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Permit No. ST 4501  
Issuance Date: July 31, 1996  
Effective Date: August 1, 1996  
Expiration Date: July 31, 2001

STATE WASTE DISCHARGE PERMIT

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY  
KENNEWICK, WASHINGTON



In compliance with the provisions of  
Chapter 90 48 RCW, as amended  
authorizes

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

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

Plant Cooling Tower Location: 400 Area  
inside the Fast Flux Test Facility (FFTF)  
perimeter fence on the Hanford Site.

Pond Discharge Location: The ponds are  
located 2,000 feet north-northeast of the  
FFTF area fence line.  
(NW 1/4, SW 1/4, S18, T11N, R28E )

Industry Type: none

Located at:

SIC Code: 9999

Longitude  
119° 21' 23.1"W

Latitude  
46° 26' 23.9"N

*Michael Wilson*

Michael Wilson, Manager  
Nuclear Waste Program

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## SUMMARY OF REQUIRED DOCUMENTS FOR SUBMITTAL

NAME/TYPE OF DOCUMENT	SECTION(S) DOCUMENT DESCRIBED IN	REPORTING FREQUENCY OR SUBMITTAL DATE
EARLY WARNING REPORT	S.4 G.11	WITHIN 10 CALENDAR DAYS AFTER DETECTION OF AN EARLY WARNING VALUE
A COPY OF EACH ANALYSIS SENT TO DOH FOR DRINKING WATER WELL #499-S1-8J	S.6	AT THE SAME FREQUENCY THE ANALYSES IS SUBMITTED TO DOH
SAMPLING AND ANALYSIS PLAN (SAP) FOR BOTH EFFLUENT AND GROUNDWATER	S.8	WITHIN 60 DAYS OF EFFECTIVE DATE OF PERMIT
DISCHARGE MONITORING REPORT TO DEMONSTRATE PERMIT COMPLIANCE	S.8 G.11	QUARTERLY (NO LATER THAN 60 DAYS FOLLOWING THE COMPLETED REPORTING PERIOD)
STATE WASTE DISCHARGE PERMIT APPLICATION/ MODIFICATION (AND ASSOCIATED SUBMITTALS)	G.4	60 DAYS PRIOR TO A CHANGE IN NATURE OF DISCHARGE OR FACILITY
ENGINEERING REPORTS, PLANS, AND SPECIFICATIONS	G.5	PRIOR TO CONSTRUCTION OR MODIFICATION OF ANY WASTE WATER CONTROL FACILITY
REAPPLICATION FOR STATE WASTE DISCHARGE PERMIT	G.10	AT LEAST 180 DAYS PRIOR TO EXPIRATION DATE OF PERMIT

PERMIT TERMS AND CONDITIONS - SOLID WASTE CONTROL PLAN	G.19	- AVAILABLE ON EFFECTIVE DATE OF PERMIT, REVIEW / UPDATE ANNUALLY, - REVISIONS REQUIRE PRIOR APPROVAL FROM ECOLOGY
OPERATIONS AND MAINTENANCE PLANS AND SUMMARY MATRIX	G.20	MANUALS AVAILABLE BY REQUEST UPON EFFECTIVE DATE OF PERMIT. UPDATED ANNUALLY (CONFIRMATION PROVIDED TO ECOLOGY). MATRIX DUE WITHIN 30 DAYS OF EFFECTIVE DATE OF PERMIT
NONCOMPLIANCE NOTIFICATION REPORT	G.21	WITHIN 30 DAYS OF DISCOVERY OF NONCOMPLIANCE
PERMITTEE REQUESTED PERMIT MODIFICATION	G.23	60 DAYS PRIOR TO REQUESTED CHANGE

## SPECIAL CONDITIONS

## S.1 ENFORCEMENT LIMITATIONS IN GROUNDWATER

Beginning on the effective date of this permit and lasting through the expiration date, the United States Department of Energy-Richland Operation Office (Permittee) is authorized by the Washington State Department of Ecology (Ecology) to discharge to ground, via percolation through the soil column into the subsurface aquifer at the permitted location, subject to the following limitations and monitoring requirements.

