

WASHINGTON STATE DEPARTMENT OF ECOLOGY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WASTEWATER DISCHARGE PERMIT
WEYERHAEUSER PAPER COMPANY
LONGVIEW, WASHINGTON

FACT SHEET
PERMIT No. WA 000012-4

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INTRODUCTION

The purpose of this proposed permit amendment is to modify the NPDES Permit No. WA-000012-4 to change the monitoring frequency for some of the parameters for outfall 001/002, and outfall 005.

On March 30, 2006, the Weyerhaeuser Company submitted a request for a reduction in monitoring frequency of various pollutant parameters in the discharge from outfalls 001/002 and outfall 005. The request addressed AOX; chloroform; 2,3,7,8-TCDD/TCDF; and BOD and TSS from outfalls 001/002. The request also included BOD, TSS, and fecal Coliform from outfall 005 which is the discharge for the sanitary wastewater treatment system that is sent to outfall 001/002 for discharge.

These requests for frequency reduction in monitoring are based on implementation of permit terms included in the June 2004 reissuance of the permit and upon EPA's *Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies*, dated April 1996. Also, the requests are based on implementation of "Monitoring Reduction for Exemplary Performance" in Ecology's *Water Quality Program – Permit Writer's Manual*, Chapter XIII, Publication No. 94-109, revised July 2004.

The monitoring frequency for AOX; chloroform; 2,3,7,8-TCDD/TCDF; and chlorinated phenolics is based on federal effluent monitoring guidelines set forth in 40 CFR Part 430.02. The current permit issued in 2004 implemented the monitoring frequency stipulated by federal regulation. These same federal regulations allow adjustment in monitoring frequency at set time intervals and/or with the demonstration of consistent attainment of discharge limitations. The Weyerhaeuser Longview mill has achieved the level of performance to be given the reduced monitoring frequency. Ecology is now proposing to adjust the monitoring frequency for these parameters as allowed by federal regulation. The requirement for AOX monitoring will be 1/month, for TCDD 1/quarter, chloroform 1/permit term if certain surrogate performance parameters are achieved, and for chlorinated phenolics 1/permit term.

The monitoring frequency for BOD and TSS in the outfall 001/002 discharge is being proposed for modification in frequency in accordance with factors described in Section XIII of Ecology's *Permit Writer's Manual*. The *Permit Writer's Manual* offers a Method 1 and Method 2 approach for developing monitoring frequency. Historical good performance, which is characterized by monitoring results consistently below permitted limits, justifies reduced monitoring frequency. After careful review of the discharge data, Ecology is proposing a 1/week monitoring frequency for BOD for outfall 001/002. Any mill upset which results could impair the wastewater treatment system as described in the Treatment System Operating Plan would trigger daily BOD monitoring for the duration of the presence of the spill liquors in the treatment system. For TSS, Ecology is proposing a 3/week monitoring frequency.

The consistent good performance from outfall 005 for the sanitary wastewater treatment system also supports reduced monitoring frequencies. Ecology is proposing a 2/month monitoring

frequency on outfall 005 for BOD, and 1/month monitoring frequency on outfall 005 for TSS and Fecal Coliform.

To make the above changes, Ecology is proposing to amend NPDES permit No. WA-000012-4. Once the permit has been amended the above changes in monitoring frequency will be effective immediately. This permit will still have June 1, 2009 as its expiration date.

The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System of permits (NPDES permits), which is administered by the Environmental Protection Agency (EPA). The EPA has delegated responsibility to administer the NPDES permit program to the State of Washington on the basis of Chapter 90.48 RCW which defines the Department of Ecology's authority and obligations in administering the wastewater discharge permit program.

The regulations adopted by the State include procedures for issuing permits (Chapter 173-220 WAC), water quality criteria for surface and ground waters (Chapters 173-201A and 200 WAC), and sediment management standards (Chapter 173-204 WAC). These regulations require that a permit be issued before discharge of wastewater to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. One of the requirements (WAC 173-220-060) for issuing a permit under the NPDES permit program is the preparation of a draft permit and an accompanying fact sheet. Public notice of the availability of the draft permit is required at least thirty days before the permit is issued (WAC 173-220-050). The fact sheet and draft permit are available for review (see Appendix A--Public Involvement of the fact sheet for more detail on the Public Notice procedures).

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in this review have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit, and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised.

