December 20, 2007

Mr. Thomas Howard
S.D. Warren Company
P. O. Box 5000, 89 Cumberland Street
Westbrook, ME 04098

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0002321
Maine Waste Discharge License #W002224-5L-D-R
**Final Permit**

Dear Tom:

Enclosed please find a copy of your **final** MEPDES permit/WDL which was approved by the Department of Environmental Protection. Please read the permit and its attached conditions carefully. You must follow the conditions in the order to satisfy the requirements of law. Any discharge not receiving adequate treatment is in violation of State Law and is subject to enforcement action.

Any interested person aggrieved by a Department determination made pursuant to applicable regulations, may appeal the decision following the procedures described in the attached DEP FACT SHEET entitled "*Appealing a Commissioner's Licensing Decision*."

If you have any questions regarding the matter, please feel free to call me at 287-7693.

Sincerely,

Gregg Wood
Division of Water Quality Management
Bureau of Land and Water Quality

Enc.

cc: Stuart Rose, DEP/SMRO
Sandy Lao, USEPA

**IN THE MATTER OF**

| | | |
|---|---|---|
| S.D.WARREN COMPANY | ) | MAINE POLLUTANT DISCHARGE |
| WESTBROOK, CUMBERLAND COUNTY, MAINE | ) | ELIMINATION SYSTEM PERMIT |
| PAPER MANUFACTURING | ) | AND |
| ME0002321 | ) | WASTE DISCHARGE LICENSE |
| W002224-5N-D-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 applicable regulations, the Department of Environmental Protection (Department hereinafter) has considered the application of the S.D. WARREN COMPANY (SDW hereinafter), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

## APPLICATION SUMMARY

The SDW has submitted an application to the Department for the renewal of combination Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0002321/ Maine Waste Discharge License (WDL) #W002224-5L-C-M (permit hereinafter), which was issued by the Department on July 2, 2002 and expired on July 2, 2007. The permit authorized the discharge of treated process waste waters, treated landfill leachate, non-contact cooling waters, treated storm water runoff, and sandfilter backwash waters associated with the operations of a non-integrated mill complex (paper mill only) to the Presumpscot River, Class C, in Westbrook, Maine. In addition to the aforementioned waste waters discharged, this permit authorizes treated discharges associated with or resulting from essential maintenance, regularly scheduled maintenance during start-up and shutdown, treated spills and release (whether anticipated or unanticipated) from anywhere in the permitted facility. The kraft pulping operations at the Westbrook mill were permanently shutdown on June 28, 1999, which significantly changed the characteristics of the process waste waters generated at the mill, thus prompting SDW to request a modification of their permit in July of 2002. On May 24, 2006, the Department authorized SDW to accept and treat up to 2,000 gpd of waste water from the Biofine Renewables LLC facility located in Gorham, Maine.

## PERMIT SUMMARY

A summary of the terms and conditions of the permit are summarized as follows:

1. Reduces the monthly average flow limit of Outfall #001 from 15.0 MGD to 10.0 MGD. The reduction in flow increases the dilution factors associated with the discharge.

2. Eliminates the seasonal limitations for biochemical oxygen demand (BOD) and establishes more stringent technology based monthly average and daily maximum mass limit for BOD based on National Effluent Guidelines criteria for the pulp and paper industry. More stringent limitations are a result of a significant decrease in production from 600 tons/day of paper in the previous permitting action to 200 tons/day in this permitting action.

3. Establishes more stringent monthly average and daily maximum technology based mass limitations for total suspended solids (TSS) based on National Effluent Guidelines criteria for the pulp and paper industry based on the decrease in production cited in #2 above.

**PERMIT SUMMARY (cont'd)**

4. Carries forward the daily maximum temperature limitation of 100ºF for Outfall 001 and 110ºF for Outfall 003.

5. Reduces the weekly average and daily maximum thermal load limitations based on discharge data collected since issuance of the previous permitting action.

6. Carries forward monthly average water quality based mass and concentration limitations for arsenic. It is noted, the limitations are expressed as the inorganic fraction of total arsenic. Being that there is no EPA approved test method for inorganic arsenic at this time, this permit establishes a schedule of compliance for said limitations. In the interim, this permit establishes a reporting requirement for total arsenic for which there is an EPA approved method. See section 7(A)(8) of the Fact Sheet attached to this permit for a more in-depth discussion on arsenic.

7. Eliminates the monthly average and or daily maximum water quality based mass and concentration limits for aluminum, bis (2-ethylhexyl) phthalate and copper. Limitations were removed based on the Department's statistical evaluation of the most current 60 months of chemical specific data as required pursuant to Department rule chapter 530, *Surface Water Toxics Control Program*. It is noted mercury limits and monitoring requirements are being regulated by the Department outside of this permitting action pursuant to Department rule Chapter 519, *Interim Effluent Limits And Control For The Discharge of Mercury*.

8. Eliminates the acute and chronic water quality based limit for the water flea (*Ceriodaphnia dubia*).

9. Establishes a new testing regime for whole effluent toxicity (WET) testing, analytical chemistry testing and priority pollutant testing based on Department rule Chapter 530, *Surface Water Toxics Control Program.*

10. Carries forward the monthly average and daily maximum limits and reporting requirements for flow, TSS, total residual chlorine and pH for water treatment filter backwash discharge from Outfall #002.

11. Carries forward the monthly average and daily maximum limits for flow, temperature and pH for the non-contact cooling waters discharged from Outfall #003. The thermal load limitation for this outfall has been modified to be consistent with the thermal load limitation for Outfall #001 as described in item #5 above.

12. Carries forward the requirements in Special Condition K, *Flow Regulation From Sebago Lake,* of the previous licensing action. Requirements in this Special Condition (Special Condition G in this permit) may change in the future due to the on-going negotiations surrounding the re-licensing of dams on the Presumpscot River.

13. Carries forward the formal mixing zone established in Special Condition I, *Thermal Mixing Zone*, (Special Condition F in this permit) from the previous permitting action. It is noted, the mixing zone was originally established based on the Smelt Hill Dam being in place. The Department, with assistance from the EPA will be conducting additional ambient water quality monitoring during the term of this permit to determine if the mixing zone remains appropriate.

**PERMIT SUMMARY (cont'd)**

14. Eliminates Special Condition I, *Dioxin Monitoring Program*, in the previous permitting action as the facility has not produced pulp since the summer of 1999 such that there is no reasonable potential to exceed applicable AWQC.

**CONCLUSIONS**

BASED on the findings in the attached Fact Sheet dated September 19, 2007, and subject to the Conditions listed below, 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 MRSA 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 national 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 S.D. WARREN COMPANY to discharge up to 10.0 MGD of treated process waste waters, treated waste waters from BioFine Renewables LLC and treated landfill leachate, treated discharges associated with or resulting from essential maintenance, regularly scheduled maintenance during start-up and shutdown, treated spills and release (whether anticipated or unanticipated) from anywhere in the permitted facility and discharge up to 12.0 MGD of non-contact cooling waters, and discharge an unspecified quantity of storm water runoff, and sandfilter backwash waters associated with the operations of a paper mill complex to the Presumpscot River, Class C, in Westbrook, Maine SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including:

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 any effluent limitations and monitoring requirements.

3. This permit expires five (5) years from the date of signature below.

DONE AND DATED AT AUGUSTA, MAINE, THIS _____DAY OF _____, 2007.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____
David P. Littell, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application June 26, 2007.

Date of application acceptance June 26, 2007.

Date filed with Board of Environmental Protection _____

This Order prepared by GREGG WOOD, BUREAU OF LAND & WATER QUALITY

W22245ND 12/19/07

## SPECIAL CONDITION

## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. Beginning upon issuance of this permit, the permittee is authorized to discharge secondary treated waste waters from **Outfall #001** to Presumpscot River. Such discharges shall be limited and monitored by the permittee as specified below.

