* STAPLE TO PERMIT.

December 29, 1995

File: PE-01240

Western Pulp Inc.
Port Alice Operation
PO Box 2000
Port Alice BC V0N 2N0

ATTENTION: B. F. Garood, Mill Manager

Dear B. F. Garood:

Re: Waste Management Permit No. PE-01240

We have reviewed the data with regard to mill production and effluent flow submitted by the mill in a letter dated December 15, 1995. As required under Section 1.1 of the Permit PE-01240, amended on December 28, 1995, the following values have been established:

CBPROD	533 ADt/d
EFF	157 000 m^3/d

Using these values, the concentration limits in Section 1.1.2 of the permit are as follows:

	Daily Maximum (mg/L)	Monthly Average (mg/L)
TSS	174	104
BOD_5	47	24
AOX	5.1	3.4

It is anticipated that the values for CBPROD and EFF will be adjusted from time to time based upon updated operating information.

Yours truly,

G. E. Oldham, P.Eng.
Regional Waste Manager
Vancouver Island Region
VP/dpc
pacrit.vp

VP 29/12/95

Province of
British Columbia

MINISTRY OF
ENVIRONMENT,
LANDS AND PARKS

BC Environment

Vancouver Island Region
Environmental Protection
2569 Kenworth Road
Nanaimo, British Columbia
V9T 4P7
Telephone: (604) 751-3100
Fax: (604) 751-3103

Date: DEC 2 8 1995

File: PE-01240

REGISTERED MAIL

Western Pulp Inc.
1900 - 700 Georgia St W
PO Box 10354 Pacific Cnt
Vancouver BC V7Y 1G5

Dear Permittee:

Enclosed is amended Permit PE-01240 issued under the provisions of the Waste Management Act. Your attention is respectfully directed to the conditions outlined in the permit. An annual permit fee will be determined according to the Waste Management Permit Fees Regulation.

This permit does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority shall rest with the permittee. This permit is issued pursuant to the provisions of the Waste Management Act to ensure compliance with Section 34(3) of that statute, which makes it an offence to discharge waste without proper authorization. It is also the responsibility of the permittee to ensure that all activities conducted under this authorization are carried out with regard to the rights of third parties, and comply with other applicable legislation that may be in force.

This permit may be appealed by persons who consider themselves aggrieved by this decision in accordance with Part 5 of the Waste Management Act. Written notice of intent to appeal must be received by the Regional Waste Manager within twenty-one (21) days.

Administration of this permit will be carried out by staff from our Regional office located at 2569 Kenworth Road, Nanaimo, British Columbia, V9T 4P7 (telephone 751-3100). Plans, data and reports pertinent to the permit are to be submitted to the Regional Waste Manager at this address.

Yours truly,

G.E.O

G. E. Oldham, P.Eng.
Regional Waste Manager
Vancouver Island Region

Enclosure

V.I Dec. 20/95

PROVINCE OF
BRITISH COLUMBIA

Environmental Protection
2569 Kenworth Road
Nanaimo
British Columbia, V9T 4P7
Telephone: (604) 751-3100

MINISTRY OF ENVIRONMENT,
LANDS AND PARKS

PERMIT
PE-01240

Under the Provisions of the Waste Management Act

Western Pulp Inc.

1900 - 700 West Georgia Street

PO Box 10354 Pacific Centre

Vancouver, British Columbia

V7Y 1G5

is authorized to discharge effluent to Neroutsos Inlet from a sulphite pulp mill located in Port Alice, British Columbia, subject to the conditions listed below. Contravention of any of these conditions is a violation of the Waste Management Act and may result in prosecution.

This permit supersedes and amends all previous versions of Permit PE-01240 issued under Part 2 Section 8 of the Waste Management Act.

1. AUTHORIZED DISCHARGES

1.1 This subsection applies to the discharge of **PROCESS EFFLUENT, LANDFILL LEACHATE** and **STORM WATER RUNOFF** identified as "01" as shown on attached Site Plan A. The site reference number for this discharge is 100 329.

1.1.1 The maximum authorized rate of discharge is 190 000 m^3/d.

1.1.2 The characteristics of the discharge shall be equivalent to or better than:

pH Range	6.0-8.5
96h LC50 toxicity	100 %
Dioxins and Furans	
2,3,7,8-tetrachlorodibenzo-para-dioxin	nonmeasurable
2,3,7,8-tetrachlorodibenzofuran	50 ppq, maximum

G.E. Oldham, P. Eng.
Regional Waste Manager

Date Issued: March 30, 1973
Date Amended:
(most recent) DEC 2 8 1995
Page: 1 of 13

PERMIT : PE-01240
VV Dec 20/95

	Daily Maximum	Monthly Average
Total Suspended Solids (TSS)	27 300x1000 mg/L EFF 27 300 kg/d	16 200x1000 mg/L EFF 16 200 kg/d
5-day Biochemical Oxygen Demand (BOD_5)	7 270x1000 mg/L EFF 7 270 kg/d	3 635x1000 mg/L EFF 3 635 kg/d
Adsorbable Organic Halogens(AOX)*	1.5xCBPRODx1000 mg/L EFF	1.0xCBPRODx1000 mg/L EFF

* The discharge of AOX shall be further reduced as required by the Pulp Mill and Pulp and Paper Mill Liquid Effluent Control Regulation (B.C. Reg. 470/90).

Notes:

(a) "96h LC50 toxicity" means the calculated concentration of neutralized effluent that is lethal to 50% of the test fish (rainbow trout (Oncorhynchus mykiss)) during a 96 hour exposure.

(b) "Monthly average" is the arithmetic average of the test values collected during the calendar month.

(c) "EFF" means the 90th percentile of the rate of effluent, expressed as m^3/d, discharged from the mill, determined by the use of statistical methods, and using a period of time specified in Subsection 3.1.2 or as approved by the Regional Waste Manager for determination of the 90th percentile of the rate of discharge of effluent.

(d) "CBPROD" means the 90th percentile of the daily production rate of bleached pulp produced from an on-site bleach plant with the use of chlorine or chlorine compounds, or both chlorine and chlorine compounds, expressed as ADt, determined by the use of statistical methods, and using a period of time specified in Subsection 3.1.6 or as approved by the Regional Waste Manager for determination of the 90th percentile of the rate of chlorine or chlorine compounds bleached pulp production.

(e) "ADt" means an air dry tonne of pulp product where the weight of the product is corrected to reflect the weight that the product would be if the product were composed of 10% water and 90% fibre.

(f) None of the individual limits for TSS and BOD_5 are to be exceeded.

G.E. Oldham, P. Eng.
Regional Waste Manager

(g) The characteristics and rate of discharge of the effluent are to be determined according to the provisions of Subsections 3.1.1, 3.1.2, 3.1.3, and 3.2.1 or alternative procedures as authorized by the Regional Waste Manager.

1.1.3 The authorized works are landfill leachate and mill storm water runoff collection systems, hydraulic debarker effluent and sluiced flyash effluent settling facilities, effluent pumphouse, primary clarifier, effluent mixing tank, activated sludge aeration basin incorporating a denitrification(anoxic) zone, two secondary clarifiers, sludge handling system, submerged outfall and diffuser and related appurtenances approximately located as shown on attached Site Plan A.

1.1.4 The authorized works must be complete and in operation according to the following schedule:

(a) Landfill leachate collection system on or before December 31, 1996; and

(b) Mill storm water runoff collection system, hydraulic debarker effluent and sluiced flyash effluent settling facilities, primary clarifier, effluent mixing tank, activated sludge aeration basin incorporating a denitrification(anoxic) zone, two secondary clarifiers, sludge handling system, submerged outfall and diffuser and related appurtenances on and from the date of this amended permit.

1.1.5 The location of the facilities from which the discharge originates is Lots 1187 and 1188, Rupert Land District.

1.1.6 The location of the point of discharge is Neroutsos Inlet.

1.2 This subsection applies to the discharge of **COOLING WATER** identified as "02" as shown on the attached Site Plan A. The site reference number for this discharge is 100 331.

1.2.1 The maximum authorized rate of discharge is 10 000 m^3/d.

1.2.2 The characteristics of the discharge shall be equivalent to or better than:

96h LC10 toxicity	100 %

G.E. Oldham, P. Eng.
Regional Waste Manager

Notes:

(a) A 96h LC10 toxicity value of 100% means that, in a static bioassay on the test fish (rainbow trout (Oncorhynchus mykiss)), there shall be no greater than 10% mortality in 100% effluent concentration after 96 hours exposure.

(b) The characteristics and rate of discharge of the effluent are to be determined according to the provisions of Subsection 3.1.1, 3.1.2 and 3.2.1 or alternative procedures as authorized by the Regional Waste Manager.

1.2.3 The authorized works are a submerged outfall and diffuser(also authorized in Subsection 1.1.3) and related appurtenances approximately located as shown on attached Site Plan A.

1.2.4 The authorized works must be complete and in operation on and from the date of this amended permit.

1.2.5 The location of the facilities from which the discharge originates and the location of the point of discharge is the same location as set out in Subsection 1.1.

1.3 This subsection applies to the discharge of **SANITARY EFFLUENT** identified as "03" as shown on the attached Site Plan A. The site reference number for this discharge is 222 650.

1.3.1 The maximum authorized rate of discharge is 200 m^3/d.

1.3.2 The characteristics of the discharge shall be equivalent to or better than:

Total Suspended Solids (TSS)	60 mg/L
5-day Biochemical Oxygen Demand (BOD_5)	45 mg/L

Notes:

The characteristics of discharge of the effluent are to be determined according to the provisions of Subsection 3.1.1 and 3.2.1 or alternative procedures as authorized by the Regional Waste Manager.

1.3.3 The authorized works are a package secondary treatment plant, submerged outfall and diffuser(also authorized in Subsection 1.1.3) and related appurtenances approximately located as shown on attached Site Plan A.

G.E. Oldham, P. Eng.
Regional Waste Manager

1.3.4 The authorized works must be complete and in operation on and from the date of this amended permit.

1.3.5 The location of the facilities from which the discharge originates and the location of the point of discharge is the same location as set out in Subsection 1.1.

2. GENERAL REQUIREMENTS

2.1 Spill Reporting

All spills to the environment (as defined in the Spill Reporting Regulation) shall be reported immediately in accordance with the Spill Reporting Regulation. Notification shall be via the Provincial Emergency Program at 1-800-663-3456.

2.2 Bypasses

The discharge of effluent which has bypassed the designated treatment works is prohibited unless the approval of the Regional Waste Manager is obtained and confirmed in writing.

2.3 Maintenance of Works

The permittee shall inspect the pollution control works regularly and maintain them in good working order. Notify the Regional Waste Manager of any malfunction of these works.

2.4 Emergency Procedures

In the event of an emergency which prevents compliance with a requirement of this permit, that requirement may be suspended for such time as the emergency exists or until otherwise directed by the Regional Waste Manager provided that:

(a) Due diligence was exercised in relation to the process, operation or event which caused the emergency and that the emergency occurred notwithstanding this exercise of due diligence;

(b) The Regional Waste Manager is immediately notified of the emergency; and

(c) The emergency condition is being corrected with due diligence.

Notwithstanding a, b, and c above, the Regional Waste Manager may require the operation to be suspended to protect the environment while the situation is corrected.

Notwithstanding the above, the permittee is required to meet the applicable requirements of the *Pulp and Paper Effluent Regulations (Canada Gazette, Part II, May 20, 1992)*, the *Pulp and Paper Mill Defoamer and Wood Chip Regulations (Canada Gazette, Part II, May 20, 1992)*, and the *Pulp and Paper Mill Effluent Chlorinated Dioxins and Furans Regulations (Canada Gazette, Part II, May 20, 1992)* whether or not an emergency exists.

2.5 Foam

Should objectionable amounts of foam, attributable to the effluent, occur on the receiving waters, measures will be required to either eliminate the cause of the foam or to eliminate the foam by additional treatment.

2.6 Colour

Should colour, attributable to the effluent, become an objectionable feature in the receiving waters, then additional treatment shall be provided to remove colour forming constituents from the effluent prior to discharge when so directed in writing by the Regional Waste Manager.

2.7 Nutrients

Should nutrients be added to increase the efficiency of any biological treatment system, the quantity of nutrients shall be controlled so that excess nutrients are not discharged to the receiving waters. The ratio of BOD_5:N:P shall be recorded and data kept available for inspection.

2.8 Emergency Response Plan

The permittee shall prepare and submit an Emergency Response Plan that describes the procedures to be taken to prevent or mitigate any deposit of deleterious substance out of the normal course of events. The Emergency Response Plan shall be immediately implemented if there is a deposit, or any risk of a deposit, of a deleterious substance out of the normal course of events. In addition, an up-dated Emergency Response Plan, including a report on any emergency responses taken in the previous year, shall be submitted by January 31 of each year. The permittee

G.E. Oldham, P. Eng.
Regional Waste Manager

shall also prepare, update annually and keep available for inspection, a remedial plan describing procedures to be taken by the permittee to eliminate all unauthorized deposits of deleterious substances if the effluent fails an acute lethality test using rainbow trout.

2.9 Sludge Wasting and Disposal

Sludge wasted from the treatment plant shall be disposed of to a site and in a manner approved by the Regional Waste Manager.

2.10 Plans - New Works

Plans and specifications of the leachate collection system authorized in Subsection 1.1 shall be submitted to the Regional Waste Manager and the approval obtained before construction commences. The works shall be constructed in accordance with such plans.

2.11 Process Modifications

The permittee shall notify the Regional Waste Manager prior to implementing changes to any process that may affect the quality and/or quantity of the discharges.

2.12 Waiver

If, in the opinion of the Regional Waste Manager, the permittee is unable to comply with the requirements specified in this amended permit because of unforeseen circumstances the Regional Waste Manager may, in writing, grant a waiver from all or part of these requirements for a period not exceeding 90 days.

2.13 Compliance with Federal Regulations

Notwithstanding the requirements in this permit, the permittee is required to adhere to all applicable legislation including the federal *Pulp and Paper Effluent Regulations (Canada Gazette, Part 11, May 20, 1992)*, the *Pulp and Paper Mill Defoamer and Wood Chip Regulations (Canada Gazette, Part II, May 20, 1992)*, and the *Pulp and Paper Mill Effluent Chlorinated Dioxins and Furans Regulations (Canada Gazette, Part II, May 20, 1992)*. Where there is an apparent conflict between federal and provincial requirements, the more stringent requirements will apply.

G.E. Oldham, P. Eng.
Regional Waste Manager

3. MONITORING AND REPORTING REQUIREMENTS

3.1 Discharge Monitoring

3.1.1 Sampling and Analysis

The permittee shall install a suitable sampling facility and obtain samples and analysis as follows:

Parameter	Type and Frequency of Sampling		
	Sample Site "01"	Sample Site "02"	Sample Site "03"
pH	CON	CON	--
Specific Conductance	CON	CON	--
Temperature	CON	CON	--
Toxicity 48h LC50 (*Daphnia magna*)	G/W	--	--
Toxicity 96h LC50 (Rainbow trout)	G/M	--	--
Toxicity 96h LC10 (Rainbow trout)	--	G/M	--
TSS	DC/D	--	G/Q
BOD_5	DC/2D	--	G/Q
AOX	DC/W	--	--
PCDDs and PCDFs	DC/A	--	--
Oil and grease	--	G/M	--
Ammonia Nitrogen	DC/W	--	--

G.E. Oldham, P. Eng.
Regional Waste Manager

CON	=	continuous monitoring	2D	=	every second day
G	=	grab sample	W	=	weekly
DC	=	daily composite sample	M	=	monthly
D	=	daily	Q	=	quarterly
PCDDs	=	Polychlorinated Dibenzo-para-dioxins	A	=	annually
PCDFs	=	Polychlorinated Dibenzofurans			

Notes:

(a) Where a sample is to be collected and tested once per month the sampling date shall be selected by the permittee at least 30 days in advance of sample collection and a period of at least 21 days shall separate any two sample collections.

(b) Rainbow trout toxicity testing shall be increased from once per month to once per week if a sample fails to meet the characteristics specified in Sections 1.1.2 and 1.2.2. Samples shall continue to be collected and tested one day per week until three consecutive tests pass, at which time testing can revert to once per month.

Daphnia magna toxicity testing shall be conducted once per week as described above. However, if a sample of effluent fails the *Daphnia magna* toxicity test, a sample of effluent shall be collected without delay and tested for 96h LC50 using rainbow trout in accordance with accepted procedures. Samples shall continue to be collected and tested three days each week for 48h LC50 using *Daphnia magna* until three consecutive tests pass, at which time testing can revert to once per week.

Effluent fails the *Daphnia magna* test when, at 100 percent concentration, it kills more than 50 percent of the *Daphnia magna* subjected to it during a 48-hour period.

For 96h LC50 and 96h LC10 tests, the percent of fish survival after 96 hours in the undiluted sample shall also be recorded. For 48h LC50 tests, the percent of *Daphnia magna* survival after 48 hours in the undiluted sample shall also be recorded.

G.E. Oldham, P. Eng.
Regional Waste Manager

(c) PCDDs and PCDFs testing shall be conducted annually as described above. However, if an annual sample does not meet the quality requirements specified in Section 1.1.2, sampling shall be conducted monthly. If three consecutive monthly samples of effluent meet the quality requirements testing may be reduced to once per quarter. If three consecutive quarterly samples meet the quality requirements testing may revert to annually. Annual samples shall be collected with at least 350 days between any sample collection.

(d) PCDDs and PCDFs testing shall include analyses for all compounds that are chlorinated on the 2, 3, 7, 8 positions (15 in all), and the total tetra, penta, hexa, hepta, and octa substituted isomers.

(e) The minimum, maximum and average daily values shall be recorded for pH, temperature and specific conductance. The total amount of time that the pH falls outside the allowable range during each operating day and in each calendar month shall also be recorded.

Based on the results of the effluent monitoring program and/or the data obtained from the receiving environment monitoring program specified in Section 3.1.4 the effluent monitoring requirements may be extended or altered by the Regional Waste Manager.

3.1.2 Flow Measurement

Provide and maintain suitable flow measuring devices and record once per day the volume of effluent discharged over a 24-hour period for the discharges authorized in Subsections 1.1 and 1.2.

Once per month, determine the 90th percentile of the volume of effluent discharged over a 24-hour period for the discharge authorized in Subsection 1.1 for the previous 90 days of mill production.

Periodic measurements of the effluent volume discharged over 24-hour periods for the discharge authorized in Subsection 1.3 may be required by the Regional Waste Manager.

G.E. Oldham, P. Eng.
Regional Waste Manager

3.1.3 Sampling for Compliance Determination

The compliance sampling method used to provide samples of effluent authorized in Subsection 1.1 for determination of BOD_5, TSS, AOX, PCDDs and PCDFs and ammonia nitrogen shall consist of collecting an effluent sample during a period of 24 hours by taking a composite sample at the outlet from the secondary treatment facility identified as "01" as shown on the attached Site Plan A at least every 15 minutes. The Regional Waste Manager may specify an alternate sampling method for compliance determination in the future.

3.1.4 Receiving Environment Monitoring

A receiving environment monitoring program shall be carried out to determine the following factors:

(a) The zone of influence of the effluent;
(b) The receiving water quality;
(c) The effects of effluent discharge on the receiving water biological community.

The program shall be carried out in accordance with requirements specified by the Regional Waste Manager. It is expected that these requirements will be developed in consultation with other government agencies. Based on the results of the monitoring program or other information, the monitoring requirements may be extended or altered by the Regional Waste Manager in the future.

3.1.5 SCIENTIFIC SAMPLING METHOD EVALUATION

The permittee shall, on and from the date of this amended permit, and continuing for a 13-month period, commence collection of data pertaining to the discharge of effluent authorized in Section 1.1 for a scientific evaluation to determine the relationship between 3 sampling methods for determination of BOD_5, TSS and AOX.

The three sampling methods are:

(a) the compliance sampling method specified in Section 3.1.3;
(b) the collection of an effluent sample for 6 hours using the technique described in Section 3.1.3; and
(c) the grab sampling method.

G.E. Oldham, P. Eng.
Regional Waste Manager

The Regional Waste Manager may establish multipliers to relate the sampling methods under subsection (a), (b), and (c) for the purpose of establishing and specifying an alternate sampling method for compliance determination in the future.

3.1.6 Production Figures

Record once per day the total mill chlorine and/or chlorine compound bleached pulp production (ADt/d).

Once per month, determine the 90th percentile of total mill chlorine and/or chlorine compound bleached sulphite pulp production per day for the previous 90 days of production.

3.2 Monitoring Procedures

3.2.1 Sampling and Analytical Procedures

Sampling and flow measurement shall be carried out in accordance with the procedures described in "Field Criteria for Sampling Effluents and Receiving Waters", April 1989, or by suitable alternative procedures as authorized by the Regional Waste Manager.

Copies of the above manual are available from the Environmental Protection Division, Ministry of Environment, Lands and Parks, 777 Broughton Street, Victoria, British Columbia, V8V 1X4, at a cost of $20.00, and are also available for inspection at all Environmental Protection offices.