## GROUNDWATER ENFORCEMENT LIMITS AND MONITORING REQUIREMENTS

PARAMETER	HIGHEST ALLOWABLE CONCENTRATION, ug/L, <sup>(1)</sup> UNLESS NOTED OTHERWISE <sup>(2), (3)</sup>
alkalinity	monitor only
cadmium (total)	10
chromium (total)	50
lead (total)	50
mercury (total)	2
pH	monitor only
sulfate (total)	monitor only
total organic carbon	monitor only

(1) Micrograms per liter

(2) Enforcement limits in groundwater shall be met in groundwater collected from point of compliance monitoring well 699-2-7, immediately upon issuance of this permit and from the proposed well installation, to be completed by July 1998 after completion.

(3) Defined as the average of four quarterly measurements from a well. The four quarters are defined as January through March, April through June, July through September, and October through December. Average to be calculated using the four most recent quarterly measurements from a well.

**S.2 EFFLUENT QUANTITY LIMITATIONS**

The total volume of effluent discharged to the two evaporation/percolation ponds is comprised of the following sources: Fast Flux Test Facility (FFTF) (Secondary cooling water tower and supporting auxiliary systems), Fuels and Materials Examination Facility (FMEF) (non-contact cooling water, System 36B & System 36D [2 separate tank batch system discharges] floor and equipment drains), Maintenance and Storage Facility (MASF) (floor and equipment drains), test water from a large diameter cleaning vessel, and 481-A Water Pumphouse (equipment drain). The total volume of wastewater from these listed sources is subject to the following quantity limitations. Flow is to be monitored continuously according to requirements in Section G. 15.

The Permittee is authorized upon Ecology approval, to add future, potential effluent(s) subject to the effluent quantity limitations, and all other limitations, conditions, and requirements identified in this permit. The Permittee must demonstrate BAT/AKART to Ecology's satisfaction no additional constituents exist in the effluent(s) which would constitute a contaminant to groundwater per the requirements of Chapter 173-200 WAC.

**EFFLUENT QUANTITY LIMITATIONS**

AVERAGE MONTHLY FLOW	FLOW RATE LIMITATIONS (IN GALLONS PER MINUTE) <sup>(4)</sup>
TOTAL OF LISTED SOURCES (CURRENT FLOW)	60
TOTAL OF FUTURE (POTENTIAL) SOURCES	5
GRAND TOTAL OF LISTED AND FUTURE (POTENTIAL) SOURCES	65

(4) The average monthly flow is defined as the highest allowable average of daily discharges over a calendar month. The highest allowable average is calculated as the sum of all daily discharges, as measured during a calendar month, divided by the number of daily discharges measured during that month.

**S.3 EFFLUENT QUALITY LIMITATIONS**

The combined total effluent shall not exceed the following highest allowable parameter concentrations, as measured before the effluent is discharged into the percolation ponds. The

point of compliance is the flow meter hut, Building 4608-B. The concentration of the parameters, arsenic and cyanide, will be re-examined in two years for possible modification of effluent monitoring requirements.

#### ENFORCEMENT LIMITS IN EFFLUENT AND MONITORING REQUIREMENTS

PARAMETER	AVERAGE MONTHLY LIMIT, ug/L, UNLESS NOTED OTHERWISE <sup>(5)</sup>
arsenic (total)	monitor only
chloride (total)	250,000
cobalt (total)	monitor only
cyanide (total)	50
manganese (total)	50
nitrate (total)	monitor only
nitrite (total)	monitor only
pH	6.5 - 9.5 (pH units)
phosphorus (total)	monitor only
tritium	monitor only
gross beta	monitor only
total organic halides	monitor only
total dissolved solids	500,000

(5) As measured in effluent before discharge to percolation ponds. The point of compliance shall be located in the flow meter hut, Building 4608-B.

