Issuance Date: May 10, 1991
Expiration Date: May 10, 1996

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WASTE DISCHARGE PERMIT

State of Washington
DEPARTMENT OF ECOLOGY
Olympia, Washington 98504

In compliance with the provisions of
The State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington
and
The Federal Water Pollution Control Act
(The Clean Water Act)
Title 33 United States Code, Section 1251 et seq.

Weyerhaeuser Paper Company
P.O. Box 188
Longview, Washington 98632

Plant Location:

Longview, Washington

Receiving Water:

Columbia River

Water Body I.D. No.:

WA-CR-1010

Discharge Location

2.1 Miles downstream
from Longview Bridge
Waterway Segment No. 26-WRIA-99
Latitude 46°N, 7', 50"
Longitude 122°W, 59', 27"

Industry Type:

- Kraft and Thermomechanical Pulp and Paperboard Mill
- Chlor-Alkali Plant
- Wood Products
- Newsprint Deinking
- Inorganic Chemical

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

Richard A. Burkhalter, P.E.
Supervisor, Industrial Section
Department of Ecology (Ecology)

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SUMMARY OF SCHEDULED ACTIVITIES AND REPORT SUBMITTALS TO ECOLOGY

	REQUIREMENT	DATE REQUIRED
1.	Submit discharge monitoring report	Monthly
2.	Conduct salmonid bioassay (effluent limit), submit report	Quarterly
3.	Update and submit Solid Waste Control Plan	Within six months of permit issuance
4.	Update and submit Spill Control Plan	Within six months of permit issuance; update annually
5a.	Submit stormwater runoff discharge sampling plan	Within six months of permit issuance
b.	Initiate stormwater runoff study	Within four months of Ecology approval of sampling program
c.	Report stormwater runoff study results	Within six months of study initiation
6.	Update and submit Treatment System Operating Plan	Within six months of permit issuance
7a.	Conduct chemical analysis of influent and effluent	Within second year of permit term
b.	Submit report on results of chemical analysis of influent and effluent	Within four months of initial sampling
8a.	Conduct particulate monitoring study	To be specified either by administrative order or permit modification
b.	Submit report on results of particulate monitoring study	To be specified either by administrative order or permit modification

9a.	Implement short term dioxin control program, and submit report	Within three months of permit issuance
b.	Submit long term dioxin control program preliminary scope of work	Within six months of permit issuance
c.	Submit long term dioxin control program final scope of work	Within eight months of permit issuance
d.	Submit long term dioxin control program engineering report	Within ten months of Ecology approval - final scope of work
e.	Comply with dioxin limit	No later than three years after permit issuance
f.	Conduct dioxin, furan and AOX monitoring	Upon permit issuance
g.	Submit chlorinated organics reduction study preliminary scope of work	Within eight months of permit issuance
h.	Submit chlorinated organics reduction study final scope of work	Within ten months of permit issuance
i.	Submit chlorinated organics reduction study report	Within twelve months of Ecology approval of final scope of work
j.	Commence improvements construction per above (13.i) report	Within six months of Ecology receipt of chlorinated organics reduction report
k.	Comply with effluent AOX limit	Within fifty four (54) months of permit issuance

WATER QUALITY STANDARD

The Permittee's discharge at the edge of the mixing zone shall not exceed the water quality criteria for freshwater chronic levels, as referenced in the State Water Quality Standards, WAC 173-201.

BASIS OF PRODUCTION BASED EFFLUENT LIMITATIONS

The effluent limitations for the pulp and paper mill discharge are based on total production quantities, utilizing the following regulations:

* Best Conventional Technology (BCT) as promulgated December 17, 1986, by EPA for paperboard production, unbleached kraft-NSSC, and the majority of the kraft fine paper production.

* New Source Performance Standards (NSPS) as promulgated November 18, 1982, by EPA for TSS and biochemical oxygen demand (BOD), for the grades produced at NORPAC I and NORPAC III, for increments of NORPAC II production, for increased production increments at R/W and at #4 machine, and for newsprint deinking (NORPAC III).

* Best Practicable Control Technology Currently Available (BPT), as promulgated by EPA on May 29, 1974, and January 6, 1977, for some of the thermomechanical paper production at NORPAC II. Ecology has determined that BPT is equal to BCT (for Category M) which has not yet been promulgated by EPA. If BCT is promulgated as more stringent than BPT, Ecology will modify the permit to reflect these new standards.

* Best Available Technology Economically Achievable (BAT) as promulgated November 18, 1982, by EPA.

Increased Production from NORPAC III (Deinking)

The Permittee intends to increase production during the term of this permit, due to new production from a third phase of the NORPAC facility (NORPAC III). The production increases will result from operation of the new deinking (newsprint) facility, increased use of purchased semi-bleached kraft pulp, increased production from the existing thermomechanical pulp (TMP) refiner lines, and by operation of an additional paper machine.

As a result of the expected increased production rates of 724 tons/day, effluent limits have also been calculated which are based on NORPAC III design productions. These limits shall be in effect upon startup of the NORPAC III papermachine.

