STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION
AUGUSTA, ME 04333

DEPARTMENT ORDER

IN THE MATTER OF

VERSO PAPER COMPANY	)	MAINE POLLUTANT DISCHARGE
JAY, FRANKLIN COUNTY, MAINE	)	ELIMINATION SYSTEM PERMIT
PULP & PAPER MANUFACTURING FACILITY	)	AND
ME0001937	)	WASTE DISCHARGE LICENSE
W000623-5N-L-R **APPROVAL**	)	**RENEWAL**

Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, Section 1251, et. seq., and Maine Law 38 M.R.S.A., Section 414-A et. seq., and all applicable regulations, the Department of Environmental Protection (Department hereinafter) has considered the application of VERSO PAPER COMPANY (Verso/permittee hereinafter), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

Verso has filed a timely and complete application with the Department to renew Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0001937/Maine Waste Discharge License (WDL) #W000623-5N-F-R (permit hereinafter) that was issued by the Department on September 15, 2005, for a five-year term. The permit was subsequently modified on April 10, 2006, February 7, 2008, July 21, 2008, December 29, 2008, May 8, 2009, January 27, 2010, and June 8, 2010. All permitting actions expired on September 21, 2010.

The Verso mill in Jay, Maine manufactures bleached kraft pulp and fine coated and specialty papers. Verso has applied to the Department for the issuance of a permit to discharge up to a daily maximum of 51 million gallons per day (MGD) of treated process waste waters, treated sanitary waste waters, contact and non-contact cooling waters, treated landfill leachate, treated stormwater runoff and general housekeeping waste waters associated with a kraft pulp and papermaking facility to the Androscoggin River in Jay, Maine. The Verso waste water treatment facility also has contracts to treat waste water from three other industrial facilities, the former Wausau-Mosinee paper facility, Specialty Minerals and Androscoggin Energy. Verso also maintains coverage under a MEPDES Multi-Sector General Permit for Stormwater Discharges Associated With Industrial Activity issued by the Department on April 26, 2011, for storm water outfalls on the mill property. The mill produced an average of 1,675 tons per day (TPD) of fine coated and specialty papers and 241 tons per day of kraft market pulp for the period calendar years 2007 – 2010 inclusively. The values are considered to be representative of normal production levels and are therefore being used to derive applicable production (technology) based limitations in this permitting action.

PERMIT SUMMARY

This permitting action is carrying forward the terms and conditions of the previous permitting actions (9/21/05, 4/10/06, 2/7/08, 7/21/08, 12/29/08, 5/8/09, 1/27/10 and 6/8/10) except that this permitting action;

1. Eliminates Special Condition L, *Biological Monitoring Plan*, of the September 21, 2005, permit that required the permittee to develop and implement an annual biological monitoring plan to monitor bald eagles and other fish eating bird species. The permittee is being relieved of this obligation based on the Maine Department of Inland Fisheries and Wildlife and the U.S. Fish and Wildlife Services determination that continuation of the monitoring program is not warranted by the findings of the past monitoring.

2. Eliminates Special Condition N, *Schedule of Compliance*, as the permittee has completed all tasks in the schedule and is in compliance with all effluent limitations in the 2005 permit and any subsequent modifications thereafter.

3. Establishes new water quality based limitations for inorganic arsenic, total cadmium, total copper, total lead and total zinc and establishes more stringent limits for total aluminum as test results submitted to the Department indicate the discharge from the mill either exceeds or has a reasonable potential to exceed applicable ambient water quality criteria (AWQC) for each of the metals cited. A schedule of compliance has been established for the new water quality based limits for aluminum and copper.

4. Eliminates the tier of effluent limitations and monitoring requirements referred to as "Without Wausau-Mosinee". Verso maintains a current Waste Water Treatment Agreement with the new owners (Otis Properties LLC) of the former Wausau-Mosinee mill complex. The agreement expires on October 13, 2014.

5. Establishes an annual certification requirement pursuant to Department rule 06-096 CMR, Chapter 530, *Surface Water Toxics Control Program.*

6. Increases the technology based limitations for adsorbable organic halogens (AOX) and chloroform based on a 7% increase in kraft pulp production from the 2005 permitting action.

7. Reduces the summertime (June – September) BOD monitoring frequency from 1/Day to 5/Week and reduces the non-summer (October – May) BOD monitoring frequency from 1/Day to 4/Week based on a statistical evaluation of the most recent 43 months of data submitted to the Department.

8. Reduces the summertime (June – September) TSS monitoring frequency from 1/Day to 4/Week and reduces the non-summer (October – May) TSS monitoring frequency from 5/Week to 4/Week based on a statistical evaluation of the most recent 43 months of data submitted to the Department.

PERMIT SUMMARY (cont'd)

9. Reduces the monitoring frequency for the 12 phenolics compounds from 2/Year to 1/Year based on a statistical evaluation of the most recent 43 months of data submitted to the Department.

10. Reduces the monitoring frequency for chloroform from 1/Quarter to 1/Year based on a statistical evaluation of the most recent 43 months of data submitted to the Department.

11. Reduces the monitoring frequencies for ortho-phosphorus from 3/Week to 2/Week based on a statistical evaluation of the most recent 43 months of data submitted to the Department.

12 Reduces the monitoring frequency for chemical oxygen demand from 1/Day to 4/Week based on a statistical evaluation of the most recent 43 months of data submitted to the Department.

13. Reduces the monitoring frequencies for mercury from 4/Year to 1/Year based on a statistical evaluation of the most recent 60 months of data submitted to the Department.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated September 27, 2012, the 2005 EPA approved Total Maximum Daily Load (TMDL) for Gulf Island Pond and ambient water quality monitoring results since issuance of the September 2005 permit, and subject to the terms and conditions contained herein, the Department makes the following CONCLUSIONS:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.

2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.

3. The provisions of the State's antidegradation policy, 38 M.R.S.A., Section 464(4)(F), will be met, in that:

   (a) Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;

   (b) Where high quality waters of the State constitute an outstanding natural resource, that water quality will be maintained and protected;

   (c) The standards of classification of the receiving water body are met or, where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification.

   (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification, that higher water quality will be maintained and protected; and

   (e) Where a discharge will result in lowering the existing quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.

4. The discharge will be subject to effluent limitations that require application of best practicable treatment.

ACTION

THEREFORE, the Department APPROVES the above noted application of the VERSO PAPER COMPANY, to discharge up to a daily maximum of 51 million gallons per day (MGD) of treated process waste waters, treated sanitary waste waters, treated landfill leachate, general housekeeping waste waters, storm water, contact and non-contact cooling waters from **Outfall #001** and bleach plant effluents (internal waste streams consisting of three points, the 15, 35 and 45 stages in each bleach plant) from **Outfall #100 and Outfall #200**, associated with a kraft pulp and papermaking facility to the Androscoggin River in Jay, Maine, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations:.

1. "*Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits*," revised July 1, 2002, copy attached.

2. The attached Special Conditions, including effluent limitations and monitoring requirements.

3. This permit becomes effective upon the date of signature below and expires at midnight five (5) years thereafter. If a renewal application is timely submitted and accepted as complete for processing prior to the expiration of this permit, the terms and conditions of this permit and all subsequent modifications and minor revisions thereto remain in effect until a final Department decision on the renewal application becomes effective. [*Maine Administrative Procedure Act*, 5 M.R.S.A. § 10002 and *Rules Concerning the Processing of Applications and Other Administrative Matters*, 06-096 CMR 2(21)(A) (effective April 1, 2003)]

PLEASE NOTE ATTACHED FACT SHEET FOR GUIDANCE ON APPEAL PROCEDURES

DONE AND DATED AT AUGUSTA, MAINE, THIS 20th DAY OF December, 2012.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Michael Kuhns
For Patricia W. Aho, Commissioner

Date of initial receipt of application June 22, 2010.

Date of application acceptance June 25, 2010.

Filed
DEC 20 2012
State of Maine
Board of Environmental Protection

Date filed with Board of Environmental Protection _____
This order prepared by Gregg Wood, BUREAU OF LAND AND WATER QUALITY

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OUTFALL #001A & #001B[1] – Secondary treated waste waters.

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	Weekly Average[2] as specified	Daily Maximum as specified	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow *[50050]*	Report MGD *[03]*	---	51 MGD*[03]*	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
BOD_5 *[00310]* (*June 1 – Sept. 30*)	4,400 lbs/day	6,400 lbs/day	8,000 lbs/day	---	---	---	5/Week *[05/07]*	Composite
(*Oct 1 – May 31*)	7,400 lbs/day *[26]*	11,100 lbs/day *[26]*	13,875 lbs/day *[26]*	---	---	---	4/Week *[04/07]*	Composite *[24]*
TSS *[00530]* (*June 1 – Sept 30*)	12,000 lbs/day	---	22,300 lbs/day	---	---	---	4/Week *[04/07]*	Composite *[24]*
	10,000 lbs/day[3]	---	---	---	---	---	1/Day *[01/01]*	Calculate *[CA]*
(*Oct 1 – May 31*)	25,000 lbs/day	---	44,600 lbs/day	---	---	---	4/Week *[04/07]*	Composite *[24]*
	14,738 lbs/day[4] *[26]*	---	---	---	---	---	1/Year *[01/YR]*	Calculate *[CA]*
Oxygen Injection*[34048]* (*June 1 – Sept. 30*)	---	---	24,279 lbs/day[5a] 34,490 lbs/day[5b]	---	---	---	1/Day*[01/01]*	Record *[RC]*
Total Phosphorus *[34048]* (*June 1 – September 30*)	130 lbs/day *[26]*	---	Report lbs/day *[26]*	Report mg/L[6] *[19]*	---	Report mg/L[6] *[19]*	3/Week *[03/07]*	Composite *[24]*
Ortho-phosphorus *[70507]* (*June 1 – September 30*)	28 lbs/day *[26]*	---	Report lbs/day *[26]*	Report mg/L[6] *[19]*	---	Report mg/L[6] *[19]*	2/Week *[02/07]*	Composite *[24]*

Footnotes: See pages 9 – 14.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

OUTFALL #001A & #001B – Secondary treated waste waters.

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Measurement Frequency As specified	Sample Type as specified
Temperature *[00011]* *June 1 – Sept. 30* *Oct. 1 – May 31*	--- ---	--- ---	--- ---	--- ---	--- ---	100°F *[15]* Report °F *[15]*	1/Day *[01/01]* 1/Week *[01/07]*	Measure *[MS]* Measure *[MS]*
River Temperature Increase *[03772]* *June 1 – Sept. 30*	--- ---	--- ---	--- ---	--- ---	0.5 °F(7a) *[15]*	---	1/Day *[01/01]*	Measure *[MS]*
River Temperature Increase *[03772]* *June 1 – Sept. 30*						0.5 °F(7b) *[15]*	1/Day *[01/01]*	Measure *[MS]*
Adsorbable Organic Halogen(8) (AOX) *[03594]*	1,495 lbs/day *[26]*	---	2,282 lbs/day *[26]*	---	---	---	2/Month *[02/30]*	Measure *[MS]*
Chemical Oxygen Demand(COD) (9) *[81017]*	51 kg/kkg *[2C]*	---	75 kg/kkg *[2C]*	---	---	---	4/Week *[04/07]*	Composite *[24]*
pH (Std. Unit) (10) *[00400]*	---	---	---	---	5.0 – 9.0 SU *[12]*	---	1/Day *[01/01]*	Composite *[24]*
Color(11) *[00084]*	113 lbs/ADTUBP *[42]*	---	---	---	---	---	3/Week *[03/07]*	Calculate *[CA]*

Footnotes: See pages 9 – 14.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

OUTFALL #001A & #001B – Secondary treated waste waters.

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average as specified	Daily Maximum as specified	Monthly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Aluminum (Total) *[01092]*	Report lbs/day *[26]*	—	Report ug/L *[28]*	—	1/Quarter *[01/90]*	Composite *[24]*
Aluminum (Total) *[01092]* *(Beginning December 19, 2017)*	677 lbs/day *[26]*	—	Report ug/L *[28]*	—	1/Quarter *[01/90]*	Composite *[24]*
Arsenic (Total) (12) *[01002]* *(Upon permit issuance)*	Report lbs/day *[26]*	—	Report ug/L *[28]*	—	2/Year *[02/YR]*	Composite *[24]*
Arsenic (Inorganic) (13) *[01252]* *(Upon EPA method approval)*	0.19 lbs/day *[26]*	—	Report ug/L *[28]*	—	2/Year *[02/YR]*	Composite *[24]*
Cadmium (Total) *[01027]*	0.46 lbs./day *[26]*	1.2 lbs./day *[26]*	Report ug/L *[28]*	Report ug/L *[28]*	1/Quarter *[01/90]*	Composite *[24]*
Copper (Total) *[01042]*	Report lbs/day *[26]*	—	Report ug/L *[28]*	—	1/Quarter *[01/90]*	Composite *[24]*
Copper (Total) *[01042]* *(Beginning December 19, 2017)*	9.8 lbs/day *[26]*	6.4 lbs/day *[26]*	Report ug/L *[28]*	Report ug/L *[28]*	1/Quarter *[01/90]*	Composite *[24]*

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

OUTFALL #001A & #001B – Secondary treated waste waters.

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average as specified	**Daily Maximum** as specified	**Monthly Average** as specified	**Daily Maximum** as specified	**Measurement Frequency** as specified	**Sample Type** as specified
Lead (Total) *[01051]*	2.7 lbs/day *[26]*	---	Report ug/L *[28]*	---	2/Year *[02/YR]*	Composite *[24]*
Mercury (Total) (14) *[71900]*	---	---	15.8 ng/L *[3M]*	23.7 ng/L *[3M]*	1/Year *[01/YR]*	Composite *[24]*
Zinc (Total) *[01092]*	---	90 lbs/day *[26]*	---	Report ug/L *[28]*	2/Year *[02/YR]*	Composite *[24]*

Footnotes: See pages 9 – 14

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

SURVEILLANCE LEVEL - Beginning upon permit issuance and lasting through 24 months prior to permit expiration (Years 1, 2 & 3 of the term of the permit) and commencing again 12 months prior to permit expiration (Year 5 of the term of the permit).

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity(15a)						
Acute – NOEL						
Ceriodaphnia dubia (Water flea) *[TDA3B]*	---	---	---	Report % *[23]*	1/2 Years *[01/2Y]*	Grab *[GR]*
Salvelinus fontinalis (Brook trout) *[TDA6F]*	---	---	---	Report % *[23]*	1/2 Years *[01/2Y]*	Grab *[GR]*
Chronic – NOEL						
Ceriodaphnia dubia (Water flea) *[TBP3B]*	---	---	---	Report % *[23]*	1/2 Years *[01/2Y]*	Grab *[GR]*
Salvelinus fontinalis (Brook trout) *[TBQ6F]*	---	---	---	Report % *[23]*	1/2 Years *[01/2Y]*	Grab *[GR]*
Analytical chemistry(16a, 18) *[51168]*	---	---	---	Report ug/L *[28]*	1/2 Years *[01/2Y]*	Composite/Grab *[24]*

SCREENING LEVEL - Beginning 24 months prior to permit expiration and lasting through 12 months prior to permit expiration (Year 4 of the term of the permit) and every five years thereafter if a timely request for renewal has been made and the permit continues in force, or is replaced by a permit renewal containing this requirement.

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity(15b)						
Acute – NOEL						
Ceriodaphnia dubia (Water flea) *[TDA3B]*	---	---	---	Report % *[23]*	2/Year *[02/YR]*	Grab *[GR]*
Salvelinus fontinalis (Brook trout) *[TDA6F]*	---	---	---	Report % *[23]*	2/Year *[02/YR]*	Grab *[GR]*
Chronic – NOEL						
Ceriodaphnia dubia (Water flea) *[TBP3B]*	---	---	---	Report % *[23]*	2/Year *[02/YR]*	Grab *[GR]*
Salvelinus fontinalis (Brook trout) *[TBQ6F]*	---	---	---	Report % *[23]*	2/Year *[02/YR]*	Grab *[GR]*
Analytical chemistry(16b, 18) *[51168]*	---	---	---	Report ug/L *[28]*	1/Quarter *[01/90]*	Composite/Grab *[24]*
Priority Pollutant (17, 18) *[50008]*	---	---	---	Report ug/L *[28]*	1/Year *[01/YR]*	Composite/Grab *[24]*

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Outfalls #001A & #001B

Footnotes:

Effluent sampling for Outfall #001 shall be sampled for all parameters from the effluent collection box (after secondary clarification) on a year-round basis. Any change in sampling location must be reviewed and approved by the Department in writing.

Sampling – Sampling and analysis must be conducted in accordance with; a) methods approved in 40 Code of Federal Regulations (CFR) Part 136, b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136, or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Human Services. Samples that are sent to another POTW licensed pursuant to *Waste discharge licenses*, 38 M.R.S.A. § 413 or laboratory facilities that analyze compliance samples in-house are subject to the provisions and restrictions of *Maine Comprehensive and Limited Environmental Laboratory Certification Rules*, 10-144 CMR 263 (last amended February 13, 2000).

All analytical test results shall be reported to the Department including results which are detected below the respective reporting limits (RLs) specified by the Department or as specified by other approved test methods. See **Attachment A** of this permit for a list of the Department's RLs. If a non-detect analytical test result is below the respective RL, the concentration result shall be reported as <Y where Y is the RL achieved by the laboratory for each respective parameter. Reporting a value of <Y that is greater than an established RL or reporting an estimated value ("J" flagged) is not acceptable and will be rejected by the Department. Reporting analytical data and its use in calculations must follow established Department guidelines specified in this permit or in available Department guidance documents.

(1) **Discharge location** - Outfall 001A is a 36" diameter pipe which is normally utilized to convey the treated process waste waters from the waste water treatment plant from the mill to the Androscoggin River. During periods of high storm water runoff events due to precipitation or snow melt events, most common in the spring and fall, discharges from Outfall 001A are hydraulically limited. As a result, the waste water treatment facility experiences hydraulic limitations and best practicable treatment of the wastewater is jeopardized. This permit authorizes the facility to discharge from Outfall 001B, a 14" diameter pipe located adjacent to Outfall 001A. The discharges from Outfall 001B will receive the same degree of treatment as discharges from Outfall 001A and all flows discharged through the secondary outfall are measured and included in analysis for all effluent samples and calculations for compliance purposes.

(2) **Average weekly discharge limitation** means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Outfalls #001A & #001B

Footnotes:

(3) **TSS** - 60–day rolling average defined as the average of sixty consecutive daily TSS discharges between June 1st and September 30th to be reported in the July, August, and September DMRs. Report the highest 60-day average for each month.

(4) **TSS** - Annual average defined as the average of all valid results between January 1st – December 31st of each year.

(5) **Oxygen Injection –** Verso shall, in partnership with FPL Maine Hydro LLC, Rumford Paper Company and Gorham Paper and Tissue LLC, or their successors in interest;

(a) Inject up to 24,279 lbs (assumes 54% efficiency) at Upper Narrows or an equivalent amount given an alternate efficiency.

(b) Inject up to 34,490 lbs (assumes 75% efficiency) at Lower Narrows or an equivalent amount given an alternate efficiency.

(6) **Total phosphorus and Ortho-phosphorus** - Report to the nearest pound. See **Attachment B** of this permit for Department protocols.

(7) **River Temperature Increase**

(a) **Temperature Increase** (Increase of the ambient receiving water temperature) – This is a weekly rolling average (7-day rolling average) limitation when the receiving water temperature is ≥66°F and <73°F. See Special Condition K, *River Temperature Increase*, of this permit for the equation to calculate the calculated river temperature increase (CRTI).

(b) **Temperature Increase** (Increase of the ambient receiving water temperature) - This is a daily maximum limitation when the receiving water temperature is ≥73°F.

(8) **AOX** - The analytical method to be used to determine adsorbable organic halogens shall be EPA Method 1650 for which a ML (Minimum Level) of 20 ug/l shall be attained. The ML is defined as the level at which the analytical system gives recognizable signals and an acceptable calibration point. There shall be at least seven (7) days between sampling events.

SPECIAL CONDITIONS
A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)
Outfalls #001A & #001B

Footnotes:

(9) **COD** - Limitations for COD are expressed as the soluble fraction of COD in the final effluent.

(10) **pH** - For Outfall #001, criteria found at Department rule Chapter 525 (4)(VIII)(A) (1&2) regarding pH limitations under continuous monitoring is applicable to the discharge when continuous monitoring is utilized.

(11) **Color** – The limitation is a calendar quarterly average limitation. Quarterly results shall be reported in the monthly DMR's for the months of March, June, September and December of each calendar year. The permittee shall monitor the true color (at a pH of 7.6 S.U) in the effluent from Outfall #001 at a minimum of three (3) times per week. The calculated mass discharged, shall be expressed as pounds per air dried ton of unbleached pulp (ADTUBP) produced entering the bleach plant. A color pollution unit is equivalent to a platinum cobalt color unit as described in NCASI Technical Document #253. A pound of color is defined as the number of color pollution units multiplied by the volume of effluent discharged in million gallons per day multiplied by 8.34. Where discharge monitoring is required when production is less than 50%, the resulting data shall be reported as a daily measurement but not included in computation of averages, unless specifically authorized by the Department.

(12) **Arsenic (Total) – Beginning upon issuance of this permit and lasting through a date on which the USEPA approves a test method for inorganic arsenic,** the permittee shall sample and analyze the discharge from the facility for total arsenic. The Department's most current reporting limit (RL) for total arsenic is 5 ug/L but may be subject to revision during the term of this permit. All detectable analytical test results shall be reported to the Department including results which are detected below the Department's most current RL at the time of sampling and reporting. Only the detectable results greater than the total arsenic threshold of 0.9 ug/L or the Department's RL at the time (whichever is higher) will be considered as a possible exceedence of the water quality criteria for inorganic arsenic. If a test result is determined to be a possible exceedence, the permittee shall submit a toxicity reduction evaluation (TRE) to the Department for review and approval within 45 days of receiving the test result of concern from the laboratory.

(13) **Arsenic (Inorganic)** – The limitations and monitoring requirements for inorganic arsenic are not in effect until the USEPA approves of a test method for inorganic arsenic. See Special Condition L, *Schedule of Compliance – Inorganic Arsenic*, of this permit. Once effective, compliance will be based on a 12-month rolling average basis beginning 12 months after the effective date of the limits. Following USEPA approval of a test method for inorganic arsenic and based on recent available data, the permittee may request that the Department reopen this permit in accordance with Special Condition Q, *Reopening of Permit For Modifications*, of this permit to establish a schedule of compliance for imposition of the numeric inorganic arsenic limitations.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Outfalls #001A & #001B

Footnotes:

(14)**Mercury** - All mercury sampling (1/Year) required to determine compliance with interim limitations established pursuant to Department rule Chapter 519, shall be conducted in accordance with EPA's "clean sampling techniques" found in EPA Method 1669, Sampling Ambient Water For Trace Metals At EPA Water Quality Criteria Levels. All mercury analysis shall be conducted in accordance with EPA Method 1631E, Determination of Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Fluorescence Spectrometry. See **Attachment C**, *Effluent Mercury Test Report*, of this permit for the Department's form for reporting mercury test results. The limitation in the monthly average column in Special Condition A (1) of this permit is an arithmetic mean of all the mercury tests ever conducted for the facility utilizing sampling Methods 1669 and analysis Method 1631E.

(15) **Whole Effluent Toxicity (WET)** - Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions set at levels to bracket the acute and chronic critical water quality thresholds of 4.7%), which provides an estimate of toxicity in terms of No Observed Effect Level, commonly referred to as NOEL or NOEC. A-NOEL is defined as the acute no observed effect level with survival as the end point. C-NOEL is defined as the chronic no observed effect level with survival, reproduction and growth as the end points.

a. **Surveillance level testing** - Beginning upon permit issuance and lasting through 24 months prior to permit expiration (Years 1, 2 & 3 of the term of the permit) and commencing again 12 months prior to permit expiration (Year 5 of the term of the permit), the permittee shall conduct surveillance level WET testing at a minimum frequency of once every other year (1/2 Years) for both the water flea (*Ceriodaphnia dubia*) and the brook trout (*Salvelinus fontinalis*). Testing shall be conducted in a different calendar quarter each sampling event.

b. **Screening level testing** - Beginning 24 months prior to permit expiration and lasting through 12 months prior to permit expiration (Year 4 of the term of the permit) and every five years thereafter if a timely request for renewal has been made and the permit continues in force, or is replaced by a permit renewal containing this requirement, the permittee shall conduct screening level WET testing at a minimum frequency of twice per year (2/Year) for both species. Acute and chronic tests shall be conducted on both the water flea (*Ceriodaphnia dubia*) and the brook trout (*Salvelinus fontinalis).* Testing shall be conducted in a different calendar quarter each sampling event.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)
Outfalls #001A & #001B
Footnotes:

Toxicity tests must be conducted by an experienced laboratory approved by the Department. The laboratory must follow procedures as described in the following U.S.E.P.A. methods manuals as modified by Department protocol for the brook trout.

Short Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Water to Freshwater Organisms, Fourth Edition, October 2002, EPA-821-R-02-013.

Methods for Measuring the Acute Toxicity of Effluent and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, October 2002, EPA-821-R-02-012.

WET test results must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days of their availability from the laboratory before submitting them. The permittee shall evaluate test results being submitted and identify to the Department possible exceedences of the critical acute and chronic water quality thresholds of 4.7% respectively. See **Attachment D** of this permit for a copy of the Department's WET report form.

Each time a WET test is performed, the permittee shall sample and analyze for the parameters in the WET Chemistry and the Analytical Chemistry sections of the Department form entitled, *Maine Department of Environmental Protection, WET and Chemical Specific Data Report Form*. See **Attachment A** of this permit. Analytical chemistry is not required for WET tests conducted for a toxicity identification evaluation (TIE), toxicity reduction evaluation (TRE) or for other investigative purposes.

(16) **Analytical chemistry** – Refers to a suite of chemicals in **Attachment A** of this permit.

a. **Surveillance level testing** – Beginning upon permit issuance and lasting through 24 months prior to permit expiration (Years 1, 2 & 3 of the term of the permit) and commencing again 12 months prior to permit expiration (Year 5 of the term of the permit),, the permittee shall conduct analytical chemistry testing at a minimum frequency of once every other year (1/2 Years). As with WET testing, testing shall be conducted in a different calendar quarter of each year.

b. **Screening level testing** – Beginning 24 months prior to permit expiration and lasting through 12 months prior to permit expiration (Year 4 of the term of the permit) and every five years thereafter if a timely request for renewal has been made and the permit continues in force, or is replaced by a permit renewal containing this requirement, the permittee shall conduct analytical chemistry testing at a minimum frequency of once per calendar quarter (1/Quarter) for four consecutive calendar quarters.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Outfalls #001A & #001B

Footnotes:

(17) **Priority pollutant testing** – Refers to a suite of chemicals in **Attachment A** of this permit.

a. **Surveillance level testing** - Department rule Chapter 530, *Surface Water Toxics Control Program*, does not establish routine surveillance level testing priority pollutant testing.

b. **Screening level testing** - Beginning 24 months prior to permit expiration and lasting through 12 months prior to permit expiration (Year 4 of the term of the permit) and every five years thereafter if a timely request for renewal has been made and the permit continues in force, or is replaced by a permit renewal containing this requirement,, the permittee shall conduct screening level priority pollutant testing at a minimum frequency of once per year (1/Year).

(18) **Priority pollutant and analytical chemistry testing** – Testing shall be conducted on samples collected at the same time as those collected for whole effluent toxicity tests when applicable. Priority pollutant and analytical chemistry testing shall be conducted using methods that permit detection of a pollutant at existing levels in the effluent or that achieve minimum reporting levels of detection as specified by the Department. See **Attachment A** of this permit for a list of the Department's reporting levels (RLs) of detection. All valid test results, even those detected below the Department's reporting limit shall be reported to the Department. Test results must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days of their availability before submitting them. The permittee shall evaluate test results being submitted and identify to the Department, possible exceedences of the acute, chronic or human health AWQC as established in Department rule Chapter 584 *Surface Water Quality Criteria for Toxic Pollutants.* For the purposes of DMR reporting, enter a "1" for yes, testing done this monitoring period or "NODI-9" monitoring not required this period.

SPECIAL CONDITIONS

OUTFALL #100 (Bleach Plant A)

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average as specified	Daily Maximum as specified	Monthly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow *[50050]*	Report MGD *[03]*	Report MGD *[03]*	---	---	1/Day[19] *[01/01]*	Calculate *[CA]*
2,3,7,8 TCDD (Dioxin)[20] *[34675]*	---	---	---	<10 pg/L[22] *[3L]*	1/Year *[01/YR]*	Composite *[24]*
2,3,7,8 TCDF (Furan)[20] *[38691]*	---	---	---	<10 pg/L[22] *[3L]*	1/Year *[01/YR]*	Composite *[24]*
Trichlorosyringol[21] *[73054]*	---	---	---	<2.5 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*
3,4,5-Trichlorocatechol[21] *[73037]*	---	---	---	<5.0 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*
3,4,,6- Trichlorocatechol[21] *[51024]*	---	---	---	<5.0 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*
3,4,5-Trichloroguaiacol[21] *[61024]*	---	---	---	<2.5 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*
3,4,6-Trichloroguaiacol[21] *[51022]*	---	---	---	<2.5 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*
4,5,6-Trichloroguaiacol[21] *[73088]*	---	---	---	<2.5 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*
2,4,5-Trichlorophenol[21] *[61023]*	---	---	---	<2.5 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*
2,4,6-Trichlorophenol[21] *[34621]*	---	---	---	<2.5 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*
Tetrachlorocatechol[21] *[79850]*	---	---	---	<5.0 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*
Tetrachloroguaiacol[21] *[73047]*	---	---	---	<5.0 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*
2,3,4,6-Tetrachlorophenol[21] *[77770]*	---	---	---	<2.5 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*
Pentachlorophenol[21] *[39032]*	---	---	---	<5.0 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*

SPECIAL CONDITIONS

OUTFALL #200 (Bleach Plant B)

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average as specified	Daily Maximum as specified	Monthly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow *[50050]*	Report MGD *[03]*	Report MGD *[03]*	---	---	1/Day[19] *[01/01]*	Calculate *[CA]*
2,3,7,8 TCDD (Dioxin)[20] *[34675]*	---	---	---	<10 pg/L[21] *[3L]*	1/Year *[01/YR]*	Composite *[24]*
2,3,7,8 TCDF (Furan)[20] *[38691]*	---	---	---	<10 pg/L[22] *[3L]*	1/Year *[01/YR]*	Composite *[24]*
Trichlorosyringol[21] *[73054]*	---	---	---	<2.5 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*
3,4,5-Trichlorocatechol[21] *[73037]*	---	---	---	<5.0 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*
3,4,,6- Trichlorocatechol[21] *[51024]*	---	---	---	<5.0 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*
3,4,5-Trichloroguaiacol[21] *[61024]*	---	---	---	<2.5 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*
3,4,6-Trichloroguaiacol[21] *[51022]*	---	---	---	<2.5 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*
4,5,6-Trichloroguaiacol[21] *[73088]*	---	---	---	<2.5 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*
2,4,5-Trichlorophenol[21] *[61023]*	---	---	---	<2.5 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*
2,4,6-Trichlorophenol[21] *[34621]*	---	---	---	<2.5 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*
Tetrachlorocatechol[21] *[79850]*	---	---	---	<5.0 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*
Tetrachloroguaiacol[21] *[73047]*	---	---	---	<5.0 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*
2,3,4,6-Tetrachlorophenol[21] *[77770]*	---	---	---	<2.5 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*
Pentachlorophenol[21] *[39032]*	---	---	---	<5.0 ug/L[22] *[28]*	1/Year *[01/YR]*	Composite *[24]*

SPECIAL CONDITIONS
OUTFALL #100 (Bleach Plant A) & OUTFALL #200 (Bleach Plant B)

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average as specified	Daily Maximum as specified	Monthly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Chloroform(23) [32106]	9.9 #/day	16.6 #/day	---	---	1/Year [01/YR]	Grab [24]

For Outfall #100 and #200 (bleach plants) sampling for all parameters shall be collected from the seal tank filtrates. Any change in sampling location(s) must be reviewed and approved by the Department in writing.

(19) **1/Day Sampling** – The permittee is only required to calculate and report flows on days when sampling is being conducted.

(20) **2,3,7,8 TCDD (Dioxin) & 2,3,7,8 TCDF (Furan)** – The analytical method to be used to determine the concentrations of dioxin and furan shall be EPA Method 1613. See Special Condition H, *Dioxin/Furan Certification*, of this permit for annual certification requirements.

(21) **12 Chlorinated phenolic compounds** - The analytical method to be used to determine the concentrations of these compounds shall be EPA Method 1653.

(22) **Minimum Levels (ML's)** - The limitations established in this permitting action for dioxin, furan and the 12 chlorinated phenolic compounds are equivalent to the ML's established for EPA Methods 1613 and 1653 respectively. For the purposes of reporting test results on the monthly DMR, the following format shall be adhered to:

Detectable results - All detectable analytical test results shall be reported to the Department including results which are detected below the respective ML.

Non-detectable results - If the analytical test result is below the respective ML, the concentration result shall be reported as <X where X is the detection level achieved by the laboratory for each respective parameter.

(23) **Chloroform** - The preferred analytical method to be used for chloroform is EPA Method 1624B for which a ML of 20 ug/l shall be attained. Other approved EPA methods are 601 and 624, and Standard Method 6210B and 6230B. The permittee must collect separate grab samples from the acid and alkaline bleach plant filtrates for chloroform analysis. Samples to be analyzed for chloroform may be taken over a period not to exceed 32 hours where a minimum of six (6) grab samples are collected, each grab sample being at least three (3) hours apart but no more than 16 hours apart. The monthly average and daily maximum limitations of 9.9 lbs/day and 16.6 lbs/day are limits for Bleach Plants A & B collectively.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Outfalls #100 & #200

For Outfall #100 and #200 (bleach plants) sampling for all parameters shall be collected from the seal tank filtrates. Any change in sampling location(s) must be reviewed and approved by the Department in writing.

