

FACT SHEET FOR NPDES PERMIT WA 000292-5
Nippon Paper Industries USA Co., Ltd.
P. O. Box 271
Port Angeles, Washington 98362

TABLE OF CONTENTS

INTRODUCTION1

BACKGROUND INFORMATION2

 DESCRIPTION OF THE FACILITY2

 History.....2

 Industrial Process2

 Discharge Outfalls2

 Permit Status2

 SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT3

 WASTEWATER CHARACTERIZATION3

 SEPA COMPLIANCE.....5

PROPOSED PERMIT LIMITATIONS.....5

 DESIGN CRITERIA.....6

 SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS.....6

 OUTFALL 001 TECHNOLOGY-BASED EFFLUENT LIMITATIONS6

 Numerical Criteria for the Protection of Aquatic Life.....8

 Numerical Criteria for the Protection of Human Health.....8

 Narrative Criteria8

 Anti-degradation8

 Critical Conditions.....9

 Mixing Zones.....9

 Description of the Receiving Water.....9

 Surface Water Quality Criteria (201A).....10

 Consideration of Surface Water Quality-Based Limits for Numeric Criteria10

 GROUND WATER QUALITY LIMITATIONS.....14

 COMPARISON OF EFFLUENT LIMITS WITH THE EXISTING 2001 PERMIT.....14

MONITORING REQUIREMENTS15

OTHER PERMIT CONDITIONS16

 LAB ACCREDITATION16

 REPORTING AND RECORDKEEPING16

 NON-ROUTINE AND UNANTICIPATED DISCHARGES16

 SPILL PLAN.....16

 SOLID WASTE PLAN.....16

 OUTFALL EVALUATION17

 TREATMENT SYSTEM OPERATING PLAN.....17

 GENERAL CONDITIONS.....17

PERMIT ISSUANCE PROCEDURES17

 PERMIT MODIFICATIONS17

 RECOMMENDATION FOR PERMIT ISSUANCE17

REFERENCES FOR TEXT AND APPENDICES.....18

FACT SHEET FOR NPDES PERMIT WA 000292-5
February 2007

APPENDIX A -- PUBLIC INVOLVEMENT INFORMATION.....19

APPENDIX B -- GLOSSARY20

APPENDIX C -- TECHNICAL CALCULATIONS24

APPENDIX D—RESPONSE TO PUBLIC COMMENTS25

INTRODUCTION

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. Comments and the resultant changes to the permit will be summarized in Appendix D--Response to Comments.

General Information	
Applicant:	Nippon Paper Industries USA Co., Ltd.
Facility Address:	P.O. Box 271
Type of Facility:	Thermomechanical Newsprint and Deinking Pulp and Paper Mill
Water Body ID Number:	WA-18-0010
Location:	The Strait of Juan de Fuca Latitude: 48° 08' 13" N Longitude: 123° 28' 28" W

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

HISTORY

The Nippon Paper Industries USA Company's (formerly Daishowa America Co., Ltd.) pulp and paper mill was built in 1920 at the base of Ediz Hook in Port Angeles, Washington. A new deinking facility started production in February 1992. The mill produced about 162,000 salable tons of telephone directory paper per year in 2005. About 50 percent of the pulp had been derived from the deinking of outdated newsprint papers and telephone directories. The present mill employs about 246 employees.

INDUSTRIAL PROCESS

Based on the information submitted to the Department, the existing pulp and paper mill will produce a daily average of 508 tons/day of paper off-of-the-machine, an increase of 9.3% as compared to the last permit renewal. The paper produced from years 2003-2006 consisted of 222 tons/day from the thermo-mechanical pulping system, 188 tons/day from the deinking pulping system, and 97 tons/day pulp as non-integrated semi bleach kraft. These productions include culls and trims. These amounts are defined as off-the-machine paper production. The percentages of the three types of pulps used to make the directory type paper were 43.7 % deinked pulp, 37.1 % TMP pulp, and 19.2 % nonintegrated semi bleach kraft pulp. The increase was due to a correction in calculating production. The calculation was revised from counting only salable paper to include all off-the-machine production as allowed by 40 CFR 430.01(n).

DISCHARGE OUTFALLS

The discharge locations for both the treated process wastewater (outfall 001) and the filtered fresh water backwash (outfall 002) are at the base of Ediz Hook in the Strait of Juan de Fuca. Outfall 001 runs 1200 feet in a NNW direction into the Strait of Juan de Fuca. A dilution ratio dye study for outfall 001 was done in 1989 and amended in 1991. An update of the dilution performance was submitted by the Permittee on July 20, 1995 with the NPDES permit application. The acute and chronic dilution ratios for outfall 001 were determined to be 95:1 and 343:1, respectively. The filter backwash water comes from the fresh water treatment system that treats the Elwha River water before it is used in the paper making process. The filter plant backwash is discharged into the Strait of Juan de Fuca at the based of Ediz Hook. All stormwaters are discharged to the secondary wastewater treatment system. All sanitary wastewaters are discharged into the city of Port Angeles wastewater collection system where it is treated and discharged under the city's permit.

PERMIT STATUS

The previous permit for this facility was issued on November 8, 2001, which is expired in December 2006. The previous permit placed effluent limitations on biochemical oxygen demand (BOD₅), total suspended solids (TSS), pH, oil and grease, and whole effluent toxicity

(acute and chronic toxicity testings). Also, the permit required the permittee to perform a sediment study in the vicinity of their outfall and a station far away from the discharge outside any possible impact from outfall 001. An application for permit renewal was submitted to the Department on May 30, 2006. On August 24, 2006, Nippon Paper Industries USA Co., Ltd. (Nippon) submitted additional data regarding the detection limit needed to determine the potential to exceed analyses.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

The facility last received an inspection on Marc 21, 2006 with sampling. The Permittee was found to be complying with its permit limits. During the history of the previous permit, the Permittee has been in compliance based on Discharge Monitoring Reports (DMRs) submitted to the Department and inspections conducted by the Department.