Analyses (with the exception of analyses for the concentrations of PCDDs and PCDFs) are to be carried out in accordance with procedures described in the latest version of "British Columbia Environmental Laboratory Manual for the Analysis of Water, Wastewater, Sediment and Biological Materials (March 1994 Permittee Edition)", or by suitable alternative procedures as authorized by the Regional Waste Manager.

Copies of the above manual may be purchased from Queens Printer Publications Centre, 2nd Floor, 563 Superior Street, Victoria, British Columbia, V8V 4R6 (1-800-663-6105). A copy of the manual is also available for inspection at all Environmental Protection offices.

G.E. Oldham, P. Eng.
Regional Waste Manager

Analyses for determining the concentration of PCDDs and PCDFs shall be carried out in accordance with the procedures described in the "Reference Method for the Determination of Polychlorinated Dibenzo-para-dioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs in Pulp and Paper Mill Effluents" (Report EPS 1/RM/19).

3.3 Reporting

Maintain effluent and receiving environment monitoring data, flow measurements and production figures for inspection and submit the data monthly, in a hard copy or electronic format as specified by the Regional Waste Manager. The information shall be submitted within 30 days following the month in which the data was collected except that the results of PCDDs and PCDFs testing shall be submitted within 60 days after the day on which a sample was collected.

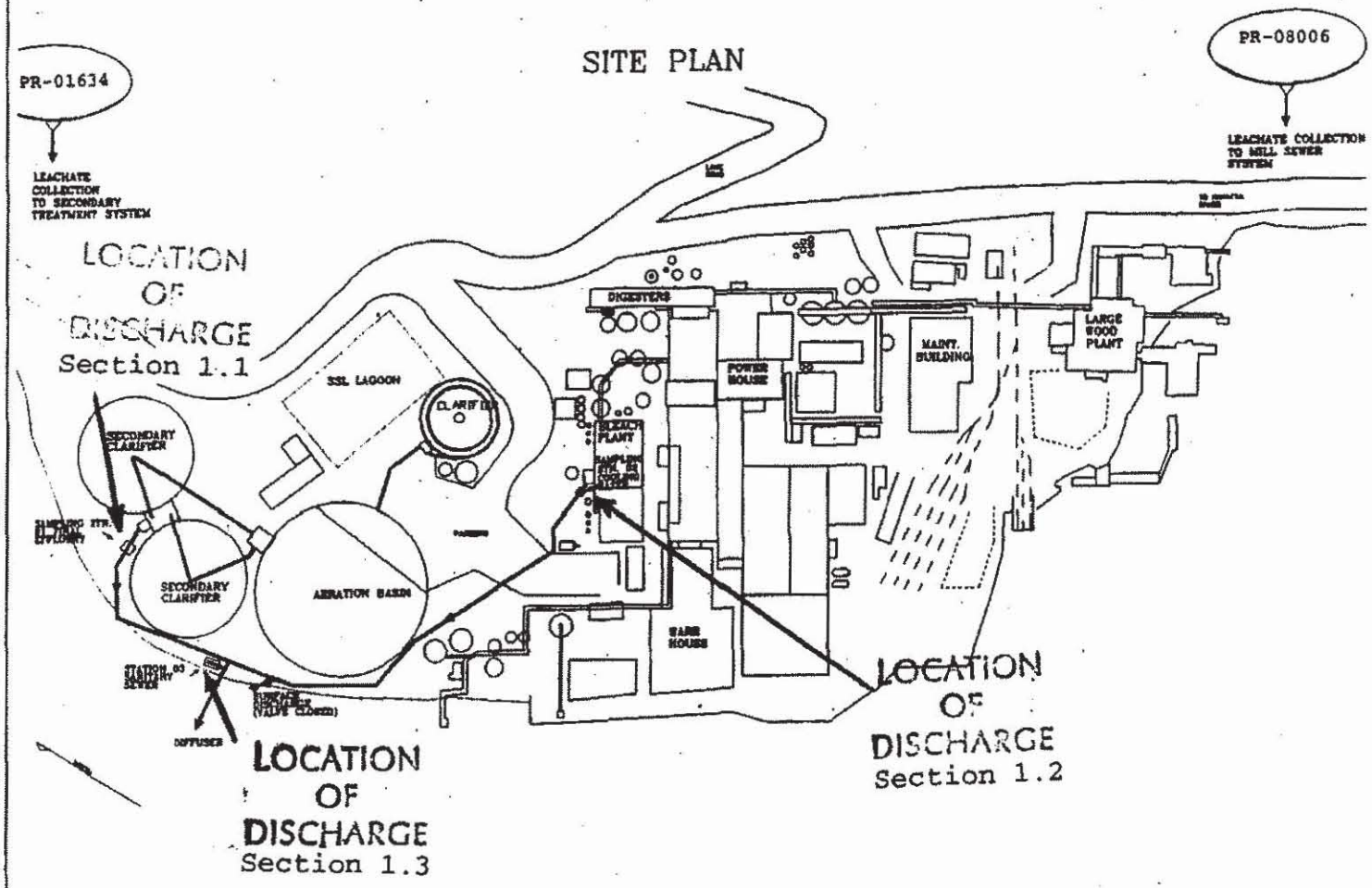
In addition, maintain the results of the pH and specific conductance tests available for inspection by the Regional Waste Manager for a minimum period of three years.

A summary of the results of the receiving environment monitoring program, including an interpretation of the effects on the receiving waters, is to be submitted annually in a report form which is suitable for release to the public. The annual report is due on March 31 for the period January to December of the previous year.

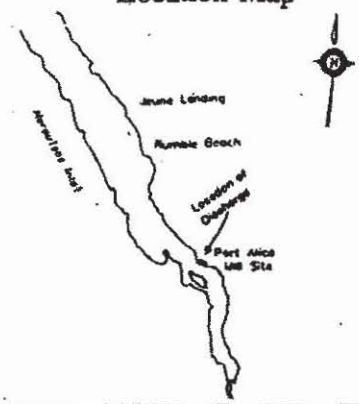
G.E. Oldham, P. Eng.
Regional Waste Manager

V.V. Dec 20/95

SITE PLAN A



Location Map



Scale: N.T.S.

Permit: PE-01240

Date: DEC 2 8 1995

G.E. Oldham, P.Eng.
Regional Waste Manager

V.V. Dec 2015

SCHEDULE IV

PART I

(Subsection 18(2))

AUTHORIZATION

Effective January 1, 1997, Western Pulp Inc. 2300-1111 W. Georgia, Vancouver, B.C. in respect of Western Pulp Limited Partnership, Port Alice Operation, P.O. Box 2000, Port Alice, B.C. mill is hereby authorized to

1. Deposit BOD matter that contains the following BOD and the following quantity of suspended solids for the following periods of time:

PERIOD	QUANTITY OF DELETERIOUS SUBSTANCES							
	BOD				SUSPENDED SOLIDS			
	DAILY		MONTHLY		DAILY		MONTHLY	
D	Q	A	Q	A	Q	A	Q	A
28 day/mo.	6650	620	111720	-	9975	17325	167580	286020
29 day/mo.	6650	620	115710	-	9975	17325	173565	296235
30 day/mo.	6650	620	119700	-	9975	17325	179550	306450
31 day/mo	6650	620	123690	-	9975	17325	185535	316665

KEY: Q - (applies only to mills) maximum quantity authorized under section 14 of the *Pulp and Paper Effluent Regulations*

A - additional quantity authorized under this authorization

D - number of days in a month

IMPORTANT:

1. Daily limits are set in terms of any 24-hour period.
2. This authorization is subject to the conditions set out in sections 7 and 17 of the *Pulp and Paper Effluent Regulations.*
3. Q values are defined by section 14 formulae and dependent on the declared Reference Production Rate (RPR) of 532 adt/day.
4. Dependent on the value of Q and on an annual basis A will be adjusted to ensure that the total daily allowable BOD discharge does not exceed 7270 kg/day and suspended solids discharges do not exceed 27,300 kg/day and monthly average suspended solids do not exceed 16200 kg/day when the total monthly discharges are divided by the number of days in the relevant month.
5. These limits are not intended to supplant existing and/or future provincial regulations that may be more stringent.
6. An annual review meeting is required in January 1998 to review the authorization.

DIRECTOR EP, PACIFIC AND YUKON REGION, ENVIRONMENT CANADA

Authorization Officer: V.E. Niemela Date: 9/4/97

V.E. Niemela

Environment Canada / Environnement Canada

Environmental Protection Branch
Pacific and Yukon Region
224 West Esplanade
North Vancouver, BC
V7M 3H7

DISTRIBUTION	DATE	INITIALS
		DAP
RAB		
VP		
GPR	2	RAB

April 8, 1997

Mr. B. Garrood
Mill Manager
Western Pulp Limited Partnership
Port Alice Operation
Box 2000
Port Alice, B.C.
V0N 2N0

Dear Mr. Garrood:

RE: **FEDERAL AUTHORIZATION- JANUARY 1, 1997 to DECEMBER 31, 1997**

Please find enclosed an updated authorization pursuant to Section 15 (1) (a) of the Pulp and Paper Effluent Regulation (PPER) reflecting the 1997 Reference Production Rate (RPR) of 532 ADT/d. This authorization will remain in effect until December 31, 1997.

This authorization does not exempt Western Pulp Limited Partnerships, Port Alice Operation from any *Conditions Governing the Deposit* outlined in Section 7 of the PPER including the monitoring and reporting of effluents, reporting of deposits out of the normal course of events and conducting environmental effects monitoring studies.

The authorization may be amended or withdrawn if

(a) there is new evidence of an adverse effect on fish, fish habitat or the use by man of fish;

(b) any of the grounds on which the authorization was issued ceases to be true; or

(c) there are reasonable steps that an operator could take to reduce the BOD of the BOD matter, the quantity of suspended solids or the lethality in respect of the effluent to be treated.

As you will note from the authorization, an annual meeting to review performance of the secondary treatment system is required in early 1998. This meeting, which will be coordinated by the B.C. MELP Nanaimo office, will be used for information exchange and to ensure that the authorization appropriately reflects effluent discharge quality from the Port Alice Operation.

../2

Canada

Environment Canada Environnement Canada

PB-1240

Environmental Protection Branch
Pacific and Yukon Region
224 West Esplanade
North Vancouver, BC
V7M 3H7

Our File No. 4236-37/W380-10

March 31, 1998

Mr. S.L. Hagan
Mill Manager, Port Alice Operation
Western Pulp Limited Partnership
Box 2000
Port Alice, B.C.
V0N 2N0

Dear Mr. Hagan:

RE: FEDERAL AUTHORIZATION - JANUARY 1, 1998 to DECEMBER 31, 1998

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(c) there are reasonable steps that an operator could take to reduce the BOD of the BOD matter, the quantity of suspended solids or the lethality in respect of the effluent to be treated.

As you will note from the authorization, an annual meeting to review performance of the secondary treatment system is required in early 1999. This meeting, which will be coordinated by the B.C. MELP Nanaimo office, will be used for information exchange and to ensure that the authorization appropriately reflects effluent discharge quality from the Port Alice Operation.

../2

Canada

If you have any questions relating to this authorization, please do not hesitate to contact me at (604) 666-0064 or M. Nassichuk at (604) 666-2799.

Yours truly,

V.E. Niemela
Regional Authorization Officer

Encl:

cc: E.A. Perry — Department of Fisheries and Oceans, Vancouver
H. Vogt — Ministry of Environment, Lands and Parks, Victoria
[redacted]
D. Halliburton — Environment Canada, Headquarters
M. Nassichuk

DISTRIBUTION	DATE	INITIALS
	98/4/3	DAB
RAB	2	09/04
VP		
fyb		

SCHEDULE IV

PART I

(Subsection 18(2))

AUTHORIZATION

Effective January 1, 1998, Western Pulp Inc. 2300-1111 W. Georgia, Vancouver, B.C. in respect of Western Pulp Limited Partnership, Port Alice Operation, P.O. Box 2000, Port Alice, B.C. mill is hereby authorized to

1. Deposit BOD matter that contains the following BOD and the following quantity of suspended solids for the following periods of time:

PERIOD	QUANTITY OF DELETERIOUS SUBSTANCES BOD				SUSPENDED SOLIDS			
	DAILY		MONTHLY		DAILY		MONTHLY	
D	Q	A	Q	A	Q	A	Q	A
28 day/mo.	6650	620	111720	-	9975	17325	167580	286020
29 day/mo.	6650	620	115710	-	9975	17325	173565	296235
30 day/mo.	6650	620	119700	-	9975	17325	179550	306450
31 day/mo	6650	620	123690	-	9975	17325	185535	316665

KEY: Q - (applies only to mills) maximum quantity authorized under section 14 of the *Pulp and Paper Effluent Regulations*

A - additional quantity authorized under this authorization

D - number of days in a month

IMPORTANT:

1. Daily limits are set in terms of any 24-hour period.
2. This authorization is subject to the conditions set out in sections 7 and 17 of the *Pulp and Paper Effluent Regulations*.
3. Q values are defined by section 14 formulae and dependent on the declared Reference Production Rate (RPR) of 532 adt/day.
4. Dependent on the value of Q and on an annual basis A will be adjusted to ensure that the total daily allowable BOD discharge does not exceed 7270 kg/day and suspended solids discharges do not exceed 27,300 kg/day and monthly average suspended solids do not exceed 16200 kg/day when the total monthly discharges are divided by the number of days in the relevant month.
5. These limits are not intended to supplant existing and/or future provincial regulations that may be more stringent.
6. An annual review meeting is required in January 1999 to review the authorization.

DIRECTOR EP, PACIFIC AND YUKON REGION, ENVIRONMENT CANADA

Authorization Officer: Vic Niemela Date: 31/3/98

Environment Canada Environnement Canada

Environmental Protection Branch
Pacific and Yukon Region
224 West Esplanade
North Vancouver, BC
V7M 3H7

Our File No. 4236-37/W380-10

May 6, 1999

99/05/12 DFB

Mr. S.L. Hagan
Mill Manager, Port Alice Operation
Western Pulp Limited Partnership
Box 2000
Port Alice, B.C.
V0N 2N0

File PE-1240
(Cpls. attach to permit)

Dear Mr. Hagan:

RE: FEDERAL AUTHORIZATION - JANUARY 1, 1999 to DECEMBER 31, 1999

Please find enclosed an updated authorization pursuant to Section 15 (1) (a) of the Pulp and Paper Effluent Regulation (PPER) reflecting the 1999 Reference Production Rate (RPR) of 496 ADT/d. This authorization will remain in effect until December 31, 1999.

This authorization does not exempt Western Pulp Limited Partnerships, Port Alice Operation from any *Conditions Governing the Deposit* outlined in Section 7 of the PPER including the monitoring and reporting of effluents, reporting of deposits out of the normal course of events and conducting environmental effects monitoring studies.

The authorization may be amended or withdrawn if:

(a) there is new evidence of an adverse effect on fish, fish habitat or the use by man of fish;

(b) any of the grounds on which the authorization was issued ceases to be true; or

(c) there are reasonable steps that an operator could take to reduce the BOD of the BOD matter, the quantity of suspended solids or the lethality in respect of the effluent to be treated.

As you will note from the authorization, an annual meeting to review performance of the secondary treatment system is required in early 2000. This meeting, which will be coordinated by the B.C. MELP Nanaimo office, will be used for information exchange and to ensure that the authorization appropriately reflects effluent discharge quality from the Port Alice Operation.

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Canada

If you have any questions relating to this authorization, please do not hesitate to contact me at (604) 666-0064 or M. Nassichuk at (604) 666-2799.

Yours truly,

J. Brian Wilson
Regional Authorization Officer

Encl:

cc:

M. Henderson	Department of Fisheries and Oceans, Vancouver
H. Vogt	Ministry of Environment, Lands and Parks, Victoria
D. Brown	Ministry of Environment, Lands and Parks, Nanaimo
D. Halliburton	Environment Canada, Headquarters
M. Nassichuk	

SCHEDULE IV

PART I

(Subsection 18(2))

AUTHORIZATION

Effective January 1, 1999, Western Pulp Inc. 2300-1111 W. Georgia, Vancouver, B.C. in respect of Western Pulp Limited Partnership, Port Alice Operation, P.O. Box 2000, Port Alice, B.C. mill is hereby authorized to

1. Deposit BOD matter that contains the following BOD and the following quantity of suspended solids for the following periods of time:

PERIOD	QUANTITY OF DELETERIOUS SUBSTANCES							
	BOD				SUSPENDED SOLIDS			
	DAILY		MONTHLY		DAILY		MONTHLY	
D	Q	A	Q	A	Q	A	Q	A
28 day/mo	6200	1070	104160	-	9300	18000	156240	297360
30 day/mo	6200	1070	111600	-	9300	18000	167400	318600
31 day/mo	6200	1070	115320	-	9300	18000	172980	329220

KEY: Q - (applies only to mills) maximum quantity authorized under section 14 of the *Pulp and Paper Effluent Regulations*

A - additional quantity authorized under this authorization

D - number of days in a month

IMPORTANT:

1. Daily limits are set in terms of any 24-hour period.
2. This authorization is subject to the conditions set out in sections 7 and 17 of the *Pulp and Paper Effluent Regulations.*
3. Q values are defined by section 14 formulae and dependent on the declared Reference Production Rate (RPR) of 496 adt/day.
4. Dependent on the value of Q and on an annual basis A will be adjusted to ensure that the total daily allowable BOD discharge does not exceed 7270 kg/day and suspended solids discharges do not exceed 27,300 kg/day and monthly average suspended solids do not exceed 16200 kg/day when the total monthly discharges are divided by the number of days in the relevant month.
5. These limits are not intended to supplant existing and/or future provincial regulations that may be more stringent.
6. An annual review meeting is required in January 2000 to review the authorization.

DIRECTOR EP, PACIFIC AND YUKON REGION, ENVIRONMENT CANADA

Authorization Officer: J. Brian Wilson Date: 7 May 1999

- Please Staple to Front of permit

FILE COPY

For detailed assessment see memo on file dated April 16/99
E.C. advised by a letter dated April 13/99

June 29, 1999

File: PE-01240

Western Pulp
Limited Partnership
Port Alice Operation
Box 2000
Port Alice BC V0N 2N0

ATTENTION: S. L. Hagen

Dear S. L. Hagen:

Re: TSS concentrations during prolonged mill shutdown

I have reviewed your letter of March 19, 1999, addressed to D. F. Brown. Our position regarding TSS concentration during mill shutdowns of 15 days or more in duration is as follows:

1. During the first 10 days of shutdown, the maximum daily TSS concentration shall not exceed the level specified in our letter of December 29, 1995 (or any subsequent letter that may, in the future, supersede our December 29, 1995 letter) in which the TSS concentration limits are based on effluent flow data corresponding to normal mill operation;

2. In the period following the first 10 days of shutdown, and including the first three days of pulp production, the maximum daily and average monthly TSS shall not exceed:

   (a) Daily Maximum (mg/L)

   $\frac{27\,300 \times 1000 \text{mg/L}}{\text{EFF}}$ * (to a maximum of 600mg/L)

   "EFF" means the daily rate of effluent, expressed in m^3/d, discharged from the mill during the shutdown and for the first three days of pulp production.

.../2

V.V 29/06/99

(b) Average Monthly(mg/L)

$$\frac{(T_{PROD} \times TSS_{PROD}) + (T_{SHUT} \times TSS_{SHUT})}{T_{PROD} + T_{SHUT}}$$

where:

"TSS_{PROD}" is the monthly average TSS concentration as specified in our letter of December 29, 1995 (or any subsequent letter that may in the future supersede our December 29, 1995 letter) in which the TSS concentration limits are based on effluent flow data corresponding to normal mill operation;

"T_{PROD}" is the sum of production days and any of the first ten non-production days in a given calendar month;

"TSS_{SHUT}"= $\frac{16\,200 \times 1000 mg/L}{EFF}$ * ;

"EFF" means the daily rate of effluent, expressed as m^3/d, discharged from the mill during the shutdown and for the first three days of pulp production;

"T_{SHUT}" is the number of days in a given calendar month for which the TSS_{SHUT} is calculated (i.e. all non-production days except the first 10 days following the mill shutdown plus any of the first three days after the mill start-up); and

"$T_{PROD} + T_{SHUT}$" is the total number of days in a given calendar month.

* Values to be calculated every day;

3. None of the TSS loading limits(kg/d) specified in the Federal Authorization dated May 6, 1999 and/or the Waste Management Permit PE-01240 dated December 28, 1995 shall be exceeded;

4. In addition to the discharge monitoring specified in the permit, you are required to collect grab samples of effluent every day and test the samples for 96h LC50 toxicity(Rainbow trout) whenever the TSS concentration of a composite effluent sample collected on the same day exceeds 500mg/L;

5. All other terms and conditions of Permit PE-01240 remain in full force and effect.

The permission to increase the TSS concentration during the shutdown in accordance with the method outlined in bullets 2.(a) and 2.(b) could be rescinded if the effluent is toxic or if the discharge has an unexpected adverse effect on the receiving environment.

.../3

VV 29/06/95

Regarding the issue of cold lake water bypass, we will provide you with our comments after we receive your detailed plans.