(19) **1/Day Sampling** – The permittee is only required to calculate and report flows on days when sampling is being conducted.

(20) **2,3,7,8 TCDD (Dioxin) & 2,3,7,8 TCDF (Furan)** – The analytical method to be used to determine the concentrations of dioxin and furan shall be EPA Method 1613. See Special Condition H, *Dioxin/Furan Certification*, of this permit for annual certification requirements.

(21) **12 Chlorinated phenolic compounds** - The analytical method to be used to determine the concentrations of these compounds shall be EPA Method 1653.

(22) **Minimum Levels (ML's)** - The limitations established in this permitting action for dioxin, furan and the 12 chlorinated phenolic compounds are equivalent to the ML's established for EPA Methods 1613 and 1653 respectively. For the purposes of reporting test results on the monthly DMR, the following format shall be adhered to:

Detectable results - All detectable analytical test results shall be reported to the Department including results which are detected below the respective ML.

Non-detectable results - If the analytical test result is below the respective ML, the concentration result shall be reported as <X where X is the detection level achieved by the laboratory for each respective parameter.

(23) **Chloroform** - The preferred analytical method to be used for chloroform is EPA Method 1624B for which a ML of 20 ug/l shall be attained. Other approved EPA methods are 601 and 624, and Standard Method 6210B and 6230B. The permittee must collect separate grab samples from the acid and alkaline bleach plant filtrates for chloroform analysis. Samples to be analyzed for chloroform may be taken over a period not to exceed 32 hours where a minimum of six (6) grab samples are collected, each grab sample being at least three (3) hours apart but no more than 16 hours apart. The monthly average and daily maximum limitations of 9.9 lbs/day and 16.6 lbs/day are limits for Bleach Plants A & B collectively.

SPECIAL CONDITIONS

B. NARRATIVE EFFLUENT LIMITATIONS

1. The effluent shall not contain a visible oil sheen, foam, or floating solids which would impair the usages designated for the classification of the receiving waters. The Riley Road Bridge (ME DOT Bridge 6050) will serve as an initial observation point for detection of abnormal levels of foam and floating solids in the river. Should abnormal levels of foam or floating solids be observed at said bridge, the permittee is required to take the necessary steps to mitigate or eliminate the source(s) of foam or floating solids. The permittee is required to notify the Department of such events in accordance with Standard Condition D, *Reporting Requirements*, of this permit.

2. The effluent shall not contain materials in concentrations or combinations which are hazardous or toxic to aquatic life; or which would impair the usages designated for the classification of the receiving waters.

3. The discharge shall not impart color, taste, turbidity, toxicity, radioactivity or other properties which cause those waters to be unsuitable for the designated uses and characteristics ascribed to their class.

4. Notwithstanding specific conditions of this permit, the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.

C. TREATMENT PLANT OPERATOR

The person who has the management responsibility over the treatment facility must hold a **Grade V** certificate (or higher) or must be a Maine Registered Professional Engineer pursuant to *Sewerage Treatment Operators*, Title 32 M.R.S.A., Sections 4171-4182 and *Regulations for Wastewater Operator Certification*, 06-096 CMR 531 (effective May 8, 2006). All proposed contracts for facility operation by any person must be approved by the Department before the permittee may engage the services of the contract operator.

D. NOTIFICATION REQUIREMENT

In accordance with Standard Condition D, the permittee shall notify the Department of the following:

1. Any substantial change (realized or anticipated) in the volume or character of pollutants being introduced into the waste water collection and treatment system.

2. For the purposes of this section, adequate notice shall include information on:

   a. The quality and quantity of waste water introduced to the waste water collection and treatment system; and
   b. Any anticipated change in the quality and quantity of the waste water to be discharged from the treatment system.

SPECIAL CONDITIONS

E. AUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with: 1) the permittee's General Application for Waste Discharge Permit, accepted for processing on June 25, 2010; 2) the terms and conditions of this permit; and 3) only from Outfall #001A and #001B. Discharges of waste water to a surface waterbody from any other point source are not authorized under this permit, and shall be reported in accordance with Standard Condition B(5)(*Bypass*) of this permit.

F. OPERATION & MAINTENANCE (O&M) PLAN

This facility shall maintain a current written comprehensive Operation & Maintenance (O&M) Plan. The plan shall provide a systematic approach by which the permittee shall at all times, properly operate and maintain all facilities and systems of transport, treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit.

By December 31 of each year, or within 90 days of any significant process changes, the permittee shall evaluate and modify the O&M Plan including site plan(s) and schematic(s) for the waste water treatment facility to ensure that it is up-to-date. The O&M Plan shall be kept on-site at all times and made available to Department and EPA personnel upon request.

Within 90 days of completion of new and or substantial upgrades of the waste water treatment facility, the permittee shall submit the updated O&M Plan to their Department inspector for review and comment.

G. ANNUAL 06-096 CMR 530(2)(D)(4) STATEMENT FOR REDUCED/WAIVED TOXICS TESTING

By December 31 of each calendar year, the permittee shall provide the Department with a certification describing any of the following that have occurred since the effective date of this permit ***[PCS Code 95799]***: See **Attachment F** of the Fact Sheet for an acceptable certification form to satisfy this Special Condition.

(a) Changes in the number or types of non-domestic wastes contributed directly or indirectly to the wastewater treatment works that may increase the toxicity of the discharge;

(b) Changes in the operation of the treatment works that may increase the toxicity of the discharge; and

(c) Changes in industrial manufacturing processes contributing wastewater to the treatment works that may increase the toxicity of the discharge.

SPECIAL CONDITIONS

G. ANNUAL 06-096 CMR 530(2)(D)(4) STATEMENT FOR REDUCED/WAIVED TOXICS TESTING (cont'd)

In addition, in the comments section of the certification form, the permittee shall provide the Department with statements describing;

(d) Changes in storm water collection or inflow/infiltration affecting the facility that may increase the toxicity of the discharge.

(e) Increases or decreases in the type or volume of off-site process waste waters accepted by the facility.

The Department reserves the right to modify toxicity testing if new information becomes available that indicates the discharge may cause or have a reasonable potential to cause exceedences of ambient water quality criteria/thresholds or if it determines that there have been changes in the character of the discharge or if annual certifications described above are not submitted.

H. DIOXIN/FURAN CERTIFICATION

In lieu of 1/Month monitoring of the bleach plant waste stream for 2,3,7,8 TCDD (dioxin) and 2,3,7,8 TCDF (furan) (40 CFR Part 430), **by December 31 of each calendar year** *(PCS Code 95799)*, the permittee shall sample a minimum of 1/Year and report the results for said parameters and provide the Department with a certification stating:

a. Elemental chlorine gas or hypochlorite was not used in the bleaching of pulp.

b. The chlorine dioxide (ClO2) generating plant has been operated in a manner which minimizes or eliminates byproduct elemental chlorine generation per the manufacturers/suppliers recommendations.

c. Documented and verifiable purchasing procedures are in place for the procurement of defoamers or other additives without elevated levels of known dioxin precursors.

d. Fundamental design changes that affect the ClO2 plant and/or bleach plant operation have been reported to the Department prior to their implementation and said reports explained the reason(s) for the change and any possible adverse consequences.

SPECIAL CONDITIONS

I. GULF ISLAND POND OXYGEN INJECTION OPERATION

1. The permittee shall, in partnership with FPL Maine Hydro LLC, Rumford Paper Company and Gorham Paper and Tissue LLC, or their successors-in-interest, operate and maintain a system to inject oxygen into Gulf Island Pond at Upper Narrows and Lower Narrows in such quantities and in such manner as described in this condition.

2. The permittee shall, in partnership with FPL Maine Hydro LLC, Rumford Paper Company and Gorham Paper and Tissue LLC, or their successors-in-interest, inject oxygen at Upper Narrows at a rate of up to 24,279 lbs/day at an oxygen transfer efficiency of 54%, and at Lower Narrows at a rate of up to 34,490 lbs/day, at an oxygen transfer efficiency of 75%, or at equivalent rates and efficiencies:

   The Gulf Island Pond Oxygenation Project (GIPOP) shall be available for operation beginning June 1 annually, or as soon thereafter as river flows recede to 5,000 cfs or less (to allow for safe inspection and maintenance of the oxygen injection system), and ending September 30 annually.

   GIPOP operation shall begin when the 3-day average temperature at Turner Bridge is greater than 18°C in June and shall cease when the 3-day average temperature at Turner Bridge is less than 21°C in September.

   During the operational period defined above, GIPOP shall be operated in accordance with the following oxygen injection rates (expressed as pounds per day) for the stated 3-day average river temperature and flow conditions.

Oxygen Injection Thresholds	Oxygen Injection At Upper Narrows	Oxygen Injection At Lower Narrows	Oxygen Injection Total
$Q > 3{,}500$	0	0	0
$T < 24$ & $3{,}000 < Q \leq 3{,}500$	1,355	34,073	35,428
$T < 24$ & $2{,}500 < Q \leq 3{,}000$	5,210	31,989	37,199
$T < 24$ & $Q \leq 2{,}500$	19,069	32,198	51,266
$T \geq 24$ & $Q \leq 3{,}500$	24,279	34,490	58,769

SPECIAL CONDITIONS

I. GULF ISLAND POND OXYGEN INJECTION OPERATION (cont'd)

1. All temperature measurements, in degrees Celsius, shall be obtained from the continuous temperature monitor at Turner Bridge and shall be expressed as a 3-day rolling average. The monitor records maximum and minimum temperatures for a given day. The daily average temperature is defined as the arithmetic mean of the maximum and minimum temperatures for a given day. The 3-day rolling average temperature (T) is defined as the arithmetic mean of three consecutive daily average temperature values.

2. All flow measurements, in cubic feet per second, shall be obtained from the USGS gage at Rumford and shall be expressed as a 3-day rolling average. The gage records hourly flows. The daily average flow is defined as the arithmetic mean of the hourly flows for a given day. The 3-day rolling average flow (Q) is defined as the arithmetic mean of three consecutive daily average flow values.

3. The permittee shall, in partnership with FPL Maine Hydro LLC, Rumford Paper Company and Gorham Paper and Tissue LLC,, or their successors-in-interest, conduct and submit the results of annual ambient water quality monitoring (see Special J of this permit) to determine compliance with Class C dissolved oxygen standards in Gulf Island Pond, in accordance with a plan approved by the Department, and any subsequent amendments or modifications thereto.

4. Based on any future revisions to the Department's water quality model for the Androscoggin River and Gulf Island Pond and/or any future modifications to the Department's May 2005 Androscoggin River Total Maximum Daily Load (TMDL) Report, and after notice to the permittee and opportunity for hearing, the Department reserves the right to re-open and modify the terms of this permit to change the rates of oxygen injection specified herein.

5. The permittee shall, in partnership with FPL Maine Hydro LLC, Rumford Paper Company and Gorham Paper and Tissue LLC, or their successors-in-interest, be responsible for taking such actions as are needed to meet Class C dissolved oxygen standards in Gulf Island Pond, insofar as Gulf Island Dam and wastewater discharges from the upstream paper mills cause or contribute to a violation of these standards. After reviewing the results of monitoring following the installation and operation of the oxygen injection system as required above and the implementation of all upstream point source final effluent limits, and after notice to the permittee, FPL Maine Hydro LLC, Rumford Paper Company and Gorham Paper and Tissue LLC, or their successors-in-interest, and opportunity for hearing, the Department reserves the right to reopen and modify the terms of the relevant permits and certification to require reduced effluent limitations and/or changes in oxygen injection system(s) and/or oxygen injection rates, or other equivalent measures, as may be deemed necessary to ensure that Gulf Island Dam and wastewater discharges from the upstream paper mills do not cause or contribute to the violation of Class C dissolved oxygen standards in Gulf Island Pond.

SPECIAL CONDITIONS

I. GULF ISLAND POND OXYGEN INJECTION OPERATION (cont'd)

6. The permittee may in partnership with FPL Maine Hydro LLC, Verso Paper and Gorham Paper and Tissue LLC, or their successors-in-interest, submit proposed changes to the operational plan at any time for review and approval by the Department.

   Failure to inject oxygen at the required rates shall be reported verbally to the Department as soon as possible by the permittee or by one or more of the parties operating the GIP oxygenation system on behalf of the permittee. Written notification shall be submitted to the Department within five days by the permittee or by one or more of the parties operating the GIP oxygenation system on behalf of the permittee.

   For the months of June, July, August and September of each calendar year, the permittee shall submit a spreadsheet (similar in format to the example below) to the Department as an attachment to the respective monthly Discharge Monitoring Report (DMR).

Date	Temperature (°C)	River Flow (cfs)	Oxygen Injected (lbs/day)
6/1	23°C	3,200 cfs	31,000 lbs/day
↓			
6/30	25°C	2,900 cfs	98,150 lbs/day

J. AMBIENT WATER QUALITY MONITORING

By February 1st of each year, *[PCS Code 22099]* the permittee shall independently or in conjunction with other parties, submit an updated ambient water quality monitoring plan for that year to the Department for review and approval.

Between June 1 and September 30 of each year *[PCS Code 21599]* the permittee shall independently or in conjunction with other parties participate in ambient water quality monitoring of Gulf Island Pond and/or designated segments of the Androscoggin River in accordance with the pre-approved monitoring plan.

By November 30th of each year, *[PCS Code 90199, 90299, 90399, 90499]* the permittee shall independently or in conjunction with other parties, submit a written report to the Department summarizing the results of the monitoring for that year. The report shall include, but not be limited to, all the field data and any pertinent field observations (algal blooms in particular), a statistical analysis of the field data and interpretation and/or conclusions drawn from the analysis and/or data and any recommendations for revisions to the monitoring plan (if appropriate) for the following year.

SPECIAL CONDITIONS

K. RIVER TEMPERATURE INCREASE

When the ambient receiving water temperature is >66°F and <73°F, the permittee is limited to a thermal discharge that will not increase the ambient receiving water temperature by more than 0.5°F based on a weekly (7 days) rolling average calculation. When the ambient receiving water temperature is >73°F, the permittee is limited to a thermal discharge that will not increase the ambient receiving water temperature by more than 0.5°F based on a daily average calculation. For each operating day during the applicable limitation period, the permittee shall calculate the Calculated River Temperature Increase (CRTI) associated with the thermal discharge from Outfall #001 according to the procedures set forth in the Department approved Heat Gain/Heat Loss (HGHL) Model dated January 15, 2010.

Receiving water flow measurements (Qr) shall be obtained from USGS Rumford Station #01054500 located in the Town of Rumford with an adjustment factor of 1.19 to account for the drainage area between Rumford and Jay. The permittee shall adhere to mathematical protocols for significant figures and rounding the calculated CRTI values. All CRTI values reported to the Department on the monthly Discharge Monitoring Reports (DMRs) for compliance shall be rounded to the nearest 0.1°F.

The temperature and flow of the effluent used in the calculations shall be measured at the effluent collection box (after secondary clarification). The temperature of the river shall be measured immediately upstream of the effluent diffuser. Temperature measurements near the process water intake at Riley Dam may be used in lieu of data obtained immediately upstream of the diffuser recognizing that if river water temperature at Riley Dam are used in the calculations, the CRTI values may be higher than if the data from upstream of the diffuser is used in the calculations.

L. SCHEDULE OF COMPLIANCE – INORGANIC ARSENIC

This permitting action is establishing a schedule of compliance for the monthly average mass and concentration limits for inorganic arsenic as follows:

Beginning upon issuance of this permit and lasting through EPA approval of a test method for inorganic arsenic, the permittee shall conduct 2/Year testing for total arsenic and report the mass and concentration on the applicable DMR's. Sampling shall be conducted in separate calendar quarters and there shall be at least 8 weeks between sampling events.

Beginning 12 months after EPA approval of a test method for inorganic arsenic, the permittee shall be in compliance with the 12-month rolling average mass limit of 0.19 lbs/day for inorganic arsenic.

Note: The applicable ambient water quality criteria for arsenic is currently undergoing review by the Department and other regulatory authorities. Should the criteria be changed during the term of this permit, the permit may be reopened and amended accordingly.

SPECIAL CONDITIONS

M. SCHEDULE OF COMPLIANCE – ALUMINUM AND COPPER

Beginning upon issuance of this permit, the permittee shall identify sources of and begin investigating source reduction opportunities to mitigate the discharge of total aluminum and total copper such that compliance with the water quality based mass limits for said metals established in this permit or alternate limitations established in any subsequent modification thereof are achieved prior to the expiration date of this permit.

On or before June 30, 2013, ***(PCS 95999)*** the permittee shall submit to the Department for review, a progress report identifying sources of and summarizing the source reduction opportunities investigated since issuance of the permit for mitigating the discharge of total aluminum and total copper.

On or before November 30, 2013, ***(PCS 34099)*** the permittee shall submit to the Department for review and approval, a Site Specific Criteria Development Plan for any parameter that the permittee is seeking an alternate ambient water quality criteria for.

On or before December 31, 2013, ***(PCS 95999)*** the permittee shall submit to the Department for review, a progress report summarizing the source reduction opportunities investigated since June 30, 2013, for mitigating the discharge of total aluminum and total copper.

On or before June 30, 2014, ***(PCS 20099)*** the permittee shall submit to the Department for review, a feasibility study containing a scope of work and schedule of practicable process modifications and treatment options for mitigating the discharge of total aluminum and total copper.

On or before December 31, 2014, ***(PCS 95999)*** the permittee shall submit to the Department for review, a progress report containing a scope of work and schedule for the implementation of source reduction and or treatment options selected to mitigate the discharge of total aluminum and total copper and a progress report on the development of alternate ambient water quality criteria for parameters cited in the November 30, 2013 Site Specific Criteria Development Plan submission.

On or before December 31, 2015, ***(PCS 95999)*** the permittee shall submit a progress report containing a scope of work, schedule and progress on the implementation of source reduction and or treatment options selected to mitigate the discharge of total aluminum and total copper and a progress report on the development of alternate ambient water quality criteria for parameters cited in the November 30, 2013 Site Specific Criteria Development Plan submission.

SPECIAL CONDITIONS

M. SCHEDULE OF COMPLIANCE – ALUMINUM AND COPPER (cont'd)

On or before December 31, 2016, ***(PCS 95999)*** the permittee shall submit a progress report on the implementation of source reduction and or treatment options selected to mitigate the discharge of total aluminum and total copper and a progress report on the development of alternate ambient water quality criteria for parameters cited in the November 30, 2013 Site Specific Criteria Development Plan submission.

On or before December 19, 2017, ***(PCS 05699)*** the permittee shall be in compliance with the water quality based mass limitations for total aluminum and total copper established in this permit or alternate limitations established in any subsequent modification thereof.

N. COLOR

The permittee is required to report the daily average color discharged for a calendar quarter expressed as pounds of color per ton of unbleached pulp produced. Supporting calculations, in a format similar to the format illustrated below must be submitted to the Department as an attachment to the DMRs for the months of March, June, September and December of each year.

Quarter Sample Date	#001 Flow (mgd)	Color Conc (cpu)	Mass (lbs/day)	Unbleached Pulp Production tons/day
xx/xs/xx	31	310	80,147	1,100
xx/xs/xx	30	340	85,069	1,050
.....				
xx/xs/xx	31	315	81,440	1,010
Quarterly Average			X=82,219	X=1,053

Quarterly Average Mass per Ton = 82,219/1,053 = 78 lbs color/ton

O. FISH ADVISORY PROGRAM

When directed to do so, the permittee is required to participate in the State's most current Surface Water Ambient Toxics (SWAT) program administered by the Department, pursuant to Maine law, 38 M.R.S.A., §420-B.

SPECIAL CONDITIONS

P. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report (DMR) forms provided by the Department and mailed or hand-delivered to a Department Regional Office such that the DMR's are received by the Department on or before the fifteenth (15^{th}) day of the month following the completed reporting period. A signed copy of the DMR and all other reports required herein shall be submitted to the following addresses:

Maine Department of Environmental Protection
Central Maine Regional Office
Bureau of Land & Water Quality
Division of Water Quality Management
State House Station #17
Augusta, ME. 04333

Alternatively, if you are submitting an electronic DMR (eDMR), the completed eDMR must be electronically submitted to the Department by a facility authorized DMR Signatory not later than close of business on the 15^{th} day of the month following the completed reporting period. Hard Copy documentation submitted in support of the eDMR must be postmarked on or hand-delivered to the Department's Regional Office such that it is received by the Department on or before the fifteenth (15^{th}) day of the month following the completed reporting period. Electronic documentation in support of the eDMR must be submitted not later than close of business on the 15^{th} day of the month following the completed reporting period.

Q. REOPENING OF PERMIT FOR MODIFICATIONS

Upon evaluation of the tests results specified by the Special Conditions of this permitting action, new site specific information, or any other pertinent test results or information obtained during the term of this permit, the Department may, at anytime and with notice to the permittee, modify this permit to: 1) include effluent limits necessary to control specific pollutants or whole effluent toxicity where there is a reasonable potential that the effluent may cause water quality criteria to be exceeded: (2) require additional monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information considering ambient water quality conditions.

R. SEVERABILITY

In the event that any provision, or part thereof, of this permit is declared to be unlawful by a reviewing court, the remainder of the permit shall remain in full force and effect, and shall be construed and enforced in all aspects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

ATTACHMENT A

Printed 1/22/2009

Maine Department of Environmental Protection
WET and Chemical Specific Data Report Form
This form is for reporting laboratory data and facility information. Official compliance reviews will be done by DEP.

Facility Name _____ **MEPDES #** _____ **Pipe #** _____ Facility Representative Signature _____
To the best of my knowledge this information is true, accurate and complete.

Licensed Flow (MGD) _____ **Flow for Day (MGD)[1]** _____ **Flow Avg. for Month (MGD)[2]** _____
Acute dilution factor _____
Chronic dilution factor _____ **Date Sample Collected** _____ Date Sample Analyzed _____
Human health dilution factor _____
Criteria type: M(arine) or F(resh) _____ Laboratory _____ Telephone _____
Address _____
Lab Contact _____ Lab ID # _____

ERROR WARNING ! Essential facility information is missing. Please check required entries in bold above.

FRESH WATER VERSION

Please see the footnotes on the last page.

			Effluent Limits, %			Receiving Water or Ambient	**Effluent Concentration (ug/L or as noted)**		**Possible Exceedence [7]**		
	WHOLE EFFLUENT TOXICITY		Acute	Chronic			WET Result, % Do not enter % sign	Reporting Limit Check	Acute	Chronic	
	Trout - Acute										
	Trout - Chronic										
	Water Flea - Acute										
	Water Flea - Chronic										
	WET CHEMISTRY										
	pH (S.U.) (9)					(8)					
	Total Organic Carbon (mg/L)					(8)					
	Total Solids (mg/L)										
	Total Suspended Solids (mg/L)										
	Alkalinity (mg/L)					(8)					
	Specific Conductance (umhos)										
	Total Hardness (mg/L)					(8)					
	Total Magnesium (mg/L)					(8)					
	Total Calcium (mg/L)					(8)					
	ANALYTICAL CHEMISTRY [3]										
	Also do these tests on the effluent with WET. Testing on the receiving water is optional	Reporting Limit	Effluent Limits, ug/L Acute[6]	Chronic[6]	Health[6]			Reporting Limit Check	Possible Exceedence [7] Acute	Chronic	Health
	TOTAL RESIDUAL CHLORINE (mg/L) (9)	0.05				NA					
	AMMONIA	NA				(8)					
M	ALUMINUM	NA				(8)					
M	ARSENIC	5				(8)					
M	CADMIUM	1				(8)					
M	CHROMIUM	10				(8)					
M	COPPER	3				(8)					
M	CYANIDE	5				(8)					
M	LEAD	3				(8)					
M	NICKEL	5				(8)					
M	SILVER	1				(8)					
M	ZINC	5				(8)					

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	PRIORITY POLLUTANTS [4]	Effluent Limits					Reporting Limit Check	Possible Exceedence [7]		
		Reporting Limit	Acute[6]	Chronic[6]	Health[6]			Acute	Chronic	Health
M	ANTIMONY	5								
M	BERYLLIUM	2								
M	MERCURY (5)	0.2								
M	SELENIUM	5								
M	THALLIUM	4								
A	2,4,6-TRICHLOROPHENOL	3								
A	2,4-DICHLOROPHENOL	5								
A	2,4-DIMETHYLPHENOL	5								
A	2,4-DINITROPHENOL	45								
A	2-CHLOROPHENOL	5								
A	2-NITROPHENOL	5								
A	4,6 DINITRO-O-CRESOL (2-Methyl-4,6-dinitrophenol)	25								
A	4-NITROPHENOL	20								
A	P-CHLORO-M-CRESOL (3-methyl-4-chlorophenol)+B80	5								
A	PENTACHLOROPHENOL	20								
A	PHENOL	5								
BN	1,2,4-TRICHLOROBENZENE	5								
BN	1,2-(O)DICHLOROBENZENE	5								
BN	1,2-DIPHENYLHYDRAZINE	10								
BN	1,3-(M)DICHLOROBENZENE	5								
BN	1,4-(P)DICHLOROBENZENE	5								
BN	2,4-DINITROTOLUENE	6								
BN	2,6-DINITROTOLUENE	5								
BN	2-CHLORONAPHTHALENE	5								
BN	3,3'-DICHLOROBENZIDINE	16.5								
BN	3,4-BENZO(B)FLUORANTHENE	5								
BN	4-BROMOPHENYLPHENYL ETHER	2								
BN	4-CHLOROPHENYL PHENYL ETHER	5								
BN	ACENAPHTHENE	5								
BN	ACENAPHTHYLENE	5								
BN	ANTHRACENE	5								
BN	BENZIDINE	45								
BN	BENZO(A)ANTHRACENE	8								
BN	BENZO(A)PYRENE	3								
BN	BENZO(G,H,I)PERYLENE	5								
BN	BENZO(K)FLUORANTHENE	3								
BN	BIS(2-CHLOROETHOXY)METHANE	5								
BN	BIS(2-CHLOROETHYL)ETHER	6								
BN	BIS(2-CHLOROISOPROPYL)ETHER	6								
BN	BIS(2-ETHYLHEXYL)PHTHALATE	3								
BN	BUTYLBENZYL PHTHALATE	5								
BN	CHRYSENE	3								
BN	DI-N-BUTYL PHTHALATE	5								
BN	DI-N-OCTYL PHTHALATE	5								
BN	DIBENZO(A,H)ANTHRACENE	5								
BN	DIETHYL PHTHALATE	5								
BN	DIMETHYL PHTHALATE	5								

Maine Department of Environmental Protection
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BN	FLUORANTHENE	5									
BN	FLUORENE	5									
BN	HEXACHLOROBENZENE	2									
BN	HEXACHLOROBUTADIENE	1									
BN	HEXACHLOROCYCLOPENTADIENE	10									
BN	HEXACHLOROETHANE	2									
BN	INDENO(1,2,3-CD)PYRENE	5									
BN	ISOPHORONE	5									
BN	N-NITROSODI-N-PROPYLAMINE	10									
BN	N-NITROSODIMETHYLAMINE	1									
BN	N-NITROSODIPHENYLAMINE	5									
BN	NAPHTHALENE	5									
BN	NITROBENZENE	5									
BN	PHENANTHRENE	5									
BN	PYRENE	5									
P	4,4'-DDD	0.05									
P	4,4'-DDE	0.05									
P	4,4'-DDT	0.05									
P	A-BHC	0.2									
P	A-ENDOSULFAN	0.05									
P	ALDRIN	0.15									
P	B-BHC	0.05									
P	B-ENDOSULFAN	0.05									
P	CHLORDANE	0.1									
P	D-BHC	0.05									
P	DIELDRIN	0.05									
P	ENDOSULFAN SULFATE	0.1									
P	ENDRIN	0.05									
P	ENDRIN ALDEHYDE	0.05									
P	G-BHC	0.15									
P	HEPTACHLOR	0.15									
P	HEPTACHLOR EPOXIDE	0.1									
P	PCB-1016	0.3									
P	PCB-1221	0.3									
P	PCB-1232	0.3									
P	PCB-1242	0.3									
P	PCB-1248	0.3									
P	PCB-1254	0.3									
P	PCB-1260	0.2									
P	TOXAPHENE	1									
V	1,1,1-TRICHLOROETHANE	5									
V	1,1,2,2-TETRACHLOROETHANE	7									
V	1,1,2-TRICHLOROETHANE	5									
V	1,1-DICHLOROETHANE	5									
V	1,1-DICHLOROETHYLENE (1,1-dichloroethene)	3									
V	1,2-DICHLOROETHANE	3									
V	1,2-DICHLOROPROPANE	6									
V	1,2-TRANS-DICHLOROETHYLENE (1,2-trans-dichloroethene)	5									
V	1,3-DICHLOROPROPYLENE (1,3-dichloropropene)	5									
V	2-CHLOROETHYLVINYL ETHER	20									

Maine Department of Environmental Protection
WET and Chemical Specific Data Report Form
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V	ACROLEIN	NA									
V	ACRYLONITRILE	NA									
V	BENZENE	5									
V	BROMOFORM	5									
V	CARBON TETRACHLORIDE	5									
V	CHLOROBENZENE	6									
V	CHLORODIBROMOMETHANE	3									
V	CHLOROETHANE	5									
V	CHLOROFORM	5									
V	DICHLOROBROMOMETHANE	3									
V	ETHYLBENZENE	10									
V	METHYL BROMIDE (Bromomethane)	5									
V	METHYL CHLORIDE (Chloromethane)	5									
V	METHYLENE CHLORIDE	5									
V	TETRACHLOROETHYLENE (Perchloroethylene or Tetrachloroethene)	5									
V	TOLUENE	5									
V	TRICHLOROETHYLENE (Trichloroethene)	3									
V	VINYL CHLORIDE	5									

Notes:

(1) Flow average for day pertains to WET/PP composite sample day.

(2) Flow average for month is for month in which WET/PP sample was taken.

(3) Analytical chemistry parameters must be done as part of the WET test chemistry.

(4) Priority Pollutants should be reported in micrograms per liter (ug/L).

(5) Mercury is often reported in nanograms per liter (ng/L) by the contract laboratory, so be sure to convert to micrograms per liter on this spreadsheet.

(6) Effluent Limits are calculated based on dilution factor, background allocation (10%) and water quality reserves (15% - to allow for new or changed discharges or non-point sources).

(7) Possible Exceedence determinations are done for a single sample only on a mass basis using the actual pounds discharged. This analysis does not consider watershed wide allocations for fresh water discharges.

(8) These tests are optional for the receiving water. However, where possible samples of the receiving water should be preserved and saved for the duration of the WET test. In the event of questions about the receiving water's possible effect on the WET results, chemistry tests should then be conducted.

(9) pH and Total Residual Chlorine must be conducted at the time of sample collection. Tests for Total Residual Chlorine need be conducted only when an effluent has been chlorinated or residual chlorine is believed to be present for any other reason.

Comments:

ATTACHMENT B

Protocol for Total Phosphorus Sample Collection and Analysis for Waste Water and Receiving Water Monitoring Required by Permits

Approved Analytical Methods: EPA 365.1 (Rev. 2.0), 365.3, 365.4; SM 4500-P B.5, 4500-P E, 4500-P F; ASTM D515-88(A), D515-88(B); USGS I-4600-85, I-4610-91; OMAAOAC 973.55, 973.56

Sample Collection: The Maine DEP is requesting that total phosphorus analysis be conducted on composite effluent samples, unless a facility's Permit specifically designates grab sampling for this parameter. Facilities can use individual collection bottles or a single jug made out of glass or polyethylene. Bottles and/or jugs should be cleaned prior to each use with dilute HCL. This cleaning should be followed by several rinses with distilled water. Commercially purchased, pre-cleaned sample containers are an acceptable alternative. The sampler hoses should be cleaned, as needed.

Sample Preservation: During compositing the sample must be at 0-6 degrees C (without freezing). If the sample is being sent to a commercial laboratory or analysis cannot be performed the day of collection then the sample must be preserved using H_2SO_4 to obtain a sample pH of <2 su and refrigerated at 0-6 degrees C (without freezing). The holding time for a preserved sample is 28 days.

Note: Ideally, Total P samples are preserved as described above. However, if a facility is using a commercial laboratory then that laboratory may choose to add acid to the sample once it arrives at the laboratory. The Maine DEP will accept results that use either of these preservation methods.

Laboratory QA/QC: Laboratories must follow the appropriate QA/QC procedures that are described in each of the approved methods.

Sampling QA/QC: If a composite sample is being collected using an automated sampler, then once per month run a blank on the composite sampler. Automatically, draw distilled water into the sample jug using the sample collection line. Let this water set in the jug for 24 hours and then analyze for total phosphorus. Preserve this sample as described above.

Protocol for Orthophosphate Sample Collection and Analysis for Waste Water and Receiving Water Monitoring Required by Permits

Approved Analytical Methods: EPA 300.0 (Rev. 2.1), 300.1 (Rev. 1.0), 365.1 (Rev. 2.0), 365.3; SM 4110 B, 4110 B-00, 4500-P E, 4500-P F; ASTM D515-88(A), D4327-97, 03; D6508 (Rev. 2); USGS I-4601-85; OMAAOAC 973.55, 973.56, 993.30

Sample Collection: The Maine DEP is requesting that orthophosphate analysis be conducted on composite effluent samples unless a facility's Permit specifically indicates grab sampling for this parameter. Facilities can use individual collection bottles or a single jug made out of glass or polyethylene. Bottles and/or jugs should be cleaned prior to each use with dilute HCL. This cleaning should be followed by several rinses with distilled water. The sampler hoses should be cleaned, as needed. Commercially purchased, pre-cleaned sample containers and or syringe type filtering apparatus are acceptable. If bench top filtering apparatus is being used this should be cleaned, as described above, before each use.