## S.4 EARLY WARNING VALUES

The following parameters are to be monitored, as indicated, to provide an early warning that allowable limits for discharge to groundwater are being approached. Attainment or exceedance of an Early Warning Value does not constitute a violation of this permit. However, attainment or exceedance of an Early Warning Value requires the Permittee to submit an Early Warning Report per the reporting requirements of G.11.

After evaluation of any Early Warning Report, Ecology will respond, per the alternative provisions of Chapter 173-200-070(6)(b). Specifically, if any Early Warning Value is attained or exceeded, Ecology may require the Permittee to increase monitoring, modify the monitoring plan or evaluation procedures, develop a trend analysis, and/or prepare and submit a report documenting any changes to the groundwater. Such modifications may include installation of additional monitoring wells or computer modeling of the groundwater regime in the vicinity of the percolation ponds. Finally, per Chapter 173-200-070(6)(B)(vi), the Permittee must take such actions as Ecology deems necessary, if Ecology determines there is a likelihood of attaining or exceeding an enforcement limit at the point of compliance.

## EARLY WARNING VALUES IN EFFLUENT

PARAMETER	MONTHLY AVERAGE CONCENTRATION, ug/L, UNLESS NOTED OTHERWISE <sup>(6)</sup>
total organic halides	20
cadmium (total)	5
lead (total)	50

(6) As measured in total, composite effluent before discharge to percolation ponds. The sampling point shall be located in the flow meter hut, Building 4608-B. The point of compliance shall be where all waste streams are combined.

## S.5 ANALYTICAL REQUIREMENTS

Practical Quantification Limit (PQL) means the lowest concentration of a substance that can be reliably measured, within specific limits of precision, during routine operating conditions. The Permittee is required to analyze all parameters specified as enforcement limits, early warning values, or other monitoring requirements to discern levels as low as the following PQL values. In addition, the required analytical method is specified. Another analytical method may be substituted by the Permittee only if the same PQL value is achieved for each parameter.

PRACTICAL QUANTIFICATION LIMITS AND REQUIRED  
ANALYTICAL METHODS

PARAMETER	PQL <sup>(7)</sup>	ANALYTICAL METHOD <sup>(8)</sup>	ADDITIONAL CLARIFICATION
alkalinity	10,000	310.1	
arsenic (total)	15	7060/200.8	monitor only
cadmium (total)	5	7131A/200.8	monitor only
chloride	1000	9056/300	
chromium (total)	20	7191/200.8	
cobalt	70	6010	monitor only
copper (total)	70	6010/200.7/200.8	monitor only
cyanide (total)	50	335	
gross beta	4 pCi/L	laboratory specific	monitor only
lead (total)	10	7421/200.8	
manganese (total)	50	6010	
mercury (total)	2	7470/7471	
nitrate	100	9056/300	monitor only
nitrite	100	9056/300	monitor only
pH	increments of 0.1 pH units	9040A/150.1 (in laboratory)	for groundwater-calibrate and measure pH in field
phosphorus (total)	50	365	monitor only
selenium (total)	20	7741	
sulfate (total)	10,000	375	
tritium	460 pCi/L	laboratory specific	monitor only
total organic carbon	1,000	415.1	

total organic halides	20	8260	
total dissolved solids	10,000	160.1	
zinc (total)	20	6010	

(7) Units are in ug/L (micrograms per liter) unless otherwise noted. For example, pCi/L means picoCurie per liter.

(8) Methods are from either EPA SW-846, or EPA-600/4-79-019.

Duplicate measurements shall be available to the Ecology. Ecology's precision goal is +/-20%. The quality control/quality assurance (QA/QC) requirements of "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods," SW-846, Supplement 1990, and EPA-600/4-79-019 shall be followed during all analytical procedures.