**OUTFALL #001 – Secondary treated waste waters**

| Effluent Characteristic | Discharge Limitations | | | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|
| | Monthly Average | Daily Maximum | Monthly Average | Weekly Average | Daily Maximum | Measurement Frequency | Sample Type |
| Flow (MGD) *[50050]* | 10.0 MGD *[03]* | Report MGD *[03]* | --- | --- | --- | Continuous *[99/99]* | Recorder*[RC]* |
| $BOD_5$ *[00310]* | 1,700 #/day *[26]* | 3,240 #/day *[26]* | --- | --- | --- | 1/Day *[01/01]* | Composite *[24]* |
| TSS *[00530]* | 2,360 #/day *[26]* | 4,400 #/day *[26]* | --- | --- | --- | 1/Day *[01/01]* | Composite *[24]* |
| Temperature *[00011]*<br>*June 1 – September 30*<br>*October 1 – May 31* | <br>---<br>--- | <br>---<br>--- | <br>---<br>--- | <br>---<br>--- | <br>100°F *[15]*<br>100°F *[15]* | <br>1/Day *[01/01]*<br>--- | <br>Measure *[MS]*<br>--- |
| Thermal Load *[00017]*<br>*June 1 – Sept. 30, 2008*<br>*Beginning June 1, 2009* | <br>---<br>--- | <br>---<br>--- | <br>---<br>--- | <br>3.517 EE9**(1)** BTU's/Day<br>2.325 EE9**(1)** BTU's/Day*[34]* | <br>4.04 EE9**(1)** BTU's/Day<br>2.674 EE9**(1)** BTU's/Day*[34]* | <br>1/Day *[01/01]*<br>1/Day *[01/01]* | <br>Calculate *[CA]*<br>Calculate *[CA]* |
| pH (Std. Unit) *[00400]* | --- | --- | --- | --- | 5.0 – 9.0 SU *[12]* | 1/Day *[01/01]* | Grab *[GR]* |
| Arsenic (Total) **(2)** *[01002]*<br>*(Upon permit issuance)* | Report #/day *[26]* | --- | Report ug/L *[28]* | --- | --- | 1/Quarter *[01/90]* | Composite*[24]* |
| Arsenic (Inorganic) **(3)** *[01252]*<br>*(Upon EPA test method approval)* | 0.025 #/day *[26]* | --- | 0.30 ug/L *[28]* | --- | --- | 1/Year*[01/YR]* | Composite*[24]* |
| *E. coli* bacteria *[31633]* | --- | --- | 126 col/100 mL**(4)** *[13]* | --- | 949 col/100 ml *[13]* | 1/Week *[01/07]* | Grab *[GR]* |

**SPECIAL CONDITIONS**

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd) – OUTFALL #001**

***SURVEILLANCE LEVEL*** **-** Beginning upon permit issuance and lasting through 12 months prior to permit expiration.

| **Effluent Characteristic** | **Discharge Limitations** | | | | **Minimum Monitoring Requirements** | |
|---|---|---|---|---|---|---|
| | **Monthly Average** | **Daily Maximum** | **Monthly Average** | **Daily Maximum** | **Measurement Frequency** | **Sample Type** |
| Whole Effluent Toxicity[5] | | | | | | |
| **Acute – NOEL** | | | | | | |
| *Ceriodaphnia dubia* (Water flea) *[TDA3B]* | --- | --- | --- | Report % *[23]* | 1/Year *[01/YR]* | Composite *[24]* |
| *Salvelinus fontinalis* (Brook trout) *[TDA6F]* | --- | --- | --- | Report % *[23]* | 1/Year *[01/YR]* | Composite *[24]* |
| **Chronic – NOEL** | | | | | | |
| *Ceriodaphnia dubia* (Water flea) *[TBP3B]* | --- | --- | --- | Report % *[23]* | 1/Year *[01/YR]* | Composite *[24]* |
| *Salvelinus fontinalis* (Brook trout) *[TBQ6F]* | --- | --- | --- | Report % *[23]* | 1/Year *[01/YR]* | Composite *[24]* |
| Analytical chemistry[6] *[51168]* | --- | --- | --- | Report ug/L *[28]* | 1/Year *[01/YR]* | Composite/Grab *[24]* |

## SPECIAL CONDITIONS

## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd) – OUTFALL #001

***SCREENING LEVEL*** **-** Beginning 12 months prior to permit expiration and lasting through permit expiration and every five years thereafter.

| Effluent Characteristic | Discharge Limitations | | | | Minimum Monitoring Requirements | |
|---|---|---|---|---|---|---|
| | Monthly Average | Daily Maximum | Monthly Average | Daily Maximum | Measurement Frequency | Sample Type |
| Whole Effluent Toxicity[5] | | | | | | |
| **Acute – NOEL** | | | | | | |
| *Ceriodaphnia dubia* (Water flea) *[TDA3B]* | --- | --- | --- | Report % *[23]* | 1/Quarter *[01/90]* | Composite *[24]* |
| *Salvelinus fontinalis* (Brook trout) *[TDA6F]* | --- | --- | --- | Report % *[23]* | 1/Quarter *[01/90]* | Composite *[24]* |
| **Chronic – NOEL** | | | | | | |
| *Ceriodaphnia dubia* (Water flea) *[TBP3B]* | --- | --- | --- | Report % *[23]* | 1/Quarter *[01/90]* | Composite *[24]* |
| *Salvelinus fontinalis* (Brook trout) *[TBQ6F]* | --- | --- | --- | Report % *[23]* | 1/Quarter *[0190]* | Composite *[24]* |
| Analytical chemistry[6] *[51168]* | --- | --- | --- | Report ug/L *[28]* | 1/Quarter *[01/90]* | Composite/Grab *[24]* |
| Priority Pollutant [7] *[50008]* | --- | --- | --- | Report ug/L *[28]* | 1/Year *[01/YR]* | Composite/Grab *[24]* |

## SPECIAL CONDITIONS

### A. OUTFALL #002 – Sand Filter Backwash

| Effluent Characteristic | Discharge Limitations | | | | 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]* | --- | 2.5 MGD *[03]* | --- | --- | 1/Day *[01/01]* | Estimate *[ES]* |
| Total Suspended Solids *[00530]* | --- | --- | 20 mg/L *[19]* | 60 mg/L *[19]* | 1/Month *[01/30]* | Grab *[GR]* |
| Total Residual Chlorine *[50060]* | --- | --- | --- | 1.33 mg/L *[19]* | 1/Week *[01/07]* | Grab *[GR]* |
| pH (Standard Units) *[00400]* | --- | --- | --- | 5.0 – 9.0 SU(*) *[12]* | 1/Month *[01/30]* | Grab *[GR]* |

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### OUTFALL #003 – Non-contact cooling waters

| Effluent Characteristic | Discharge Limitations | | | | Minimum Monitoring Requirements | |
|---|---|---|---|---|---|---|
| | **Monthly Average** as specified | **Daily Maximum** as specified | **Weekly Average** as specified | **Daily Maximum** as specified | **Measurement Frequency** as specified | **Sample Type** As specified |
| Flow *[50050]* | Report MGD *[03]* | 12.0 MGD *[03]* | --- | --- | 1/Day *[01/01]* | Estimate *[ES]* |
| Temperature *[00011]* | --- | --- | --- | 110°F *[15]* | 1/Day *[01/01]* | Measure *[MS]* |
| Thermal Load *[00017]*<br>*June 1 – Sept. 30, 2008* | --- | --- | 3.517 EE9(1) BTU's/Day | 4.04 EE9(1) BTU's/Day | 1/Day *[01/01]* | Calculate *[CA]* |
| *Beginning June 1, 2009* | --- | --- | 2.325 EE9(1) BTU's/Day *[34]* | 2.674 EE9(1) BTU's/Day *[34]* | 1/Day *[01/01]* | Calculate *[CA]* |
| pH (Standard Units) *[00400]* | --- | --- | --- | 5.0 – 9.0 SU(*) *[12]* | 1/Month *[01/30]* | Grab *[GR]* |

Footnotes:

(*) The pH of the effluent shall not be more than 0.5 standard units outside the background (precipitation/ambient receiving water) pH.

**SPECIAL CONDITION**

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

Footnotes:

**Sampling** – Sampling to demonstrate compliance with this permit shall be conducted after the last treatment process and shall be representative of normal operating conditions. All sampling must be conducted in accordance with (a) methods approved by 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, (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 Health and Human Services.

All detectable 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. If a non-detect analytical test result is below the respective RL, the concentration result shall be reported as <Y where Y is the detection limit achieved by the laboratory for each respective parameter. Reporting a value of <Y that is greater than an established RL is not acceptable and will be rejected by the Department. For mass, if the analytical result is reported as <Y or if a detectable result is less than a RL, report a <X lbs/day, where X is the parameter specific limitation established in the permit.

(1) **Thermal Load** – The weekly average and daily maximum thermal load from Outfalls #001 and #003 collectively, shall be calculated in accordance with Special Condition F, *Thermal Mixing Zone*, of this permit. The limitations are in effect between June 1 and September 30 of each year. For the monthly Discharge Monitoring Report (DMR) reporting purposes, the permittee shall report the highest thermal load (expressed in BTU's/day) for any seven (7) consecutive days for each calendar month and the highest single day heat load (expressed in BTU's/day) for the calendar month. See Special Condition F, *Thermal Mixing Zone*, of this permit.

(2) **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 0.60 ug/L (See page 21 of the Fact Sheet attached to this permit modification) or the Department's RL at the time (whichever is higher) will be considered as a possible exceedence of the inorganic limit. 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.

(3) **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 J, *Schedule of Compliance – Inorganic Arsenic*, of this permit modification.

**SPECIAL CONDITION**

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

Footnotes:

(4) ***E. coli* bacteria** - The monthly average limitation is a geometric mean limitation and shall be calculated and reported as such.

(5) **Whole Effluent Toxicity** (**WET)** - Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions set at levels to bracket the modified acute and chronic critical water quality thresholds of 5.6%), which provides a point 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. The critical modified acute and chronic thresholds were derived as the mathematical inverse of the applicable acute and chronic dilution factors of 18:1.

a. **Surveillance level testing -** Beginning upon issuance of this permit and lasting through 12 months prior to permit expiration, the permittee shall conduct surveillance level WET testing at a minimum frequency of once per year (1/Year) for both species. Acute and chronic tests shall be conducted on the water flea (*Ceriodaphnia dubia*) and the brook trout (*Salvelinus fontinalis*). Testing shall be conducted in a different calendar quarter of each year such that a test is conducted in all four quarters of the year during the first four years of the term of this permit.

b. **Screening level testing -** Beginning 12 months prior to permit expiration and lasting through permit expiration and every five years thereafter, the permittee shall conduct screening level WET testing at a minimum frequency of once per quarter (1/Quarter) for both species. Acute and chronic tests shall be conducted on the water flea (*Ceriodaphnia dubia*) and the brook trout (*Salvelinus fontinalis.*

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 receipt from the laboratory conducting the testing 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 5.6%.