Sample Preservation: During compositing the sample must be at 0-6 degrees C (without freezing). The sample must be filtered immediately (within 15 minutes) after collection using a pre-washed 0.45-um membrane filter. Be sure to follow one of the pre-washing procedures described in the approved methods unless your commercial lab is providing you with pre-washed filters and filtering apparatus. If the sample is being sent to a commercial laboratory or analysis cannot be performed within 2 hours after collection then the sample must be kept at 0-6 degrees C (without freezing). There is a 48-hour holding time for this sample although analysis should be done sooner, if possible.

Laboratory QA/QC: Laboratories must follow the appropriate QA/QC procedures that are described in each of the approved methods. Additionally, laboratories providing filters or filter apparatus for sampling are required to submit blank data for each lot of filters/filtering apparatus to the facility.

Sampling QA/QC:
Filter Blank- If a facility is using a pre-cleaned filter and or filtering apparatus provided by a commercial laboratory then the commercial laboratory must run a filter/filtering apparatus blank on each lot. The results of that analysis must be provided to the facility.

If a facility is using their own filters and filtering apparatus then a filter blank must be included with every sample set that does not include a composite sampler (composite jug and sample line) blank.

Composite Sampler Blank- If a composite sample is being collected using an automatic composite sampler, then once per month run a blank on the composite sampler. A separate filter blank does not have to be done along with the composite sampler blank. When running a composite sampler blank, automatically, draw distilled water into the sample jug using the sample collection line. Let this water set in the jug for 24 hours and then filter and analyze for orthophosphate. Preserve these samples as described above.

ATTACHMENT C

Maine Department of Environmental Protection

Effluent Mercury Test Report

Name of Facility: _____ Federal Permit # ME _____

Pipe # _____

Purpose of this test:
- ☐ Initial limit determination
- ☐ Compliance monitoring for: year _____ calendar quarter _____
- ☐ Supplemental or extra test

SAMPLE COLLECTION INFORMATION

Sampling Date: ___ ___ ___ (mm dd yy) Sampling time: _____ AM/PM

Sampling Location:

Weather Conditions: _____

Please describe any unusual conditions with the influent or at the facility during or preceding the time of sample collection:

Optional test - not required but recommended where possible to allow for the most meaningful evaluation of mercury results:

Suspended Solids _____ mg/L Sample type: _____ Grab (recommended) or _____ Composite

ANALYTICAL RESULT FOR EFFLUENT MERCURY

Name of Laboratory: _____

Date of analysis: _____ **Result:** _____ **ng/L (PPT)**

Please Enter Effluent Limits for your facility

Effluent Limits: **Average =** _____ ng/L **Maximum =** _____ ng/L

Please attach any remarks or comments from the laboratory that may have a bearing on the results or their interpretation. If duplicate samples were taken at the same time please report the average.

CERTIFICATION

I certifiy that to the best of my knowledge the foregoing information is correct and representative of conditions at the time of sample collection. The sample for mercury was collected and analyzed using EPA Methods 1669 (clean sampling) and 1631 (trace level analysis) in accordance with instructions from the DEP.

By: _____ Date: _____

Title: _____

PLEASE MAIL THIS FORM TO YOUR ASSIGNED INSPECTOR

ATTACHMENT D

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
WHOLE EFFLUENT TOXICITY REPORT
FRESH WATERS

Facility Name _____ MEPDES Permit # _____

Facility Representative _____ Signature _____

By signing this form, I attest that to the best of my knowledge that the information provided is true, accurate, and complete.

Facility Telephone # _____ Date Collected _____ Date Tested _____

mm/dd/yy mm/dd/yy

Chlorinated? _____ Dechlorinated? _____

Results **% effluent**

	water flea	trout
A-NOEL		
C-NOEL		

Effluent Limitations

A-NOEL	
C-NOEL	

Data summary

	water flea			trout		
	% survival		no. young	% survival		final weight (mg)
QC standard	A>90	C>80	>15/female	A>90	C>80	> 2% increase
lab control						
receiving water control						
conc. 1 (%)						
conc. 2 (%)						
conc. 3 (%)						
conc. 4 (%)						
conc. 5 (%)						
conc. 6 (%)						
stat test used						

place * next to values statistically different from controls

for trout show final wt and % incr for both controls

Reference toxicant

	water flea		trout	
	A-NOEL	C-NOEL	A-NOEL	C-NOEL
toxicant / date				
limits (mg/L)				
results (mg/L)				

Comments _____

Laboratory conducting test

Company Name _____ Company Rep. Name (Printed) _____

Mailing Address _____ Company Rep. Signature _____

City, State, ZIP _____ Company Telephone # _____

Report WET chemistry on DEP Form "ToxSheet (Fresh Water Version), March 2007."

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: **September 27, 2012**

PERMIT NUMBER: **ME0001937**
LICENSE NUMBER: **W000632-5N-L-R**

NAME AND ADDRESS OF APPLICANT:

VERSO PAPER COMPANY
Androscoggin Mill
Jay, Maine 04239

COUNTY: **Franklin County**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

Androscoggin Mill
300 Riley Road
Jay, Maine 04239

RECEIVING WATER AND CLASSIFICATION: **Androscoggin River/ Class C**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Mr. Kenneth Gallant**
Environmental Manager
(207) 897-1633
e-mail: kenneth.gallant@versopaper.com

1. APPLICATION SUMMARY

Verso Paper Company (Verso/permitee hereinafter) has filed a timely and complete application with the Department to renew Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0001937/Maine Waste Discharge License (WDL) #W000623-5N-F-R (permit hereinafter) that was issued by the Department on September 15, 2005 for a five-year term. It is noted the permit was subsequently modified on April 10, 2006, February 7, 2008, July 21, 2008, December 29, 2008, May 8, 2009, January 27, 2010 and June 8, 2010. All permitting actions expired on September 21, 2010.

The Verso mill in Jay, Maine (see **Attachment A** of this Fact Sheet for a location map) manufactures bleached kraft pulp and fine coated and specialty papers. Verso has applied to the Department for the issuance of a permit to discharge up to a daily maximum of 51 million gallons per day (MGD) of treated process waste waters, treated sanitary waste waters, contact and non-contact cooling waters, treated landfill leachate, treated stormwater runoff and general housekeeping waste waters associated with a kraft pulp and papermaking facility to the Androscoggin River in Jay, Maine.

1. APPLICATION SUMMARY (cont'd)

The Verso waste water treatment facility also has contracts to treat waste water from two other industrial facilities, the former Wausau-Mosinee paper facility and Specialty Minerals. Verso maintains a multi-sector permit from the Department for the discharge of storm water. The mill produced an average of 1,675 tons per day (TPD) of fine coated and specialty papers and 241 tons per day of kraft market pulp for the period calendar years 2007 – 2010 inclusively. The values are considered to be representative of normal production levels and are therefore being used to derive applicable production (technology) based limitations in this permitting action.

2. PERMIT SUMMARY

a. Terms and Conditions - This permitting action is carrying forward the terms and conditions of the previous permitting actions (9/21/05, 4/10/06, 2/7/08, 7/21/08, 12/29/08, 5/8/09, 1/27/10 and 6/8/10) except that this permitting action;

1. Eliminates Special Condition L, *Biological Monitoring Plan*, of the September 21, 2005, permit that required the permittee to develop and implement an annual biological monitoring plan to monitor bald eagles and other fish eating bird species. The permittee is being relieved of this obligation based on the Maine Department of Inland Fisheries and Wildlife and the U.S. Fish and Wildlife Services determination that continuation of the monitoring program is not warranted by the findings of the past monitoring.

2. Eliminates Special Condition N, *Schedule of Compliance*, as the permittee has completed all tasks in the schedule and is in compliance with all effluent limitations in the permit and any subsequent modifications thereafter.

3. Establishes new water quality based limitations for inorganic arsenic, total cadmium, total copper, total lead and total zinc and establishes more stringent limits for total aluminum as test results submitted to the Department indicate the discharge from mill either exceeds or has a reasonable potential to exceed applicable ambient water quality criteria (AWQC) for each of the metals cited. A schedule of compliance has been established for the new water quality based limits for aluminum and copper.

4. Eliminates the tier of effluent limitations and monitoring requirements referred to as "Without Wausau-Mosinee". Verso maintains a current Waste Water Treatment Agreement with the new owners (Otis Properties LLC) of the former Wausau-Mosinee mill complex. The agreement expires on October 13, 2014.

5. Establishes an annual certification requirement pursuant to Department rule 06-096 CMR, Chapter 530, *Surface Water Toxics Control Program.*

6. Increases the technology based limitations for adsorbable organic halogens (AOX) and chloroform based on a 7% increase in kraft pulp production from the 2005 permitting action.

2. PERMIT SUMMARY (cont'd)

7. Reduces the summertime (June – September) BOD monitoring frequency from 1/Day to 5/Week and reduces the non-summer (October – May) BOD monitoring frequency from 1/Day to 4/Week based on a statistical evaluation of the most recent 43 months of data submitted to the Department.

8. Reduces the summertime (June – September) TSS monitoring frequency from 1/Day to 4/Week and reduces the non-summer (October – May) TSS monitoring frequency from 5/Week to 4/Week based on a statistical evaluation of the most recent 43 months of data submitted to the Department.

9. Reduces the monitoring frequency for the 12 phenolics compounds from 2/Year to 1/Year based on a statistical evaluation of the most recent 43 months of data submitted to the Department.

10. Reduces the monitoring frequency for chloroform from 1/Quarter to 1/Year based on a statistical evaluation of the most recent 43 months of data submitted to the Department.

11. Reduces the monitoring frequencies for ortho-phosphorus from 3/Week to 2/Week based on a statistical evaluation of the most recent 43 months of data submitted to the Department.

12 Reduces the monitoring frequency for chemical oxygen demand from 1/Day to 4/Week based on a statistical evaluation of the most recent 43 months of data submitted to the Department.

13. Reduces the monitoring frequencies for mercury from 4/Year to 1/Year based on a statistical evaluation of the most recent 60 months of data submitted to the Department.

b. History: - The most recent significant and relevant regulatory actions for the Verso Androscoggin mill are as follows:

September 30, 1985 – The EPA issued NPDES permit #ME0001937 for a five-year term.

May 1, 1992 – The EPA issued a renewal of NPDES permit #ME0001937 for a five-year term. However, IP appealed the permit under the regulations then in effect and requested an evidentiary hearing. The EPA did not conduct the hearing and by letter dated July 14, 2000, the EPA notified IP that 1) its appeal and request for an evidentiary hearing had not been acted on, 2) the 1992 permit was not in effect, and 3) IP was and had been subject to the terms and conditions of its 1985 permit.

May 1, 1994 – The Department issued WDL #W000632-44-C-R for a five-year term.

2. PERMIT SUMMARY (cont'd)

April 1998 – The EPA promulgated new National Effluent Guidelines (NEGs) for a portion of the pulp and paper industry. The NEG's applicable to the IP mill are found at 40 CFR Part 430, commonly referred to as the Cluster Rule.

October 16, 1998 - The Department issued WDL modification #W000632-5N-D-M to incorporate limitations for dioxin, furan and color.

June 6, 1999 - The Department issued WDL modification #W000632-5N-E-M to incorporate the terms and conditions of a new operational plan for the Gulf Island Pond Oxygenation Project (GIPOP).

May 23, 2000 – Pursuant to Maine law, 38 M.R.S.A. §420 and Department rule, 06-096 CMR Chapter 519, *Interim Effluent Limitations and Controls for the Discharge of Mercury*, the Department issued a *Notice of Interim Limits for the Discharge of Mercury* to the permittee. This action administratively modified WDL # W000632-44-C-R by establishing interim average and maximum effluent concentration limits of 15.8 parts per trillion (ppt) and 23.7 ppt, respectively, and a minimum monitoring frequency requirement of four tests per year for mercury.

June 29, 2000 – The EPA and IP entered into an agreement entitled, Final Project Agreement, International Paper XL Project: Effluent Improvements, June 29, 2000. IP sought the agreement as a regulatory exemption from the Best Management Practices (BMP) under the water portion of the Cluster Rule in order to reinvest resources to implement effluent improvement projects designed specifically to reduce final effluent discharge of chemical oxygen demand (COD) and color. The agreement outlines IP's acceptance of limitations for COD (not established in the NEGs) and more stringent limitations for color than State law requires that are to be incorporated into this permit. These limitations are referred to as Phase I limitations in the agreement. In addition, the agreement provides for possibly even more stringent long-term average performance goals to be achieved.

January 12, 2001 - The State of Maine received authorization from the USEPA to administer the NPDES program in Maine.

October 9, 2001 – The Town of Jay Planning Board issued a local permit for a five-year term for the discharge of waste water from the IP mill. The document is entitled, State of Maine Town of Jay Planning Board, Jay Water Permit No. 5, International Paper Company, October 9, 2001.

July 18, 2005 – The EPA approved a total maximum daily load (TMDL) entitled, May 2005 TMDL, Final for the Androscoggin River.

September 21, 2005 – The Department issued MEPDES permit #ME0001937/WDL #W000623-5N-F-R for a five-year term.

2. PERMIT SUMMARY (cont'd)

October 12, 2005 – The Department promulgated two new rules; Chapter 530, *Surface Water Toxics Control Program*, and Chapter 584, *Surface Water Quality Criteria For Toxic Pollutants.*

October 21, 2005 - Timely appeals of the Department's September 21, 2005, decision were filed by the permittee, Rumford Paper Company, FPL Energy, the Natural Resources Council of Maine, the Conservation Law Foundation, Maine Rivers, Androscoggin River Alliance, and Androscoggin Lake Improvement Association.

April 10, 2006 – The Department modified the 9/21/05 MEPDES permit by establishing monitoring requirements for whole effluent toxicity (WET) and chemical specific testing pursuant to Department rule Chapter 530.

February 7, 2008 – The Maine Board of Environmental Protection issued a Board Order in response to the appeals of the 9/21/05 MEPDES permit filed on 10/21/05. The Board Order modified several of the terms and conditions of the 9/21/05 MEPDES permit and ordered the Department to revise and re-calibrate its water quality model following the correction of a dispersive mixing error (which could affect additional oxygen injection requirements) and a recalculation of the sediment area that is contributing phosphorus to the pond (which could affect final effluent limits for total phosphorus and/or ortho-phosphorus).

July 21, 2008 – The Department issued a minor revision to the 9/21/05 permit that reduced the monitoring frequencies for AOX, chloroform and the twelve chlorinated phenolic compounds in accordance with guidance provided by the EPA in a document entitled, "*Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies*" (USEPA 1996).

December 29, 2008 - The Department issued a minor revision to the 9/21/05 permit that added a footnote to Special Condition A, *Effluent Limitations & Monitoring Requirements, Outfalls #100 & #200*, in the 7/21/08 MEPDES minor revision to clarify that the 1/Day flow monitoring and reporting requirement is only applicable when sampling the bleach plant outfalls.

May 8, 2009 - The Department issued a minor revision to the 9/21/05 permit that added footnote #20 to Special Condition A, *Effluent Limitations & Monitoring Requirements, Outfalls #001A & 001B*, of the 9/21/05 MEPDES permit to clarify that the limitations for COD are based on the soluble fraction of COD discharged from the mill.

January 27, 2010 - The Department issued a minor revision to the 9/21/05 permit that modifying Special Condition H, *River Temperature Increase*, to include the Heat Gain/Heat Loss (HGHL) model as the applicable method of determining compliance with Department rule, Chapter 582, *Regulation Relating To Temperature* and modified footnotes 11(a) and11(b) in Special Condition A, *Effluent Limitations & Monitoring Requirements*, by replacing the term "predicted river temperature increase" (PRTI) with the term "calculated river temperature increase"(CRTI).

2. PERMIT SUMMARY (cont'd)

June 8, 2010 – The Department issued a modification of the 9/21/05 permit that modified the oxygen injection requirement for the Gulf island Pond Oxygen Injection System and increased the monthly average water quality based mass limitation for ortho-phosphorus based on new modeling information.

June 22, 2010 – The permittee filed a timely and complete application with the Department to renew the 9/21/05 MEPDES permit.

c. Source Description: Verso's Androscoggin mill is an integrated facility engaged in the production of approximately 1,675 tons per day of fine coated and specialty papers from bleached kraft and groundwood pulp and 241 lbs/day of kraft market pulp. The mill has three separate pulping operations, one dedicated to pulping softwood and one dedicated to hardwood via the kraft process and one dedicated to ground wood pulping. However, on occasion, the digestors can be swung to pulp opposite species depending on the mill operations. Verso refers to the kraft softwood operation as Digestor and Bleach Plant "A" and the kraft hardwood operation as Digestor and Bleach Plant "B". Verso has been and will be sampling the two bleach plant effluents for a number of compounds including 2,3,7,8 TCDD (dioxin) and 2,3,7,8 TCDF (furan). Combined, the kraft pulp mills produce approximately 1,200 tons per day of pulp.

Kraft pulp production is split at approximately 60% softwood and 40% hardwood. The Androscoggin pulp mills have been elemental chlorine free (ECF) since December of 1996 and use chlorine dioxide as the primary bleaching agent.

Waste waters discharged include treated process waters, treated sanitary waste waters, treated landfill leachate, treated storm water runoff and other miscellaneous waste waters associated with the papermaking process. A review of Verso's EPA Form 2C application indicates that the long term (three year mean for 2007 –2009) discharge flow has averaged 39 MGD, the biochemical oxygen demand (BOD_5) averaged 3,600 lbs/day, the total suspended solids (TSS) averaged 13,200 lbs/day, and a summer time average temperature of 31°C (88°F) with a daily maximum temperature of 36°C (97°F). The permittee has indicated that these values are expected to be representative when production is at or near the production levels cited above.

The Androscoggin mill generates waste water from the operations and activities presented below. Waste waters discharged to the wastewater treatment plant include but are not limited to treated process waters, treated sanitary waste waters, treated landfill leachate, treated storm water runoff and other miscellaneous waste waters associated with the papermaking process.

Paper Machines: The paper mill generates process waste water from four paper machines and one pulp drying machine, stock preparation, coating preparation, and additive operations. The paper machines recycle various waste water sources whenever possible. As part of maintaining operations, various chemicals are used for cleaning the machines and process components. Approximate flow: 13 MGD

2. PERMIT SUMMARY (cont'd)

Bleach Plant: The bleach plants contribute caustic and acid waste waters from the bleaching and chemical preparation operations. Whenever possible, bleaching filtrate is reused as shower medium in other bleach stages. Approximate flow: 5-7 MGD

Storm water: Storm water run-off for the active mill facility is largely collected in the sewer system in a series of storm drains and routed to the waste water treatment facility. All Storm water run-off not collected and transported to the waste water treatment facility is regulated by the MEPDES Multi-Sector General Permit #MER 05A862. Approximate flow: 2-4 MGD

Power Plant: The power plant contributes waste water from liquor recovery, steam and electric generation, boiler feedwater conditioning, and evaporator systems. Wastewater sources include, but are not limited to, boiler blowdown, demineralizers (acid and caustic), sluiced boiler ash, condensate, and cooling water. Approximate flow: 4.5 MGD

Pulp Mill: The pulp mill contributes wastewater from the following wood fiber processes/systems: digester systems, screening, cleaning, brown stock washing, deckering, reject handling and the flash dryer system. Counter-current washing and black liquor recovery reduces the quantity of waste water discharged to the waste water treatment plant. Approximate flow: 2-4 MGD

Otis Mill: Waste effluent, groundwater and storm water from the Otis mill located in Jay, Maine can be treated in the waste water treatment facility. Approximate flow: 2.0-3.0 MGD

Foul Condensate Collection System (hard pipe): flow from the A and B flash steam condensers, A and B evaporators surface condensers and the A evaporators pre- evaps and B evaporators 6th effect are collected to meet the mass collection requirement of 40 CFR 63.446(c) (3). Approximate flow: 1.5-2.5 MGD

Wastewater Treatment: Waste water associated with sludge and filtrate recycling are generated and treated in the waste water treatment plant. Approximate flow: 2 MGD

Wood Prep/Wood rooms/Groundwood: These areas contribute waste water generated during the handling, washing, and processing of round wood. Extensive reuse of water occurs within these operations. Approximate flow: 1.8 MGD

Water Treatment: The water treatment plant clarifies water from the Androscoggin River for use by the facility. The water is processed by a series of pulsators and sand filters to remove suspended matter. Solids that accumulate in the pulsators are purged directly to the waste water treatment plant. The sand filters are backwashed at scheduled intervals with treated water to remove accumulated solids. This filter backwash is piped directly to the Riley pump station and then to the water treatment plant with the raw river water. Approximate flow: 1 MGD

2. PERMIT SUMMARY (cont'd)

Specialty Minerals PCC Plant: Process waste water from the Specialty Minerals PCC plant (precipitated calcium carbonate) is treated in the waste water treatment facility. The Specialty Minerals PCC Plant is located at the Androscoggin Mill's site in Jay, Maine. Approximate flow: 0.7 MGD

Sanitary Waste: Sanitary waste water is generated from toilets, lavatories, and showers located throughout the mill. It is treated in the acid sewer; and both streams are directed to the waste water treatment facility. During shutdowns, sanitary wastes are disinfected through the addition of sodium hypochlorite or calcium hypochlorite. Approximate flow: 0.2 MGD

Recaust: Recaust generates caustic waste waters during the recausticizing process. Approximate flow: 0.1 MGD

Landfill Leachate: Leachate is generated from special wastes contained in the Androscoggin Mill's landfill and from associated groundwater collection systems. Approximate flow: 0.1 MGD

Cogeneration Power Plant: Process waste water from the co-generation Power Plant is treated at the waste treatment facility. The plant uses natural gas to generate both steam and power. In addition to water from equipment drains, the plant discharges cooling tower and boiler blowdown water. Approximate flow: 0.05 MGD

Cooling Water: Cooling water from the mill cooling towers and from equipment is recycled. Any discharge from the systems that is not recycled is treated in the wastewater treatment facility.

Other: Several other activities at the facility contribute waste water to the waste water treatment plant. These include, but are not limited to, the following:

- rejected pulp knots dewatering;
- vehicle washing;
- fire protection;
- flash dryer operating;
- maintenance (housekeeping, tank cleaning, acid cleaning, caustic boilouts, etc.); and
- equipment start-up and shut-down.

Intermittent Discharges: Verso operates and maintains two (2) fire water pumps, one (1) electric, and one (1) diesel. These pumps are located on the west bank of the Androscoggin River, approximately 2,300 feet upriver from the effluent diffuser (Outfall 001). The pumps serve only as emergency backups to the normal mill fire water supply and are used very infrequently. The electric pump is rated for 2,000 gallons per minute and the diesel pump for 1,500 gallons per minute. Both pumps are run weekly for approximately five (5) minutes in order to verify their operability and the water is returned to the river. On an annual basis, the pumps are run long enough, approximately ten (10) minutes, to check the water pressure

2. PERMIT SUMMARY (cont'd)

generated by the pumps. River water is used to cool the top shaft bearings on both fire water pumps. In addition, the diesel pump utilizes non-contact cooling water from the river and discharges the water back to the river.

d. Waste Water Treatment – Verso's waste water treatment plant provides primary clarification, biological treatment, and secondary clarification. The treatment plant equipment consists of two (2) coarse mechanical screens, two (2) primary clarifiers each measuring 190 feet in diameter, four (4) influent pumps, chemical addition for pH adjustment, one (1) aeration basin, two (2) secondary clarifiers each measuring 255 feet in diameter, one (1) activated sludge handling system, one (1) gravity thickener, and seven (7) sludge presses (six screws and one belt). Additionally, temporary sludge presses may be brought on site and operated as necessary. Acidic process waste water is collected separately from the caustic and neutral pH range wastewater. The mill's sanitary waste water is disinfected by combining it with the acid process waste water. Disinfection by sodium hypochlorite or calcium hypochlorite is utilized if the acid wastewater is unavailable for treatment.

Caustic and neutral pH waste waters are collected by sewer lines and directed to the waste water treatment plant. The waste water from the sewer flows through mechanically-raked bar screens to remove large objects. These objects are then landfilled. Waste effluent, ground water and storm water from the Otis mill may combine with the Androscoggin Mill's flow just downstream of the bar screens. The combined waste water then flows to a splitter box which subsequently divides the flow between the two (2) primary clarifiers. The combined acid process waste water and sanitary waste water combines with effluent from the primary clarifiers. This waste stream does not receive primary clarification because very few of the suspended solids can be removed by screening or conventional treatment.

Caustic, or sulfuric acid, is used to adjust the pH of the combined waste water prior to the aeration basin's lift pump station. Four (4) centrifugal pumps lift the combined waste water from a wet well to the aeration basin through a 42-inch force main. Phosphoric acid and urea are injected on an as needed basis into the force main before the aeration basin to provide nutrient sources that enhance biological growth. The aeration basin is an irregular shaped earthen berm structure with mechanical surface aerators. The aerators entrain air and mix the solids and liquid in the aeration basin to biologically treat the waste water.

The waste water exits the basin over a weir and enters a splitter box where the flow is divided between the two (2) secondary clarifiers. Polymer may be added before the secondary clarifiers to enhance settling of solids in the waste water. Stamford baffles have been installed in these clarifiers to aid in the removal of solids. The settled solids consist of active biological matter and are returned via sludge pumps to the aerated basin through a return line that discharges from two surface pipes within one hundred feet of the submerged influent force main from the lift pump station.

2. PERMIT SUMMARY (cont'd)

Waste sludge pumps remove excess solids from the secondary clarifiers to the gravity thickener. This waste sludge is then pumped to the belt press. Polymer is added to the sludge prior to the belt press to increase floc size and aid in dewatering. After dewatering by the belt filter presses, the dewatered sludge is incinerated in the multi-fuel boiler Waste Fuel Incinerator (WFI) or stockpiled and trucked to the on-site facility landfill for disposal.

Defoamer is added to the final effluent in the overflow from the secondary clarifiers, as necessary. The final effluent then flows to a collection box, where flow from the two (2) secondary clarifiers is combined. The combined flow passes through a continuous flow monitor and to the Outfall 001A diffuser for discharge into the Androscoggin River. The diffuser is located on the westerly side of the Androscoggin River just upstream of the confluence with Allen Brook. During the winter months, a portion of the effluent flows through a heat exchanger to recover energy from the final effluent. The compliance sampling point for the final effluent is located at the secondary clarifier collection box.

An emergency spill pond is available in the event of an unforeseen shutdown or power failure of the lift pump station. The spill pond provides the capacity to contain up to six (6) hours of peak wastewater flow. Electric and diesel pumps capable of handling these flows are located in the pond. Separate back-up electricity is also available in the event of any power failures.

See **Attachment B** of this Fact Sheet for a flow diagram of the treatment process associated with waste waters discharged through Outfall #001.

3. RECEIVING WATER QUALITY STANDARDS

The Androscoggin River is one of the four major New England river basins. The basin extends from the Canadian border to the Atlantic Ocean covering a 3,450 square mile section of eastern New Hampshire and southwestern Maine. New Hampshire has classified the main stem of the river as Class B above and below the Gorham Paper and Tissue LLC's paper mill in Gorham N.H. Maine has classified the river as Class B [Maine law, 38 M.R.S.A. §467(1)(A)(1)] from the Maine-New Hampshire boundary to its confluence with the Ellis River in Rumford and Class C [Maine law, 38 M.R.S.A. §467(1)(A)(2)] below the Ellis River to the confluence with Merrymeeting Bay in Brunswick. The river above and below the Verso mill is classified as a Class C waterway.

Maine law 38 M.R.S.A. §465(4)(B) states in part, *The dissolved oxygen content of Class C water may be not less than 5 parts per million or 60% of saturation, whichever is higher, except that in identified salmonid spawning areas where water quality is sufficient to ensure spawning, egg incubation and survival of early life stages, that water quality sufficient for these purposes must be maintained. In order to provide additional protection for the growth of indigenous fish, the following standards apply.*

3. RECEIVING WATER QUALITY STANDARDS (cont'd)

(1) The 30-day average dissolved oxygen criterion of a Class C water is 6.5 parts per million using a temperature of 22 degrees centigrade or the ambient temperature of the water body, whichever is less, if:

(a) A license or water quality certificate other than a general permit was issued prior to March 16, 2004 for the Class C water and was not based on a 6.5 parts per million 30-day average dissolved oxygen criterion; or

(b) A discharge or a hydropower project was in existence on March 16, 2005 and required but did not have a license or water quality certificate other than a general permit for the Class C water.

(1) This criterion for the water body applies to licenses and water quality certificates issued on or after March 16, 2004.

(2) In Class C waters not governed by subparagraph (1), dissolved oxygen may not be less than 6.5 parts per million as a 30-day average based upon a temperature of 24 degrees centigrade or the ambient temperature of the water body, whichever is less. This criterion for the water body applies to licenses and water quality certificates issued on or after March 16, 2004.

This standard codifies the 6.5 mg/L criteria utilized by the Department in historic modeling practices and is consistent with the EPA publication, *Quality Criteria for Water, 1986,* (Gold Book) that establishes a dissolved oxygen criteria with a 30-day mean of 6.5 mg/L to protect and support all species of fish indigenous to the receiving waters and maintain the structure and function of the biological community. On July 18, 2005, the EPA formally approved the Department's May 2005 TMDL for the Androscoggin River which utilized the 30-day average dissolved oxygen standard of 6.5 mg/L at a temperature of 22°C in its analysis.

The use of a 30-day average criterion that considers temperature is premised on the fact that a monthly average criterion is designed to protect for those conditions over which only an insignificant amount of salmonid growth and production is lost. The EPA's "Gold Book" provides a maximum weekly average temperature for growth of Atlantic salmon (20°C), brook trout (19°C) and rainbow trout (19°C) as the optimum temperatures for growth plus 1/3 of the difference between the optimum growth and the ultimate incipient lethal temperature just above the temperature of zero growth. Some growth occurs up to 23-24 °C for these species.

The Maine legislature decided that a temperature threshold of 22°C is an acceptable amount of growth relative to dissolved oxygen [38 M.R.S.A.§465(4)(B)(1)] in the Androscoggin and St. Croix rivers. Consequently, the 30-dayaverage DO criterion applies only when temperatures are 22°C or below.

3. RECEIVING WATER QUALITY STANDARDS (cont'd)

Therefore, based on a best professional judgment by the Department and EPA's approval of the TMDL to protect and support all species of fish indigenous to the receiving waters and maintain the structure and function of the biological community, this permitting action is utilizing a 30-day average ambient dissolved oxygen criteria of 6.5 mg/L at 22°C in establishing monthly average biochemical oxygen demand (BOD) limitations.

Maine law 38 M.R.S.A. §465(4) also states in part *Discharges to Class C waters may cause some changes to aquatic life, provided that the receiving waters shall be of sufficient quality to support all species of fish indigenous to the receiving waters and maintain the structure and function of the resident biological community.*

Maine law 38 M.R.S.A, §464(13) states *Measurement of dissolved oxygen in riverine impoundments. Compliance with dissolved oxygen criteria in existing riverine impoundments must be measured as follows.*

A. Compliance with dissolved oxygen criteria may not be measured within 0.5 meters of the bottom of existing riverine impoundments

B. Where mixing is inhibited due to thermal stratification in an existing riverine impoundment, compliance with numeric dissolved oxygen criteria may not be measured below the higher of:

(1) The point of thermal stratification when such stratification occurs; or

(2) The point proposed by the department as an alternative depth for a specific riverine impoundment based on all factors included in section 466, subsection 11-A and for which a use attainability analysis is conducted if required by the United States Environmental Protection Agency

For purposes of this paragraph, "thermal stratification" means a change of temperature of at least one degree Celsius per meter of depth, causing water below this point in an impoundment to become isolated and not mix with water above this point in the impoundment.

C. Where mixing is inhibited due to natural topographical features in an existing riverine impoundment, compliance with numeric dissolved oxygen criteria may not be measured within that portion of the impoundment that is topographically isolated. Such natural topographic features may include, but not be limited to, natural deep holes or river bottom sills.

Notwithstanding the provisions of this subsection, dissolved oxygen concentrations in existing riverine impoundments must be sufficient to support existing and designated uses of these waters. For purposes of this subsection, "existing riverine impoundments" means all impoundments of rivers and streams in existence as of January 1, 2001 and not otherwise classified as GPA.

3. RECEIVING WATER QUALITY STANDARDS (cont'd)

Maine law, 38 M.R.S.A. Section 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require application of best practicable treatment (BPT), be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, 38 M.R.S.A., Section 420 and Department rule 06-096 CMR Chapter 530, *Surface Water Toxics Control Program,* require the regulation of toxic substances not to exceed levels set forth in Department rule 06-096 CMR Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*, and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

4. RECEIVING WATER QUALITY CONDITIONS

A report entitled, The State of Maine 2010 Integrated Water Quality Monitoring and Assessment Report, prepared by the Department pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists various segments of the Androscoggin River in the following categories;

1. *Category 4-A: Rivers and Streams With Impaired Use TMDL Required, Waters Impaired by Atmospheric Deposition of Mercury.* This applies to all freshwaters in Maine. Impairment in this context refers to the designated use of recreational fishing due to elevated levels of mercury in some fish caused by atmospheric deposition. As a result, the State has established a fish consumption advisory for all freshwaters in Maine. Maine law 38 M.R.S.A., §420 and Department Rule, Chapter 519, *Interim Effluent Limitations and Controls For the Discharge of Mercury*, establishes controls of mercury to surface waters of the State and United States through interim effluent limitations and implementation of pollution prevention plans. See Section 5(m) of this Fact Sheet. Maine law 38 M.R.S.A., §420 1-B,(B)(1) states that a facility is not in violation of the AWQC for mercury if the facility is in compliance with an interim discharge limit established by the Department pursuant to Section 413, subsection 11. A review of the Department's data base for the period January 2007 through the present indicates the permittee has been in compliance with the interim limits for mercury. See Section 5(m) of this Fact Sheet.