## S.6 DRINKING WATER

Water supply well 499-S1-8J is located to the southwest of the percolation ponds and is pumped from the aquifer at approximately the 400 foot level. This is a deeper, less contaminated portion of the aquifer in which only small amounts of tritium and nitrate have been detected. The well water is chlorinated to 1 part per million by injecting liquid sodium hypochlorite into the water as it is pumped into one of three storage tanks. The chemical and microbiological status of this system is monitored by the Permittee and is permitted for operation by the Washington State Department of Health (DOH). The sanitary water supply system is monitored for chemical and microbiological parameters by the Permittee, and meets safe drinking water criteria according to analytical results submitted to DOH. Because water supply in the 400 Area is pumped from well 499-S1-8J, which is located in the same aquifer the 400 Area ponds discharge to, a copy of the analytical results, as submitted to DOH, shall also be provided to Ecology for the duration of this permit.

## S.7 ESTABLISH GROUNDWATER MONITORING

The Permittee has established groundwater monitoring wells 699-8-17 (upgradient), and 699-2-7 (downgradient) in the vicinity of the effluent percolation ponds addressed by this permit. The groundwater monitoring wells shall be sampled and maintained by the Permittee as a condition of this permit for the following purposes:

- to validate permit compliance for the permitted effluent discharge (well 699-2-7),
- to ensure groundwater quality protective of human health and the environment (699-2-7),

- to monitor background groundwater quality before discharge of the permitted effluent well 699-8-17).

The Permittee shall construct an additional groundwater monitoring well 165 to 175 feet in depth and downgradient 800 feet of the ponds. The well shall have a 20 foot screen with the top of the screen at the water table. The exact location of the well and construction specifications shall be submitted to Ecology for approval 60 days prior to drilling the well. Further, maintenance and operation of this well shall be conducive to the previous two wells listed. Installation of this monitoring well shall be in accordance with WAC 173-160. The well shall be operational by July 1998. Sampling of the new well shall commence in the 3rd quarter of 1998.

See Section S.8 for monitoring requirements to achieve early warning and compliance validation. Groundwater monitoring wells 699-8-17, 699-2-7, and the proposed new well shall be sampled and maintained per the requirements of WACs 173-160, 173-162, 173-200, and 173-216, and RCWs 90.44, 90.48, and 18.104. In situations of conflict, State regulations take precedence.

#### S.8 MONITOR TO DEMONSTRATE PERMIT COMPLIANCE

The Permittee shall monitor the total effluent and groundwater to verify compliance with all permit enforcement limits and to determine if Early Warning Values are being approached. This monitoring will also be used to verify the Best Available Technology/All Known, Available and Reasonable methods of prevention, control, and Treatment (BAT/AKART) source, treatment, and technology controls are being met. The following table lists the monitoring requirements the Permittee must initially follow to fulfill this objective.

The Permittee shall submit a proposed Sampling and Analysis Plan (SAP), which addresses the implementation of the monitoring requirements described below, to Ecology within 60 days of the effective date of this permit. Sampling procedures (such as sample collection, field handling/preservation, holding requirements) shall follow the requirements found in the "Manchester Environmental Laboratory, Lab Users Manual, Washington State Department of Ecology, 4th edition, January 1994." For field, QA/QC the procedures of SW-846, volume 2, Section 1.2, "Field Manual for Physical and Chemical Methods" is to be followed. All samples collected for metal analyses shall be unfiltered.

Aliquots from the wastewater discharge to produce the time proportional composite will be taken at a frequency of at least one (1) aliquot per 4-hour interval. The volume of each aliquot will be a minimum of 10 milliliters (mL) and must be a constant volume throughout the two (2) month monitoring interval. The functioning of the sampler shall be inspected at least once per week. Because the refrigeration unit must be opened to inspect the sampler, temperature excursions recorded by the thermometer, due to these inspections, are expected and will not invalidate the effluent sample.