WASTEWATER CHARACTERIZATION

The Permittee's effluent analysis results submitted with the renewal application indicated the presence of the pollutants listed below at concentrations above detection limits. See Table 1. Of the pollutants listed, cadmium, chromium, copper, lead, nickel, and zinc are considered potentially toxic substances and are assigned water quality standards under WAC 173-201A-040. These particular substances are addressed later in this fact sheet under the toxic pollutant subcategory.

Table 1: Wastewater Characterization Outfall 001

Parameter	Concentration
BOD ₅	78 mg/L
TSS	183 mg/L
Fecal coliform	23 MPN/100 mL
pH	6.1 – 6.7
Total Organic Nitrogen	0.7 mg/L
Oil and Grease	< 5 ppm
Total Phosphorus	0.70 ppm
Phenol, Total	0.01 ng/L
Sulfate	241 ppm
Sulfide	< 0.05 ppm
Surfactants	0.18 mg/L
Aluminum	0.42 mg/L
Barium	0.04 ppm
Boron	1.35 mg/L

FACT SHEET FOR NPDES PERMIT WA 000292-5
February 2007

Parameter	Concentration
Cobalt	0.00105 mg/L
Iron	0.07 ppm
Magnesium	4.22 ppm
Molybdenum	0.00374 ppm
Manganese	0.479 ppm
Titanium	0.01 ppm
Thallium	0.03 ppb
Antimony	0.00030 ppm
Arsenic	0.0051 ppm
Cadmium	2.6 ppb
Chromium	1.7 ppb
Copper	2.5 ppb
Lead	0.78 ppb
Nickel	8.1 ppb
Zinc	17 ppb

Table 2: Wastewater Characterization Outfall 002

Parameter	Concentration
Flow, Average	162,950 gal/day
TSS	537 mg/L
pH	6.89 – 6.96
Aluminum	59.1 mg/L
Barium	0.105 ppm
Cobalt	7.4 ppb
Iron	37.6 ppm
Magnesium	10.8 ppm
Molybdenum	0.17 ppb
Manganese	0.77 ppm
Titanium	0.58 ppm
Antimony	0.17 ppb

Parameter	Concentration
Arsenic	7.3 ppb
Beryllium	0.47 ppb
Cadmium	0.2 ppb
Chromium	38 ppb
Copper	60 ppb
Lead	10.6 ppb
Nickel	13.5 ppb
Silver	0.18 ppb
Thallium	0.08 ppb
Zinc	0.12 ppb

SEPA COMPLIANCE

There is no SEPA requirements related to reissuing this permit.

PROPOSED PERMIT LIMITATIONS

Federal and State regulations require that effluent limitations set forth in a NPDES permit must be either technology- or water quality-based. Technology-based limitations are based upon the treatment methods available to treat specific pollutants. Technology-based limitations are set by regulation or developed on a case-by-case basis (40 CFR 125.3, and Chapter 173-220 WAC). Water quality-based limitations are based upon compliance with the Surface Water Quality Standards (Chapter 173-201A WAC), Ground Water Standards (Chapter 173-200 WAC), Sediment Quality Standards (Chapter 173-204 WAC) or the National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992). The more stringent of these two limits must be chosen for each of the parameters of concern. Each of these types of limits is described in more detail below.

The limits in this permit are based in part on information received in the application. The effluent constituents in the application were evaluated on a technology- and water quality-basis. The limits necessary to meet the rules and regulations of the State of Washington were determined and included in this permit. Ecology does not develop effluent limits for all pollutants that may be reported on the application as present in the effluent. Some pollutants are not treatable at the concentrations reported, are not controllable at the source, are not listed in regulation, and do not have a reasonable potential to cause a water quality violation. Effluent limits are not always developed for pollutants that may be in the discharge but not reported as present in the application. In those circumstances the permit does not authorize discharge of the non-reported pollutants. Effluent discharge conditions may change from the conditions reported in the permit application. If significant changes occur in any constituent, as described in 40 CFR

122.42(a), the Permittee is required to notify the Department of Ecology. The Permittee may be in violation of the permit until the permit is modified to reflect additional discharge of pollutants.

DESIGN CRITERIA

The secondary wastewater treatment system is designed properly to meet the requirements of the NPDES permit. The table below lists the designed parameters.

Design Standards for Peak Monthly Waste Load with Adequate Safety Factors

Parameter	Design Quantity
Monthly average flow (max. month)*	12 MGD
BOD ₅ influent loading	18,000 Lbs/day
TSS influent loading	20,000 Lbs/day

In accordance with WAC 173-220-150 (1)(g), flows or waste loadings shall not exceed approved design criteria.

SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's surface waters, WAC 173-201A-060 states that waste discharge permits shall be conditioned such that the discharge will meet established Surface Water Quality Standards. The Washington State Surface Water Quality Standards (Chapter 173-201A WAC) is a state regulation designed to protect the beneficial uses of the surface waters of the state. Surface water quality-based effluent limitations may be based on an individual waste load allocation (WLA) or on a WLA developed during a basin wide total maximum daily loading study (TMDL).

OUTFALL 001 TECHNOLOGY-BASED EFFLUENT LIMITATIONS

Technology-based limitations are set by regulations or developed on a case by case basis. The federal effluent guidelines for best practicable control technically available (BPT) is defined in Part 430 Subpart G for Mechanical Pulp subcategory, Part 430 Subpart I for Secondary Fiber Deink subcategory, and Part 430 Subpart K for Fine and Lightweight Papers from Purchased Pulp subcategory. These guidelines were published in the Code of Federal Regulations, 40 CFR Part 430 Edition July 1, 2002. The federal effluent guidelines for best conventional pollutants control technology (BCT) for these categories were defined on December 17, 1986 to be the same as BPT previously defined in March 1983. The BCT and BPT applicable to the Nippon were defined more than ten years ago. With BCT and BPT being defined longer than ten years, it is Ecology policy to determine if they are still valid and if they can still be considered equivalent to all known and reasonable treatment (AKART) for these categories of paper making.

