized by this Permit, the discharge is of similar quality and quantity to other authorized discharges. Therefore, this discharge is being included as a discharge authorized by this Permit. The P2BMPs for this discharge should be included in the Permit required Plan. The P2BMPs submitted for this pond discharge should include details on the treatment used by HAMMER to maintain the quality of the water and information on planned maintenance of the pond liner integrity.

S.7.D. INCIDENTAL RELEASES

S.7.D.1. Activities associated with operations and routine maintenance may result in small incidental releases of wastewater within the facility's boundaries (e.g., water skid maintenance and pump testing) that do not meet the location or distance limits specified in Permit Conditions S.4.A.1 or S.4.A.2. These facility activities are subject to the following controls and limitations:

S.7.D.1.a. No discharge from a single activity may exceed 60 gallons released to the soil.

S.7.D.1.b. All appropriate best management practices shall be implemented to prevent unnecessary discharges.

S.7.D.1.c. No ponding of liquids in contaminated areas is allowed.

S.7.D.2. In addition, the Permittee will perform the following activities:

S.7.D.2.a. During pre-job planning, measures to limit soil erosion will be incorporated into the work plan.

S.7.D.2.b During performance of the work, all measures to limit ponding and/or erosion will be implemented.

S.7.E. WASTE TREATMENT AND IMMOBILIZATION PLANT BALANCE OF FACILITIES FIRE WATER DISCHARGE

The Waste Treatment and Immobilization Plant (WTP)/Balance of Facilities (BOF) has the potential for an unplanned raw water discharge to the ground. In the unlikely event of a total loss of site power, or a break in the cooling tower supply/return lines, fire water (raw water) will be used to cool the High Level Waste (HLW) and Low Activity Waste (LAW) melters and the LAW pour cave walls. Fire water may be returned to the cooling water tower basin after which it will be discharged to the ground.

S.7.E.1. WTP/BOF may route this unplanned cooling water discharge to the ground via the stormwater drainage system under the following permit conditions:

S.7.E.1.a. The fire water is introduced into the supply lines such that all protective measures are in place to ensure no cross-contamination occurs during normal supply of cooling water and remain in place during the alternate supply from the fire water system. This includes at a minimum double isolation (primary/secondary heat exchangers) and maintenance of positive pressure inward from the utility side.

S.7.E.1.b. The cooling water discharge is of similar quality to other discharges authorized by this Permit.

S.7.E.1.c. Best Management Practices (BMPs) for this discharge will be included in the required P2BMP Plan.

S.7.E.1.d. Should this unplanned cooling water discharge from the WTP/BOF Facility occur, the Permittee will verbally report the occurrence to Ecology within 24 hours. A written report will be submitted to the Ecology Water Quality Coordinator in Richland within 30 days unless requested earlier by Ecology. The written report should include but not be limited to the following information:

- Discharge date
- Duration time of discharge
- Estimated volumes discharged (gallons)
- Estimated discharge rate (gallons/minute)
- Source water
- Additives (if any)
- Location
- Name of assigned responsible person
- Any other information necessary to fully evaluate the situation

S.7.F. WASTE TREATMENT AND IMMOBILIZATION PLANT BALANCE OF FACILITIES NON-ROUTINE AND SPECIAL CASE CONSTRUCTION DISCHARGES

S.7.F.1. Discharges to the ground of WTP construction related water are anticipated to be infrequent. Once WTP is operational, these construction related water discharges as identified in Table S.7.F.1, are no longer allowed under this Permit (e.g., new tanks and vessels, during the building/construction phase of the facility and prior to start-up). Beginning on the effective date of this Permit, a WTP vessel or tank that exceeds 50,000 gallons total volume may discharge these special case discharges to the ground on a case by case basis approved by Ecology and under the following conditions:

S.7.F.1.a. The construction related water discharge is of similar quality to other discharges authorized by this Permit.

S.7.F.1.b. The discharge does not meet the waste acceptance criteria for the 200 Area TEDF and/or the discharge is not near a connection to the TEDF collection system. All reasonable attempts will be made to discharge to the TEDF.

S.7.F.1.c. Best Management Practices (BMPs) for this discharge are included in the required P2BMP Plan.

S.7.F.1.d. No authorized discharge from a single activity may exceed 3,500 gallons per minute released to the ground.

S.7.F.1.e. During performance of the work, all measures to limit ponding and/or erosion will be implemented.