The technology based effluent limitations are calculated from the following:

Category	Production Air Dry Tons/Day	Basis	BOD Pounds/Ton Monthly Average	BOD Pounds/Ton Max Day	TSS Pounds/Ton Monthly Average	TSS Pounds/Ton Max. Day
Kraft fine paper (I)	288	BCT	11.0	21.2	23.8	44.3
Kraft fine paper (I)	112	NSPS	6.2	11.4	9.6	18.2
NI kraft fine paper (R)	8	BCT	8.5	16.4	11.8	22.0
Kraft paperboard (H)	626	BCT	14.2	27.3	25.8	48.0
NI paperboard (Z)	10	BCT	7.2	13.0	5.6	11.6
Unbleached kraft-NSSC (V)	246*	BCT	8.0	16.0	12.5	25.0
NI unblchd kraft-NSSC (Z)	64	BCT	7.2	13.0	5.6	11.6
NI unblchd kraft-NSSC (Z)	23	NSPS	3.8	8.0	3.0	7.0
NORPAC I						
Thermomechanical Paper (M)	722	NSPS	5.0	9.2	9.2	17.4
Fine (NI) paper (R)	57	NSPS	3.8	7.0	4.6	8.8
NORPAC II						
Thermomechanical Paper (M)	565	BPT	11.1	21.2	16.7	31.1
Thermomechanical Paper (M)	88	NSPS	5.0	9.2	9.2	17.4
NI Fine paper (R)	51	BCT	8.5	16.4	11.8	22.0
NI Fine paper (R)	76	NSPS	3.8	7.0	4.6	8.8
SUBTOTAL	2936					
NORPAC III						
Thermomechanical Paper (M)	110	NSPS	5.0	9.2	9.2	17.4
Newsprint De-Ink (Q)	550	NSPS	6.4	12.0	12.6	24.0
Fine (NI) Paper (R)	64	NSPS	3.8	7.0	4.6	8.8
TOTAL	3660					
Chip Washing (M)	1,235	BPT	0.1	0.1	0.3	0.6

*Corrected to ten percent moisture.

Contribution of Wood Products Discharge

In addition to the above production considerations, a TSS allowance of 400 lbs/day (monthly average) and 800 lbs/day (daily maximum) is provided at the pulp mill's 001/002 Outfall for the contribution of the wood products discharge. This allowance is based on a Best Engineering Judgment determination of Best Conventional Technology.

SPECIAL CONDITIONS

S1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

I. Limits and Monitoring

A. OUTFALL 001/002

From the issue date of this permit and until startup of the NORPAC III facility, the Permittee is authorized to discharge from Outfall 001/002 subject to the stated limitations and monitoring requirements:

Parameter	EFFLUENT LIMITATIONS Monthly Average [1]	Daily Maximum [1]	MONITORING REQUIREMENTS Frequency	Sample Type
Dioxin (2,3,7,8-TCDD) and AOX [2]				
Biochemical Oxygen Demand (5-day) lbs/day	26,800	51,000	Daily	24-hr Composite [3]
Total Suspended Solids lbs/day	46,600	87,700	Daily	24-hr Composite
pH	5.0 to 9.0 [4]		Continuous	Recording
Flow, MGD	---	---	Continuous	Recording
Temperature, °F	---	---	Continuous	Recording
Fecal Coliform	---	---	Annual	Grab

[1] The monthly average is defined as the average of the measured values obtained over a calendar month's time. The daily maximum is defined as the greatest value for any day within the same monthly period.

[2] Permit limit requirements are described in Section S1.V.

[3] BOD composite samples shall be refrigerated in the dark at 4 °C. Changes to existing sampling system shall be reviewed and approved by Ecology prior to implementation.

[4] Indicates the range of permitted values. Excursions between 4.0 and 10.0 shall not be considered violations provided no single excursion exceeds 60 minutes in length and total excursions do not exceed 7 hours and 26 minutes per month. Any excursions below 4.0 or above 10.0 shall be considered violations. The instantaneous maximum and minimum pH shall be reported monthly.

- There shall be no discharge of floating solids or visible foam in other than trace amounts.

- The Permittee shall certify to Ecology that zinc hydrosulfite as a bleaching agent in TMP production, and biocides containing chlorophenols are not used.

OUTFALL 001/002 FOLLOWING NORPAC III STARTUP

Upon startup of the NORPAC III paper machine and lasting throughout the remainder of this permit, the Permittee is authorized to discharge from Outfall 001/002 subject to the stated limitations and monitoring requirements for BOD and TSS (all other effluent limitations and monitoring requirements for Outfall 001/002 remain as stated above):

	EFFLUENT LIMITATIONS		MONITORING REQUIREMENTS	
Parameter	Monthly Average	Daily Maximum	Frequency	Sample Type
Biochemical Oxygen Demand (5-day) lbs/day	31,100	59,100	Daily	24-hr Composite
Total Suspended Solids lbs/day	54,800	103,000	Daily	24-hr Composite

B. OUTFALL 005 (SANITARY SEWAGE TREATMENT PLANT)

The Permittee is authorized to discharge from this outfall subject to the stated limitations and monitoring requirements:

	EFFLUENT LIMITATIONS		MONITORING REQUIREMENTS	
Parameter	Monthly Average	Daily Maximum	Frequency	Sample Type
Flow, MGD	---	---	Daily	Continuous
Biochemical Oxygen Demand (5-day):				
mg/L	20	30	Weekly	Grab
lbs/day	70	125		
Total Suspended Solids:				
mg/L	20	30	Weekly	Grab
lbs/day	70	125		
Chlorine Residual:				
mg/L	range 0.1 to 3.0		Daily	(5 Grab/Week)
Fecal Coliform:				
Number/100 ml	200	400	Weekly	Grab

C. BASIS OF EFFLUENT LIMITATIONS FOR CHLORINE PLANT DISCHARGE

The chlorine plant discharges to the pulp mill outfall (001/002) at a junction just prior to the outfall entering the Columbia River, except for about 7 gallons/hour of discharge to the treatment plant from the $CaCl_2$ facility. The effluent limitations are to be met prior to this junction. The effluent limitations are based on:

- Best Available Technology (BAT) as promulgated June 29, 1982, by the EPA, and
- Best Conventional Technology (BCT), determined by Ecology using Best Engineering Judgement to be equal to Best Practicable Treatment (BPT) standards (promulgated by EPA June 29, 1982). EPA has not yet promulgated BCT standards; if BCT is promulgated as more stringent than BPT, Ecology will modify the permit to reflect these new standards.