On April 15, 1998, the Environmental Protection Agency promulgated effluent guidelines for the Bleached Kraft Papergrade and Soda subcategories and Papergrade Sulfite subcategory. The 1998 allowance for BOD and TSS in pound per 1000 pound of pulp produced for the above categories were set at the same values as the allowances in the effluent guidelines published in

FACT SHEET FOR NPDES PERMIT WA 000292-5

February 2007

1982. The 1998 effluent guidelines took both emissions to air and water into consideration and included chlorinated organic compounds. Secondary treatment was the required type of treatment.

The company treats their wastewater with primary treatment followed by a secondary activated sludge treatment system. The wastewater treatment system removes above 95 percent solids and BOD₅ from the raw wastewater.

Throughout the history of the effluent guidelines, secondary treatment has been the accepted standard for BOD and TSS removal. It is expected that in the immediate future this trend will continue as indicated by the guideline promulgated on April 15, 1998. It is determined that the 1982 effluent guidelines for the TMP paper production, the deinking paper production, and nonintegrated paper production allowances are equivalent to AKART for the following reasons:

- 1) The mill wastewater flow has historically been from three components, that is TMP pulp production, deinked pulp production and nonintegrated.
- 2) There were no changes in the new guidelines for BOD and TSS for the type of paper making promulgated on April 15, 1998.
- 3) Secondary treatment has been and is expected to remain the level of treatment that the effluent guidelines are based on.
- 4) Other permits have been issued with the 1982 effluent guidelines being determined to be equivalent to AKART.

Therefore, the 2002 guidelines allowances from 40 CFR 430 Subpart G will be used for the thermo-mechanical portion of the production, 40 CFR 430 Subpart I will be used for the deinked portion of the production, and 40 CFR 430 Subpart K will be used for the Fine and Lightweight Papers (FLP) portion of the production. The allowances are the same as the ones in the 1998 guidelines since they were only reorganized and not re-promulgated. Effluent guidelines allowances for these types of production are given below:

	BOD 30 day ave lbs/1000 lbs	BOD daily max lbs/1000 lbs	TSS 30 day ave lbs/1000 lbs	TSS daily max lbs/1000 lbs
TMP	5.55	10.6	8.35	15.55
Deinked	3.2	6.0	6.3	12.0
FLP	4.25	8.2	5.9	11.0

Ecology maintains the records of production rates for the above categories. The production used is given below (the average production rate for the last 3 years):

Production	TMP Tons/day	Deinked Tons/day	FLP Tons/day	Total combined production Tons/day

Base	222	188	97	508
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The limits are calculated using the production and allowances indicated. The effluent limits are summarized below:

Production (ton/day) Total	BOD Monthly Average	BOD Daily Maximum	TSS Monthly Average	TSS Daily Maximum
508	4492	8553	7221	13550

NUMERICAL CRITERIA FOR THE PROTECTION OF AQUATIC LIFE

"Numerical" water quality criteria are numerical values set forth in the State of Washington's Water Quality Standards for Surface Waters (Chapter 173-201A WAC). They specify the levels of pollutants allowed in the receiving water while remaining protective of aquatic life. Numerical criteria set forth in the Water Quality Standards are used along with chemical and physical data for the wastewater and receiving water to derive the effluent limits in the discharge permit. When surface water quality-based limits are more stringent or potentially more stringent than technology-based limitations, they must be used in a permit.

NUMERICAL CRITERIA FOR THE PROTECTION OF HUMAN HEALTH

The U.S. EPA has promulgated 91 numeric water quality criteria for the protection of human health that are applicable to Washington State (EPA 1992). These criteria are designed to protect humans from cancer and other disease and are primarily applicable to fish and shellfish consumption and drinking water from surface waters.

NARRATIVE CRITERIA

In addition to numerical criteria, "narrative" water quality criteria (WAC 173-201A-030) limit toxic, radioactive, or deleterious material concentrations below those which have the potential to adversely affect characteristic water uses, cause acute or chronic toxicity to biota, impair aesthetic values, or adversely affect human health. Narrative criteria protect the specific beneficial uses of all fresh (WAC 173-201A-130) and marine (WAC 173-201A-140) waters in the State of Washington.

ANTI-DEGRADATION

The State of Washington's Antidegradation Policy requires that discharges into a receiving water shall not further degrade the existing water quality of the water body. In cases where the natural conditions of receiving water are of lower quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. Similarly, when the natural conditions of receiving water are of higher quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. More information on the State Antidegradation Policy can be obtained by referring to WAC 173-201A-070.

Ecology will use the designated classification criteria for this water body in the proposed permit. The discharges authorized by this proposed permit should not cause a loss of beneficial uses.

February 2007

CRITICAL CONDITIONS

Surface water quality-based limits are derived for the waterbody's critical condition, which represents the receiving water and waste discharge condition with the highest potential for adverse impact on the aquatic biota, human health, and existing or characteristic water body uses.

MIXING ZONES

The 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 can only be 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-400.

The recent whole effluent toxicity testings were conducted on different dilution concentrations of the mill's discharge. (See Whole Effluent Toxicity Testing for more details.) Several species were tested to determine that whether toxicity would have resulted from the discharge. Acute and chronic tests were used to test on these species. The chronic bioassay tests indicated no statistically significant reduction in survival or growth when compared to the control at any sample concentration tested. Also, based on the tests results, no acute toxicity was observed in the acute screening bioassays. The survival in the 100 percent effluent sample was 100 percent for the daphnid, 100 percent survival for the fathead minnow, and 100 percent for the rainbow trout. Refer to Whole Effluent Toxicity section for more details.