Upon the discovery of the catastrophic failure of the refrigeration unit to maintain  $4 \pm 2$  degrees Celsius:

- (1) the Permittee shall immediately (within one (1) hour) refrigerate the sample;
- (2) notify the Kennewick Ecology permit coordinator, who will give direction on how to proceed with the sample; and
- (3) a replacement refrigeration unit must be functional within seventy-two (72) hours to support the collection of a time proportional composite to complete the 60-day reporting period.

The time proportional sampler shall be protected from tampering and the chain of custody for the sample shall be implemented by providing a lock on either the refrigeration unit or the flow meter hut, 4608-B. Persons with access to the time proportional sampler and sample shall be limited. The flow meter hut log book shall provide a record of persons accessing the sampler or sample.

See Section G.11 for reporting requirements for this Discharge Monitoring Report to verify permit compliance.

#### MONITORING REQUIREMENTS TO DEMONSTRATE PERMIT COMPLIANCE

Parameter	Groundwater Sampling and Analysis frequency <sup>(9)</sup>	Sample Type for Groundwater	Minimum Effluent Sampling and Analysis Frequency <sup>(9)</sup>	Sample Type for Effluent
alkalinity	quarterly	grab	--	--
arsenic (total)	--	--	1 time per 60 days	time proportional composite <sup>(10)</sup>
cadmium (total)	quarterly	grab	1 time per 60 days	time proportional composite
chloride (total)	--	--	1 time per 60 days	time proportional composite
chromium (total)	quarterly	grab	--	--
cobalt (total)	--	--	1 time per 60 days	time proportional composite
cyanide (total)	--	--	1 time per 60 days	grab

flow	--	--	continuous	flow meter per G.15 requirements
gross beta	--	--	1 time per 60 days	time proportional composite
lead (total)	quarterly	grab	1 time per 60 days	time proportional composite
manganese (total)	--	--	1 time per 60 days	time proportional composite
mercury (total)	quarterly	grab	--	--
nitrate (total)	--	--	1 time per 60 days	grab
nitrite (total)	--	--	1 time per 60 days	grab
pH	quarterly	grab and measure in field	continuous monitoring	--
phosphorus (total)	--	--	1 time per 60 days	time proportional composite
sulfate (total)	quarterly	grab	--	--
total organic halides	--	--	1 time per 60 days	grab
total organic carbon	quarterly	grab	--	--
total dissolved solids	--	--	1 time per 60 days	time proportional composite
tritium	--	--	1 time per 60 days	grab

(9) The sampling and analysis frequencies are defined as follows. Quarterly is defined as the four quarters of the calendar year: January through March, April through June, July through September, and October through December. Sixty (60) days is defined as the following two (2) month periods: January through February, March through April, May through June, July through August, September through October, and November through December.

(10) The time proportional composite container shall have at least two gallons capacity. Equivalent volume shall be for analysis every 60 days. The collection vessel must be maintained at  $4 \pm 2$  degrees Celsius as verified by a continuous, recording thermometer. Charts must be retained according to Section G. 12.

## S.9 BATCH DISCHARGE EFFLUENT VARIABILITY MONITORING

- Tank System 36B and/or System 36D contents shall be sampled, analyzed, and the resulting data evaluated against the specified analytical requirements, prior to discharge into the percolation ponds.
- Analytical data shall be submitted to Ecology within 30 days of the batch discharge.
- Each batch system (System 36 B or System 36 D) is limited to one (1) batch discharge per calendar quarter.
- At the Permittee's request, and upon presentation of a summary of the batch monitoring data for three (3) discharges from one system, Ecology will review the data summary and these permit conditions. For this system, Ecology either may remove monitoring requirements, continue monitoring requirements, and/or modify the permit to add or remove constituents of concern.
- If there is no discharge, no sampling is required.

## ANALYTICAL REQUIREMENTS PRIOR TO BATCH DISCHARGE

Parameter	Sample Type	Limit Prior to Batch Discharge <sup>(11)</sup>
copper (total)	grab	monitor only
selenium (total)	grab	0.01 mg/L
pH	grab	monitor only
zinc (total)	grab	5.0 mg/L

(11) mg/L means milligrams per liter.