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.

a. 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.

b. 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.

**SPECIAL CONDITION**

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

Footnotes:

Each time a WET test is performed, the permittee shall sample and analyze for the nine (9) parameters in the WET Chemistry and the eleven (11) parameters in 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.

(6) **Analytical chemistry** – Refers to a suite of chemical tests that include ammonia nitrogen (as N), total aluminum, total arsenic, total cadmium, total chromium, total copper, total cyanide, total lead, total nickel, total silver, total zinc and total residual chlorine.

a. **Surveillance level testing** – Beginning upon issuance of this permit and lasting through 12 months prior to permit expiration, the permittee shall conduct analytical chemistry testing at a minimum frequency of once per year (1/Year). As with WET testing, testing shall be conducted in a different calendar quarter of each year such that tests are conducted in all four quarters of the year during the first four years of the term of this permit.

b. **Screening level testing** – Beginning 12 months prior to permit expiration and lasting through permit expiration and every five years thereafter, the permittee shall conduct analytical chemistry testing at a minimum frequency of once per calendar quarter (1/Quarter) for four consecutive calendar quarters.

(7) **Priority pollutant testing –** Priority pollutants are those parameters listed by Department rule, Chapter 525, Section 4(IV).

a. **Screening level testing** - Beginning 12 months prior to permit expiration and lasting through permit expiration and every five years thereafter, the permittee shall conduct screening level priority pollutant testing at a minimum frequency of once per year (1/Year). It is noted Department rule Chapter 530, *Surface Water Toxics Control Program*, does not establish routine surveillance level testing priority pollutant testing.

Priority pollutant and analytical chemistry 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 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 receipt from the laboratory conducting the testing before submitting them. The permittee shall evaluate test results being submitted and identify to the Department, possible exceedences of

**SPECIAL CONDITION**

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

Footnotes:

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.

All mercury sampling required by this permit or 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 1631, Determination of Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Fluorescence Spectrometry. See Attachment F, *Effluent Mercury Test Report*, of this permit for the Department's form for reporting mercury test results.

**B. NARRATIVE EFFLUENT LIMITATIONS**

1. The effluent shall not contain a visible oil sheen, foam or floating solids at any time which would impair the usages designated by the classification of the receiving waters.

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 by the classification of the receiving waters.

3. The discharge shall not cause visible discoloration or turbidity in the receiving waters which would impair the usages designated by the classification of the receiving waters.

4. Notwithstanding specific conditions of this license 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 treatment facility must be operated by a person holding a minimum of a **Grade V** certificate (or Registered Maine Professional Engineer) pursuant to Title 32 M.R.S.A. §4171 *et seq*. 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.

## SPECIAL CONDITIONS

### 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.

### E. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from Outfalls #001, #002 and #003 and from the sources identified in the 6/26/07 application for permit renewal. Discharges of waste water from any other point source are not authorized under this permit, but shall be reported in accordance with Standards Condition B(5)(*Bypass*) of this permit.

### F. THERMAL MIXING ZONE

The zone of initial dilution for the thermal discharge from the Westbrook mill is described as beginning at Outfall 003 (river mile 6.5) and extending downstream a distance of approximately 0.75 miles (river mile 5.75). See Attachment B of this permit.

The mixing zone established by the Department for the thermal discharge from the Westbrook mill is described as beginning at a point 0.75 miles downstream of Outfall #003 (0.25 miles below Outfall 001) and extending downstream to the site of the former Smelt Hill Dam (river mile 0.00). See Attachment B of this permit.

The receiving waters shall not be tested for compliance with temperature standards within the designated zone of initial dilution or the established mixing zone.

**SPECIAL CONDITIONS**

**F. THERMAL MIXING ZONE (cont'd)**

The weekly rolling average and daily maximum thermal load limitations for Outfalls #001 and #003 combined, are in effect between June 1 and September 30 of each year. Beginning June 1, 2008 and lasting through September 30, 2008, the permittee is limited to a weekly average thermal load of 3.517 BTUs/day and a daily maximum thermal load of 4.04 BTUs/day. Unless the permittee presents a firm proposal to the Department to restart the No.3 recovery boiler, beginning June 1, 2009, the weekly average thermal load limitation will be reduced to 2.325 BTUs/day and the daily maximum thermal load will be reduced to 2.674 BTUs/day. During the June 1 – September 30 time frame, the permittee shall measure and record the Qe, Te and Tr on a daily basis. The permittee shall calculate the thermal load from the mill on a daily basis in accordance with the following formulas:

$$\text{Thermal Load} = [(Qe_{001})(Te_{001}\text{-}Tr)+(Qe_{003})(Te_{003}\text{-}Tr)](8.34 \text{ lb/gal}) = \Sigma\text{BTU/day}$$

Qe = Effluent flow in gallons (each outfall)
Te = Effluent Temperature in °F (each outfall)
Tr = Upstream (mill intake) River Water Temperature in °F

The daily recorded and calculated values shall be reported to the Department as an attachment to the Discharge Monitoring Reports (DMR's) for the months of June, July, August and September of each year.

**As an exhibit to the application for the next permit renewal,** the permittee shall submit to the Department for review, an updated report that summarizes a literature search and cost/benefit analysis evaluating new technologies or process control measures currently available to reduce the heat load to the Presumpscot River with the goal to reduce or eliminate the formal mixing zone. In addition, the permittee shall identify the highest 7 consecutive day thermal load discharged during the term of this permit.

**G. FLOW REGULATION FROM SEBAGO LAKE**

In accordance with the approved *State of Maine Compromise Sebago Lake Plan*, dated August 12, 1996, and revised on May 1, 2000, (See Attachment C of this license) when lake levels are within the established target range between May 1 and November 1, flows from Sebago Lake shall be at least 333 cfs [20,000 cfm]. Further, in accordance with the approved *State of Maine Compromise Sebago Lake Plan*, when lake levels are below the established target range between May 1 and November 1, flows from Sebago Lake shall be reduced to the minimum flow required to meet water quality standards in the lower Presumpscot River.

Except where emergency low lake level conditions exist, as defined below, the minimum flow release from Sebago Lake shall be 270 cfs [16,200 cfm] or such higher flow as required by the Department's *Temperature Based Flow Regulation Curve For Presumpscot River*, to meet water quality standards. (See Attachment D of this permit).

**SPECIAL CONDITIONS**

## G. FLOW REGULATION FROM SEBAGO LAKE (cont'd)

For purposes of implementation of a cap on flow releases from Sebago Lake, "emergency low lake level conditions" shall exist when (a) the level of Sebago Lake is 1 foot or more below its allowable target range between May 1 and November 1 and (b) flow releases from Sebago Lake have been greater than 270 cfs [16,200 cfm] for at least 4 consecutive weeks in order to maintain water quality in the river as required by the Department's *Temperature Based Flow Regulation Curve For Presumpscot River*.

When emergency low lake level conditions, as defined above, exist on Sebago Lake, flow releases from the lake shall be capped at 250 cfs [15,000 cfm] for as long as these conditions exist. When either of the prerequisites for emergency low lake levels ceases to exist, then the flow cap shall no longer be in effect, and shall not go back into effect until both prerequisites for emergency low lake level conditions again exist.

When flow releases from Sebago Lake are capped at 250 cfs [15,000 cfm], effluent limits for the discharge of $BOD_5$ from Warren's Westbrook paper mill shall be reduced as a function of river temperature in accordance with the *Allowable BOD5 Discharge For SDW During Emergency Low Sebago Lake Levels* curve contained in the mill's permit. (See Attachment E of this permit).

The requirements for a minimum flow release cap under emergency low lake level conditions, as defined above, have been approved by the Federal Energy Regulatory Commission.

## H. OPERATIONS & MAINTENANCE (O&M) MANUAL

This facility shall have 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 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 process changes or minor equipment upgrades,** 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.

## SPECIAL CONDITIONS

### I. CHAPTER 530(2)(D)(4) CERTIFICATION

**On or before December 31 of each year** ***[PCS code 95799]*** the permittee is required to file a statement with the Department describing the following.

1. 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;

2. Changes in the operation of the treatment works that may increase the toxicity of the discharge; and;

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

   Further, the Department may require that annual WET, analytical chemistry and or priority pollutant testing be re-instituted if it determines that there have been changes in the character of the discharge or if annual certifications described above are not submitted.

