Fact Sheet for State Waste Discharge Permit ST0004500

Effluent Treatment Facility and State Approved Land Disposal Site

August 25, 2014

Purpose of this Fact Sheet

This fact sheet explains and documents the decisions the Department of Ecology (Ecology) made in drafting the proposed State Waste Discharge permit for the Effluent Treatment Facility (ETF) that will allow discharge of wastewater to an infiltration gallery known as the State Approved Land Disposal Site (SALDS).

State law requires any industrial facility to obtain a permit before discharging waste or chemicals to waters of the state, which includes groundwater.

Ecology makes the draft permit and fact sheet available for public review and comment at least thirty (30) days before issuing the final permit. Copies of the fact sheet and draft permit for ETF/SALDS, State Waste Discharge permit ST0004500, are available for public review and comment from September 8, 2014, until the close of business October 10, 2014. For more details on preparing and filing comments about these documents, please see **Appendix A - Public Involvement Information**.

The Permittee reviewed the draft permit and fact sheet for factual accuracy. Ecology corrected any errors or omissions about the facility's location, history, product type or production rate, discharges or receiving water prior to publishing this draft fact sheet for public notice.

After the public comment period closes, Ecology will summarize substantive comments and our responses to them. Ecology will include our summary and responses to comments to this fact sheet as **Appendix D - Response to Comments**, and publish it when we issue the final State Waste Discharge permit. Ecology will not revise the rest of the fact sheet, but the full document including all appendices will become part of the legal history contained in the facility's permit file.

Summary

The Effluent Treatment Facility is located in the 200 East Area of the Hanford Site. SALDS is located north of the 200 West Area. The ETF influent consists of individual waste streams from many Hanford facilities. Major sources include process condensate from the 242-A Evaporator, and leachate from land waste disposal sites. Most liquid waste streams to be treated at ETF are initially stored at the Liquid Effluent Retention Basin (LERF), located near the ETF.

ETF has a robust treatment train that can remove all contaminates in the influent wastewaters, with the exception of tritium. The SALDS location was selected to avoid potential mobilization of contaminates from historical disposal practices, as well as to give groundwater a long travel time to the Columbia River. Since tritium is present in the effluent, a long travel time to the Columbia River gives the tritium time to decay before it reaches the river. The Permittee employs a series of groundwater monitoring wells to keep track of the tritium plume, and has submitted a Tritium Tracking and Groundwater Monitoring Plan to Ecology. In addition, the Permittee submits tritium tracking reports to Ecology as required by the monitoring plan.

TABLE OF CONTENTS

I. Introduction *4*

II. Background Information *4*

A. Facility Description **7**
History 7
Industrial Process(s) 7
Wastewater treatment processes (prior to land treatment) 7
Land Treatment 8
Solid wastes 8

B. Description of the Groundwater **8**

C. Groundwater Characterization **10**

D. Summary of Compliance with Previous Permit Issued **13**

E. State Environmental Policy Act (SEPA) Compliance **13**

III. Proposed Permit Limits *14*

A. Design Criteria **14**

B. Technology-Based Effluent Limits **14**

C. Groundwater Quality-Based Effluent Limits **16**
Antidegradation 16
Non-degradation 16
Background Water Quality 17

D. Comparison of Effluent Limits with the Previous Permit Issued on August 1, 2000 ..... **18**

IV. Monitoring Requirements *18*

A. Lab Accreditation **19**

B. Wastewater Monitoring **19**

G. Groundwater Monitoring **19**

V. Other Permit Conditions *19*

A. Reporting and Recordkeeping **19**

C. Operations and Maintenance **19**

F. Spill Plan **20**

G. Tritium Tracking and Groundwater Monitoring **20**

J. Best Management Practices **20**

M. General Conditions **20**

VI. Permit Issuance Procedures ***21***

A. Permit Modifications **21**

B. Proposed Permit Issuance **21**

VII. References for Text and Appendices ***22***

Appendix A--Public Involvement Information ***23***

Appendix B --Your Right to Appeal ***24***

Appendix C--Glossary ***25***

Appendix D--Response to Comments ***33***

Table 1 General Facility Information 4

Table 2 Wastewater Characterization 10

Table 3 Permit Submittals 13

Table 4 Design Criteria for Wastewater Treatment Facility 14

Table 5 Technology-Based Effluent Limits 15

Table 6 Groundwater Quality Criteria 17

Table 7 Groundwater Quality-Based Effluent and Groundwater Limits 17

Figure 1 Facility Location Map 6

I. INTRODUCTION

The legislature defined Ecology's authority and obligations for the wastewater discharge permit program in the Water Pollution Control law, chapter 90.48 RCW (Revised Code of Washington).

Ecology adopted rules describing how it exercises its authority:

- State waste discharge program (chapter 173-216 WAC)
- Water quality standards for ground waters of the state of Washington (chapter 173-200 WAC)
- Submission of plans and reports for construction of wastewater facilities (chapter 173-240 WAC).

These rules require any industrial facility owner/operator to obtain a State Waste Discharge permit before discharging wastewater to state waters. They also help define the basis for limits on each discharge and for performance requirements imposed by the permit.

Under the State Waste Discharge permit program and in response to a complete and accepted permit application, Ecology generally prepares a draft permit and accompanying fact sheet, and makes it available for public review before final issuance. If the volume of the discharge has not changed or if the characteristics of the discharge have not changed Ecology may choose not to issue a public notice. When Ecology publishes an announcement (public notice), it tells people where they can read the draft permit, and where to send their comments, during a period of thirty days. (See **Appendix A-Public Involvement Information** for more detail about the public notice and comment procedures). After the public comment period ends, Ecology may make changes to the draft State Waste Discharge permit in response to comment(s). Ecology will summarize the responses to comments and any changes to the permit in **Appendix D**.

II. BACKGROUND INFORMATION

Table 1 General Facility Information

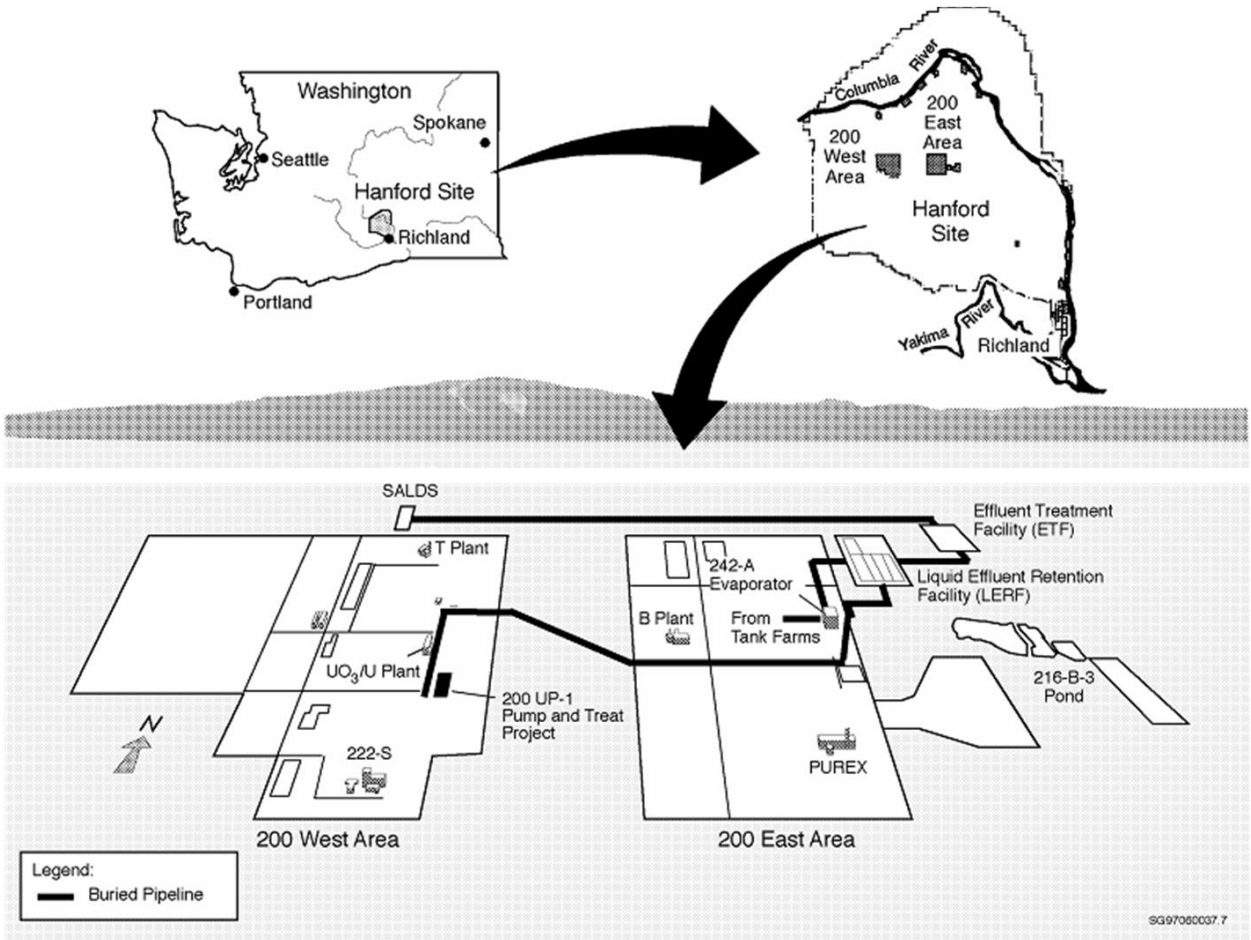
Facility Information	
Applicant	United States Department of Energy
Facility Name and Address	Effluent Treatment Facility/State Approved Land Disposal Site 200 East Area of the Hanford Site
Contact at Facility	Name: Dave Watson Telephone #:509-438-6721
Responsible Official	Name: Doug Shoop Title: Acting Manager Address: PO Box 550 Richland, WA 99352 Telephone #: 509-376-7395 FAX # 509-376-4789

Facility Information	
Industry Type	Cleanup Site
Type of Treatment	Wastewater Treatment
NAIC Codes	562211
Facility Location	Latitude: 46.562873 Longitude: -119.510307
Legal Description of Infiltration Area	Section, township, range: S36 T13N R253 Latitude: 46.5739 Longitude: -119.6363

Permit Status	
Renewal Date of Previous Permit	8/1/2000
Application for Permit Renewal Submittal Date	2/2/2005

Inspection Status	
Date of Last Sampling Inspection	NA

Figure 1 Facility Location Map



A. Facility Description

History

The Effluent Treatment Facility (ETF) and State Approved Land Disposal Site (SALDS) is owned and operated by the United States Department of Energy (DOE), and has been in operation since December 1995. The permit was last renewed in August 2000. The construction and operation of the ETF/SALDS was incorporated as a portion of Milestone 17 in the 1989 Hanford Federal Agreement and Consent Order (Tri-Party Agreement) between the Permittee, the U.S. Environmental Protection Agency, and Ecology. No major modifications have occurred at ETF/SALDS since operations began.