Federal regulations (40 CFR 122.44) also require NPDES permits to contain effluent limits for toxic chemicals in an effluent whenever there is a reasonable potential for those chemicals to exceed the surface water quality criteria. Ecology performs a reasonable potential analysis on the chemicals reported in the permittee's application which were above detection limits and for which water quality or human health standards for marine waters exist. The parameters were evaluated at critical conditions with procedures given by EPA requirements. The results of the analysis indicated that there were no exceedances to either current water quality or existing human health standards.

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 into Strait of Juan de Fuca which is designated as a Class AA water in the vicinity of the outfalls. Other nearby point sources include the City of Port Angeles. Characteristic uses include fish migration; fish rearing, spawning and harvesting; wildlife habitat; primary contact recreation; sport fishing; boating and aesthetic enjoyment; commerce and navigation.

February 2007

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 these discharges are summarized below:

Fecal Coliform	14 organisms/100 ml maximum geometric mean
Dissolved Oxygen	7 mg/L minimum
Temperature	13 degrees Celsius maximum or incremental increases above background
pH	6.5 to 8.5 standard units
Turbidity	less than 5 NTU above background
Toxics	No toxics in toxic amounts were found in the discharge from outfalls 001 and 002 (See Appendix C for numeric criteria for toxics of concern for this discharge.)

CONSIDERATION OF SURFACE WATER QUALITY-BASED LIMITS FOR NUMERIC CRITERIA

Pollutant concentrations in the proposed discharge exceed water quality criteria with technology-based controls that the Department has determined to be AKART. A mixing zone is authorized in accordance with the geometric configuration, flow restriction, and other restrictions for mixing zones in Chapter 173-201A WAC. The dilution models used in predicting the dilution ratios were determined to be conservative as compared to the dye study performed by CH2M Hill in 1989. The dilution factors have been calculated using algorithm in the above regulation to be 95:1 for the acute dilution ratio and 343:1 for the chronic dilution ratio.

The dilution ratios for the filter backwash, outfall 002 are 9:1 for the acute dilution ratio and 18:1 for the chronic.

Outfall 001	Acute	Chronic
Aquatic Life	95	343
Human Health, Carcinogen		343
Human Health, Non-carcinogen		343
Outfall 002	Acute	Chronic
Aquatic Life	9	18
Human Health, Carcinogen		18
Human Health, Non-carcinogen		18

Pollutants in an effluent may affect the aquatic environment near the point of discharge (near field) or at a considerable distance from the point of discharge (far field). Toxic pollutants, for example, are near-field pollutants--their adverse effects diminish rapidly with mixing in the receiving water. Conversely, a pollutant such as BOD is a far-field pollutant whose adverse effect occurs away from the discharge even after dilution has occurred. Thus, the method of calculating surface water quality-based effluent limits varies with the point at which the pollutant has its maximum effect.

February 2007

The derivation of surface water quality-based limits also takes into account the variability of the pollutant concentrations in both the effluent and the receiving water.

Turbidity

The impact of turbidity was evaluated based on the range of turbidity in the effluent and turbidity of the receiving water. Due to the large degree of dilution, it was determined that the turbidity criteria would not be violated outside the designated mixing zone.

Dissolved Oxygen

Due to the large dilution factor and large current speed, it has been determined that the receiving water will not adversely be effected by these discharges.

Temperature

The impact of temperature of the discharge on the receiving water was modeled with a simple mixing analysis at critical conditions. The receiving water and the effluent temperatures at critical conditions are 13°C and 31.5°C, respectively. The predicted resultant temperature at the boundary of the chronic mixing zone is 13.06 °C. The wastewater discharge will not adversely affect the receiving waters.

pH

Because of the high buffering capacity of marine water, compliance with the technology-based limits of 5 to 9 will assure compliance with the Water Quality Standards for Surface Waters. EPA has published a standard variance for pH at industrial plants having continuous pH measuring devices (40 CFR Part 401.17.) This variance allows an uncontrolled pH discharge beyond the permitted range for 1 hour at any pH level, and a total pH excursions of up to 7 hours, 26 minutes per month for one unit of pH above or below the criteria. In the last NPDES permit, the pH variance allowance was further restricted by the department to just one pH unit beyond the permitted range. The pH variance allowance has been continued in this permit.

BOD₅

Under critical conditions there is no predicted violation of the Water Quality Standards for Surface Waters. Therefore, the technology-based effluent limitation for BOD₅ was placed in the permit.

Toxic Pollutants

Federal regulations (40 CFR 122.44) require NPDES permits to contain effluent limits for toxic chemicals in an effluent whenever there is a reasonable potential for those chemicals to exceed the surface water quality criteria. This process occurs concurrently with the derivation of technology-based effluent limits. Facilities with technology-based effluent limits defined in regulation are not exempted from meeting the Water Quality Standards for Surface Waters or from having surface water quality-based effluent limits. The following toxics were determined

February 2007

to be present in the discharge: cadmium, chromium, copper, lead, nickel, and zinc. Mercury was not detected in both outfalls 001 and 002.

A reasonable potential analysis (See Appendix C) was conducted on the parameters reported in the Permittee's application which were above detection limits and for which water quality or human health standards exist. The parameters were evaluated at critical conditions with procedures given by EPA. The parameters used in the critical condition modeling are as follows: acute dilution factor **95:1**, chronic dilution factor **343:1**.

No valid ambient background data was available for inorganic cadmium, chromium, copper, lead, nickel, and zinc. A determination of reasonable potential using zero for background resulted in no reasonable potential.

Water quality criteria for metals in Chapter 173-201A WAC are based on the dissolved fraction of the metal. The Permittee may provide data clearly demonstrating the seasonal partitioning of the dissolved metal in the ambient water in relation to an effluent discharge. Metals criteria may be adjusted on a site-specific basis when data is available clearly demonstrating the seasonal partitioning in the ambient water in relation to an effluent discharge.