2. *Category 4-A: Rivers and Streams With Impaired Use Other than Mercury, TMDL Completed,* applies to 8.19 mile section of the Androscoggin River designated as a Class C waterbody upstream of the Gulf Island Pond Dam. Impairment in this context refers to algal blooms (none since 2004) and depressed dissolved oxygen levels caused by the discharges of biochemical oxygen demand (BOD), total suspended solids (TSS), and phosphorus. See the discussion in Section 4 and Sections 5(d) and 5(k) of this Fact Sheet.

4. RECEIVING WATER QUALITY CONDITIONS (cont'd)

3. Category 4-B: *Rivers and Streams Impaired By Pollutants – Pollution Control Requirements Reasonably Expected To Result in Attainment*, applies to 97 miles of the Androscoggin River designated as a Class C waterbody. Impairment in this context refers to the designated use of fish consumption due to dioxin. Compliance is measured by (1) no detection of dioxin in any internal waste stream (at 10 pg/L detection limit) (2) no detection in fish tissue sampled below a mill's outfall greater than upstream reference." A review of the Department's data base for the period January 2007 through the present indicates the permittee has been in compliance with the dioxin and furan limitations as well as fish tissue samples. See Section 5(p) of this Fact Sheet.

4. *Category 5-D: Rivers and Streams Impaired by Legacy Pollutants*, applies to 69 miles of the Androscoggin River designated as a Class C waterbody. Impairment in this context refers to the designated use of fish consumption due to the presence of polychlorinated biphenyls (PCBs) in fish tissue. Based on data available to it, the Department finds that the permitee is not causing or contributing to this impairment.

The Department has reviewed the annual ambient water quality monitoring reports submitted by Verso, in conjunction with others, required by Special Condition O, *Ambient Water Quality Monitoring,* of the 9/21/05 permit. The recent monitoring conducted during summer of 2010 indicates water quality has improved over that of recent years, even at low river flow and high water temperatures. Algal blooms have not been observed since 2004. Dissolved oxygen (DO), levels have steadily improved and were at the highest levels observed since monitoring GIP was initiated in 2004. In 2010 there were documented depressed DO concentrations below the minimum criteria (5.0 ppm) and the monthly average criteria (6.5 ppm when and where temperatures were 22°C or lower) below the new Lower Narrows oxygen injection diffuser. The depressed DO levels were usually restricted vertically to 1-3 meters in or near the thermocline and in the deeper parts of the impoundment where mixing is inhibited and the generally higher DO levels were observed above the thermocline. The Department has concluded the depressed DO levels are related to sediment oxygen demand (SOD) resulting primarily from past inputs of total suspended solid (TSS) and settled algae due to past inputs of nutrients. SOD is a primary cause of reduced DO levels in the deeper areas of GIP. Historically, the Department has estimated that a significant portion of the SOD in GIP resulted from two sources; algal settling and total suspended solids (TSS) settling. The following is a brief discussion of each of these SOD sources related influences;

Algal settling - GIP has historically been prone to phytoplankton (free-floating algae) blooms as a result of excessive nutrient loadings from upstream discharges. A substantial portion of the algal biomass that originates in GIP eventually settles to the bottom of the pond providing a particularly labile source of SOD.

TSS settling - The slow moving nature of the GIP impoundment provides a good opportunity for suspended solids to settle out. As a result, TSS that originates from upstream point and non-point source discharges provides another significant source of SOD.

4. RECEIVING WATER QUALITY CONDITIONS (cont'd)

In 2005, the Department issued MEPDES/WDL renewals for dischargers on the Androscoggin River. A primary focus of the 2005 permitting effort was to implement phosphorus and TSS discharge limitations as an annual average to specifically address the above mentioned SOD influences in GIP. Final water quality based limits for TSS for Verso, measured as an annual average, became effective in January 2006 and phosphorus limits became effective in September 2005.

Point source loading reductions combined with seasonal oxygen injection efforts have resulted in significant water quality improvement in GIP. Recent occurrences of deficient DO levels in GIP have been reduced in number and occur at depths in or near the thermocline. SOD is a primary factor influencing the observed DO levels which occur during periods of water column stratification. The mean chlorophyll-a concentrations have steadily trended downward since 2004. Secchi disk transparency readings have trended upwards since 2004 and have not been below the 2m threshold for phytoplanktonic algae blooms. Since 2004, there have not been any algae blooms in GIP. There have been significant reductions in point-source phosphorus loadings. In addition, there have been reductions in TSS loadings upstream of GIP compared to historical levels measured as an annual average. Over time, these improvements are expected to result in a significant lowering of the SOD rate in GIP. The Department has a reasonable expectation that these SOD related improvements will result in the elimination of any DO issue in GIP within the 5-year term of this permit.

Based on the continued improvement in water quality being experienced in GIP, the Department is recommending the implementation of a program to continue the assessment of the relative improvement in SOD during the course of this 5-year permitting cycle. The goal of the SOD monitoring will be to identify and implement a refined methodology to assist with the on-going SOD assessment. This SOD data will be evaluated prior to the next 5-year permitting term to better reassess water quality conditions in GIP.

The Department has made the determination consistent with the Androscoggin TMDL implementation plan that additional ambient water quality monitoring is necessary to continue to evaluate compliance with Class C water quality criteria. Therefore, this permit carries forward the annual water quality monitoring via Special Condition J, *Ambient Water Quality Monitoring*, of this permit.

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

a. Regulatory Basis: The discharge from the Androscoggin mill is subject to National Effluent Guidelines (NEG) found in 40 Code of Federal Regulations (CFR) Part 430 – *Pulp, Paper and Paperboard Manufacturing Point Source Category*. The regulation was revised on April 15, 1998, and reorganized 26 sub-categories in the previous regulation into 12 sub-categories by grouping mills with similar processes. Applicable Subparts of the regulation to the Verso facility are limited to Subpart B, *Bleached Papergrade and Soda Subcategory.* The NEG's establish applicable limitations representing; 1) best practicable control technology currently available (BPT) for conventional pollutants for existing dischargers, 2) best conventional

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

pollutant technology economically achievable (BCT) for conventional pollutants for existing dischargers, and 3) best available technology economically achievable (BAT) for toxic and non-conventional pollutants for existing dischargers. The regulation establishes limitations and monitoring requirements on the final outfall to the receiving waterbody as well as internal waste stream(s) such as the bleach plant effluents. The regulation also establishes limitations based on several methodologies including monthly average and or daily maximum mass limits based on production of pulp and paper produced or concentration limitations based on BPT, BCT or BAT.

b. Production: For the period January 2007 – December 2008 inclusively, the Verso mill produced an average of 1,675 tons per day (TPD) of fine coated and specialty papers and 241 tons/day of unbleached market kraft pulp. These production values are being used to calculate BPT limitations for BOD and TSS in accordance with the NEG's. For AOX and chloroform limitations in this permitting action, an unbleached pulp production value of 1,200 tons/day is being utilized which is the highest annual average for the period, calendars 2007 – 2008 inclusively.

OUTFALL #001 (Final effluent)

c. Flow: The previous permitting action established a daily maximum effluent flow limit of 51.0 MGD that is being carried forward in this permitting action and represents the design flow of the waste water treatment facility.

A review of the monthly Discharge Monitoring Report (DMR) data for the period June 2008 – July 2011 indicates the permittee has been in compliance with the daily maximum flow limitation of 51 MGD 100% of the time as values have been reported as follows:

Flow (DMRs=55)

Value	Limit (MGD)	Range (MGD)	Mean (MGD)
Monthly Average	Report	34 -43	38
Daily Maximum	51	38 - 49	45

d. Dilution Factors: Dilution factors associated with the discharge from the mill's waste water treatment facility were derived in accordance with freshwater protocols established in Department Rule Chapter 530, *Surface Water Toxics Control Program*, October of 2005. With a permitted flow of 51.0 MGD, dilution calculations are:

$$\text{Dilution Factor} = \frac{\text{River Flow (cfs)(Conversion Factor)}}{\text{Plant Flow (MGD)}}$$

$$\text{Acute}^{(1)}\text{: 1Q10} = 1{,}671 \text{ cfs} \Rightarrow \frac{(1{,}671 \text{ cfs})(0.6464)}{51.0 \text{ MGD}} = 21.2{:}1$$

$$\text{Chronic: 7Q10} = 1{,}671 \text{ cfs} \Rightarrow \frac{(1{,}671 \text{ cfs})(0.6464)}{51.0 \text{ MGD}} = 21.2{:}1$$

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Harmonic Mean: = 3,152 cfs $\Rightarrow \frac{(3{,}152 \text{ cfs})(0.6464)}{51.0 \text{ MGD}} = 40.0{:}1$

Footnotes:

(1) Chapter 530 (4)(B)(1) states that analyses using numeric acute criteria for aquatic life must be based on 1/4 of the 1Q10 stream design flow to prevent substantial acute toxicity within any mixing zone. The 1Q10 is lowest one day flow over a ten-year recurrence interval. The regulation goes on to say that where it can be demonstrated that a discharge achieves rapid and complete mixing with the receiving water by way of an efficient diffuser or other effective method, analyses may use a greater proportion of the stream design, up to including all of it. The Department made the determination in previous permitting actions that the discharge does receive rapid and complete mixing with the receiving water by way of a diffuser, therefore 100% of the 1Q10 is applicable in acute statistical evaluations pursuant to Chapter 530.

e. Biochemical Oxygen Demand (BOD_5) & Total Suspended Solids (TSS):

The following table contains the monthly average and daily maximum BOD and TSS limitations as calculated utilizing the BPT effluent limitation in the NEGs found at 40 CFR Part 430, **Sub-part B**, *Bleached Papergrade and Soda Subcategory* and the production figures found in Section 5(b) of this Fact Sheet.

Final Prod. (t/d)	Subpart B	BOD Avg		BOD Max		TSS Avg		TSS Max	
		kg/kkg	lbs/day	kg/kkg	lbs/day	kg/kkg	lbs/day	kg/kkg	lbs/day
1,675	Kraft Fine Paper	5.5	18,425	10.6	35,510	11.9	39,865	22.15	74,203
241	B-Mkt Kraft	8.05	3,880	15.45	7,447	16.4	7,905	30.4	14,653
1,916	Totals	---	22,305	---	42,957	---	47,770	---	88,856

Summary of NEG calculated BPT Limitations

BOD Avg.	BOD Max.	TSS Avg.	TSS Max.
22,305 lbs/day	42,957 lbs/day	47,770 lbs/day	88,856 lbs/day

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Seasonal BOD5 limits established in the 9/21/05 MEPDES permit were as follows:

BOD (9/21/05 MEPDES Permit)

	BOD Monthly Avg.	BOD Weekly Avg.	BOD Daily Max.
June 1 – Sept 30	7,400 lbs/day	11,100 lbs/day	13,875 lbs/day
Oct 1 – May 31	17,700 lbs/day	---	34,050 lbs/day

The Fact Sheet of the 9/21/05 permit contained the following italicized text describing the basis for the BOD limits in the permit.

Beginning upon issuance of the permit, the summertime (June 1 – September 30) monthly average water quality based BOD limit of 7,400 lbs/day as recommended in the May 2005 TMDL is being established to maintain compliance with the 30-day rolling average dissolved oxygen criteria of 6.5 mg/L at 22° C. The weekly average and daily maximum water quality based limits of 11,100 lbs/day and 13,875 lbs/day respectively, as recommended in the May 2005 TMDL are being established to maintain compliance with the minimum dissolved oxygen standard of 5.0 mg/L. The daily maximum limitation of 13,875 lbs/day was derived by multiplying the recommended weekly average of 11,100 lbs/day limitation by a statistically derived factor of 1.25. This factor was derived based on a statistical evaluation of the mills historic effluent variability. The non-summer monthly average and daily maximum limitations of 17,700 lbs/day and 34,050 lbs/day respectively are being carried forward from the previous licensing action pursuant to anti-backsliding provisions of Department rule (Chapter 523 §5(1)and federal regulation (USC §1342(o).

BOD (2/17/08 BEP Appeal Order)

On February 17, 2008, the Board of Environmental Protection (BEP) issued a Board Order to settle the appeals of the 9/21/05 MEPDES permit by multiple parties. For BOD limits, the 2/17/08 Board Order contained the following italicized text;

The Board is persuaded by the evidence in the record that the more stringent final limits for BOD discharges proposed by the Department in its draft modification are appropriate and achievable, at least during the critical summer months, and that these limits will correspondingly reduce Verso's requirement for additional oxygenation. However, the evidence in the record indicates that biological wastewater treatment facilities, such as the one at the Jay mill, tend not to perform as efficiently during the non-summer months.

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Therefore, the Board is persuaded that non-summer BOD limits should not be as stringent as summertime limits, and that the BOD limits established in the September 21, 2005 permit for the summertime are appropriate and achievable for the non-summer months.

The Board further concludes that lower discharge limits for BOD, TSS, total phosphorus and ortho-phosphorus are appropriate in the event that the wastewater from the Wausau-Mosinee Otis paper mill is no longer treated at the Jay mill's wastewater treatment facility.

The Board concludes that more stringent final discharge limits on BOD are appropriate and achievable and would reduce Verso's requirement for additional oxygen injection. Specifically, the Board concludes that:

- *Final summertime monthly average limits for BOD should be reduced from 7,400 to 4,500 pounds per day, effective immediately;*
- *Final summertime weekly average limits for BOD should be reduced from 11,100 to 6,400 pounds per day, effective immediately;*
- *Final summertime daily maximum limits for BOD should be reduced from 13,875 to 8,000 pounds per day, effective immediately;*
- *Final non-summer monthly average limits for BOD should be reduced from 17,700 to 7,400 pounds per day, effective immediately;*
- *Final non-summer daily maximum limits for BOD should be reduced from 34,050 to 13,875 pounds per day, effective immediately; and*

In addition to the reductions cited above, the Department was made aware of a letter dated December 16, 2005, from IP (now Verso) to Wausau-Mosinee (WM) indicating IP was providing official written notice of termination of the Waste Treatment Agreement between the two parties. The WM papermaking facility was located approximately 5 miles downstream of Verso's Androscoggin mill and once produced approximately 220 tons/day of paper from purchased pulp. The facility has since terminated papermaking production during the term of the 9/21/05 permit. The WM facility did not have its own waste water treatment facility so process waste waters from the mill were conveyed to Verso's waste water treatment facility via a pipeline and co-mingled with Verso's waste streams for treatment. The 12/16/05 letter indicated the termination was to be effective on December 16, 2010.

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

As a result of the termination letter, the Department issued a draft MEPDES permit modification on May 11, 2006, (never issued as a final document) to address the potential elimination of process waste water flows being treated at the Verso waste water treatment facility that are generated at the WM facility and conveyed to Verso. The Department proposed the establishment of alternate limits for BOD, TSS, total phosphorus and ortho-phosphorus based on proportional decrease in influent loadings to Verso from Wausau-Mosinee.

Based on information provided by WM at that time, the Department determined that WM's BOD influent loadings expressed as a percentage of Verso's total influent BOD loading to its waste water treatment facility was 7.8%. As a result, the 2/17/08 appeal Order reduced seasonal BOD limits by 7.8% if Verso exercised its termination notification.

In summary, the 2/17/08 BEP appeal Order established seasonal BOD limits with and without the treatment of waste water from the Wausau Mosinee mill as follows:

With Wausau Mosinee

	BOD Monthly Avg.	BOD Weekly Avg.	BOD Daily Max.
June 1 – Sept 30	4,500 lbs/day	6,400 lbs/day	8,000 lbs/day
Oct 1 – May 31	7,400 lbs/day	11,100 lbs/day	13,875 lbs/day

Without Wausau Mosinee

	BOD Monthly Avg.	BOD Weekly Avg.	BOD Daily Max.
June 1 – Sept 30	4,150 lbs/day	5,900 lbs/day	7,376 lbs/day
Oct 1 – May 31	6,823 lbs/day	10,234 lbs/day	12,793 lbs/day

BOD (6/8/10 MEPDES Permit Modification)

On June 8, 2010, the Department issued a modification of the 9/21/05 MEPDES permit and 2/17/08 BEP Order. The primary purpose of the modification was to modify the oxygen injection requirements for the Gulf Island Pond oxygen injection system and establish a revised water quality based mass limit for ortho-phosphorus based on the re-calibration of the water quality model for Gulf Island Pond following correction of an error relating to dispersive mixing and a recalculation of the sediment area that is contributing phosphorus to the pond. At the request of the permittee, the Department reduced the monthly average BOD mass limit (with Wausau-Mosinee) from 4,500 lbs/day to 4,400 lbs/day. All other

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

BOD limits remained the same as were established in the 2/17/08 BEP Order. The final BOD limits were as follows:

With Wausau Mosinee

	BOD Monthly Avg.	BOD Weekly Avg.	BOD Daily Max.
June 1 – Sept 30	4,400 lbs/day	6,400 lbs/day	8,000 lbs/day
Oct 1 – May 31	7,400 lbs/day	11,100 lbs/day	13,875 lbs/day

Without Wausau Mosinee

	BOD Monthly Avg.	BOD Weekly Avg.	BOD Daily Max.
June 1 – Sept 30	4,150 lbs/day	5,900 lbs/day	7,376 lbs/day
Oct 1 – May 31	6,823 lbs/day	10,234 lbs/day	12,793 lbs/day

The Wausau-Mosinee facility ceased papermaking operations in 2008. The facility has since been purchased by Otis Properties LLC (OP hereinafter) that currently operates multiple dry processes at the former mill site which are not pulp and paper related. On October 13, 2009, OP and Verso entered into a five-year agreement in which Verso would continue to treat waste effluent, ground water and storm water generated at the former mill site up to comparable flows and loadings from the former paper mill.

Therefore, the BOD limitations established for the scenario of "without Wausau-Mosinee" are being eliminated in this permitting action. The limits for BOD (with Wausau-Mosinee) cited above are being carried forward in this permitting action as they represent the Department's best professional judgment of the BOD limits necessary to meet water quality standards based on the most current modeling of Gulf Island Pond. If ambient water quality monitoring (required by Special Condition J of this permit) indicates more stringent BOD limits are necessary, this permit will be re-opened pursuant to Special Condition O to establish said limits.

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

A review of the DMR data for the period June 2008 – July 2011 indicates the permittee has been in compliance with the seasonal BOD limits as values have been reported as follows:

BOD *(June 1 – September 30)*

BOD Mass (DMRs 14)

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)
Monthly Average	4,500	1,896 – 3,720	3,166
Weekly average	6,400	2,344 – 4,658	3,752
Daily Maximum	8,000	3,225 – 7,328	5,124

BOD *(October 1 – May 31)*

BOD Mass (DMRs=24)

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)
Monthly Average	7,400	1,639 – 6,739	3,958
Weekly Average	11,100	2,234 – 7,955	5,078
Daily Maximum	13,875	2,787 – 11,360	5,269

On July 31, 2006, the U.S. EPA issued a memorandum to the Water Division Directors in all ten regions of the U.S. reminding them to convey to NPDES permitting authorities that facilities subject to Effluent Limitations Guidelines (ELGs) for Pulp and Paper Mills covered under 40 CFR Part 430 (promulgated by the EPA on April 15, 2008) were eligible for monitoring frequency reductions where appropriate. 40 CFR, Part 430 specified monitoring frequencies that were required for a five-year period with the preamble of Part 430 clarifying that permit writers can require less frequent monitoring after the compulsory five-year period. The EPA recommends the use of a document entitled, "*Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies*" (USEPA 1996) as the basis for determining these reduced monitoring frequencies. Monitoring requirements are not considered effluent limitations under section 402(o) of the Clean Water Act and therefore, anti-backsliding prohibitions would not be triggered by reductions in monitoring frequencies

The EPA Guidance indicates "*...the basic premise underlying a performance-based reduction approach is that maintaining a low average discharge relative to the permit limits results in a low probability of the occurrence of a violation for a wide range of sampling frequencies.*" The monitoring frequency reductions in EPA's guidance were designed to maintain approximately the same level of reported violations as that experienced with the existing baseline sampling frequency in the permit. To establish baseline performance the long term average (LTA) discharge rate for each parameter is calculated using the most recent two-year data set of monthly average effluent data representative of current operating conditions. The LTA/permit limit ratio is calculated and then compared to the matrix in Table I of EPA's guidance to determine the potential monitoring frequency reduction. It is noted Table I of EPA's guidance was derived from a probability table that used an 80% effluent variability or coefficient of

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

variation (cv). The permitting authority can take into consider even further reductions in the monitoring frequencies if the actual cv for the facility is significantly lower than the default 80% utilized by the EPA in Table I.

In addition to the parameter-by-parameter performance history via the statistical evaluation cited above, the EPA recommends the permitting authority shall take into consideration the facility enforcement history and the parameter-by-parameter compliance history and factors specific to the State or facility. If the facility has already been given monitoring reductions due to superior performance, the baseline may be a previous permit.

Though EPA's 1996 Guidance recommends evaluation of the most current two-years of effluent data for a parameter, the Department is considering the most current 43 months of data (January 2008 – July 2011) as it is representative of the timeframe from the last monitoring frequency reduction to the present for a number of parameters including AOX, 12-phenolic compounds and chloroform.

The permittee has been monitoring BOD dating back to the 1970's without a reduction in the monitoring frequency. The review of the seasonal monitoring data for BOD on pages 21 and 22 of this Fact Sheet indicates the ratios (expressed in percent) of the long term effluent average to the monthly average limits can be calculated as follows:

June 1 – September 30

Long term average = 3,166 lbs/day
Monthly average limit = 4,500 lbs/day
Current monitoring frequency = 1/Day

$$\text{Ratio} = \frac{3{,}166 \text{ lbs/day}}{4{,}500 \text{ lbs/day}} = 70\%$$

According to Table I of the EPA Guidance, a 1/Day monitoring requirement can be reduced to 5/Week. Therefore, the summertime BOD monitoring frequency has been reduced to 5/Week in this permitting action.

October 1 – May 31

Long term average = 3,958 lbs/day
Monthly average limit = 7,400 lbs/day
Current monitoring frequency = 1/Day

$$\text{Ratio} = \frac{3{,}958 \text{ lbs/day}}{7{,}400 \text{ lbs/day}} = 53\%$$

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001A & 001B (Final effluent)

According to Table I of the EPA Guidance, a 1/Day monitoring requirement can be reduced to 4/Week. Therefore, the non-summertime BOD monitoring frequency has been reduced to 4/Week in this permitting action.

TSS (9/21/05 MEPDES Permit)

Seasonal TSS limits established in the 9/21/05 MEPDES permit are as follows:

TSS - Upon issuance and lasting through May 31, 2010

	TSS Month. Avg.	TSS Daily Max.
June 1 – Sept 30	12,000 #/day 12,000 #/day(2)	22,300 #/day
Oct 1 – May 31	25,000 #/day 17,557 #/day(3)	44,600 #/day

Beginning June 1, 2010 and lasting through May 31, 2015

	TSS Month. Avg.	TSS Daily Max.
June 1 – Sept 30	12,000 #/day 11,060 #/day(2)	22,300 #/day
Oct 1 – May 31	25,000 #/day 16,000 #/day(3)	44,600 #/day

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Beginning June 1, 2010 and lasting through May 31, 2015

	TSS Month. Avg.	TSS Daily Max.
June 1 – Sept 30	12,000 #/day 10,000 #/day(2)	22,300 #/day
Oct 1 – May 31	25,000 #/day 14,738 #/day(3)	44,600 #/day

Footnotes:

(2) 60–day rolling average defined as the average of sixty consecutive daily TSS discharges between June 1st and September 30th to be reported in the July, August, and September DMRs. The 60-day rolling average limit of 12,000 lbs/day becomes effective on June 1, 2006.

(3) Annual average defined as January 1st – December 31st of each year beginning calendar year 2006.

The Fact Sheet of the 9/21/05 permit contained the following italicized text describing the basis for the TSS limits in the permit.

The final summertime monthly average limit of 12,000 lbs/day is based on a May 1998 Section 401 water quality certification for IP's hydro facilities and is consistent with the Town of Jay's Permit #5. The final non-summertime monthly average limitation of 25,000 lbs/day is being carried forward from the previous licensing action pursuant to anti-backsliding provisions of Department rule (Chapter 523 §5(1) and federal regulation (USC §1342(o).

The final summertime 60-day average (June 1 – September 30) limitation of 10,000 lbs/day (effective June 1, 2015) is being established as a TMDL recommended limit to mitigate the adverse affects of settleable solids on the macro-invertebrate community in the Livermore Falls impoundment. An interim limit of 12,000 lbs/day (consistent with the previous licensing action) is in effect upon issuance of the permit and 11,060 lbs/day (negotiated between the Department and the permittee based on past performance) becomes effective June 1, 2010, five years after permit issuance.

In a letter dated January 25, 2011, from the Department to Verso's Hydro facility agent, the Department concluded, "Based on the results of the sampling conducted since issuance of the previous permit, the Department concluded that Verso has demonstrated compliance with applicable Class C aquatic life standards in the Livermore Falls impoundment under critical water quality conditions. No further sampling will be required."

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

The final summertime and non-summertime daily maximum limitations of 22,300 lbs/day and 44,600 lbs/day respectively, are based on a May 1998 Section 401 water quality certification for IP's hydro facilities and is consistent with the Town of Jay's Permit #5. These limits are in effect upon issuance of the permit.

The final annual average limitation of 14,738 lbs/day is a TMDL recommended limit and is being established to reduce the contribution of sediment oxygen demand to non-compliance in GIP. Interim limits of 17,557 lbs/day and 16,000 lbs/day (negotiated between the Department and the permittee based on past performance) become effective upon permit issuance and June 1, 2010, respectively.

TSS (2/17/08 BEP Appeal Order)

On February 17, 2008, the Board of Environmental Protection (BEP) issued a Board Order to settle the appeals of the 9/21/05 MEPDES permit by multiple parties. For TSS limits, the 2/17/08 Board Order contained the following italicized text;

In its May 11, 2006 draft modification of the permit for the Jay mill, the Department concluded that, taking into consideration historic effluent data and the technological, economic and environmental impact of the steps necessary to attain the more stringent water quality-based numeric standards for the discharge of phosphorus from the Jay mill imposed by the September 21, 2005 permit, the compliance schedules for final effluent limits for TSS should be shortened, with compliance due by 2010 instead of by 2015. The Department also concluded, for similar reasons, that the compliance schedules for final effluent limits for total phosphorus and ortho-phosphorus should be shortened, with compliance due by 2008 instead of by 2015.

The Board is persuaded by the evidence that shortened compliance schedules for final effluent limits for TSS, total phosphorus and ortho-phosphorus are both achievable and as short as possible. In particular, the Board relies on CLF, et al. Exhibit CLF-DD that charts Verso's actual discharge levels for BOD, TSS and phosphorus for the past 7-12 years in comparison to the discharge limits established in the September 21, 2005 permit and the May 11, 2006 draft modification. This exhibit indicates that Verso has demonstrated its ability, with limited exceptions, to comply with the new limits.

Therefore, the Board concurs with the shortened compliance schedules for TSS proposed by the Department.

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

As with BOD, the 2/17/08 BEP appeal Order took into consideration the 12/16/05 termination letter from IP to WM. Based on information provided by WM at that time, the Department determined that WM's TSS influent loadings expressed as a percentage of Verso's total influent TSS loading to its waste water treatment facility was 3.5%. As a result, the 2/17/08 appeal Order reduced seasonal TSS limits by 3.5% if Verso exercised its termination notification. Seasonal TSS limits established in the 2/17/08 BEP Appeal Order are as follows:

With Wausau Mosinee

	TSS Month. Avg.	TSS Daily Max.
June 1 – Sept 30	12,000 #/day 12,000 #/day(2)	22,300 #/day
Oct 1 – May 31	25,000 #/day 17,557 #/day(3a)	44,600 #/day

With Wausau Mosinee

	TSS Month. Avg.	TSS Daily Max.
June 1 – Sept 30 *(Begin June 1, 2010)*	12,000 #/day 10,000 #/day(2)	22,300 #/day
Oct 1 – May 31 *(Begin Jan. 1, 2010)*	25,000 #/day 14,738 #/day(3b)	44,600 #/day

Footnotes:

(2) 60–day rolling average defined as the average of sixty consecutive daily TSS discharges between June 1st and September 30th to be reported in the July, August, and September DMRs. The 60-day rolling average limit of 12,000 lbs/day becomes effective on June 1, 2006.

(3a) Annual average defined as January 1st – December 31st of each year beginning calendar year 2006.

(3b) Annual average defined as January 1st – December 31st of each year beginning calendar year 2010.

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Without Wausau Mosinee

	TSS Month. Avg.	TSS Daily Max.
June 1 – Sept 30	11,580 #/day 11,580 #/day[(2)]	21,520 #/day
Oct 1 – May 31	24,125 #/day 16,942 #/day[(3a)]	43,039 #/day

Without Wausau Mosinee

	TSS Month. Avg.	TSS Daily Max.
June 1 – Sept 30 *(Begin June 1, 2010)*	11,580 #/day 9,650 #/day[(2)]	21,520 #/day
Oct 1 – May 31 *(Begin Jan. 1, 2010)*	24,125 #/day 14,222 #/day[(3b)]	43,039 #/day

Footnotes:

(2) 60–day rolling average defined as the average of sixty consecutive daily TSS discharges between June 1st and September 30th to be reported in the July, August, and September DMRs. The 60-day rolling average limit of 12,000 lbs/day becomes effective on June 1, 2006.

(3a) Annual average defined as January 1st – December 31st of each year beginning calendar year 2006.

(3b) Annual average defined as January 1st – December 31st of each year beginning calendar year 2010.

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

TSS – (6/8/10 MEPDES Permit Modification)

The 6/8/10 MEPDES permit modification did not modify any of the seasonal TSS limits established in the 2/17/08 BEP appeal Order.

Given the contractual agreement between the new owners of the mill site and Verso, the limits for TSS "without Wausau-Mosinee" are no longer necessary and being removed from this permit. The seasonal limits for TSS (with Wausaua-Mosinee) beginning January 1, 2010 and June 1, 2010 established in the 2/17/08 BEP appeal Order are being carried forward in this permitting action as they represent the Department's best professional judgment of the TSS limits necessary to meet water quality standards based on the most current modeling of Gulf Island Pond. If ambient water quality monitoring (required by Special Condition J of this permit) indicates more stringent TSS limits are necessary, this permit will be re-opened pursuant to Special Condition O to establish said limits. The limits in this permitting action are summarized as follows:

With Wausau-Mosinee

	TSS Month. Avg.	TSS Daily Max.
June 1 – Sept 30	12,000 #/day 10,000 #/day(2)	22,300 #/day
Oct 1 – May 31	25,000 #/day 14,738 #/day(3)	44,600 #/day

Footnotes:

(2) 60–day rolling average defined as the average of sixty consecutive daily TSS discharges between June 1st and September 30th to be reported in the July, August, and September DMRs.

(3) Annual average defined as January 1st – December 31st of each year beginning calendar year 2010.

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

A review of the DMR data for the period June 2008 – July 2011 indicates the permittee has been in compliance with the seasonal TSS limits as values have been reported as follows:

TSS *(June 1 – September 30)*

TSS Mass (DMRs 14)

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)
Monthly Average	12,000	5,895 – 9,519	7,439
Daily Maximum	22,300	9,042 – 14,498	11,939
60 Rolling Average	10,000	6,158 – 8,727	7,418

TSS *(October 1 – May 31)*

TSS Mass (DMRs=24)

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)
Monthly Average	25,000	5,366 – 21,925	14,024
Daily Maximum	44,600	11,709 – 33,547	21,800

TSS *(Year-round)*

TSS Mass (DMRs=3)(2008 – 2010)

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)
Annual Average	14,222	9,910 – 14,889	13,203

As with BOD, the permittee has been monitoring TSS dating back to the 1970's without a reduction in the monitoring frequency. The review of the seasonal monitoring data for TSS on page 29 of this Fact Sheet indicates the ratios (expressed in percent) of the long term effluent average to the monthly average limits can be calculated as follows:

June 1 – September 30

Long term average = 7,439 lbs/day
Monthly average limit = 12,000 lbs/day
Current monitoring frequency = 1/Day

Ratio = $\frac{7,43 \text{ lbs/day}}{12,000 \text{ lbs/day}} = 62\%$

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

According to Table I of the EPA Guidance, a 1/Day monitoring requirement can be reduced to 4/Week. Therefore, the summertime TSS monitoring frequency has been reduced to 4/Week in this permitting action.

October 1 – May 31

Long term average = 14,024 lbs/day
Monthly average limit = 25,000 lbs/day
Current monitoring frequency = 1/Day

Ratio = 14,024 lbs/day = 58%
25,000 lbs/day

According to Table I of the EPA Guidance, a 1/Day monitoring requirement can be reduced to 4/Week. Therefore, the non-summertime TSS monitoring frequency has been reduced to 4/Week in this permitting action.

f. Temperature: The 9/21/05 MEPDES permitting action established a seasonal (June 1 – September 30) daily maximum temperature limit of 100°F along with a reporting requirement in the non-summer months.