The limitations are calculated on a production of 423 tons chlorine per day, together with the following:

Pollutant	Limits	Monthly Average pounds/ton	Maximum Day pounds/ton
Total Chlorine Residual	BAT	0.0158	0.026
Copper	BAT	0.0098	0.024
Lead	BAT	0.0048	0.0118
Nickel	BAT	0.0074	0.0194

D. CHLORINE PLANT DISCHARGE (prior to junction with pulp mill discharge)

Parameter	EFFLUENT LIMITATIONS Monthly Average	Daily Maximum	MONITORING REQUIREMENTS Frequency	Sample Type
Total Chlorine Residual				
lbs/day	6.7	11.0	Continuous	Recording
mg/L	NA	NA	Continuous	Recording
Copper, lbs/day	4.1	10.2	Semiannual	Composite
Lead, lbs/day	2.0	5.0	Semiannual	Composite
Nickel, lbs/day	3.1	8.2	Semiannual	Composite
TSS, lbs/day	189	503	Quarterly	Composite
Flow, MGD	---	---	Continuous	Recording

1. At any time the instantaneous total chlorine residual exceeds 5.0 mg/L, a written report of the incident shall be submitted to Ecology.

BASIS OF EFFLUENT LIMITATIONS FOR WOOD PRODUCTS DISCHARGE

The several plants comprising the Weyerhaeuser wood products complex discharge process wastewaters, noncontact cooling water, and ground water infiltration to a sump where they are used as scrubbing water for air pollution control at the wood products power boilers. The once-used scrubbing water is pumped to a pulp mill wastewater pipeline whence it enters the pulp mill secondary treatment system.

The plants are: Powerhouse: scrubbing, cooling, and blowdown water
Dry Hardboard mill (prestock)
Sawmill and planing (Mill B)
Presto log mill
Softwood Veneer mill
Loci machine shop
Carrier garage steam cleaning

EPA's Best Conventional Technology (BCT)/Best Available Technology (BAT) for a few of the plants specify no discharge of pollutants. The wastewater discharges from these particular plants are at de minimus levels. Since the wastewater flow is used as scrubbing water for air pollution control devices and thence receives secondary treatment, Ecology considers this to be equivalent to the BCT/BAT requirements.

Allowance is provided at the pulp mill's 001/002 Outfall for the contribution of the wood products discharge. The allowance, which is incorporated in the total amount, and which is based on a Best Engineering Judgement of Best Conventional Technology, is as follows:

	Monthly Average	Daily Maximum
BOD, lbs/day	None	None
TSS, lbs/day	400	800

F. WOOD PRODUCTS DISCHARGE (Prior to junction with NORPAC wastewater and eventual primary treatment)

	EFFLUENT LIMITATIONS		MONITORING REQUIREMENTS	
PARAMETER	Monthly Average	Daily Maximum	Frequency	Sample Type
Flow, MGD	---	---	Continuous	Recording

G. WATER SUPPLY PLANT'S DISCHARGES TO OUTFALL 001/002

During the terms of this permit, the Permittee is authorized to discharge filter backwash and sediments from the existing raw water treatment system to the Columbia River. The basis for this determination is the unique suspended solids loadings in the intake water caused by the eruption of Mt. Saint Helens, as determined by the Pollution Control Hearings Board in PCHB No. 85-220. Discharge of the solids from the water treatment system will be reviewed upon the reissuance of this permit, which is expected in 1996.

H. PFIZER SPECIALTY MINERALS INC. DISCHARGE

The Permittee is authorized to receive, for primary and secondary treatment, wastewater and stormwater discharges from Pfizer Specialty Minerals, Inc. Such discharges are subject to the terms and conditions of Pfizer's State Waste Discharge Permit. The Permittee is also authorized to receive noncontact cooling water discharges from Pfizer Specialty Minerals, Inc.

Sanitary wastewaters received from Pfizer shall be treated in the Permittee's sanitary treatment facilities, and shall not be authorized to enter the Permittee's industrial wastewater treatment facilities.

I. INTEROX AMERICA DISCHARGE

The Permittee is authorized to receive, for biological treatment, wastewater discharges from Interox America. Such discharges are subject to the terms and conditions of Interox America's State Waste Discharge Permit, including discharges from the proposed 1990 expansion project (design production of about 150 tons/day).

Sanitary wastewaters received from Interox shall be treated in Weyerhaeuser's sanitary treatment facilities, and shall not be authorized to enter Weyerhaeuser's industrial wastewater treatment facilities.

J. PRESTOCK PLANT DISCHARGE

The Permittee is authorized to receive, for biological treatment, wastewater discharges from the Prestock manufacturing facility located on the wood products plant site, both prior to and subsequent to the transfer of facility ownership from Weyerhaeuser Paper Company to G & L Industries. After transfer of ownership, such discharges shall be subject to the terms and conditions of a State Waste Discharge Permit issued to G & L Industries.