If you have any questions regarding this matter please do not hesitate to contact me at (250) 751-3100.

Yours truly,

R. A. Bollans, P.Eng.
Assistant Regional Waste Manager
Vancouver Island Region

cc: M. D. Nassichuk, Manager Pollution Abatement Division, Environment Canada

VP/raf
ALltssTA2.doc

VP 29/06/99

BRITISH COLUMBIA

PLEASE STAPLE TO PERMIT FILE

Date: FEB 16 2000

File: PE-01240

REGISTERED MAIL

Western Pulp Inc.
1900 - 700 West Georgia Street
P.O. Box 10354 Pacific Centre
Vancouver BC V7Y 1G5

Dear Permittee:

Amendment to Waste Management Permit PE-01240

Pursuant to Section 13 of the *Waste Management Act* Permit PE-01240 last amended December 28, 1995, is hereby amended as follows:

Subsection 1.1

Change from:

"This subsection applies to the discharge of process effluent, landfill leachate and storm water runoff identified as "01" as shown on the attached Site Plan A."

to:

"This subsection applies to the discharge of treated process effluent, landfill leachate, storm water runoff as well as biosolids from the Village of Port Alice municipal sewage treatment plant identified as "01" as shown on the attached Site Plan A."

. . . /2

VV. 18/02/00

Ministry of Environment Lands and Parks
Environment and Lands Vancouver Island Region
2080-A Labieux Road
Nanaimo, British Columbia
V9T 6J9
Telephone: (250) 751-3100
Fax: (250) 751-3103

Subsection 1.1.2

Delete pH Range of 6.0 – 8.5 and substitute in its place pH Range of 5.5 – 8.5.

All other terms and conditions of the subject permit remain in full force and effect.

Yours truly,

R.A. Bollans, P.Eng.
Assistant Regional Waste Manager
Vancouver Island Region

cc: M.D.Nassichuk, Manager, Pollution Abatement Division, Environment Canada

VV 14 /02/ 01

January 07, 2013

George Leu
Manager, Environmental Protection
Ministry of Environment
Vancouver Island Region
2080-A Labieux Road
Nanaimo, B.C. V9T 6J9

Dear Mr. Leu,

Re: **EMS Data for January 2013 – Permit PE-01240**

Please find the following, Neucel Specialty Cellulose Inc. effluent results for the month of January 2013. The pulp mill operated for 15 days during the month. The mill was on a maintenance / production curtailment for the first 16 days of the month. The mill experienced high TSS discharges for the three days (January 15-17) during the start-up of the mill where cold effluent temperatures caused poor settling
The average effluent quality was as follows:

Final effluent flow	95,731 m^3 /day
Pulp production	461 adt/day
Total suspended solids	11,619 kg/day
5-day biochemical oxygen demand	1,338 kg/day
Total absorbable organic halogens	0.815 mg/l or 0.23 kg/adt

If you have any questions regarding this report please do not hesitate to call me at (250) 284-3331 Ext 7809.

Yours truly,

D. Bradshaw
Environmental Manager

neucel

January 14, 2013

George Leu, P. Eng.
Sr. Environmental Protection Officer
West Coast Region
Ministry of Environment
2080-A Labieux Road
Nanaimo, B.C. V9T 6J9

Dear Mr. Leu,

Re: **EMS Data for December 2013 – Permit PE-01240**

Please find the following, Neucel Specialty Cellulose Inc. effluent results for the month of December 2013. The pulp mill operated for 22 days during the Month and was in curtailment from December23, 2013 into January 2014. There were two Days where TSS was over the permit limit of 27,300 kg/Day. Both of these were from organic loading during acetate runs.

The average effluent quality for the Month of December was as follows:

Final effluent flow	116,838 m^3 /day
Pulp production	412 ADt/day
Total suspended solids	4309 kg/day
5-day biochemical oxygen demand	932 kg/day
Total absorbable organic halogens	1.74 mg/l or 0.71 kg/adt

If you have any questions regarding this report please do not hesitate to call me at (250) 284-3331 Ext 7809.

Yours truly,

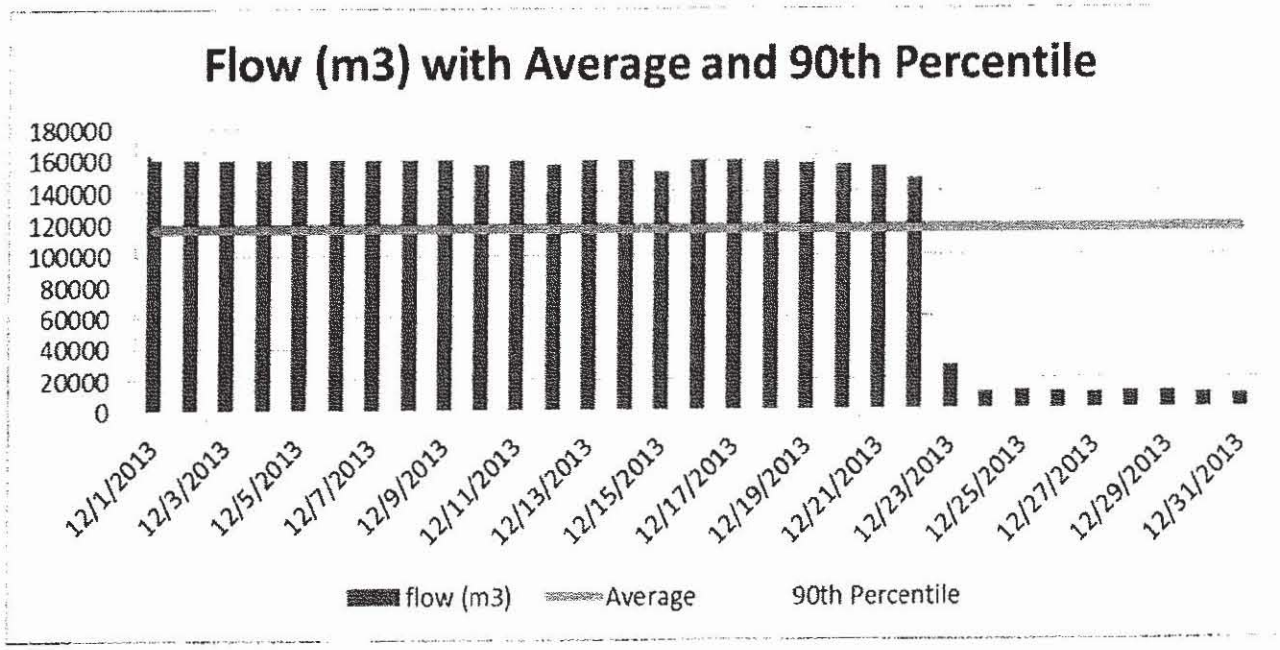
Douglas Bradshaw
Environmental Manager

MONTHLY ENVIRONMENTAL DATA SUMMARY **BY:** **Doug Bradshaw**

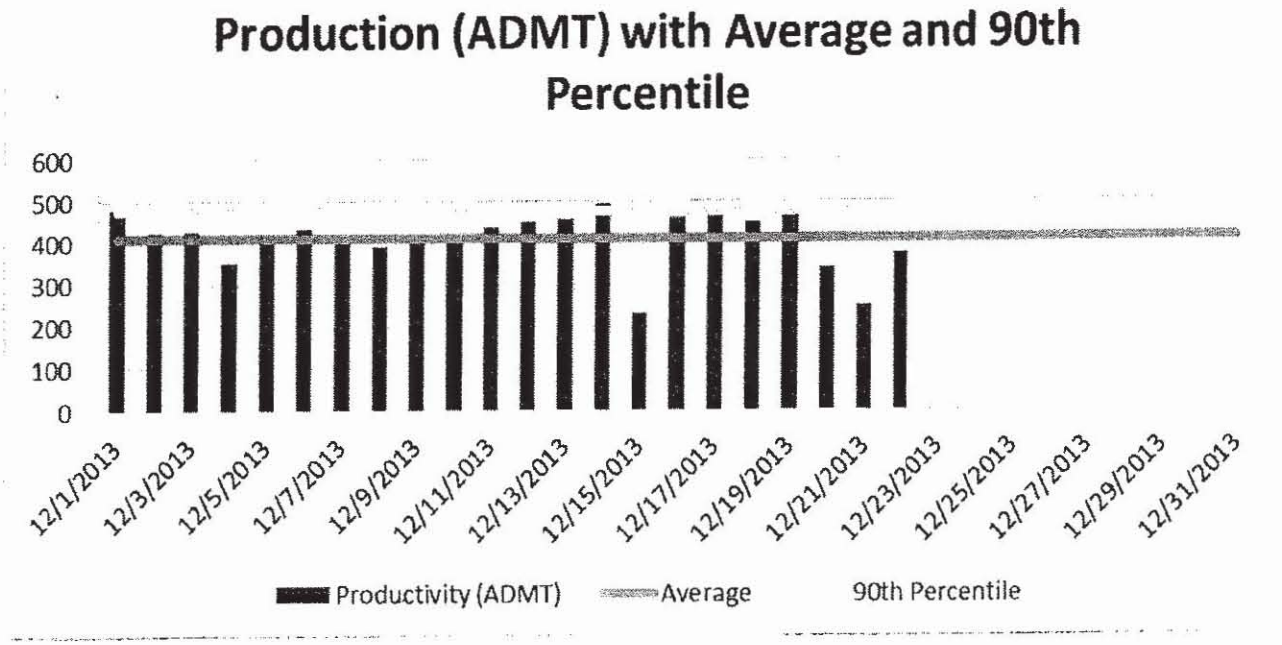
MONTH OF : **December-13**

FINAL EFFLUENT QUALITY PARAMETERS															
DATE	FLOW m3/day	PROD ADT/day	TEMP oC	pH	COND mmho	TSS mg/l	BOD5 mg/l	NH3 - N mg/l	COLOUR APCU	AOX mg/l	AOX kg/ADt	LC50 (D) (%v/v)	LC50 (D) % mort	LT50 (T) (%v/v)	LT50 (T) %mort
1	163,191	481	31.9	6.84	1357	22	7.4	0.2	1000						
2	163,150	426	31.4	6.54	1348	17	5.1	0.1	895	1.56	0.60				
3	161,138	428	31.5	7.17	1337	16	5.1	0.9	1005			100	0		
4	160,008	354	31.6	7.27	1431	23	7.2	0.4	1240						
5	160,361	417	32.2	7.41	1391	262	23.8	0.4	2640			100	0	100	0
6	160,613	434	31.6	7.09	1314	23	6.6	0.4	960						
7	164,343	423	31.1	7.08	1314	14	5.7	0.4	1010						
8	160,583	393	31	7.15	1325	11	5.7	0.3	970						
9	162,446	421	31.1	6.77	1301	12	4.7	0.2	880						
10	157,079	401	32	7.03	1340	13	5.4	0.3	890	0.954	0.37	100	0	100	0
11	162,414	437	32	7.07	1330	17	5.6	0.3	1030						
12	156,744	452	31.8	7.35	1377	19	6.4	0.7	1105						
13	159,780	457	32.8	7.32	1424	24	6.7	0.6	1165						
14	163,081	493	33.1	7.36	1476	23	7.6	0.7	1235						
15	152,285	231	29	7.23	1359	15	6.7	0.5	1055						
16	159,809	461	31.6	7.12	1318	13	8.1	0.5	1070	1.29	0.45				
17	164,562	465	32.7	7.08	1438	14	8	0.8	1065			100	0		
18	158,834	450	32.4	7.21	1449	9	6.9	0.3	1110						
19	157,958	465	32.8	6.96	1472	19	7.1	0.4	990						
20	157,068	341	32.5	7.13	1466	15	6.6	0.4	1120						
21	155,583	249	31.5	7.14	1388	30	8.3	0.8	1060						
22	148,052	376	32.1	6.96	1374	228	24.8	0.5	2285			100	0	100	0
23	27,690		25.2	7.29	1214	13	5	1.1	835						
24	10,688		23.3	7.44	1198	18	5.3	0.2	924						
25	11771		22.3	7.32	1174	19	3.9	0.1	856						
26	11,255		21.1	7.26	1146	19	4.5	0.1	942						
27	10,246		20.2	6.84	1115	22	4	0.1	870						
28	10,689		19	6.85	1105	23	3.6	0.2	925						
29	10,968		18.5	6.72	1097	19	3.2	0.2	845						
30	10,332		17.7	7.12	1116	18	3.5	0.2	1010	0.362	#DIV/0!				
31	9258		16.5	7.35	1185	14	3.7	0.1	872			100	0		
Avg	116,838	412	28.5	7.1	1,312.2	32.4	7.0	0.4	1,092.2	1.74	0.71				

Effluent Flow for December 2013 in Cubic Meters (m^3)



Production for December 2013 in Air Dried Metric Tonnes (ADMT)



BRITISH COLUMBIA

January 21, 2013

File: PE-1240

REGISTERED MAIL

Doug Bradshaw
Environmental Manager
Neucel Specialty Cellulose Ltd.
PO Box 2000
300 Marine Dr
Port Alice BC V0N 2N0

Dear Mr. Lewis:

Re: Neucel Specialty Cellulose CBPROD and EFF Rates Applicable for 2013

We have reviewed the data with regard to mill production and effluent flow data submitted by Neucel in a letter dated January 10, 2013.

We agree that the CBPROD and EFF for 2013 are those derived from the 2012 operating data as follows:

CBPROD	525 Adt/d
EFF	173,000 m^3/day

The concentration limits in Section 1.1.2 of the permit for 2013 are recalculated as follows:

	Daily Maximum (mg/L)	Monthly Average (mg/L)
TSS	158	94
BOD_5	42	21

The above rates will be amended annually based on the updated CBPROD and EFF submitted by the mill and calculated as follows:

.../2

Ministry of Environment
West Coast Region
Environmental Protection Division
Mailing Address:
2080A Labieux Rd
Nanaimo BC V9T 6J9
Telephone: 250 751-3100
Facsimile: 250 751-3103
Website: www.gov.bc.ca/env

CBPROD – The highest yearly 90th percentile of the daily production rate of bleached pulp produced from an on-site bleach plant with the use of chlorine or chlorine compounds, or both chlorine and chlorine compounds for any of the previous three years, expressed as ADt determined by the use of statistical methods.

EFF – means the 90th percentile of effluent rate of discharge for the same year used for calculation of CBPROD, expressed as m^3/day determined by the use of statistical methods.

When there are less than three years of data available to calculate CBPROD and EFF of the mill, the operator may apply to the Director for an Interim CBPROD and EFF, or the Director may use the mill's design figures until such time when the parameters may be calculated in accordance with the above definitions.

Yours truly,

Hubert Bunce
for Director
Environmental Management Act

February 08, 2013

George Leu
Manager, Environmental Protection
Ministry of Environment
Vancouver Island Region
2080-A Labieux Road
Nanaimo, B.C. V9T 6J9

Dear Mr. Leu,

Re: **EMS Data for February 2013 – Permit PE-01240**

Please find the following, Neucel Specialty Cellulose Inc. effluent results for the month of February 2013. The pulp mill operated for 15 days during the month. The mill was on a maintenance / production curtailment for 13 days of the month. The mill experienced high TSS discharges for the three days (February 21-22-23) during the start-up of the mill where cold effluent temperatures caused poor settling
The average effluent quality was as follows:

Final effluent flow	99,530 m^3 /day
Pulp production	376 adt/day
Total suspended solids	32,007 kg/day
5-day biochemical oxygen demand	2,893 kg/day
Total absorbable organic halogens	0.829 mg/l or 0.16 kg/adt

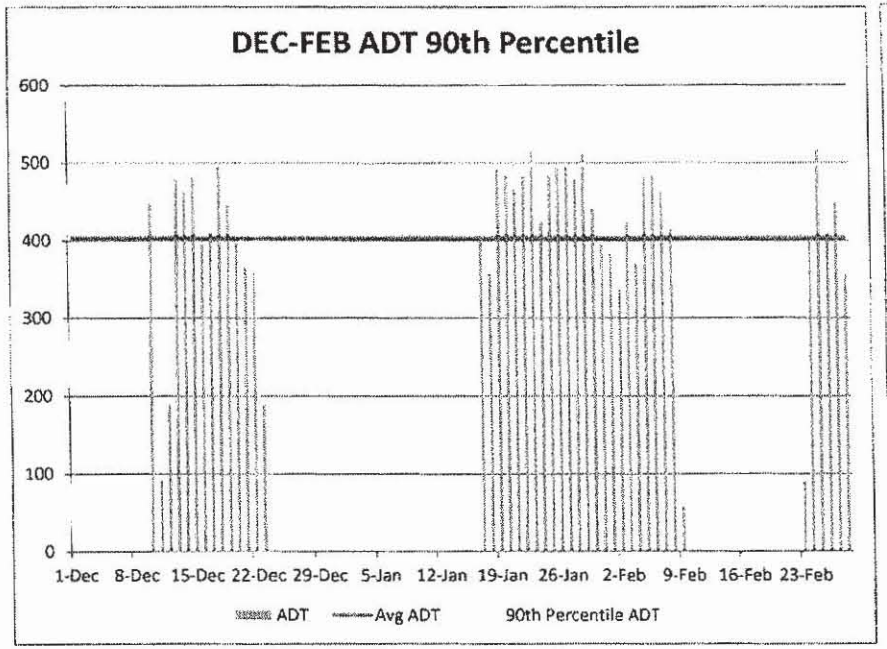
If you have any questions regarding this report please do not hesitate to call me at (250) 284-3331 Ext 7809.

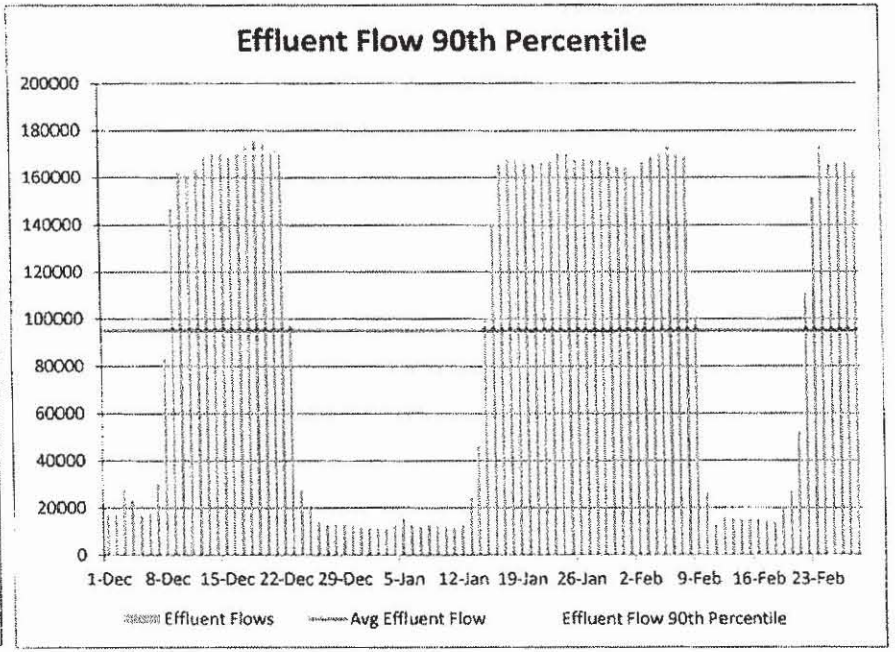
Yours truly,

D. Bradshaw
Environmental Manager

MONTHLY ENVIRONMENTAL DATA SUMMARY **BY:** **Doug Bradshaw**
MONTH OF : **February-13**

FINAL EFFLUENT QUALITY PARAMETERS															
DATE	FLOW m3/day	PROD ADT/day	TEMP oC	pH	COND mmho	TSS mg/l	BOD5 mg/l	NH3 - N mg/l	COLOUR APCU	AOX mg/l	AOX kg/ADt	LC50 (D) (%v/v)	LC50 (D) % mort	LC50 (T) (%v/v)	LC50 (T) %mort
1	164,456	384	32	7.61	1651	554	41.7	0.3	4130			100	0		
2	159,964	339	32	7.6	1627	210	17.7	0.3	2320			100	0		
3	166,722	424	32.2	7.69	1707	710	50.8	0.5	4440			100	0		
4	168,707	371	32.7	7.61	1715	234	26.3	5.1	2420			100	0		
5	171,319	481	31	7.45	1578	30	10.2	6.5	1230			100	0		
6	173,227	483	29.1	7.13	1503	57	8.9	0.4	1210						
7	169,921	463	30.2	7.17	1492	139	14	0.4	1545	0.53	0.17				
8	169,006	416	28.4	7.14	1508	346	31	1.3	2770						
9	101,117	58	21	7.1	1132	10	3.9	0.2	700						
10	26,322		19.8	7.31	817	6	1.8	0.3	520						
11	12,615		17.5	7.27	763	6	1.4	0.2	484	0.718	0.02				
12	15,975		16.6	7.21	738	5	1.4	0.5	474			100	0	100	0
13	15,453		15.7	7.12	725	3	1.6	1	396						
14	14,805		14.4	6.92	710	3	1.5	0.1	389						
15	15,186		14.2	6.81	681	6	1.9	0.2	395						
16	15,036		13.1	7.14	697	2	1.7	0.1	373						
17	14,118		12.4	7.15	678	4	1.8	0.1	359						
18	14,093		12.1	7.01	670	11	1.8	0.1	361						
19	20,697		12.3	6.97	635	7	2	0.2	339						
20	27,262		11.6	6.89	593	6	2.3	0.2	323	0.348	0.02				
21	52,409		10.8	6.87	526	332	16.5	0.2	2060						
22	111,229		11.1	6.73	420	2624	124.6	0.5	13900			100	0	100	0
23	151,634	89	19.6	6.83	722	1252	156.5	24.6	7600			100	0	100	0
24	173,463	401	25.9	7.14	1274	38	25.8	42.1	1110			100	0	100	0
25	166026	516	29.3	7.07	1395	15	10.5	9.3	1060						
26	166,033	409	29.2	7.21	1476	17	4	0.4	1000			100	0		
27	166,337	449	29.8	7.2	1489	11	5	1.2	855						
28	163,703	357	30.1	7.21	1402	10	3.7	0.3	805	1.72	0.54				
29															
30															
31															
Avg	99,529.8	376.0	21.9	7.2	1,083.0	237.4	20.4	3.5	1,913.1	0.829	0.16				


DEC-FEB ADT 90th Percentile
600
500
400
300
200
100
0
1-Dec 8-Dec 15-Dec 22-Dec 29-Dec 5-Jan 12-Jan 19-Jan 26-Jan 2-Feb 9-Feb 16-Feb 23-Feb
ADT
Avg ADT
90th Percentile ADT


Effluent Flow 90th Percentile
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
1-Dec 8-Dec 15-Dec 22-Dec 29-Dec 5-Jan 12-Jan 19-Jan 26-Jan 2-Feb 9-Feb 16-Feb 23-Feb
Effluent Flows
Avg Effluent Flow
Effluent Flow 90th Percentile

Neucel Specialty Cellulose Ltd.
300 Marine Drive, P.O. Box 2000
Port Alice, BC V0N 2N0

Attention: Doug Bradshaw

Report date: March 13, 2013
Our ref: B13102 LIQ:13:140
Your ref: 28237
Page: 1 of 1 + Dioxin/Furan report

Sample: One (1) final effluent sample
Labeled: 24 Hr. Composite
Dated: February 5-6, 2013, 7:30 am

Date rec'd: February 7, 2013

ANALYSIS RESULTS

Residual environmental samples will be retained for a period of one month, process samples for three months, unless otherwise instructed by your company. Details of methods and dates analyzed are available on request. Results only relate to samples tested.