Industrial Process(s)

The Hanford Site was used by the U.S. government to produce the materials needed for atomic bombs. The production of these materials produced various by-products that have become contaminates in the environment. The mission of the Hanford Site has shifted from nuclear production to environmental cleanup. ETF is a key facility in the Permittee's efforts to handle various liquid wastes on the Hanford Site.

As part of its cleanup activities, the Permittee is using the 242-A Evaporator Dangerous Waste Operating Unit Group 2 to concentrate liquid waste in the double-shell tanks and reduce the volume of waste in the tanks. The evaporator process produces a dilute liquid waste known as process condensate (PC). The PC is sent to the LERF basins where it is stored temporarily prior to treatment in the ETF. The LERF consists of three covered and lined surface impoundments just east of the 200 East Area. This PC was the first source of influent to be treated by the ETF and then discharged to the ground. Prior to 1988, this 242-A Evaporator PC was discharged untreated and directly to the soil.

Treated effluent discharged to the subsurface from the ETF will meet all applicable state and federal limits, with one exception. The only constituent which is not removed by the ETF is tritium, a heavy form of hydrogen. Tritium is a radioactive species which has a short life span (12.3 year half-life) compared to many other more well-known radioactive compounds such as uranium and plutonium. Tritium, however, because it is similar in form to hydrogen, replaces hydrogen in some water molecules. In addition, because of its similarity to hydrogen, it is very difficult and expensive to separate tritium from the more common hydrogen atoms.

The chosen alternative for handling tritium in the ETF effluent is to discharge this water to the subsurface and allow tritium to decay into non-radioactive helium before it reaches the Columbia River. Although the preferred alternative would be to separate tritium and handle it appropriately, the large expense involved currently makes this an unrealistic option. Therefore, discharge to the subsurface is the only cost effective method to handle tritium found in the process condensate and other feeds to ETF.

Wastewater Treatment Processes (Prior to Land Treatment)

The ETF was constructed pursuant to the TPA and was required by Ecology Consent Order No. DE-91NM-177 of December 23, 1991. The ETF has been in operation since late 1995. The ETF is a multi-stage liquid treatment train consisting of the following elements:

- Surge tank (pH adjustment)
- Coarse filtration
- Ultraviolet/Oxidation (UV/OX) system
- pH adjustment
- Hydrogen peroxide decomposer
- Fine filter
- Degasification
- Reverse Osmosis (RO) system
- Polisher Ion Exchange columns
- Verification tanks
- Cooling tower unit and blowdown

Influent to the ETF arrives in the surge tank via one 3-inch diameter and one 4-inch diameter underground pipelines totaling approximately 1,500 feet in length. One pipe originates from the LERF, and the other pipe tees off of the line from the 242-A Evaporator to the LERF. Influent also can go directly from a truck unloading station to the surge tank or to load in tanks. Most all of the influent is stored in LERF prior to transfer to ETF.

After treatment, ETF effluent accumulates prior to discharge in any one of three 650,000-gallon verification tanks. If verification tank contents are shown via sampling and analysis to be out of compliance with this permit's effluent limitations then the contents of that tank will be re-routed through the ETF for further treatment.

The effluent pipeline to the SALDS is a subsurface 8-inch diameter PVC pipe which is approximately six miles long. This line includes vacuum relief and sectioning valves.

Land Treatment

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 layer of native soil at least 12 inches deep.

Solid wastes

ETF consists of a primary and a secondary treatment train. The primary treatment train removes or destroys dangerous and mixed waste components from the aqueous waste. In the secondary treatment train, the waste components are concentrated and dried into a powder. This waste is containerized, and transferred to a waste treatment, storage, and/or disposal (TSD) unit on the Hanford site (e.g., the Central Waste Complex or to the Environmental Restoration Disposal Facility).

B. Description of the Groundwater

The effluent infiltration gallery (SALDS) is located just north of the 200 West Area and is underlain by sediments that are geologically young. The sediments are composed of the Ringold Formation, the “Plio-Pleistocene unit” and early “Palouse” soil, and the overlying Hanford formation. A thin, discontinuous veneer of dune sand overlies the Hanford formation at the

surface of the SALDS. The Plio-Pleistocene, the Ringold Formation, and the underlying basalt slope gently to the south beneath the SALDS.

The Hanford formation is approximately 7 meters (23 feet) thick and is mostly highly permeable gravel with a sandy matrix between gravel clasts. Minor amounts of silt also occur throughout the formation. The Hanford formation thickens southward in the vicinity of the SALDS.

The strata known as the Plio-Pleistocene unit and the early "Palouse" soil collectively consist of calcium carbonate cemented silt, sand, and gravel, and silt and sand without calcium carbonate cement. Calcium carbonate lenses (local pockets) also occur within these units. The thickness of these combined units beneath the infiltration gallery is approximately 13 meters (42 feet).

Beneath the SALDS, the Ringold Formation consists of three primary sedimentary units that total approximately 119 meters (390 feet) in thickness. From bottom to top, these units are:

- The Ringold unit A, consisting of a mixture of sand and gravel, measuring 18 meters (60 feet) thick;
- The Ringold unit E, consisting of gravel mixed with both sand and silt, interbedded with sand layers, and 95 meters (312 feet) thick; and
- The "upper Ringold" unit, which is predominantly sand and is 5.5 meters (18 feet) thick.

Ringold units A and E are similar in many respects and may be difficult to distinguish using borehole information.

A north-south trending permeable, subsurface channel is present in the vicinity of SALDS, although the exact location and boundaries of the channel are not well known.

Three groundwater monitoring wells were installed along the northeastern and southern edges of the facility. The two wells northeast of the facility are downgradient wells: one of these wells monitors groundwater at the water table (699-48-77D); the other well monitors groundwater deeper in the aquifer (699-48-77C). The well at the southern end of the facility (699-48-77A) was originally intended as an upgradient well that monitors the aquifer at the water table. The plume from the SALDS discharge has reached this well, making all three wells downgradient wells. The uppermost aquifer occurs within the Ringold units A and E beneath the facility.

Water level monitoring shows declining regional groundwater levels, and water levels in wells 699-48-77A and 699-48-77D have been approaching their screened levels for several years. In March 2012, Ecology granted the Permittee approval to discontinue sampling of wells 699-48-77A and 699-48-77D once they could no longer produce representative data. Well 699-48-77A stopped producing representative data after August 2011. The permittee will continue to monitor Well 699-48-77C, as well as the effluent from the verification tanks at ETF.

The hydraulic gradient beneath the facility is about 0.004 ft/ft. Groundwater flows in a north-northeasterly direction at a low velocity. Groundwater samples were taken from well 699-48-77A before the start of discharge, over a period of eight quarters. Results of numerical modeling of groundwater flow suggest travel times of approximately 100 years from the facility to the Columbia River.

The average annual precipitation at the Hanford Site is 6.3 inches. Minor local variations occur. Most of the precipitation occurs during the winter, with nearly half of the annual amount occurring from November through February. Snowfall accounts for about 38 percent of all

precipitation. Days with greater than 0.51 inch of precipitation occur less than 1 percent of the year. These semiarid conditions mitigate the development of groundwater contamination plumes.

Projections are that the probable maximum flood on the Columbia River would not encroach within three miles of the SALDS.

C. Groundwater Characterization

The Department of Energy reported the concentration of pollutants in the discharge in the permit reapplication and in discharge monitoring reports. The tabulated data represents the quality of the wastewater discharged to the SALDS from February 2013 to January 2014. The wastewater is characterized as follows:

Table 2 Wastewater Characterization

Parameter	Units	Average Value	Maximum Value
Specific Conductance	uS/cm	1.52	3.56
Arsenic	µg/L	0.246	0.417
Cadmium	µg/L	<0.060	<0.10
Chromium	µg/L	0.140	0.305
Copper	µg/L	0.319	0.750
Lead	µg/L	0.062	0.066
Manganese	µg/L	<0.14	<0.20
Mercury	µg/L	<0.060	<0.10
Selenium	µg/L	<1.2	<2.0
Uranium	µg/L	0.133	0.826
Total Dissolved Solids	mg/L	13	25
Total Suspended Solids	mg/L	<2.0	<2.0
Bromide	µg/L	<0.12	<0.22
Chloride	µg/L	<0.06	<0.12
Fluoride	µg/L	<0.025	<0.046
Nitrogen in Nitrate	µg/L	0.026	0.129

Parameter	Units	Average Value	Maximum Value
Nitrogen in Nitrite	µg/L	<0.020	<0.038
Phosphorus in Phosphate	µg/L	<0.049	<0.084
Sulfate	µg/L	<0.11	<0.22
Nitrogen in Ammonium	µg/L	0.0035	0.0069
Cyanide	µg/L	<4.0	<4.0
Aluminum	µg/L	<13	<20
Barium	µg/L	<4.0	<4.0
Beryllium	µg/L	<3.8	<4.0
Calcium	µg/L	<45	<50
Cobalt	µg/L	<4.0	<4.0
Iron	µg/L	33.3	140
Magnesium	µg/L	11.7	14.6
Manganese	µg/L	<4.0	<4.0
Nickel	µg/L	<4.8	<10.0
Potassium	µg/L	112	410
Silicon	µg/L	<39	<100
Silver	µg/L	<4.1	<5.0
Sodium	µg/L	30.9	173
Thallium	µg/L	<35	<39
Titanium	µg/L	<4.0	<4.0
Vanadium	µg/L	<6.0	<10.0
Zinc	µg/L	<5.0	<5.0
Aroclor-1016	µg/L	<0.10	<0.10
Aroclor-1221	µg/L	<0.23	<0.30