Metals criteria may also be adjusted using the water effects ratio approach established by USEPA, as generally guided by the procedures in USEPA Water Quality Standards Handbook, December 1983, as supplemented or replaced.

Whole Effluent Toxicity

The Water Quality Standards for Surface Waters require that the effluent not cause toxic effects in the receiving waters. Many toxic pollutants cannot be detected by commonly available detection methods. However, toxicity can be measured directly by exposing living organisms to the wastewater in laboratory tests and measuring the response of the organisms. Toxicity tests measure the aggregate toxicity of the whole effluent, and therefore this approach is called whole effluent toxicity (WET) testing. Some WET tests measure acute toxicity and other WET tests measure chronic toxicity.

Acute toxicity tests measure mortality as the significant response to the toxicity of the effluent. Dischargers who monitor their wastewater with acute toxicity tests are providing an indication of the potential lethal effect of the effluent to organisms in the receiving environment.

Chronic toxicity tests measure various sublethal toxic responses such as retarded growth or reduced reproduction. Chronic toxicity tests often involve either a complete life cycle test of an organism with an extremely short life cycle or a partial life cycle test on a critical stage of one of a test organism's life cycles. Organism survival is also measured in some chronic toxicity tests.

Accredited WET testing laboratories have the proper WET testing protocols, data requirements, and reporting format. Accredited laboratories are knowledgeable about WET testing and capable of calculating an NOEC, LC₅₀, EC₅₀, IC₂₅, etc. All accredited labs have been provided the most recent version of the Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* which is referenced in the permit. Any Permittee interested in receiving a copy of this publication may call the Ecology Publications

February 2007

Distribution Center 360-407-7472 for a copy. Ecology recommends that Permittees send a copy of the acute or chronic toxicity sections(s) of their permits to their laboratory of choice.

An effluent assessment for acute and chronic toxicity is required in this 2006-2011 permit term. Both acute and chronic testing is required once in the summer and once in the winter within two years of the July 1, 2011 permit expiration. Results will be submitted with the next permit renewal application.

The following summarizes the most recent results of WET testing conducted on mill effluent:

In the winter 2006, Nippon Paper Industries (NPUSA) conducted chronic and acute bioassay monitoring tests using mysid shrimp (*Mysidopsis bahia*). The acute screening bioassays were conducted using daphnid (*Ceriodaphnia dubia*), fathead minnow (*Pimephales promelas*), and rainbow trout (*Oncorhynchus mykiss*). In addition, Nippon Paper Industries conducted a chronic definitive bioassay using mussel (*Mytilus* sp.) during this time frame. The concentration tested in the chronic mysid saltwater test was 0.15, 0.29, 0.50, 1.0, and 2.0 percent effluent. The results of the chronic bioassay for the mysid shrimp indicated no statistically significant reduction in survival or growth when compared to the control at any sample concentration tested. The control survival was 95 percent. No acute toxicity was observed in the acute screening bioassays. The survival in the 100 percent effluent sample was 100 percent for the daphnid, 100 percent survival for the fathead minnow, and 100 percent for the rainbow trout. The LC50 for all of the acute tests was greater than 100 percent. No observed effect concentration (NOEC) for all three acute tests was 100%.

The results of the chronic definitive bioassay for the mussel also indicated no statistically significant reduction in survival or growth when compared to the control at any sample concentration tested. The concentrations tested in the chronic saltwater test were 20, 10, 5, 2, and 1 percent effluent. The NOEC in the study, the EC50, and IC25 for normal development were 20 percent or greater (in the case for EC55 and IC25). Therefore, no permit limits for acute and chronic toxicity are proposed in this permit. Conditions S9.A and S10.A required NPUSA to conduct acute and chronic toxicity testings within two years of the permit expiration date.–

Human Health

Washington's water quality standards now include 91 numeric health-based criteria that must be considered in NPDES permits. These criteria were promulgated for the state by the U.S. EPA in its National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992). A determination of the discharge's potential to cause an exceedance of the water quality standards was conducted as required by 40 CFR 122.44(d). The reasonable potential determination was evaluated with procedures given in the Technical Support Document for Water Quality-Based Toxics Control (EPA/505/2-90-001) and the Department's Permit Writer's Manual (Ecology Publication 92-109, July, 1994). The determination indicated that the discharge has no reasonable potential to cause a violation of water quality standards, thus an effluent limit is not warranted.

Sediment Quality

The Department has promulgated aquatic sediment standards (Chapter 173-204 WAC) to protect aquatic biota and human health. These standards state that the Department may require the Permittee to evaluate the potential for the discharge to cause a violation of applicable standards (WAC 173-204-400). The permittee performed sediment sampling and analyses three times in previous permits. Hexachlorobenzene was found above the detection limit in three sediment samples performed in the report submitted in August 1999. The sampling points were AS-1, MZ-3 and MZ-4. All other parameters were considered to be below the sediment quality standards (SQS). The permittee does not use chlorine containing compounds in the valence state that would explain the production of chlorobenzene in the sediment. It is suspected that the detected compound may be from historical sources. The sediment sampling plan submitted by Nippon to Ecology was reviewed and approved in November 2006. The sediment sampling plan and analysis submittal by Nippon is approved as proposed. However; several sampling stations need to be adjusted to accommodate the Sediment Unit's recommendations from Department of Ecology. These stations are MZ-1, MZ-3, AS-1, AZ-1 and 2, and a station far away from 001 to provide background information.

GROUND WATER QUALITY LIMITATIONS

The Department has promulgated Ground Water Quality Standards (Chapter 173-200 WAC) to protect beneficial uses of ground water. Permits issued by the Department shall be conditioned in such a manner so as not to allow violations of those standards (WAC 173-200-100). The Permittee has no discharge to groundwater; and therefore, no limitations are required based on potential effects to ground water.