Please see attached *report for sample results.

*subcontracted analysis

Comments:
Dioxins/furans: determined by GC/MS.

Thomas Y.C. Yuen
Supervisor - Analytical (Pulping & Liquor)

/js

Econotech is responsible for subcontracted work.

SAMPLE RECEIPT FORM / CHEMICAL ANALYSIS FORM

FILE #: PR130226

CLIENT: Econotech Services Ltd.
852 Derwent Way
Delta, BC
V3M 5R1

Phone – 604-526-4221
Fax – 604-526-1898
Email – tomy@econotech.com

RECEIVED BY: M. Wright
CONDITION: good, 4°C

DATE/TIME: February 12, 2013 (4:00 p.m.)

# of Containers	Sample Type	Sample (Client Codes)	Lab Codes	Test Requested
1	water	Final Effluent – 24 hr comp (Feb. 5-6, 2013)	PR130226	PCDD/F

STORAGE: Stored at 4°C

ANALYTES: HRGC/HRMS analysis for polychlorinated dibenzo(p)dioxins and dibenzofurans (PCDD/F).

SPECIAL INSTRUCTIONS: none

METHODOLOGY

Reference Method: PCDD/F: SOP LAB01; EPA Method 1613b

Data summarized in Data Report Attached

Report sent to: Tom Yuen Date: March 5, 2013

Comments: Results relate only to items tested.

David Hope PChem, CEO

DATA REPORT

Client:	Econotech	**Contact:**	Tom Yuen
Client ID:	Final Effluent -24 hr comp (Feb 5-6, 2013)	**Date Extracted:**	19-Feb-13
PRL ID:	PR130226	**Date Analysed:**	28-Feb-13

DIOXINS			Surrogate	I-TEQs		WHO-TEQs	
	Conc.	DL	Recoveries	(ND=0)	(ND=DL)	(ND=0)	(ND=DL)
Congeners	pg/L	pg/L	%	pg/L	pg/L	pg/L	pg/L
2,3,7,8-TCDD	ND	1	46	ND	1	ND	1
Total TCDD	ND	1					
1,2,3,7,8-PeCDD	ND	2	84	ND	1	ND	2
Total PeCDD	ND	2					
1,2,3,4,7,8-HxCDD	ND	2	56	ND	0.2	ND	0.2
1,2,3,6,7,8-HxCDD	ND	2	54	ND	0.2	ND	0.2
1,2,3,7,8,9-HxCDD	ND	2	-	ND	0.2	ND	0.2
Total HxCDD	ND	2					
1,2,3,4,6,7,8-HpCDD	ND	3	77	ND	0.03	ND	0.03
Total HpCDD	ND	3					
OCDD	ND	4	28	ND	0.004	ND	0.0004
		Total Dioxin TEQ		0.00	2.63	0.00	3.63

FURANS			Surrogate	I-TEQs		WHO-TEQs	
		DL	Recoveries	(ND=0)	(ND=DL)	(ND=0)	(ND=DL)
Congeners	pg/L	pg/L	%	pg/L	pg/L	pg/L	pg/L
2,3,7,8-TCDF	ND	1	31	ND	0.1	ND	0.1
Total TCDF	ND	1					
1,2,3,7,8-PeCDF	ND	2	62	ND	0.1	ND	0.1
2,3,4,7,8-PeCDF	ND	2	67	ND	1	ND	1
Total PeCDF	ND	2					
1,2,3,4,7,8-HxCDF	ND	2	45	ND	0.2	ND	0.2
1,2,3,6,7,8-HxCDF	ND	2	43	ND	0.2	ND	0.2
1,2,3,7,8,9-HxCDF	ND	2	49	ND	0.2	ND	0.2
2,3,4,6,7,8-HxCDF	ND	2	43	ND	0.2	ND	0.2
Total HxCDF	ND	2					
1,2,3,4,6,7,8-HpCDF	ND	3	53	ND	0.03	ND	0.03
1,2,3,4,7,8,9-HpCDF	ND	3	65	ND	0.03	ND	0.03
Total HpCDF	ND	3					
OCDF	ND	4	-	ND	0.004	ND	0.0004
		Total Furan TEQ		0.00	2.06	0.00	2.06

Total PCDD/PCDF Toxic Equivalent				
	0.00	4.70	0.00	5.69

ND - none detected

Patrick Pond, Chief Technical Officer

Form Name: DOC18 Data Report DxW 01-Feb-07 DGH

QC REPORT - BLANK

Client:	Econotech	**Contact:**	Tom Yuen
Client ID:	Blank	**Date Extracted:**	19-Feb-13
PRL ID:	DF130109B	**Date Analysed:**	28-Feb-13

DIOXINS			Surrogate	I-TEQs		WHO-TEQs	
	Conc.	DL	Recoveries	(ND=0)	(ND=DL)	(ND=0)	(ND=DL)
Congeners	pg/L	pg/L	%	pg/L	pg/L	pg/L	pg/L
2,3,7,8-TCDD	ND	1	59	ND	1	ND	1
Total TCDD	ND	1					
1,2,3,7,8-PeCDD	ND	2	114	ND	1	ND	2
Total PeCDD	ND	2					
1,2,3,4,7,8-HxCDD	ND	2	78	ND	0.2	ND	0.2
1,2,3,6,7,8-HxCDD	ND	2	78	ND	0.2	ND	0.2
1,2,3,7,8,9-HxCDD	ND	2	-	ND	0.2	ND	0.2
Total HxCDD	ND	2					
1,2,3,4,6,7,8-HpCDD	ND	3	91	ND	0.03	ND	0.03
Total HpCDD	ND	3					
OCDD	ND	4	86	ND	0.004	ND	0.0004
		Total Dioxin TEQ		0.00	2.63	0.00	3.63

FURANS			Surrogate	I-TEQs		WHO-TEQs	
		DL	Recoveries	(ND=0)	(ND=DL)	(ND=0)	(ND=DL)
Congeners	pg/L	pg/L	%	pg/L	pg/L	pg/L	pg/L
2,3,7,8-TCDF	ND	1	34	ND	0.1	ND	0.1
Total TCDF	ND	1					
1,2,3,7,8-PeCDF	ND	2	74	ND	0.1	ND	0.1
2,3,4,7,8-PeCDF	ND	2	84	ND	1	ND	1
Total PeCDF	ND	2					
1,2,3,4,7,8-HxCDF	ND	2	68	ND	0.2	ND	0.2
1,2,3,6,7,8-HxCDF	ND	2	56	ND	0.2	ND	0.2
1,2,3,7,8,9-HxCDF	ND	2	68	ND	0.2	ND	0.2
2,3,4,6,7,8-HxCDF	ND	2	64	ND	0.2	ND	0.2
Total HxCDF	ND	2					
1,2,3,4,6,7,8-HpCDF	ND	3	73	ND	0.03	ND	0.03
1,2,3,4,7,8,9-HpCDF	ND	3	77	ND	0.03	ND	0.03
Total HpCDF	ND	3					
OCDF	ND	4	-	ND	0.004	ND	0.0004
		Total Furan TEQ		0.00	2.06	0.00	2.06

Total PCDD/PCDF Toxic Equivalent	0.00	4.70	0.00	5.69

ND - none detected

Patrick Pond, Chief Technical Officer

Form Name: DOC18 Data Report DxW 01-Feb-07 DGH

QC REPORT - SPIKE

Client:	Econotech	**Contact:**	Tom Yuen
Client ID:	SPIKE	**Date Extracted:**	19-Feb-13
PRL ID:	DF130110S	**Date Analysed:**	28-Feb-13

DIOXINS			Acceptable Recovery		Pass/Fail	Surrogate Recoveries
	LOF	Recovery	Min	Max		
Congeners	pg/L	%	%	%		%
2,3,7,8-TCDD	200	111	70	130	Pass	47
1,2,3,7,8-PeCDD	1000	92	70	130	Pass	96
1,2,3,4,7,8-HxCDD	1000	104	70	130	Pass	91
1,2,3,6,7,8-HxCDD	1000	111	70	130	Pass	84
1,2,3,7,8,9-HxCDD	1000	108	70	130	Pass	-
1,2,3,4,6,7,8-HpCDD	1000	102	70	130	Pass	107
OCDD	2000	103	70	130	Pass	135

FURANS			Acceptable Recovery		Pass/Fail	Surrogate Recoveries
	LOF	Recovery	Min	Max		
Congeners	pg/L	%	%	%		%
2,3,7,8-TCDF	200	91	70	130	Pass	44
1,2,3,7,8-PeCDF	1000	87	70	130	Pass	67
2,3,4,7,8-PeCDF	1000	89	70	130	Pass	77
1,2,3,4,7,8-HxCDF	1000	90	70	130	Pass	81
1,2,3,6,7,8-HxCDF	1000	93	70	130	Pass	77
1,2,3,7,8,9-HxCDF	1000	100	70	130	Pass	89
2,3,4,6,7,8-HxCDF	1000	105	70	130	Pass	79
1,2,3,4,6,7,8-HpCDF	1000	108	70	130	Pass	90
1,2,3,4,7,8,9-HpCDF	1000	104	70	130	Pass	91
OCDF	2000	83	70	130	Pass	-

LOF - Level of Fortification

Patrick Pond, Chief Technical Officer

Form Name: DOC18 Data Report DxW 01-Feb-07 DGH

Acronyms used in reporting dioxins and furans:

TCDD = Tetrachlorodibenzo-*p*-dioxin	TCDF = Tetrachlorodibenzofuran
PeCDD = Pentachlorodibenzo-*p*-dioxin	PeCDF = Pentachlorodibenzofuran
HxCDD = Hexachlorodibenzo-*p*-dioxin	HxCDF = Hexachlorodibenzofuran
HpCDD = Heptachlorodibenzo-*p*-dioxin	HpCDF = Heptachlorodibenzofuran
OCDD = Octachlorodibenzo-*p*-dioxin	OCDF = Octachlorodibenzofuran

Acceptable recoveries for surrogates	**EPA 1613**	
	Min (%)	**Max (%)**
$^{13}C_{12}$ -2,3,7,8-TCDD	25	164
$^{13}C_{12}$ -1,2,3,7,8-PeCDD	25	181
$^{13}C_{12}$ -1,2,3,4,7,8-HxCDD	32	141
$^{13}C_{12}$ -1,2,3,6,7,8-HxCDD	28	130
$^{13}C_{12}$ -1,2,3,4,6,7,8-HpCDD	23	140
$^{13}C_{12}$ -OCDD	17	157
$^{13}C_{12}$ -2,3,7,8-TCDF	24	169
$^{13}C_{12}$ -1,2,3,7,8-PeCDF	24	185
$^{13}C_{12}$ -2,3,4,7,8-PeCDF	21	178
$^{13}C_{12}$ -1,2,3,4,7,8-HxCDF	26	152
$^{13}C_{12}$ -1,2,3,6,7,8-HxCDF	26	123
$^{13}C_{12}$ -1,2,3,7,8,9-HxCDF	29	147
$^{13}C_{12}$ -2,3,4,6,7,8-HxCDF	28	136
$^{13}C_{12}$ -1,2,3,4,6,7,8-HpCDF	28	143
$^{13}C_{12}$ -1,2,3,4,7,8,9-HpCDF	26	138

April 9, 2013

George Leu
Manager, Environmental Protection
Ministry of Environment
Vancouver Island Region
2080-A Labieux Road
Nanaimo, B.C. V9T 6J9

Dear Mr. Leu,

Re: **EMS Data for March 2013 – Permit PE-01240**

Please find the following, Neucel Specialty Cellulose Inc. effluent results for the month of March 2013. The pulp mill operated for 16 days during the month. The pulp mill was down for a final leg of a maintenance reliability program.
The average effluent quality was as follows:

Final effluent flow	99,345 m^3 /day
Pulp production	433 adt/day
Total suspended solids	2,301 kg/day
5-day biochemical oxygen demand	746 kg/day
Total absorbable organic halogens	1.44 mg/l or 0.27 kg/adt

If you have any questions regarding this report please do not hesitate to call me at (250) 284-3331 Ext 7809.

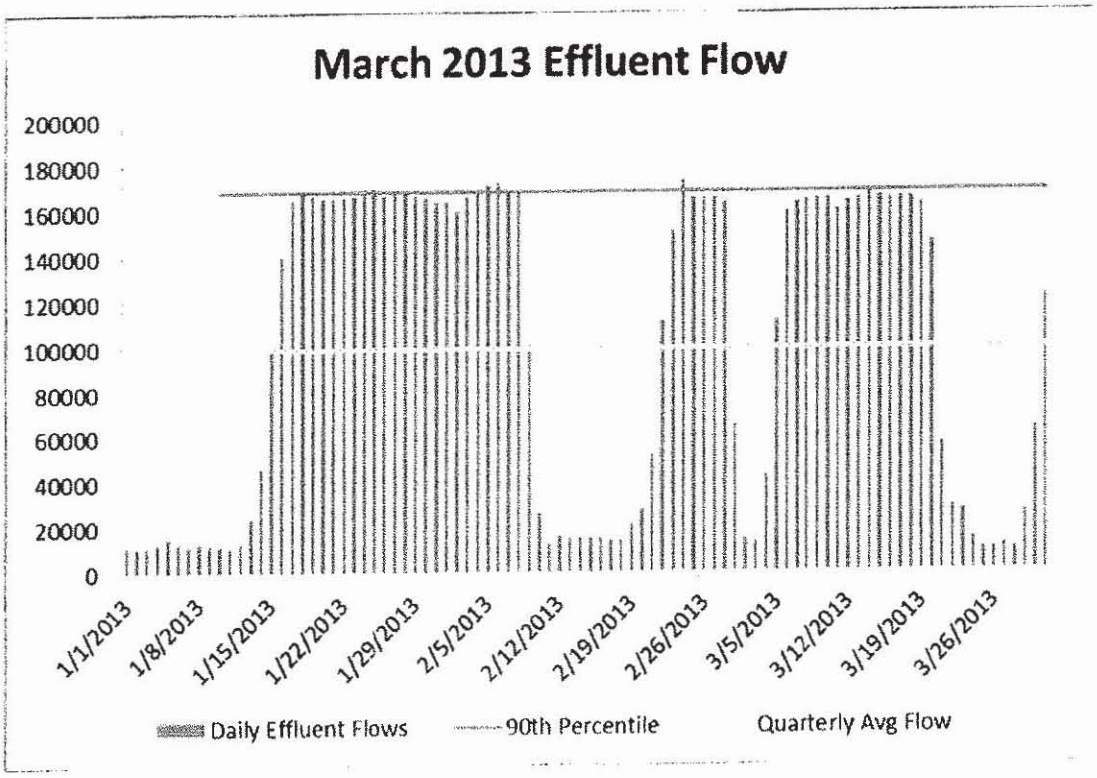
Yours truly,

D. Bradshaw
Environmental Manager

MONTHLY ENVIRONMENTAL DATA SUMMARY **BY:** **Doug Bradshaw**

MONTH OF : **March-13**

FINAL EFFLUENT QUALITY PARAMETERS															
DATE	FLOW m3/day	PROD ADT/day	TEMP oC	pH	COND mmho	TSS mg/l	BOD5 mg/l	NH3 - N mg/l	COLOUR APCU	AOX mg/l	AOX kg/ADt	LC50 (D) (%v/v)	LC50 (D) % mort	LC50 (T) (%v/v)	LC50 (T) %mort
1	64,752	63	27.6	7.41	1273	8	3	0.4	800						
2	14,511		22.7	7.28	1604	8	3.2	0.1	786						
3	13,032		21.4	7.28	1127	11	2.4	0.1	906						
4	42,477		19.6	7.16	1079	12	2.6	0.1	910	0.664	0.05				
5	111,977		16.3	6.91	815	4	2.4	0.1	630			100	0		
6	159,656	398	18.2	6.84	992	164	37	18	1170						
7	163,791	472	26.2	6.76	1448	21	9.7	29.6	1335						
8	165,120	499	31.6	6.75	1581	27	11	3.9	1495						
9	165,545	479	33.1	6.83	1642	16	6	2.2	1950						
10	165,388	497	33.6	6.99	1621	15	5.7	0.2	1925						
11	160,893	488	33.4	6.79	1591	13	6.4	0.1	1690	1.94	0.59				
12	164,696	506	32.6	6.86	1567	10	6.7	0.1	1625			100	0	100	0
13	165,912	422	32.6	6.95	1539	9	5.6	0.1	1250						
14	169,167	468	32.7	6.75	1512	13	5.2	0.4	865						
15	166,887	487	33.5	6.77	1528	9	5.2	0.6	870						
16	165,653	464	34.1	6.7	1625	13	5.2	0.4	745						
17	165,924	395	33.8	6.8	1519	17	5.8	0.3	640						
18	166,104	502	32	6.85	1497	15	4.9	0.2	870	2.6	0.82				
19	163,327	442	31.9	6.79	1445	8	4.6	0.1	868			100	0		
20	146,694	351	27.7	6.85	1371	7	4.6	0.1	736						
21	56,661		21.5	7.13	1106	7	3.6	0.2	644						
22	28,591		21.5	6.67	915	19	4.9	0.4	600						
23	26,818		18.5	6.39	826	29	6.7	0.2	596						
24	14,364		16.7	6.3	779	34	6.9	0.7	622						
25	9670		14.2	6.41	777	89	16.6	0.5	756	0.586	0.01				
26	9,676		15.4	6.6	783	35	6.6	0.1	493			100	0		
27	11,245		15.2	6.43	783	38	7.2	0.1	543						
28	9,440		15.2	5.89	780	81	14.6	0.1	794						
29	26,387		14.8	6.11	771	51	9.7	0.1	664						
30	63,456		15.3	5.84	705	40	5.9	0.6	506						
31	121889		16.9	6.28	590	26	5.3	3.5	316						
Avg	99,345.3	433.3								1.4475	0.27				


March 2013 Effluent Flow
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
1/1/2013
1/8/2013
1/15/2013
1/22/2013
1/29/2013
2/5/2013
2/12/2013
2/19/2013
2/26/2013
3/5/2013
3/12/2013
3/19/2013
3/26/2013
Daily Effluent Flows
90th Percentile
Quarterly Avg Flow