Parameter	Units	Average Value	Maximum Value
Aroclor-1232	µg/L	<0.10	<0.10
Aroclor-1242	µg/L	<0.10	<0.10
Aroclor-1248	µg/L	<0.10	<0.10
Aroclor-1254	µg/L	<0.10	<0.10
Aroclor-1260	µg/L	<0.10	<0.10
Aroclor-1262	µg/L	<0.10	<0.10
Aroclor-1268	µg/L	<0.10	<0.10
Acetone	µg/L	12	42
Acetonitrile	µg/L	84	260
Benzene	µg/L	<1.0	<1.0
Carbon tetrachloride	µg/L	<1.0	<1.0
Chloroform	µg/L	<1.0	<1.0
Methylene chloride	µg/L	<1.0	<1.0
Tetrachloroethene	µg/L	<1.0	<1.0
Tetrahydrofuran	µg/L	<2.0	<2.0
Acetophenone	µg/L	<1.0	<1.0
n-Nitrosodimethylamine	µg/L	1.0	1.0
Total organic carbon	mg/l	0.175	0.347
Gross alpha	pCi/L	1.7	2.8
Americium-241	pCi/L	0.16	0.21
Gross beta	pCi/L	3.9	12
Colbalt-60	pCi/L	8.4	9.6
Plutonium-239/240	pCi/L	0.067	0.085
Radium-226	pCi/L	0.043	0.061

Parameter	Units	Average Value	Maximum Value
Total beta radiostrontium	pCi/L	1.6	2.3
Technetium-99	pCi/L	<6.8	<7.4
Tritium	pCi/L	3.5E+05	5.5E+05

D. Summary of Compliance with Previous Permit Issued

The Department of Energy has complied with the effluent limits and permit conditions throughout the duration of the permit issued on August 1, 2000. Ecology assessed compliance based on its review of the facility's information in the Ecology Permitting and Reporting Information System (PARIS) and discharge monitoring reports (DMRs).

The following table summarizes compliance with report submittal requirements over the permit term.

Table 3 Permit Submittals

Submittal Name	Submittal Status	Report Begin Date	Due Date	Received Date	Approved Date	Reviewed Date
Operations and Maintenance Manual Reviews/Updates	Received	---	06/30/2013	06/27/2013	---	---
Application for Permit Renewal	Received	---	02/02/2005	02/02/2005	---	---
Results of Tritium Tracking and Groundwater Monitoring-FY 2013	Received	---	11/30/2013	11/25/2013	---	---

E. State Environmental Policy Act (SEPA) Compliance

A SEPA determination was made when the original permit was issued. State law exempts reissuance or modification of any wastewater discharge permit from the SEPA process as long as the permit contains conditions which are no less stringent than federal and state rules and regulations (RCW 43.21C.0383). The exemption applies only to existing discharges, not to new discharges.

III. PROPOSED PERMIT LIMITS

State regulations require that Ecology base limits in a State Waste Discharge permit on the:

- Technology and treatment methods available to treat specific pollutants (technology-based). Dischargers must treat wastewater using all known, available, reasonable methods of prevention, control, and treatment (AKART). Ecology has developed guidance describing technology-based (AKART) criteria for industrial/commercial systems that discharge to ground; (Ecology, 1993; 2004).
- Operations and best management practices necessary to meet applicable water quality standards to preserve or protect existing and future beneficial uses of the groundwaters.
- Ground water quality standards (Ecology, 1996).
- Applicable requirements of other local, state and federal laws.

Ecology applies the most stringent of technology and water quality-based limits to each parameter of concern.

The limits in this permit reflect information received in the application and from supporting reports (engineering, hydrogeology, monitoring, and irrigation/crop management). Ecology evaluated the permit application and determined the limits needed to comply with the rules adopted by the state of Washington. Ecology does not develop effluent limits for all reported pollutants. Some pollutants are not treatable at the concentrations reported, are not controllable at the source, and are not listed in regulation.

Ecology does not usually develop permit limits for pollutants not reported in the permit application but that may be present in the discharge. The permit does not authorize the discharge of the non-reported pollutants. During the five-year permit term, the facility's effluent discharge conditions may change from those conditions reported in the permit application. The facility must notify Ecology if significant changes occur in any constituent. Until Ecology modifies the permit to reflect additional discharges of pollutants, a permitted facility could be violating its permit.

A. Design Criteria

Under WAC 173-216-110 (4), flows and waste loadings must not exceed approved design criteria. The table below includes the approved design criteria.

Table 4 Design Criteria for Wastewater Treatment Facility

Parameter	Design Quantity
Maximum Daily Flow	0.67 MGD
Average Monthly Flow	0.25 MGD

B. Technology-Based Effluent Limits

Waste discharge permits issued by Ecology specify conditions requiring the facility to use AKART before discharging to waters of the state (RCW 90.48).

Ecology determined that the facility meets the minimum requirements demonstrating compliance with the AKART standard if USDOE operates the treatment and disposal system as described in their engineering report and any subsequent reports submitted to Ecology.

USDOE must meet the following permit limits to satisfy the requirement for AKART:

- Operate the system to protect the existing and future beneficial uses of the groundwater and not cause a violation of the groundwater standards.

Table 5 Technology-Based Effluent Limits

Effluent Limits		
Parameter	**Average Monthly**	**Maximum Daily**
Acetone	160 µg/l	---
Acetophenone	10 µg/l	---
Benzene	5 µg/l	---
Carbon Tetrachloride	5 µg/l	10 µg/l
Chloroform	6.2 µg/l	---
N-Nitrosodimethylamine	20 µg/l	---
Tetrachloroethylene	5 µg/l	10 µg/l
Tetrahydrofuran	100 µg/l	---
Total Organic Carbon	1,100 µg/l	---
Arsenic (total)	15 µg/l	30 µg/l
Beryllium (total)	40 µg/l	---
Copper (total)	70 µg/l	---
Ammonia (as N)	830 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	---

C. Groundwater Quality-Based Effluent Limits

In order to protect existing water quality and preserve the designated beneficial uses of Washington's groundwaters including the protection of human health, WAC 173-200-100 states that waste discharge permits shall be conditioned in such a manner as to authorize only activities that will not cause violations of the groundwater quality standards. The goal of the groundwater quality standards is to maintain the highest quality of the State's groundwaters and to protect existing and future beneficial uses of the groundwater through the reduction or elimination of the discharge of contaminants to groundwater [WAC 173-200-010(4)]. Ecology achieves this goal by:

- Applying all known available and reasonable methods of prevention, control and treatment (AKART) to any discharge.
- Applying the antidegradation policy of the groundwater standards.
- Establishing numeric and narrative criteria for the protection of human health and the environment in the groundwater quality standards.

The state of Washington's ground water quality standards (GWQS) require preservation of existing and future beneficial uses of groundwater through the antidegradation policy, which includes the two concepts of antidegradation and non-degradation. Antidegradation is not the same as non-degradation (see below).

Antidegradation

Antidegradation applies to calculation of permit limits in groundwater when background (see below) contaminant concentrations are less than criteria in the GWQS. Ecology has discretion to allow the concentrations of contaminants at the point of compliance to exceed background concentrations but not exceed criteria in the GWQS. Ecology grants discretion through an approved AKART engineering analysis of treatment alternatives. If the preferred treatment alternative predicts that discharges to groundwater will result in contaminant concentrations that fall between background concentrations and the criteria, then the preferred treatment alternative should protect beneficial uses and meet the antidegradation policy. In this case, the predicted concentrations become the permit limits. If the preferred alternative will meet background contaminant concentrations, background concentrations become the permit limits. Permit limits must protect groundwater quality by preventing degradation beyond the GWQS criteria. If discharges will result in exceedance of the criteria, facilities must apply additional treatment before Ecology can permit the discharge.

Non-Degradation

Non-degradation applies to permit limits in groundwater when background contaminant concentrations exceed criteria in the GWQS. Non-degradation means that discharges to groundwater must not further degrade existing water quality. In this case, Ecology considers the background concentrations as the water quality criteria and imposes the criteria as permit limits. To meet the antidegradation policy, the facility must prepare an AKART engineering analysis that demonstrates that discharges to groundwater will not result in increasing background concentrations. Ecology must review and approve the AKART engineering analysis.

You can obtain more information on antidegradation and non-degradation by referring to the *Implementation Guidance for the Ground Water Quality Standards (Implementation Guidance)*, Ecology Publication #96-02 (available at http://www.ecy.wa.gov/biblio/9602.html).

Background Water Quality

Background water quality is determined by a statistical calculation of contaminant concentrations without the impacts of the proposed activity. The calculation requires an adequate amount of groundwater quality data and determining the mean and standard deviation of the data, as described in the *Implementation Guidance*. Following the procedure in the *Implementation Guidance*, Ecology then defines background water quality for most contaminants as the 95 percent upper tolerance limit. This means that Ecology is 95 percent confident that 95 percent of future measurements will be less than the upper tolerance limit. There are a few exceptions to the use of the upper tolerance limit. For pH, Ecology will calculate both an upper and a lower tolerance limit resulting in an upper and lower bound to the background water quality. If dissolved oxygen is of interest, Ecology will calculate a lower tolerance limit without an upper tolerance limit.

Applicable groundwater criteria as defined in chapter 173-200 WAC and in RCW 90.48.520 for this discharge include those in the following table:

Table 6 Groundwater Quality Criteria

Parameter	Units	Groundwater Criteria	Background Value
Tritium	pCi/l	20,000	1,287
pH	Standard Units	6.5-8.5	6.9-8.5

Ecology has reviewed the hydrogeologic evaluation for the land treatment site and has determined that groundwater monitoring may not be representative of the discharge. The 200 West Pump & Treat injection wells are in close proximity to the SALDS monitoring wells and this is directly affecting the groundwater at SALDS. However, in order to track the tritium plume, Ecology will continue to require monitoring of the groundwater wells at SALDS for tritium, pH, conductivity, temperature, and water level.