Sanitary wastewaters received from the Prestock facility may be treated in Weyerhaeuser's sanitary treatment facilities, and shall not be authorized to enter Weyerhaeuser's industrial wastewater treatment facilities.

K. SECONDARY TREATMENT OF LANDFILL LEACHATE

The Permittee is authorized to receive, for biological treatment, leachate collected from the Mt. Solo (Radakovich) landfill. The Department may also authorize the Permittee, by letter, to receive, for biological treatment, leachate produced from another landfill or landfills.

II. ACUTE SALMONID BIOASSAY

The Permittee's discharge after secondary treatment shall allow at least 80 percent survival of salmonid test fishes in a minimum of 65 percent concentration of treated effluent for a 96-hour period. These tests shall be conducted on a quarterly basis by the Permittee using techniques conforming to protocols specified in Section S4 of this permit. A portion of the bioassay sample shall be preserved (refrigerated in the dark) for later chemical analysis should the bioassay fail.

If Ecology determines that effluent composition has changed significantly due to process or treatment changes, or if a routine quarterly test is failed, bioassays shall be conducted once a month for three consecutive months. All three of these tests must be passed before the Permittee may revert back to the quarterly schedule. The Permittee shall notify Ecology if additional testing is to be conducted.

Ecology may require more frequent testing if routine monitoring shows a significant increase for any of the parameters listed in Permit Condition S1, Effluent Limitations and Monitoring Requirements.

III. TEMPERATURE CRITERIA

Columbia River water quality immediately outside of the Permittee's mixing zone, described below, shall not exceed the following temperature criteria:

No measurable temperature increase (0.3°C) in the receiving water shall be permitted.

IV. MIXING ZONE AND ACUTE CRITERIA COMPLIANCE BOUNDARY

The mixing zone shall not extend in the down stream direction for a distance greater than 320 feet nor extend upstream for a distance over 100 feet from the point of discharge. It shall not be wider than 50 feet on either side of the diffuser section.

A zone where acute criteria may be exceeded shall be no larger than 30 feet in any direction from the point of discharge. The edge of this zone shall be referred to as the acute criteria compliance boundary.

V. DIOXIN AND CHLORINATED ORGANICS

A. Dioxin Control Program

1. Short Term Dioxin Control Program

The Permittee shall, upon the issuance of the permit, take the following actions to reduce the production and the discharge of dioxins at its facility to the extent that such actions are consistent with existing bleach plant configuration.

a. Eliminate brownstock defoamers which contain re-cycled oils.

b. Minimize the use of defoamers and other chemicals in the pulping process which contain dioxin precursors.

c. Optimize chlorine dioxide substitution to the extent allowed by on site chlorine dioxide generating equipment.

d. Minimize chlorine usage.

e. Minimize the discharge of suspended solids from the final effluent.

The permittee shall complete implementation of the short term dioxin control program, and submit a report of the actions taken to Ecology for review within three (3) months of permit issuance.

2. Long Term Dioxin Control Program

The Permittee shall effect control of dioxins from its facility in accordance with the following schedule:

a. Within six (6) months of the issuance of the permit, the permittee shall submit a preliminary scope of work to Ecology for review. This scope of work shall address control strategies for the reduction of dioxins in mill effluents. Furthermore, this scope of work shall also address other non-water quality environmental impacts such as the management of secondary treatment sludge to eliminate the re-introduction of dioxin into the environment.

b. Within eight (8) months of the issuance of the permit, the permittee shall submit a final scope of work to Ecology for review and approval.

c. Within ten (10) months after receipt of Ecology's approval of the final scope, the permittee shall submit an engineering report to effect dioxin control to Ecology for review and approval. This report shall describe how the dioxin limit presented below is achieved.

d. Achieve compliance with the dioxin discharge limit set forth below no later than three (3) years after issuance of the permit.

Parameter	Limitation
TCDD[1]	Annual Average[2] 0.49 mg/day[3] 11 x 10^{-9} lbs/day
TCDD	Daily Maximum[4] 0.81 mg/day[3] 18 x 10^{-9} lbs/day

[1] TCDD is defined as 2,3,7,8-tetrachlorodibenzo-p-dioxin and is analyzed per the EPA Method 1613: Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution; or the NCASI Procedures for the Preparation and Isomer Specific Analysis of Pulp and Paper Industry Samples for 2,3,7,8-TCDD and 2,3,7,8-TCDF: Technical Bulletin No. 551; or an approved equivalent.

[2] Annual average for TCDD is defined as the arithmetic average of the daily maximum values for any twelve (12) consecutive months.

[3] TCDD limits were derived based on the EPA Region 10's Total Maximum Daily Loading (TMDL) to Limit Discharges of 2,3,7,8-TCDD (Dioxin) to the Columbia River Basin: Decision Document, February 25, 1991.

[4] For permit compliance purposes, the point of compliance shall be defined as the final effluent before discharge. Compliance with permit limit (daily maximum) shall be demonstrated by: 1) direct mass loading calculation for final effluent with detectable TCDD concentration; or 2) mass loading calculation for combined bleach plant effluent minus TCDD removed in the primary and/or the secondary treatment systems, for final effluent with non-detectable TCDD concentration.

For final effluent with non-detectable TCDD concentration, the removal efficiency of its secondary treatment system for dioxin may be established using an isomer of chlorinated dioxin or chlorinated furan as a TCDD surrogate. Treatment removal efficiency shall be established, on a quarterly basis, by: 1) measuring the surrogate concentrations in the combined bleach plant effluent and in the final effluent; 2) measuring the volumetric flow rates of the combined bleach plant flow rate and the final effluent; 3) with the surrogate data and their respective flow data, determine the TCDD removal rate in the secondary treatment system.