## GENERAL CONDITIONS

## G.1 DISCHARGE VIOLATIONS

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

## G.2 REDUCED DISCHARGE FOR COMPLIANCE

The Permittee shall control discharge to the extent necessary to maintain compliance with the terms and conditions of this permit. This requirement also applies in the situation where batch discharges occur. Batch discharges are limited to one each quarter, per system.

## G.3 RIGHT OF ENTRY

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

## G.4 FACILITY CHANGE

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

Facility modifications which result in future (potential) streams, per section S.2, meeting all the requirements of this permit, engineering reports, plans, and specifications must be submitted showing documentation of compliance with BAT/AKART requirements.

#### G.5 PLAN REVIEW REQUIRED

Prior to constructing facilities or modifying any wastewater controls, an engineering report, engineering plans, and specifications shall be submitted to Ecology for approval in accordance with Chapter 173-240 WAC. This requirement also applies to facilities associated with future (potential) sources described in the preceding section S.2. Facilities shall be constructed and operated in accordance with the approved plans.

#### G.6 PAYMENT OF PERMIT FEES

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

#### G.7 COMPLIANCE WITH OTHER LAWS AND STATUTES

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

#### G.8 REMOVED SUBSTANCES

Collected screenings, grit, solids, sludge's, filter backwash, or other pollutants removed in the liquid effluent during the course of discharge or control of wastewaters shall not be resuspended or reintroduced to the final effluent stream for discharge.

#### G.9 PERMIT TRANSFER

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

- a written agreement between the old and new owner or operator containing a specific date for transfer of permit responsibility, coverage, and liability is submitted to Ecology; and
- Ecology does not notify the Permittee of the need to modify the permit.

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

#### G.10 DUTY TO REAPPLY

The Permittee must reapply for permit renewal at least 180 days prior to the specified expiration date of this permit. The expiration date of this permit is shown on page 1.

#### G.11 REPORTING REQUIREMENTS

Monitoring of the constituents listed in the table found in Section S.8, conducted to verify permit compliance, shall be started upon issuance of this permit. For constituent concentrations below the PQL, report the result as less than the PQL. Report the PQL in effect at the laboratory at the time of analysis. It is expected these PQLs will be equal to, or less than, the PQLs stated in this permit.

Upon initiation of the System 36B or System 36D discharge, monitoring of the constituents listed in the table found in Section S.9, conducted to characterize tank waste, shall occur.

If a contaminant is detected above the batch discharge limit, and/or is found to contain radionuclides, an alternative method of disposal must be pursued. Batch discharges exceeding the permit limits will not be allowed to be discharged into the permitted ponds:

- upon identification of the exceedence of any permit limit for a batch discharge, Ecology must be notified in writing within 10 calendar days from identification of the exceedence. The notification shall contain the parameter exceeded, the concentration, the identification of the tank from which the sample was taken, and the alternate form of disposal used.

For the effluent, if a contaminant is identified at, or above, an Early Warning Value found in Section S.4, the Permittee shall submit the following Early Warning Report:

- notifies Ecology, in writing, within ten calendar days from identification of the Early Warning Value. The notification shall contain, at a minimum, information regarding the concentration of contaminant(s) which attained or exceeded the Early Warning Values, concentrations of other contaminants monitored, the location(s) and sampling date(s), and concentrations of contaminants determined during the previous six (6) months.

Effluent and/or groundwater monitoring results obtained during the reporting period shall be validated, summarized, and reported on the Discharge Monitoring Report (DMR) Form (EPA 3320-1) and submitted no later than 60 days following the completed reporting period.

An alternate form for reporting can be substituted upon Ecology review and approval. It is not necessary to submit these DMRs to EPA. The report shall be sent to the Washington State Department of Ecology, Nuclear Waste Program, Water Quality Permit Coordinator, 1315 W. 4th Avenue, Kennewick, WA 99336-6018.