COMPARISON OF EFFLUENT LIMITS WITH THE EXISTING 2001 PERMIT

Parameter	Existing Limits (lbs./day)	Proposed Limits (lbs./day)
BOD ₅ (Monthly average)	4090	4492
BOD ₅ (Daily maximum)	7770	8553
TSS (Monthly average)	6770	7221
TSS (Daily maximum)	12730	13550
pH (Minimum - maximum)	5.0 – 9.0 SU	5.0 – 9.0 SU
O & G (Maximum)	15 mg/L	15 mg/L

The limits for BOD and TSS increase due to the shift in production; i.e., an increase in thermal-mechanical pulp production and a decrease in deinked pulp production. The increase was due to a revision in calculating production. The calculation was revised from counting only salable paper to include all off-the-machine production as allowed by 40 CFR 430.01(n). Another factor that contributes to the change is the overall production increase (about 9.3% on the average) in the last 3 years. Ecology shows the calculations reflecting these changes in Outfall 001 Technology-based Effluent Limitations above on page 7 of this document.

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to verify that the treatment process is functioning correctly and the effluent limitations are being achieved. The monitoring schedule is detailed in the proposed permit under Condition S2. Specified monitoring frequencies taking into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

All parameters listed in this section shall be monitored as of the effective date through the expiration of this permit. The frequency of monitoring is subjectively determined 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. Two conflicting objectives are balanced in establishing monitoring frequency. Historical good performance, which is characterized by monitoring results consistently below permitted limits, justifies reduced monitoring. Balanced against reduced monitoring is the opposite objective of frequently monitoring an industrial effluent which could impact receiving water quality under worse case scenario. For the conventional pollutants BOD and TSS, Ecology proposes a minimum monitoring frequency of 3/week even though the Permittee's past performance indicates less frequent monitoring may be statistically justified. This is consistent with the Method 1 approach outlined in Section XIII 1.3.1 of Ecology's Permit Writer's Manual. Monitoring frequency may be reduced further in subsequent permit cycles based on historical performance.

Category	Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
Wastewater Effluent	Flow	MGD	Effluent	Daily	Continuous
Wastewater Effluent	BOD ₅	mg/l	Effluent	At least 3/week	24-hr Composite
Wastewater Effluent	TSS	mg/l	Effluent	At least 3/week	24-hr Composite
Wastewater Effluent	Temperature	Degree	Effluent	Daily	Continuous
Wastewater Effluent	pH	SU	Effluent	Daily	Continuous
Wastewater Effluent	O & G	mg/L	Effluent	Yearly	Grab
Production	Off-the-machine	Tons/day	Paper machine	Daily	Continuous

OTHER PERMIT CONDITIONS

LAB ACCREDITATION

With the exception of certain parameters the permit requires all monitoring data to be prepared by a laboratory registered or accredited under the provisions of Chapter 173-50 WAC, *Accreditation of Environmental Laboratories*. The permittee's laboratory is accredited for BOD₅, TSS, pH, and dissolved oxygen.

REPORTING AND RECORDKEEPING

The conditions of S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-220-210).

NON-ROUTINE AND UNANTICIPATED DISCHARGES

Occasionally, this facility may generate wastewater that is not characterized in their permit application because it is not a routine discharge and was not anticipated at the time of application. These typically are waters used to pressure test storage tanks or fire water systems or leaks from drinking water systems. These are typically clean wastewaters but may be contaminated with pollutants. The permit contains an authorization for non-routine and unanticipated discharges. The permit requires a characterization of these wastewaters for pollutants and examination of the opportunities for reuse. Depending on the nature and extent of pollutants in this wastewater and opportunities for reuse, Ecology may authorize a direct discharge via the process wastewater outfall or through a stormwater outfall for clean water, require the wastewater to be placed through the facilities wastewater treatment process or require the water to be reused.

SPILL PLAN

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080. The Permittee has developed a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The proposed permit requires the Permittee to update this plan and submit it to the Department.

SOLID WASTE PLAN

The Department has determined that the Permittee has a potential to cause pollution of the waters of the state from leachate of solid waste. This proposed permit requires, under authority of RCW 90.48.080, that the Permittee update their solid waste. The plan must be submitted to the local permitting agency for approval, if necessary, and to the Department.

February 2007

OUTFALL EVALUATION

Proposed permit requires the Permittee to conduct an outfall inspection in the fourth year of the permit and submit a report detailing the findings of that inspection. The purpose of the inspection is to determine the condition of the discharge pipe and diffusers and to evaluate the extent of sediment accumulations in the vicinity of the outfall.

TREATMENT SYSTEM OPERATING PLAN

In accordance with state and federal regulations, the Permittee is required to take all reasonable steps to properly operate and maintain the treatment system (40 CFR 122.41(e)) and WAC 173-220-150 (1)(g). The implementation of the procedures in the Treatment System Operating Plan is a reasonable measure to ensure compliance with the terms and limitations in the permit. The permittee has prepared a treatment system operation plan in previous permit. The proposed permit requires that the treatment system operation plan be updated and submitted to the department.

GENERAL CONDITIONS

General Conditions are based directly on state and federal law and regulations and have been standardized for all individual industrial NPDES permits issued by the Department.

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 ISSUANCE

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 issued for five (5) years.

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. USEPA 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. USEPA 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(EE2). (Cited in EPA 1985 op.cit.)

APPENDIX A -- PUBLIC INVOLVEMENT INFORMATION

The Department of Ecology proposes to reissue a permit to Nippon Paper Industries of USA's mill located in Port Angeles, Washington. The permit prescribes operating conditions, pollution control standards, and waste discharge limits. This fact sheet describes the federal pollution control standards and the state water quality criteria apply to the mill during the next five-year permit term.