In lieu of the Ecology's method, the permittee may propose an alternative method to demonstrate permit compliance for TCDD. The alternate method shall be submitted to Ecology for review and approval in accordance with the engineering report submittal schedule specified in Section 4.1.2.c.

The daily maximum limit and the annual average limit for TCDD are derived based on the statistical method presented in the EPA Technical Support Document for Water Quality-based Toxics Control. The bases of the derivations are: 1) a log-normal distribution for TCDD effluent data, 2) a coefficient of variation of 0.6, and 3) an effluent occurrence probability of 0.01 (i.e., the 99th percentile).

B. Total Chlorinated Organics Reduction Program

The Permittee shall evaluate and implement control measures for the reduction of chlorinated organics in mill effluents in accordance with the following schedule:

1. Within eight (8) months of the issuance of the permit, the permittee shall submit a preliminary scope of work to Ecology for review using criteria developed by an Advisory Committee to be appointed by Ecology. The scope of work shall address reduction of chlorinated organics via in-process modifications and end-of-pipe treatments.

2. Within ten (10) months of the issuance of the permit, the permittee shall submit a final scope of work to Ecology for review and approval.

3. Within twelve (12) months after receipt of Ecology's approval of the final scope of work, the permittee shall submit the total chlorinated organics reduction report to the Advisory Committee. The Advisory Committee will review the report and make recommendations to Ecology.

   This report shall include analysis of these technologies with respect to capital and operating costs, mill configuration, product specifications, other factors established by the Advisory Committee as well as the criteria contain in 40 CFR Section 125.3(d) and shall address compliance with an annual average Adsorbable Organic Halogens (AOX) effluent level of 1.5 kg/air dried metric ton (ADMT) of bleached pulp (off the machine) and a monthly maximum AOX limit of 1.9 kg/ADMT of bleached pulp. In English units, the annual average and the monthly maximum AOX limits are 3.0 lbs/air-dried ton (ADT) of bleached pulp and 3.9 lbs/ADT of bleached pulp respectively. Ecology shall make the final decision on the report in accordance with Section 4.4.b.

4. Within six (6) months after Ecology's receipt of the total chlorinated organics reduction report, based on recommendations from the Advisory Committee, the permittee shall commence construction of the necessary improvement to meet the current AOX effluent limits, and shall submit progress report to Ecology every six (6) months thereafter until construction completion.

5. Within fifty-four (54) months of the issuance of the permit, the permittee shall comply with the following AOX effluent limits:

Parameter	Limitation
AOX[1]	Annual Average[2] 1.5 kg/ADMT of bleached pulp 3.0 lbs/ADT of bleached pulp 3080 lbs/day
AOX	Monthly Maximum[3] 1.9 kg/ADMT of bleached pulp 3.9 lbs/ADT of bleached pulp 3950 lbs/day

[1] AOX is defined as Adsorbable Organic Halogens and is analyzed per the Scandinavian Pulp, Paper and Board Testing Committee, SCAN-W 9:89; or the Standards Methods, 16th Edition, Part 506; or an approved equivalent. Both the suspended and dissolved fractions of the wastewater shall be included in the analysis. AOX values shall be reported in concentration basis, and in mass basis as kg/ADMT of bleached pulp (off the machine).

[2] Annual average for AOX is defined as the average of the monthly maximum values for any twelve (12) consecutive months.

[3] The monthly maximum AOX limit is defined as the average of the weekly values for the month and is derived based on the statistical method presented in the EPA Technical Support Document for Water Quality-based Toxics Control. The bases of the derivations are: 1) a log-normal distribution for AOX effluent data, 2) a coefficient of variation of 0.6, and 3) an effluent occurrence probability of 0.05 (i.e., the 95th percentile).

C. Monitoring Program

The Permittee shall upon the issuance of the permit conduct an effluent and sludge monitoring program in accordance with the following requirements:

Parameters	Frequency[11]	Sample Type[11]
Effluent:		
TCDD	Quarterly	24-hr composite
TCDF[9]	Quarterly	24-hr composite
AOX	Weekly	24-hr composite
Sludge[10]:		
TCDD	Quarterly	grab
TCDF	Quarterly	grab

[9] TCDF is defined as 2,3,7,8-tetrachlorodibenzofuran and is analyzed per the EPA Method 1613: Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution; or the NCASI Procedures for the Preparation and Isomer Specific Analysis of Pulp and Paper Industry Samples for 2,3,7,8-TCDD and 2,3,7,8-TCDF: Technical Bulletin No. 551; or an approved equivalent.

[10] Sludge is defined as primary treatment and secondary treatment sludge. Monitoring program for primary sludge shall be conducted by mills with primary sludge process/treatment train. Monitoring program for secondary sludge shall be conducted by mills with secondary sludge process/treatment train.

[11] For the first year of this permit, TCDD and TCDF monitoring shall be conducted on a quarterly basis. Sampling frequency may be reduced by the department after evaluation of reported data. Effluent samples shall be taken at the same time as the sludge samples. Sampling for AOX shall also coincide with that for TCDD and TCDF.

[12] Sampling of TCDD and TCDF shall be per Appendix B of the USEPA/Paper Industry Cooperative Dioxin Screening Study (EPA 440/1-88-025, March 1988).

D. General Conditions for Dioxin and AOX

1. The TCDD/TCDF analytical method in Section 4.3 is specified per 40 CFR 122.41(j)(4). That method shall be used for TCDD/TCDF monitoring during this permit term.