### J. SCHEDULE OF COMPLIANCE

**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.

### K. 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 **postmarked on or before the thirteenth (13$^{th}$) day of the month 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 Department's compliance inspector (unless otherwise specified) at the following address:

Department of Environmental Protection
Southern Maine Regional Office
Bureau of Land and Water Quality
312 Canco Road
Portland, Maine 04103

## SPECIAL CONDITIONS

### L. 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.

### M. 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 respects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

**MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT**

**AND**

**MAINE WASTE DISCHARGE LICENSE**

**FACT SHEET**

Date: **September 19, 2007**

PERMIT NUMBER: **ME0002321**
LICENSE NUMBER: **W002224-5N-D-R**

NAME AND ADDRESS OF APPLICANT*:*

**S.D. WARREN COMPANY**
**89 Cumberland Street, P.O. Box 5000**
**Westbrook, Maine 04098-1597**

COUNTY: **Cumberland County**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

**Cumberland Street**
**Westbrook, Maine**

RECEIVING WATER/CLASSIFICATION: **Presumpscot River, Class C**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER*:* **Mr. Thomas Howard**
**(207) 856-4286**
**e-mail: tom.howard@sappi.com**

## 1. APPLICATION SUMMARY

a. Application: The S.D. Warren Company (SDW) has submitted an application to the Department for the renewal of combination Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0002321/ Maine Waste Discharge License (WDL) #W002224-5L-C-M (permit hereinafter), which was issued by the Department on July 2, 2002 and expired on July 2, 2007. The permit authorized the discharge of treated process waste waters, treated landfill leachate, non-contact cooling waters, treated storm water runoff, and sandfilter backwash waters associated with the operations of a non-integrated mill complex (paper mill only) to the Presumpscot River, Class C, in Westbrook, Maine. In addition to the aforementioned waste waters discharged, this permit authorizes treated discharges associated with or resulting from essential maintenance, regularly scheduled maintenance during start-up and shutdown, treated spills and release (whether anticipated or unanticipated) from anywhere in the permitted facility. See Attachment A of this Fact Sheet for a location map. The kraft pulping operations at the Westbrook mill were permanently shutdown on June 28, 1999, which significantly changed the characteristics of the process waste waters generated at the mill, thus prompting SDW to request a modification of their permit in July of 2002. On May 24, 2006, the Department authorized SDW to accept and treat up to 2,000 gpd of waste water from the Biofine Renewables LLC facility located in Gorham, Maine.

## 1. APPLICATION SUMMARY (cont'd)

b. Source Description: SDW is engaged in the production of coated fine paper at the Westbrook mill. In the application submitted to the Department for the renewal of this permit, SDW has indicated that off-machine coating, corrected for moisture and operating days, production levels have averaged 142 tons/day over the most recent three-year period. The company noted that if market conditions changed such that demand increases, production may be as high as 200 tons/day with the existing paper machine. Therefore, a production figure of 200 tons/per day is being utilized to calculate applicable technology based BOD and TSS limits in this permitting action.

c. Waste Water Treatment: SDW discharges treated process waste waters, treated stormwater, treated landfill leachate, treated waste water from BioFine Renewables, non-contact cooling waters and sandfilter backwash waters to the Presumpscot River via three separate outfalls.

**Outfall #001** - Process waste waters - The major waste streams contributing to the discharge include paper machine white waters, off-machine coating, utility operations, treated stormwater, treated waste water generated by BioFine Renewables LLC of Gorham, Maine and treated landfill leachate generated by the Hunt Road Landfill in Amesbury, Massachusetts. The process waste waters from paper machine and off-machine coating operations on the west side of the mill are initially treated in one of two primary clarifiers. The other primary clarifier treats all other waste waters from the mill. Following primary clarification, the two waste streams are combined and receive a secondary level of treatment in two large aeration basins with mechanical aerators followed by final settling in two secondary clarifiers. Waste waters are conveyed to the Presumpscot River via a concrete "stairway" (for reaeration) and outfall pipe measuring 36" in diameter extending out into the middle of the river (on the bottom) with a diffuser configuration consisting of three 22" vertical ports.

**Outfall #002** – Sandfilter back wash - Approximately 11 MGD of water is extracted from the Presumpscot River and filtered by way of a conventional sandfilter for use throughout the mill complex**.** The sand filter is backwashed daily with approximately 2.5 MGD and solids collected in the filtering process are discharged back into the river via an exposed outfall pipe measuring 18" in diameter. The discharge is located upstream of process waste water outfall described above.

**Outfall #003** – Unfiltered water is withdrawn from the Presumpscot River and is processed through the mill's sandfilters and then used for condensing on the mill's turbine generators. This heated non-contact cooling waters is sent back to the mill's sandfilters to be used as process water throughout the mill as long as the temperature of the process water does not exceed 95°F. Once the process water temperature exceeds this temperature, some of the non-contact cooling water is discharged through Outfall #003. The cooling water is discharged to the river via a pipe measuring 24" in diameter with a diffuser configuration consisting of three vertical risers.

## 2. PERMIT SUMMARY

a. History: The most recent permitting/licensing actions include the following:

*April 29, 1974* - The Department issued a Consent Order establishing a thermal mixing zone for the 15 MGD cooling water discharge from the mill. The thermal mixing zone was delineated as 370 feet long by 57 feet wide.

*June 28, 1978* - The Department issued WDL #2224 for a five-year term.

*September 14, 1983* - The Department issued a renewal of WDL #2224 for a five-year term.

*September 29, 1983* - The U.S. Environmental Protection Agency (EPA) issued National Pollutant Discharge Elimination System (NPDES) permit #ME0002321 for a five-year term.

*February 15, 1989* - A Superior Court Order was issued to resolve violations of water quality standards as well as terms, conditions and/or limitations stipulated in the SDW waste discharge license. The major elements of the Order required SDW to install and commence operation of cooling towers to reduce the heat load from Outfall #003 to the Presumpscot River, required SDW to conduct an in-stream water temperature monitoring program to determine the effects of the thermal discharge on the receiving waters and to conduct a sediment monitoring program to determine the contribution of the SDW effluent pollutant load to the Presumpscot River and estuary. All terms and conditions of the Order were completed to the satisfaction of the Department.

*September 28, 1992* - The EPA issued a renewal of NPDES permit #ME0002321 for a five-year term.

*October 26, 1992* - SDW appealed the Department's 9/24/92 Section 401 Water Quality Certification based on an objection to the river flow figure used in the calculation to establish an acute whole effluent toxicity limitation in the permit. No action was ever taken to resolve the appeal.

*October 27, 1992* - SDW filed a Request for an Evidentiary Hearing with the EPA appealing the issuance of NPDES permit #ME0002321. No action was ever taken to resolve the appeal.

*December 1995 through April 1998* - The Department and SDW convened numerous meetings and generated correspondence and work plans to identify and resolve outstanding issues surrounding the renewal of the WDL.

*May 16, 1996* – The Department issued WDL #W002224-51-A-N establishing a thermal mixing zone from a point 0.75 miles downstream of Outfall #003 and extending downstream to the head of tide at the Smelt Hill Dam.

*October 22, 1997* - SDW filed an application with the EPA to renew NPDES permit #ME0002321.

*July 7, 1998* – The Department issued WDL #W002224-44-B-R for a five-year term.

**2. PERMIT SUMMARY (cont'd)**

*November 30, 1998* – The EPA approved a Total Maximum Daily Load (TMDL) prepared by the Department for the Presumpscot River.

*February 19, 1999* – The U.S. EPA issued NPDES permit #ME0002321 for a five-year term.

*March 31, 1999* – The U.S. EPA issued NPDES permit #ME0002321, Administrative Order Docket No. 98-04 based upon facility monitoring data and the S.D. Warren statements that it would not be able to comply with effluent limitations for AOX, 2,3,7,8 TCDD, 2,3,7,8 TCDF, twelve phenolic compounds and chloroform in the NPDES permit #ME0002321 issued on 2/19/99.

*January 25, 2000* – The U.S. EPA issued a modification of NPDES Permit #ME0002321 reflecting the fact that on June 28, 1999, the S.D. Warren Company shutdown the kraft pulping operations, the #11 paper machine, the #19 power boiler and one off-machine coater.

*March 23, 2000* – The Department issued a letter to the S.D. Warren Company that administratively modified WDL W002224-44-B-R by removing the requirement to conduct continuous instream temperature monitoring during the summer months as specified in Special Condition F, *Thermal Mixing Zone* of the WDL.

*May 23, 2000* – The Department initiated a modification of the 7/7/98 WDL by establishing interim average and maximum limitations for mercury based on new statutes and a Department regulation entitled, Chapter 519, *Interim Effluent Limitations and Controls for the Discharge of Mercury*

*January 12, 2001* - The Department received authorization from the U.S. EPA to administer the NPDES permitting program in Maine.

*April 4, 2001* – The S.D. Warren Company submitted an application to the Department to modify WDL #W002224-44-B-R to reflect the terms and conditions of the NPDES permit modification issued by the U.S. EPA on 1/25/00.

*April 17, 2001* – The Department issued a letter to the S.D. Warren Company that administratively modified WDL W002224-44-B-R by removing Special Condition C, *Macro-Invertebrate Study and Re-Opener* from the WDL.

*January 16, 2002* – The Department of Marine Resources issued Order #L-20703-34-A-N approving the removal of the Smelt Hill Dam. The dam was removed in calendar year 2002.