MONTHLY ENVIRONMENTAL DATA SUMMARY BY: Doug Bradshaw

MONTH OF : January-13

FINAL EFFLUENT QUALITY PARAMETERS															
DATE	FLOW m3/day	PROD ADT/day	TEMP oC	pH	COND mmho	TSS mg/l	BOD5 mg/l	NH3 - N mg/l	COLOUR APCU	AOX mg/l	AOX kg/ADt	LC50 (D) (%v/v)	LC50 (D) % mort	LC50 (T) (%v/v)	LC50 (T) %mort
1	11,499		14.3	7.1	961	41	4.7	0.2	916	0.201	0.00	100	0		
2	11,379		13.4	6.9	937	51	5	0.2	1025						
3	11,183		12.9	6.6	920	57	6	0.8	970						
4	12,723		12.5	6.43	914	62	6.3	3.9	1125						
5	15,462		11.6	6.44	917	62	6.8	3.6	944						
6	12,626		11.4	6.43	900	74	8.7	10.2	1022						
7	11,928		11	6.44	879	84	8.4	14.4	1120	0.177	0.00				
8	12,701		10.6	6.48	862	91	8.3	12.7	1195			100	0	100	10
9	12,498		10.5	6.55	831	93	7.7	11.7	1270						
10	11,638		10.1	6.66	821	110	9.2	14	1525						
11	11,252		9.6	6.64	811	122	10.4	9.9	1530						
12	12,901		9.3	6.73	798	116	8.9	14.2	1545						
13	24,406		9.3	6.67	811	100	10.1	13.6	1370						
14	46,620		9.6	6.56	751	86	8.7	20.5	1130	0.111	0.01				
15	99,620		11.4	7.01	684	288	25.6	15.9	2140			100	0		
16	140,784		15.4	7.1	651	1170	83.6	16.8	6400			100	20		
17	165,387	405	19.6	7.2	1070	620	55	28.7	3860			100	0	100	0
18	167,747	358	25.3	7.14	1417	18	9.6	27.6	710						
19	167,188	492	28.6	7.21	1592	15	10.3	22.3	885						
20	166,105	484	30.3	7.16	1659	15	9.6	28.8	960						
21	165,902	467	30.5	6.86	1624	8	8.5	17.3	990	1.91	0.60				
22	166,395	483	30.5	6.92	1533	8	7	2.5	930			100	0		
23	167,284	514	30.6	6.97	1503	4	3.5	0.6	830						
24	170,241	424	30.6	7.11	1535	4	4	0.1	900						
25	170621	484	30.8	7.15	1533	9	3.9	0.4	935						
26	167,451	493	31.3	7.31	1557	12	4	0.6	925						
27	167,953	499	31.7	7.3	1568	7	3.7	0.5	970						
28	167,540	478	31.8	7.44	1597	10	3.7	0.2	1005						
29	167,340	511	31.7	7.43	1629	6	4	0.9	945			100	20		
30	166,738	441	31.6	7.44	1608	11	5.1	0.1	972	1.68	0.53				
31	164555	395	31.7	7.62	1648	150	20.8	0.1	2225						
Avg	95,731.2	461.9	20.3	6.9	1,178.1	113.0	12.0	9.5	1,395.8	0.8158	0.23				

MONTHLY ENVIRONMENTAL DATA SUMMARY BY: Doug Bradshaw
MONTH OF : February-13

FINAL EFFLUENT QUALITY PARAMETERS															
DATE	FLOW m3/day	PROD ADT/day	TEMP oC	pH	COND mmho	TSS mg/l	BOD5 mg/l	NH3 - N mg/l	COLOUR APCU	AOX mg/l	AOX kg/ADt	LC50 (D) (%v/v)	LC50 (D) % mort	LC50 (T) (%v/v)	LC50 (T) %mort
1	164,456	384	32	7.61	1651	554	41.7	0.3	4130			100	0	100	0
2	159,964	339	32	7.6	1627	210	17.7	0.3	2320			100	0	100	0
3	166,722	424	32.2	7.69	1707	710	50.8	0.5	4440			100	0	100	0
4	168,707	371	32.7	7.61	1715	234	26.3	5.1	2420			100	0	100	0
5	171,319	481	31	7.45	1578	30	10.2	6.5	1230			100	0		
6	173,227	483	29.1	7.13	1503	57	8.9	0.4	1210						
7	169,921	463	30.2	7.17	1492	139	14	0.4	1545	0.53	0.17				
8	169,006	416	28.4	7.14	1508	346	31	1.3	2770						
9	101,117	58	21	7.1	1132	10	3.9	0.2	700						
10	26,322		19.8	7.31	817	6	1.8	0.3	520						
11	12,615		17.5	7.27	763	6	1.4	0.2	484	0.718	0.02				
12	15,975		16.6	7.21	738	5	1.4	0.5	474			100	0	100	0
13	15,453		15.7	7.12	725	3	1.6	1	396						
14	14,805		14.4	6.92	710	3	1.5	0.1	389						
15	15,186		14.2	6.81	681	6	1.9	0.2	395						
16	15,036		13.1	7.14	697	2	1.7	0.1	373						
17	14,118		12.4	7.15	678	4	1.8	0.1	359						
18	14,093		12.1	7.01	670	11	1.8	0.1	361						
19	20,697		12.3	6.97	635	7	2	0.2	339			100	0		
20	27,262		11.6	6.89	593	6	2.3	0.2	323	0.348	0.02				
21	52,409		10.8	6.87	526	332	16.5	0.2	2060						
22	111,229		11.1	6.73	420	2624	124.6	0.5	13900			100	0	100	0
23	151,634	89	19.6	6.83	722	1252	156.5	24.6	7600			100	0	100	0
24	173,463	401	25.9	7.14	1274	38	25.8	42.1	1110			100	0	100	0
25	166026	516	29.3	7.07	1395	15	10.5	9.3	1060						
26	166,033	409	29.2	7.21	1476	17	4	0.4	1000			100	0		
27	166,337	449	29.8	7.2	1489	11	5	1.2	855						
28	163,703	357	30.1	7.21	1402	10	3.7	0.3	805	1.72	0.54				
29															
30															
31															
Avg	99,529.8	376.0	21.9	7.2	1,083.0	237.4	20.4	3.5	1,913.1	0.829	0.16				

May 7, 2013

George Leu
Manager, Environmental Protection
Ministry of Environment
Vancouver Island Region
2080-A Labieux Road
Nanaimo, B.C. V9T 6J9

Dear Mr. Leu,

Re: **EMS Data for April 2013 – Permit PE-01240**

Please find the following, Neucel Specialty Cellulose Inc. effluent results for the month of April 2013. The pulp mill operated for 30 days during the month.
The average effluent quality was as follows:

Final effluent flow	163,513 m^3 /day
Pulp production	447 adt/day
Total suspended solids	6,896 kg/day
5-day biochemical oxygen demand	1,234 kg/day
Total absorbable organic halogens	1.48 mg/l or 0.46 kg/adt

If you have any questions regarding this report please do not hesitate to call me at (250) 284-3331 Ext 7809.

Yours truly,

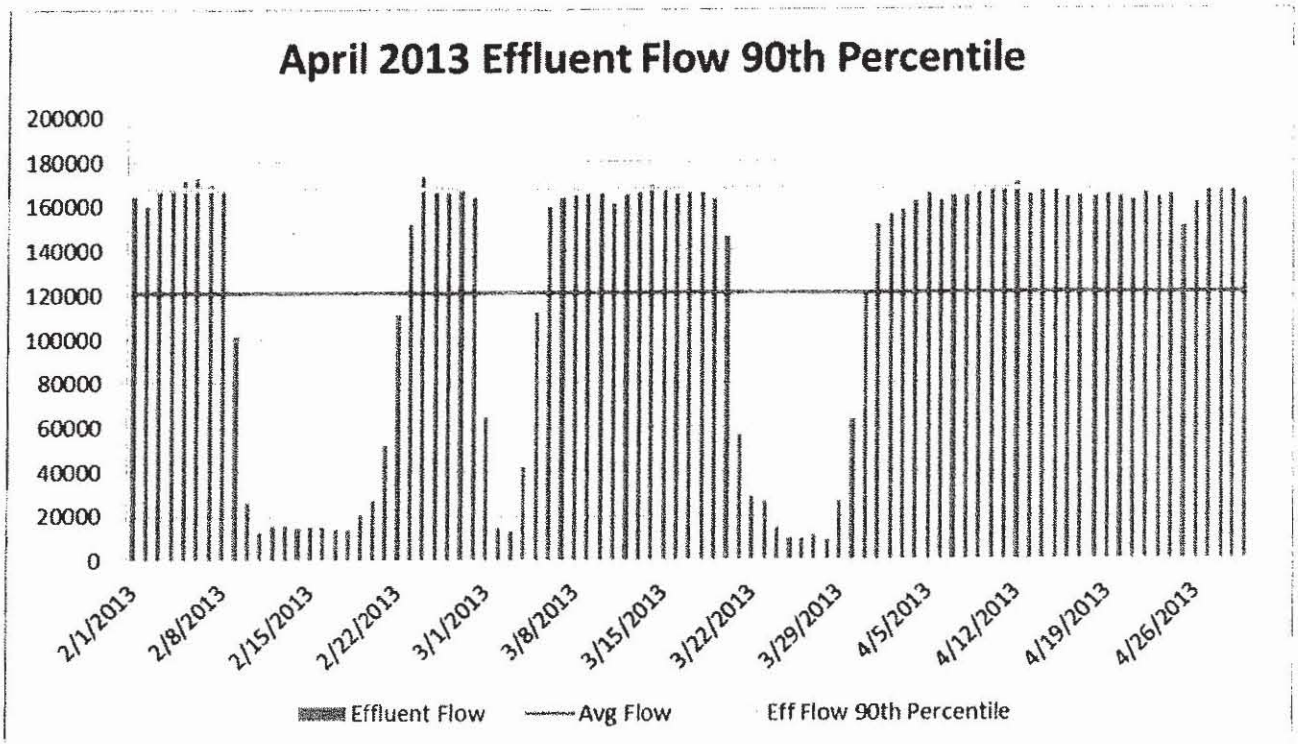
D. Bradshaw
Environmental Manager

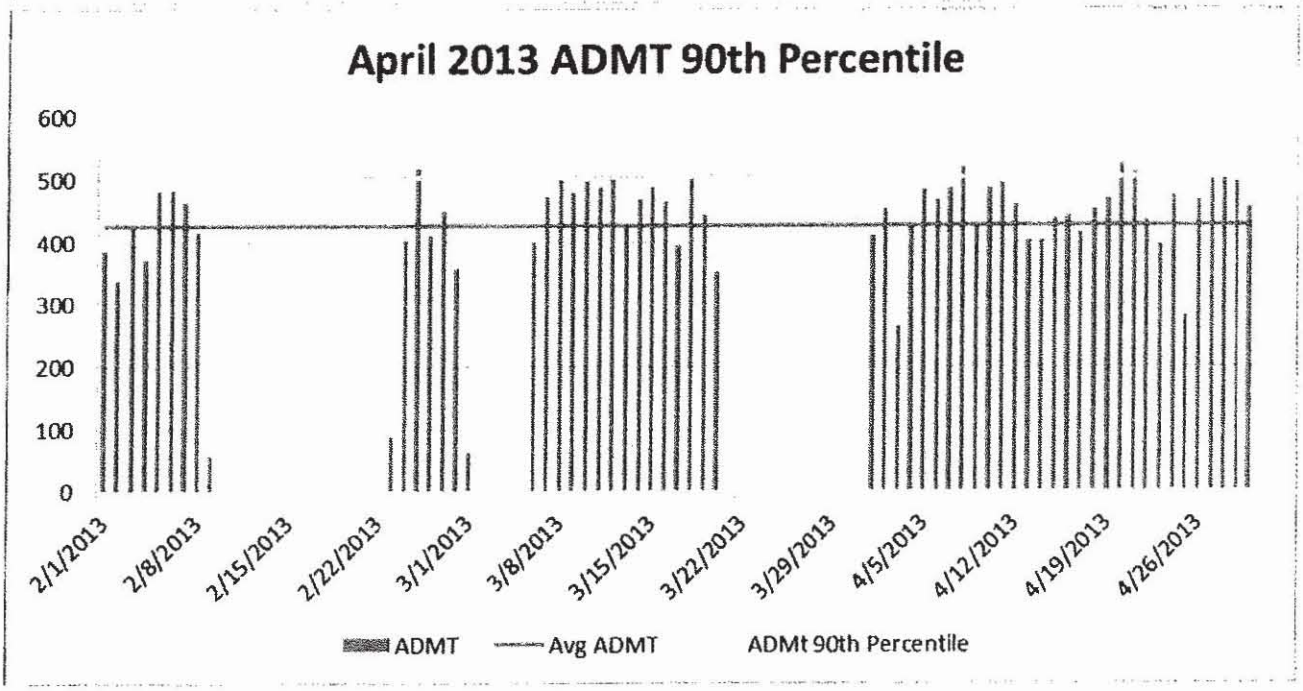
MONTHLY ENVIRONMENTAL DATA SUMMARY **BY:** **Doug Bradshaw**

MONTH OF : **April-13**

FINAL EFFLUENT QUALITY PARAMETERS

DATE	FLOW m3/day	PROD ADT/day	TEMP oC	pH	COND mmho	TSS mg/l	BOD5 mg/l	NH3 - N mg/l	COLOUR APCU	AOX mg/l	AOX kg/ADt	LC50 (D) (%v/v)	LC50 (D) % mort	LC50 (T) (%v/v)	LC50 (T) %mort
1	151,455	410	20.9	6.76	1054	20	9.4	25.5	600	0.976	0.28				
2	156,314	452	27.9	6.76	1274	18	8.5	6.1	790			100	0		
3	157,742	265	29.6	6.96	1319	15	6.7	0.2	745						
4	162,433	426	30.2	6.71	1280	15	5.7	0.5	615						
5	165,575	484	32.9	6.88	1506	15	6.2	0.3	760						
6	162,366	466	33.5	7.02	1554	17	5.1	0.3	855						
7	164,669	486	34.2	7.09	1630	9	4.7	0.2	935						
8	164,342	518	34.1	7.36	1638	15	4	0.6	1025						
9	165,753	427	32.6	7.31	1575	14	3.5	2.5	1040			100	0	100	0
10	166,671	486	33.2	7.18	1605	10	3.7	0.2	1025						
11	166,845	493	33.4	7.09	1604	6	4.1	0.1	985	1.94	0.62				
12	170,505	458	33.2	6.88	1654	7	2.8	0.1	888						
13	164,873	401	32.6	7.19	1604	4	3.1	0.1	874						
14	166,546	401	33.9	7.27	1598	10	3.2	0.1	938						
15	166,466	436	34.3	7.27	1604	43	6.9	0.1	1175	1	0.32				
16	163,747	440	35	7.41	1640	150	12.8	0.3	1805			100	0		
17	164,183	414	34.6	7.44	1664	254	16.4	0.2	2075			100	10	100	0
18	163,673	450	33.9	7.35	1626	168	13.4	0.2	1860			100	0	100	0
19	164,868	468	32.5	7.44	1580	18	4.9	0.1	1175						
20	163,784	523	32.4	7.07	1441	14	4	0.1	888						
21	162,119	510	32.7	6.94	1445	76	9.6	0.1	1047						
22	165,682	433	32.6	6.74	1510	92	12.4	0.5	1145	2.01	0.63				
23	163,705	394	32.6	6.81	1405	90	9.9	0.3	1270			100	0		
24	164,897	474	32.7	6.99	1431	46	7.8	0.4	1090						
25	150901	282	30.6	6.81	1323	100	21.9	13	1150						
26	160,958	466	29.1	7.03	1380	16	3.8	0.2	895						
27	167,206	500	32.6	7.15	1488	9	2.9	0.1	882						
28	166,866	502	33	7	1521	4	2.8	0.1	912						
29	167,605	495	33.3	6.88	1556	9	3.7	0.2	918						
30	162,667	455	33.2	6.8	1586	7	4.5	0.3	898			100	0		
31															
Avg	163,513.9	447.2	32.2	7.1	1,503.2	42.4	6.9	1.8	1,042.0						


April 2013 Effluent Flow 90th Percentile
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
2/1/2013
2/8/2013
2/15/2013
2/22/2013
3/1/2013
3/8/2013
3/15/2013
3/22/2013
3/29/2013
4/5/2013
4/12/2013
4/19/2013
4/26/2013
Effluent Flow
Avg Flow
Eff Flow 90th Percentile


April 2013 ADMT 90th Percentile
600
500
400
300
200
100
0
2/1/2013
2/8/2013
2/15/2013
2/22/2013
3/1/2013
3/8/2013
3/15/2013
3/22/2013
3/29/2013
4/5/2013
4/12/2013
4/19/2013
4/26/2013
ADMT
Avg ADMT
ADMt 90th Percentile

June 7th, 2013

George Leu
Manager, Environmental Protection
Ministry of Environment
Vancouver Island Region
2080-A Labieux Road
Nanaimo, B.C. V9T 6J9

Dear Mr. Leu,

Re: **EMS Data for May 2013 – Permit PE-01240**

Please find the following, Neucel Specialty Cellulose Inc. effluent results for the month of May 2013. The pulp mill operated for 31 days during the month.
The average effluent quality was as follows:

Final effluent flow	164,697 m^3 /day
Pulp production	473 adt/day
Total suspended solids	9.026 kg/day
5-day biochemical oxygen demand	1,358 kg/day
Total absorbable organic halogens	1.35 mg/l or 0.43 kg/adt

If you have any questions regarding this report please do not hesitate to call me at (250) 284-3331 Ext 7809.