2. The annual AOX limit of 1.5 kg/ADMT (3.0 lbs/ADT) of bleached pulp and the monthly AOX limit of 1.9 kg/ADMT (3.9 lbs/ADT) of bleached pulp in Section 4.2(e) are established based on best professional judgment. If, after the evaluation of the engineering and cost information submitted per Section 4.2(c) but not later than six months after that submittal, the department after considering the Advisory Committee's recommendations determines that the present limits are not appropriate, the permit shall be re-opened and new AOX limits will be established.

3. In the event that the EPA develops AOX or chlorinated organic compounds discharge limits during the term of this permit, this permit will be re-opened and new AOX or chlorinated organic compounds limits will be established, within the constraints of the anti-backsliding provision. This sub-paragraph shall not be construed to authorize delay in meeting any schedule established herein for meeting any effluent limitations.

E. Bioaccumulation Monitoring

The Permittee shall test for dioxin in year four of the permit and submit the data 180 days before the expiration of the permit. The data will be used to assess the impact of the individual discharge and the suitability of the current allocation process. The testing shall conform to the following requirements:

1. Species - (freshwater) Walleye, Yellow Perch, Black Bass, Sturgeon, Catfish, Brown Bullhead, and Carp
(saltwater) Starry flounder, Sanddab, Mussels, Crab

2. Sample Number - Four samples shall be collected. Three samples shall be taken in an area directly influenced by the discharge. One sample shall be from an area outside the area of immediate influence.

3. Sample Type - Each sample will be a composed of three to six individuals. The fish samples will be whole gutted fish. The mussels and crabs will be soft tissue.

4. Sample Analysis - The samples shall be analyzed for TCDD, TCDF and lipid content.

5. Sample Locations - Ecology will notify the permittee of sample locations after examining the data from the dilution zone study and other pertinent information.

6. Sampling Plan - Within three years of the issuance of this permit, the permittee shall submit a bioaccumulation sampling and testing plan to Ecology for approval.

7. Analytical Protocol - The analysis shall be conducted by the EPA Method 1613; Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution, or an approved equivalent.

For the purposes of compliance with this condition, Ecology will also consider a demonstration of no dioxin bioaccumulation (or acceptable levels of bioaccumulation) using mussels in experimental flow-through channels containing a mix of effluent and receiving water (ASTM E1292-94 (1988)).

S2. MONITORING AND REPORTING REQUIREMENTS

The Permittee shall monitor the parameters as specified in Section S1 and shall comply with the following additional requirements:

A. Representative Sampling

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

B. Test Procedures

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

C. Recording of Results

For each measurement or sample taken, the Permittee shall record the following information: (1) the date, place, and time of sampling; (2) the date of analysis; (3) name of analyst; (4) the technique or methods used; (5) the results of the analysis.

D. Records Retention

The Permittee shall retain on site for a minimum of three years all records of monitoring and results, including all reports and instrument recordings. This period of retention may be extended by request of Ecology.

E. Reporting

Monitoring results obtained during a month shall be summarized and reported on the Discharge Monitoring Report Form (EPA No. 3320-1). Monitoring results of sanitary wastewater, specified in Section S1, shall be reported on Form ECY 040-2-33. This form shall accompany the DMR form. In addition, a table shall be submitted which lists the following information, in accordance with the monitoring requirements of Section S1: date (MM,DD,YY); flow (MGD); BOD (lbs/day); TSS (lbs/day); pH (min. and max.).

A report, including the Discharge Monitoring Report (DMR) form and the table previously described, shall be mailed no later than 15 days after the end of each month to the Department of Ecology, MS PV-11, Olympia, WA 98504-8711, Attention: Industrial Section.

F. Sample Dechlorination

The Permittee shall not dechlorinate any effluent samples prior to conducting biomonitoring or bioassay tests.

G. 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 the manufacturer's recommendations or at a minimum frequency of at least one calibration per year.

S3. OTHER REQUIREMENTS

The Permittee shall submit a report to Ecology that interprets and summarizes the data from each study required in Section S3. The reports shall include a summary of the results of each study, any modifications made to protocols and explanations for these modifications, interpretations of data, and conclusions.

A. Spill Control Plan

The permittee shall annually update the existing Spill Control Plan, subject to Department approval, for the prevention, containment, and control of spills or unplanned discharges for: 1) oil and petroleum products, and 2) materials, which when spilled, or otherwise released into the environment, are designated Dangerous (DW) or Extremely Hazardous Waste (EHW) by the procedures set forth in WAC 173-303-070.

The Spill Control Plan shall include the following:

1. A description of the reporting system which will be used to alert responsible managers and legal authorities in the event of a spill.

2. A description of preventive measures and facilities (including an overall facility plot showing drainage patterns.) which prevent, contain, or treat spills of these materials.

3. A list of all oil and chemicals used, processed, or stored at the facility which may be spilled into state waters.

4. For purposes of this requirement, plans and manuals required by 40 CFR Part 112, and also the contingency plan and emergency procedures of 173-303-350 and 360, may be included.

An updated Spill Control Plan shall be submitted for Department review and approval within six months of the issuance date of this permit. The Spill Control Plan and supplement shall be followed throughout the term of the permit.

B. Stormwater Runoff

The permittee shall update the stormwater study results submitted during the term of their last permit by providing any new information that will help to characterize stormwater discharges. This information shall include a topographic map indicating areas and maximum quantities of runoff that are not routed to the wastewater treatment system. The new information shall be submitted within six months of the issuance date of this permit.