Table S.7.F.1 – Description of Waste Treatment and Immobilization (WTP Balance of Facilities (BOF) Vessels and Tanks Greater than 50,000 Gallons

Pretreatment Plant Tank Systems	Maximum Capacity Gallons
Waste Feed Receipt Vessel #1	474,000
Waste Feed Receipt Vessel #2	474,000
Waste Feed Receipt Vessel #3	474,000
Waste Feed Receipt Vessel #4	474,000
Waste Feed Evaporator Feed Vessel #1	85,557
Waste Feed Evaporator Feed Vessel #2	85,557
Ultrafiltration Feed Preparation Vessel #1	75,593
Ultrafiltration Feed Preparation Vessel #2	75,593
High Level Waste Feed Blending Vessel	142,200
High Level Waste Lag Storage Vessel	127,260
High Level Waste Feed Receipt Vessel	270,600
Cesium Ion Exchange Feed Vessel	103,350
Low Activity Waste Submerged Bed Scrubber Condensate Receipt Vessel #1	130,010
Low Activity Waste Submerged Bed Scrubber Condensate Receipt Vessel #2	130,010
Treated Low Activity Waste Concentrate Storage Vessel	146,740
Spent Resin Dewatering Moisture Separation Vessel	**RESERVED**
Process Condensate Tank #1	394,000
Process Condensate Tank #2	394,000
Acid/Alkaline Effluent Vessel #1	119, 150
Plant Wash Vessel	103,024
Acid/Alkaline Effluent Vessel #2	119,150
Decontamination Soak Tank	**RESERVED**

Balance of Facilities Plant Tank Systems	Maximum Capacity Discharged to Ground (Gallons)
High Level Waste Plant Tank Systems – None Over 50,000 Gallons	
N/A	N/A
Analytical Laboratory Plant Tank Systems – None Over 50,000 Gallons	
N/A	N/A
Low Activity Waste Plant Tank Systems – None Over 50,000 Gallons	
N/A	N/A
Non-radioactive Liquid Waste Disposal	620,000
Firewater A	345,000
Firewater B	345,000
Process Service Water A	190,000
Process Service Water B	130,000
Fuel	345,000
Domestic Water	63,000
Demineralized Water	58,000

S.7.F.2. The construction related water discharge(s) from the WTP authorized by Ecology and this Permit and listed in Table S.7.F.1 will be tracked and recorded. These discharges will be recorded in a WTP significant discharge log (separate from the Hanford sitewide significant discharge log) and at a minimum provide the following information:

S.7.F.2.a. The nature of the activity that is generating the discharge.

S.7.F.2.b. Any alternatives to the discharge such as reuse, storage, or recycling of the water.

S.7.F.2.c. The total volume of water expected to be discharged.

S.7.F.2.d. The date of proposed discharge, and the rate at which the water will be discharged, in gallons per minute.

S.7.F.2.e. The location where discharge will occur.

S.7.F.2.f. Name of the responsible person leading the activity.

S.7.F.2.g. Reason why the TEDF Facility is not used for the discharge

S.7.F.2.h. Any other information that would be appropriate.

S.7.F.3 Prior to the initial receipt of test water to the Spent Resin Dewatering Moisture Separation Vessel and Decontamination Soak Tank, Permit Table S.7.F.1 shall be completed to provide the information as specified in each column heading. Incorporation of this information shall not require a permit modification under Permit Condition G.3;

S.7.F.3.a. Under column 2, update and replace “Reserved” with the appropriate capacity.

S.7.F.4. After more WTP construction is completed, the Permittees shall review and amend, if necessary, the applicable portions of Permit Table S.7.F.1 to reflect changes and/or additions. The Permittees shall update, resubmit, and receive approval from Ecology for amendments to Permit Table S.7.F.1. Incorporation of this information shall not require a permit modification under Permit Condition G.3.

S.8. UPSET CONDITION

For the purposes of this Permit and the Hanford site, “Upset Condition” means an exceptional incident in which there is a wastewater discharge that exceeds the limitations of this Permit resulting from factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, lack of preventive maintenance, or careless and/or improper operation.

An upset constitutes an affirmative defense to an action brought for noncompliance with such permit discharge limitations if the requirements of the following paragraph are met.

A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through relevant evidence that: 1) an upset occurred and that the Permittee can identify the cause(s) of the upset; 2) the permitted facility was being properly operated at the time of the upset. Any upset which exceeds any discharge limitation in this Permit, must be reported to Ecology within 24 hours from the time the Permittee becomes aware of the circumstances. The Permittee shall take appropriate measures to minimize or prevent any adverse environmental impacts caused by such upset.

In any enforcement proceeding the Permittee seeking to establish the occurrence of an upset has the burden of proof.

GENERAL CONDITIONS

G.1. SIGNATORY REQUIREMENTS

Documents such as permit applications, permit modifications, reports, or other information submitted to Ecology require an appropriate signature with respect to the kind of document submitted. Appropriate signatures are explained as follows:

G.1.A. All Permit applications and modifications shall be certified as in the certification statement below, and signed by either a principal executive officer or signature authority delegated to specific RL programs addressed in the *State Waste Discharge Permit (SWDP) Program Signature Authority letter (02-RCA-025, November 2001).*

Certification: Any person signing a document under General Permit Condition G.1.A 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 gathered and evaluated 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 fine and imprisonment for knowing violations."

G.1.B. Changes to authorization. If an authorization under General Permit Condition G.1.A 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 applications to be signed by a principal executive officer or delegated signature.