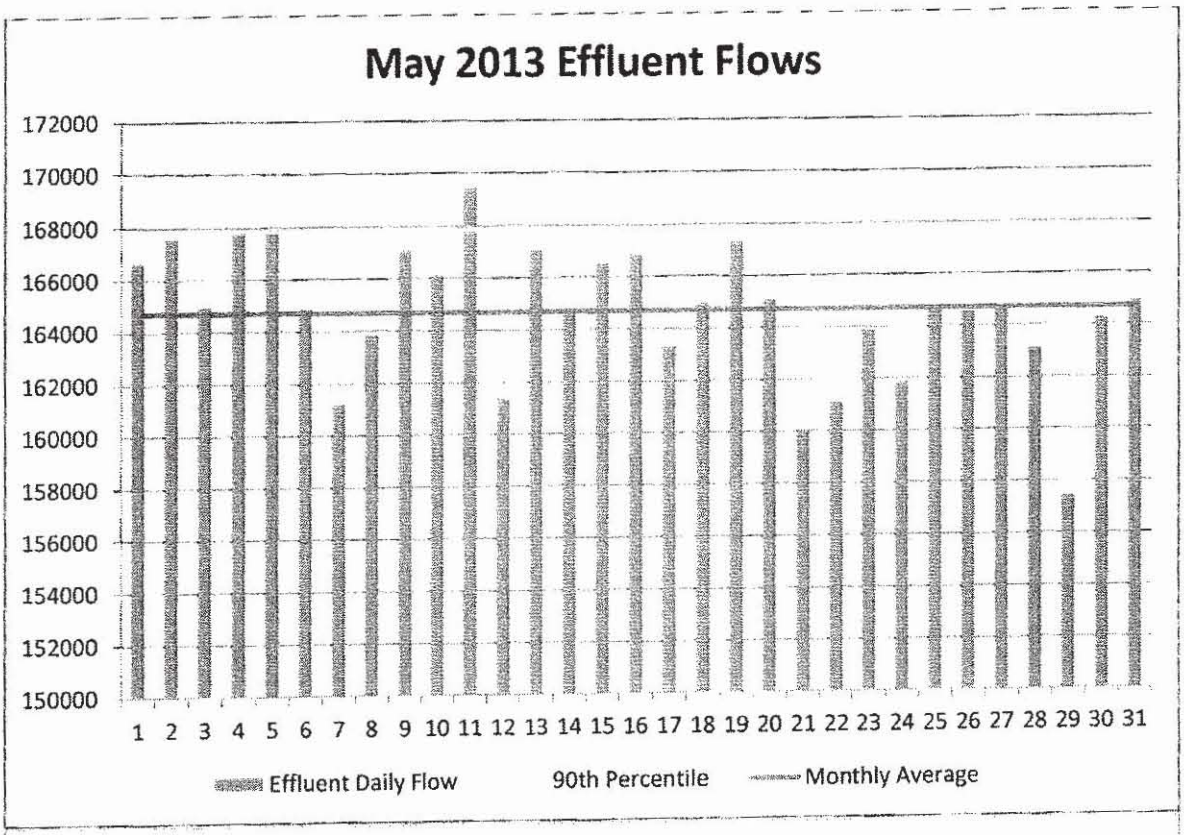
Yours truly,

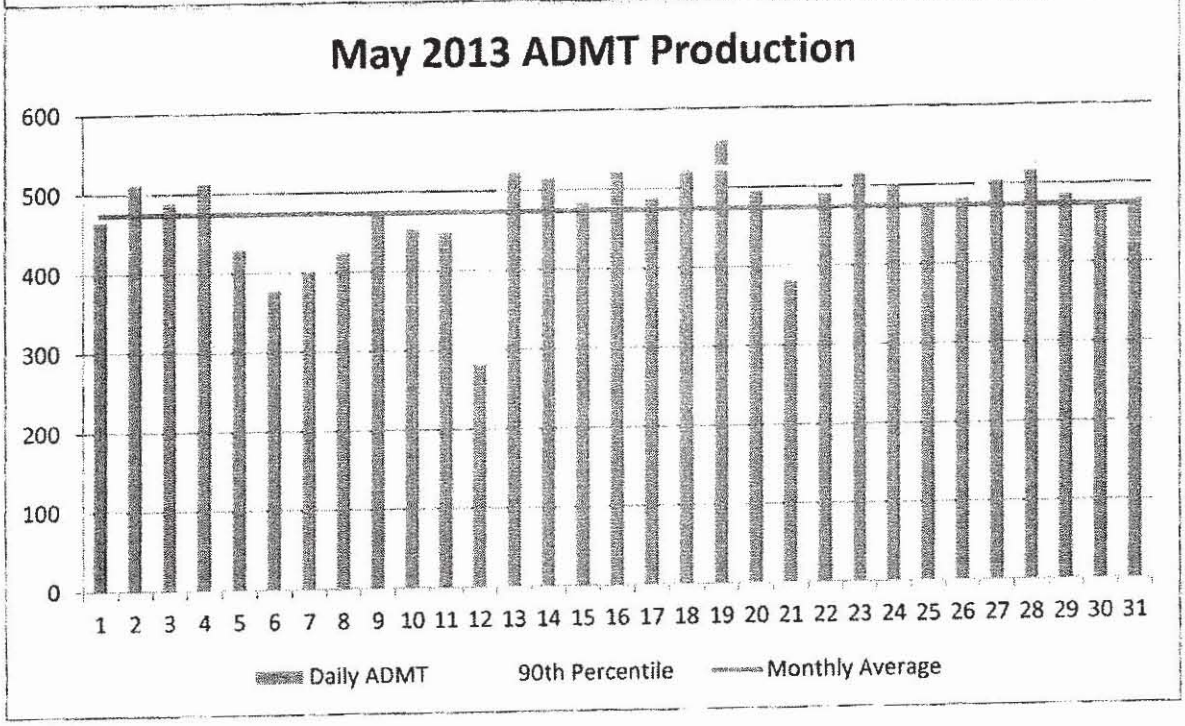
D. Bradshaw
Environmental Manager

MONTHLY ENVIRONMENTAL DATA SUMMARY BY: Doug Bradshaw

MONTH OF May-13

FINAL EFFLUENT QUALITY PARAMETERS															
DATE	FLOW m3/day	PROD ADT/day	TEMP oC	pH	COND mmho	TSS mg/l	BOD5 mg/l	NH3 - N mg/l	COLOUR APCU	AOX mg/l	AOX kg/ADt	LC50 (D) (%v/v)	LC50 (D) % mort	LC50 (T) (%v/v)	LC50 (T) %mort
1	166,657	465	33.5	6.92	1554	55	8.8	0.7	1000						
2	167,550	512	33.7	6.95	1547	57	7.7	0.3	1200						
3	164,942	489	34.4	6.93	1545	14	4.7	0.4	875						
4	167,937	513	34.8	6.99	1497	24	6.6	0.7	805						
5	168,055	429	34.4	7.23	1513	20	6.9	0.2	982						
6	164,853	378	34.4	7.55	1548	62	10.2	0.1	1345	0.74	0.23				
7	161,201	402	34.5	7.52	1545	116	13.4	0.2	1590			100	0		
8	163,835	425	35.2	7.63	1570	454	32.2	0.2	3331						
9	167,084	472	35.3	7.37	1486	256	19.9	0.9	2530			100	0	100	0
10	166,158	453	34.3	7	1419	10	4	0.2	855						
11	169,459	449	33.6	6.91	1398	42	6.8	0.3	950						
12	161,369	282	32.9	7.02	1296	64	8.1	0.5	975						
13	167,073	526	34	7.08	1350	7	3.3	0.5	730	1.48	0.47				
14	164,814	515	33.6	6.98	1442	9	3.5	0.4	854			100	0	100	0
15	166,503	484	34.6	7.09	1450	8	4.1	0.2	866						
16	166,885	528	34.3	6.98	1480	12	4.5	0.3	970						
17	163,320	488	34.5	6.91	1460	15	4.1	1	865						
18	164,941	521	34.7	6.9	1454	12	3.9	0.3	855						
19	167,333	559	35.2	7.03	1484	23	5.6	0.3	995						
20	165,060	495	34.7	7.01	1422	19	5.5	0.7	1005	1.68	0.53				
21	160,011	382	32.4	6.96	1330	36	9.8	1.3	908			100	0		
22	161,130	491	34.9	6.98	1383	41	10.2	0.4	1010						
23	163,860	516	35.7	7.09	1410	25	6.3	0.3	1024						
24	161,862	499	35.9	6.98	1481	20	5.9	0.4	1090						
25	164747	473	36	6.95	1464	40	9.3	0.7	1125						
26	164,565	483	36.1	7.15	1475	36	9.3	0.4	1175						
27	164,666	504	36	7.05	1459	61	8.8	0.3	1175	1.53	0.48				
28	163,142	517	35.4	7.05	1417	79	10.2	0.2	1240			100	0		
29	157,441	486	35.4	6.99	1455	24	7.1	0.2	1130						
30	164,265	472	35	6.85	1460	28	7.3	0.2	1165						
31	164916	480	34.9	6.72	1386	32	8	0.2	880						
Avg	164,697.9	473.8	34.7	7.1	1,457.4	54.9	8.3	0.4	1,145.2						


May 2013 Effluent Flows
172000
170000
168000
166000
164000
162000
160000
158000
156000
154000
152000
150000
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Effluent Daily Flow
90th Percentile
Monthly Average


May 2013 ADMT Production
600
500
400
300
200
100
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Daily ADMT
90th Percentile
Monthly Average

July 7th, 2013

George Leu
Manager, Environmental Protection
Ministry of Environment
Vancouver Island Region
2080-A Labieux Road
Nanaimo, B.C. V9T 6J9

Dear Mr. Leu,

Re: **EMS Data for June 2013 – Permit PE-01240**

Please find the following, Neucel Specialty Cellulose Inc. effluent results for the month of June 2013. The pulp mill operated for 30 days during the month.
The average effluent quality was as follows:

Final effluent flow	162,285 m^3 /day
Pulp production	392 adt/day
Total suspended solids	7,276 kg/day
5-day biochemical oxygen demand	1,130 kg/day
Total absorbable organic halogens	1.40mg/l or 0.43 kg/adt

If you have any questions regarding this report please do not hesitate to call me at (250) 284-3331 Ext 7809.

Yours truly,

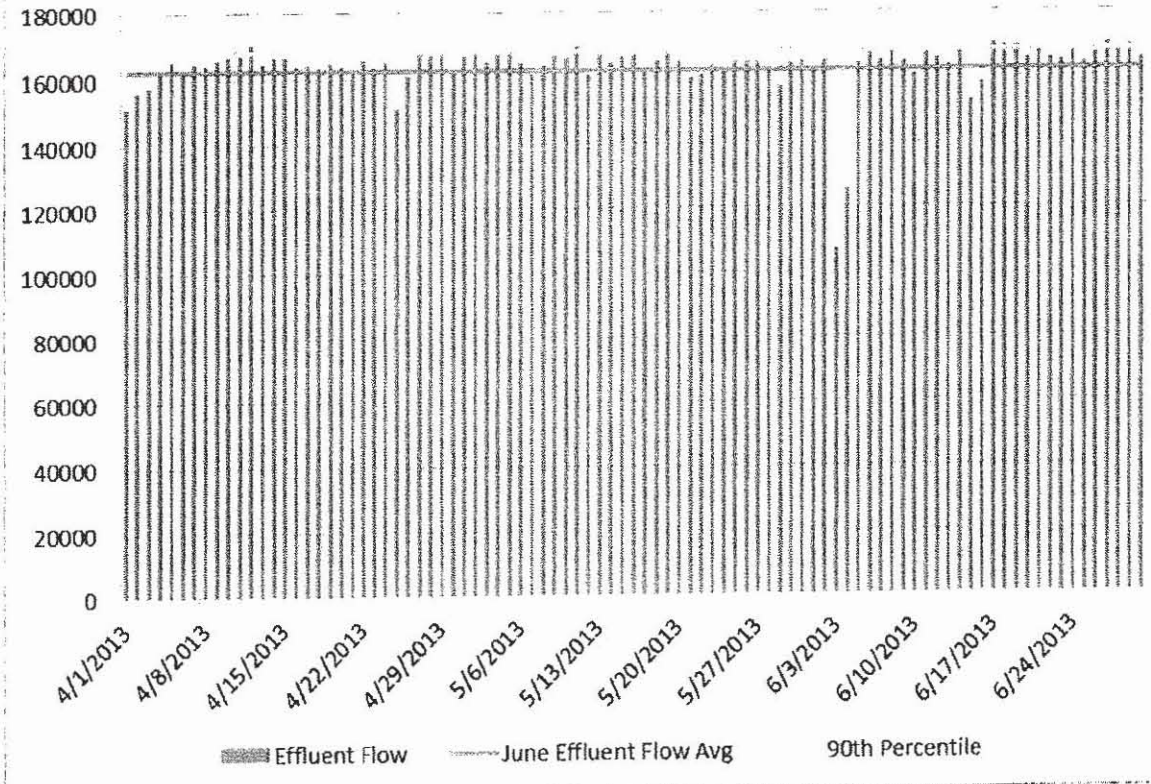
D. Bradshaw
Environmental Manager

MONTHLY ENVIRONMENTAL DATA SUMMARY BY: Doug Bradshaw

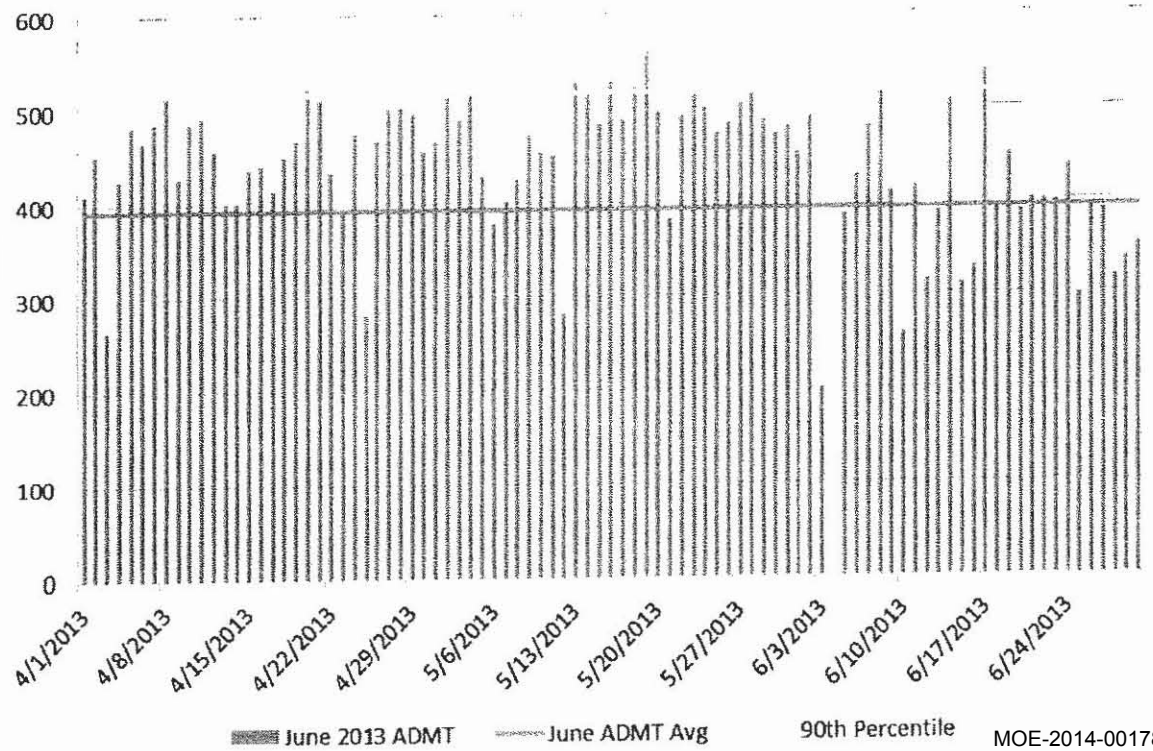
MONTH OF : June-13

FINAL EFFLUENT QUALITY PARAMETERS															
DATE	FLOW m3/day	PROD ADT/day	TEMP oC	pH	COND mmho	TSS mg/l	BOD5 mg/l	NH3 - N mg/l	COLOUR APCU	AOX mg/l	AOX kg/ADt	LC50 (D) (%v/v)	LC50 (D) % mort	LC50 (T) (%v/v)	LC50 (T) %mort
1	162,279	452	34.3	6.72	1373	26	5.7	0.2	806						
2	165,093	490	34.4	6.98	1352	33	7.1	0.7	880			100	0		
3	106,893	199	34.1	7.07	1402	47	9.6	11	895	1.84	0.37				
4	125,534		30.3	6.66	1259	30	5.4	24.8	755			100	0		
5	164,169	386	26.2	6.68	1019	396	35	2.7	2430						
6	167,459	427	33.4	6.52	1253	34	7.2	2.1	848			100	0	100	0
7	164,922	480	36.4	6.52	1452	36	7.1	0.8	956						
8	167,660	513	36.7	6.66	1536	34	7.7	0.3	966						
9	164,684	409	34.8	6.82	1452	23	6.7	0.1	912						
10	160,933	259	34.5	7.06	1282	22	7.6	1.2	840	1.08	0.33				
11	168,096	415	32.3	6.85	1208	21	5.6	0.2	635			100	0	100	0
12	165,873	316	31.5	6.88	1202	21	5.4	0.5	560						
13	163,624	388	31.3	6.99	1168	19	5.3	3.2	439						
14	168,177	507	35	6.89	1295	22	6	0.5	704						
15	152,891	311	33.9	7.09	1410	20	7	0.9	860						
16	158,364	328	34.5	7.13	1241	15	7	2.1	680						
17	170,103	537	35.8	7.15	1412	12	3.9	0.2	844	1.54	0.50				
18	169,385	395	36.1	7.16	1447	14	3.6	0.4	870			100	0		
19	169,304	450	36.1	7.26	1442	12	3.6	0.4	845						
20	165,321	388	36.7	7.42	1554	13	3.6	0.3	1000						
21	167,318	402	37.3	7.64	1548	39	5.3	0.4	1285						
22	165,292	399	37.3	7.51	1569	56	7.9	0.3	1305						
23	164,701	397	36.4	7.59	1560	100	8.2	0.2	1420						
24	167,437	437	35	7.45	1453	10	2.9	0.2	830	1.14	0.36				
25	164167	299	33.3	7.23	1252	9	3.1	0.1	736			100	0		
26	166,907	390	33.8	7.39	1248	13	3.3	0.3	700						
27	169,919	389	35.1	7.43	1374	12	3.1	0.2	755						
28	167,177	318	36.3	7.69	1456	12	2.8	0.2	895						
29	169,426	336	36.2	7.68	1363	118	11.9	0.6	1310						
30	165,444	352	36.1	7.5	1369	125	11.5	0.3	1540						
31															
Avg	162,285.1	392.0	34.5	7.1	1,365.0	44.8	7.0	1.8	950.0	1.4	0.43				

June 2013 Effluent Flow



June 2013 ADMT



August 7th, 2013

George Leu
Manager, Environmental Protection
Ministry of Environment
Vancouver Island Region
2080-A Labieux Road
Nanaimo, B.C. V9T 6J9

Dear Mr. Leu,

Re: **EMS Data for July 2013 – Permit PE-01240**

Please find the following, Neucel Specialty Cellulose Inc. effluent results for the month of July 2013. The pulp mill operated for 31 days during the month.
The average effluent quality was as follows:

Final effluent flow	150,651 m^3 /day
Pulp production	425 adt/day
Total suspended solids	3,625 kg/day
5-day biochemical oxygen demand	808 kg/day
Total absorbable organic halogens	0.81mg/l or 0.23 kg/adt

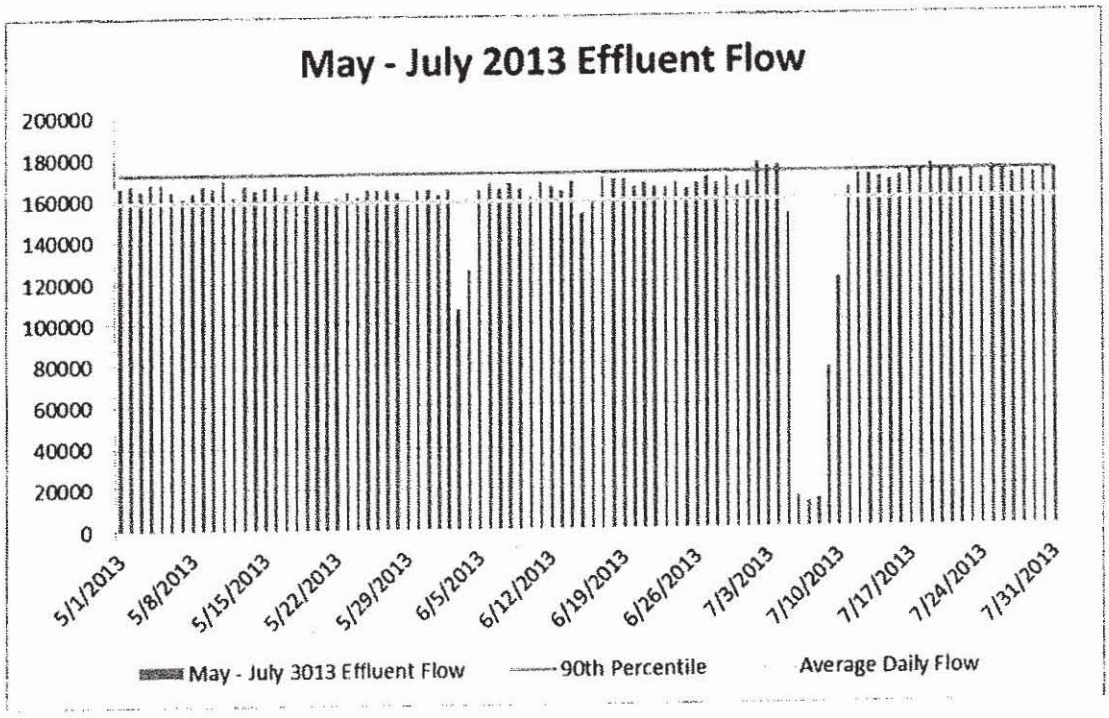
If you have any questions regarding this report please do not hesitate to call me at (250) 284-3331 Ext 7809.