Ecology placed a Public Notice in the **Penninsula Daily News** to inform the public about the proposed National Pollution Discharge Elimination System (NPDES) permit renewal. The Notice told where to find printed copies of the draft permit and fact sheet for review. It invited people to comment on how well the draft permit would protect the Washington's waters from the mill's discharge. The draft permit and fact sheet were available for inspection between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment at either the Ecology's headquarters building in Lacey (360/407-6916).

WA Department of Ecology
Industrial Section – HQ Bldg
300 Desmond Drive SW
Lacey, WA 98503

Send written comments to Teddy Le:

Ask about the proposed NPDES Permit:

WA Department of Ecology
Industrial Section, PO Box 47706
Olympia, WA 98504-7600

Teddy Van Le, P.E.
phone: 360/407-6948
e-mail: tele461@ecy.wa.gov

You were presumed able to comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period. We received no request for a hearing, nor were we otherwise convinced of a defined interest in the permit and explain why the hearing is warranted. The Department will hold a hearing if it finds significant public interest in the draft permit (WAC 173-220-090). Ecology promised to publish a Notice of the date, time, and place of any hearing at least thirty (30) days in advance. Any comment should refer to certain text, followed by a concern, and a proposed modification when possible. Comments could address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of protection afforded by permit conditions, or any other concern that would result from issuance of this permit.

The Department considers the merits of all comments received during the public comment period before deciding to issue, revise, or deny the permit. After writing the final permit, the Department will compile responses to all significant comments and send copies directly to people who expressed an interest in this permit.

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

This draft permit renewal and fact sheet were written by Teddy Van Le.

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--Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average Monthly Discharge Limitation --The 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 wastewaters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

Chronic Toxicity--The effect of a compound on an organism over a relatively long time, often 1/10 of an organism's lifespan 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.

February 2007

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 percent 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 environment. 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%.

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 wastewater 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.

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.

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.

February 2007

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.

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 criteria 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).

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 storm water drainage system into a defined surface water body, or a constructed infiltration facility.

February 2007

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 limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

APPENDIX C -- TECHNICAL CALCULATIONS

Several of the Excel® spreadsheet tools used to evaluate a discharger's ability to meet Washington State water quality standards can be found on the Department's homepage at <http://www.wa.gov/ecology>.

APPENDIX D—RESPONSE TO PUBLIC COMMENTS

Nippon Paper Industries USA Co., LTD. NPDES PERMIT WA 000292-5

On November 29, 2006 Ecology published a notice of our intent to issue the referenced permit, in the *Peninsula Daily News* in Port Angeles. In the notice we invited public evaluation of the proposed permit and scheduled a public comment period from November 29, 2006 through January 3, 2007. During that period, Ecology received written comments from members of the Olympic Environmental Council and operators of Nippon Paper Industries.

Ecology changed the permit, where appropriate, to improve clarity and to address the comments. We describe the changes in this Response to Comments.

The original comment letters comprise part of the legal record of this facility's permit. The record is available for public review at Ecology's Industrial Section office in Lacey. Anyone interested in reading the full text of the comment letters or in obtaining a copy of a particular comment, should call Mr. Teddy Van Le in Lacey at 360/407-6948.

Comments from Olympic Environmental Council:

Olympic Environmental Council - Question Part A:

Often, agencies' intra-departmental and interagency actions are unknown to each other. We point out that two important proposals affecting the part of the Strait of Juan de Fuca into which Nippon emits wastes are (a) Governor Christine Gregoire's Puget Sound Cleanup Plan, of which Ecology will be a lead; and (b) NOAA's recommended ORCA Whale marine protected area. Both are soon to be implemented.

Ecology's Response:

We acknowledge your advice about the Puget Sound Cleanup Plan and the NOAA Initiative. Refer to response of the Question Part B & D below for information regarding the methodology that Ecology uses to protect the state waters. At this point, Ecology has imposed all applicable requirements of the existing federal permit program.

Olympic Environmental Council - Question Part B:

For the Nippon permit, you propose no new limitations, based on the Permittee's past performance; but how will allowing the same point source pollution [discharge] by Nippon negatively affect the above mentioned government cleanup and whale protection?

Ecology's Response:

The Nippon discharge complies with the federal effluent guidelines—requiring use of the “best practicable control technically available (BPT)” and “best conventional pollutants control technology (BCT)” for these pulp categories.

February 2007

- Ecology also evaluates the guidelines to ensure these technologies are still equivalent to all known and reasonable treatment (AKART) for the discharge.
- In addition, Ecology requires the permittee to conduct multiple tests, measurements, and monitoring to verify Nippon's compliance with the state's water quality standard.
- Ecology performs several inspections—including independent sample collections and laboratory analysis—throughout the five years permit cycle. We also require acute and chronic toxicity tests during the permit term as well.

Therefore, we have good reason to believe that Nippon's compliance with the requirements of the NPDES permit protects state waters and respects the Puget Sound cleanup initiative and the whale protection initiative above.

Nippon's wastewater must receive necessary treatment to meet water quality-based and technology-based standards, prior to discharge.

- Water quality-based standard: Refer to page 9 of the fact sheet for a detailed discussion of the water quality-based standard.
- Technology-based standard—AKART determination: Refer to page 5 of the fact sheet for a detailed discussion of the technology-based effluent limits.

Olympic Environmental Council Question Part C:

In order to be in compliance with these two incoming programs to protect the Sound/Strait, have you approached Nippon on how they could become a 100% sustainable paper industry for at least this plant?

Ecology's Response:

No, Ecology has not approached Nippon on its individual sustainability.

Instead, Ecology approaches the entire paper industry located within Washington. We promote sustainability through a collaborative process between the whole industry and the Industrial Section.