A review of the DMR data for the period June 2008 – July 2011 indicates the permittee has been in compliance with the seasonal limits as values have been reported as follows:

Temperature *(June 1 – September 30)*

Temperature (DMRs 14)

Value	Limit (°F)	Range (°F)	Average (°F)
Daily Maximum	100	89 - 96	92

Temperature *(October 1 – May 31)*

Temperature Mass (DMRs=24)

Value	Limit (°F)	Range (°F)	Average (°F)
Daily Maximum	Report	70 - 88	79

Temperature Difference *(June 1 – September 30*

(DMRs 14)

Value	Limit (°F)	Range (°F)	Average (°F)
Daily Maximum	0.5	0.1 – 0.5	0.18

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Department Rule Chapter 582, *Regulations Relating To Temperature*, limits thermal discharges to an in-stream temperature increase (ΔT) of 0.5° F above the ambient receiving water temperature when the weekly average temperature of the receiving water is greater than or equal to 66° F or when the daily maximum temperature is greater than or equal to 73° F. The temperature thresholds are based on EPA water quality criteria for the protection of cold water fish species including the brook trout and Atlantic salmon (both species indigenous to the Androscoggin River). The weekly average temperature of 66° F was derived to protect for normal growth of the brook trout and the daily maximum threshold temperature of 73° F protects for the survival of juveniles and adult Atlantic salmon during the summer months. As a point of clarification, the Department interprets the term "weekly average temperature" to mean a seven (7) day rolling average. To promote consistency, the Department also interprets the ΔT of 0.5° F as a weekly rolling average criterion when the receiving water temperature is $\geq$66° F and <73° F. When the receiving water temperature is $\geq$73° F compliance with the ΔT of 0.5° F is evaluated on a daily basis.

Maine law, 38 M.R.S.A., §451 states that after adoption of any classification by the Legislature for surface waters or tidal flats or sections thereof, it is unlawful for any person, firm, corporation, municipality, association, partnership, quasi-municipal body, state agency or other legal entity to dispose of any pollutants, either alone or in conjunction with another or others, in such manner as will, after reasonable opportunity for dilution, diffusion or mixture with the receiving waters or heat transfer to the atmosphere, lower the quality of those waters below the minimum requirements of such classifications, or where mixing zones have been established by the department, so lower the quality of those waters outside such zones, notwithstanding any exemptions or licenses which may have been granted or issued under sections 413 to 414-B.

Section 451 also states that, after opportunity for hearing, the Department may establish by order a mixing zone with respect to any discharge for which a license has been issued pursuant to section 414.

Section 451 also states that the purpose of a mixing zone is to allow a reasonable opportunity for dilution, diffusion or mixture of pollutants with the receiving waters before the receiving waters below or surrounding a discharge will be tested for classification violations. In determining the extent of any mixing zone to be established under this section, the Department may require from the applicant testimony concerning the nature and rate of the discharge; the nature and rate of existing discharges to the waterway; the size of the waterway and the rate of flow therein; any relevant seasonal, climatic, tidal and natural variations in such size, flow, nature and rate; the uses of the waterways in the vicinity of the discharge, and such other and further evidence as in the Department's judgment will enable it to establish a reasonable mixing zone for such discharge. An order establishing a mixing zone may provide that the extent thereof varies in order to take into account seasonal, climatic, tidal and natural variations in the size and flow of, and the nature and rate of, discharges to the waterway.

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

The 9/21/05 MEPDES permit Fact Sheet contain the following discussion in italics on temperature and the thermal load from the permittee's mill to the Androscoggin River.

To comply with Department rule Chapter 525, the IP mill, at 7Q10 low flow conditions of 1,671 cfs (1,080 MGD) would be limited to a thermal load based on the following calculation:

$$(1,080,000,000 \text{ gal})(0.5\,^{\circ}F)(8.34) = 4.5 \times 10^{9} \text{ BTUs/day}$$

This is the heat load that would theoretically cause the Androscoggin River temperature to increase by 0.5 °F (after complete mixing) at a 7Q10 river flow of 1,671 cfs (1,080 MGD).

Under the guidance of the Department, IP conducted a thermal survey in the Androscoggin River in 1994 to determine whether after complete mixing of the discharge with the receiving water, if the thermal discharge from the mill is in compliance with the Department Chapter 582 regulation and Section 451 of State law. The report concluded that based on the data collected in the study, complete mixing of the mill effluent with the receiving water (horizontally and vertically) occurs at the USGS gauging station #01055100 (commonly referred to as the Jay Monitoring Station) approximately 3,000 feet downstream of Outfall #001. Based on the thermal study results, IP concluded, and the Department concurred at the time of the previous licensing action , that the discharge was in compliance with the Department regulation of a ΔT of 0.5 °F. It is noted compliance was marginal taking into consideration significant figures. IP has recently expressed concern that due to elevated temperature of the effluent between the 1994 study and the present, due to mill process modification to comply with the Cluster Rule, the discharge may not meet the criteria in the Chapter 582 regulation. IP is concerned that the discharge will periodically not be in compliance with the ΔT of 0.5°F based on theoretical calculations that do not take into consideration diffusion of heat to the atmosphere within the zone of initial dilution (approximately 3,000 feet). IP retained the services of a consulting engineer to model the effect of the mill's thermal discharge on the river. The latest modeling indicates the thermal discharge (after the zone of initial dilution) is in compliance with Chapter 582.

To validate the model results, IP placed temperature monitors in the Androscoggin River above and below the point of discharge during the summer of calendar year 2005 to more accurately determine the ΔT in the receiving water. Preliminary data from the instream monitors correlates very well to the impacts predicted by the model but does not correlate very well with the results derived from the theoretical calculations contained in other permits issued by the Department. In an effort to address this discrepancy, Special Condition H, River Temperature Increase of this permitting action requires that;

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

On or before December 31, 2005, the permittee shall submit to the Department for review and approval, a schedule on how the mill plans to comply with Department Rule, Chapter 582, Regulation Relating To Temperature.

On or before June 1, 2006, the permittee shall have the methodology/mechanism in place and/or fully operational to demonstration compliance with Department Rule, Chapter 582, Regulation Relating To Temperature.

Based on conclusions from the 2005 summer study, IP may propose an alternate method for state review and approval to demonstrate compliance with Department rule Chapter 582. The Department has determined that a cap on temperature is necessary given the uncertainty surrounding compliance with Chapter 582. Therefore, this permit establishes a daily maximum temperature limitation of 100°F as a best professional judgment of historic discharge temperatures. In the event the permittee and Department fail to agree on a methodology/mechanism to demonstrate compliance with Chapter 582, the permittee will be required to utilize the mathematical formula in Special Condition H River Temperature Increase, of this permit to calculate the weekly average or daily maximum temperature difference (ΔT) when the weekly rolling average temperature of the Androscoggin River is greater than or equal to 66 °F.

In December 2009, Verso filed an application with the Department to modify Special Condition H of the 9/21/05 permit. The permittee requested the Department modify Special Condition H, *River Temperature Increase*, to include the Heat Gain/Heat Loss (HGHL) model as the applicable method of determining compliance with Department rule, Chapter 582, *Regulation Relating To Temperature* and modify footnotes 11(a) and 11(b) in Special Condition A, *Effluent Limitations & Monitoring Requirements*, by replacing the term "predicted river temperature increase" (PRTI) with the term "calculated river temperature increase" (CRTI). The permittee requested the modification to the methodology to calculate river temperature increase due to the fact the Department's PRTI formula actually calculates the maximum potential change in temperature and it does not consider or take into account the fact that some or essentially all of the heat added by Verso Paper can be lost to the atmosphere during the night. The night time heat loss is significant during the later half of the summer season when the air temperature at night is cooler than the river water temperature. The HGHL model developed by the permittee and approved by the Department factors in night time heat loss and more accurately calculates the river temperature increase. On January 27, 2010, the Department issued a modification of the 9/21/05 permit granting the permittee's request. The modified Special Condition is being carried forward in this permitting action.

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

g. pH Range: The previous permitting action established a pH range limit of 5.0 – 9.0 standard units that was based on federal regulation 40 CFR, Part 430. This permitting action is carrying the limit forward and continues to be consistent with the federal NEGs.

A review of the DMR data for the period June 2008 – July 2011 indicates the permittee has been in compliance with the limits as values have been reported as follows:

pH (DMRs 14)

Value	Limit (su)	Range (su)	Average (su)
Daily Maximum	5.0 – 9.0	7.2 – 8.0	N/A

h. Adsorbable organic halogens (AOX): The 9/21/05 permitting action established monthly average and daily maximum technology based mass limits for AOX based on federal regulation found at 40 CFR Part 430 along with a 3/Week monitoring requirement. The regulation establishes production based BAT monthly average and daily maximum allowances of 0.623 and 0.951 kg/kkg (lbs per 1000 pounds or metric tons) of unbleached pulp production. With a three–year high unbleached kraft production figure of 1,120 tons/day (calendar year 2003) the limits were calculated as follows:

Monthly average: 1,120 tons/day X 0.623 lbs/1000 lbs X 2000 lbs/ton = 1,396 lbs /day
Daily maximum: 1,120 tons/day X 0.951 lbs/1000 lbs X 2000 lbs/ton = 2,130 lbs /day

In the application for permit renewal, the permittee has indicated that kraft pulp production has increased to 1,200 tons/day and therefore the technology based limits for AOX should be adjusted accordingly. The Department agrees and has calculated new monthly average and daily maximum limits as follows:

Monthly average: 1,200 tons/day X 0.623 lbs/1000 lbs X 2000 lbs/ton = 1,495 lbs /day
Daily maximum: 1,200 tons/day X 0.951 lbs/1000 lbs X 2000 lbs/ton = 2,282 lbs /day

A review of the monthly Discharge Monitoring Report (DMR) data for the period June 2008 – July 2011 indicates the permittee has been in compliance with the limits in the 9/21/05 permit 100% of the time as values have been reported as follows:

AOX (DMRs=38)

Value	Limit (lbs/day)	Range (lbs/day)	Mean (lbs/day)
Monthly Average	1,495	362 – 1,013	728
Daily Maximum	2,282	515 – 1,165	816

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

i. COD: This previous permit established technology based monthly average and daily maximum mass limitations of 50.7 kg/kkg (rounded to 51 kg/kkg) and 75 kg/kkg respectively, with a monitoring frequency of 1/Day that are being carried forward in this permit. Limitations for COD are expressed as the soluble fraction of COD in the final effluent. The limitations were established by Verso's previous owner IP in a signed an agreement with EPA in June of 2000, Final Project Agreement, International Paper XL Project that outlined agreed upon effluent limitations for COD to be incorporated into the permitting action. It is noted federal regulation 40 CFR Part 430, has reserved promulgating of specific final effluent limits for COD.

A review of the monthly Discharge Monitoring Report (DMR) data for the period June 2008 – July 2011 indicates the permittee has been in compliance with the limits in the 9/21/05 permit 100% of the time as values have been reported as follows:

COD (DMRs=55)

Value	Limit (kg/kkg)	Range (kg/kkg)	Mean (kg/kkg)
Monthly Average	51	22 - 45	29
Daily Maximum	75	32 - 71	47

A review of the monitoring data for COD on the previous page indicates the ratios (expressed in percent) of the long term effluent average to the monthly average limits can be calculated as follows:

Long term average = 29 lbs/day
Monthly average limit = 51 lbs/day
Current monitoring frequency = 1/Day

$$\text{Ratio} = \frac{29 \text{ lbs/day}}{51 \text{ lbs/day}} = 57\%$$

According to Table I of the EPA Guidance, a 1/Day monitoring requirement can be reduced to 4/Week. Therefore, the summertime TSS monitoring frequency has been reduced to 4/Week in this permitting action.

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

j. Color: For the Verso mill, applicable sections of Maine law, 38 M.R.S.A., §414-C states that:

2) Best practicable treatment; color pollution. For the purposes of Section 414-A, Subsection 1, best practicable treatment for color pollution control for discharges of color pollutants from the kraft pulping process is:

A) For discharges licensed and in existence prior to July 1, 1989:

2) On and after January 1, 2001, 150 pounds or less of color pollutants per [air dried] ton of unbleached pulp produced, measured on a quarterly average basis. A discharge from a kraft mill that is in compliance with this section is exempt from provisions of subsection 3.

3) An individual waste discharge may not increase the color of any water body by more than 20 color units. The total increase in color pollution units caused by all dischargers to the water body must be less than 40 color pollution units. This subsection applies to all flows greater than the minimum 30-day low flow that can be expected to occur with a frequency of once in 10 years (30Q10). A discharge that is in compliance with this subsection is exempt from the provisions of subsection 2. Such a discharge may not exceed 175 pounds of color pollutants per [air dried] ton of unbleached pulp produced after January 1, 2001.

As with COD, IP's XL agreement with the EPA outlined agreed upon effluent limitations for color that were incorporated into 9/21/05 permitting action. The permit established a calendar quarter average limit of 113 lbs/ton of unbleached kraft pulp produced with a monitoring frequency of 3/Week.

A review of the monthly Discharge Monitoring Report (DMR) data for the period June 2008 – July 2011 indicates the permittee has been in compliance with the limits in the 9/21/05 permit 100% of the time as values have been reported as follows:

Color (DMRs=8)

Value	Limit (lbs/ton)	Range (lbs/ton)	Mean (lbs/ton)
Quarterly Average	113	63 - 100	80

The permittee has been monitoring color 3/Week in its discharge and reporting the quarterly average results since the mid 1980's. The review of the monitoring data for color indicates the ratios (expressed in percent) of the long term effluent average to the monthly average limits can be calculated as follows:

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Long term average = 80 lbs/ton
Monthly average limit = 113 lbs/ton
Current monitoring frequency = 3/Week

Ratio = 80 lbs/ton = 71%
113 lbs/ton

According to Table I of the EPA Guidance, a 3/Week monitoring requirement is the appropriate monitoring frequency. Therefore, the monitoring frequency of 3/Week for color in the previous permitting action is being carried forward in this permitting action.

k. Total phosphorus and Ortho-phosphorus – The 9/21/05 permitting action established seasonal (June 1 – September 30) monthly average water quality based limitations for total phosphorus and ortho-phosphorus limitations. The final monthly average limits of 130 lbs/day (total P) and 22 lbs/day (ortho-P) were based on the recommendations in the May 2005 final TMDL and were derived based on mass discharge quantities for both parameters for the period May 1 – September 30, 2004. The 9/21/05 permit established a ten-year schedule of compliance with said limits and established monthly average interim limits of 193 lbs/day (total P) and 44 lbs/day (ortho-P) upon permit issuance and monthly average limits of 160 lbs/day (total P) and 33 lbs/day (ortho-P) beginning June 1, 2010. The interim limitations were negotiated limits between the Department and permittee.

The limitations cited above and the ten-year schedule of compliance were appealed to the Board of Environmental Protection (BEP) by third parties shortly after issuance of the permit. The 2/7/08 Board Order contained the following italicized text;

"...the Board is sensitive to the fact that it is time to bring Gulf Island Pond into compliance with water quality standards. The question, therefore, is whether the compliance schedules for final effluent limits imposed by the September 21, 2005 permit are "as short as possible. "In its May 11, 2006 draft modification of the permit for the Jay mill, the Department concluded that, taking into consideration historic effluent data and the technological, economic and environmental impact of the steps necessary to attain the more stringent water quality-based numeric standards for the discharge of phosphorus from the Jay mill imposed by the September 21, 2005 permit, the compliance schedules for final effluent limits for TSS should be shortened, with compliance due by 2010 instead of by 2015. The Department also concluded, for similar reasons, that the compliance schedules for final effluent limits for total phosphorus and ortho-phosphorus should be shortened, with compliance due by 2008 instead of by 2015.

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

The Board is persuaded by the evidence that shortened compliance schedules for final effluent limits for TSS, total phosphorus and ortho-phosphorus are both achievable and as short as possible. In particular, the Board relies on CLF, et al. Exhibit CLF-DD that charts Verso's actual discharge levels for BOD, TSS and phosphorus for the past 7-12 years in comparison to the discharge limits established in the September 21, 2005 permit and the May 11, 2006 draft modification. This exhibit indicates that Verso has demonstrated its ability, with limited exceptions, to comply with the new limits. Therefore, the Board concurs with the shortened compliance schedules for TSS proposed by the Department. However, the Board is persuaded by the evidence in the record that Verso needs more time than proposed by the Department to meet final effluent limits for phosphorus while simultaneously meeting more stringent limits for BOD and TSS. In particular, the Board found persuasive the testimony of Verso witnesses Michael Rowland and Steve Woodard that long-term consistent compliance with final phosphorus limits would be technically challenging and that time is needed to implement changes to mill production and wastewater treatment processes to ensure future compliance. [see pre-filed direct testimony of Verso witness Michael Rowland and pre-filed rebuttal testimony of Verso witness Steve Woodard; see also Verso witness Steve Woodard's hearing testimony at Transcript pp. 1969-1974]. The Board finds that a compliance schedule of 2010 for final effluent limits for total phosphorus and orthophosphorus is appropriate and achievable. These shortened schedules will bring the Jay mill into compliance with all final effluent limits within the 5-year term of the current permit."

The 2/7/08 Board Order established monthly average total phosphorus and ortho-phosphorus mass limits as follows:

Total phosphorus	
Beginning June 1, 2008	148 lbs/day
Beginning June 1, 2010	130 lbs/day
Ortho phosphorus	
Beginning June 1, 2008	33 lbs/day
Beginning June 1, 2010	22 lbs/day

On January 5, 2010, the final ortho-phosphorus that was scheduled to go into effect on June 1, 2010, was increased to 28 lbs/day based on results of an April 2, 2009 report to the Department, by HydroAnalysis, Inc. The report stated that 6 pounds of ortho-phosphorus from point sources to Gulf Island Pond could be allocated without causing algal blooms. All 6 pounds are being allocated to Verso Paper as it has the most stringent ortho-phosphorus limits of any point source discharger and it is the only discharge currently operating with an interim ortho-phosphorus limit.

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Therefore, this permitting action is carrying forward the monthly average water quality based limitations for total phosphorus and ortho-phosphorus as follows;

Total phosphorus
Beginning June 1, 2010 130 lbs/day

Ortho phosphorus
Beginning June 1, 2010 28 lbs/day

A review of the monthly Discharge Monitoring Report (DMR) data for the period June 2008 – July 2011 indicates the permittee has reported values as follows:

Mass

Total phosphorus (DMRs=14)

Value	Limit (lbs/day)	Range (lbs/day)	Mean (lbs/day)
Monthly Average	130	60 - 111	88
Daily Maximum	Report	73 - 150	97

Ortho-phosphorus (DMRs=14)

Value	Limit (lbs/day)	Range (lbs/day)	Mean (lbs/day)
Monthly Average	28	6 - 32	17
Daily Maximum	Report	8 - 63	27

Concentration

Total phosphorus (DMRs=14)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	Report	0.19 – 0.32	0.27
Daily Maximum	Report	0.23 – 0.45	0.35

Ortho-phosphorus (DMRs=14)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	Report	0.02 – 0.09	0.05
Daily Maximum	Report	0.03 – 0.17	0.08

For the purposes of consideration for monitoring frequency reductions, the permittee has completed baseline monitoring for total and ortho-phosphorus as the permittee has been conducting the monitoring at frequency of 3/Week for the five-year term of the previous permitting action. The review of the monitoring data for total and ortho-phosphorus indicates the ratios (expressed in percent) of the long term effluent average to the monthly average limits can be calculated as follows:

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Total phosphorus

Long term average = 88 lbs/day
Monthly average limit = 130 lbs/day
Current monitoring frequency = 3/Week

Ratio = 88 lbs/day = 68%
130 lbs/day

According to Table I of the EPA Guidance, with a 68% ratio a 3/Week monitoring requirement should not be reduced.

Ortho-phosphorus

Long term average = 17 lbs/day
Monthly average limit = 28 lbs/day
Current monitoring frequency = 3/Week

Ratio = 17 lbs/day = 61%
28 lbs/day

According to Table I of the EPA Guidance, a 3/Week monitoring requirement can be reduced to 2/Week.

Given the calculations above, the monitoring frequency for total phosphorus will remain at 3/Week while the monitoring frequency for ortho-phosphorus is being reduced to 2/Week.

l. Whole Effluent Toxicity (WET) & Chemical-Specific Testing – Maine law, 38 M.R.S.A., Sections 414-A and 420, prohibit the discharge of effluents containing substances in amounts that would cause the surface waters of the State to contain toxic substances above levels set forth in Federal Water Quality Criteria as established by the USEPA. Department Rules, 06-096 CMR Chapter 530, *Surface Water Toxics Control Program*, and Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants* set forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters. WET, priority pollutant and analytical chemistry testing as required by Chapter 530, is included in this permit in order to fully characterize the effluent. This permit also provides for reconsideration of effluent limits and monitoring schedules after evaluation of toxicity testing results. The monitoring schedule includes consideration of results currently on file, the nature of the wastewater, existing treatment and receiving water characteristics.

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

WET monitoring is required to assess and protect against impacts upon water quality and designated uses caused by the aggregate effect of the discharge on specific aquatic organisms. Acute and chronic WET tests are performed on invertebrate and vertebrate species. Priority pollutant and analytical chemistry testing is required to assess the levels of individual toxic pollutants in the discharge, comparing each pollutant to acute, chronic, and human health AWQC as established in Chapter 584.

Chapter 530 establishes four categories of testing requirements based predominately on the chronic dilution factor. The categories are as follows:

1) Level I – chronic dilution factor of <20:1.
2) Level II – chronic dilution factor of ≥20:1 but <100:1.
3) Level III – chronic dilution factor ≥100:1 but <500:1 or >500:1 and Q ≥1.0 MGD
4) Level IV – chronic dilution >500:1 and Q ≤1.0 MGD

Department rule Chapter 530 (1)(D) specifies the criteria to be used in determining the minimum monitoring frequency requirements for WET, priority pollutant and analytical chemistry testing. Based on the Chapter 530 criteria, the permittee's facility falls into the Level II frequency category as the facility has a chronic dilution factor of ≥20:1 but <100:1. Chapter 530(1)(D)(1) specifies that routine screening and surveillance level testing requirements are as follows:

Screening level testing – Beginning 24 months prior to permit expiration and lasting through 12 months prior to permit expiration (Year 4 of the permit) and every five years thereafter if a timely request for renewal has been made and the permit continues in force, or is replaced by a permit renewal containing this requirement.

Level	WET Testing	Priority pollutant testing	Analytical chemistry
II	2 per year	1 per year	4 per year

Surveillance level testing – Beginning upon issuance of the permit and lasting through 24 months prior to permit expiration (Years 1, 2 & 3 of the term of the permit) and commencing again 12 months prior to permit expiration (Year 5 of the permit).

Level	WET Testing	Priority pollutant testing	Analytical chemistry
II	1 per year	None required	2 per year

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Department rule Chapter 530(D)(3)(b) states in part, *Dischargers in Level II may reduce surveillance testing to one WET or specific chemical series every other year provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedence as calculated pursuant to section 3(E).*

Chapter 530(3)(E) states "*For effluent monitoring data and the variability of the pollutant in the effluent, the Department shall apply the statistical approach in Section 3.3.2 and Table 3-2 of USEPA's "Technical Support Document for Water Quality-Based Toxics Control" (USEPA Publication 505/2-90-001, March, 1991, EPA, Office of Water, Washington, D.C.) to data to determine whether water-quality based effluent limits must be included in a waste discharge license. Where it is determined through this approach that a discharge contains pollutants or WET at levels that have a reasonable potential to cause or contribute to an exceedence of water quality criteria, appropriate water quality-based limits must be established in any licensing action.*"

Chapter 530 §3 states, "*In determining if effluent limits are required, the Department shall consider all information on file and effluent testing conducted during the preceding 60 months. However, testing done in the performance of a Toxicity Reduction Evaluation (TRE) approved by the Department may be excluded from such evaluations.*"

See **Attachment C** of this Fact Sheet for a summary of the WET test results and **Attachment D** of this Fact Sheet for a summary of the chemical-specific test dates.

WET evaluation

On 7/30/12, the Department conducted a statistical evaluation on the most recent 60 months of WET data that indicates that the discharge does not exceed or have a reasonable potential (RP) to exceed either the acute and chronic critical ambient water quality criteria (AWQC) threshold (4.7% – mathematical inverse of the applicable dilution factors) for any of the WET species tested to date.

Given the absence of exceedences or reasonable potential to exceed critical WET thresholds, the permittee meets the surveillance level monitoring frequency reduction criteria found at Department rule Chapter 530(D)(3)(b). Therefore, surveillance level WET testing is being established at once every other year (1/2 Years). Routine screening level testing of 2/Year shall be completed in the period 24-months to 12 months prior to the expiration date of this permit and every five years thereafter if a timely request for renewal has been made and the permit continues in force, or is replaced by a permit renewal containing this requirement.

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

In accordance with Department rule Chapter 530(2)(D)(4) and Special Condition G of this permit, *06-096 CMR 530(2)(D)(4) Statement For Reduced/Waived Toxics Testing*, the permittee must annually submit to the Department a written statement evaluating its current status for each of the four conditions listed.

Chemical evaluation

Chapter 530 (promulgated on October 12, 2005) §4(C), states *"The background concentration of specific chemicals must be included in all calculations using the following procedures. The Department may publish and periodically update a list of default background concentrations for specific pollutants on a regional, watershed or statewide basis. In doing so, the Department shall use data collected from reference sites that are measured at points not significantly affected by point and non-point discharges and best calculated to accurately represent ambient water quality conditions The Department shall use the same general methods as those in section 4(D) to determine background concentrations. For pollutants not listed by the Department, an assumed concentration of 10% of the applicable water quality criteria must be used in calculations."*

The Department has limited information on the background levels of metals in the water column in the Androscoggin River in the vicinity of the permittee's outfall. Therefore, a default background concentration of 10% of the applicable water quality criteria is being used in the calculations of this permitting action.

Chapter 530 4(E), states "*In allocating assimilative capacity for toxic pollutants, the Department shall hold a portion of the total capacity in an unallocated reserve to allow for new or changed discharges and non-point source contributions. The unallocated reserve must be reviewed and restored as necessary at intervals of not more than five years. The water quality reserve must be not less than 15% of the total assimilative quantity."* However, in May 2012, Maine law 38 M.R.S.A. §464, ¶¶ J was enacted which reads as follows, *"For the purpose of calculating waste discharge license limits for toxic substances, the department may use any unallocated assimilative capacity that the department has set aside for future growth if the use of that unallocated assimilative capacity would avoid an exceedance of applicable ambient water quality criteria or a determination by the department of a reasonable potential to exceed ambient water quality criteria.."*

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

On July 24, 2012, the Department conducted statistical evaluations based on 15% of the ambient water quality criteria reserve being withheld (Report ID 457) and 0% of the reserve of the criteria being withheld (Report ID 458) to determine if the unallocated assimilative capacity would avoid an exceedance or reasonable potential to exceed applicable ambient water quality criteria for toxic pollutants. Report ID 458 indicates Mechanic Falls no longer has a reasonable potential to exceed the chronic ambient water quality criteria for aluminum or zinc and North Jay no longer has a reasonable potential to exceed the chronic ambient water quality criteria for lead. Therefore, the department is utilizing the full 15% of the unallocated assimilative capacity in the statistical evaluation when establishing limits for toxic pollutants in waste discharge licenses for facilities in the Androscoggin River watershed.

Chapter 530 §(3)(E) states *"... that a discharge contains pollutants or WET at levels that have a reasonable potential to cause or contribute to an exceedence of water quality criteria, appropriate water quality-based limits must be established in any licensing action."*

Chapter 530 §4(F) states in part "*Where there is more than one discharge into the same fresh or estuarine receiving water or watershed, the Department shall consider the cumulative effects of those discharges when determining the need for and establishment of the level of effluent limits. The Department shall calculate the total allowable discharge quantity for specific pollutants, less the water quality reserve and background concentration, necessary to achieve or maintain water quality criteria at all points of discharge, and in the entire watershed. The total allowable discharge quantity for pollutants must be allocated consistent with the following principles.*

Evaluations must be done for individual pollutants of concern in each watershed or segment to assure that water quality criteria are met at all points in the watershed and, if appropriate, within tributaries of a larger river.

The total assimilative capacity, less the water quality reserve and background concentration, may be allocated among the discharges according to the past discharge quantities for each as a percentage of the total quantity of discharges, or another comparable method appropriate for a specific situation and pollutant. Past discharges of pollutants must be determined using the average concentration discharged during the past five years and the facility's licensed flow.

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

The amount of allowable discharge quantity may be no more than the past discharge quantity calculated using the statistical approach referred to in section 3(E) [Section 3.3.2 and Table 3-2 of USEPA's "Technical Support Document for Water Quality-Based Toxics Control"] of the rule, but in no event may allocations cause the water quality reserve amount to fall below the minimum referred to in 4(E) [15% of the total assimilative capacity]. Any difference between the total allowable discharge quantity and that allocated to existing dischargers must be added to the reserve.

Chapter 530 §(3)(D)(1) states "*For specific chemicals, effluent limits must be expressed in total quantity that may be discharged and in effluent concentration. In establishing concentration, the Department may increase allowable values to reflect actual flows that are lower than permitted flows and/or provide opportunities for flow reductions and pollution prevention provided water quality criteria are not exceeded. With regard to concentration limits, the Department may review past and projected flows and set limits to reflect proper operation of the treatment facilities that will keep the discharge of pollutants to the minimum level practicable.*" However, in May 2012, Maine law 38 M.R.S.A. §464, ¶¶ K was enacted which reads as follows, "*Unless otherwise required by an applicable effluent limitation guideline adopted by the department, any limitations for metals in a waste discharge license may be expressed only as mass-based limits.*" There are no applicable effluent limitation guidelines adopted by the Department or the USEPA for metals for dischargers subject to federal regulation, Effluent Limitations Guidelines (ELGs) for Pulp and Paper Mills covered under 40 CFR Part 430 (promulgated by the EPA on April 15, 2008). Therefore, concentration limits for pollutants identified in Report ID 458 that exceed or have a reasonable potential to exceed applicable ambient water quality criteria are not being established in this permitting action.

See **Attachment E** of this Fact Sheet for Department guidance that establishes protocols for establishing waste load allocations. The guidance states that the most protective of water quality becomes the facility's allocation. According to the 7/24/12 statistical evaluation (Report ID #458), all pollutants of concern (aluminum, arsenic, cadmium, copper, lead and zinc) are to be limited based on the segment allocation method and inorganic arsenic is to be limited based on the individual allocation method.