The Permittee shall also develop a sampling program to assess pollutants in stormwater runoff discharges which are not routed to the wastewater treatment system. The program shall include sampling locations, a sampling schedule, and a list of the sample parameters to be analyzed. The Permittee shall distinguish those areas directly associated with industrial activities from other areas (such as parking lots). The sampling program shall be submitted to the Department for approval within six months of the issuance date of the permit.

The stormwater sampling program shall be initiated during the first winter storms after Department approval of the sampling program. A written report of the stormwater study results shall be submitted to the department within six months of initiation of the study. Additional permit requirements, or Best Management Practices (BMP's), may be imposed for storm water discharges.

C. Treatment System Operating Plan

Wastewater treatment systems shall be operated according to procedures and criteria described in an approved operating plan. The permittee shall submit an updated Treatment System Operating Plan for Departmental review and approval within six months of the issuance date of this permit. The plan shall include, but is not limited to, the following:

1. A baseline operating condition which describes the operating parameters and procedures used to meet the limitations of S1 at the production levels used in developing these limitations.

2. Operating parameters and procedures needed to maintain design treatment efficiency at production levels lower than those used in developing the limits of S1. Monitoring and reporting of such parameters and procedures shall be described in the plan.

3. The plan shall describe the operating procedures employed to mitigate upset conditions, such as those resulting from high solids loading from plant maintenance activities or loss of the mill's electrical power supply.

The permittee shall operate the treatment system to meet its design efficiency at lower production levels.

D. Solid Waste Disposal

This condition is based on state law, not federal National Pollutant Discharge Elimination System (NPDES) program regulations.

1. The permittee shall handle and dispose of all solid waste material in a manner to prevent its entry into the state ground or surface waters.

2. The permittee shall not allow leachate from solid waste material to enter state ground or surface waters without providing all known, available and reasonable treatment, nor allow such leachate to cause any adverse effect on state ground or surface waters.

3. The permittee shall submit an updated solid waste control plan within six months of the issuance date of this permit for review and approval of the department. The plan shall include all wastes except those covered by Chapter 173-303 WAC (Dangerous Waste Regulations). The plan shall include at a minimum a description, source, generation rate, and disposal methods for these wastes. Proposed changes in disposal practices shall be submitted to the Department for review and approval.

The plan shall not be at variance with any approved local solid waste management plan. The permittee shall comply with the plan as approved by the department. The permittee shall submit an update of the plan with the application for permit renewal 180 days prior to the expiration date of the permit.

4. If wastes subject to Chapter 173-303 WAC are generated, the plan shall include the State/EPA identification number.

E. Slime Control Reporting

In-plant slime control methods and materials shall be reported in detail annually giving the description, amount, and the periods of application for each slimicide used. Any deviation from the reported ranges of quantities used shall be reported as soon as practicable.

F. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or to relieve the permittee from any liability, or penalties, to which he may be subject under Section 311 of the Federal Clean Water Act.

G. Sanitary Plant Operator Certification

All operators in responsible charge of facilities that treat sanitary wastes shall be certified in accordance with the provisions of Chapter 70.95B RCW and 173-230 WAC, within one year of the issue date of the permit.

H. Particulate Monitoring Study

The permittee shall be required to analyze samples of the particulate fraction of the effluent from Outfall 001 after Departmental guidelines and protocols have been established. The Department will notify the permittee in writing when the guidelines are established. At that time, the permittee shall collect and analyze particulate samples for the pollutants specified by the Department, and submit the results to the Department within 270 days from the date of notification.

The sampling referred to in this condition shall be specified in a permit modification or administrative order, and shall be subject to appeal to the Pollution Control Hearings Board.

I. Chemical Analysis of Influent and Effluent

The Permittee shall conduct chemical analyses of influent and effluent samples collected from the wastewater treatment system during the second year of the permit term, in accordance with protocols, study requirements, and QA/QC procedures specified below. A written report shall be submitted to Ecology within 120 days after initial sampling.

Monitoring Requirements

The following samples shall be collected for analyses: 1) influent to wastewater treatment: two samples, with sampling times at least one week apart; and 2) effluent from wastewater treatment: two samples, collected at such times that results, in conjunction with influent analyses results, may be used to estimate constituent removal efficiencies across the treatment system.

Each sample of the influent and effluent shall be a representative composite consisting of continuous sampling or six grab samples equally spaced over a 24-hour period.

Influent and effluent samples shall be analyzed for pH, conductivity, hardness, BOD, TSS, cadmium, chlorine, chloroform, copper, zinc, mercury, total and hexavalent chromium (total recoverable for metals), naphthalene, pentachlorophenol, 2-nitrophenol, and 4-nitrophenol.

Protocols & Quality Assurance/Quality Control Procedures

Sample analyses and quality assurance procedures shall be conducted in accordance with 40 CFR 136 and/or Standard Methods for the Examination of Water and Wastewater, Seventeenth Edition, 1989 or updated versions thereof.

GENERAL CONDITIONS

G1. Discharge Violations:

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any pollutant more frequently than, or at a concentration in excess of, that authorized by this permit shall constitute a violation of the terms and conditions of this permit.

G2. Proper Operation and Maintenance:

The permittee shall at all times properly operate and maintain all facilities and systems of collection, treatment, and control (and related appurtenances) which are installed or used by the permittee for pollution control.