*July 2, 2002* – The Department issued combination MEPDES permit #ME0002321/WDL #W002224-5N-C-M modification and renewal for a five-year term.

*January 22, 2004* - The Department issued an administrative modification of the 7/2/02 permit that corrected an error in the monitoring frequency for pH for Outfall #003.

**2. PERMIT SUMMARY (cont'd)**

*December 17, 2004* – The Department issued an administrative modification of the 7/2/02 permit by eliminating Special Condition M, *Turbidity*, from the permit.

*April 10, 2006* – The Department initiated a modification of the 7/2/07 MEPDES permit by revising the whole effluent toxicity (WET) testing and chemical specific testing requirements based on revised Department regulations entitled, Chapter 530, *Surface Water Toxics Control Program*, and Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*, both promulgated on October 12, 2005.

*May 24, 2006* – The Department authorized SDW to accept and treat up to 2,000 gpd of waste water from BioFine Renewables LLC located in Gorham, Maine.

*June 26, 2007* – The SDW Company submitted a timely and complete application to the Department for the renewal of MEPDES permit/WDL.

b. Terms and conditions - A summary of the terms and conditions of the permit are summarized as follows:

1. Reduces the monthly average flow limit of Outfall #001 from 15.0 MGD to 10.0 MGD. The reduction in flow increases the dilution factors associated with the discharge.

2. Eliminates the seasonal limitations for biochemical oxygen demand (BOD) and establishes more stringent technology based monthly average and daily maximum mass limit for BOD based on National Effluent Guidelines criteria for the pulp and paper industry. More stringent limitations are a result of a significant decrease in production from 600 tons/day of paper in the previous permitting action to 200 tons/day in this permitting action.

3. Establishes more stringent monthly average and daily maximum technology based mass limitations for total suspended solids (TSS) based on National Effluent Guidelines criteria for the pulp and paper industry based on the decrease in production cited in #2 above.

4. Carries forward the daily maximum temperature limitation of 100ºF for Outfall 001 and 110ºF for Outfall 003.

5. Reduces the weekly average and daily maximum thermal load limitations based on discharge data collected since issuance of the previous permitting action.

6. Carries forward monthly average water quality based mass and concentration limitations for arsenic. It is noted, the limitations are expressed as the inorganic fraction of total arsenic. Being that there is no EPA approved test method for inorganic arsenic at this time, this permit establishes a schedule of compliance for said limitations. In the interim, this permit establishes a reporting requirement for total arsenic for which there is an EPA approved method. See section 7(A)(8) of the Fact Sheet attached to this permit for a more in-depth discussion on arsenic.

## 2. PERMIT SUMMARY (cont'd)

7. Eliminates the monthly average and or daily maximum water quality based mass and concentration limits for aluminum, bis (2-ethylhexyl) phthalate and copper. Limitations were removed based on the Department's statistical evaluation of the most current 60 months of chemical specific data as required pursuant to Department rule chapter 530, *Surface Water Toxics Control Program*. It is noted mercury limits and monitoring requirements are being regulated by the Department outside of this permitting action pursuant to Department rule Chapter 519, *Interim Effluent Limits And Control For The Discharge of Mercury*.

8. Eliminates the acute and chronic water quality based limit for the water flea (*Ceriodaphnia dubia*).

9. Establishes a new testing regime for whole effluent toxicity (WET) testing, analytical chemistry testing and priority pollutant testing based on Department rule Chapter 530, *Surface Water Toxics Control Program*.

10. Carries forward the monthly average and daily maximum limits and reporting requirements for flow, TSS, total residual chlorine and pH for water treatment filter backwash discharge from Outfall #002.

11. Carries forward the monthly average and daily maximum limits for flow, temperature and pH for the non-contact cooling waters discharged from Outfall #003. The thermal load limitation for this outfall has been modified to be consistent with the thermal load limitation for Outfall #001 as described in item #5 above.

12. Carries forward the requirements in Special Condition K, *Flow Regulation From Sebago Lake*, of the previous licensing action. Requirements in this Special Condition (Special Condition G in this permit) may change in the future due to the on-going negotiations surrounding the re-licensing of dams on the Presumpscot River.

13. Carries forward the formal mixing zone established in Special Condition I, *Thermal Mixing Zone*, (Special Condition F in this permit) from the previous permitting action. It is noted, the mixing zone was originally established based on the Smelt Hill Dam being in place. The Department, with assistance from the EPA will be conducting additional ambient water quality monitoring during the term of this permit to determine if the mixing zone remains appropriate.

## 3. CONDITIONS OF PERMITS

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 STANDARDS

Maine law, 38 M.R.S.A., §467(9)(A)(3) states that at the point of discharge, the Presumpscot River is classified as a Class C waterway. Maine law, 38 M.R.S.A., §465(4) describes the classification standards for Class C waters.

## 5. RECEIVING WATER QUALITY CONDITIONS

a. Historical - The 7/7/98 licensing action contained the follow text*: The 1996 State of Maine Water Quality Assessment (305b) Report states that the lower 7.0 miles of the 7.9 mile segment of river between Sacarappa Dam and the Smelt Hill Dam does not attain the Class C bacteria and aquatic life standards. It also states that water quality modeling (at current licensed BOD loads) indicates that the lower 2.0 miles does not attain the dissolved oxygen standard of its assigned classification. The report states that the causes of non-attainment seem to be discharge(s) of combined sewer overflow (CSO's) and inadequately treated industrial waste water.*

*The Department's November 1995 Presumpscot River Waste Load Allocation Final Report includes a discussion written by a Department aquatic biologist on the results of an evaluation of aquatic life standards in the Presumpscot River. The report concludes that 1994 macro-invertebrate data collected by the Department indicates that the impoundment below the SDW mill does not attain Class C standards for the maintenance of structure and function of aquatic life. For a more detailed discussion on the interpretation of the 1994 data, see page 46 of the aforementioned report.*

*In addition to the 1994 data, the Department conducted additional in-stream macro-invertebrate data collection during August 1996. The Department recently completed its evaluation of the data and has concluded, once again, that the Presumpscot River below the mill is not attaining the aquatic life standards of its assigned classification. For a more detailed discussion regarding this matter, see the discussion beginning on page 21 of the March 1998, Presumpscot River Supplemental Report to Waste Load Allocation published by the Department.*

Special Condition C, *Macro-Invertebrate Study*, of the 7/7/98 licensing action required the SDW to conduct annual macro-invertebrate sampling to determine whether TSS reductions specified in the license were sufficient to improve in-stream water quality such that the structure and function of the resident biological community were restored and maintained. It is noted that the TSS reductions specified in the license were based on the fact that the pulp mill was still operational and the Smelt Hill Dam (6.5 miles downstream) was being operated as it historically had been. On June 28, 1999, the pulping operations at the SDW permanently shutdown. Beginning in the summer of 1997, the Smelt Hill Dam had been partially breached (gates opened) to provide for unimpeded fish passage between May 1 and July 1 of each year which had significantly changed the hydraulic characteristics and the assimilative capacity of the river (versus an impounded receiving waterbody) between the mill and the dam. In addition, SDW conducted macro-invertebrate sampling during summer of calendar year 2000 that confirmed the stretch of river between the mill and the dam was attainting the aquatic life standards for Class C waters. On August 17, 2001, the Department issued a letter to the SDW concurring that the macro-invertebrate sampling conducted during the summer of 2000 indicated the Presumpscot River was and is attaining the Class C aquatic life standards and that it was administratively modifying the license to remove Special Condition C from the license.

**5. RECEIVING WATER QUALITY CONDITIONS (cont'd)**

The 7/7/98 licensing action also contained the follow text*:*

*The Department's most recent modeling efforts [at 1983 licensed biochemical oxygen demand (BOD) levels] and recent in-stream dissolved oxygen (DO) monitoring data collected at the Smelt Hill dam approximately 6.2 miles downstream of the mill, indicate that DO standards assigned to Class C waters are not being attained under certain conditions. These conditions include low flow in the receiving waters combined with elevated receiving water temperatures, both usually occur during the summer period between June 1 and September 30. For more details on the Department's modeling efforts, refer to the November 1995 Presumpscot River Waste Load Allocation Final Report and the March 1998 Presumpscot River Supplemental Report to Waste Load Allocation published by the Department.*

*To address the periodic DO non-attainment incidents mentioned above, this licensing action establishes summertime BOD limitations that are 45% lower than the limitations in the previous licensing action. In addition, a flow regulation curve (entitled Figure 11 Final Temperature Based Flow Regulation Curve For Presumpscot River, page 18 of the March 1998 Presumpscot River Supplemental Report to Waste Load Allocation) has been developed that will ensure DO standards will be maintained at all times at the new licensed BOD load. In the simplest of terms, this scenario fixes the maximum BOD load discharged from the mill, then regulates the flow in the river as a function of the temperature of the river with the objective of maintaining DO standards downstream of the mill. See Attachment A of this license for the flow regulation curve.*