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Segment allocation methodology

Historical Average:

For the segment allocation methodology, the historical average quantity (mass) for each pollutant of concern for each facility is calculated utilizing the arithmetic mean of the concentrated values reported for each pollutant, a conversion factor of 8.34 lbs/gallon and the monthly average permit limit for flow. The historical mass discharged for each pollutant for each facility is mathematically summed to determine the total mass discharged for each pollutant in the watershed. Based on the individual dischargers historical average each discharger is assigned a percentage of the whole which is then utilized to determine the percent of the segment allocation for each pollutant for each facility. For Verso's facility, historical averages for aluminum, cadmium, copper, lead and zinc were calculated as follows:

Aluminum

Mass limits

Mean concentration (n=23) = 1,498 ug/L or 1.498 mg/L
Permit flow limit = 51 MGD
Historical average mass = (1.498 mg/L)(8.34)(51 MGD) = 637 lbs/day

The 7/24/12 statistical evaluation indicates the historical average mass of aluminum discharged by the permittee's facility is 83.89% of the aluminum discharged by the facilities on the Androscoggin River and its tributaries. The Department has calculated a chronic assimilative capacity 807 lbs/day of aluminum at Brunswick, the most downstream discharger on the Androscoggin River. The chronic assimilative capacity (AC) at Brunswick was calculated based on 90% of the applicable AWQC (taking into consideration the 10% reduction to account for background, 0% reduction for reserve, totaling 10%), critical low flows (1Q10 = 1,053 cfs, 7Q10 = 2,010 cfs) at Brunswick less the assimilative capacity allocated to Whitney Brook in Canton (critical low flows 1Q10 = 20 cfs, 7Q10 = 20 cfs), to Seven Mile Stream in Jay (critical low flows 1Q10 = 2 cfs, 7Q10 = 2 cfs) and to the Little Androscoggin River in Auburn(critical low flows 1Q10 = 75 cfs, 7Q10 = 75 cfs). The calculations for aluminum are as follows:

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Segment allocation methodology

Chronic:

7Q10 @ Brunswick = 2,010 cfs or 1,299 MGD
7Q10 at Canton = 20 cfs or 12.9 MGD
7Q10 at Jay = 2 cfs or 1.29 MGD
7Q10 at Auburn = 75 cfs or 48.5 MGD

AWQC = 87 ug/L
87 ug/L(0.90) = 78.3 ug/L or 0.0783 mg/L

Chronic AC = 1,299 MGD – 12.9 MGD – 1.29 MGD – 48.5 MGD = 1,236 MGD

(1,236 MGD)(8.34 lbs/gal)(0.0783 mg/L) = 807 lbs/day

Therefore, the chronic mass segment allocations for aluminum for the permittee can be calculated as follows:

Monthly average: (Chronic assimilative capacity mass)(% of total aluminum discharged)
(807 lbs/day)(0.8389) = **677 lbs/day**

Cadmium

Mass limits

Mean concentration (n=5) = 0.70 ug/L or 0.00070 mg/L
Permit flow limit = 51 MGD
Historical average mass = (0.00070 mg/L)(8.34)(51 MGD) = 0.298 lbs/day

The 7/24/12 statistical evaluation indicates the historical average mass of cadmium discharged by the permittee's facility is 62.2% of the cadmium discharged by the facilities on the Androscoggin River and its tributaries. The Department has calculated an acute assimilative capacity of 1.95 lbs and a chronic assimilative capacity of 0.742 lbs/day of cadmium at Brunswick, the most downstream discharger on the Androscoggin River. The acute and chronic assimilative capacities (AC) at Brunswick were calculated based on 90% of the applicable AWQC (taking into consideration the 10% reduction to account for background, 0% reduction for reserve, totaling 10%), critical low flows (1Q10 = 1,053 cfs, 7Q10 = 2,010 cfs) at Brunswick less the assimilative capacity allocated to Whitney Brook in Canton (critical low flows 1Q10 = 20 cfs, 7Q10 = 20 cfs), to Seven Mile Stream in Jay (critical low flows 1Q10 = 2 cfs, 7Q10 = 2 cfs) and to the Little Androscoggin River in Auburn (critical low flows 1Q10 = 75 cfs, 7Q10 = 75 cfs). The calculations for cadmium are as follows:

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Segment allocation methodology

Acute:

1Q10 @ Brunswick = 1,053 cfs or 681 MGD
1Q10 at Canton = 20 cfs or 12.9 MGD
1Q10 at Jay = 2 cfs or 1.29 MGD
1Q10 at Auburn = 75 cfs or 48.5 MGD

AWQC = 0.42 ug/L
0.42 ug/L(0.90) = 0.378 ug/L or 0.000378 mg/L

Acute AC = 681 MGD – 12.9 MGD – 1.29 MGD – 48.5 MGD = 618 MGD

(618 MGD)(8.34 lbs/gal)(0.000378 mg/L) = 1.95 lbs/day

Therefore, the acute mass segment allocations for cadmium for the permittee can be calculated as follows:

Daily maximum mass for cadmium:
(Acute assimilative capacity mass)(% of total cadmium discharged)
(1.95 lbs/day)(0.622) = **1.21 lbs/day**

Chronic:

7Q10 @ Brunswick = 2,010 cfs or 1,299 MGD
7Q10 at Canton = 20 cfs or 12.9 MGD
7Q10 at Jay = 2 cfs or 1.29 MGD
7Q10 at Auburn = 75 cfs or 48.5 MGD

AWQC = 0.08 ug/L
0.08 ug/L(0.90) = 0.072 ug/L or 0.000072 mg/L

Chronic AC = 1,299 MGD – 12.9 MGD – 1.29 MGD – 48.5 MGD = 1,236 MGD

(1,236 MGD)(8.34 lbs/gal)(0.000072 mg/L) = 0.742 lbs/day

Therefore, the chronic mass segment allocation for cadmium for the permittee can be calculated as follows:

Monthly average: (Chronic assimilative capacity mass)(% of total cadmium discharged)
(0.742 lbs/day)(0.622) = **0.46 lbs/day**

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Segment allocation methodology

Copper

Mass limits

Mean concentration (n=5) = 17.2 ug/L or 0.0172 mg/L
Permit flow limit = 51 MGD
Historical average mass = (0.0172 mg/L)(8.34)(51 MGD) = 7.3 lbs/day

The 7/24/12 statistical evaluation indicates the historical average mass of copper discharged by the permittee's facility is 45% of the copper discharged by the facilities on the Androscoggin River and its tributaries. The Department has calculated an acute assimilative capacity of 14.2 lbs and a chronic assimilative capacity 21.8 lbs/day of copper at Brunswick, the most downstream discharger on the Androscoggin River. The acute and chronic assimilative capacities (AC) at Brunswick were calculated based on 90% of the applicable AWQC (taking into consideration the 10% reduction to account for background, 0% reduction for reserve, totaling 10%), critical low flows (1Q10 = 1,053 cfs, 7Q10 = 2,010 cfs) at Brunswick less the assimilative capacity allocated to Whitney Brook in Canton (critical low flows 1Q10 = 20 cfs, 7Q10 = 20 cfs), to Seven Mile Stream in Jay (critical low flows 1Q10 = 2 cfs, 7Q10 = 2 cfs) and to the Little Androscoggin River in Auburn(critical low flows 1Q10 = 75 cfs, 7Q10 = 75 cfs). The calculations for copper are as follows:

Acute:

1Q10 @ Brunswick = 1,053 cfs or 681 MGD
1Q10 at Canton = 20 cfs or 12.9 MGD
1Q10 at Jay = 2 cfs or 1.29 MGD
1Q10 at Auburn = 75 cfs or 48.5 MGD

AWQC = 3.07 ug/L
3.07 ug/L(0.90) = 2.76 ug/L or 0.00276 mg/L

Acute AC = 681 MGD – 12.9 MGD – 1.29 MGD – 48.5 MGD = 618 MGD

(618 MGD)(8.34 lbs/gal)(0.00276 mg/L) = 14.2 lbs/day

Therefore, the acute mass segment allocations for copper for the permittee can be calculated as follows:

Daily maximum mass for copper:
(Acute assimilative capacity mass)(% of total copper discharged)
(14.2 lbs/day)(0.45) = **6.4 lbs/day**

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Segment allocation methodology

Chronic:

7Q10 @ Brunswick = 2,010 cfs or 1,299 MGD
7Q10 at Canton = 20 cfs or 12.9 MGD
7Q10 at Jay = 2 cfs or 1.29 MGD
7Q10 at Auburn = 75 cfs or 48.5 MGD

AWQC = 2.36 ug/L
2.36 ug/L(0.90) = 2.12 ug/L or 0.00212 mg/L

Chronic AC = 1,299 MGD – 12.9 MGD – 1.29 MGD – 48.5 MGD = 1,236 MGD
(1,236 MGD)(8.34 lbs/gal)(0.00212 mg/L) = 21.85 lbs/day

Therefore, the chronic mass segment allocation for copper for the permittee can be calculated as follows:

Monthly average: (Chronic assimilative capacity mass)(% of total copper discharged)
(21.85 lbs/day)(0.45) = **9.8 lbs/day**

The calculations above are correct in that the monthly average limitation is greater than the daily maximum limit. This will occur when the ratio between the acute and chronic AWQC is smaller than the ratio between the acute (1Q10) and chronic (7Q10) receiving water flows.

Lead

Mass limits

Mean concentration (n=22) = 3.38 ug/L or 0.00338 mg/L
Permit flow limit = 51 MGD
Historical average mass = (0.00338 mg/L)(8.34)(51 MGD) = 1.44 lbs/day

The 7/24/12 statistical evaluation indicates the historical average mass of lead discharged by the permittee's facility is 70.5% of the lead discharged by the facilities on the Androscoggin River and its tributaries. The Department has calculated a chronic assimilative capacity 3.8 lbs/day of lead at Brunswick, the most downstream discharger on the Androscoggin River. The chronic assimilative capacity (AC) at Brunswick was calculated based on 90% of the applicable AWQC (taking into consideration the 10% reduction to account for background, 0% reduction for reserve, totaling 10%), critical low flows (1Q10 = 1,053 cfs, 7Q10 = 2,010 cfs) at Brunswick less the assimilative capacity allocated to Whitney Brook in Canton (critical low flows 1Q10 = 20 cfs, 7Q10 = 20 cfs), to Seven Mile Stream in Jay (critical low flows 1Q10 = 2 cfs, 7Q10 = 2 cfs) and to the Little Androscoggin River in Auburn(critical low flows 1Q10 = 75 cfs, 7Q10 = 75 cfs). The calculations for lead are as follows:

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Segment allocation methodology

Chronic:

7Q10 @ Brunswick = 2,010 cfs or 1,299 MGD
7Q10 at Canton = 20 cfs or 12.9 MGD
7Q10 at Jay = 2 cfs or 1.29 MGD
7Q10 at Auburn = 75 cfs or 48.5 MGD

AWQC = 0.41 ug/L
0.41 ug/L(0.90) = 0.369 ug/L or 0.000369 mg/L

Chronic AC = 1,299 MGD – 12.9 MGD – 1.29 MGD – 48.5 MGD = 1,236 MGD

(1,236 MGD)(8.34 lbs/gal)(0.000369 mg/L) = 3.8 lbs/day

Therefore, the chronic mass segment allocation for lead for the permittee can be calculated as follows:

Monthly average: (Chronic assimilative capacity mass)(% of total lead discharged)
(3.8 lbs/day)(0.705) = **2.7 lbs/day**

Zinc

Mass limits

Mean concentration (n=6) = 97 ug/L or 0.097 mg/L
Permit flow limit = 51 MGD
Historical average mass = (0.097 mg/L)(8.34)(51 MGD) = 41.3 lbs/day

The 7/24/12 statistical evaluation indicates the historical average mass of zinc discharged by the permittee's facility is 63.4% of the zinc discharged by the facilities on the Androscoggin River and its tributaries. The Department has calculated an acute assimilative capacity of 142 lbs of zinc at Brunswick, the most downstream discharger on the Androscoggin River. The acute assimilative capacity (AC) at Brunswick was calculated based on 90% of the applicable AWQC (taking into consideration the 10% reduction to account for background, 0% reduction for reserve, totaling 10%), critical low flows (1Q10 = 1,053 cfs, 7Q10 = 2,010 cfs) at Brunswick less the assimilative capacity allocated to Whitney Brook in Canton (critical low flows 1Q10 = 20 cfs, 7Q10 = 20 cfs), to Seven Mile Stream in Jay (critical low flows 1Q10 = 2 cfs, 7Q10 = 2 cfs) and to the Little Androscoggin River in Auburn(critical low flows 1Q10 = 75 cfs, 7Q10 = 75 cfs). The calculations for zinc are as follows:

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Segment allocation methodology

Acute:

1Q10 @ Brunswick = 1,053 cfs or 681 MGD
1Q10 at Canton = 20 cfs or 12.9 MGD
1Q10 at Jay = 2 cfs or 1.29 MGD
1Q10 at Auburn = 75 cfs or 48.5 MGD

AWQC = 30.6 ug/L
30.6 ug/L(0.90) = 27.54 ug/L or 0.02754 mg/L

Acute AC = 681 MGD – 12.9 MGD – 1.29 MGD – 48.5 MGD = 618 MGD
(618 MGD)(8.34 lbs/gal)(0.02754 mg/L) = 142 lbs/day

Therefore, the acute mass segment allocation for zinc for the permittee can be calculated as follows:

Daily maximum mass for zinc:
(Acute assimilative capacity mass)(% of total zinc discharged)
(142 lbs/day)(0.634) = **90 lbs/day**

In a letter dated August 8, 2012, to the Department, the permittee stated that after reviewing the Department's recent re-analysis for the Androscoggin River, it has determined that it could not sustain compliance with the newly proposed permit limitations for aluminum, cadmium, copper, lead and zinc without a compliance schedule. Verso requested the Department incorporate a five-year schedule of compliance for aluminum, cadmium, copper and lead and a one-year schedule of compliance for zinc. Subsequent discussions between the Department and Verso resulted in the limiting the schedule of compliance (term of the permit) to aluminum and copper as the permittee has already demonstrated compliance with the proposed limits for cadmium, lead and zinc.

Maine law 38 M.R.S.A. §414(2) *Schedules of Compliance*, clearly authorizes the Department to establish schedules of compliance for water quality based limitations within the terms and conditions of a license. Said law states "*Within the terms and conditions of a license, the department may establish a schedule of compliance for a final effluent limitation based on a water quality standard adopted after July 1, 1977. When a final effluent limitation is based on new or more stringent technology-based treatment requirements, the department may establish a schedule of compliance consistent with the time limitations permitted for compliance under the Federal Water Pollution Control Act, Public Law 92-500, as amended. A schedule of*

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

compliance may include interim and final dates for attainment of specific standards necessary to carry out the purposes of this subchapter and must be as short as possible, based on consideration of the technological, economic and environmental impact of the steps necessary to attain those standards."

In addition, Department rule Chapter 523, Waste Discharge License Conditions, § Section 7, *Schedules of Compliance*, states in part, "*if a permit establishes a schedule of compliance which exceeds 1 year from the date of permit issuance, the schedule shall set forth interim requirements and the dates for their achievement.*

(i) The time between interim dates shall not exceed 1 year, except that in the case of a schedule for compliance with standards for sewage sludge use and disposal, the time between interim dates shall not exceed six months.

(ii) If the time necessary for completion of any interim requirement (such as the construction of a control facility) is more than 1 year and is not readily divisible into stages for completion, the permit shall specify interim dates for the submission of reports of progress toward completion of the interim requirements and indicate a projected completion date."

Verso's August 8, 2012, letter indicates it intends to conduct a comprehensive investigation and an evaluation of the source of metals in waste streams within the mill. The investigation and evaluation will focus sequentially on three areas: reduction of metals in raw materials, process and wastewater; reduction of metals through treatment of the effluent if practicable and if necessary, development of site-specific limits. Verso intends to proceed with site-specific criteria development at the same time as metal source identification and reduction.

Special Condition M, *Schedule of Compliance*, of this permit establishes said schedule of compliance.

Individual allocation methodology
Arsenic (inorganic)

For inorganic arsenic, the individual allocation method is the most stringent allocation. In the individual allocation, the Department continues to utilize the formula it has used in permitting actions since October 2005 taking into consider background (10% of AWQC) and a reserve (0% of AWQC). The formula is as follows:

EOP concentration = [Dilution factor x 0.90 x AWQC] + [0.10 x AWQC]

Mass limit = (EOP concentration in mg/L)(8.34 lbs/gal)(Permit flow limit in MGD)
Human health (w&o) AWQC = 0.012 ug/L*
Harmonic mean dilution factor = 41:1

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Individual allocation methodology

* It is noted, Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants,* was amended by the Department in the spring of 2012, which resulted in a less stringent human health AWQC for inorganic arsenic. The revised criteria is currently under review by the USEPA. If the new criteria is approved by the USEPA during the term of this permit, the Department will reassess the necessity for water quality based limitations and modify or eliminate the limitations for inorganic arsenic pursuant to Special Condition Q, *Reopening of Permit For Modifications*, of this permit.

EOP = [41 x 0.90 x 0.012 ug/L] + [0.10 x 0.012 ug/L] = 0.44 ug/L

Based on a permitted flow of 51 MGD, EOP monthly average mass limits for arsenic can be calculated as follows:

(51 MGD)(8.34 lbs/gal)(0.00044 mg/L) = 0.19 lbs/day

It is noted the Department's Reporting Limit (RL) for arsenic is 5 ug/L. Compliance will be based on the RL as Chapter 530, Section 3(F)(1) states "*When a test result for a specific chemical is reported as not found in concentrations at a detection level specified by the Department pursuant to section 2(C)(6), the compound must be considered to be not present for the purposes of determining exceedences of water quality criteria.*"

Department rule Chapter 530 Section (C)(6) states:

All chemical testing must be carried out by approved methods that permit detection of a pollutant at existing levels in the discharge or that achieve detection levels as specified by the Department. When chemical testing results are reported as less then, or detected below the Department's specified detection limits, those results will be considered as not being present for the purposes of determining exceedences of water quality criteria.

The USEPA has not approved a test method for inorganic arsenic as of the date of issuance of this permit. Therefore, there is no way for the permittee to formally demonstrate compliance with the monthly average water quality based mass and concentration limits for inorganic arsenic established in this permitting action. Therefore, beginning upon issuance of this permit and lasting through the date in which the USEPA approves a test method for inorganic arsenic the permittee is being required to monitor for total arsenic. Once a test method is approved, the Department will notify the permittee in writing and the limitations and monitoring requirements for inorganic arsenic become effective thereafter.

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

As of the date of this permitting action, the Department has limited data on the percentage of inorganic arsenic (approximately 50%) in total arsenic test results. Based on a literature search conducted by the Department, the inorganic fraction can range from 1% - 99% depending on the source of the arsenic. Generally speaking, ground water supplies derived from bedrockwells will likely tend to have higher fractions of inorganic arsenic (As^{+3}-arsentite and/or As^{+5}-arsenate) than one may find in a food processing facility where the inorganic fraction is low and the organic fraction (arsenobetaine, arsenoribosides) is high. Until the Department and the regulated community in Maine develop a larger database to establish statistically defensible ratios of inorganic and organic fractions in total arsenic test results, the Department is making a rebuttable presumption that the effluent contains a ratio of 50% inorganic arsenic and 50% organic arsenic in total arsenic results.

Being that the only approved test methods for compliance with arsenic limits established in permits is for total arsenic, the Department converted the water quality based end-of pipe monthly average concentration value of 0.44 ug/L for inorganic arsenic calculated on the previous page of this Fact Sheet into an equivalent total arsenic threshold (assuming 50% of the total arsenic is inorganic arsenic). This results in a total arsenic end-of-pipe monthly average concentration threshold of 0.74 ug/L. The calculation is as follows:

$$\frac{\text{0.44 ug/L inorganic arsenic}}{\text{0.5 ug/L inorganic arsenic/ 1.0 ug/L total arsenic}} = \text{0.88 ug/L total arsenic}$$

Therefore, a total arsenic value greater than 0.88 ug/L is potentially exceeding the water quality based end-of pipe monthly average concentration value of 0.44 ug/L for inorganic arsenic. Only the results greater than the total arsenic threshold of 0.88 ug/L will be considered a potential exceedance of the inorganic limit of 0.44 ug/L. It is noted the Department's current RL for total arsenic is 5.0 ug/L.

If a test result is determined to be a potential exceedence, the permittee shall submit a toxicity reduction evaluation (TRE) to the Department for review and approval within 45 days of receiving the test result of concern from the laboratory. Contact the Department's compliance inspector for a copy of the Department's December 2007 guidance on conducting a TRE for arsenic.

Maine law, 38 M.R.S.A., §414-A(2), Schedules of Compliance states "*Within the terms and conditions of a license, the department may establish a schedule of compliance for a final effluent limitation based on a water quality standard adopted after July 1, 1977. When a final effluent limitation is based on new or more stringent technology-based treatment requirements, the department may establish a schedule of compliance consistent with the time limitations permitted for compliance under the Federal Water Pollution Control Act, Public Law 92-500, as amended. A schedule of compliance may include interim and final dates for attainment of*

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

specific standards necessary to carry out the purposes of this subchapter and must be as short as possible, based on consideration of the technological, economic and environmental impact of the steps necessary to attain those standards." Special Condition L, *Schedule of Compliance – Inorganic Arsenic*, of this permit establishes a schedule as follows:

Beginning upon issuance of this permit modification and lasting through a date on which the USEPA approves a test method for inorganic arsenic, the limitations and monitoring requirements for inorganic are not in effect. During this time frame, the permittee is required by Special Condition A, Effluent Limitations and Monitoring Requirements, of this permit to conduct 1/Quarter sampling and analysis for total arsenic.

Upon receiving written notification by the Department that a test method for inorganic arsenic has been approved by the USEPA, the limitations and monitoring requirements for inorganic arsenic become effective and enforceable and the permittee is relieved of their obligation to sample and analyze for total arsenic.

The schedule of compliance reserves the final date for compliance with the limit for inorganic arsenic. This reservation stems from the fact the EPA has no schedule for approving a test method for inorganic arsenic nor does the Department have any authority to require the EPA to do so. Therefore, the Department considers the aforementioned schedule for inorganic arsenic to be as short as possible given the technological (or lack thereof) issue of not being able to sample and analyze for inorganic arsenic with an approved method.

Department rule Chapter 523, *Waste Discharge License Conditions*, § Section 7, *Schedules of Compliance* sub-§3, *Interim dates*, states in part, "*if a permit establishes a schedule of compliance which exceeds 1 year from the date of permit issuance, the schedule shall set forth interim requirements and the dates for their achievement.*

(ii) The time between interim dates shall not exceed 1 year, except that in the case of a schedule for compliance with standards for sewage sludge use and disposal, the time between interim dates shall not exceed six months.

(ii) If the time necessary for completion of any interim requirement (such as the construction of a control facility) is more than 1 year and is not readily divisible into stages for completion, the permit shall specify interim dates for the submission of reports of progress toward completion of the interim requirements and indicate a projected completion date.

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

Special Condition A, *Effluent Limitations and Monitoring Requirements*, of this permit requires that beginning upon issuance of this permit and lasting through USEPA approval of a test method for inorganic arsenic, the permittee shall conduct 1/Quarter monitoring for total arsenic. Should the test method approval for inorganic arsenic extend more than one year from the date of the issuance of this permit the sampling and analysis for total arsenic will serve to satisfy the interim requirements specified by Department rule, Chapter 523, *Waste Discharge License Conditions*, Section 7, *Schedules of Compliance*, Sub-section 3, *Interim dates.*

Chapter 530 does not establish monitoring frequencies for parameters that exceed or have a reasonable potential to exceed AWQC. Monitoring frequencies are established on case-by-case basis given the timing, severity and frequency of occurrences of the exceedences or reasonable potential to exceed applicable critical water quality thresholds. Therefore, this permitting action is making a best professional judgment to establish the monitoring frequencies for total arsenic, total lead and total zinc at the routine surveillance level frequency of 2/Year specified in Chapter 530. The monitoring frequencies for total aluminum, total cadmium and total copper are being established at the routine screening level monitoring frequencies of Chapter 530.

As for the remaining chemical specific parameters tested to date, none of the test results in the 60-month evaluation period exceed or have a reasonable potential to exceed applicable acute, chronic or human health AWQC. Therefore, this permitting action is establishing default surveillance level reporting and monitoring frequency for analytical chemistry and priority pollutant testing for the first four years of the term of the permit. It is noted Chapter 530 does require surveillance level testing for dischargers in the Level II category. As with reduced WET testing, the permittee must file an annual certification with the Department pursuant to Chapter 530 §2(D)(3) and Special Condition P of this permit modification.

Beginning 24-months prior to the expiration date of this permit and last through 12 months prior to permit expiration every five years thereafter if a timely request for renewal has been made and the permit continues in force, or is replaced by a permit renewal containing this requirement, the permittee shall conduct routine screening level analytical chemistry testing at 1/Quarter and priority pollutant testing of 1/Year.

m. Mercury

Pursuant to Maine law, 38 M.R.S.A. §420 and Department rule, 06-096 CMR Chapter 519, *Interim Effluent Limitations and Controls for the Discharge of Mercury*, the Department issued a *Notice of Interim Limits for the Discharge of Mercury* to the permittee thereby administratively modifying WDL # W000632-44-C-R by establishing interim average and maximum effluent concentration limits of 15.8 parts per trillion (ppt) (0.0158 ug/L) and 23.7 ppt (0.0237 ug/L), respectively, and a minimum monitoring frequency requirement of four tests per year for mercury. The interim mercury limits were scheduled to expire on October 1, 2001. However, effective June 15, 2001, the Maine Legislature enacted Maine law, 38 M.R.S.A. §413, sub-§11 specifying that interim mercury limits and monitoring requirements

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #001 (Final effluent)

remain in effect. The mercury effluent limitations have been incorporated into Special Condition A, *Effluent Limitations And Monitoring Requirements*, of this permit. Verso has been in compliance with the interim limits for mercury 100% of the time as the most recent 60 months of test results (n=19) indicates values have been reported as follows;

Total mercury (DMRs=19)

Value	Limit (ng/L)	Range (ng/L)	Mean (ng/L)
Average	15.8	0.9 – 8.8	4.0
Maximum	23.7	0.9 – 8.8	4.0

The review of the monitoring data for total and mercury indicates the ratios (expressed in percent) of the long term effluent average to the average limit can be calculated as follows:

Mercury

Long term average = 4.0 lbs/day
Average limit = 15.8 lbs/day
Current monitoring frequency = 4/Year

Ratio = 4.0 ug/L / 15.8 ug/L = 25%

Pursuant to Maine law 38, M.R.S.A. §420, sub-§1-B, ¶F, this permitting action is reducing the monitoring frequency for mercury from 4/Year to 1/Year given the permittee has maintained at least 5 years of mercury testing data. In fact, the permitte has been monitoring mercury at a frequency of 4/Year since May 2000 or 11 years.

OUTFALL #100 (Bleach Plant A) and Outfall #200 (Bleach Plant B)

In accordance with federal regulation 40 CFR Part 430, this permitting action is establishing limitations and monitoring requirements for internal point sources, Bleach Plant A and Bleach Plant B filtrate effluents.

n. Flow: The previous permitting action established a monthly average and daily maximum reporting requirement for flow from the bleach plants. The permit required calculating the flow when sampling for pollutants as the permittee demonstrated that installing continuous flow measurement was disproportionate to EPA's cost estimates proposed in the federal regulation due to the age of mill, and the configuration of the bleach plant sewers. This permitting action is carrying forward the two reporting requirements along with estimating the flow when sampling for pollutants based on daily pulp production figures.

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #100 (Bleach Plant A) and Outfall #200 (Bleach Plant B)

A review of the monthly Discharge Monitoring Report (DMR) data for the period June 2008 – July 2011 indicates the permittee has reported values as follows:

Flow (DMRs=16)

Value	Limit (MGD)	Range (MGD)	Mean (MGD)
Monthly Average	Report	2.38 – 6.36	4.08
Daily Maximum	Report	2.38 – 6.36	4.08

o. 2,3,7,8-TCDD (Dioxin): The previous permitting action established a daily maximum concentration limit of <10 ppq (pg/L) with a monitoring frequency of 1/Year for dioxin based on Maine law, 38 M.R.S.A., §420 and are being carried forward in this permitting action. The limit of 10 pg/L is also the ML (Minimum Level - the level at which the analytical system gives recognizable signals and an acceptable calibration point) for EPA Method 1613. Federal regulation 40 CFR Part 430 establishes the same limitation and is therefore being carried forward in this permitting action.

A review of the monthly Discharge Monitoring Report (DMR) data for the period June 2008 – July 2011 indicates the permittee has reported two non-detect values as follows:

Dioxin (DMRs=2)

Value	Limit (pg/L)	Range (pg/L)	Mean (pg/L)
Daily maximum	10	<0.263 - <10	N/A

p. 2,3,7,8 TCDF (Furan): The previous permitting action established a daily maximum concentration limit of 10 pg/L which is also the ML for furan for EPA Method 1613. Federal regulation 40 CFR Part 430 establishes a daily maximum concentration limit of 31.9 pg/L. Being that Maine law is more stringent, the limit of <10 pg/L is being carried forward in this permitting action.

A review of the monthly Discharge Monitoring Report (DMR) data for the period June 2008 – July 2011 indicates the permittee has reported two non-detect values as follows:

Furan (DMRs=2)

Value	Limit (pg/L)	Range (pg/L)	Mean (pg/L)
Daily maximum	10	<1.35 - <10	N/A

Federal regulation 40 CFR Part 430 establishes a default monitoring frequency of 1/Month for both dioxin and furan. The regulation also authorizes the permitting authority to modify the monitoring frequency for dioxin and furan after five years of monitoring data (60 data points) for dioxin and furan has been collected. Verso has been monitoring the bleach plant effluent for dioxin and furan since 1997 and has more than 65 data points. The data collected to date indicates dioxin and furan levels have been less than the respective MLs of 10 ppq since the transition to the elimination of elemental chlorine from the bleaching process was completed in

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #100 (Bleach Plant) and Outfall #200 (Bleach Plant B)

late 1996. Therefore, the Department the 9/21/05 permit reduced the 1/Month monitoring requirement to 1/Year for dioxin and furan. In lieu of the 1/Month monitoring requirement, Special Condition J, *Dioxin/Furan Certification,* of the 9/21/05 permit required the permittee to submit an annual certification indicating the bleaching process has not changed from previous practices and therefore the formation of dioxin/furan compounds is highly unlikely.

It is noted, Maine law 38 M.R.S.A., §420(2)(I)(3) states that – "*After December 31, 2002, a mill may not discharge dioxin into its receiving waters. For purposes of this subparagraph, a mill is considered to have discharged dioxin into its receiving waters if 2, 3, 7, 8 - tetrachlorodibenzo-p-dioxin or 2, 3, 7, 8 - tetrachlorodibenzo-p-furan is detected in any of the mill's internal waste streams of its bleach plant and in a confirmatory sample at levels exceeding 10 picograms per liter, unless the Department adopts a lower detection level by rule, which is a routine technical rule pursuant to Title 5, chapter 375, subchapter II-A, or a lower detection level by incorporation of a method in use by the United States Environmental Protection Agency, or if levels of dioxin, as defined in section 420-A, subsection 1 detected in fish tissue sampled below the mill's wastewater outfall are higher than levels in fish tissue sampled at an upstream reference site not affected by the mill's discharge or on the basis of a comparable surrogate procedure acceptable to the commissioner. The commissioner shall consult with the technical advisory group established in section 420-B, subsection 1, paragraph B, subparagraph (5) in making this determination and in evaluating surrogate procedures. The fish-tissue sampling test must be performed with differences between the average concentrations of dioxin in the fish samples taken upstream and downstream from the mill measured with at least 95% statistical confidence. If the mill fails to meet the fish-tissue sampling-result requirements in this subparagraph and does not demonstrate by December 31, 2003 to the commissioner's satisfaction that its wastewater discharge is not the source of elevated dioxin concentrations in fish below the mill, then the commissioner may pursue any remedy authorized by law."*

On May 3, 2005, the Department presented a report to the Natural Resources Committee of the Maine Legislature reporting on the status of each mill regarding the "above/below" test. In the report, the Department made the determination dioxin levels in the fish tissue from fish collected above and below the Verso mill, though detectable, were not statistically different. As a result, the Department made the determination that the Verso was in compliance with Maine law 38 M.R.S.A., §420(2)(I)(3). Therefore, Verso was been granted a reduction in the monitoring frequency for dioxin and furans at the end of the bleach plant.

If required to do so, the permittee shall continue to participate in the State's Fish Advisory Program as required by Special Condition O, *Fish Advisory Program*, of this permitting action. The permittee is required to participate in the program due to the fact there is no statistical difference in the dioxin levels in fish tissue in the fish collected upstream and downstream of the mill, but there remain detectable quantities of dioxin in the fish tissue. Continued participation in the program will assist the Department in documenting trends up or down from current levels.

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #100 (Bleach Plant) and Outfall #200 (Bleach Plant B)

q. Twelve Chlorophenolics: The 9/21/05 permitting action established limitations and monitoring requirements for the chlorophenolic compounds pursuant to federal regulation 40 CFR Part 430. The technology based limitations varied from 2.5 ug/L to 5.0 ug/L and are equivalent to the ML for each parameter using EPA Method 1653 and are being carried forward in this permitting action. A 1/Month monitoring requirement was established in the 9/21/05 permit based on the federal regulation but was subsequently reduced to 2/Year in a permit minor revision dated July 21, 2008, based a statistical evaluation of 60 months of data.

A review of the monthly Discharge Monitoring Report (DMR) data for the period June 2008 – July 2011 indicates the permittee has reported values indicating none of the parameters have been detected at or above their respective MLs. In fact, none of the compounds have ever been reported in a detectable concentration since monitoring for the parameters beginning with promulgation 40 CFR Part 430 in April 1998. Therefore, the Department is reducing the monitoring frequency for the 12 phenolic compounds from 2/Year to 1/Year.

r. Chloroform: The previous permitting action established monthly average and daily maximum mass limits for chloroform based on federal regulation found at 40 CFR Part 430. The regulation establishes production based BAT monthly average and daily maximum allowances of 4.14 and 6.92 g/kkg of unbleached pulp production. With a historic unbleached kraft pulp production of 1,120 tons/day the monthly average (MA) and daily maximum (DM) limits were calculated as follows:

MA: 1,120 tons/day x 4.14 g/kkg x 0.907 kkg/ton x 1.0 lbs/ 454g = 9.3 lbs /day
DM: 1,120 tons/day x 6.92 g/kkg x 0.907 kkg/ton x 1.0 lbs/ 454g = 15.5 lbs /day

The monthly average and daily maximum limitations of 9.3 lbs/day and 15.5 lbs/day were limits for Bleach Plants A & B collectively. A monitoring requirement of 1/Week was established based the federal regulation but was subsequently reduced to 1/Quarter in a permit minor revision dated July 21, 2008, based a statistical evaluation of 60 months of data.

This permitting action is establishing slightly higher limitations due to the recent increase in kraft pulp production. With a pulp production of 1,200 tons/day, the month average and daily maximum technology based limitation were calculated as follows;

MA: 1,200 tons/day x 4.14 g/kkg x 0.907 kkg/ton x 1.0 lbs/ 454g = 9.9 lbs /day
DM: 1,200 tons/day x 6.92 g/kkg x 0.907 kkg/ton x 1.0 lbs/ 454g = 16.6 lbs /day

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

OUTFALL #100 (Bleach Plant) and Outfall #200 (Bleach Plant B)

A review of the monthly Discharge Monitoring Report (DMR) data for the period June 2008 – July 2011 indicates the permittee has reported values as follows:

Chloroform (DMRs=14)

Value	Limit (lbs/day)	Range (lbs/day)	Mean (lbs/day)
Monthly average	10.4	1.3 – 3.5	1.7
Daily maximum	17.3	1.3 – 3.5	1.7

A review of the monitoring data above for chloroform indicates the ratios (expressed in percent) of the long term effluent average to the monthly average limits can be calculated as follows:

Chloroform

Long term average = 1.7 lbs/day
Monthly average limit = 10.4 lbs/day
Current monitoring frequency = 1/Quarter

$$\text{Ratio} = \frac{1.7 \text{ lbs/day}}{10.4 \text{ lbs/day}} = 16\%$$

Given the facility has been monitoring chloroform since promulgation of 40 CFR Part 430 in April 1998 without any violations of permit limits and the fact the most recent 43 months of data indicates discharge levels to be at 16% of the permit limits, the Department has made a determination that an appropriate monitoring frequency for chloroform is 1/Year. Therefore, this permit establishes a monitoring frequency of 1/Year for chloroform.

6. GULF ISLAND POND (GIP) OXYGEN INJECTION SYSTEM

At the time of permitting in 2005, it was the Department's understanding that the contractual agreement for the operation and maintenance of the existing oxygenation system at Upper Narrows was as follows: FPLE (now FPL Maine Hydro LLC) 14%, Fraser (succeeded in interest by Gorham Paper and Tissue LLC) 10%, RPC 38% and IP (succeeded in interest by Verso Paper LLC) 38%. Based on collective loadings of phosphorus, BOD and TSS that are representative of current discharges levels and assimilation rates for each parameter, the Department determined the individual percentages of mill-related pollutant loading to GIP are Fraser 20.13%, RPC, 32.64% and IP 47.23%.