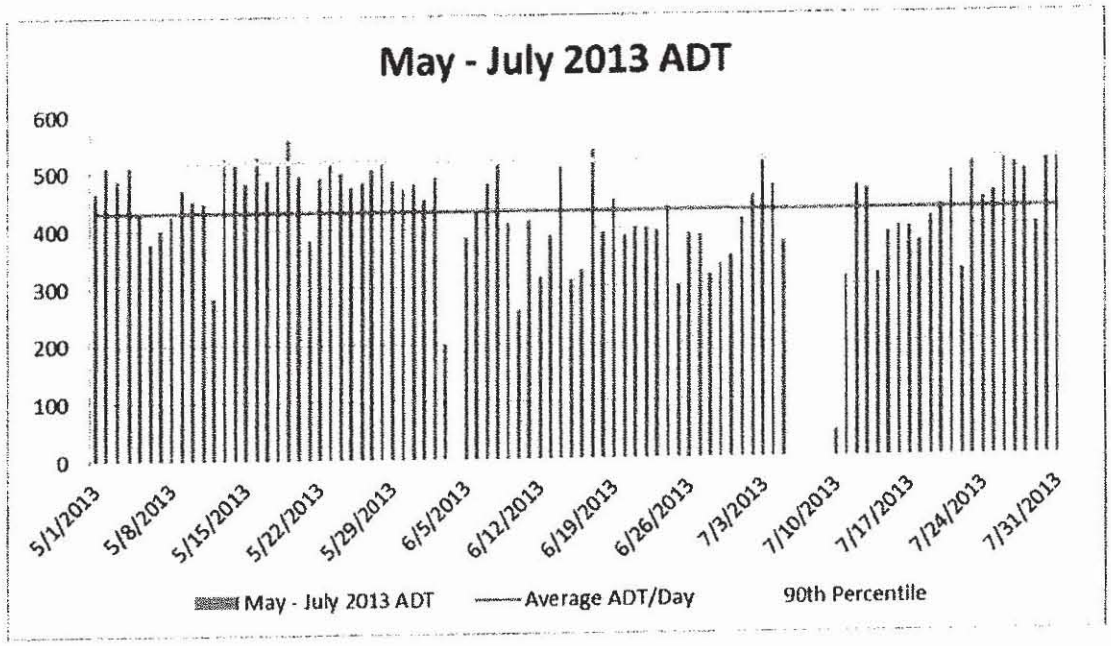
Yours truly,

D. Bradshaw
Environmental Manager

MONTHLY ENVIRONMENTAL DATA SUMMARY BY: Doug Bradshaw
MONTH OF : July-13

FINAL EFFLUENT QUALITY PARAMETERS															
DATE	FLOW m3/day	PROD ADT/day	TEMP oC	pH	COND mmho	TSS mg/l	BOD5 mg/l	NH3 - N mg/l	COLOUR APCU	AOX mg/l	AOX kg/ADt	LC50 (D) (%v/v)	LC50 (D) % mort	LC50 (T) (%v/v)	LC50 (T) %mort
1	167,555	416	36.3	7.29	1351	25	4.5	0.2	925	0.548	0.17				
2	176,548	456	35.5	7.06	1295	10	3.2	0.3	1295			100	0		
3	174,714	523	36.1	6.66	1358	10	5	0.2	744						
4	175,052	473	36.5	7.15	1408	18	4.6	1	830						
5	152,129	376	36.4	7.23	1378	19	4.1	0.3	670						
6	14,520		34.6	7.39	1435	32	8.1	0.8	834						
7	12,255		30	7.28	1513	15	5.2	2.5	715						
8	13,829		30.6	7.22	1377	30	10	5.7	850	1.14	0.03				
9	77,041		29.9	7.21	1248	29	10.3	3.4	870			100	0	100	0
10	120,718	45	25.2	7.12	857	14	3.5	0.2	580						
11	164,403	313	24.7	7.2	922	11	4.3	3	730						
12	170,027	472	31.1	7.15	1168	16	5.3	1.6	745						
13	170,481	466	34.5	7.36	1386	21	5.4	0.3	805						
14	169,377	319	36.7	7.64	1481	20	5.6	0.4	910						
15	167,586	390	36.5	7.61	1474	24	6.6	0.2	1010	0.438	0.14				
16	169,956	399	37.6	7.62	1541	22	6.4	0.4	1090			100	0		
17	172,494	398	38.7	7.56	1481	20	6.3	0.4	1045						
18	171,340	374	37.5	7.34	1464	21	5.6	0.3	1115						
19	175,308	417	36	7.24	1391	15	5.4	0.3	915						
20	172,380	436	35.9	7.19	1255	17	4.4	0.4	680						
21	171,281	494	35.7	7.22	1312	17	4.3	0.3	750						
22	167,498	325	34.8	6.94	1214	17	4.8	0.5	540	1.14	0.36				
23	171,274	510	34.2	7.05	1256	15	5.2	0.4	655			100	0		
24	168,063	449	36.5	7.08	1419	14	4.9	0.4	776						
25	174049	460	36.2	7.09	1471	13	4.4	0.4	748						
26	173,110	524	37.2	7.11	1498	12	4.3	0.3	848						
27	170,466	507	37.4	7.12	1500	21	5.5	0.3	940						
28	170,982	497	37.6	7	1439	45	6.8	0.4	1060						
29	170,102	404	37.9	6.96	1388	11	3.5	0.4	715						
30	173,388	522	36.6	7.11	1361	8	3.4	0.2	690			100	0		
31	172247	518	36.9	7.14	1455	187	14	0.2	1575			100	0	100	0
Avg	150,650.7	425.3	34.9	7.2	1,357.9	24.2	5.6	0.8	859.8	0.8165	0.23				


May - July 2013 Effluent Flow
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
5/1/2013
5/8/2013
5/15/2013
5/22/2013
5/29/2013
6/5/2013
6/12/2013
6/19/2013
6/26/2013
7/3/2013
7/10/2013
7/17/2013
7/24/2013
7/31/2013
May - July 3013 Effluent Flow
90th Percentile
Average Daily Flow


May - July 2013 ADT
600
500
400
300
200
100
0
5/1/2013
5/8/2013
5/15/2013
5/22/2013
5/29/2013
6/5/2013
6/12/2013
6/19/2013
6/26/2013
7/3/2013
7/10/2013
7/17/2013
7/24/2013
7/31/2013
May - July 2013 ADT
Average ADT/Day
90th Percentile

neucel

September 6, 2013

George Leu, P. Eng.
Sr. Environmental Protection Officer
West Coast Region
Ministry of Environment
2080A Labieux Road
Nanaimo BC V9T 6J9

Dear Mr. Leu,

Re: **EMS Data for Aug 2013 – Permit PE-01240**

Please find the following, Neucel Specialty Cellulose Inc. effluent results for the month of August 2013. The pulp mill operated for 29 days during the Month. There were six Days where TSS was over the permit limit of 27,300 kg/Day. On Aug 7 hydraulic load for cooling caused the beds to rise, Aug. 15 start-up after an unscheduled shut down combined with low basin temp., Aug 22& 28 equipment malfunction in sludge handling, Aug 29 & 30 continued high levels after equipment repairs were completed before the beds settled.

The average effluent quality was as follows:

Final effluent flow	165,670 m^3 /day
Pulp production	451 adt/day
Total suspended solids	13,998 kg/day
5-day biochemical oxygen demand	1,239 kg/day
Total absorbable organic halogens	1.58 mg/l or 0.5 kg/adt

If you have any questions regarding this report please do not hesitate to call me at (250) 284-3331 Ext 7809.

Yours truly,

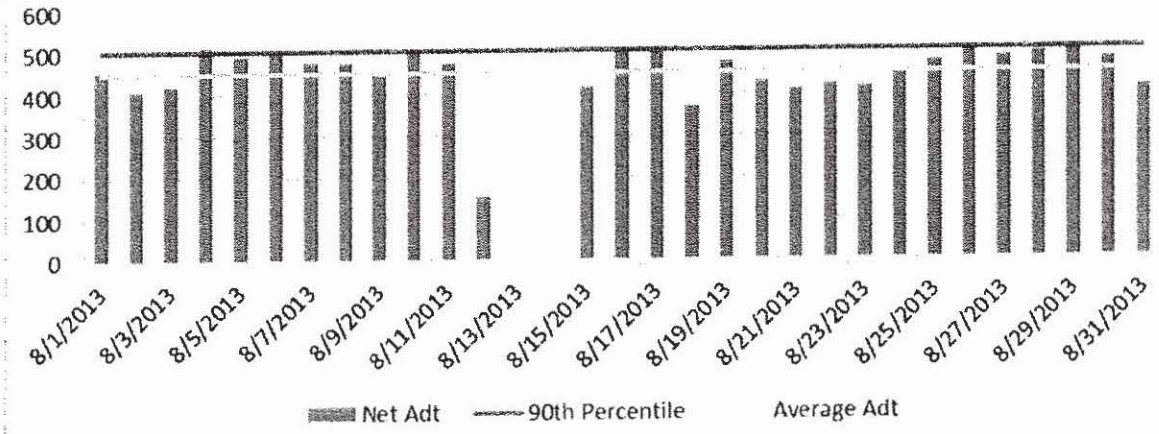
D. Bradshaw
Environmental Manager

MONTHLY ENVIRONMENTAL DATA SUMMARY **BY:** **Doug Bradshaw**

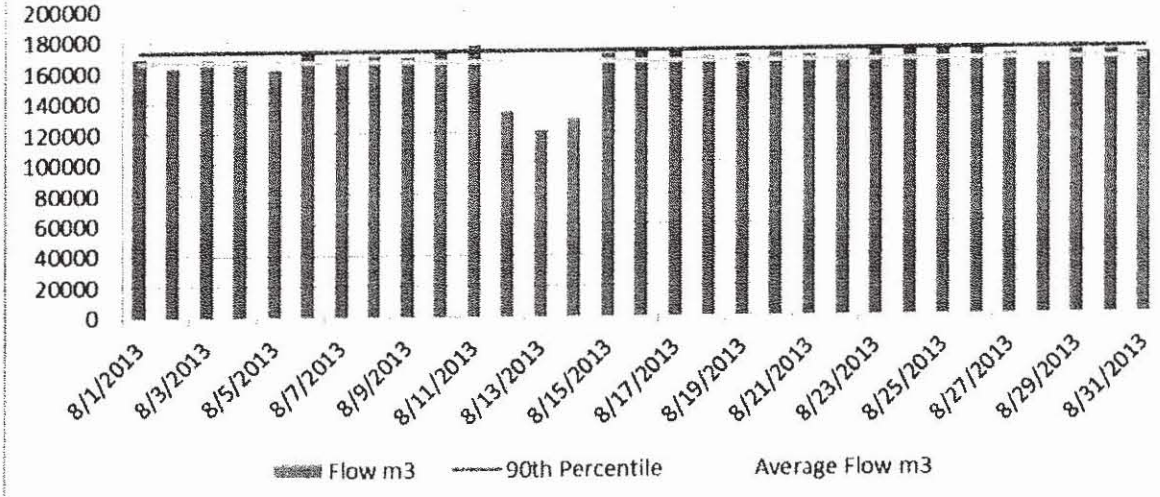
MONTH OF : **August-13**

FINAL EFFLUENT QUALITY PARAMETERS															
DATE August	FLOW m3/day	PROD ADT/day	TEMP oC	pH	COND mmho	TSS mg/l	BOD5 mg/l	NH3 - N mg/l	COLOUR APCU	AOX mg/l	AOX kg/ADt	LC50 (D) (%v/v)	LC50 (D) % mort	LC50 (T) (%v/v)	LC50 (T) %mort
1	169,359	457	36.8	6.85	1425	109	11.2	1	1185						
2	163,129	410	35.4	6.89	1394	59	6.3	0.2	955						
3	168,057	423	35.9	6.87	1360	89	8.5	0.1	1028						
4	168,033	515	36.6	7.01	1404	149	10	0.9	1410			100	0	100	0
5	160,900	492	36.9	6.72	1391	193	11.2	0.2	1320						
6	171,440	500	36.9	6.94	1363	104	8	0.2	1235	1.72	0.56	100	0	100	0
7	168,161	478	36.5	6.88	1354	34	4.3	0.2	1010						
8	169,925	476	36.6	6.8	1312	108	9.6	0.2	1495						
9	168,913	457	36.7	6.94	1288	10	3	0.1	805						
10	174,074	509	37.9	6.9	1350	11	3.5	0.2	946						
11	177,050	473	37	7.1	1390	11	3.8	0.1	904						
12	134,017	154	30.6	6.87	1292	6	2.6	0.1	822	1.47	0.38				
13	121,025		29.3	6.9	817	9	2.3	0.3	575			100	0	100	0
14	128,830		22.9	7.18	513	21	2.8	0.7	400						
15	171,036	417	24.2	7.08	816	361	19.3	0.2	2460			100	0	100	0
16	173,360	499	32.3	6.98	1161	39	6.4	0.4	870						
17	172,582	498	36.5	6.81	1360	22	4.9	0.2	922						
18	168,048	370	36	6.53	1382	7	3	0.1	734						
19	169,704	478	36.2	6.88	1377	9	2.6	0.1	730	1.44	0.47				
20	170,675	431	36.4	6.82	1393	13	3.8	0.1	808			100	0		
21	168,861	409	36.8	7.16	1383	268	18.2	0.5	2120						
22	168,560	421	37.4	7.02	1394	76	7.2	0.3	1080			100	0	100	0
23	171,303	416	37.3	7.04	1394	34	5.2	0.2	920						
24	171,064	452	37.6	7.12	1385	17	3.3	0.4	860						
25	172153	476	37	6.9	1394	9	3.1	0.1	806						
26	172,671	500	37.4	6.87	1408	67	6.9	0.3	1174	1.68	0.55				
27	169,139	487	37.3	6.87	1457	225	16	0.2	2035			100	0	100	0
28	162,363	493	37	6.9	1443	249	17.9	0.5	1920			100	0	100	0
29	170,927	507	37.4	7.15	1406	213	15.2	0.9	1970			100	0	100	0
30	171,001	479	37.3	7.09	1369	32	4.4	0.2	885						
31	169419	413	37.1	7.04	1329	31	4.6	0.2	820						
Avg	165,670	451	35.4	6.9	1,307	83.4	7.4	0.3	1,136	1.578	0.50				

August 2013 Net ADMT with 90th Percentile



August 2013 Flow in m^3 with 90th Percentile



October 9, 2013

George Leu, P. Eng.
Sr. Environmental Protection Officer
West Coast Region
Ministry of Environment
2080A Labieux Road
Nanaimo BC V9T 6J9

Dear Mr. Leu,

Re: **EMS Data for September 2013 – Permit PE-01240**

Please find the following, Neucel Specialty Cellulose Inc. effluent results for the month of September 2013. The pulp mill operated for 8 days during the Month. A scheduled shut down took place from Sept 9, 2013 and did not initiate start-up until after Oct.1, 2013. There were no Days where TSS was over the permit limit of 27,300 kg/Day. On Sept.11, 2013 there was a single event where TSS in mg/l appeared to be over the limit of 158mg/l. The effluent flow from the Mill was too low during shut down for the composite sampler to operate. A one-time grab sample was taken on Sept 11, this was performed during the initial work of cleaning the primary clarifier giving a high value at that point.

The average effluent quality for the Month of September was as follows:

Final effluent flow	50,448 m^3 /day
Pulp production	426 ADt/day
Total suspended solids	2,019 kg/day
5-day biochemical oxygen demand	307 kg/day
Total absorbable organic halogens	1.58 mg/l or 0.23 kg/adt

If you have any questions regarding this report please do not hesitate to call me at (250) 284-3331 Ext 7809.

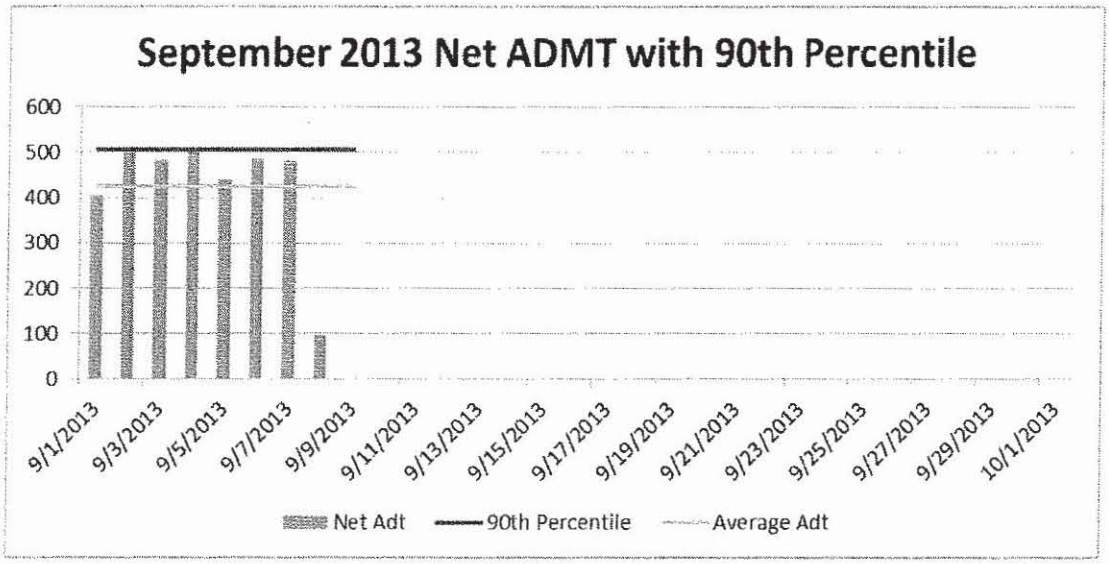
Yours truly,

Douglas Bradshaw
Environmental Manager

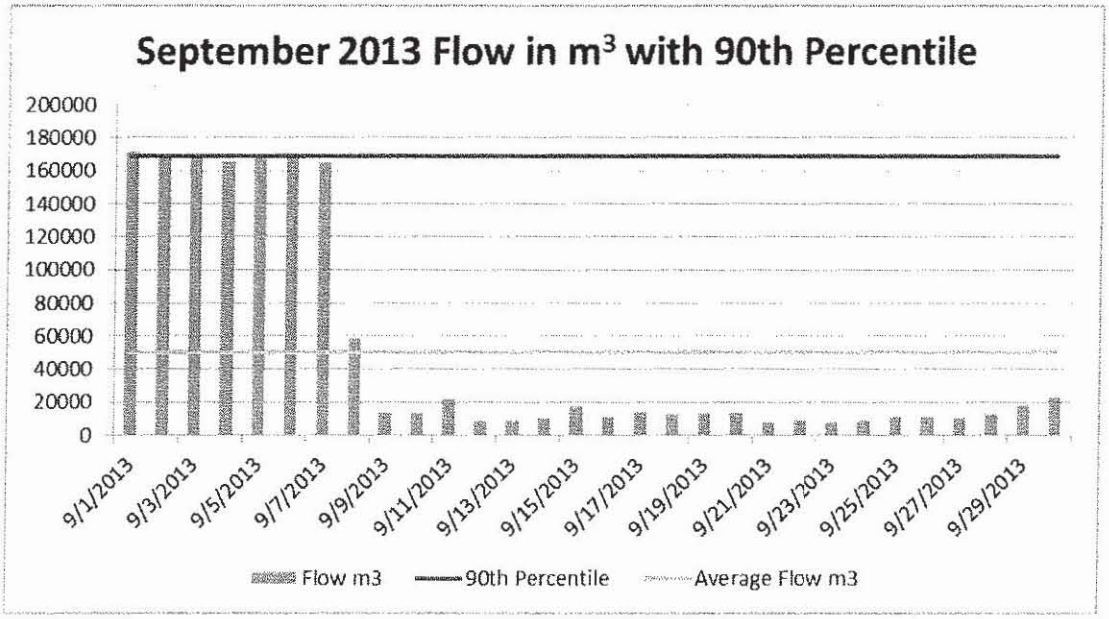
MONTHLY ENVIRONMENTAL DATA SUMMARY **BY:** **Doug Bradshaw**
MONTH OF : **September-13**

FINAL EFFLUENT QUALITY PARAMETERS															
DATE September	FLOW m3/day	PROD ADT/day	TEMP oC	pH	COND mmho	TSS mg/l	BOD5 mg/l	NH3 - N mg/l	COLOUR APCU	AOX mg/l	AOX kg/ADt	LC50 (D) (%v/v)	LC50 (D) % mort	LC50 (T) (%v/v)	LC50 (T) %mort
1	171,514	406	36.8	6.90	1266	126	11.0	1.1	1210						
2	168,987	503	37.0	6.88	1297	13	3.5	0.2	720	1.34	0.43				
3	169,437	485	36.9	6.77	1323	11	3.1	0.3	806			100	0		
4	165,520	508	37.3	6.76	1322	13	3.4	0.3	820						
5	167,840	441	36.5	6.79	1316	15	3.5	0.2	824						
6	167,869	487	37.7	6.67	1344	17	4.4	0.3	824						
7	164,683	482	37.8	7.09	1312	20	4.5	1.0	870						
8	58,301	96	36.2	7.05	1202	26	4.9	0.2	900						
9	13,125	0	34.7	6.96	1113	35	6.1	0.3	970	0.994	0.02				
10	13,125		31.5	6.18	1338	56	9.2	5.9	1090			100	0	100	0
11	22,291		31.1	6.77	1530	162	40.3	1.2	1395						
12	8,455		30.3	7.11	1554	56	10.2	0.5	966						
13	9,542		29.7	7.31	1520	53	8.5	0.3	968						
14	10,764		29.6	7.27	1460	64	8.9	0.3	1110						
15	17,119		26.7	6.63	1440	80	8.7	0.3	1250						
16	11,197		24.8	6.69	1416	86	8.6	0.5	920	0.485	0.01				
17	14,038		16.1	6.78	1373	84	9.7	0.4	935			100	0	100	0
18	12,557		25.6	6.91	1372	64	7.7	0.1	874						
19	13,173		25.1	7.00	1354	55	6.9	0.3	928						
20	13,173		24.2	7.08	1312	65	8.8	0.1	1024						
21	7,936		23.6	6.89	1298	68	9.5	0.1	1070						
22	8,885		22.7	6.65	1296	71	10.6	0.1	1015						
23	7,716		22.6	6.42	1277	72	10.2	1.1	990	0.432	0.01				
24	9,438		22.1	6.20	1273	78	11.3	0.9	975			100	0		
25	11,186		22.6	6.06	1270	95	17.2	0.1	1040						
26	11,186		20.9	6.10	1268	79	9.8	0.1	955						
27	10,876		20.1	5.91	1256	86	12.0	0.2	1030						
28	12,509		19.6	5.81	1222	69	8.2	0.1	958						
29	18,224		19.5	5.90	1187	94	9.3	0.7	1142						
30	22,776		17.0	6.48	1114	100	8.3	0.2	1200						
Avg	50,448	426	27.9	6.7	1,321	63.8	9.3	0.6	993	1.578	0.23				
90th Percenti	168875	508													

Production in Air Dried Metric tonnes with Average and 90th Percentile



Effluent Flow in Cubic Meters with Average and 90th Percentile



November 06, 2013

Safwan Soufan
for
George Leu, P. Eng.
Sr, Environmental Protection Officer
Ministry of Environment
Vancouver Island Region
2080-A Labieux Road
Nanaimo, B.C. V9T 6J9