Table 7 Groundwater Quality-Based Effluent and Groundwater Limits

Parameter	Background Water Quality	Effluent Limits
Chloride	---	250,000 µg/l
Cadmium	---	10 µg/l
Lead (total)	---	50 µg/l

Table 7 Groundwater Quality-Based Effluent and Groundwater Limits

Parameter	Background Water Quality	Effluent Limits
Mercury (total)	---	2 µg/l
Total Dissolved Solids	210,000 µg/l	500,000 µg/l
		Groundwater Limits [a]
Tritium	1,287 pCi/l	Report Only
Specific Conductance	320 µmhos/cm	Report Only
Temperature	---	Report Only
Water Level	---	Report Only

Parameter	Daily Minimum	Daily Maximum
pH (groundwater)	6.5 standard units	8.5 standard units

[a] Two consecutive exceedances of an enforcement limit for the same parameter at the same well constitutes a violation.

D. Comparison of Effluent Limits with the Previous Permit Issued on August 1, 2000.

Ecology has determined that groundwater monitoring at SALDS may not be representative of the discharge from the ETF verification tanks. The 200 West Pump & Treat injection wells are in close proximity to the SALDS monitoring wells. The water from the pump and treat facility is directly influencing the groundwater at SALDS. Therefore, the compliance point for most of the groundwater parameters have been moved to the effluent from the ETF verification tanks. Monitoring effluent at the verification tank is more protective of the environment. If a parameter exceeds a limit at the verification tank, the water is not discharged to SALDS. It is rerouted back through the ETF for additional treatment. However, the tritium plume in the groundwater still needs to be tracked. In order to track the tritium plume, Ecology will continue to require monitoring of the groundwater wells at SALDS for tritium. Monitoring of pH, conductivity, temperature, and water level will also be required.

IV. MONITORING REQUIREMENTS

Ecology requires monitoring, recording, and reporting (WAC 173-216-110) to verify that the treatment process functions correctly, the discharge meets groundwater criteria and that the discharge complies with the permit's effluent limits.

If a facility uses a contract laboratory to monitor wastewater, it must ensure that the laboratory uses the methods and meets or exceeds the method detection levels required by the permit. The permit describes when facilities may use alternative methods. It also describes what to do in certain situations when the laboratory encounters matrix effects. When a facility uses an alternative method as allowed by the permit, it must report the test method, DL, and QL on the discharge monitoring report or in the required report.

A. Lab Accreditation

Ecology requires that facilities must use a laboratory registered or accredited under the provisions of chapter 173-50 WAC, Accreditation of Environmental Laboratories, to prepare all monitoring data (with the exception of certain parameters). Ecology has accredited the laboratory used by this facility for the parameters listed in Table 5 and Table 7 of this fact sheet.

B. Wastewater Monitoring

Ecology details the proposed monitoring schedule under Special Condition S2 and S3. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

C. Groundwater Monitoring

Ecology requires groundwater monitoring at the site in accordance with the Ground Water Quality Standards, chapter 173-200 WAC. See Table 9 for groundwater monitoring requirements. However, water level monitoring shows declining regional groundwater levels, water levels in wells 699-48-77A and 699-48-77D have been approaching their screened levels for several years. In March 2012, Ecology granted the Permittee approval to discontinue sampling of wells 699-48-77A and 699-48-77D once these wells could no longer produce representative data. Well 699-48-77A stopped producing representative data after August 2011. The permittee will continue to monitor Well 699-48-77C for a limited list of parameters. All other groundwater parameters will now be monitored at the verification tanks. This process is more protective of the environment because verification tank effluent that does not meet permit limits will not be discharged to SALDS; it will be rerouted through the treatment process.

V. OTHER PERMIT CONDITIONS

A. Reporting and Recordkeeping

Ecology based Special Condition S3 on its authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-216-110).

B. Operations and Maintenance

Ecology requires dischargers to take all reasonable steps to properly operate and maintain their wastewater treatment system in accordance with state regulations (WAC 173-240-080 and WAC 173-216-110). The facility has prepared an operation and maintenance (O&M) manual for the wastewater facility.

Implementation of the procedures in the operation and maintenance manual ensures the facility's compliance with the terms and limits in the permit and ensures the facility provides AKART to the waste stream.

C. Spill Plan

This facility stores a quantity of chemicals on-site that have the potential to cause water pollution if accidentally released. Ecology can require a facility to develop best management plans to prevent this accidental release [Section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080].

USDOE developed a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs.

D. Tritium Tracking and Groundwater Monitoring

The permittee has an approved Tritium Tracking and Groundwater Monitoring Plan on file with Ecology. In accordance with this plan:

1. The Permittee shall report tritium sampling results for each fiscal year to Ecology at least annually, by November 30th of the following fiscal year.
2. The Permittee shall have 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 from the ETF discharge in a new monitoring well. The plan should include the proposed reporting format, e.g., maps, tables, etc.
3. The Permittee shall sample Wells 699-48-77C (and 699-48-77D until it no longer produces representative data) 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.
4. The Permittee must submit proposed revisions or modifications to the Tritium Tracking and Groundwater Monitoring Plan to Ecology for review and approval at least 30 days prior to implementation. Once approved, the Permittee must comply with any plan modifications.
5. 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.

E. Best Management Practices

Best management practices (BMPs) are the actions identified to manage, prevent contamination of groundwater. BMPs include schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs also include treatment systems, operating procedures, and practices used to control plant site runoff, spillage or leaks, sludge or waste disposal, and drainage from raw material storage.

F. General Conditions

Ecology bases the standardized general conditions on state law and regulations. They are included in all individual industrial state waste discharge permits issued by Ecology.

VI. PERMIT ISSUANCE PROCEDURES

A. Permit Modifications

Ecology may modify this permit to impose numerical limits, if necessary to comply with water quality standards for groundwaters, based on new information from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

Ecology may also modify this permit to comply with new or amended state regulations.

B. Proposed Permit Issuance

This proposed permit meets all statutory requirements for Ecology to authorize a wastewater discharge. The permit includes limits and conditions to protect human health and aquatic life, and the beneficial uses of waters of the state of Washington. Ecology proposes to issue this permit for a term of 5 years.

VII. REFERENCES FOR TEXT AND APPENDICES

Washington State Department of Ecology

1993. *Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems*, Ecology Publication Number 93-36. 20 pp. http://www.ecy.wa.gov/pubs/9336.pdf

Laws and Regulations http://www.ecy.wa.gov/laws-rules/index.html

Permit and Wastewater Related Information http://www.ecy.wa.gov/programs/wq/permits/guidance.html

Revised October 2005. *Implementation Guidance for the Ground Water Quality Standards*, Ecology Publication Number 96-02. http://www.ecy.wa.gov/biblio/9602.html

December 2011. *Permit Writer's Manual*, Publication Number 92-109 http://www.ecy.wa.gov/biblio/92109.html

February 2007. *Focus Sheet on Solid Waste Control Plan, Developing a Solid Waste Control Plan for Industrial Wastewater Discharge Permittees*, Publication Number 07-10-024. http://www.ecy.wa.gov/pubs/0710024.pdf

November 2004. *Guidance on Land Treatment of Nutrients in Wastewater, with Emphasis on Nitrogen*, Ecology Publication Number 04-10-081. http://www.ecy.wa.gov/biblio/0410081.html

March 2012. *Status of Compliance Monitoring Wells at State Approved Land Disposal Site as Required by State Waste Discharge Permit ST-4500, Letter 12-EMD-0030, dated February 16, 2012*, Document Number 12-NWP-035.

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November 2013. *Results of Tritium Tracking and Groundwater monitoring at the Hanford Site 200 Area State Approved Land Disposal Site, Fiscal Year 2013.* Document Number SGW-56060, Revision 0.

United States Department of Energy

January 2005. *Application for Renewal of State Waste Discharge Permit ST 4500 for 200 Area Effluent Treatment Facility*, Document Number DOE/RL-2005-10, Revision 0.

February 2012. *Status of Compliance Monitoring Wells Required by State Waste Discharge Permit Number ST 4500*, Document Number 12-EMD-0030.

Flour Hanford

May 2006. *Response to the State of Washington, Department of Ecology Letter Requesting Additional Data of the Application for Renewal of State Waste Discharge Permit ST4500*, Document Number FH-0601340.

APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

Ecology proposes to reissue a permit to the United States Department of Energy (USDOE). The permit includes wastewater discharge limits and other conditions. This fact sheet describes the facility and Ecology's reasons for requiring permit conditions.

Ecology will place a Public Notice of Draft on September 7-8, 2014 in the Tri-City Herald to inform the public and to invite comment on the proposed draft State Waste Discharge permit and fact sheet.

The notice:

- Tells where copies of the draft Permit and Fact Sheet are available for public evaluation (a local public library, the closest Regional or Field Office, posted on our website).
- Offers to provide the documents in an alternate format to accommodate special needs.
- Urges people to submit their comments, in writing, before the end of the Comment Period.
- Tells how to request a public hearing of comments about the proposed state waste discharge permit.
- Explains the next step(s) in the permitting process.

Ecology has published a document entitled *Frequently Asked Questions about Effective Public Commenting*, which is available on our website at http://www.ecy.wa.gov/biblio/0307023.html.

You may obtain further information from Ecology by telephone, 509-372-7950 or by writing to the address listed below.

Water Quality Permit Coordinator
Department of Ecology
3100 Port of Benton Blvd.
Richland, WA 99394

The primary author of this permit and fact sheet is Stacy Nichols.

APPENDIX B --YOUR RIGHT TO APPEAL

You have a right to appeal this permit to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of the final permit. The appeal process is governed by chapter 43.21B RCW and chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2) (see glossary).

To appeal you must do the following within 30 days of the date of receipt of this permit:

- File your appeal and a copy of this permit with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this permit on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in chapter 43.21B RCW and chapter 371-08 WAC.

ADDRESS AND LOCATION INFORMATION

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	**Department of Ecology** Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board 1111 Israel RD SW STE 301 Tumwater, WA 98501	**Pollution Control Hearings Board** PO Box 40903 Olympia, WA 98504-0903

APPENDIX C--GLOSSARY

1-DMax or 1-day maximum temperature -- The highest water temperature reached on any given day. This measure can be obtained using calibrated maximum/minimum thermometers or continuous monitoring probes having sampling intervals of thirty minutes or less.

7-DADMax or 7-day average of the daily maximum temperatures -- The arithmetic average of seven consecutive measures of daily maximum temperatures. The 7-DADMax for any individual day is calculated by averaging that day's daily maximum temperature with the daily maximum temperatures of the three days prior and the three days after that date.

Acute toxicity --The lethal effect of a compound on an organism that occurs in a short time period, usually 48 to 96 hours.