6. GULF ISLAND POND (GIP) OXYGEN INJECTION SYSTEM (cont'd)

The May 2005 final TMDL indicated with zero discharge from all point sources, oxygen injection is still required due to dissolved oxygen deficiencies as a result of sediment oxygen demand in an environment of low velocity water movement and low vertical mixing due to the presence of the Gulf Island Dam. Modeling for the TMDL indicated that to offset this dissolved oxygen deficiency, FPLE would be required to inject 105,000 lbs/day of oxygen at Upper Narrows (present system) or inject 65,000 lbs/day of oxygen at Lower Narrows. Therefore, only 0.619 lbs of oxygen is required at Lower Narrows for every 1.0 lb of oxygen at Upper Narrows (65,000/105,000 = 0.619).

In an effort to distribute oxygen injection based on loadings to GIP, (at the same time recognizing parties contractual obligations), the Department assigned oxygen requirements for each entity in the 9/21/05 permit based on collectively injecting 105,000 lbs/day at Upper Narrows and 105,000 lbs/day at Lower Narrows. The oxygen injection requirements for each entity were derived as follows:

Upper Narrows:

Allocation by contractual obligation

FPLE (14%)	105,000 lbs (0.14) = 14,700 lbs
Fraser (10%)	105,000 lbs (0.10) = 10,500 lbs
RPC (38%)	105,000 lbs (0.38) = 39,900 lbs
IP (38%)	105,000 lbs (0.38) = 39,900 lbs

Allocation by percent pollutant loading to GIP

FPLE fixed at 14,700 lbs $\Rightarrow$105,000 lbs – 14,700 lbs = 90,300 lbs to be split between mills.

Fraser (20.17%)	90,300 lbs (0.2017) = 18,177 lbs
RPC (32.64%)	90,300 lbs (0.3264) = 29,474 lbs
IP (47.23%)	90,300 lbs (0.4723) = 42,648 lbs

Difference between contractual and percent pollutant loading

FPLE fixed at 14,700 lbs

Fraser	10,500 lbs – 18,177 lbs = (7,677 lbs)
RPC	39,900 lbs – 29,474 lbs = 10,426 lbs
IP	39,900 lbs – 42,648 lbs = (2,748 lbs)

6. GULF ISLAND POND (GIP) OXYGEN INJECTION SYSTEM (cont'd)

Lower Narrows

Being that FPLE would be responsible for 105,000 lbs of oxygen injection at Upper Narrows with the mills at zero discharge and was contractually only contributing 14% to the Upper Narrows, the Department assigned the remaining portion of that obligation at Lower Narrows. It is noted that only 0.619 lbs of oxygen is required at Lower Narrows for every 1.0 lb of oxygen at Upper Narrows.

FPLE's responsibility at Lower Narrows: (105,000 lbs – 14,700 lbs)(0.619) = 55,900 lbs.
105,000 lbs – 55,900 lbs = 49,100 lbs was allocated between the mills.

Allocation for the three mills based on pollutant loading to GIP
FPLE fixed at 55,900 lbs
Fraser 49,100 lbs (0.2017) = 9,884 lbs
RPC 49,100 lbs (0.3264) = 16,026 lbs
IP 49,100 lbs (0.4723) = 23,190 lbs

Re-allocation for the three mills considering over or under compensation at Upper Narrows
FPLE fixed at 55,900 lbs
Fraser 9,884 lbs + 7,677(0.619) lbs = 14,636 lbs
RPC 16,026 lbs – 10,426(0.619) lbs = 9,570 lbs
IP 23,190 lbs + 2,748(0.619) lbs = 24,891 lbs

Re-allocation expressed as a percentage of the total of 105,000 lbs
FPLE 55,900 lbs/105,000 lbs = 53.2%
Fraser 14,636 lbs/105,000 lbs = 13.9%
RPC 9,570 lbs/105,000 lbs = 9.1%
IP 24,891 lbs/105,000 lbs = 23.8%

Summary of Oxygen Injection for 9/21/05 permit

A summary of oxygen injection requirements (assuming the TMDL default allocation of 105,000 lbs/day at Upper Narrows and 105,000 lbs/day at Lower Narrows) based on pollutant loading to GIP, compensation for existing oxygen injection at Upper Narrows to offset pollutant loading to GIP and the existing contractual obligation of the partnership for the existing system at Upper Narrows was established as follows:

Upper Narrows	
FPLE	14,700 lbs
Fraser	10,500 lbs
RPC	39,900 lbs
IP	39,900 lbs

Lower Narrows	
FPLE	55,900 lbs
Fraser	14,636 lbs
RPC	9,570 lbs
IP	24,891 lbs

6. GULF ISLAND POND (GIP) OXYGEN INJECTION SYSTEM (cont'd)

In its February 7, 2008 appeal orders, the Board included a condition that, by June 1, 2008, the permittee, Verso Paper (successor in interest to IP), or FPL Energy Maine Hydro LLC (successor in interest in FPL Energy), independently or in cooperation with each other and Gorham Paper and Tissue LLC (successor in interest to Fraser Paper), submit a plan and schedule for upgrading the existing oxygen injection system, located at Upper Narrows in Gulf Island Pond, to increase the oxygen transfer efficiency of the system, thereby increasing dissolved oxygen levels in Gulf Island Pond, and that the upgraded oxygen injection system be operational no later than June 1, 2009.

On May 30, 2008, on behalf of the GIPOP Partnership, FPL Energy Hydro Maine LLC submitted a plan and schedule to replace the existing in-stream oxygenation diffuser system with a new line diffuser system designed to improve the oxygen transfer efficiency of the oxygen injection system from 33% to 54%. On June 23, 2008, the Department issued an order approving the plan with a condition requiring that the upgraded oxygen injection system continue to be operated in accordance with the approved June 1999 operational plan.

The upgraded system was installed and began operation in June of 2009.

In its February 7, 2008 appeal orders, the Board included a condition that, by June 1, 2009, Verso Paper, Rumford Paper or FPL Energy, independently or in cooperation with each other and Fraser Paper, submit a plan and schedule for injecting sufficient oxygen into Gulf Island Pond to mitigate the impact of Gulf Island Dam and the Verso and Rumford wastewater discharges on dissolved oxygen levels in the pond, based on the Department's 2005 TMDL, and that the required oxygen injection be provided no later than June 1, 2010. A similar condition was included in EPA's September 30, 2008 wastewater discharge permit for Fraser Paper's Gorham, New Hampshire paper mill.

On May 26, 2009, on behalf of the GIPOP Partnership, FPL Energy submitted a conceptual plan to inject sufficient oxygen to meet standards in Gulf Island Pond using the existing oxygen injection supply infrastructure and an additional oxygen storage tank and/or vaporizer and additional diffusers, as required.

In a letter dated May 27, 2009, the Department accepted the GIPOP conceptual plan as fulfilling the filing requirements of the Board's appeal orders and EPA permit, pending further discussions with the GIPOP Partnership regarding options for meeting water quality standards without additional oxygen injection.

The Department asked its contract modeler, HydroAnalysis, Inc., to run the recalibrated water quality model to determine oxygen injection requirements with diffusers at Upper Narrows and Lower Narrows, as proposed by the GIPOP Partnership, and the reduced BOD limit proposed by Verso.

6. GULF ISLAND POND (GIP) OXYGEN INJECTION SYSTEM (cont'd)

In a December 1, 2009 report to the Department, HydroAnalysis, Inc. submitted the results of the requested model run. The results were that, with an oxygen injection rate of 24,279 lbs/day at Upper Narrows, at an oxygen transfer efficiency of 54%, and an oxygen injection rate of 34,490 lbs/day at Lower Narrows at an oxygen transfer efficiency of 75%, Class C dissolved oxygen standards will be met in Gulf Island Pond to a depth of 60 feet under critical conditions (i.e., high temperature and low flow) and with all upstream point source discharges at their permit limits. The total oxygen injection rate of 56,100 lbs/day is well within the 73,000 lbs/day design capacity of the oxygen injection system.

On June 7, 2010, the Department issued a modification of the 9/21/05 permit to incorporate the numeric oxygen injection requirements cited above. The numeric limitations have been carried forward in this permitting action. In addition, Special Condition I, *Gulf Island Pond Oxygen Injection Operation*, of this permit has been established for the operational conditions of the oxygenation system.

7. AMBIENT WATER QUALITY MONITORING

The Department has made the determination that additional ambient water quality monitoring is necessary to continue to assess compliance with Class C water quality standards. Therefore, this permit carries forward the annual water quality monitoring via Special Condition J, *Ambient Water Quality Monitoring*. See section 4 of this Fact Sheet (pages 13-15) for a more in-depth discussion.

8. BEST MANAGEMENT PRACTICES PLAN

Best Management Practices (BMPs) are specified at 40 CFR 430.03(d). The primary objective of the Best Management Practices is to prevent leaks and spills of spent pulping liquors, soap, and turpentine. The secondary objective is to contain, collect, and recover at the immediate process area, or otherwise control, those leaks, spills, and intentional diversions of spent pulping liquor, soap and turpentine that do occur. Toward those objectives, the permittee must implement the Best Management Practices (BMPs) specified in 40 CFR 430.03 (c). However, the former permittee for the discharge from the mill, IP, had an XL project approved by the EPA that relieved the facility of the obligation to implement the specific BMP recommendations in the rule as BMPs will be self implementing via the acceptance of more stringent color limitations than State law provides for and the acceptance of a stringent COD limitation.

9. BIOLOGICAL MONITORING PROGRAM

Special Condition L, *Biological Monitoring Program*, of the 9/21/05 permit required the permittee to monitor bald eagles within 25 miles of the Verso mill. Other fish eating birds including, but not limited to, ospreys, great blue herons and common loons could be sampled as surrogates for dead young, sub-adult or adult eagles or non-viable bald eagle eggs. State and federal agencies with jurisdiction over fish and wildlife submitted comments to the Department pursuant to Department Rule Chapter 523, Waste Discharge License Conditions, requesting additional information regarding eagles and other fish-eating birds in the vicinity of pulp and paper mills.

Verso conducted the monitoring in each of the five years of the term of the 9/21/05 permit in accordance with monitoring plans reviewed and approved by the State and federal agencies with jurisdiction over fish and wildlife. The permittee is being relieved of this obligation to conduct additional monitoring based on the Maine Department of Inland Fisheries and Wildlife and the U.S. Fish and Wildlife Services determination that continuation of the monitoring program is not warranted by the findings of the past monitoring. Therefore, the Special Condition requiring said monitoring is not being carried forward in this permitting action.

10. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As permitted, the Department has determined the existing water uses will be maintained and protected and anticipates additional improvements in water quality after implementation of water quality based limits herein that will result in the discharge not causing or contributing to the failure of the Androscoggin River to meet standards of its assigned Class C classification. In addition, the Department has made the determination that water quality standards established in State law are protective of all cold water fish populations and that effluent monitoring of the discharge and ambient water quality monitoring of the receiving waters required by this permit serve as an interim Habitat Conservation Plan (HCP).

11. PUBLIC COMMENTS

Public notice of this application was made in the Franklin Journal newspaper on or about May 11, 2010. The Department receives public comments on an application until the date a final agency action is taken on that application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

12. DEPARTMENT CONTACTS

Additional information concerning this permitting action may be obtained from and written comments should be sent to:

Gregg Wood
Division of Water Quality Management
Bureau of Land and Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone: (207) 287-7693
E-mail: gregg.wood@maine.gov

13. RESPONSE TO COMMENTS

During the period of September 28, 2012, through the issuance date of the permit/license, the Department solicited comments on the proposed draft permit/license to be issued for the discharge(s) from the Verso Paper facility. The Department received written comments from the permittee in letters dated October 29, 2012 and December 19, 2012, and from the Natural Resources Council of Maine (NRCM) in a letter dated October 29, 2012 and from the Androscoggin River Alliance (ARA) in a letter dated October 29, 2012. Therefore, the Department has prepared a Response to Comments as follows:

Comment # 1 – Both the NRCM and ARA state that because the river has not been brought into compliance with the dissolved oxygen standards during the term of the previous permit, the Department must reduce the level of organic and nutrient pollution entering the river to bring it into attainment with standards.

Response #1 – According to a report entitled, 2010 Gulf Island Pond Monitoring Program Report, prepared by the Department, no algal blooms have been observed on Gulf Island Pond (GIP) since the summer of 2004 due to significantly lower discharges of total phosphorus and ortho-phosphorus by Verso Paper and Rumford Paper Company. Mean chlorophyll *a* levels in 2010 were well below 2004 levels and corroborate the declining trend seen from 2004 through 2008. In 2010, Secchi disk transparency readings at all sampling stations were greater than the Department's 2 meter threshold used for determining phytoplanktonic algae blooms. As a result, the Department has made the determination that the designated use of recreation in and on the water is being attained.

As for dissolved oxygen (DO), the 2010 report states that levels have steadily improved and were at the highest levels observed since monitoring GIP was initiated in 2004. There were documented depressed DO concentrations below the minimum criteria (5.0 ppm) and the monthly average criteria (6.5 ppm when and where temperatures were 22°C or lower) below the new Lower Narrows oxygen injection diffuser during 2010. The depressed DO levels were usually restricted vertically to 1-3 meters in or near the thermocline and in the deeper parts of the impoundment where mixing is inhibited and the generally higher DO levels were observed above the thermocline. The Department has concluded the depressed DO levels are related to sediment

13. RESPONSE TO COMMENTS

oxygen demand (SOD) resulting primarily from past inputs of total suspended solid (TSS) and settled algae due to past inputs of nutrients. SOD is a primary factor influencing the observed DO levels which occur during periods of water column stratification. SOD decay rates in the cooler water temperatures near the bottom of the deepest parts of GIP are slower than the rate in the warmer water temperatures. As a result, full improvement in SOD in the deepest parts of GIP has not likely been fully realized to date. With the reductions in point-source phosphorus and TSS loadings upstream of GIP compared to historical levels, the Department expects a lowering of the SOD rate in GIP. The Department has a reasonable expectation that these SOD related improvements will result in the elimination of any DO issue in GIP within the 5-year term of this permit without the need for additional reductions in limitations for organic and or nutrient parameters. Therefore, the final permit remains unchanged.

ATTACHMENT A

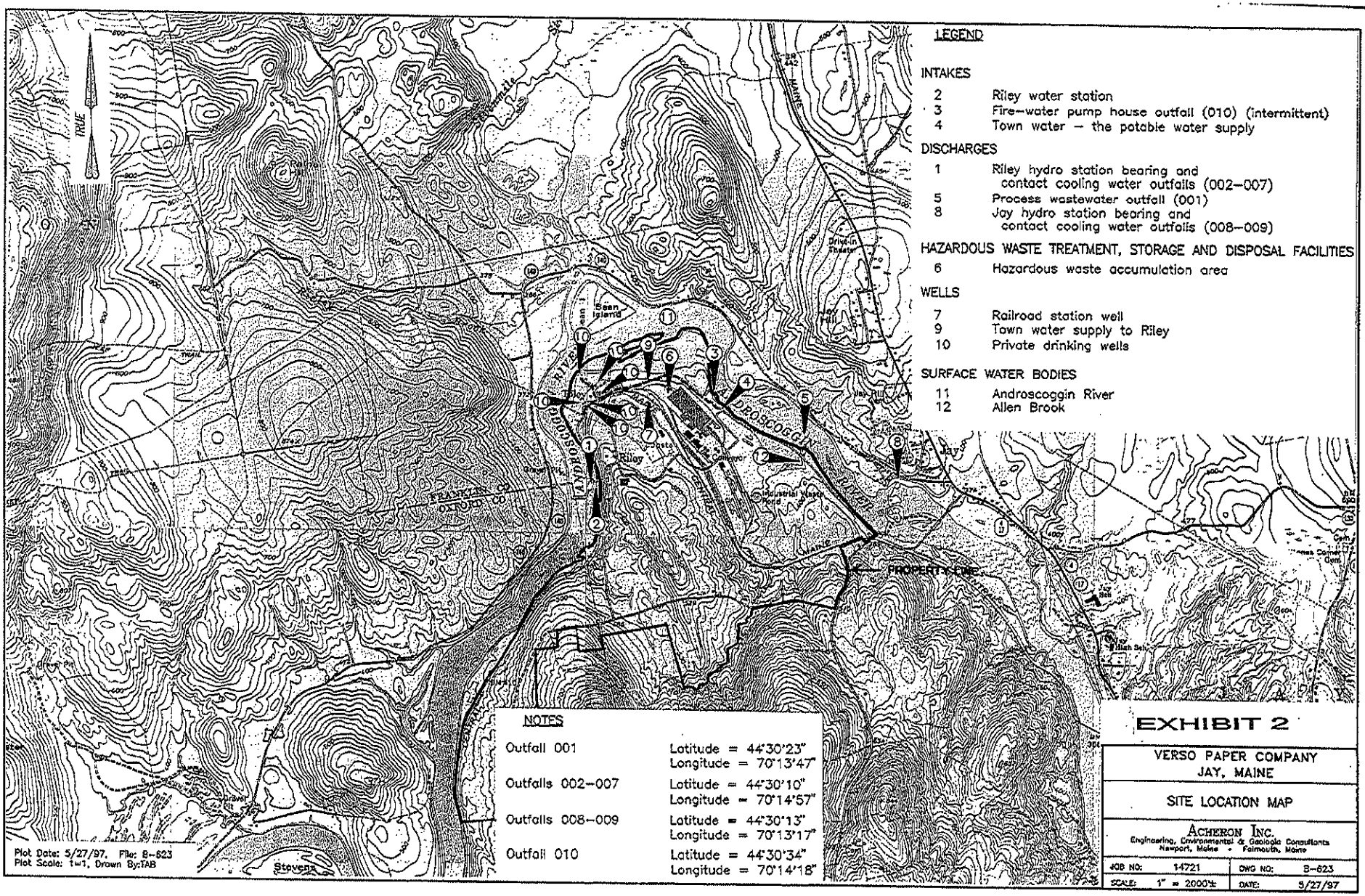


EXHIBIT 2

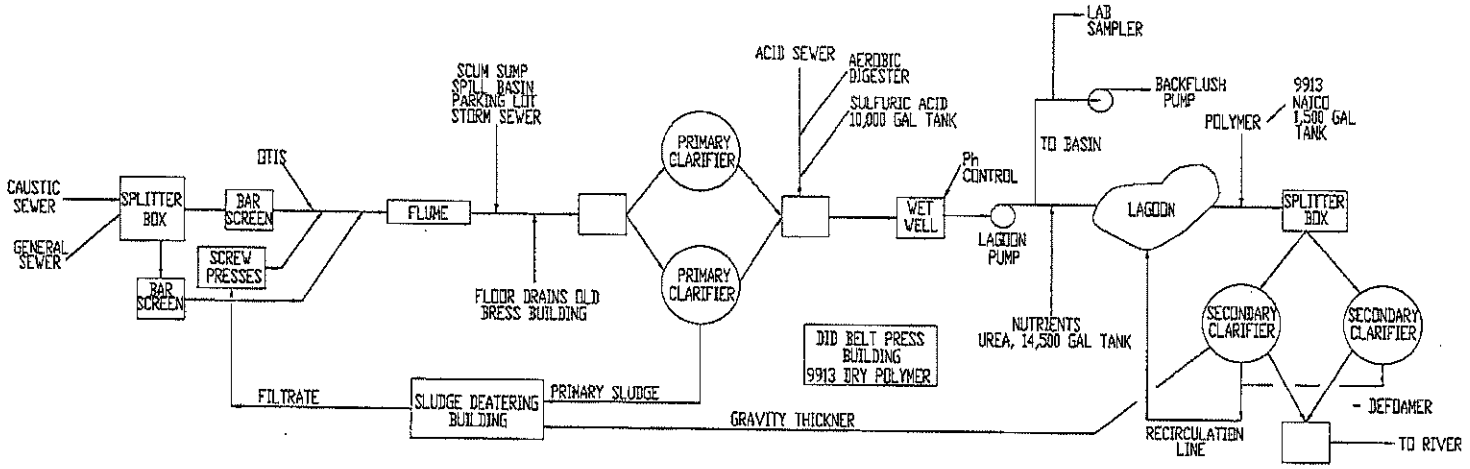
VERSO PAPER COMPANY
JAY, MAINE

SITE LOCATION MAP

ACHERON INC.
Engineering, Environmental & Geologic Consultants
Newport, Maine - Falmouth, Maine

JOB NO:	14721	DWG NO:	B-623
SCALE:	1" = 2000'	DATE:	5/27/97

ATTACHMENT B



WASTE TREATMENT SCHEMATIC

☐ PRELIMINARY – NOT FOR CONSTRUCTION

☐ APPROVED FOR CONSTRUCTION

BY _____ DATE _____

REFERENCE DRAWINGS

DWG. NO.	TITLE	BY

REV.	ISSUED TO	ISSUED FOR

REPORT ALL FIELD REVISIONS TO THE CADD DEPARTMENT

REV. NO.	DATE	REVISION	DR	CH

VERSO
ANDROSCOGGIN MILL
RILEY ROAD, PO BOX 20
JAY, ME 04239-0520
(207)-897-3431

PROJ. No. XX

ITEM NO:

PROJECT TITLE

WASTE TREATMENT SCHEMATIC

DRAWING No. 007-6-2534

REV. 01

CADFILE: FLOWDIAG.DWG

ATTACHMENT C

WET TEST REPORT

Data for tests conducted for the period

28/Sep/2007-28/Sep/2012

VERSO PAPER NPDES= ME0000193 Effluent Limit: Acute (%) = 4.722 Chronic (%) = 4.722

Species	Test	Percent	Sample date	Critical %	Exception	RP
TROUT	A_NOEL	100	10/23/2007	4.722		
TROUT	A_NOEL	100	09/15/2009	4.722		
TROUT	A_NOEL	100	05/06/2010	4.722		
TROUT	C_NOEL	100	10/23/2007	4.722		
TROUT	C_NOEL	100	09/15/2009	4.722		
TROUT	C_NOEL	100	05/06/2010	4.722		
WATER FLEA	A_NOEL	100	10/23/2007	4.722		
WATER FLEA	A_NOEL	100	09/15/2009	4.722		
WATER FLEA	A_NOEL	100	05/06/2010	4.722		
WATER FLEA	C_NOEL	50	10/23/2007	4.722		
WATER FLEA	C_NOEL	100	09/15/2009	4.722		
WATER FLEA	C_NOEL	50	05/06/2010	4.722		

ATTACHMENT D

PRIORITY POLLUTANT DATA SUMMARY

Date Range: 19/Dec/2007 - 19/Dec/2012

Facility Name: **VERSO PAPER** NPDES: **ME0001937**

Test Date	Monthly (Flow MGD)	Daily (Flow MGD)	Total Test Number	Test # By Group M	V	BN	P	O	A	Clean	Hg
01/07/2008	NR	39.90	2	2	0	0	0	0	0	F	0
04/07/2008	40.90	42.80	2	2	0	0	0	0	0	F	0
07/29/2008	NR	44.40	2	2	0	0	0	0	0	F	0
10/06/2008	40.50	39.70	2	2	0	0	0	0	0	F	0
01/05/2009	38.20	37.30	2	2	0	0	0	0	0	F	0
04/06/2009	NR	44.80	2	2	0	0	0	0	0	F	0
07/06/2009	NR	37.60	2	2	0	0	0	0	0	F	0
09/15/2009	42.10	41.80	135	14	28	46	25	11	11	F	0
10/05/2009	40.50	39.80	2	2	0	0	0	0	0	F	0
11/17/2009	40.70	39.20	11	10	0	0	0	1	0	F	0
12/16/2009	39.20	39.50	2	2	0	0	0	0	0	F	0
02/01/2010	39.60	40.70	11	10	0	0	0	1	0	F	0
05/06/2010	40.70	38.80	20	10	0	0	0	10	0	F	0

Key:

A = Acid O = Others P = Pesticides

BN = Base Neutral M = Metals V = Volatiles

Test Date	Monthly (Flow MGD)	Daily	Total Test Number	Test # By Group M	V	BN	P	O	A	Clean	Hg
07/05/2010	38.00	35.00	2	2	0	0	0	0	0	F	0
10/05/2010	37.60	36.80	2	2	0	0	0	0	0	F	0
02/14/2011	36.00	34.50	2	2	0	0	0	0	0	F	0
05/01/2011	35.10	37.70	2	2	0	0	0	0	0	F	0
08/14/2011	37.70	38.20	2	2	0	0	0	0	0	F	0
10/10/2011	35.60	35.00	2	2	0	0	0	0	0	F	0
01/16/2012	34.30	35.00	2	2	0	0	0	0	0	F	0
06/14/2012	36.40	36.00	21	10	0	0	0	11	0	F	0
07/08/2012	36.90	34.40	2	2	0	0	0	0	0	F	0
10/15/2012	36.20	34.60	2	2	0	0	0	0	0	F	0

Key:

A = Acid O = Others P = Pesticides

BN = Base Neutral M = Metals V = Volatiles

FACILITY CHEMICAL DATA REPORT

Data Date Range: 19/Dec/2007 - 19/Dec/2012

Facility name: **VERSO PAPER** Permit Number: **ME0001937**

Parameter: ALUMINUM	**Test date**	**Result (ug/l)**	**Lsthan**
	01/07/2008	1820.000	N
	04/07/2008	1140.000	N
	07/29/2008	1381.000	N
	10/06/2008	1413.000	N
	01/05/2009	2000.000	N
	04/06/2009	1368.000	N
	07/06/2009	1059.000	N
	09/15/2009	1690.000	N
	10/05/2009	1960.000	N
	11/17/2009	2370.000	N
	12/16/2009	2280.000	N
	02/01/2010	1810.000	N
	05/06/2010	1135.000	N
	07/05/2010	1820.000	N
	10/05/2010	1400.000	N
	02/14/2011	1290.000	N
	05/01/2011	1210.000	N
	08/14/2011	1560.000	N
	10/10/2011	1370.000	N
	01/16/2012	1460.000	N
	06/14/2012	1300.000	N
	07/08/2012	1460.000	N
	10/15/2012	1370.000	N

Parameter: ARSENIC	**Test date**	**Result (ug/l)**	**Lsthan**
	09/15/2009	1.000	N
	11/17/2009	5.000	Y
	02/01/2010	5.000	Y
	05/06/2010	5.000	Y
	06/14/2012	5.000	Y

FACILITY CHEMICAL DATA REPORT

Data Date Range: 19/Dec/2007 - 19/Dec/2012

Facility name: **VERSO PAPER** Permit Number: **ME0001937**

Parameter: CADMIUM	Test date	Result (ug/l)	Lsthan
	09/15/2009	1.000	Y
	11/17/2009	1.000	N
	02/01/2010	1.000	N
	05/06/2010	1.000	Y
	06/14/2012	1.000	Y

Parameter: LEAD	Test date	Result (ug/l)	Lsthan
	01/07/2008	4.000	N
	04/07/2008	4.000	N
	07/29/2008	3.000	N
	10/06/2008	3.000	Y
	01/05/2009	6.000	N
	04/06/2009	9.000	N
	07/06/2009	3.000	Y
	09/15/2009	4.000	N
	10/05/2009	4.000	N
	11/17/2009	5.000	N
	02/01/2010	5.000	N
	05/06/2010	3.000	N
	07/05/2010	3.000	N
	10/05/2010	3.000	Y
	02/14/2011	3.000	Y
	05/01/2011	4.100	N
	08/14/2011	3.000	Y
	10/10/2011	3.700	N
	01/16/2012	3.200	N
	06/14/2012	3.000	Y
	07/08/2012	3.000	Y
	10/15/2012	3.000	Y

Parameter: ZINC	Test date	Result (ug/l)	Lsthan
	09/15/2009	107.000	N
	11/17/2009	92.000	N
	12/16/2009	148.000	N
	02/01/2010	121.000	N
	05/06/2010	57.000	N
	06/14/2012	68.000	N

ATTACHMENT E

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

MEMORANDUM

DATE: October 2008

TO: Interested Parties

FROM: Dennis Merrill, DEP

SUBJECT: DEP's system for evaluating toxicity from multiple discharges

****

Following the requirements of DEP's rules, Chapter 530, section 4(F), the Department is evaluating discharges of toxic pollutants into a freshwater river system in order to prevent cumulative impacts from multiple discharges. This is being through the use of a computer program known internally as "DeTox". The enclosed package of information is intended to introduce you to this system.

Briefly, the DeTox program evaluates each wastewater facility within a watershed in three different ways in order to characterize its effluent: 1) the facility's past history of discharges, 2) its potential toxicity at the point of discharge on an individual basis, and 3) the facility's contribution to cumulative toxicity within a river segment in conjunction with other facilities. The value that is most protective of water quality becomes the value that is held in the DeTox system as an allocation for the specific facility and pollutant.

The system is not static and uses a five-year "rolling" data window. This means that, over time, old test results drop off and newer ones are added. The intent of this process is to maintain current, uniform facility data to estimate contributions to a river's total allowable pollutant loading prior to each permit renewal.

Many facilities are required to do only a relatively small amount of pollutant testing on their effluent. This means, statistically, the fewer tests done, the greater the possibility of effluent limits being necessary based on the facility's small amount of data. To avoid this situation, most facilities, especially those with low dilution factors, should consider conducting more than the minimum number of tests required by the rules.

Attached you will find three documents with additional information on the DeTox system:

- Methods for evaluating the effects of multiple discharges of toxic pollutants
- Working definitions of terms used in the DeTox system
- Reviewing DeTox Reports
- Prototype facility and pollutant reports

If you have questions as you review these, please do not hesitate to contact me at Dennis.L.Merrill@maine.gov or 287-7788.

Maine Department of Environmental Protection

Methods for evaluating the effects of multiple discharges of toxic pollutants.

Reference: DEP Rules, Chapter 530, section 4(F)

To evaluate discharges of toxic pollutants into a freshwater river system and prevent cumulative impacts from multiple discharges, DEP uses a computer program called "DeTox that functions as a mathematical evaluation tool.

It uses physical information about discharge sources and river conditions on file with the Department, established water quality criteria and reported effluent test information to perform these evaluations. Each toxic pollutant and associated water quality criterion for acute, chronic and/or human health effects is evaluated separately.

Each facility in a river drainage area has an assigned position code. This "address" is used to locate the facility on the river segment and in relation to other facilities and tributary streams. All calculations are performed in pounds per day to allow analysis on a mass balance. Pollutants are considered to be conservative in that once in the receiving water they will not easily degrade and have the potential to accumulate.

The process begins with establishing an assimilative capacity for each pollutant and water quality criterion at the most downstream point in the river segment. This calculation includes set-aside amounts for background and reserve quantities and assumed values for receiving water pH, temperature and hardness. The resulting amount of assimilative capacity is available for allocation among facilities on the river.

Each facility is evaluated to characterize its past discharge quantities. The historical discharge, in pounds per day, is figured using the average reported concentration and the facility's permitted flow. As has been past practice, a reasonable potential (RP) factor is used as a tool to estimate the largest discharge that may occur with a certain degree of statistical certainty. The RP factor is multiplied by the historical average to determine an allocation based on past discharges. The RP factor is also multiplied by the single highest test to obtain a maximum day estimate. Finally, the direct average without RP adjustment is used to determine the facility's percent contribution to the river segment in comparison to the sum of all discharges of the pollutant. This percent multiplied by the total assimilative capacity becomes the facility's discharge allocation used in evaluations of the segment loadings.

Additionally, individual facility discharges are evaluated as single sources, as they have been in the past to determine if local conditions are more limiting than a segment evaluation.

With all of this information, facilities are evaluated in three ways. The methods are:

1. The facility's past history. This is the average quantity discharged during the past five years multiplied by the applicable RP factor. This method is often the basis for an allocation when the discharge quantity is relatively small in comparison to the water quality based allocation.
2. An individual evaluation. This assumes no other discharge sources are present and the allowable quantity is the total available assimilative capacity. This method may be used when a local condition such as river flow at the point of discharge is the limiting factor.
3. A segment wide evaluation. This involves allocating the available assimilative capacity within a river segment based on a facility's percent of total past discharges. This method would be used when multiple discharges of the same pollutant to the same segment and the available assimilative capacity is relatively limited.

The value that is most protective of water quality becomes the facility's allocation that is held in the system for the specific facility and pollutant. It is important to note that the method used for allocation is facility and pollutant specific and different facilities on the same segment for the same pollutant can have different methods used depending on their individual situations.

Discharge amounts are always allocated to all facilities having a history of discharging a particular pollutant. This does not mean that effluent limits will be established in a permit. Limits are only needed when past discharge amounts suggest a reasonable potential to exceed a water quality based allocation, either on an individual or segment basis. Similar to past practices for single discharge evaluations, the single highest test value is multiplied by a RP factor and if product is greater than the water quality allowance, an effluent limit is established. It is important to remember an allocation is "banking" some assimilative capacity for a facility even if effluent limits are not needed.

Evaluations are also done for each tributary segment with the sum of discharge quantities in tributaries becoming a "point source" to the next most significant segment. In cases where a facility does not use all of its assimilative capacity, usually due to a more limiting individual water quality criterion, the unused quantity is rolled downstream and made available to other facilities.

The system is not static and uses a five-year rolling data window. Over time, old tests drop off and newer ones are added on. These changes cause the allocations and the need for effluent limits to shift over time to remain current with present conditions. The intent is to update a facility's data and relative contribution to a river's total assimilative capacity prior to each permit renewal. Many facilities are required to do only minimal testing to characterize their effluents. This creates a greater degree of statistical uncertainty about the true long-term quantities. Accordingly, with fewer tests the RP factor will be larger and result in a greater possibility of effluent limits being necessary. To avoid this situation, most facilities, especially those with relatively low dilution factors, are encouraged to conduct more that a minimum number of tests. It is generally to a facility's long-term benefit to have more tests on file since their RP factor will be reduced.

Maine Department of Environmental Protection

Working Definitions of Terms Used in the DeTox System.