Dear Mr. Soufan,

Re: **EMS Data for October 2013 – Permit PE-01240**

Please find the following, Neucel Specialty Cellulose Inc. effluent results for the month of October 2013. The pulp mill operated for 24 days during the month. The mill was on maintenance / for 7 days of the month. The mill experienced high TSS discharges for six days (October 16th, 19th,20th,23rd, 24th and 31st) These six TSS and one BOD 5 exceedence can be traced back to higher than normal NH3 residuals coming from the absorbtion section of the Absorber Cooler. More than one piece of equipment was found to be malfunctioning during the troubleshooting period and as of October 14th the NH3 residuals were back to normal but the two secondary clarifiers is still suffering from de-nitrification.
The average effluent quality was as follows:

Final effluent flow	140,452 m^3 /day
Pulp production	390 adt/day
Total suspended solids	20,342 kg/day
5-day biochemical oxygen demand	1,466 kg/day
Total absorbable organic halogens	0.95 mg/l or 0.26 kg/adt

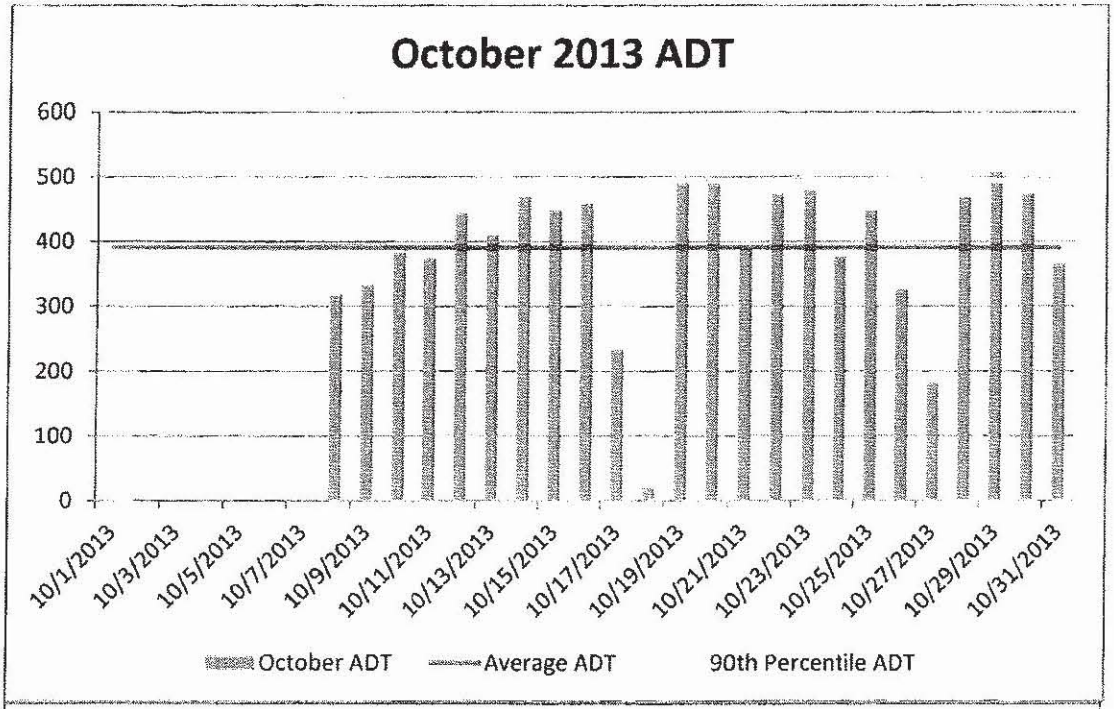
If you have any questions regarding this report please do not hesitate to call me at (250) 284-3331 Ext 7809.

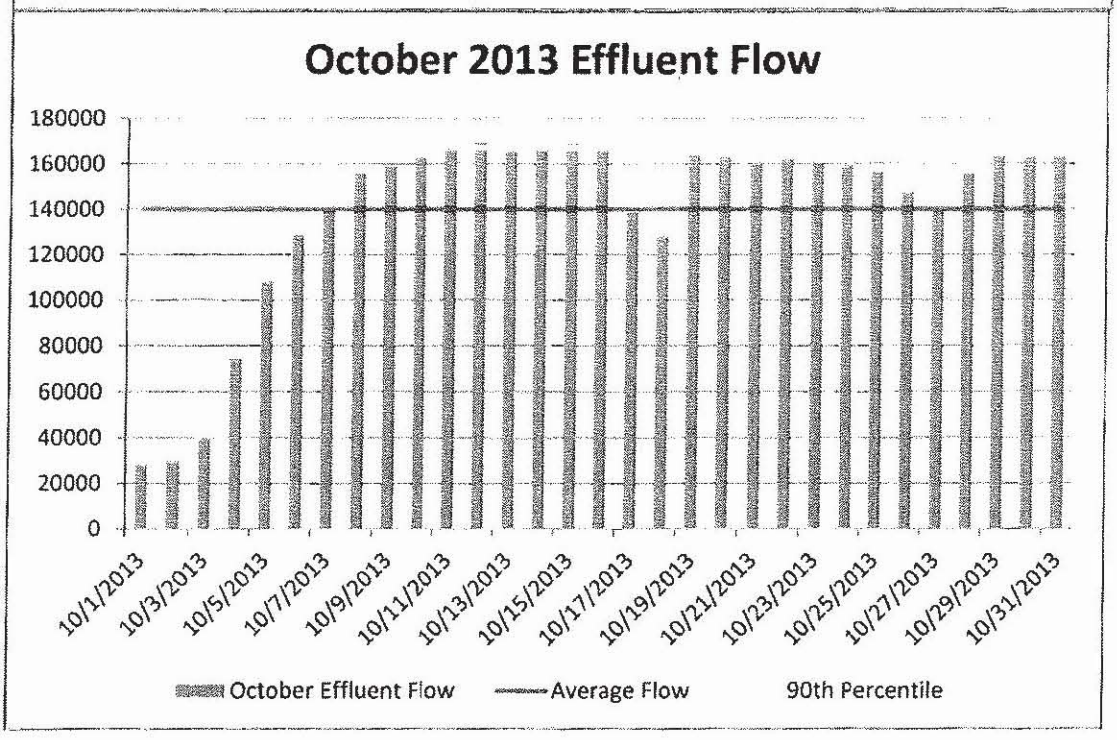
Yours truly,

D. Bradshaw
Environmental Manager

MONTHLY ENVIRONMENTAL DATA SUMMARY **BY:** **Doug Bradshaw**
MONTH OF : **October-13**

FINAL EFFLUENT QUALITY PARAMETERS															
DATE	FLOW m3/day	PROD ADT/day	TEMP oC	pH	COND mmho	TSS mg/l	BOD5 mg/l	NH3 - N mg/l	COLOUR APCU	AOX mg/l	AOX kg/ADt	LC50 (D) (%v/v)	LC50 (D) % mort	LC50 (T) (%v/v)	LC50 (T) %mort
1	28,174		18.2	6.51	1042	82	7.6	0.2	1075			100	0		
2	29,706		18	6.45	920	90	6.9	0.2	1140						
3	39,268		17.4	6.42	824	98	6.8	0.4	1150						
4	74,753		17.9	6.86	702	72	4.4	0.1	936						
5	107,957		20.5	7.12	579	25	2	0.1	428						
6	128,447		23.8	7.14	538	13	3.8	5.2	508						
7	139,686		26.6	7.08	671	12	2.8	13.9	522	0.105	0.03				
8	155,698	317	27.9	7.1	1051	118	10.3	25.4	1160			100	0	100	0
9	158,603	333	31.4	6.69	1415	12	3	52	675						
10	162,763	382	33.3	6.7	1469	14	2.8	41.6	510						
11	166,074	374	33.1	6.62	1444	8	2.5	27.4	475						
12	169,045	444	34.9	6.48	1452	25	2.8	13.1	516						
13	165,411	409	35.2	6.58	1514	13	3.6	8	748						
14	167,105	469	35.8	6.32	1580	81	8.8	5.9	1130	1.53	0.49				
15	168,957	448	36	6.61	1555	56	8.8	1.3	1025			100	0		
16	166,373	460	37	6.74	1592	194	12.4	0.5	1960						
17	138,501	233	37	6.74	1588	20	3.7	0.3	770						
18	128,145	20	32.4	6.56	1200	8	1.6	0.5	450						
19	163,614	492	29.5	6.52	1211	708	51.9	7.4	4600			100	0	100	0
20	163,030	495	33.9	6.66	1472	235	21	4.4	2120			100	0	100	0
21	160,217	388	34.1	6.72	1471	29	3.6	0.4	790	1.24	0.38				
22	161,908	474	34.7	6.71	1590	126	8.8	0.4	1475			100	0		
23	160,889	479	34.8	6.86	1567	554	24.5	0.3	4850			100	0	100	0
24	159,084	376	35	7.01	1522	200	11.2	0.4	1980			100	0	100	0
25	156616	448	35.6	6.97	1493	89	7.6	0.2	1275						
26	147,249	325	35.6	6.97	1479	38	5.2	0.2	1055						
27	141,369	182	32.9	6.69	1188	64	6.5	0.5	1060						
28	155,685	468	33.7	7.07	1325	108	9	0.1	1425	1.15	0.34				
29	163,344	507	34.6	6.89	1439	158	14.1	0.2	2040			100	0		
30	163,128	474	34.6	7.07	1470	85	8.3	0.3	1205						
31	163227	365	34.7	6.47	1417	832	36.8	0.4	3880			100	0	100	0
Avg	140,452.5	390.1	31.0	6.8	1,283.2	134.4	9.8	6.8	1,384.9	1.00625	0.27				


October 2013 ADT
600
500
400
300
200
100
0
10/1/2013
10/3/2013
10/5/2013
10/7/2013
10/9/2013
10/11/2013
10/13/2013
10/15/2013
10/17/2013
10/19/2013
10/21/2013
10/23/2013
10/25/2013
10/27/2013
10/29/2013
10/31/2013
October ADT
Average ADT
90th Percentile ADT


October 2013 Effluent Flow
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
10/1/2013
10/3/2013
10/5/2013
10/7/2013
10/9/2013
10/11/2013
10/13/2013
10/15/2013
10/17/2013
10/19/2013
10/21/2013
10/23/2013
10/25/2013
10/27/2013
10/29/2013
10/31/2013
October Effluent Flow
Average Flow
90th Percentile

December 6, 2013

George Leu, P. Eng.
Sr. Environmental Protection Officer
West Coast Region
Ministry of Environment
2080A Labieux Road
Nanaimo BC V9T 6J9

Dear Mr. Leu,

Re: **EMS Data for November 2013 – Permit PE-01240**

Please find the following, Neucel Specialty Cellulose Inc. effluent results for the month of November 2013. The pulp mill operated for 30 days during the month. The month of November was a difficult month for effluent quality. The mill had 11 days of high daily TSS of which three of those days the daily BOD^5 was exceeded but the monthly BOD^5 was within the permit.

The average effluent quality was as follows:

Final effluent flow	161,966 m^3 /day
Pulp production	423 adt/day
Total suspended solids	29,239 kg/day
5-day biochemical oxygen demand	3,064 kg/day
Total absorbable organic halogens	1.74 mg/l or 0.71 kg/adt

If you have any questions regarding this report please do not hesitate to call me at (250) 284-3331 Ext 7809.

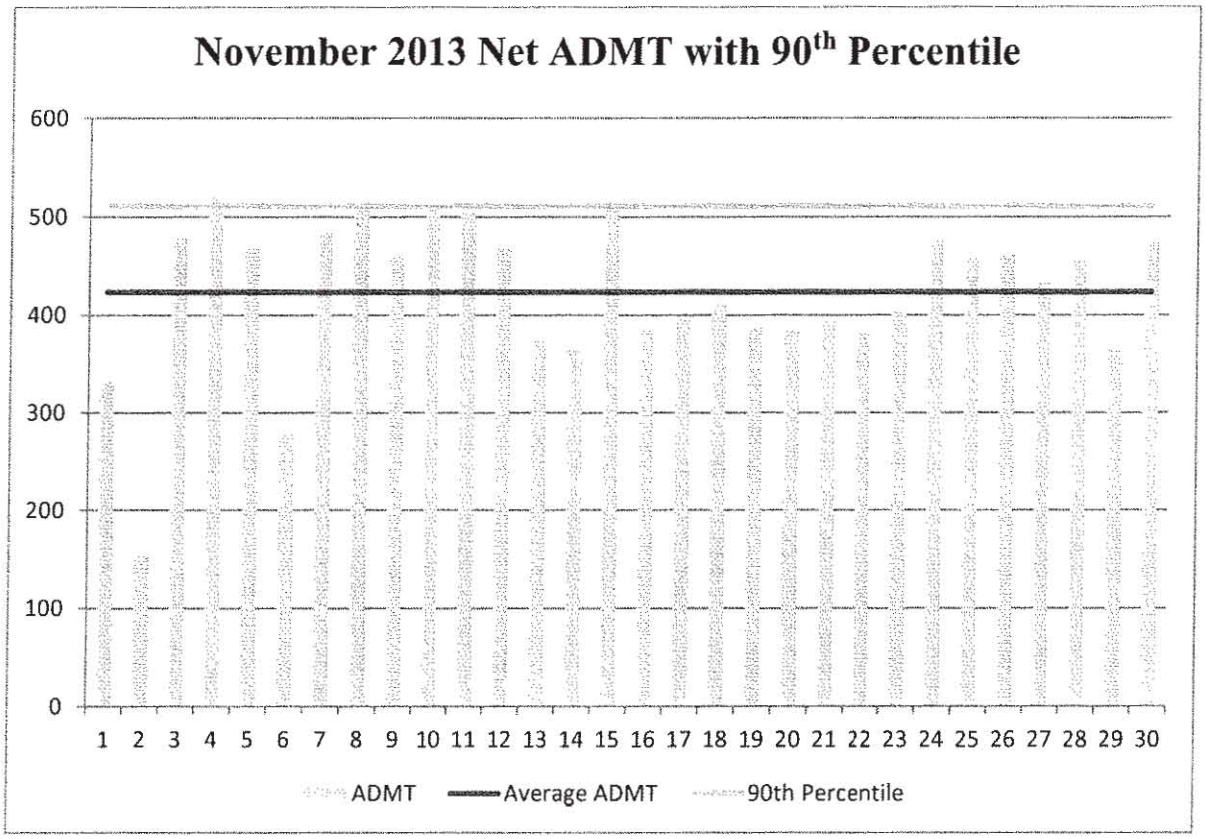
Yours truly,

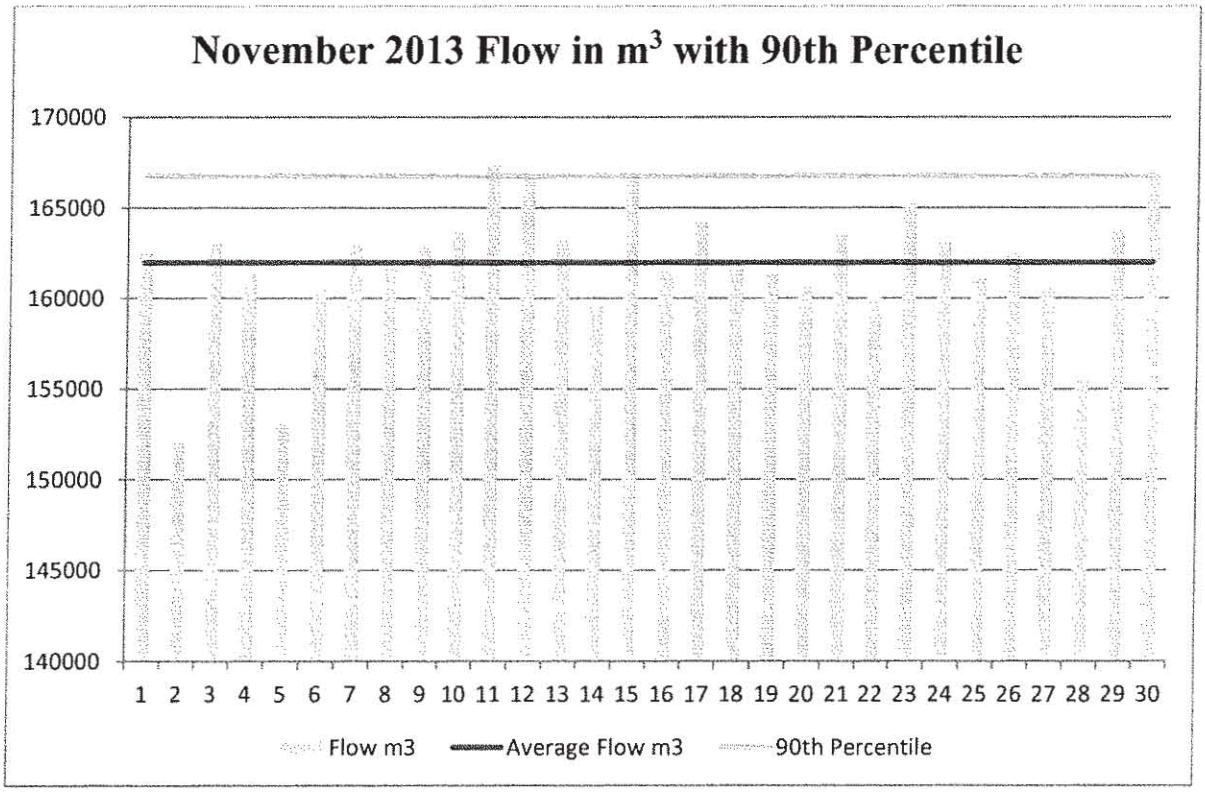
D. Bradshaw
Environmental Manager

MONTHLY ENVIRONMENTAL DATA SUMMARY **BY:** **Doug Bradshaw**

MONTH OF : **November-13**

FINAL EFFLUENT QUALITY PARAMETERS															
DATE	FLOW m3/day	PROD ADT/day	TEMP oC	pH	COND mmho	TSS mg/l	BOD5 mg/l	NH3 - N mg/l	COLOUR APCU	AOX mg/l	AOX kg/ADt	LC50 (D) (%v/v)	LC50 (D) % mort	LT50 (T) (%v/v)	LT50 (T) %mort
1	162,522	331	34.5	6.87	1340	89	8.3	0.4	1270						
2	151,984	153	32.8	7.09	1191	24	3.8	0.6	675						
3	163,001	478	30.1	6.83	1157	304	17	0.7	2610			100	0	100	0
4	161,496	520	32.6	6.94	1451	171	16.6	1.0	1990	1.11	0.34	100	0	100	0
5	153,083	468	34.3	6.88	1552	178	14.8	0.4	1890			100	0	100	0
6	160,535	278	32.7	7.06	1463	442	28	0.4	4169			100	0	100	0
7	163,017	484	34.1	6.71	1429	549	36	1.0	4400			100	0	100	0
8	161,601	513	33.9	6.39	1476	115	15.6	2.6	1525						
9	162,841	461	34.0	6.75	1431	25	6.5	0.2	940						
10	163,745	512	34.2	6.83	1440	50	9.8	1.2	1255						
11	167,333	504	34.5	6.88	1436	42	8.8	0.8	1195	1.96	0.65				
12	166,836	469	34.0	7.20	1435	46	9.2	0.2	1230			100	0	100	0
13	163,318	374	33.0	6.97	1356	36	7.5	4.8	1105						
14	159,569	366	32.5	7.13	1318	39	7.6	1.0	1050						
15	166,496	508	32.4	7.26	1349	37	6.5	0.2	1165						
16	161,624	386	34.1	7.54	1456	52	8.7	0.2	1455						
17	164,268	399	34.5	7.42	1478	700	66	0.4	3980			100	0	100	20
18	161,666	411	34.7	7.36	1497	560	56.5	0.3	4280	0.804	0.32	100	0	100	10
19	161,411	386	34.3	7.38	1524	536	52.5	0.6	3870			100	0	100	0
20	160,682	385	35.8	7.49	1526	420	42.4	0.6	3320			100	0	100	0
21	163,453	393	35.0	7.30	1554	314	37.2	0.4	3505			100	0	100	0
22	160,148	383	35.2	6.93	1517	300	31.1	0.5	2220			100	0	100	0
23	165,190	404	34.6	7.07	1479	228	28	1.3	2320			100	0	100	0
24	163,104	477	33.7	6.98	1452	29	7.8	0.8	1000						
25	161029	457	33.3	7.36	1456	27	7.8	0.3	1085	1.39	0.49				
26	162,441	461	33.5	7.21	1432	24	8.4	0.4	1120			100	0		
27	160,581	433	33.8	7.11	1501	22	7.1	1.5	1100						
28	155,532	457	31.8	6.80	1410	19	6.6	3.0	880						
29	163,681	364	30.4	6.76	1317	13	4.6	1.9	660						
30	166,803	475	31.0	7.05	1390	23	6.2	0.5	875						
Avg	161,966.3	423.0	33.5	7.1	1,427.1	180.5	18.9	0.9	1,938.0	1.74	0.71				


November 2013 Net ADMT with 90th Percentile
600
500
400
300
200
100
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
ADMT
Average ADMT
90th Percentile


November 2013 Flow in m3 with 90th Percentile
170000
165000
160000
155000
150000
145000
140000
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Flow m3
Average Flow m3
90th Percentile