AKART -- The acronym for "all known, available, and reasonable methods of prevention, control and treatment." AKART is a technology-based approach to limiting pollutants from wastewater discharges, which requires an engineering judgment and an economic judgment. AKART must be applied to all wastes and contaminants prior to entry into waters of the state in accordance with RCW 90.48.010 and 520, WAC 173-200-030(2)(c)(ii), and WAC 173-216-110(1)(a).

Alternate point of compliance -- An alternative location in the groundwater from the point of compliance where compliance with the groundwater standards is measured. It may be established in the groundwater at locations some distance from the discharge source, up to, but not exceeding the property boundary and is determined on a site specific basis following an AKART analysis. An "early warning value" must be used when an alternate point is established. An alternate point of compliance must be determined and approved in accordance with WAC 173-200-060(2).

Ambient water quality -- The existing environmental condition of the water in a receiving water body.

Ammonia -- Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is present in Hanford Site wastes because it was used in the plutonium separations process. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Annual average design flow (AADF -- average of the daily flow volumes anticipated to occur over a calendar year.

Average monthly (intermittent) discharge limit-- The average of the measured values obtained over a calendar months time taking into account zero discharge days.

Average monthly discharge limit -- The average of the measured values obtained over a calendar months time.

Background water quality -- The concentrations of chemical, physical, biological or radiological constituents or other characteristics in or of groundwater at a particular point in time upgradient of an activity that has not been affected by that activity, [WAC 173-200-020(3)]. Background water quality for any parameter is statistically defined as the 95% upper tolerance interval with a 95% confidence based on at least eight hydraulically

upgradient water quality samples. The eight samples are collected over a period of at least one year, with no more than one sample collected during any month in a single calendar year.

Best management practices (BMPs) -- Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD5 -- Determining the five-day Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD5 is used in modeling to measure the reduction of dissolved oxygen in receiving waters after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD_5 is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass -- The intentional diversion of waste streams from any portion of a treatment facility.

Categorical pretreatment standards -- National pretreatment standards specifying quantities or concentrations of pollutants or pollutant properties, which may be discharged to a POTW by existing or new industrial users in specific industrial subcategories.

Chlorine -- A chemical used to disinfect wastewaters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

Chronic toxicity -- The effect of a compound on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

Clean water act (CWA -- The federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Compliance inspection-without sampling -- A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance inspection-with sampling -- A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations. In addition it includes as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Ecology may conduct additional sampling.

Composite sample -- A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected

by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots).

Construction activity -- Clearing, grading, excavation, and any other activity, which disturbs the surface of the land. Such activities may include road building; construction of residential houses, office buildings, or industrial buildings; and demolition activity.

Continuous monitoring -- Uninterrupted, unless otherwise noted in the permit.

Critical condition -- The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low, thus, its ability to dilute effluent is reduced.

Date of receipt – This is defined in RCW 43.21B.001(2) as five business days after the date of mailing; or the date of actual receipt, when the actual receipt date can be proven by a preponderance of the evidence. The recipient's sworn affidavit or declaration indicating the date of receipt, which is unchallenged by the agency, constitutes sufficient evidence of actual receipt. The date of actual receipt, however, may not exceed forty-five days from the date of mailing.

Detection limit -- The minimum concentration of a substance that can be measured and reported with 99 percent confidence that the pollutant concentration is above zero and is determined from analysis of a sample in a given matrix containing the pollutant.

Dilution factor (DF) -- A measure of the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. Expressed as the inverse of the percent effluent fraction, for example, a dilution factor of 10 means the effluent comprises 10% by volume and the receiving water 90%.

Distribution uniformity -- The uniformity of infiltration (or application in the case of sprinkle or trickle irrigation) throughout the field expressed as a percent relating to the average depth infiltrated in the lowest one-quarter of the area to the average depth of water infiltrated.

Early warning value -- The concentration of a pollutant set in accordance with WAC 173-200-070 that is a percentage of an enforcement limit. It may be established in the effluent, groundwater, surface water, the vadose zone or within the treatment process. This value acts as a trigger to detect and respond to increasing contaminant concentrations prior to the degradation of a beneficial use.

Enforcement limit -- The concentration assigned to a contaminant in the groundwater at the point of compliance for the purpose of regulation, [WAC 173-200-020(11)]. This limit assures that a groundwater criterion will not be exceeded and that background water quality will be protected.

Engineering report -- A document that thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report must contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Fecal coliform bacteria -- Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the wastewater. The presence of high numbers of fecal coliform

bacteria in a water body can indicate the recent release of untreated wastewater and/or the presence of animal feces.

Grab sample -- A single sample or measurement taken at a specific time or over as short a period of time as is feasible.

Groundwater -- Water in a saturated zone or stratum beneath the surface of land or below a surface water body.

Industrial user -- A discharger of wastewater to the sanitary sewer that is not sanitary wastewater or is not equivalent to sanitary wastewater in character.

Industrial wastewater -- Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business; from the development of any natural resource; or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Interference -- A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

- Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
- Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), sludge regulations appearing in 40 CFR Part 507, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Local limits -- Specific prohibitions or limits on pollutants or pollutant parameters developed by a POTW.

Major facility -- A facility discharging to surface water with an EPA rating score of > 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Maximum daily discharge limit -- The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Maximum day design flow (MDDF) -- The largest volume of flow anticipated to occur during a one-day period, expressed as a daily average.

Maximum month design flow (MMDF) -- The largest volume of flow anticipated to occur during a continuous 30-day period, expressed as a daily average.

Maximum week design flow (MWDF) -- The largest volume of flow anticipated to occur during a continuous 7-day period, expressed as a daily average.

Method detection level (MDL) -- See Method Detection Level.

Minor facility -- A facility discharging to surface water with an EPA rating score of < 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Mixing zone -- An area that surrounds an effluent discharge within which water quality criteria may be exceeded. The permit specifies the area of the authorized mixing zone that Ecology defines following procedures outlined in state regulations (chapter 173-201A WAC).

National pollutant discharge elimination system (NPDES) -- The NPDES (Section 402 of the Clean Water Act) is the federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the state of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington State permit writers are joint NPDES/State permits issued under both state and federal laws.

pH -- The pH of a liquid measures its acidity or alkalinity. It is the negative logarithm of the hydrogen ion concentration. A pH of 7 is defined as neutral and large variations above or below this value are considered harmful to most aquatic life.

Pass-through -- A discharge which exits the POTW into waters of the State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation), or which is a cause of a violation of State water quality standards.

Peak hour design flow (PHDF) -- The largest volume of flow anticipated to occur during a one-hour period, expressed as a daily or hourly average.

Peak instantaneous design flow (PIDF) -- The maximum anticipated instantaneous flow.

Point of compliance -- The location in the groundwater where the enforcement limit must not be exceeded and a facility must comply with the Ground Water Quality Standards. Ecology determines this limit on a site-specific basis. Ecology locates the point of compliance in the groundwater as near and directly downgradient from the pollutant source as technically, hydrogeologically, and geographically feasible, unless it approves an alternative point of compliance.

Potential significant industrial user (PSIU) --A potential significant industrial user is defined as an Industrial User that does not meet the criteria for a Significant Industrial User, but which discharges wastewater meeting one or more of the following criteria:

a. Exceeds 0.5 % of treatment plant design capacity criteria and discharges <25,000 gallons per day or;

b. Is a member of a group of similar industrial users which, taken together, have the potential to cause pass through or interference at the POTW (e.g. facilities which develop photographic film or paper, and car washes). Ecology may determine that a discharger initially classified as a potential significant industrial user should be managed as a significant industrial user.

Quantitation level (QL) -- Also known as Minimum Level of Quantitation (ML) – The lowest level at which the entire analytical system must give a recognizable signal and acceptable calibration point for the analyte. It is equivalent to the concentration of the lowest calibration standard, assuming that the lab has used all method-specified sample weights, volumes, and cleanup procedures. The QL is calculated by multiplying the MDL by 3.18 and rounding the result to the number nearest to (1,2,or 5) x 10^n, where n is an integer. (64 FR 30417).
ALSO GIVEN AS:
The smallest detectable concentration of analyte greater than the Detection Limit (DL) where the accuracy (precision & bias) achieves the objectives of the intended purpose. (Report of the Federal Advisory Committee on Detection and Quantitation Approaches and Uses in Clean Water Act Programs Submitted to the US Environmental Protection Agency December 2007).

Reasonable potential -- A reasonable potential to cause a water quality violation, or loss of sensitive and/or important habitat.

Responsible corporate officer -- A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22).

Significant industrial user (SIU) --

1) All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N and;

2) Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority* on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement [in accordance with 40 CFR 403.8(f)(6)].

   Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority* may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

   *The term "Control Authority" refers to the Washington State Department of Ecology in the case of non-delegated POTWs or to the POTW in the case of delegated POTWs.

Slug discharge -- Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge to the POTW. This may include any

pollutant released at a flow rate that may cause interference or pass through with the POTW or in any way violate the permit conditions or the POTW's regulations and local limits.

Soil scientist -- An individual who is registered as a Certified or Registered Professional Soil Scientist or as a Certified Professional Soil Specialist by the American Registry of Certified Professionals in Agronomy, Crops, and Soils or by the National Society of Consulting Scientists or who has the credentials for membership. Minimum requirements for eligibility are: possession of a baccalaureate, masters, or doctorate degree from a U.S. or Canadian institution with a minimum of 30 semester hours or 45 quarter hours professional core courses in agronomy, crops or soils, and have 5,3,or 1 years, respectively, of professional experience working in the area of agronomy, crops, or soils.

Solid waste -- All putrescible and non-putrescible solid and semisolid wastes including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, sewage sludge, demolition and construction wastes, abandoned vehicles or parts thereof, contaminated soils and contaminated dredged material, and recyclable materials.

Soluble BOD_5 -- Determining the soluble fraction of Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of soluble organic material present in an effluent that is utilized by bacteria. Although the soluble BOD_5 test is not specifically described in Standard Methods, filtering the raw sample through at least a 1.2 um filter prior to running the standard BOD_5 test is sufficient to remove the particulate organic fraction.

State waters -- Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater--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 a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based effluent limit -- A permit limit based on the ability of a treatment method to reduce the pollutant.

Total coliform bacteria--A microbiological test, which detects and enumerates the total coliform group of bacteria in water samples.