GENERAL INFORMATION	
Applicant	Weyerhaeuser Longview
Facility Address	P.O. Box 188, Longview, Washington 98632
Type of Facility	Bleached Pulp and Paper, Wood Products
Discharge Location	Columbia River 2.1 Miles downstream from Lewis and Clark Bridge, Waterway Segment No. 26-WRIA 99. Outfall 001 and 002 Latitude: 46° 7' 51" N Longitude: 122° 59' 26" W.
Water Body ID Number	Segment No. 26 WRIA 99 WA-CR-1010

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

LOCATION

The Weyerhaeuser Longview Mill is located near the intersection of Industrial Way and Washington Way, Longview, and is on the shore of the Columbia River. The mill discharge outfall extends from the mill site in a southwesterly direction into the Columbia River, about 2.1 miles downstream of the Lewis and Clark Bridge. The Department of Ecology and other state resource agencies use a system of Watershed Resource Inventory Areas (WRIAs) to refer to the state's major watershed basins. A map of the state's WRIAs can be found at www.ecy.wa.gov/programs/eap/wrias/index.html.

INDUSTRIAL PROCESS

The mill produces a wide range of paper products. A kraft pulp mill and bleach plant produces bleached fiber to make paperboard products. The NORPAC facility produces newsprint using thermomechanical pulp, deink pulp from old newsprint, and bleached kraft fiber. Softwood lumber finishing operations, including lumber kilns, planers, and shipping/exporting facilities, exist on-site. A solid waste materials recovery and transfer facility is located on the mill site. Several inorganic chemical manufactures operate on or adjacent to the mill site, and send their wastewater to Weyerhaeuser's industrial wastewater treatment system for treatment.

RECEIVING WATER

Outfall 001/002

Columbia River
Class A Water Quality
Columbia River 2.1 miles downstream from Lewis and Clark Bridge
Latitude: 46° 7' 51" N Longitude: 122° 59' 26" W
Segment No. 26 WRIA 99 WA-CR-1010

Outfall 003

Wood Products Area Discharge
Consolidated Diking Improvement Ditch #3
Latitude: 46° 07' 03" Longitude: 122° 57' 15"

Outfall 004

Wood Products Area Discharge
Consolidated Diking Improvement Ditch #3
Latitude: 46° 07' 25" Longitude: 122° 57' 50"

There are other stormwater discharges to the Columbia River and Consolidated Diking Improvement Ditch #3.

DISCHARGE OUTFALL

Outfall 001/002

Outfall 001/002 is the principal outfall. The mill discharges its treated wastewater via a 54-inch pipe, 723.4 feet long (Outfall 001) and an adjacent 48-inch pipe, 1174 feet long (Outfall 002), at the above noted location. Both of the mill discharge lines end with 300 feet long diffusers. Mill discharge receives primary clarification followed by secondary treatment in an activated sludge process, prior to discharge to the Columbia River. Currently, wastewater treatment system effluent flow volume averages 48 million gallons per day. Chlorophenolic biocides for slime control will not be used in the mill and bleaches containing zinc hydrosulfite will not be used in thermomechanical production.

Outfall 003 and 004

Outfall 003 and 004 are stormwater discharges to the Consolidated Diking Improvement District Ditch #3. These flows are monitored by grab samples. The results of this sampling are included in the monthly discharge report (DMR) submitted to the Department of Ecology.

STORM WATER TREATMENT

The Permittee collects stormwater from the manufacturing areas of the mill site, treats, and discharges stormwater as part of the process discharge and has met all of required planning and monitoring requirements. Stormwater discharge limitations are consistent with and incorporated in the process effluent discharge limitations. Stormwater drainage from the perimeter of the mill site is authorized by this permit to be treated, routed and discharged to either the Columbia River or the Consolidated Diking Improvement District ditch #3. Ecology's Industrial Stormwater General Permit requirements were utilized in the permit. BOD₅ is included because this permit is for timber product industry, paper and allied products facility.

Stormwater discharges are listed in the table below. The Permittee may suspend stormwater sampling and analysis for turbidity, pH, zinc, petroleum, and BOD₅ based on consistent attainment of benchmark values. Consistent attainment is defined as eight consecutive quarters (any quarter with no stormwater discharge is not counted) where the reported values are equal to or less than the benchmark values. For pH equal to or less than the benchmark values means that the pH did not exceed 9 and was not less than 6.