G.1.C. All reports required by this Permit and other information requested by Ecology shall be signed by a person described in General Permit Condition G.1.A or by a duly authorized representative of that person. A person is a duly authorized representative only if:

G.1.C.1. The authorization is made in writing by the person described in General Permit Condition G.1.A and is submitted to Ecology at the time of authorization.

G.1.C.2. The authorization specifies either a named individual or any individual occupying a named position.

G.2. 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.

G.3. 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:

G.3.A. Violation of any permit term or condition

G.3.B. Obtaining a permit by misrepresentation or failure to disclose all relevant facts

G.3.C. A material change in quantity or type of waste disposal

G.3.D. A material change in the condition of the waters of the state

G.3.E. Nonpayment of fees assessed pursuant to RCW 90.48.465

G.3.F. 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.

G.4. 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.

G.5. DUTY TO REAPPLY

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

G.6. PERMIT TRANSFER

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

G.6.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.

G.6.B. Ecology does not notify the Permittee of the need to modify the Permit.

Unless this Permit is automatically transferred according to General Permit Condition G.6.A, 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.

G.7. 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.

G.8. 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.

G.9. 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.

G.10. 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 (3) 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.

G.10.A. For each measurement or sample required by this Permit, the Permittee shall record the following information:

- Date, exact place, and time of sampling
- Dates the analyses were performed
- Who performed the analyses
- Analytical techniques or methods used
- Results of the analyses reported to the Method Detection Limit
- Name of the individual who performed the sampling or provided the measurement

G.11. 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:

G.11.A. Immediately take action to stop, contain, and cleanup unauthorized discharges or otherwise stop the violation, and correct the problem.

G.11.B. Immediately notify Ecology's designated Water Quality Permit Coordinator, Richland Office at (509) 372-7590 of the failure to comply.

G.11.C. Submit a detailed written report to Ecology within 30 days, unless requested earlier by Ecology, which shall include but not be limited to the following:

G.11.C.1. A description including location, cause, name, title, and telephone number of the individual reporting.

G.11.C.2. Estimated quantity that resulted from the incident.

G.11.C.3. Whether the noncompliance has been corrected and the release has been cleaned up.

G.11.C.4. The steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

G.11.C.5. The period(s) in which the incident occurred.

G.11.C.6. Any other information necessary to fully evaluate the situation and to develop an appropriate course of action.

G.11.D. 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.

G.11.E. If the Permittee is in compliance with the terms and conditions of this Permit, but the activities authorized by this Permit 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).

G.12. WASTEWATER DISCHARGE STREAM EXEMPTIONS

By prior agreement and practice (DOE/RL-97-67) with Ecology, the United States Environmental Protection Agency (EPA), and USDOE and in accordance with this Permit, the following wastewater and stormwater streams are not subject to permitting under WAC 173-216 or registration under WAC 173-218 on the Hanford Site:

G.12.A. Purgewater resulting from well sampling, well development, well rehabilitation, and aquifer testing when managed consistent with Strategy for *Handling and Disposing of Purgewater at the Hanford Site, Washington* (DOE-RL 1990 as revised).

G.12.B. Raw Columbia River water or potable water that is discharged to the ground for beneficial use.

G.12.C. Fire system/test water that potentially is not contaminated. This includes, but is not limited to, water generated from fire system operation, fire system functional tests, flushing and draining of fire systems before or after testing, fire system maintenance and repair, fire system pressure relief valve operation and testing, fire hydrant flushing/flow testing/maintenance, and fire department training.

G.12.D. Industrial wastewater that is discharged to the ground for beneficial use (e.g., irrigation, aesthetics, dust control). However, this water must meet the WAC 173-200 GWQC at the point of discharge unless the discharge is expected to have a contaminant that exceeds the GWQC solely because the source water (i.e., potable water or raw water) has a contaminant that exceeds one or more of the GWQC. The discharge may also exceed the GWQC, if it can be demonstrated to the satisfaction of Ecology that the site-specific characteristics will degrade or attenuate contaminants before reaching the groundwater, and will not generate additional contaminants by discharging wastewater into the environment.

G.12.E. Wastewater from washing the exterior of vehicles when managed consistent with *Vehicle and Equipment Wastewater Discharges* (WQ-R-95-56).

G.12.F. Wastewater resulting from washing concrete trucks, pumps, forms, and associated equipment consistent with *Ecology Environmental Handbook for Washington Construction Contractors #96-503.*

G.12.G**.** Stormwater that is not considered industrial stormwater (see Special Permit Condition S.1.A.3, Industrial Stormwater Discharges).

G.12.H. Small leaks from pumps and valves because of factors beyond the reasonable control of the Permittee.

G.12.I. Spills are regulated under *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA) *of 1980* Part 40 Code of Federal Regulations (CFR) 302 and *Resource Conservation and Recovery Act* (RCRA) and the State of Washington Department of Ecology *Dangerous Waste Regulations* Section WAC 173-303-145.

G.12.J. Discharges to the ground from cleanup activities conducted under *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA) *of 1980.*

G.12.K. Wastewater from eye-wash stations and safety showers.