*However, during drought conditions when water levels in Sebago Lake are significantly below target levels or are dropping faster than the target level curve established in the approved lake level management plan, water releases from Sebago Lake must be restricted to protect existing recreational uses in and on the lake. Thus, a minimum flow cap under emergency lake level conditions has been established to be 250 cfs from the lake. In this scenario, the river flow is fixed at 250 cfs and the mill's BOD discharge will be limited as a function of the receiving water temperature. See Attachment B of this license for the BOD regulation curve which is entitled Figure 12 Allowable BOD5 Discharge For SDW During Emergency Low Sebago Lake Levels, Flow=250 cfs.*

*With a minimum flow of 250 cfs from the lake under emergency low lake level conditions and the additional flow contribution of 30 cfs from the drainage area between the lake and the mill, the resultant 1Q10 flow at the mill is 280 cfs. As a result, the Department has determined that the acute dilution factor is 8.6:1. The dilution factor was derived using a mill flow of 21 MGD and a 1Q10 flow of 280 cfs*

*For the purposes of implementation of a minimum flow cap on water releases from Sebago Lake, "emergency low lake level conditions" shall exist when the level of Sebago Lake is one (1) foot below its allowable target range between May 1 and November 1 and flow releases from Sebago Lake have been greater than 270 cfs for at least four (4) consecutive weeks. When either of the prerequisites for emergency low lake level ceases to exist, then the flow cap shall no longer be in*

## 5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

*effect and shall not go back into effect until both prerequisites for emergency low lake level again exist. The requirements for a minimum flow release cap under emergency low lake level conditions, as defined above, will take effect when approved by the Federal Energy Regulatory Commission (FERC). Sebago Lake levels are managed in accordance with the graph entitled, State of Maine Compromise Sebago Lake Plan, dated April 19, 1996, revised May 1, 2000. See Attachment C of this license.*

b. Current – The three attachments to the 7/7/98 licensing action and 7/2/02 permitting action are being carried forward in this permitting action. The attachments have been relabeled in this permitting action as follows:

Attachment C - *State of Maine Compromise Sebago Lake Plan*,

Attachment D - *Temperature Based Flow Regulation Curve For Presumpscot River*

Attachment E – *Allowable BOD5 Discharge For SDW During Emergency Low Sebago Lake Levels*

On July 6, 1999, the Department issued a letter to SDW stating that the requirement in Special Condition E of the 7/7/98 WDL to provide 30-day average flows from Sebago Lake based on 30-day average river temperatures was being suspended provided the gates at the dam remained open. With the removal of the dam in 2002, the 30-day average flow curve in Attachment D, *Final Temperature Based Flow Regulation Curve For Presumpscot River* is no longer necessary and the attachment has been revised accordingly. The Department continues to be negotiating with SDW and non-governmental organizations on the water levels in Sebago Lake which directly effects the regulated flow in the river. In addition, the Department needs to re-evaluate the dissolved oxygen assimilative capacity of the Presumpscot River given the removal of the Smelt Hill dam. Once these events are completed, the Department will re-evaluate Attachments C, D and E and make the necessary changes. This permit will then be re-opened per Special Condition G of this permit to incorporate the revisions.

## 6. RECEIVING WATER FLOWS

The source of the Presumpscot River is Maine's second largest lake, Sebago Lake. Lake levels and the flow in the Presumpscot River are controlled by a dam and associated hydro-electric generating facility called the Eel Weir Hydro Project. The Eel Weir Project is owned and operated by the SDW Company and is licensed by the Federal Energy Regulatory Commission (FERC) as Project No. 2984. On April 21, 1997, FERC approved the State's Sebago Lake water level management plan. See Attachment C of this permit. In summary, the plan manages flows released from Sebago Lake through the Eel Weir Dam based on a set of targeted lake levels. Under conditions when lake levels are within the established target ranges, SWD will pass minimum generating flows of 333 cfs from Sebago Lake. When lake levels are below the target levels during drought conditions, SDW will pass at least 250 cfs from the lake. As a result, the 7Q10 low flow from the lake has been determined to be 250 cfs.

## 6. RECEIVING WATER FLOWS (cont'd)

The SDW mill is approximately 13 miles downstream of the Eel Weir Dam. With a minimum flow of 250 cfs from the dam and the additional flow contribution of 30 cfs from the drainage area between the dam and the mill, the resultant 7Q10 flow at the mill is 280 cfs.

The 30Q10 low flow has been determined to be 330 cfs; 300 cfs from the lake plus 30 cfs from the contributing drainage area between the lake and the mill.

As for the harmonic mean river flow, the Department has calculated 511 cfs as being the long term average river flow at the mill based on a statistical analysis of historic USGS gauge flow data for the Presumpscot River.

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. For the purposes of this permit, the Department has determined that the acute and chronic dilution factors are 18:1 and the harmonic dilution factor is 33.0:1. The dilution factors were derived using a mill flow of 10.0 MGD for Outfall #001, a 7Q10 of 280 cfs and a harmonic mean flow of 511 cfs (at the mill). The dilution factors are calculated as follows:

$$\text{Dilution Factor} = \frac{\text{River Flow (cfs)(Conv. Factor)}}{\text{Plant Flow}}$$

$$\text{Acute: 1Q10} = 280 \text{ cfs} \Rightarrow \frac{(280 \text{ cfs})(0.6464)}{10.0 \text{ MGD}} = 18.1{:}1$$

$$\text{Chronic: 7Q10} = 280 \text{ cfs} \Rightarrow \frac{(280 \text{ cfs})(0.6464)}{10.0 \text{ MGD}} = 18.1{:}1$$

$$\text{Harmonic Mean:} = 511 \text{ cfs} \Rightarrow \frac{(511 \text{ cfs})(0.6464)}{10.0 \text{ MGD}} = 33.0{:}1$$

## 7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Effluent limitations and monitoring requirements in Special Condition A of this permitting action were derived as follows:

### A. OUTFALL #001 - Process Waste Waters

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,

## 7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

### A. OUTFALL #001 - Process Waste Waters

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.

1. Regulatory Basis: The discharge from SDW facility 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 new regulation for the SDW facility are limited to Subpart K, *Fine and Lightweight Papers From Purchased Pulp Subcategory*. The NEG's establish applicable limitations representing; 1) best practicable control technology currently available (BPT) for toxic and conventional pollutants for existing dischargers, 2) best conventional 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. The regulation also establishes limitations based on several methodologies including monthly average and or daily maximum mass limits based on production of paper produced or concentration limitations based on BPT, BCT or BAT.

2) Flow – The previous licensing action established a monthly average flow limitation of 15.0 MGD for Outfall 001 based on the SDW facility operating a paper mill only. A review of the monthly Discharge Monitoring Reports (DMRs) submitted to the Department for the period April 2005 to April 2007 indicates that at current production levels, the monthly average flow has ranged from 3.06 MGD to 6.81 MGD with a mean value of 5.58 MGD. As for the daily maximum flow, process water flows have ranged from 5.76 MGD to 14.5 MGD with a mean of 8.02 MGD. Based on the historic data, this permitting action is establishing a monthly average limit of 10.0 MGD which will be representative of discharge flows should the facility realize full production at 200 tons/day.

3) Production: In the application submitted to the Department for the renewal of this permit, SDW has indicated that off-machine coating, corrected for moisture and operating days, production levels have averaged 142 tons/day over the most recent three-year period. The company noted that if market conditions changed such that demand increases, production may be as high as 200 tons/day with the existing paper machine. Therefore, a production figure of 200 tons/per day is being utilized to calculate applicable technology based BOD and TSS limits in this permitting action.

## 7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

### A. OUTFALL #001 - Process Waste Waters

4) Biochemical Oxygen Demand ($BOD_5$) and Total Suspended Solids (TSS)– The previous licensing action established seasonal limitations for $BOD_5$ and year-round TSS as follows:

BOD

*June 1 through September 30* – Technology based monthly average and daily maximum limits of 3,565 lbs/day and 6,780 lbs/day respectively, were based on a past demonstrated performance evaluation for the three-year calendar period of 1994 - 1996.

*October 1 through May 31* **–** Technology based monthly average and daily maximum limits of 5,100 lbs/day and 9,840 lbs/day respectively, were based on a production figure of 600 tons/day and the applicable NEGs found in 40 CFR, Part 430, Subpart K.

TSS

Year-round technology based monthly average and daily maximum limits of 7,080 lbs/day and 13,200 lbs/day respectively, were based on a production figure of 600 tons/day and the applicable NEGs found in 40 CFR, Part 430, Subpart K.