Benchmark values are not water quality standards and are not permit limits. They are indicator values. Values at or below benchmark are considered unlikely to cause a water quality violation.

The listed test methods in the table below are the EPA standard methods considered appropriate for the required test. Equivalent or superior test methods may be substituted by and accredited

lab. All meters used onsite for sample analysis must be operated in accordance with the manufacturers' requirements and properly calibrated.

Stormwater Discharges: 001/002 Ditch, RW Office, Raw Water Ditch, Adjacent to Export Dock, Export Dock, and Cargo Dock				
Parameter	Units	Analytical Method	Benchmark Value	Minimum Sampling Frequency
Turbidity	NTU	Meter	25 NTU	Quarterly
pH	Standard Units	Meter/litmus paper	6 – 9 SU	Quarterly
Total Zinc	µg/L	EPA 200.7	117 µg/L	Quarterly
Petroleum – Oil and Grease	mg/L	EPA 1664 or 1664A	15 mg/L	Quarterly
BOD ₅	mg/L	EPA 405.1 or Standard Methods 5210B	30 mg/L	Quarterly

COMPLIANCE HISTORY

The facility has been in compliance with their permit.

There are no SEPA requirements for this permit.

MONITORING SCHEDULE AT AMENDMENT EFFECTIVE DATE

Ecology has reviewed Weyerhaeuser's request for the reduction of monitoring frequency arising from consistent compliant pollutant discharges significantly below permit limits. Following guidance in Ecology's Permit Writer's Manual as found on page XIII-15c, Ecology is reducing monitoring frequency of 5 times per week to once per week for BOD₅ and 3 times per week for TSS for outfall 001/002.

Category	Parameter	Units	Sample Point ^(c) Point of Compliance	Minimum Sampling Frequency	Sample Type
Wastewater Effluent - Outfalls 001/002	Flow	MGD	Final Effluent ^(c)	Daily	Continuous Recording
	BOD ₅ ^{(d)(h)}	mg/L	Secondary Treatment Effluent ^{(d)(c)}	1/week	24-hour Composite

Category	Parameter	Units	Sample Point ^(c) Point of Compliance	Minimum Sampling Frequency	Sample Type
	COD	mg/L	Secondary Treatment Effluent	Weekly	24-hour Composite
	TSS ^(d)	mg/L	Secondary Treatment Effluent ^(d)	3/week	24-hour Composite
	pH	Standard Units	Final Effluent	Daily	Continuous Recording ^(f)
	Temperature	°C	Final Effluent	Daily	Continuous Recording ^(f)
	Kraft Pulp Production	ADT/Day	Brownstock into the Bleach Plant	Daily	
	Thermal Mechanical Pulp Production	ADT/Day	Stock to Production	Daily	
	Deink Pulp Production	ADT/Day	Stock to Production	Daily	
	Paper Production	MDT/Day ^(b)	At the Reel ^(b)	Daily	
	AOX	mg/L	Secondary Effluent	1/month	24-hour Composite
	2,3,7,8-TCDD ^(g)	pg/L	Bleach Plant Effluent	Quarterly	24-hour Composite
	2,3,7,8-TCDD	pg/L	Secondary Effluent	Semi-annual	24-hour composite
	2,3,7,8-TCDF ^(g)	pg/L	Secondary Effluent	Semi-annual	24-hour composite
	2,3,7,8-TCDF	pg/L	Bleach Plant Effluent	Quarterly	24-hour Composite
	Chloroform	µg/L	Bleach Plant Effluent	1/permit ^(e)	24-hour Composite

Category	Parameter	Units	Sample Point ^(c) Point of Compliance	Minimum Sampling Frequency	Sample Type
Wastewater Effluent	Trichlorosyringol	µg/L	Bleach Plant Effluent	1/permit term	24-hour Composite
	3,4,5-trichlorocatechol				
	3,4,6-trichlorocatechol				
	3,4,5-trichloroguaiacol				
	3,4,6-trichloroguaiacol				
	4,5,6-trichloroguaiacol				
	2,4,5-trichlorophenol				
	2,4,6-trichlorophenol				
	Tetrachlorocatechol				
	Tetrachloroguaiacol				
	2,3,4,6-tetrachlorophenol				
Pentachlorophenol					
Wastewater Treatment Solids	2,3,7,8-TCDD ^(g)	ng/Kg	Combined primary and secondary solids	Annually	Grab
	2,3,7,8-TCDF ^(g)				

^(b) As described in 40 CFR Part 430, machine dry tons are based on normal moisture content at the reel for each paper machine. Machine tons are on the basis of gross production at the reel.

