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Page 1 of 23
Permit No. ST 4501
Issuance Date: _____
Effective Date: _____
Expiration Date: _____

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, 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 |
| BATCH DISCHARGE MONITORING SUMMARY DATA | S.9 | WITHIN 60 DAYS AFTER COMPLETION OF 3 BATCH DISCHARGES |
| 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 - SPILL CONTROL PLAN | G.19 | - AVAILABLE ON EFFECTIVE DATE OF PERMIT, - REVIEW / UPDATE ANNUALLY, - NOTIFY ECOLOGY OF CHANGES |
| 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, ⁽¹⁾ UNLESS NOTED OTHERWISE ^{(2), (3)} |
|----------------------|--|
| 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 that no additional constituents exist in the effluent(s) that 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) ⁽⁴⁾ |
|---|---|
| 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 ⁽⁵⁾ |
|------------------------|---|
| 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 | 6.6 - 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 that documents 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 that 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 ⁽⁶⁾ |
|-----------------------|--|
| 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 so as 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 ⁽⁷⁾ | ANALYTICAL METHOD ⁽⁸⁾ | 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 | monitor only |
| sulfate (total) | 10,000 | 375 | |
| temperature | increments of 0.1 degrees Celsius | 170.1 | monitor only |
| tritium | 460 pCi/L | laboratory specific | monitor only |

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|------------------------|--------|-------|--|
| 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 U.S. EPA.

Duplicate measurements shall be available to the Department of Ecology (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 U.S. EPA, shall be followed during all analytical procedures.

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.

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 Department of Energy Richland Operations 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 it 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 that 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) and
- to ensure groundwater quality protective of human health and the environment (699-2-7) and
- 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 10 ft. screen with the top of the screen at least 5 feet below 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 173-160 WAC. 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 also will be used to verify that 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 that the Permittee must follow initially 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.

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

MONITORING REQUIREMENTS TO DEMONSTRATE PERMIT COMPLIANCE

| Parameter | Groundwater Sampling and Analysis frequency ⁽⁹⁾ | Sample Type for Groundwater | Minimum Effluent Sampling and Analysis Frequency | Sample Type for Effluent |
|-------------------|--|-----------------------------|--|---|
| alkalinity | quarterly | -- | 1 time per month | time proportional composite ⁽¹⁰⁾ |
| arsenic (total) | -- | -- | 1 time per month | time proportional composite |
| cadmium (total) | quarterly | grab | 1 time per month | time proportional composite |
| chloride (total) | -- | -- | 1 time per month | grab |
| chromium (total) | quarterly | grab | -- | -- |
| cobalt (total) | -- | -- | quarterly | time proportional composite |
| cyanide (total) | quarterly | grab | 1 time per month | grab |
| lead (total) | quarterly | grab | 1 time per month | time proportional composite |
| manganese (total) | -- | -- | 1 time per month | time proportional composite |
| mercury (total) | quarterly | grab | -- | -- |
| nitrate (total) | -- | -- | 1 time per month | grab |

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

(9) Quarterly is defined as the four quarters of the calendar year: January through March, April through June, July through September, and October through December.

(10) The time proportional composite container volume shall be two gallons. Equivalent volume shall be for analysis every 45 days. The collection vessel must be maintained at 4 ± 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 prior to discharge into the percolation ponds.
- Only two (2) batch discharges are allowed per quarter from System 36B and/or System 36D. (One batch discharge from each system is allowed per quarter.)
- Effluent variability monitoring shall cease if the following criteria are met:
 - a. Monitoring analysis data are summarized and submitted to Ecology for review, and
 - b. The average concentration of the constituents or characteristics of concern have maintained levels below groundwater standards as determined by the Department of Ecology's review of the discharge monitoring data summary, and
 - c. Department of Ecology written approval is obtained.

A submittal of data for 3 batches is required. After 3 batches, Ecology either will remove these monitoring requirements, continue monitoring requirements, and/or modify the permit to add constituents of concern. If there is no discharge, then no sampling is required.

ANALYTICAL REQUIREMENTS PRIOR TO BATCH DISCHARGE

| Parameter | Sample Type | Limit Prior to Batch Discharge ⁽¹¹⁾ |
|------------------|-------------|--|
| copper (total) | grab | monitor only |
| selenium (total) | grab | 0.05 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 once each quarter.

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.

In regards to facility modifications that result in future(potential) streams per section S.2 that meet all the requirements of this permit, engineering reports, plans, and specifications must be submitted that document compliance with BAT/AKART requirements.

G.5 PLAN REVIEW REQUIRED

Prior to constructing facilities or modifying any wastewater controls, an engineering report and engineering plans and specifications shall be submitted to Ecology for approval in accordance with Chapter 173-240 WAC. This requirement also applies to any facilities associated with any 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 wastewater's 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 such 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. Monitoring of the constituents listed in the table found in Section S.9, conducted to characterize tank waste, shall be started upon initiation of the System 36B or System 36D discharge. Said monitoring results obtained during the previous three months 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 DMR's 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.

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. Discharges that exceed the permitted limits will not be allowed to be discharged into the permitted ponds:

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

If a contaminant is detected at or above an Early Warning Value found in Section S.4, then the Permittee shall submit the following Warning/Early Report that:

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

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, exact place, and time of sampling; (2) the dates the analyses were performed; (3) who performed the analyses; (4) the analytical techniques or methods used; and (5) the results of the analyses reported to the Method Detection Limit; (6) measurements equal to the PQL equal the measurement, (7) and the name of the individual who performed the sampling or provided the measurement.

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 TEST PROCEDURES

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

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 that the accuracy of the measurements are consistent with the accepted industry standard for that type of device. Frequency of calibration shall be in conformance with manufacturer's recommendations or at a minimum frequency of at least one calibration per year. Calibration records should

be maintained for a minimum of three years. 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 test procedures specified by this permit, then the results of this monitoring shall be included in calculation and reporting of the data submitted in the Permittee's self-monitoring reports.

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, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and/or imprisonment for knowing violations."

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 that were 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 as 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, which 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; or other 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 as 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 them to achieve compliance with the terms and conditions of this permit. Where design criteria have been established, the Permittee shall not permit flows or waste loadings to exceed approved design criteria. The facilities' Operations and Maintenance 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 by letter to Ecology. All Manuals and manual updates shall be available by request of Ecology for review upon the effective date of this permit. The Manuals shall include the following:

- emergency procedures for effluent re-routing, storage, and subsequent treatment and disposal in the event of system upset or failure, and the source of the upset shall be taken off-line instead of re-routing.
- 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 that the Permittee is unable to comply with any of 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 with any civil or criminal penalty, 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:

- that it was procured by misrepresentation of any material fact or by lack of full disclosure in the application;
- that there has been a violation of the conditions thereof; or
- that 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 which requests 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 either accepting, accepting with modification, or denying said request within 60 days of its receipt.