#### G.12 RECORD KEEPING REQUIREMENTS

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

For each measurement or sample taken, the Permittee shall record the following information: (1) the date, location, and time of sampling; (2) the name of the individual who performed the sampling; (3) the result of any measurement made; (4) the name of any individual who performed the measurement; (5) the dates the analyses were performed; (6) the name of the individuals who performed the analyses; (7) the analytical techniques or methods used; and (8) the results of the analyses reported.

#### G.13 REPRESENTATIVE SAMPLING

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

#### G.14 SAMPLING AND ANALYTICAL PROCEDURES

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

Chain of custody shall be implemented from the time of sampling through the laboratory analysis and sample disposal to protect the integrity of the samples and the resulting analytical data.

#### G.15 FLOW MEASUREMENT

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure the accuracy of the measurements are consistent with the accepted industry standard for this type of device. Frequency of calibration shall be in conformance with manufacturer's recommendations or, at a minimum, frequency of at least one calibration per year. Calibration records should be maintained for a minimum of three years. An estimate of flow rate shall be based on previous records, average estimates should be used for the two days of down time used for calibration purposes.

#### G.16 LABORATORY ACCREDITATION

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

#### G.17 ADDITIONAL MONITORING BY THE PERMITTEE

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

#### G.18 SIGNATORY REQUIREMENTS

All reports or information submitted to Ecology shall be signed and certified. All reports required by this permit shall be signed by a municipal, state, federal, or other public facility by either a principal executive officer or ranking elected official. A person is a duly authorized representative only if the authorization is made in writing by the principal executive officer or ranking elected official as described above, and is submitted to Ecology. The authorization must also specify either an individual or a position (such as plant manager, or environmental affairs director) having responsibility for the overall operation of the regulated facility, or environmental matters for the company. Modification of the designated authorized individual requires prior notification to Ecology.

**Any person signing a document under this section shall make the following certification:**

"I certify under penalty of law, this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage

the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of a fine and/or imprisonment for knowing violations."

#### G.19 WAC 173-216-110 PERMIT TERMS AND CONDITIONS

The Permittee shall comply with all the best available technology (BAT) and all the known, available, and reasonable methods of prevention, control, and treatment (AKART) requirements agreed to and implemented, as described in the "Phase II Liquid Effluent Program (Project W-252) Waste Water Engineering Report" and associated appendices A.1 through B.8. (WHC-SD-W252-ER-001, Rev.0); and as modified via Ecology and Permittee in agreed upon engineering change notices.

The Permittee shall implement all the effluent treatment requirements described in the aforementioned engineering report (and associated mutually agreed upon engineering change notices), and Ecology approved plans and specifications.

Permittee shall implement all of the spill prevention, source control, and best management practices described in the aforementioned engineering report (addendum's and associated mutually agreed upon engineering change notices) to prevent and control pollutant discharge. In addition, the Permittee shall follow the spill control plan(s) for each of the facilities discharging to this permitted effluent. Said spill control plan(s) describes and implements prevention, containment, and control measures to reduce the potential for, and mitigate the significance of accidental spills or unplanned discharges of oil and petroleum products; materials, when spilled (or otherwise released into the environment) become designated Dangerous Waste or Extremely Hazardous Waste by the procedures set forth in WAC 173-303-070; materials which may become pollutants, or cause pollution, upon reaching State waters.

The Permittee shall review and update the spill control plan(s), for each contributing facility, as needed, and notify Ecology of changes. The plan and any supplements shall be followed throughout the term of the permit. Each spill control plan shall include the following:

- a description of the reporting system which will be used to alert responsible manager(s) and legal authorities in the event of a spill,
- a description of preventive measures and facilities (including an overall facility plot showing drainage patterns) which prevent, contain, or treat spills of these materials, and
- a list of oil and chemicals used, processed, or stored at the facility which may enter, by any means, the liquid effluent stream.