G3. Reduced Production for Compliance:

The permittee, in order to maintain compliance with its permit, shall control production and/or all discharges upon reduction, loss, failure, or bypass of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

G4. Noncompliance Notification:

If for any reason, the permittee does not comply with, or will be unable to comply with, any of the discharge limitations or other conditions specified in the permit, the permittee shall, at a minimum, provide the Department of Ecology (department) with the following information:

a. A description of the nature and cause of noncompliance, including the quantity and quality of any unauthorized waste discharges;

b. The period of noncompliance, including exact dates and times and/or the anticipated time when the permittee will return to compliance; and

c. The steps taken, or to be taken, to reduce, eliminate, and prevent recurrence of the noncompliance.

In addition, the permittee shall take immediate action to stop, contain, and clean up any unauthorized discharges and take all reasonable steps to minimize any adverse impacts to waters of the state and correct the problem. The permittee shall notify the department by telephone so that an investigation can be made to evaluate any resulting impacts and the corrective actions taken to determine if additional action should be taken.

In the case of any discharge subject to any applicable toxic pollutant effluent standard under Section 307(a) of the Clean Water Act, or which could constitute a threat to human health, welfare, or the environment, 40 CFR Part 122 requires that the information specified in items G4.a., G4.b., and G4.c., above, shall be provided not later than 24 hours from the time the permittee becomes aware of the circumstances. If this information is provided orally, a written submission covering these points shall be provided within five days of the time the permittee becomes aware of the circumstances, unless the department waives or extends this requirement on a case-by-case basis.

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

G5. Bypass Prohibited:

The intentional bypass of wastes from all or any portion of a treatment works is prohibited unless the following four conditions are met:

a. Bypass is: (1) unavoidable to prevent loss of life, personal injury, or severe property damage; or (2) necessary to perform construction or maintenance-related activities essential to meet the requirements of the Clean Water Act and authorized by administrative order;

b. There are no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, maintenance during normal periods of equipment down time, or temporary reduction or termination of production;

c. The permittee submits notice of an unanticipated bypass to the department in accordance with Condition G4. Where the permittee knows or should have known in advance of the need for a bypass, this prior notification shall be submitted for approval to the department, if possible, at least 30 days before the date of bypass (or longer if specified in the special conditions);

d. The bypass is allowed under conditions determined to be necessary by the department to minimize any adverse effects. The public shall be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible.

"Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

After consideration of the factors above and the adverse effects of the proposed bypass, the department will approve or deny the request.

Approval of a request to bypass will be by administrative order under RCW 90.48.120.

G6. Right of Entry:

The permittee shall allow an authorized representative of the department, upon the presentation of credentials and such other documents as may be required by law:

a. To enter upon the premises where a discharge is located or where any records must be kept under the terms and conditions of this permit;

b. To have access to and copy at reasonable times any records that must be kept under the terms of the permit;

c. To inspect at reasonable times any monitoring equipment or method of monitoring required in the permit;

d. To inspect at reasonable times any collection, treatment, pollution management, or discharge facilities; and

e. To sample at reasonable times any discharge of pollutants.

G7. Permit Modifications:

The permittee shall submit a new application or supplement to the previous application where facility expansions, production increases, or process modifications will (1) result in new or substantially increased discharges of pollutants or a change in the nature of the discharge of pollutants, or (2) violates the terms and conditions of this permit.

G8. Permit Modified or Revoked:

After notice and opportunity for public hearing, this permit may be modified, terminated, or revoked during its term for cause as follows:

a. Violation of any terms or conditions of the permit;

b. Failure of the permittee to disclose fully all relevant facts or misrepresentations of any relevant facts by the permittee during the permit issuance process;

c. A change in any condition that requires either a temporary or a permanent reduction or elimination of any discharge controlled by the permit;

d. Information indicating that the permitted discharge poses a threat to human health or welfare;

e. A change in ownership or control of the [illegible]

f. Other causes listed in 40 CFR Part 122.62 and 122.63.

Permit modification, revocation and reissuance, or termination may be initiated by the department or requested by any interested person.

G9. Reporting a Cause for Modification:

A permittee who knows or has reason to believe that any activity has occurred or will occur which would constitute cause for modification or revocation and reissuance under condition G8 or 40 CFR Part 122.62 must report such plans, or such information, to the department so that a decision can be made on whether action to modify or revoke and reissue a permit will be required. The department may then require submission of a new application. Submission of such application does not relieve the discharger of the duty to comply with the existing permit until it is modified or reissued.

G10. Toxic Pollutants:

If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Clean Water Act for a toxic pollutant and that standard or prohibition is more stringent than any limitation upon such pollutant in the permit, the department shall institute proceedings to modify or revoke and reissue the permit to conform to the toxic effluent standard or prohibition.

G11. Plan Review Required:

Prior to constructing or modifying any waste water control facilities, detailed plans shall be submitted to the department for approval in accordance with Chapter 173-240 WAC. Facilities shall be constructed and operated in accordance with the approved plan.

G12. Other Requirements of 40 CFR:

All other requirements of 40 CFR Part 122.41 and 122.42 except 122.41(n) are incorporated in this permit by reference.

G13. Compliance With Other Laws and Statutes:

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

G14. Additional Monitoring:

The department may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

G15. Revocation for Non-Payment of Fees:

The department may revoke this permit if the permit fees established under Chapter 173-224 WAC are not paid.

G16. Removed Substances:

Collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment of wastewaters or control of wastewaters shall not be resuspended or reintroduced to the final effluent stream for discharge to state waters.

G17. Duty to Reapply:

The permittee must reapply for a permit at least 180 days before the expiration of this permit.