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STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

1315 W. 4th Avenue • Kennewick, Washington 99336-6018 • (509) 735-7581

January 5, 2000

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**EDMC**

Mr. James E. Rasmussen, Acting Director  
Office of Site Services  
United States Department of Energy  
Richland Operations Office  
P.O. Box 550, MSIN: A2-15  
Richland, Washington 99352-0550

Dear Mr. Rasmussen:

Re: Minor Modifications to State Waste Discharge Permit ST-4507

On December 21, 1999, the United States Department of Energy, Richland Operations Office (USDOE-RL) submitted a request for modifications to the State Waste Discharge Permit ST-4507 for the 100-N Sewage Lagoons. The Washington State Department of Ecology (Ecology) has reviewed the request and is hereby issuing Modifications in the form of three (3) page changes to Permit ST-4507. Please ensure that these pages are incorporated into the Permit maintained by the operators at the facility.

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The Modifications to Permit Sections S.2.A and S.2.B are deemed minor.

The Modification in Section S.2.A includes the addition of one (1) footnote in the table to define the term 'continuous'. This change allows for brief periods of down time (up to forty-eight (48) hours) during periods the continuous monitoring equipment is out of service due to power failure, maintenance, or unanticipated equipment failure.



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The change in Section S.2.B adds a footnote that allows the use of another analytical procedure, if the procedure has a practical quantification level at least as low as that specified in the table. These changes make this Permit consistent with other Hanford discharge Permits.

If there are any questions concerning this information, please call me at (509) 736-3011.

Sincerely,



Steven J. Skurla  
Permit Manager  
Nuclear Waste Program

SS:ld

Enclosures

cc w/enc.: Brian Dixon, Dyn, G3-26  
D.J. Ortiz, USDOE, A2-15  
Alex Teimouri, USDOE, A5-15  
Administrative Record: State Waste Discharge Permit ST-4507

cc w/o enc.: Doug Sherwood, EPA, B5-01  
Russell Jim, YIN  
Donna Powaukee, NPT  
J. R. Wilkinson, CTUIR  
Mary Lou Blazek, OOE

**S2. MONITORING REQUIREMENTS**

**A. Wastewater Monitoring**

The sampling point for the effluent from the stabilization pond will be at the weir prior to discharging to the infiltration pond. This point will be considered the end of pipe.

To demonstrate compliance with the effluent limitations, the Permittee shall monitor the wastewater according to the following schedule:

Parameter	Units	Sample Point	Sampling Frequency	Sample Type
Influent Flow	MGD <sup>a</sup>	<sup>b</sup>	Continuous <sup>c</sup>	Measurement
Effluent Flow	MGD	End of pipe	Continuous	Measurement
pH	Standard Units	End of pipe	Once per two weeks	Grab <sup>d</sup>
BOD <sub>5</sub>	mg/l	End of pipe	Once per two weeks	Grab
TSS	mg/l	End of pipe	Once per two weeks	Grab
TDS	mg/l	End of pipe	Once per two weeks	Grab
NO <sub>3</sub>	mg/l	End of pipe	Once per two weeks	Grab
NH <sub>3</sub>	mg/l	End of pipe	Once per two weeks	Grab
Fecal Colliforms	Colony per 100 ml	End of pipe	Once per two weeks	Grab

<sup>a</sup> MGD = million gallons per day

<sup>b</sup> Combination of measurement at Lift Station #1 and estimated truck hauled sewage to the Aeration Lagoon

<sup>c</sup> Continuous means uninterrupted, except for brief lengths of time (periods of up to 48 hours) for calibration, for power failure, or for unanticipated equipment repair or maintenance.

<sup>d</sup> Grab samples are not required for two-week intervals in which there is no discharge to the Infiltration Pond. Measurements of influent and effluent flow will continue to be monitored and reported during flow intervals with no discharge.

The sludge depth in each cell shall be measured and reported to the Department at least once every five years.