^(c) Effluent sampling points shall be defined as follows: 1. Final effluent is that effluent stream after the treated effluent from the wastewater treatment system, sump E and non-contact cooling water are combined; and, 2. Secondary effluent shall be treated effluent from the wastewater treatment system prior to the combination with any other streams.

^(d) Mass discharge calculations for BOD and TSS are done on the basis of secondary treatment flow times secondary treatment effluent concentrations.

^(f) Continuous means uninterrupted except for brief periods of time for calibration, power failure, or for unanticipated equipment repairs or maintenance.

^(g) 2,3,7,8-TCDD is 2,3,7,8-tetrachlorodibenzo-p-dioxin and 2,3,7,8-TCDF is 2,3,7,8 tetrachlorodibenzofuran. Analysis including sample containers and QA/QC shall be conducted in accordance with Method 1613: Tetra- through Octa- chlorinated Dioxin and Furans by Isotopic Dilution HRGC/HRMS, USEPA Office of Water, Engineering and Analysis Division, Revision B or an approved equivalent method.

^(h) 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.

⁽ⁱ⁾ Monitoring weekly shall begin within 12 months after the effective date of the permit after the Permittee's laboratory is accredited.

OUTFALL 005 (SANITARY SEWAGE TREATMENT PLANT DISCHARGE TO OUTFALL 001/002)

The Permittee is authorized to discharge from this outfall subject to the stated limitations and monitoring requirements beginning on the effective date of this permit and lasting through the term of this permit ^(a):

EFFLUENT LIMITATIONS: OUTFALL #005				
MONITORING REQUIREMENTS				
Parameter			Frequency	Sample Type
Flow, MGD	---		Daily	Continuous
Chlorine Residual ^(b)	Following chlorination > 0.3 mg/L		5/week	Grab
pH	Range 6.0 to 8.5 at all times		5/week	Grab
	<u>Monthly Average</u>	<u>Weekly Average</u>		
BOD ₅ : mg/L ^(c)	35	53	2/month	Grab
lbs/day	40	60		
TSS: mg/L ^(c)	45	65	1/month	Grab
lbs/day	61	92		
Fecal Coliform, Number/100 ml	200	400	1/month	Grab

^(a)All parameter samples to be collected at weir outfall of sanitary system.

^(b) Measured as total chlorine.

^(c) Concentrations and mass loading limits based on “effluent limits consistently achievable through proper operation and maintenance” as defined in WAC 173-221-030 and modified by “best professional judgment.”

WOOD PRODUCTS DISCHARGE 003 AND 004 EFFLUENT LIMITS

Beginning on the effective date of this permit and lasting through the term of this permit, the Permittee is authorized to discharge to the Consolidated Diking Improvement District Ditch #3 through Discharges 003 and 004, the following wastewaters: stormwater, vehicle wash water, dust control water, area wash-up water, equipment wash water, non-contact cooling water overflow, and emergency fire control water. Ecology may authorize additional sources of discharge to the Consolidated Diking District Ditch #3, on a case-by-case basis. The Consolidated Diking Improvement District Ditch #3 is listed on 303(d) listing. Ecology has the policy of allowing a permit writer to include limits for impaired water bodies that have received a Total Maximum Daily Loading (TMDL) study, to apply a limit to address the impaired water body until a TMDL has been completed. The Industrial Section has included a limit for BOD₅ to

address low dissolved oxygen (DO) in the Consolidated Diking District Ditch #3. This is a technology based limit. The discharge is subject to the following limitations.

Discharge 003 and 004				
Parameter	Avg Day	Day Max	Minimum Frequency	Sample Type
Flow	N/A	N/A	Continuous Reading	On-Line Monitor
pH	Shall be within the range of 6.0 to 9.0		Monthly	Grab
Dissolved Oxygen	N/A	N/A	Monthly at base flow	Grab
BOD ₅	004 N/A 003 only 895 Lbs/day	004 N/A 003 only 1155 Lbs/day	004 Monthly at base flow 003 5/week	Grab
TSS	N/A	N/A	Monthly at base flow	Grab
Turbidity (NTU)	N/A	N/A	Monthly at base flow	Grab
Fecal Coliform	N/A	N/A	Monthly at base flow	Grab
Settleable Solids	N/A	0.1 ml/L	Monthly	Grab
Oil and Grease	10 mg/L	15 mg/L	Weekly	Grab
Oil And Grease Visual Assessment	N/A	No visible sheen	5/week	Visual

Other stormwater discharges are listed below.