Allocation. The amount of pollutant loading set aside for a facility. Separate amounts are set for each *water quality criterion.* Each pollutant having a history of being discharged will receive an allocation, but not all allocations become *effluent limits.* Allocation may be made in three ways: *historical allocation, individual allocation* or *segment allocation.*

Assimilative capacity. The amount of a pollutant that river segment can safely accept from point source discharges. It is determined for the most downstream point in a river segment using the *water quality criterion* and river flow. Separate capacities are set for acute, chronic and human health criteria as applicable for each pollutant. Calculation of this capacity includes factors for *reserve* and *background* amounts.

Background. A concentration of a pollutant that is assumed to be present in a receiving water but not attributable to discharges. By rule, this is set as a rebuttable presumption at 10% of the applicable *water quality criterion.*

Effluent limit. A numeric limit in a discharge permit specifically restricting the amount of a pollutant that may be discharged. An effluent limit is set only when the highest discharge, including an adjustment for *reasonable potential*, is greater than a facility's water quality based *allocation* for a pollutant.

Historical allocation (or *RP history*). One of three ways of developing an *allocation.* The facility's average history of discharges, in pounds at design flow, is multiplied by the appropriate *reasonable potential* factor. An allocation using this method does not become an *effluent limit.*

Historical discharge percentage. For each pollutant, the average discharge concentration for each facility in a segment is multiplied by the permitted flow (without including a *reasonable potential* factor). The amounts for all facilities are added together and a percent of the total is figured for each facility. When a facility has no detectable concentrations, that pollutant is assumed to be not present and it receives no percentage.

Individual allocation. One of three ways of developing an *allocation.* The facility's single highest discharge on record multiplied by the appropriate *reasonable potential* factor is compared to a water quality based quantity with an assumption that the facility is the only point source to that receiving water. If the RP-adjusted amount is larger, the water quality amount may become an *effluent limit.*

Less than. A qualification on a laboratory report indicating the concentration of a pollutant was below a certain concentration. Such a result is evaluated as being one half of the Department's reporting limit in most calculations.

Reasonable potential (RP). A statistical method to determine the highest amount of a pollutant likely to be present at any time based on the available test results. The method produces a value or RP factor that is multiplied by test results. The method relies on an EPA guidance document, and considers the coefficient of variation and the number of tests. Generally, the fewer number of tests, the higher the RP factor.

Reserve. An assumed concentration of a pollutant that set aside to account for non-point source of a pollutant and to allow new discharges of a pollutant. By rule this is set at 15% of the applicable *water quality criterion.*

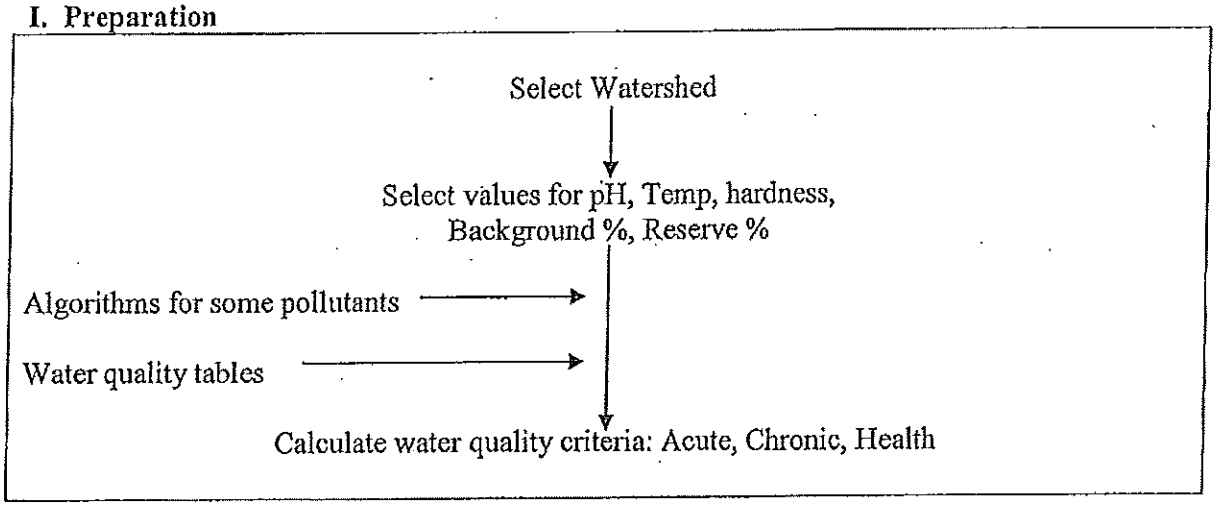
Segment allocation. One of three ways of developing an *allocation.* The amount is set by multiplying a facility's *historical discharge percentage* for a specific pollutant by the *assimilative capacity* for that pollutant and criterion. A facility will have different allocation percentages for each pollutant. This amount may become an *effluent limit.*

Tributary. A stream flowing into a larger one. A total pollutant load is set by adding the all facilities *allocations* on the tributary and treating this totaled amount as a "point source" to the next larger segment.

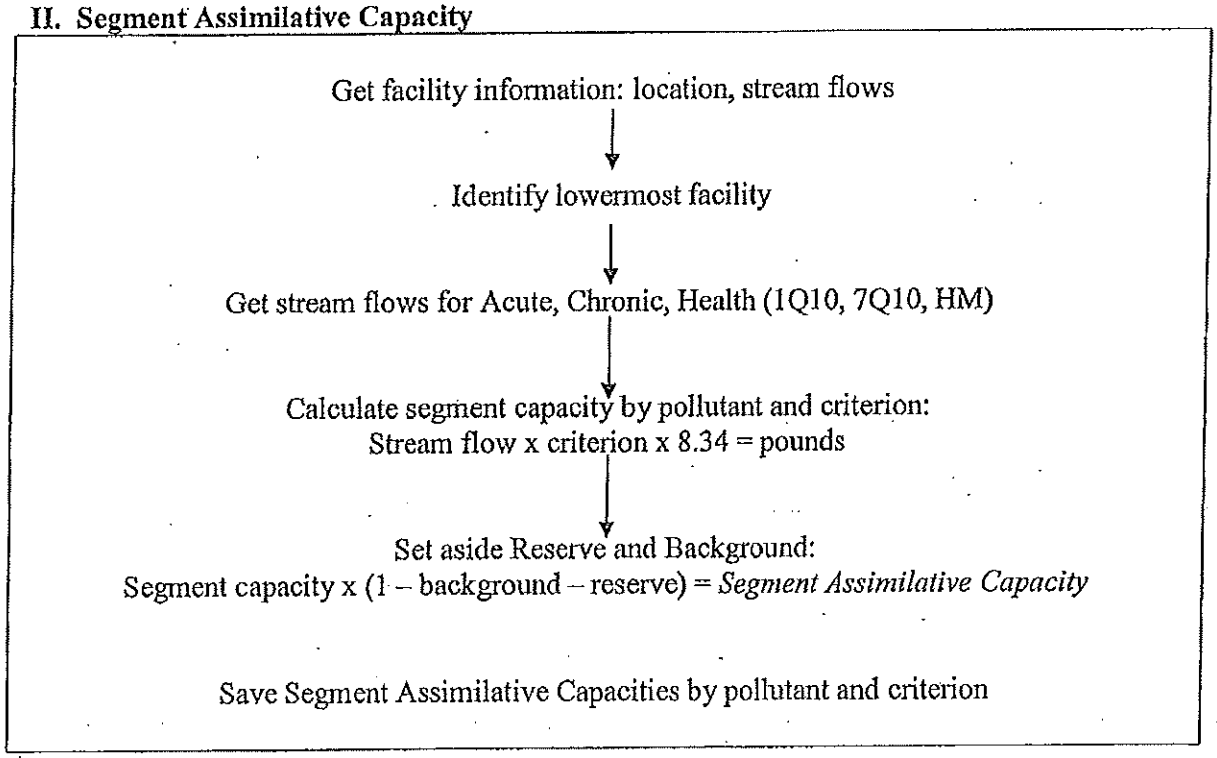
Water quality criteria. Standards for acceptable in-stream or ambient levels of pollutants. These are established in the Department's Chapter 584 and are expressed as concentrations in ug/L. There may be separate standards for acute and chronic protection aquatic life and/or human health. Each criterion becomes a separate standard. Different stream flows are used in the calculation of each.

Maine Department of Environmental Protection
General Processing Steps in "DeTox"

I. Preparation

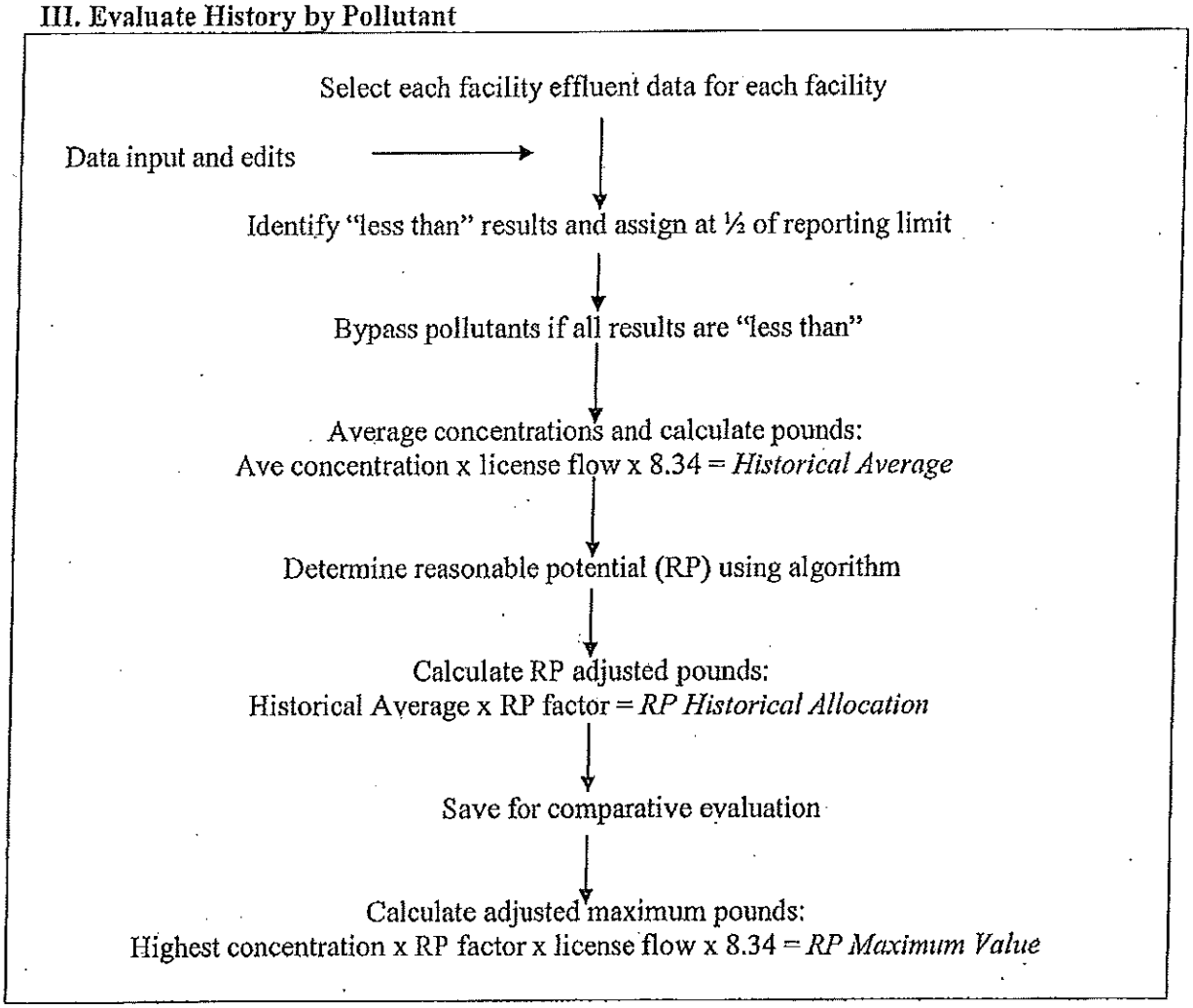


II. Segment Assimilative Capacity

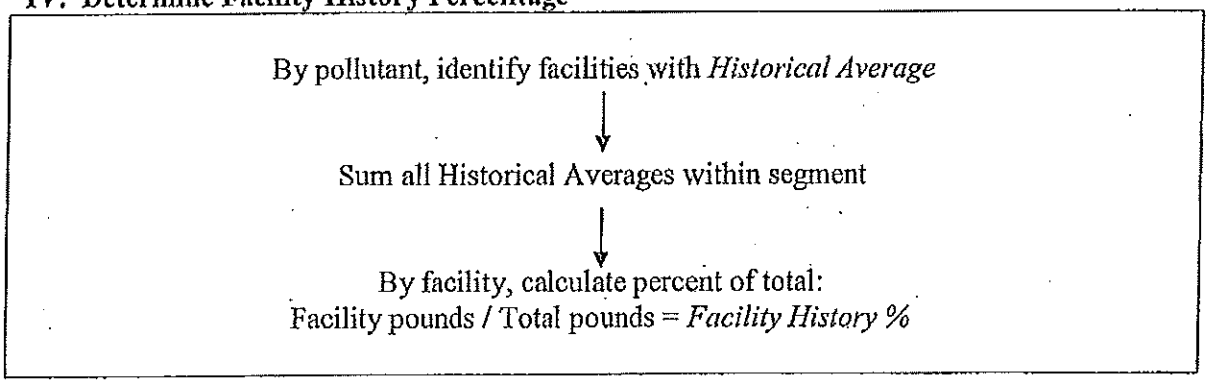


Maine Department of Environmental Protection
General Processing Steps in "DeTox"

III. Evaluate History by Pollutant



IV. Determine Facility History Percentage



Maine Department of Environmental Protection
General Processing Steps in "DeTox"

V. Segment Allocation

By pollutant and criterion, select *Segment Assimilative Capacity*

↓

Select individual *Facility History %*

↓

Determine facility allocation:
Assimilative Capacity x Facility History % = *Segment Allocation*

↓

Save for comparative evaluation

VI. Individual Allocation

Select individual facility and dilution factor (DF)

↓

Select pollutant and water quality criterion

↓

By pollutant and criterion, calculate individual allocations:
[DF x 0.75 x criterion] + [0.25 x criterion] = Individual Concentration

↓

Determine individual allocation:
Individual Concentration x license flow x 8.34 = *Individual Allocation*

↓

Save for comparative evaluation

VII. Make Initial Allocation

By facility, pollutant and criterion, get:
Individual Allocation, Segment Allocation, RP Historical Allocation

↓

Compare allocation and select the smallest

↓

Save as *Facility Allocation*

VIII. Evaluate Need for Effluent Limits

By facility, pollutant and criterion select
Segment Allocation, *Individual Allocation* and *RP Maximum value*

↓

If *RP Maximum value* is greater than either *Segment Allocation* or *Individual Allocation*, use lesser value as *Effluent Limit*

↓

Save *Effluent Limit* for comparison

IX. Reallocation of Assimilative Capacity

Starting at top of segment, get *Segment Allocation*, *Facility Allocation* and *Effluent Limit*

↓

If *Segment Allocation* equals *Effluent Limit*, move to next facility downstream

↓

If not, subtract *Facility Allocation* from *Segment Allocation*

↓

Save difference

↓

Select next facility downstream

↓

Figure remaining *Segment Assimilative Capacity* at and below facility, less tributaries

↓

Add saved difference to get an adjusted *Segment Assimilative Capacity*

↓

Reallocate *Segment Assimilative Capacity* among downstream facilities per step V

↓

Repeat process for each facility downstream in turn

ATTACHMENT F

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHAPTER 530.2(D)(4) CERTIFICATION

PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
Commissioner

MEPDES#_____Facility Name_____

Since the effective date of your permit, have there been;		NO	YES Describe in comments section
1	Increases in the number, types, and flows of industrial, commercial, or domestic discharges to the facility that in the judgment of the Department may cause the receiving water to become toxic?	☐	☐
2	Changes in the condition or operations of the facility that may increase the toxicity of the discharge?	☐	☐
3	Changes in storm water collection or inflow/infiltration affecting the facility that may increase the toxicity of the discharge?	☐	☐
4	Increases in the type or volume of hauled wastes accepted by the facility?	☐	☐

COMMENTS:

Name (printed): _____

Signature: _____ Date: _____

This document must be signed by the permittee or their legal representative.

This form may be used to meet the requirements of Chapter 530.2(D)(4). This Chapter requires all dischargers having waived or reduced toxic testing to file a statement with the Department describing changes to the waste being contributed to their system as outlined above. As an alternative, the discharger may submit a signed letter containing the same information.

Scheduled Toxicity Testing for the next calendar year

Test Conducted	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
WET Testing	☐	☐	☐	☐
Priority Pollutant Testing	☐	☐	☐	☐
Analytical Chemistry	☐	☐	☐	☐
Other toxic parameters [1]	☐	☐	☐	☐

Please place an "X" in each of the boxes that apply to when you will be conducting any one of the three test types during the next calendar year.

[1] This only applies to parameters where testing is required at a rate less frequently than quarterly.

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769-2094
(207) 764-0477 FAX: (207)760-3143

web site: www.maine.gov/dep

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

CONTENTS

A. GENERAL PROVISIONS

1. **General compliance.** All discharges shall be consistent with the terms and conditions of this permit; any changes in production capacity or process modifications which result in changes in the quantity or the characteristics of the discharge must be authorized by an additional license or by modifications of this permit; it shall be a violation of the terms and conditions of this permit to discharge any pollutant not identified and authorized herein or to discharge in excess of the rates or quantities authorized herein or to violate any other conditions of this permit.

2. **Other materials.** Other materials ordinarily produced or used in the operation of this facility, which have been specifically identified in the application, may be discharged at the maximum frequency and maximum level identified in the application, provided:

(a) They are not

(i) Designated as toxic or hazardous under the provisions of Sections 307 and 311, respectively, of the Federal Water Pollution Control Act; Title 38, Section 420, Maine Revised Statutes; or other applicable State Law; or
(ii) Known to be hazardous or toxic by the licensee.

(b) The discharge of such materials will not violate applicable water quality standards.

3. **Duty to comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of State law and the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

(a) The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act, and 38 MRSA, §420 or Chapter 530.5 for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
(b) Any person who violates any provision of the laws administered by the Department, including without limitation, a violation of the terms of any order, rule license, permit, approval or decision of the Board or Commissioner is subject to the penalties set forth in 38 MRSA, §349.

4. **Duty to provide information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

5. **Permit actions.** This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

6. **Reopener clause.** The Department reserves the right to make appropriate revisions to this permit in order to establish any appropriate effluent limitations, schedule of compliance or other provisions which may be authorized under 38 MRSA, §414-A(5).

7. Oil and hazardous substances. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under section 311 of the Federal Clean Water Act; section 106 of the Federal Comprehensive Environmental Response, Compensation and Liability Act of 1980; or 38 MRSA §§ 1301, et. seq.

8. Property rights. This permit does not convey any property rights of any sort, or any exclusive privilege.

9. Confidentiality of records. 38 MRSA §414(6) reads as follows. "Any records, reports or information obtained under this subchapter is available to the public, except that upon a showing satisfactory to the department by any person that any records, reports or information, or particular part or any record, report or information, other than the names and addresses of applicants, license applications, licenses, and effluent data, to which the department has access under this subchapter would, if made public, divulge methods or processes that are entitled to protection as trade secrets, these records, reports or information must be confidential and not available for public inspection or examination. Any records, reports or information may be disclosed to employees or authorized representatives of the State or the United States concerned with carrying out this subchapter or any applicable federal law, and to any party to a hearing held under this section on terms the commissioner may prescribe in order to protect these confidential records, reports and information, as long as this disclosure is material and relevant to any issue under consideration by the department."

10. Duty to reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

11. Other laws. The issuance of this permit does not authorize any injury to persons or property or invasion of other property rights, nor does it relieve the permittee if its obligation to comply with other applicable Federal, State or local laws and regulations.

12. Inspection and entry. The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the EPA Administrator), upon presentation of credentials and other documents as may be required by law, to:

(a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
(d) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

B. OPERATION AND MAINTENACE OF FACILITIES

1. General facility requirements.

(a) The permittee shall collect all waste flows designated by the Department as requiring treatment and discharge them into an approved waste treatment facility in such a manner as to

maximize removal of pollutants unless authorization to the contrary is obtained from the Department.

(b) The permittee shall at all times maintain in good working order and operate at maximum efficiency all waste water collection, treatment and/or control facilities.

(c) All necessary waste treatment facilities will be installed and operational prior to the discharge of any wastewaters.

(d) Final plans and specifications must be submitted to the Department for review prior to the construction or modification of any treatment facilities.

(e) The permittee shall install flow measuring facilities of a design approved by the Department.

(f) The permittee must provide an outfall of a design approved by the Department which is placed in the receiving waters in such a manner that the maximum mixing and dispersion of the wastewaters will be achieved as rapidly as possible.

2. Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

3. Need to halt or reduce activity not a defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. Bypasses.

(a) Definitions.

(i) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

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

(b) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (c) and (d) of this section.

(c) Notice.

(i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph D(1)(f), below. (24-hour notice).

(d) Prohibition of bypass.

(i) Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:

(A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
(C) The permittee submitted notices as required under paragraph (c) of this section.

(ii) The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three conditions listed above in paragraph (d)(i) of this section.

6. Upsets.

(a) Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(b) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (c) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(c) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(i) An upset occurred and that the permittee can identify the cause(s) of the upset;
(ii) The permitted facility was at the time being properly operated; and
(iii) The permittee submitted notice of the upset as required in paragraph D(1)(f) , below. (24 hour notice).
(iv) The permittee complied with any remedial measures required under paragraph B(4).

(d) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

C. MONITORING AND RECORDS

1. General Requirements. This permit shall be subject to such monitoring requirements as may be reasonably required by the Department including the installation, use and maintenance of monitoring equipment or methods (including, where appropriate, biological monitoring methods). The permittee shall provide the Department with periodic reports on the proper Department reporting form of monitoring results obtained pursuant to the monitoring requirements contained herein.

2. Representative sampling. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. If effluent limitations are based wholly or partially on quantities of a product processed, the permittee shall ensure samples are representative of times when production is taking place. Where discharge monitoring is required when production is less than 50%, the resulting data shall be reported as a daily measurement but not included in computation of averages, unless specifically authorized by the Department.

3. Monitoring and records.

(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(b) Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

(c) Records of monitoring information shall include:

(i) The date, exact place, and time of sampling or measurements;
(ii) The individual(s) who performed the sampling or measurements;
(iii) The date(s) analyses were performed;
(iv) The individual(s) who performed the analyses;
(v) The analytical techniques or methods used; and
(vi) The results of such analyses.

(d) Monitoring results must be conducted according to test procedures approved under 40 CFR part 136, unless other test procedures have been specified in the permit.

(e) State law provides that any person who tampers with or renders inaccurate any monitoring devices or method required by any provision of law, or any order, rule license, permit approval or decision is subject to the penalties set forth in 38 MRSA, §349.

D. REPORTING REQUIREMENTS

1. Reporting requirements.

(a) Planned changes. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

(i) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or

(ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under Section D(4).

(iii) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;

(b) Anticipated noncompliance. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(c) Transfers. This permit is not transferable to any person except upon application to and approval of the Department pursuant to 38 MRSA, § 344 and Chapters 2 and 522.

(d) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(i) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Department for reporting results of monitoring of sludge use or disposal practices.

(ii) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Department.

(iii) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Department in the permit.

(e) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(f) Twenty-four hour reporting.

(i) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance

has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(ii) The following shall be included as information which must be reported within 24 hours under this paragraph.

(A) Any unanticipated bypass which exceeds any effluent limitation in the permit.
(B) Any upset which exceeds any effluent limitation in the permit.
(C) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit to be reported within 24 hours.

(iii) The Department may waive the written report on a case-by-case basis for reports under paragraph (f)(ii) of this section if the oral report has been received within 24 hours.

(g) Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs (d), (e), and (f) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (f) of this section.

(h) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

2. Signatory requirement. All applications, reports, or information submitted to the Department shall be signed and certified as required by Chapter 521, Section 5 of the Department's rules. State law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan or other document filed or required to be maintained by any order, rule, permit, approval or decision of the Board or Commissioner is subject to the penalties set forth in 38 MRSA, §349.

3. Availability of reports. Except for data determined to be confidential under A(9), above, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. As required by State law, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal sanctions as provided by law.

4. Existing manufacturing, commercial, mining, and silvicultural dischargers. In addition to the reporting requirements under this Section, all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Department as soon as they know or have reason to believe:

(a) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(i) One hundred micrograms per liter (100 ug/l);
(ii) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
(iii) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with Chapter 521 Section 4(g)(7); or
(iv) The level established by the Department in accordance with Chapter 523 Section 5(f).

(b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following ``notification levels":

(i) Five hundred micrograms per liter (500 ug/l);
(ii) One milligram per liter (1 mg/l) for antimony;
(iii) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with Chapter 521 Section 4(g)(7); or
(iv) The level established by the Department in accordance with Chapter 523 Section 5(f).

5. Publicly owned treatment works.

(a) All POTWs must provide adequate notice to the Department of the following:

(i) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA or Chapter 528 if it were directly discharging those pollutants.
(ii) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
(iii) For purposes of this paragraph, adequate notice shall include information on (A) the quality and quantity of effluent introduced into the POTW, and (B) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

(b) When the effluent discharged by a POTW for a period of three consecutive months exceeds 80 percent of the permitted flow, the permittee shall submit to the Department a projection of loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans.

E. OTHER REQUIREMENTS

1. Emergency action - power failure. Within thirty days after the effective date of this permit, the permittee shall notify the Department of facilities and plans to be used in the event the primary source of power to its wastewater pumping and treatment facilities fails as follows.

(a) For municipal sources. During power failure, all wastewaters which are normally treated shall receive a minimum of primary treatment and disinfection. Unless otherwise approved, alternate power supplies shall be provided for pumping stations and treatment facilities. Alternate power supplies shall be on-site generating units or an outside power source which is separate and independent from sources used for normal operation of the wastewater facilities.

(b) For industrial and commercial sources. The permittee shall either maintain an alternative power source sufficient to operate the wastewater pumping and treatment facilities or halt, reduce or otherwise control production and or all discharges upon reduction or loss of power to the wastewater pumping or treatment facilities.

2. Spill prevention. (applicable only to industrial sources) Within six months of the effective date of this permit, the permittee shall submit to the Department for review and approval, with or without conditions, a spill prevention plan. The plan shall delineate methods and measures to be taken to prevent and or contain any spills of pulp, chemicals, oils or other contaminates and shall specify means of disposal and or treatment to be used.

3. **Removed substances.** Solids, sludges trash rack cleanings, filter backwash, or other pollutants removed from or resulting from the treatment or control of waste waters shall be disposed of in a manner approved by the Department.

4. **Connection to municipal sewer.** (applicable only to industrial and commercial sources) All wastewaters designated by the Department as treatable in a municipal treatment system will be cosigned to that system when it is available. This permit will expire 90 days after the municipal treatment facility becomes available, unless this time is extended by the Department in writing.

F. DEFINITIONS. For the purposes of this permit, the following definitions shall apply. Other definitions applicable to this permit may be found in Chapters 520 through 529 of the Department's rules

Average means the arithmetic mean of values taken at the frequency required for each parameter over the specified period. For bacteria, the average shall be the geometric mean.

Average monthly discharge limitation means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. Except, however, bacteriological tests may be calculated as a geometric mean.

Average weekly discharge limitation means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best management practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Composite sample means a sample consisting of a minimum of eight grab samples collected at equal intervals during a 24 hour period (or a lesser period as specified in the section on monitoring and reporting) and combined proportional to the flow over that same time period.

Continuous discharge means a discharge which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities.

Daily discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the day.

Discharge Monitoring Report ("DMR") means the EPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by approved States as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA's.

Flow weighted composite sample means a composite sample consisting of a mixture of aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge.

Grab sample means an individual sample collected in a period of less than 15 minutes.

Interference means a Discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

(1) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
(2) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Maximum daily discharge limitation means the highest allowable daily discharge.

New source means any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

(a) After promulgation of standards of performance under section 306 of CWA which are applicable to such source, or
(b) After proposal of standards of performance in accordance with section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal.

Pass through means a discharge which exits the POTW into waters of the State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

Permit means an authorization, license, or equivalent control document issued by EPA or an approved State to implement the requirements of 40 CFR parts 122, 123 and 124. Permit includes an NPDES general permit (Chapter 529). Permit does not include any permit which has not yet been the subject of final agency action, such as a draft permit or a proposed permit.

Person means an individual, firm, corporation, municipality, quasi-municipal corporation, state agency, federal agency or other legal entity.

Point source means any discernible, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation or vessel or other floating craft, from which pollutants are or may be discharged.

Pollutant means dredged spoil, solid waste, junk, incinerator residue, sewage, refuse, effluent, garbage, sewage sludge, munitions, chemicals, biological or radiological materials, oil, petroleum products or byproducts, heat, wrecked or discarded equipment, rock, sand, dirt and industrial, municipal, domestic, commercial or agricultural wastes of any kind.

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly owned treatment works ("POTW") means any facility for the treatment of pollutants owned by the State or any political subdivision thereof, any municipality, district, quasi-municipal corporation or other public entity.

Septage means, for the purposes of this permit, any waste, refuse, effluent sludge or other material removed from a septic tank, cesspool, vault privy or similar source which concentrates wastes or to which chemicals have been added. Septage does not include wastes from a holding tank.

Time weighted composite means a composite sample consisting of a mixture of equal volume aliquots collected over a constant time interval.

Toxic pollutant includes any pollutant listed as toxic under section 307(a)(1) or, in the case of sludge use or disposal practices, any pollutant identified in regulations implementing section 405(d) of the CWA. Toxic pollutant also includes those substances or combination of substances, including disease causing agents, which after discharge or upon exposure, ingestion, inhalation or assimilation into any organism, including humans either directly through the environment or indirectly through ingestion through food chains, will, on the basis of information available to the board either alone or in combination with other substances already in the receiving waters or the discharge, cause death, disease, abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction, or physical deformations in such organism or their offspring.

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Whole effluent toxicity means the aggregate toxic effect of an effluent measured directly by a toxicity test.

DEP INFORMATION SHEET

Appealing a Department Licensing Decision

Dated: March 2012 **Contact: (207) 287-2811**

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's ("DEP") Commissioner: (1) in an administrative process before the Board of Environmental Protection ("Board"); or (2) in a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S.A. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S.A. § 480-HH(1) or a general permit for a tidal energy demonstration project (38 M.R.S.A. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

This INFORMATION SHEET, in conjunction with a review of the statutory and regulatory provisions referred to herein, can help a person to understand his or her rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

The laws concerning the DEP's *Organization and Powers*, 38 M.R.S.A. §§ 341-D(4) & 346, the *Maine Administrative Procedure Act*, 5 M.R.S.A. § 11001, and the DEP's *Rules Concerning the Processing of Applications and Other Administrative Matters* ("Chapter 2"), 06-096 CMR 2 (April 1, 2003).

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written appeal within 30 days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days of the date on which the Commissioner's decision was filed with the Board will be rejected.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, c/o Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; faxes are acceptable for purposes of meeting the deadline when followed by the Board's receipt of mailed original documents within five (5) working days. Receipt on a particular day must be by 5:00 PM at DEP's offices in Augusta; materials received after 5:00 PM are not considered received until the following day. The person appealing a licensing decision must also send the DEP's Commissioner a copy of the appeal documents and if the person appealing is not the applicant in the license proceeding at issue the applicant must also be sent a copy of the appeal documents. All of the information listed in the next section must be submitted at the time the appeal is filed. Only the extraordinary circumstances described at the end of that section will justify evidence not in the DEP's record at the time of decision being added to the record for consideration by the Board as part of an appeal.

WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

Appeal materials must contain the following information at the time submitted:

1. *Aggrieved Status.* The appeal must explain how the person filing the appeal has standing to maintain an appeal. This requires an explanation of how the person filing the appeal may suffer a particularized injury as a result of the Commissioner's decision.
2. *The findings, conclusions or conditions objected to or believed to be in error.* Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
3. *The basis of the objections or challenge.* If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.
5. *All the matters to be contested.* The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.
6. *Request for hearing.* The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing on the appeal is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.
7. *New or additional evidence to be offered.* The Board may allow new or additional evidence, referred to as supplemental evidence, to be considered by the Board in an appeal only when the evidence is relevant and material and that the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process or that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2.

Other Considerations in Appealing a Decision to the Board

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, made easily accessible by DEP. Upon request, the DEP will make the material available during normal working hours, provide space to review the file, and provide opportunity for photocopying materials. There is a charge for copies or copying services.
2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer questions regarding applicable requirements.
3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed the license normally remains in effect pending the processing of the appeal. A license holder may proceed with a project pending the outcome of an appeal but the license holder runs the risk of the decision being reversed or modified as a result of the appeal.

What to Expect Once You File a Timely Appeal with the Board

The Board will formally acknowledge receipt of an appeal, including the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials accepted by the Board Chair as supplementary evidence, and any materials submitted in response to the appeal will be sent to Board members with a recommendation from DEP staff. Persons filing appeals and interested persons are notified in advance of the date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, a license holder, and interested persons of its decision.

II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court, see 38 M.R.S.A. § 346(1); 06-096 CMR 2; 5 M.R.S.A. § 11001; & M.R. Civ. P 80C. A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. Failure to file a timely appeal will result in the Board's or the Commissioner's decision becoming final.

An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S.A. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board's Executive Analyst at (207) 287-2452 or for judicial appeals contact the court clerk's office in which your appeal will be filed.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.