Total dissolved solids--That portion of total solids in water or wastewater that passes through a specific filter.

Total maximum daily load (TMDL) --A determination of the amount of pollutant that a water body can receive and still meet water quality standards.

Total suspended solids (TSS) -- Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

Upset -- An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limits because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventative maintenance, or careless or improper operation.

Water quality-based effluent limit -- A limit imposed on the concentration of an effluent parameter to prevent the concentration of that parameter from exceeding its water quality criterion after discharge into receiving waters.

APPENDIX D--RESPONSE TO COMMENTS

DEPARTMENT OF
ECOLOGY
State of Washington

Response to Comments

Waste Water Discharge Permit ST-4500 Renewal

September 8 – October 10, 2014

Summary of a public comment period and responses to comments

December 2014
Publication no. 14-05-021

PUBLICATION AND CONTACT INFORMATION

This publication is available on the Department of Ecology's (Ecology) website at https://fortress.wa.gov/ecy/publications/SummaryPages/1405021.html

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3100 Port of Benton Boulevard
Richland, WA 99354

Phone: 509-372-7950
Hanford Cleanup Line: 800-321-2008
Email: Hanford@ecy.wa.gov

Washington State Department of Ecology - www.ecy.wa.gov

- Headquarters, Lacey 360-407-6000
- Northwest Regional Office, Bellevue 425-649-7000
- Southwest Regional Office, Lacey 360-407-6300
- Central Regional Office, Yakima 509-575-2490
- Eastern Regional Office, Spokane 509-329-3400

If you need this document in a format for the visually impaired, call the Nuclear Waste Program at 509-372-7950. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

Response to Comments

Waste Water Discharge Permit ST-4500 Renewal
September 8 – October 10, 2014

Department of Ecology
Nuclear Waste Program
3100 Port of Benton Boulevard
Richland, Washington 99354

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TABLE OF CONTENTS

Introduction.....1
Reasons for Issuing the Permit 1
Public Involvement Actions.....2
Response to Comments.....3
APPENDIX A: COPIES OF ALL PUBLIC NOTICES
APPENDIX B: COPIES OF ALL WRITTEN COMMENTS

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INTRODUCTION

The Washington State Department of Ecology requires industrial facilities in the state to have a permit before discharging waste or chemicals to the waters of the state, including groundwater. When a new permit or a significant change to an existing permit is proposed, we hold a public comment period to allow the public to review the changes and provide formal feedback.

The Response to Comments is the last step before issuing the final permit, and its purpose is to:

- Specify which provisions, if any, of a permit will become effective upon issuance of the final permit, providing reasons for those changes.
- Describe and document public involvement actions.
- List and respond to all significant comments received during the public comment period and any related public hearings.

This Response to Comments is prepared for:

Comment period:	September 8 – October 10, 2014
Permit:	State Waste Discharge Permit Number ST-4500 for state-approved land disposal site
Original issuance date:	June 30, 1995
Draft effective date:	January 1, 2015

To see more information related to the Hanford Site and nuclear waste in Washington, please visit our website: www.ecy.wa.gov/programs/nwp.

REASONS FOR ISSUING THE PERMIT

Near the center of Hanford, the soil has a lot of contamination. It is important that cleanup work does not make the contamination worse. This permit ensures that water discharged to the ground meets the state's standard to protect human health and the environment (WAC 173-200 "Water Quality Standards"). The permit is for the disposal of liquids after they are treated in Hanford's Effluent Treatment Facility. The discharge site is just north of Hanford's 200 West Area, near central Hanford.

Waste water discharge permits have a term of five years. After that, they must be renewed if the need is still present. Since the Effluent Treatment Facility remains in operation, this discharge permit must be renewed.

There is one key change from the old permit. Ecology moved the point of compliance from the groundwater monitoring wells to the tanks where the water is stored after treatment before it is discharged. A "point of compliance" is the place where the liquid being discharged is measured to ensure it is within the permit defined limits.

PUBLIC INVOLVEMENT ACTIONS

Ecology's Nuclear Waste Program encouraged public comment on the Waste Water Discharge Permit Number ST-4500 renewal during a 30-day public comment period held September 8 through October 10, 2014.

Ecology took the following actions to announce the comment period:

- Mailed a public notice announcing the comment period to 1,953 interested members of the public.
- Emailed two advance notices of the comment period to the Hanford-Info email list, which then had 1,454 recipients.
- Placed a public announcement legal classified advertisement in the *Tri-City Herald* on September 8 and September 9, 2014.
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- Transmittal letter
- Fact sheet
- Permit

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2. Comment period summary
3. Classified advertisements in the *Tri-City Herald*
4. Notice sent to the Hanford-Info and Water Quality Info email lists
5. Event posted on Ecology @ecyhanford Twitter page

RESPONSE TO COMMENTS

Ecology accepted comments on the Waste Water Discharge Permit renewal from September 8 through October 10, 2014. This section provides summary of comments that we received during the public comment period and our responses, as required by RCW 34.05.325(6)(a)(iii).

Description of Comments:

One person commented on the draft permit: Mark Bowman, from Hanford contractor CHPRC (CH2M Hill Plateau Remediation Company). A verbatim copy of the comment is attached in Appendix B.

Comment from Mark Bowman, dated October 6, 2014:

There are inconsistencies about which SALDS wells are being sampled. Well 699-48-77A is dry. Wells 699-48-77C and -77D are still being sampled. The table in Section S2A is incorrect; Section S10 is correct.

Ecology Response:

Thank you for your comment. We have corrected the well identification number in the table in Section S2A. Well number 699-48-77A has been changed to 699-48-77C.

APPENDIX A: COPIES OF ALL PUBLIC NOTICES

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6. Event posted on Ecology @ecyhanford Twitter page

From: Brown, Madeleine (ECY) <mabr461@ecy.wa.gov>
Sent: Friday, May 16, 2014 11:35 AM
To: hanford-Info@listserv.wa.gov
Subject: advance notice - comment period for water discharge permit

This is a message from the Washington Department of Ecology

Comment period – advance notice

The Department of Ecology's Nuclear Waste Program will hold a 30-day comment period starting in late June 2014 for a renewal of a water discharge permit. The permit is for the State-Approved Land Disposal Site (SALDS) for Hanford's 200 Area Effluent Treatment Facility.

The permit is issued to the U.S. Department of Energy, Richland Operations Office. The SALDS is where the U.S. Department of Energy disposes of the water after it is treated to remove its contaminants. The permit is a renewal and will be in effect for five years. The permit first took effect in 1995.

We do not plan to hold a public meeting, but can reconsider if there is significant interest.

Contact Ecology at Hanford@ecy.wa.gov or 800-321-2008 for more information or to request a meeting.

Waste Water Discharge Permit Renewal

The Washington State Department of Ecology (Ecology) invites you to comment on the renewal of Hanford's permit for discharging treated liquids from the Effluent Treatment Facility.

The official name of the permit is "State Waste Discharge Permit Number ST0004500 for the state-approved land disposal site," or SALDS. A waste water discharge permit must be renewed every five years.

What Does the Permit Cover?

Hanford's Effluent Treatment Facility treats liquid waste. After the liquid is treated, it is discharged to the ground. The permit ensures the discharged liquids meet state standards in WAC 173-200 "Water Quality Standards."

How Did the Permit Change?

There is one key change. Ecology moved the point of compliance from the groundwater monitoring wells to the tanks where the water is stored after treatment before it is discharged.

A "point of compliance" means the place where the liquid to be discharged is measured to ensure it is within the limits the permit defines.

The discharge site is just north of Hanford's 200 West Area, near Hanford's center.

WHY IT MATTERS

Near the center of Hanford, the soil has a lot of contamination. It's important that today's cleanup work does not worsen the problems.

This permit ensures that water discharged to the ground meets the state's standard to protect human health and the environment.

Public Comment Period

September 8 – October 10, 2014

To submit comments or request a public hearing, contact (in writing):

Stacy Nichols
3100 Port of Benton Blvd
Richland, WA 99354
hanford@ecy.wa.gov

Document Review Locations:

Nuclear Waste Program website
www.ecy.wa.gov/programs/nwp/commentperiods.htm

Public Information Repositories (see page 2 for locations and contact information.)

Tips on Effective Commenting

http://www.ecy.wa.gov/biblio/0307023.html

Special Accommodations

To request ADA accommodation for disabilities, or printed materials in a format for the visually impaired, call Ecology at 509-372-7950.

Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

DEPARTMENT OF ECOLOGY
State of Washington
3100 Port of Benton Blvd
Richland, WA 99354

Public Comment Period
Waste Water Discharge Permit Renewal
9/8/2014 – 10/10/2014

Will There be a Public Hearing? We don't have one scheduled, but if we get requests, we may reconsider. (See sidebar on page 1)

What's Next? When the comment period closes, we will consider the comments received and revise the permit if needed. Then we will issue the final permit and a response to comments.

Hanford's Public Information Repositories and Other Review Locations

University of Washington
Suzzallo Library, Govt Pubs Dept
Seattle, WA 98195
Hilary Reinert (206) 543-5597
Reinerth@uw.edu

Gonzaga University
Foley Center Library
East 502 Boone Ave.
Spokane, WA 99258
John S. Spencer (509) 313-6110
Spencer@gonzaga.edu

Department of Ecology
Nuclear Waste Program
Resource Center
3100 Port of Benton Boulevard
Richland, WA 99354
Valarie Peery (509) 372-7920
Valarie.Peery@ecy.wa.gov

Portland State University
Government Information
Branford Price Millar Library
1875 SW Park Avenue
Portland, OR 97207-1151
Claudia Weston (503) 725-4542
westonc@pdx.edu

Washington State University
Consolidated Information Center
Room 101L
Richland, WA 99354
Janice Parthree (509) 375-7443
Janice.Parthree@pnnl.gov

Department of Energy
Administrative Record
2440 Stevens Drive, room 1101
Richland, WA 99354
Heather Childers (509) 376-2530
Heather_M_Childers@rl.gov

Classified Legals

The Washington State Department of Ecology invites you to comment on the renewal of Hanford´s permit for discharging treated liquids from the Effluent Treatment Facility. The discharge site is just north of Hanford´s 200 West Area, near Hanford´s center.

The official name of the permit is "State Waste Discharge Permit Number ST0004500 for the state-approved land disposal site," or SALDS. A waste water discharge permit must be renewed every five years.