For the purpose of meeting these spill control plan requirements, plans and manuals required by 40 CFR Part 112, and contingency plans required by Chapter 173-303 WAC shall be available.

The Permittee shall comply with the discharge restrictions and prohibitions as described in the State of Washington's Dangerous Waste Regulations, Chapter 173-303 WAC; and the Resource Conservation and Recovery Act.

The Permittee shall handle and dispose of all solid waste materials taken from flow trenches, pipelines, tank bottoms, or drains in such a manner to prevent their entry into State ground or surface waters. The Permittee shall follow their solid waste control plan(s) for all facilities discharging to the permitted effluent. This plan includes all solid waste generated at the associated facilities, with the exception of those solid wastes regulated by Chapter 173-303 WAC (Dangerous Waste Regulations). The plan includes, at a minimum, a description, source, generation rate, and disposal methods for solid wastes. This plan shall not differ from any approved local solid waste management plan. Said plan(s) shall be made available to Ecology prior to any proposed revisions or modifications and shall be reviewed and updated, as needed. Any proposed revision or modification of the solid waste control plan(s) must be submitted to Ecology for prior approval. The Permittee shall comply with the solid waste control plan and any modifications thereof. The Permittee shall make available an update of the solid waste control plan with the application for permit renewal 180 days prior to the expiration date of the permit.

## G.20 OPERATIONS AND MAINTENANCE

The Permittee shall, at all times, be responsible for the proper operations and maintenance of the facilities and systems of control installed by the Permittee to achieve compliance with the terms and conditions of this permit. Where design criteria have been established, the Permittee shall not permit flows or waste loadings to exceed approved design criteria. The facilities' Operations and Maintenance Manuals (Manuals) for facilities discharging to this wastewater stream shall be listed in a matrix and reported to Ecology within 30 days of the effective date of this permit. These Operations and Maintenance Manuals shall be reviewed and updated by the Permittee at least annually. The Permittee shall confirm the review via a letter to Ecology. All Manuals and Manual updates shall be made available, at Ecology's request, for review upon the effective date of this permit. The Manuals shall include the following:

- emergency procedures for taking a source off-line in the event of a system upset or failure; and
- all effluent-associated treatment facilities', tanks', pipelines', sampling and monitoring stations', and pump stations' routine and emergency operational and maintenance requirements.

## G.21 NONCOMPLIANCE NOTIFICATION

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

- immediately take action to stop, contain, and clean-up unauthorized discharges, or otherwise stop the violation, and correct the problem; and
- immediately notify Ecology's designated Water Quality Permit Coordinator, Kennewick Office at (509) 735-7581 of the failure to comply; and
- submit a detailed written report to Ecology within 30 days, unless requested earlier by Ecology, describing the nature of the violation, corrective action taken and/or planned, planned steps to prevent a recurrence, and any other pertinent information.

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

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

## G.22 PERMIT TERMINATION

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

- it was procured by misrepresentation of any material fact or by lack of full disclosure in the application;
- there has been a violation of the conditions thereof; or
- a material change in quantity or type of waste disposal exists.

## G.23 PERMIT MODIFICATION

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

- violation of any permit term or condition;
- obtaining a permit by misrepresentation or failure to fully disclose all relevant facts;

- a material change in quantity or type of waste disposal; or
- a material change in the condition of the waters of the State affected by this permit.

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

Per the allowed provisions of WAC 173-216-110(5), the Permittee may submit a new application, or supplement, to this permit's previous application requesting modification of this permit when the Permittee has refined data or conditions have changed since issuance of this permit. Said submittal shall include supporting documentation and a statement of the proposed permit modification. Said submittal shall be submitted at least 60 days prior to any proposed physical plant or discharge changes. Ecology will respond to said request for permit modification, by accepting, accepting with modification, or denying said request within 60 days of its receipt.