A summary of the monthly average and daily maximum limits for BOD and TSS established in the previous permitting action are summarized as follows:

| | BOD Avg | BOD Max | TSS Avg | TSS Max |
|---|---|---|---|---|
| Summer | 3,565 lbs/day | 6,780 lbs/day | 7,080 lbs/day | 13,200 lbs/day |
| Winter | 5,100 lbs/day | 9,840 lbs/day | 7,080 lbs/day | 13,200 lbs/day |

A summary of the calculations for technology based limitations (based on the applicable NEGs at a production rate of 600 tons/day) is as follows:

| NEG BPT limits | BOD Avg | | BOD Max | | TSS Avg | | TSS Max | |
|---|---|---|---|---|---|---|---|---|
| | lbs/ton | lbs/day | lbs/ton | lbs/day | lbs/ton | lbs/day | lbs/ton | lbs/day |
| Subpart K 600 ADTPD | 8.5 | 5,100 | 16.4 | 9,840 | 11.8 | 7,080 | 22.0 | 13,200 |

## 7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

### A. OUTFALL #001 - Process Waste Waters

With a reduced production rate from 600 tons/day down to 200 tons/day, new technology based monthly average and daily maximum BOD and TSS limitations can be calculated as follows:

| NEG BPT limits | BOD Avg | | BOD Max | | TSS Avg | | TSS Max | |
|---|---|---|---|---|---|---|---|---|
| | lbs/ton | lbs/day | lbs/ton | lbs/day | lbs/ton | lbs/day | lbs/ton | lbs/day |
| Subpart K 200 ADTPD | 8.5 | **1,700** | 16.4 | **3,240** | 11.8 | **2,360** | 22.0 | **4,400** |

The limitations (bolded) calculated in the table above for both BOD and TSS are being established in this permitting action.

A review of the monthly Discharge Monitoring Report (DMR) data for BOD and TSS for the period April 2005 – April 2007 indicates actual discharge levels are as follows:

| | BOD Mass (lbs/day) | |
|---|---|---|
| | Month Avg. | Daily Max. |
| Range | 123 - 462 lbs/day | 267 – 1,951 lbs/day |
| Arithmetic mean | 236 lbs/day | 642 lbs/day |

| | TSS Mass (lbs/day) | |
|---|---|---|
| | Month Avg. | Daily Max. |
| Range | 140 – 637 lbs/day | 351 – 1,615 lbs/day |
| Arithmetic mean | 300 lbs/day | 907 lbs/day |

5) Temperature – The previous permitting action established a daily maximum limitation of 100°F based on information provided by the SDW in a letter to EPA dated August 30, 1999. This permitting action is carrying forward the daily maximum limit at 100°F as being representative of the current discharge temperature. A review of the monthly DMR data for temperature for the period April 2005 – April 2007 indicates the temperature limit has not been exceeded.

6) Thermal Load - Weekly average and daily maximum thermal load limitations in the 7/7/98 licensing action were derived based on a methodology established in a statute promulgated in June of 1995 and has since been repealed. As a point of clarification, the limits apply to the total thermal load associated with Outfall #001 plus Outfall #003. A thermal mixing zone was established in May of 1996 as the thermal load

## 7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

### A. OUTFALL #001 - Process Waste Waters

discharged from the mill exceeded (and still does) the assimilative capacity of the Presumpscot River a 7Q10 low flow conditions (280 cfs). The assimilative capacity of the river can be calculated as follows:

$$(280 \text{ cfs})(0.6464 \frac{\text{MGD}}{\text{cfs}}) = 181 \text{ MGD or } 181{,}000{,}000 \text{ gallons}$$

$$(181{,}000{,}000 \text{ gallons})(8.34 \frac{\text{lbs}}{\text{gal.}})(0.5\ ^{o}\text{F}) = 7.55 \times 10^{8} \text{ BTU/day}$$

On May 17, 1996, the Department's issued a WDL establishing the formal thermal mixing zone beginning at Outfall #003 (upstream of Outfall #001) and extending downstream approximately 6.5 miles to the Smelt Hill Dam. The thermal load limitations at that time were derived in accordance with the criterion established in an emergency legislative action of June 1995, Public Law 1995, Chapter 312, An Act to Establish Temperature Limits For Certain Existing Discharges.

The previous licensing action also contained Special Condition F, *Thermal Mixing Zone*, which in part required the SDW to conduct annual continuous in-stream temperature monitoring to assess the impact of the mill's thermal discharge on the receiving water and to accurately define the physical extent of the mixing zone established in the license.

During the summer of 1999, the SDW conducted the in-stream temperature monitoring as required by Special Condition F of the license. On March 23, 2000, the Department issued a letter to the SDW stating that it had reviewed the temperature information collected and made the determination that the mixing zone established in the license was necessary and its physical extent down to the Smelt Hill Dam appropriate.

Maine law, 38 M.R.S.A., §464(4)(I) (since repealed) required the Department to establish the thermal limits in permitting actions such that the quantity of heat discharged during a 7-day period may not exceed the maximum heat discharged in any 7-day period between January 1, 1989 and January 11, 1995 and that the amount of heat discharged on any single day may not exceed 1.15 times the maximum 7-day average. The 7-day maximum quantity of heat discharged must protect existing uses. Based on this criteria, the Department established the original weekly average thermal load limit of $4.881 \times 10^{9}$ BTU's/day and a daily maximum limitation of $5.613 \times 10^{9}$ BTU's/Day in the 7/7/98 WDL. In the 7/7/02 MEPDES permit modification/renewal, the Department reduced the weekly average thermal load limit to $3.517 \times 10^{9}$ BTU's/day (based on data from 7/6/98 – 7/12/98) and a daily maximum limitation of $4.04 \times 10^{9}$ BTU's/Day.

## 7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

### A. OUTFALL #001 - Process Waste Waters

In keeping with the methodology/criteria established in the repealed statute, SDW has provided the Department with updated thermal loadings for June 1 –September 30 beginning June 2002 through September 2006. The highest 7 day thermal load of 2.325 x $10^9$ BTU's/Day (8/20/05-8/26/05) was multiplied by a factor of 1.15 which yields a daily maximum thermal load of 2.674 x $10^9$ BTU's/Day which is being established in this permit. However, SDW has indicated in a letter dated October 19, 2007, that it is currently investigating the possibility of converting the No. 3 recovery boiler (currently mothballed) into a solid fuel boiler to burn a biomass product (carbon-neutral fuel). The conversion and restarting of the boiler would require maintaining the same thermal limits as the previous permit. The permittee has requested 12-18 months to investigate the potential reuse of the boiler. The Department is granting the permittee's request and as a result, has established two tiers of thermal load limits. Beginning June 1, 2008 and lasting through September 30, 2008, the permittee is limited to a weekly average thermal load of 3.517 BTUs/day and a daily maximum thermal load of 4.04 BTUs/day. Unless the permittee presents a firm proposal to the Department to restart the No.3 recovery boiler, beginning June 1, 2009, the weekly average thermal load limitation will be reduced to 2.325 BTUs/day and the daily maximum thermal load will be reduced to 2.674 BTUs/day.

It is noted the more stringent weekly average thermal load limit in this permit is approximately one half of the limit originally established in the 5/17/96 mixing zone order issued by the Department. As previously stated in Section 5(b) of this Fact Sheet, the Department continues to be negotiating with SDW and non-governmental organizations on the water levels in Sebago Lake which directly effects the regulated flow in the river and the extent of the mixing zone. Once negotiations are completed and a new flow regime established, the Department will
re-evaluate the physical extent of the mixing zone make the necessary changes or eliminate the mixing zone if appropriate. This permit will then be re-opened per Special Condition G of this permit to incorporate any modifications.

7. pH – The previous permitting action established a technology based pH range limitation of 5.0 -9.0 standard units based on the NEGs found at 40 CFR, Part 430, Subpart K. The limitation range is being carried forward in this permitting action. A review of the monthly DMR data for temperature for the period April 2005 – April 2007 indicates the pH limit has not been exceeded.

8. 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.

## 7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

### A. OUTFALL #001 - Process Waste 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.

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 $\geq$20:1 but <100:1.
3) Level III – chronic dilution factor $\geq$100:1 but <500:1 or >500:1 and Q $\geq$1.0 MGD
4) Level IV – chronic dilution >500:1 and Q $\leq$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 SDW facility falls into the Level I frequency category as the facility has a chronic dilution factor of <20:1. Chapter 530(1)(D)(1) specifies that default screening and surveillance level testing requirements are as follows:

Screening level testing – Beginning 12 months prior to permit expiration and lasting through permit expiration and every five years thereafter.

| Level | WET Testing | Priority pollutant testing | Analytical chemistry |
|---|---|---|---|
| I | 4 per year | 1 per year | 4 per year |

Surveillance level testing – Beginning upon issuance of the permit and lasting through 12 months prior to permit expiration.

| Level | WET Testing | Priority pollutant testing | Analytical chemistry |
|---|---|---|---|
| I | 2 per year | None required | 4 per year |

## 7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

### A. OUTFALL #001 - Process Waste Waters

A review of the data on file with the Department indicates that to date, SDW has fulfilled the WET and chemical-specific testing requirements of the former Chapter 530.5. See Attachment B of this Fact Sheet for a summary of the WET test results and Attachment C of this Fact Sheet for a summary of the chemical-specific test dates.

Department rule Chapter 530(D)(3)(c) states in part *"Dischargers in Level I may reduce surveillance testing to one WET or specific chemical series per 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*

*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."*

WET Evaluation

On June 27, 2007, the Department conducted a statistical evaluation on the most recent 60 months of WET tests results on file at the Department. The statistical evaluation indicates the discharge from the SDW waste water treatment facility does not have any test results that exceed or have a reasonable potential to exceed the critical acute and chronic water quality threshold of 5.5% (mathematical inverse of the acute and chronic dilution factor of 18.1:1).