The public comment period is **September 8 through October 10, 2014**. To submit comments, send them to Stacy Nichols, 3100 Port of Benton Blvd, Richland, WA 99354, or Hanford@ecy.wa.gov. Email is preferred.

A public meeting is not schedule but could be held if we receive requests and reconsider. To request a public meeting, contact Stacy Nichols.

The permit matters. Near the center of Hanford, the soil has a lot of contamination. It´s important that today´s cleanup work does not worsen the problems.

This permit ensures that water discharged to the ground meets the state´s standard to protect human health and the environment

There is one key change in the permit. Ecology moved the point of compliance from the groundwater monitoring wells to the tanks where the water is stored after treatment before it is discharged.

A "point of compliance" means the place where the liquid to be discharged is measured to ensure it is within the limits the permit defines.

You can review the permit online at www.ecy.wa.gov/programs/nwp/commentperiods.htm. You can also visit one of the document review locations (below). For tips on effective commenting, visit www.ecy.wa.gov/biblio/0307023.html

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Branford Price Millar Library
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Washington State
University Consolidated
Information Center
Room 101L Richland,
WA 99354
Janice Parthree
(509) 375-7443
Janice.Parthree@pnnl.gov

#14-7555 9/7 & 9/8/2014

Classified Legals

BID MEETINGS

Tuesday September 9:
Benton Irrigation District is having a Board of Directors meeting at 3:00PM at the Benton Irrigation District office on N Highland. The meeting is open to the public.

Wednesday September 10:
The Benton Irrigation District is having a contract workshop meeting at 9:00AM at the Benton Irrigation District office on N Highland. The meeting is open to the public.

Monday September 22:
The Benton Irrigation District is having a Board of Directors meeting at 8:00AM at the Benton Irrigation District office on N Highland. The meeting is open to the public.
#14-7605 9/7 & 9/8/2014

Legal Notice

The Schroth Family Charitable Trust annual report forms for the year ended June 30, 2014 are available for inspection. Any citizen may request inspection upon notification of the principle trust officer within 180 days of publication of this notice. The trust manager is Janis Schroth Wood and may be reached at 3708 S. Green St., Kennewick, WA 99337. Phone (509)585-3663.
#14-7607 9/8/2014

The Washington State Department of Ecology invites you to comment on the renewal of Hanford's permit for discharging treated liquids from the Effluent Treatment Facility. The discharge site is just north of Hanford's 200 West Area, near Hanford's center.

The official name of the permit is "State Waste Discharge Permit Number ST0004500 for the state-approved land disposal site," or SALDS. A waste water discharge permit must be renewed every five years.

The public comment period is **September 8 through October 10, 2014**. To submit comments, send them to Stacy Nichols, 3100 Port of Benton Blvd, Richland, WA 99354, or Hanford@ecy.wa.gov. Email is preferred.

A public meeting is not schedule but could be held if we receive requests and reconsider. To request a public meeting, contact Stacy Nichols.

The permit matters. Near the center of Hanford, the soil has a lot of contamination. It's important that today's cleanup work does not worsen the problems.

This permit ensures that water discharged to the ground meets the state's standard to protect human health and the environment

There is one key change in the permit. Ecology moved the point of compliance from the groundwater monitoring wells to the tanks where the water is stored after treatment before it is discharged.

A "point of compliance" means the place where the liquid to be discharged is measured to ensure it is within the limits the permit defines.

You can review the permit online at www.ecy.wa.gov/programs/nwp/commentperiods.htm. You can also visit one of the document review locations (below). For tips on effective commenting, visit www.ecy.wa.gov/biblio/0307023.html

After the comment period closes, we will consider the comments received and revise the permit it needed. Then we will issue the final permit and a response to comments.

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Janice Parthree
(509) 375-7443
Janice.Parthree@pnnl.gov
#14-7555 9/7 & 9/8/2014

To Place Your Legal Announcement, Call 582-1560

From: Bohrmann, Dieter (ECY) <DBOH461@ECY.WA.GOV>
Sent: Thursday, August 07, 2014 2:55 PM
To: HANFORD-INFO@LISTSERV.WA.GOV
Subject: Advance notice for comment period starting September 8

This is a message from the Washington Department of Ecology

Advance notice for comment period starting September 8

Ecology will hold a comment period September 8 – October 10, 2014, for the renewal of Hanford's permit for discharging treated liquids from the 200 Area Effluent Treatment Facility. The official name of the permit is State Waste Discharge Permit Number ST0004500, for the state-approved land discharge disposal site, or SALDS.

We do not plan to hold a public meeting but can reconsider if public interest warrants it.

When the comment period starts, you will be able to find the permit materials by visiting the Nuclear Waste Program's comment period web page and Hanford's information repositories.

Contact Hanford@ecy.wa.gov or call 800-321-2008 if you have questions or would like more information.

From: Brown, Madeleine (ECY)
Sent: Monday, September 08, 2014 11:05 AM
To: hanford-Info@listserv.wa.gov
Subject: Waste discharge permit renewal comment period starts today

Comment period starts today!

The Washington State Department of Ecology invites you to comment on the renewal of Hanford's permit for discharging treated liquids from the Effluent Treatment Facility.

The comment period starts today and runs through October 10, 2014. We do not plan to hold a public meeting but can reconsider if public interest warrants it.

The official name of the permit is "State Waste Discharge Permit Number ST0004500 for the state-approved land disposal site," or SALDS. A waste water discharge permit must be renewed every five years.

Hanford's Effluent Treatment Facility treats liquid waste. After the liquid is treated, it is discharged to the ground. The permit ensures the discharged liquids meet state standards in
WAC 173-200 "Water Quality Standards."

There is one key change proposed in this permit renewal: The point of compliance (where the treated liquid is measured to ensure it is within the limits the permit defines) is moved from groundwater monitoring wells to the tanks where the liquid is stored after treatment before it is discharged.

You will be able to find the permit materials by visiting the Nuclear Waste Program's comment period web page and Hanford's documents review locations.

Submit comments by October 10 to
Stacy Nichols (Hanford@ecy.wa.gov) (preferred)
3100 Port of Benton Boulevard
Richland, WA 99354
Fax 509-372-7971

When the comment period closes, we will consider the comments received and revise the permit if needed. Then we will issue the final permit and a response to comments.

Contact Hanford@ecy.wa.gov or call 800-321-2008 if you have questions or would like more information.

From: News and Information about water quality from the Department of Ecology <ECOLOGY-WATER-QUALITY-INFO@LISTSERV.WA.GOV> on behalf of Howard, Sandy (ECY) <srud461@ECY.WA.GOV>
Sent: Tuesday, September 09, 2014 11:52 AM
To: ECOLOGY-WATER-QUALITY-INFO@LISTSERV.WA.GOV
Subject: Public comment period: Hanford permit for discharging treated liquids

The Department of Ecology invites you to comment on the renewal of Hanford's permit for discharging treated liquids from the Effluent Treatment Facility.

The comment period is now open and runs through October 10, 2014. We do not plan to hold a public meeting but can reconsider if public interest warrants it.

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SALDS SOCIAL MEDIA

APPENDIX B: COPIES OF ALL WRITTEN COMMENTS

From: Barnes, Brett M <Brett_M_Barnes@rl.gov>
Sent: Monday, October 06, 2014 7:54 AM
To: Nichols, Stacy (ECY)
Cc: Collins, Michael S; Engelmann, Richard H
Subject: COMMENT ON ST4500

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Red Category

Good Morning Stacy,

I think you may have already received this comment on ST4500…but just in case you have not…see below comment from Mr. Mark Bowman. Should you have any questions, please give me a call on my cell phone, 521-3053.

Brett M. Barnes
Environmental Compliance Officer

From: Bowman, Mark W
Sent: Monday, October 06, 2014 7:50 AM
To: Barnes, Brett M

Brett,

This was the comment I had:

There are inconsistencies about which SALDS wells are being samples. Well 699-48-77A is dry. Wells 699-48-77C and -77D are still being sampled. The table in Section S2A is incorrect; Section S10 is correct.

PUBLICATION AND CONTACT INFORMATION

This publication is available on the Department of Ecology's (Ecology) website at https://fortress.wa.gov/ecy/publications/SummaryPages/1405021.html

For more information contact:

Stacy Nichols, Environmental Specialist
Nuclear Waste Program
3100 Port of Benton Boulevard
Richland, WA 99354

Phone: 509-372-7950
Hanford Cleanup Line: 800-321-2008
Email: Hanford@ecy.wa.gov

Washington State Department of Ecology - www.ecy.wa.gov

- Headquarters, Lacey 360-407-6000
- Northwest Regional Office, Bellevue 425-649-7000
- Southwest Regional Office, Lacey 360-407-6300
- Central Regional Office, Yakima 509-575-2490
- Eastern Regional Office, Spokane 509-329-3400

If you need this document in a format for the visually impaired, call the Nuclear Waste Program at 509-372-7950. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

Response to Comments

Waste Water Discharge Permit ST-4500 Renewal
September 8 – October 10, 2014

Department of Ecology
Nuclear Waste Program
3100 Port of Benton Boulevard
Richland, Washington 99354

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TABLE OF CONTENTS

Introduction.....1
Reasons for Issuing the Permit 1
Public Involvement Actions.....2
Response to Comments.....3
APPENDIX A: COPIES OF ALL PUBLIC NOTICES
APPENDIX B: COPIES OF ALL WRITTEN COMMENTS

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INTRODUCTION

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Comment period:	September 8 – October 10, 2014
Permit:	State Waste Discharge Permit Number ST-4500 for state-approved land disposal site
Original issuance date:	June 30, 1995
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To see more information related to the Hanford Site and nuclear waste in Washington, please visit our website: www.ecy.wa.gov/programs/nwp.

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Near the center of Hanford, the soil has a lot of contamination. It is important that cleanup work does not make the contamination worse. This permit ensures that water discharged to the ground meets the state's standard to protect human health and the environment (WAC 173-200 "Water Quality Standards"). The permit is for the disposal of liquids after they are treated in Hanford's Effluent Treatment Facility. The discharge site is just north of Hanford's 200 West Area, near central Hanford.

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There is one key change from the old permit. Ecology moved the point of compliance from the groundwater monitoring wells to the tanks where the water is stored after treatment before it is discharged. A "point of compliance" is the place where the liquid being discharged is measured to ensure it is within the permit defined limits.