- The synergy initiative is known as the Pulp and Paper Footprint Project. This voluntary effort between the Industrial Section of Ecology's Solid Waste and Financial Assistance Program and the industry, will show direct and indirect impacts of the way we do business now. Armed with those measurements, we will see more clearly where we can make changes toward sustainability.
- Moreover, the industry has already undertaken or embarked on sustainability efforts through its own initiative.
- In addition, Nippon uses recycled telephone books as its feedstock (rather than harvesting and processing raw materials). This practice saves resources and may reduce making or releasing toxic chemicals into the environment.

Olympic Environmental Council Question Part D:

February 2007

We would not like to see Nippon be given a permit to pollute and then citizens of WA State having to pay to cleanup the pollutants to be in compliance with the incoming programs mentioned above. Now is the time to stop the pollution and implement clean water safeguards.

Ecology's Response:

Ecology administers the federal permit program; i. e., National Pollutant Discharge Elimination System (Section 402 of the Clean Water Act) under authorities, rules, and standards developed by the federal Environmental Protection Agency. Our state legislature accepted delegation of the federal program.

Ecology requires Nippon comply with both our state's water quality-based standards and with the federal technology-based pollution control standards. Our water quality standards allow us to apply more stringent performance requirements than do the federal (technical) standards, if needed. These requirements include measuring multiple acute and chronic effects tests on exposed marine species. Our water quality-based standards reasonably prevent harm to those marine species. One of the water quality-based requirements included in this permit is the "Whole Effluent Toxicity Testing" regimen.

Whole effluent toxicity (WET) testing measures the total toxicity of any effluent (waste water) directly on exposed local species.

- WET testing is necessary because the EPA cannot develop criteria for every toxic pollutant that could possibly be found in wastewater discharges.
- WET testing is also the only reliable method available to Ecology's permit managers for assessing toxic interactions among combined pollutants.
- WET Testing requirements and Limits (Chapter 173-205 WAC), became effective November 6, 1993. The goal of the WET rule is eventual elimination of toxics discharges, in toxic amounts, into Washington waters. The WET rule established a procedure for deriving whole effluent toxicity limits--in accordance with state law RCW 90.48.520, and with the federal rules published as 40 CFR 122.44(d), and 40 CFR 122.44(e)--for inclusion as NPDES permit conditions.

The rule implements the requirement that the permittee use all known, available, and reasonable methods of prevention, control, and treatment of toxics to ensure the effluent's attainment of state water quality standards and protection of state waters.

Olympic Environmental Council Question Part E:

We recommend Nippon come up with a plan to recycle its wastes/Strait[. And that Ecology not issue] a permit until we have the above plans detailed and know when the permittee will be in compliance.

Ecology's Response:

We thank you for your suggestion about a waste recycling plan for Nippon. Ecology has currently imposed all applicable requirements of the existing federal permit program. The EPA's program does not impose waste cycling on Nippon.

However, several mills throughout the paper industry have attained ISO 14001 environmental standards certification. Established by the International Organization for Standardization, ISO 14001 is recognized as the leading standard for environmental management systems (EMS). Certification indicates that the mills' environmental management systems comply with ISO 14001 standards; it demonstrates the company's commitment to high standards of environmental stewardship and to continuously improving its environmental outcomes.

Comments from Nippon Paper Industries:

Nippon Paper's Comment 1:

Nippon is currently not accredited for conductivity. In addition, conductivity is not an element of any reporting requirements. Conductivity in the following paragraph should be deleted.

Page 10 of the proposed permit states that, "All monitoring data required by the Department 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, conductivity, pH, turbidity, and internal process control parameters are exempt from this requirement. Conductivity and pH shall be accredited if the laboratory must otherwise be registered or accredited. The Department exempts crops, soils, and hazardous waste data from this requirement pending accreditation of laboratories for analysis of these media."

Ecology's Response:

Request denied. This paragraph is a standard language for all permits in your category. The wording confers an exemption. Unless Nippon uses a laboratory that falls within the exception, the present conductivity reference in this paragraph will not affect Nippon.

Nippon Paper's Comment 2:

Nippon requests that the solid waste control plan be submitted 180 days after the effective date of the permit.

Condition S6.C in the permit states that, "The Permittee shall submit all proposed revisions or modifications to the solid waste control plan to the Department. The Permittee shall comply with any plan modifications. The Permittee shall submit an update of the solid waste control plan with the application for permit renewal 180 days prior to the expiration date of the permit."

Ecology's Response:

Request granted. This submittal scheduling change would assist all of us by spreading required submittal dates for this permit more evenly throughout the permit term. Ecology will change the condition to read:

"The Permittee shall submit all proposed revisions or modifications to the solid waste control plan to the Department. The Permittee shall comply with any plan modifications.

The Permittee shall submit an update of the solid waste control plan within 180 days after the effective date of the permit.”

Nippon Paper’s Comment 3:

Nippon requests clarification of Special Condition S14, which states as follows: “The Permittee shall sample the final effluent and analyze the sample for the priority pollutants listed in the table below on the first year, the third year, and during the fifth year of the permit. The detection limit and the method shall conform to those listed. The results of these analyses shall be submitted to Ecology within three months of each sampling event, except the analysis on the fifth year shall be submitted with the permit renewal application. The data shall be listed in tabular form with the detection limit, the value including units, and the method. This table is a list of all priority pollutants. It includes PCBs and pesticides that are not required to be tested for in the treatment efficiency study analysis, if applicable, unless they are used on site.”

Ecology’s Response:

Ecology clarifies the condition to read as follows:

“The Permittee shall sample the final effluent and analyze the sample for the priority pollutants listed in the table below during the first year, during the third year, and during the fifth year of the permit. The detection limit and the sampling method shall conform to those listed. Unless the Permittee uses Pesticides and PCBs on site, the Permittee must analyze for those listed in the table below, only during the fifth year of the permit. The Permittee shall submit results of these analyses to Ecology within three months of each sampling event, except the analysis on the fifth year shall be submitted with the permit renewal application. The data shall be listed in tabular form with the detection limit, the value including units, and the method. This table is a list of all priority pollutants.

-END-