The following table lists the additional sampling to be used to meet the monitoring requirements of the Effluent Variability Study (Condition S7). The additional sampling shall be performed for 12 consecutive months following permit issuance. The analytical results will not be reported in the quarterly discharge monitoring reports, but will be reported in the Effluent Variability Study.

Sampling and analytical methods used to meet the water and wastewater effluent monitoring requirements specified in this permit shall be performed in accordance with the following table:

Parameter	Analytical Method <sup>a</sup>	Practical Quantification Level (PQL)	Units
Flow	Metered/estimate	N/A	MGD
pH	150.1	0.1	Standard Units
BOD <sub>5</sub>	405.1	4	mg/l
TSS	160.2	1.0	mg/l
TDS	160.1	N/A	mg/l
Fecal colliform	9222C, 9222D	1	Colonies per 100 ml
TKN	351.2	0.1	mg/l
NO <sub>3</sub>	300.00	0.2	mg/l
NO <sub>2</sub>	300.00	0.1	mg/l
NH <sub>3</sub>	350.2	0.2	mg/l
Trihalomethanes	8260	1.0	ug/l
Total phosphate	365.1	0.01	mg/l
Orthophosphate	300.0	0.05	mg/l
Oil and grease	413.2	1	mg/l
Dissolved O <sub>2</sub>	360.1	1	mg/l
SVOA	8270	<sup>b</sup>	ug/l
ICP Metals	6020	N/A	ug/l
Mercury	7470/7471	2	ug/l
Radionuclides	Laboratory specific	N/A	pCi/l

<sup>a</sup> Another analytical method may be substituted by the Permittee provided the same PQL value(s) is achieved.

<sup>b</sup> Report all analytical results above the laboratory PQLs and all tentatively identified organic compounds (TICs). Results below the PQLs reported as <[value of PQL].

### C. Flow Measurement

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the quantity of monitored flows. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements are consistent with the accepted industry standard for that type of device. Frequency of

calibration shall be in conformance with manufacturer's recommendations and at a minimum frequency of at least one calibration per year. Calibration records shall be maintained for at least three years.

A daily log listing of all of the domestic wastewater trucked to the 100-N Sewage Lagoon shall be kept. The log entries shall include: date, source of the sewage, estimated amount (in gallons), name of the hauler.

D. Laboratory Accreditation

All monitoring data shall be prepared by a laboratory registered or accredited under the provisions of, *Accreditation of Environmental Laboratories*, Chapter 173-50 WAC. Flow, temperature, settleable solids, pH and internal process control parameters are exempt from this requirement. The pH shall be accredited if the laboratory must otherwise be registered or accredited. Crops, soils and hazardous waste data are exempted from this requirement pending accreditation of laboratories for analysis of these media by the Department.

E. Sampling and Analysis Plan

Within 60 days after permit issuance, the Permittee shall submit to the Department a Sampling and Analysis Plan (SAP) that addresses the implementation of the sampling and analysis requirements of this condition. This SAP may be combined with the Effluent Variability Study Plan. The Department can require revision of the SAP after reviewing the results of the Effluent Variability Study. Such a revised SAP would be due 90 days after a written request by the Department is received by the Permittee.

S3. REPORTING AND RECORDKEEPING REQUIREMENTS

The Permittee shall monitor and report in accordance with the following conditions.

The falsification of information submitted to the Department shall constitute a violation of the terms and conditions of this permit.

A. Reporting

The first monitoring period begins on the effective date of the permit. Monitoring results shall be submitted quarterly. The four quarters are defined as January through March, April through June, July through September, and October through December. Monitoring results obtained during the previous three (3) months shall be reported on the monthly forms as provided, or otherwise approved, by the Department, and be submitted no later than the 60th day following the completed reporting period, unless otherwise specified in this permit. The report shall be sent to Water Quality Permit Coordinator, the Department of Ecology, Nuclear Waste Program, 1315 West 4th Avenue, Kennewick, Washington, 99336.