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Description of Comments:

One person commented on the draft permit: Mark Bowman, from Hanford contractor CHPRC (CH2M Hill Plateau Remediation Company). A verbatim copy of the comment is attached in Appendix B.

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Comment period – advance notice

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We do not plan to hold a public meeting, but can reconsider if there is significant interest.

Contact Ecology at Hanford@ecy.wa.gov or 800-321-2008 for more information or to request a meeting.

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Public Comment Period

September 8 – October 10, 2014

To submit comments or request a public hearing, contact (in writing):

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http://www.ecy.wa.gov/biblio/0307023.html

Special Accommodations

To request ADA accommodation for disabilities, or printed materials in a format for the visually impaired, call Ecology at 509-372-7950.

Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

DEPARTMENT OF ECOLOGY
State of Washington
3100 Port of Benton Blvd
Richland, WA 99354

Public Comment Period
Waste Water Discharge Permit Renewal
9/8/2014 – 10/10/2014

Will There be a Public Hearing? We don't have one scheduled, but if we get requests, we may reconsider. (See sidebar on page 1)

What's Next? When the comment period closes, we will consider the comments received and revise the permit if needed. Then we will issue the final permit and a response to comments.

Hanford's Public Information Repositories and Other Review Locations

University of Washington
Suzzallo Library, Govt Pubs Dept
Seattle, WA 98195
Hilary Reinert (206) 543-5597
Reinerth@uw.edu

Gonzaga University
Foley Center Library
East 502 Boone Ave.
Spokane, WA 99258
John S. Spencer (509) 313-6110
Spencer@gonzaga.edu

Department of Ecology
Nuclear Waste Program
Resource Center
3100 Port of Benton Boulevard
Richland, WA 99354
Valarie Peery (509) 372-7920
Valarie.Peery@ecy.wa.gov

Portland State University
Government Information
Branford Price Millar Library
1875 SW Park Avenue
Portland, OR 97207-1151
Claudia Weston (503) 725-4542
westonc@pdx.edu

Washington State University
Consolidated Information Center
Room 101L
Richland, WA 99354
Janice Parthree (509) 375-7443
Janice.Parthree@pnnl.gov

Department of Energy
Administrative Record
2440 Stevens Drive, room 1101
Richland, WA 99354
Heather Childers (509) 376-2530
Heather_M_Childers@rl.gov

Classified Legals

The Washington State Department of Ecology invites you to comment on the renewal of Hanford's permit for discharging treated liquids from the Effluent Treatment Facility. The discharge site is just north of Hanford's 200 West Area, near Hanford's center.

The official name of the permit is "State Waste Discharge Permit Number ST0004500 for the state-approved land disposal site," or SALDS. A waste water discharge permit must be renewed every five years.

The public comment period is **September 8 through October 10, 2014**. To submit comments, send them to Stacy Nichols, 3100 Port of Benton Blvd, Richland, WA 99354, or Hanford@ecy.wa.gov. Email is preferred.

A public meeting is not schedule but could be held if we receive requests and reconsider. To request a public meeting, contact Stacy Nichols.

The permit matters. Near the center of Hanford, the soil has a lot of contamination. It's important that today's cleanup work does not worsen the problems.

This permit ensures that water discharged to the ground meets the state's standard to protect human health and the environment

There is one key change in the permit. Ecology moved the point of compliance from the groundwater monitoring wells to the tanks where the water is stored after treatment before it is discharged.

A "point of compliance" means the place where the liquid to be discharged is measured to ensure it is within the limits the permit defines.

You can review the permit online at www.ecy.wa.gov/programs/nwp/commentperiods.htm. You can also visit one of the document review locations (below). For tips on effective commenting, visit www.ecy.wa.gov/biblio/0307023.html

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Janice.Parthree@pnnl.gov

#14-7555 9/7 & 9/8/2014

Classified Legals

BID MEETINGS

Tuesday September 9:
Benton Irrigation District is having a Board of Directors meeting at 3:00PM at the Benton Irrigation District office on N Highland. The meeting is open to the public.

Wednesday September 10:
The Benton Irrigation District is having a contract workshop meeting at 9:00AM at the Benton Irrigation District office on N Highland. The meeting is open to the public.

Monday September 22:
The Benton Irrigation District is having a Board of Directors meeting at 8:00AM at the Benton Irrigation District office on N Highland. The meeting is open to the public.
#14-7605 9/7 & 9/8/2014

Legal Notice

The Schroth Family Charitable Trust annual report forms for the year ended June 30, 2014 are available for inspection. Any citizen may request inspection upon notification of the principle trust officer within 180 days of publication of this notice. The trust manager is Janis Schroth Wood and may be reached at 3708 S. Green St., Kennewick, WA 99337. Phone (509)585-3663.
#14-7607 9/8/2014

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The official name of the permit is "State Waste Discharge Permit Number ST0004500 for the state-approved land disposal site," or SALDS. A waste water discharge permit must be renewed every five years.

The public comment period is **September 8 through October 10, 2014**. To submit comments, send them to Stacy Nichols, 3100 Port of Benton Blvd, Richland, WA 99354, or Hanford@ecy.wa.gov. Email is preferred.

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You can review the permit online at www.ecy.wa.gov/programs/nwp/commentperiods.htm. You can also visit one of the document review locations (below). For tips on effective commenting, visit www.ecy.wa.gov/biblio/0307023.html

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(509) 375-7443
Janice.Parthree@pnnl.gov
#14-7555 9/7 & 9/8/2014

To Place Your Legal Announcement, Call 582-1560

From: Bohrmann, Dieter (ECY) <DBOH461@ECY.WA.GOV>
Sent: Thursday, August 07, 2014 2:55 PM
To: HANFORD-INFO@LISTSERV.WA.GOV
Subject: Advance notice for comment period starting September 8

This is a message from the Washington Department of Ecology

Advance notice for comment period starting September 8

Ecology will hold a comment period September 8 – October 10, 2014, for the renewal of Hanford's permit for discharging treated liquids from the 200 Area Effluent Treatment Facility. The official name of the permit is State Waste Discharge Permit Number ST0004500, for the state-approved land discharge disposal site, or SALDS.

We do not plan to hold a public meeting but can reconsider if public interest warrants it.

When the comment period starts, you will be able to find the permit materials by visiting the Nuclear Waste Program's comment period web page and Hanford's information repositories.

Contact Hanford@ecy.wa.gov or call 800-321-2008 if you have questions or would like more information.

From: Brown, Madeleine (ECY)
Sent: Monday, September 08, 2014 11:05 AM
To: hanford-Info@listserv.wa.gov
Subject: Waste discharge permit renewal comment period starts today

Comment period starts today!

The Washington State Department of Ecology invites you to comment on the renewal of Hanford's permit for discharging treated liquids from the Effluent Treatment Facility.

The comment period starts today and runs through October 10, 2014. We do not plan to hold a public meeting but can reconsider if public interest warrants it.

The official name of the permit is "State Waste Discharge Permit Number ST0004500 for the state-approved land disposal site," or SALDS. A waste water discharge permit must be renewed every five years.

Hanford's Effluent Treatment Facility treats liquid waste. After the liquid is treated, it is discharged to the ground. The permit ensures the discharged liquids meet state standards in
WAC 173-200 "Water Quality Standards."

There is one key change proposed in this permit renewal: The point of compliance (where the treated liquid is measured to ensure it is within the limits the permit defines) is moved from groundwater monitoring wells to the tanks where the liquid is stored after treatment before it is discharged.

You will be able to find the permit materials by visiting the Nuclear Waste Program's comment period web page and Hanford's documents review locations.

Submit comments by October 10 to
Stacy Nichols (Hanford@ecy.wa.gov) (preferred)
3100 Port of Benton Boulevard
Richland, WA 99354
Fax 509-372-7971

When the comment period closes, we will consider the comments received and revise the permit if needed. Then we will issue the final permit and a response to comments.

Contact Hanford@ecy.wa.gov or call 800-321-2008 if you have questions or would like more information.

From: News and Information about water quality from the Department of Ecology <ECOLOGY-WATER-QUALITY-INFO@LISTSERV.WA.GOV> on behalf of Howard, Sandy (ECY) <srud461@ECY.WA.GOV>
Sent: Tuesday, September 09, 2014 11:52 AM
To: ECOLOGY-WATER-QUALITY-INFO@LISTSERV.WA.GOV
Subject: Public comment period: Hanford permit for discharging treated liquids

The Department of Ecology invites you to comment on the renewal of Hanford's permit for discharging treated liquids from the Effluent Treatment Facility.

The comment period is now open and runs through October 10, 2014. We do not plan to hold a public meeting but can reconsider if public interest warrants it.

The official name of the permit is "State Waste Discharge Permit Number ST0004500 for the state-approved land disposal site," or SALDS. A waste water discharge permit must be renewed every five years.

Hanford's Effluent Treatment Facility treats liquid waste. After the liquid is treated, it is discharged to the ground. The permit ensures the discharged liquids meet state standards in WAC 173-200 "Water Quality Standards."

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Fax 509-372-7971

When the comment period closes, we will consider the comments received and revise the permit if needed. Then we will issue the final permit and a response to comments.

Contact Hanford@ecy.wa.gov or call 800-321-2008 if you have questions or would like more information.

SALDS SOCIAL MEDIA

APPENDIX B: COPIES OF ALL WRITTEN COMMENTS

From: Barnes, Brett M <Brett_M_Barnes@rl.gov>
Sent: Monday, October 06, 2014 7:54 AM
To: Nichols, Stacy (ECY)
Cc: Collins, Michael S; Engelmann, Richard H
Subject: COMMENT ON ST4500

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Red Category

Good Morning Stacy,

I think you may have already received this comment on ST4500…but just in case you have not…see below comment from Mr. Mark Bowman. Should you have any questions, please give me a call on my cell phone, 521-3053.

Brett M. Barnes
Environmental Compliance Officer

From: Bowman, Mark W
Sent: Monday, October 06, 2014 7:50 AM
To: Barnes, Brett M

Brett,

This was the comment I had:

There are inconsistencies about which SALDS wells are being samples. Well 699-48-77A is dry. Wells 699-48-77C and -77D are still being sampled. The table in Section S2A is incorrect; Section S10 is correct.