Stormwater Discharges: 001/002 Ditch, RW Office, Raw Water Ditch, Adjacent to Export Dock, Export Dock, and Cargo Dock				
Parameter	Units	Analytical Method	Benchmark Value	Minimum Sampling Frequency
Turbidity	NTU	Meter	25 NTU	Quarterly
pH	Standard Units	Meter/litmus paper	6 – 9 SU	Quarterly
Total Zinc	µg/L	EPA 200.7	117 µg/L	Quarterly
Petroleum – Oil and Grease	mg/L	EPA 1664 or 1664A	15 mg/L	Quarterly
BOD ₅	Mg/L	EPA 405.1 or Standard Methods 5210B	30 MG/L	Quarterly

BEST MANAGEMENT PRACTICES

Best Management Practices (40 CFR 430.28) are required to prevent leaks and spills of spent pulping liquors, soap, and turpentine. The Permittee has established a program to accomplish this objective.

MIXING ZONES

The Clean Water Act and Washington's Water Quality Standards allow the Department of Ecology to authorize mixing zones around a point of discharge in establishing surface water quality-based effluent limits. Both "acute" and "chronic" mixing zones may be authorized for pollutants that can have a toxic effect on the aquatic environment near the point of discharge. The concentration of pollutants at the boundary of these mixing zones may not exceed the numerical criteria for that type of zone. Mixing zones are authorized for discharges that are receiving all known, available, and reasonable methods of prevention, control and treatment (AKART) and in accordance with other mixing zone requirements of WAC 173-201A-100. The National Toxics Rule (EPA, 1992) allows the chronic mixing zone to be used to meet human health criteria.

DESCRIPTION OF THE RECEIVING WATER

The facility discharges to the Columbia River. The Columbia River is designated a Class A receiving water in the vicinity of the outfalls. Characteristic water uses include fish and shellfish rearing and harvesting, commerce and navigation, industrial water supply, and general recreation and aesthetic enjoyment. Compliance with the permit conditions should not result in degradation of water quality or impair any beneficial uses.

SURFACE WATER QUALITY CRITERIA (201A)

Applicable criteria are defined in Chapter 173-201A WAC for aquatic biota. In addition, U.S. EPA has promulgated human health criteria for toxic pollutants (EPA 1992). Criteria for this water body are summarized below:

Fecal Coliform	100 organisms/100 ml maximum geometric mean
Dissolved Oxygen	8.0 mg/L minimum
Temperature	20° C maximum or incremental increases greater than 0.3° C above ambient
pH	6.5 to 8.5 standard units
Turbidity	less than 5 NTU above background
Toxics	No toxics in toxic amounts

PERMIT ISSUANCE PROCEDURES

PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary to meet Water Quality Standards for Surface Waters, Sediment Quality Standards, or Water Quality Standards for Ground Waters, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this permit as a result of new or amended state or federal regulations.

RECOMMENDATION FOR PERMIT MODIFICATION

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, protect human health, aquatic life, and the beneficial uses of waters of the State of Washington. The Department proposes that this proposed permit be modified.

REFERENCES FOR TEXT AND APPENDICES

Environmental Protection Agency (EPA):

- 1992 National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.
- 1991 Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001.
- 1988 Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling. U.S. EPA Office of Water, Washington, D.C.
- 1985 Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water. EPA/600/6-85/002a.
- 1983 Water Quality Standards Handbook. U.S. EPA Office of Water, Washington, D.C.

Tsivoglou, E. C., and J. R. Wallace.

- 1972 Characterization of Stream Reaeration Capacity. EPA-R3-72-012. (Cited in EPA 1985 op.cit.)

Washington State Department of Ecology:

- 1994 Permit Writer's Manual. Publication Number 92-109

Wright, R .M., and A .J. McDonnell:

- 1979 In-stream Deoxygenation Rate Prediction. Journal Environmental Engineering Division, ASCE. 105(E2). (Cited in EPA 1985 op.cit.)

APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to modify a permit to the applicant listed on Page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

The Department published a Public Notice of Draft (PNOD) in the **Longview Daily News** Newspaper to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. It will be a 30 day comment period that will close on January 31, 2007. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. on weekdays, by appointment, at the regional office listed below. Written comments are to be mailed to:

Department of Ecology
Industrial Section
300 Desmond Drive S.W.
P.O. Box 47600
Lacey, WA 98504-7600
Attention: Marc E. Crooks, P.E.

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-220-090). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing (WAC 173-220-100).

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments will be available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by writing to the address listed above.

This permit and fact sheet were written by Marc Crooks.

APPENDIX B—GLOSSARY

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

AKART-- An acronym for “all known, available, and reasonable methods of treatment.”

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

Ammonia—High concentrations of ammonia are toxic to aquatic organisms. They exert an oxygen demand and contribute to eutrophication.

Average Monthly Discharge Limitation --The arithmetic average of the measured values obtained over a calendar month's time.

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

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

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

Chlorine--Chlorine is used to disinfect potable water, industrial water, and domestic sewage for pathogens harmful to human health.

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

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

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

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a compliance inspection--without sampling, and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits and, for municipal facilities, sampling of influent to ascertain compliance with the 85% removal requirement. Additional sampling may be conducted.

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

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

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

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

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

EC₅₀ (Effective Concentration, 50%)--Means the effluent concentration estimated to cause an adverse effect in 50% of the test organisms in a toxicity test involving a series of dilutions of effluent.

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

Fecal Coliform Bacteria--Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the wastewater. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated domestic sewage and/or the presence of animal feces.

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

IC₅₀ (Inhibition Concentration, 50%)--Means the effluent concentration estimated to cause a 50% reduction in a biological function in a toxicity test involving a series of dilutions of effluent.

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

LC₅₀ (Lethal Concentration, 50%) means the effluent concentration estimated to cause death in 50% of the test organisms in a toxicity test involving a series of dilutions.

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

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

Method Detection Level (MDL)--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Minimum Level (ML)—The level at which an analytical system gives a recognizable signal and an acceptable calibration point.

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

Mixing Zone--An area that surrounds an effluent discharge within which water quality standards may be exceeded. The area of the authorized mixing zone is specified in a facility's permit and follows procedures outlined in state regulations (Chapter 173-201A WAC).

NOEC (No Observed Effect Concentration)--The highest measured continuous concentration of an effluent or a toxicant that causes no observed effect on a test organism.

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

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

Quantitation Level (QL)--A calculated value five times the MDL (method detection level).

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

Technology-based Effluent Limit--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

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

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

Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a stormwater drainage system into a defined surface water body or a constructed infiltration facility.

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

Water Quality Based Effluent Limit--A wastewater parameter concentration limit that is intended to prevent the concentration of that parameter from exceeding a water quality standard after it is discharged into a receiving water.

APPENDIX C—RESPONSE TO COMMENTS

Ecology only received comments from Weyerhaeuser Longview on this permit amendment. Those comments are:

1. Page 15 of Amended Permit, A4, Outfall #5 of the Effluent Limitations: Outfall #005 Monitoring Requirements Table- Replace “weekly Average” with “Daily Maximum”.

Ecology response to comment: Ecology agrees. Permit has been changed.

2. Page 16 of Amended Permit, A.5 Wood Products Discharge #003 and #004 Effluent Limits, in the table listed sampling frequency for BOD₅ on 003 is 5/week.

Discussion – The footnote to the table indicates that we would sample for 5/week for two years to provide a sufficiently significant data pool to characterize this discharge. We have sampled for over two and a half years at this frequency. There are now over 650 data values characterizing the BOD concentration for the 003 discharge. We are requesting a reduction of the monitoring frequency to 4 times per week. This change would allow us to fully realize the savings associated with the reduced BOD monitoring frequencies embodied in this permit revision while assuring the continued complete characterization of this discharge.

Request – Please consider decreasing the BOD₅ sampling frequency for 003 from 5/week to 4/week.

Ecology response to comment: Ecology will consider decreasing the BOD₅ sampling frequency for outfall #003. This action will not be included in this permit amendment action, but will be a matter of discussion in the near future.