As for testing frequencies, Chapter 530 §(2)(D)(3)(c) states in part that for Level I facilities "*…may reduce WET and chemical testing to once per year provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedences."* Based on the results of the 6/27/07 statistical evaluation, the permittee qualifies for the testing reduction for both the brook trout and the water flea. As a result, this permitting action is establishing surveillance level testing as follows:

## 7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

### A. OUTFALL #001 - Process Waste Waters

Beginning upon issuance of this permit and lasting through 12 months prior to permit expiration.

| Species | WET Testing |
|---|---|
| Water flea | 1/Year |
| Brook trout | 1/Year |

Surveillance level tests are to be conducted in a different calendar quarter of each year.

Chapter 530 §(2)(D) states:

*(4) All dischargers having waived or reduced testing must file statements with the Department on or before December 31 of each year describing the following.*

*(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 Condition I, *Chapter 530 §(2)(D)(4) Certification*, of this permitting action requires the permittee to file an annual certification with the Department.

Beginning 12 months prior to the expiration date of the permit and lasting through permit expiration and every five years thereafter, the permittee shall conduct screening level WET testing as follows:

| Level | WET Testing |
|---|---|
| I | 4/Year |

Analytical chemistry & priority pollutant testing evaluation

The previous permitting action established water quality based monthly average and or daily maximum mass and concentration limits for aluminum, arsenic, bis (2-ethylhexyl) phthalate and copper as all four parameters either exceeded or had a reasonable potential to exceed applicable AWQC. As with WET test results, on 6/27/07, the Department conducted a statistical evaluation on the most recent 60 months of analytical chemistry and priority pollutant test results on file with the Department in accordance with the statistical approach outlined in Chapter 530. The statistical evaluation indicates the discharge has a test result for total arsenic of 13 ug/L on 12/5/06 that possibly exceeds the organisms only human health AWQC for inorganic arsenic. For all other parameters evaluated, none exceeded or have a reasonable potential to exceed the acute, chronic or human health AWQC.

## 7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

### A. OUTFALL #001 - Process Waste Waters

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."*

Chapter 530 §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 Presumpscot River. Therefore, a default background concentration of 10% of the applicable water quality criteria is being used in the calculations of this permitting action.

One aspect of the new Chapter 530 rule found in Section 4(F) is evaluating toxic pollutant impacts on a watershed basis. Section 4(F) states, "*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 Department is currently working to construct a computer program to conduct this analysis. Until such time the program is complete and a multi-discharger statistical evaluation can be conducted, the Department is evaluating the impact of the SDW discharge assuming it is the only discharger to the river. Should the multi-discharger evaluation indicate there are parameters that exceed or have a reasonable potential to exceed applicable AWQC, this permit will be reopened pursuant to Special Condition L, *Reopening of Permit For Modifications*, to incorporate additional limitations and or revise monitoring requirements.

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*". Therefore, the Department is reserving 15% of the applicable water quality criteria in the calculations of this permitting action.

## 7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

### A. OUTFALL #001 - Process Waste Waters

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 §(3)(D) states *"Expression of effluent limits. Where the need for effluent limits has been determined, limits derived from acute water quality criteria must be expressed as daily maximum values. Limits derived from chronic or human health criteria must be expressed as monthly average values."* Therefore, this permitting action establishes monthly average (chronic) end-of-pipe (EOP) mass and concentrations limits for inorganic arsenic. The derivation for these limits is as follows:

**Arsenic (Inorganic)**

HH AWQC (water & organisms only) = 0.012 ug/L
Harmonic mean dilution factor = 33.0:1

EOP concentration = [Dilution factor x 0.75 x AWQC] + [0.25 x AWQC]
EOP = [33.0 x 0.75 x 0.012 ug/L] + [0.25 x 0.012 ug/L] = 0.30 ug/L

Based on a permitted flow of 10 MGD, EOP mass limits are as follows:

| Parameter | Calculated EOP Concentrations | Month Avg. Mass Limit |
|---|---|---|
| Inorganic Arsenic | 0.30 ug/L | 0.025 lbs/day |

Ex. Calculation: Inorganic Arsenic - $\frac{(0.30\ ug/L)(8.34)(10\ MGD)}{1000\ ug/mg}$ = 0.025 lbs/day

Department rule Chapter 530 (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

## 7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

### A. OUTFALL #001 - Process Waste Waters

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.

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 bedrock wells 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 0.30 ug/L for inorganic arsenic calculated on page 20 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 0.6 ug/L. The calculation is as follows:

$$\frac{\text{0.30 ug/L inorganic arsenic}}{\text{0.5 ug/L inorganic arsenic/ 1.0 ug/L total arsenic}} = \text{0.60 ug/L total arsenic}$$

Therefore, a total arsenic value greater than 0.6 ug/L is potentially exceeding the water quality based end-of pipe monthly average concentration value of 0.30 ug/L for inorganic arsenic. However, the Department's most current reporting limit (RL) for total arsenic is 5 ug/L and 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 results greater than the total arsenic threshold of 0.60 ug/L or the Department's RL at the time of sampling (whichever is higher) will be considered a potential exceedence of the inorganic limit of 0.30 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.

## 7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

### A. OUTFALL #001 - Process Waste Waters

In the first quarter of 2007, the permittee conducted a TRE for arsenic and determined that landfill leachate it was receiving from an out-of-state commercial landfill contained elevated levels of arsenic. The permittee surmised the arsenic was passing through its waste water treatment facility, thus exceeding applicable AWQC. The permittee ceased accepting the leachate in early 2007 and arsenic levels have dropped below the Department's RL of 5 ug/L. As a result of the TRE work already conducted by the permittee that successfully identified and corrected the situation, this permitting action is not requiring the submission of 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 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 J, *Schedule of Compliance,* of this permit modification 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.

## 7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

### A. OUTFALL #001 - Process Waste Waters

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.*

*(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.*

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 §(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.*"

It is noted the calculations for establishing limitations for inorganic arsenic on page 21 do not increase the EOP concentration for inorganic arsenic by a factor of 1.5 due to uncertainty of the ratio between organic and inorganic fractions of total arsenic. However, the Department has given the permittee some flexibility by evaluating possible exceeedences using the rebuttable presumption that the effluent contains a ratio of 50% inorganic arsenic and 50% organic arsenic in total arsenic results. In other words, the equivalent total arsenic concentration threshold has been increased by a factor of 2.0. Refer to the discussion and calculations on pages 20 and 21 of this Fact Sheet.

## 7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

### A. OUTFALL #001 - Process Waste Waters

Chapter 530 does not establish specific monitoring frequencies for parameters that exceed or have a reasonable to exceed AWQC. This permitting action is establishing the monitoring frequencies for arsenic based on a best professional judgment given the timing, frequency and severity of the exceedence or reasonable to exceed AWQC. To be consistent with the default monitoring requirements in Chapter 530, the Department is establishing a monitoring frequency of 1/Quarter for total arsenic.

As for the remaining parameters, monitoring frequencies for priority pollutant and analytical testing established in this permitting action are based on the Chapter 530 rule. Chapter 530(2)(D)(3)(d) states in part that for Level I facilities "… *may reduce surveillance testing to one WET or specific chemical series per year provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedence as calculated pursuant to section 3(E)"*. Based on the results of the 6/27/07 statistical evaluation, the permittee qualifies for the testing reduction. Therefore, this permit action establishes surveillance level priority pollutant and analytical testing (with the exception of arsenic) requirements as follows:

Beginning upon permit issuance and lasting through 12 months prior to permit expiration.

| Level | Priority pollutant testing | Analytical chemistry |
|---|---|---|
| I | Not required | 1 per year |

Department rule Chapter 530 (2)(D)(1) specifies that screening level testing is to be establishes for analytical chemistry and priority pollutant testing requirements as follows:

Beginning 12 months prior to and lasting through permit expiration and every five years thereafter.

| Level | Priority pollutant testing | Analytical chemistry |
|---|---|---|
| I | 1 per year | 4 per year |

As with WET testing, Chapter 530 (2)(D) requires an annual certification to qualify for reduced testing. Special Condition M, *Chapter 530 (2)(D)(4) Certification*, of this permitting action requires the permittee to file an annual certification with the Department.

9. *E. coli* bacteria – This permitting action is establishing new monthly average and daily maximum water quality based limitations with a 1/Week monitoring requirement for *E. coli* bacteria based n Class C water quality criteria. The Department is imposing the limitations as test result of landfill leachate that the SDW facility accepts from a commercial landfill indicates the presence of the bacteria. MEPDES permits for the Towns of Westbrook and Falmouth have bacteria limitations imposed on a year-round basis to protect an open shellfish

## 7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

### A. OUTFALL #001 - Process Waste Waters

harvesting area in the Mackworth Cove area. If after one year of monitoring the SDW demonstrates the discharge does not exceed or have a reasonable potential to exceed the AWQC for *E. coli.* bacteria, the Department will entertain a modification request by the permittee to remove the limitations and monitoring requirements.

10. 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 on May 23, 2000, thereby administratively modifying WDL # W002224-5N-B-R by establishing interim monthly average and daily maximum effluent concentration limits of 4.5 parts per trillion (ppt) and 6.8 ppt, 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 remain in effect. It is noted that the mercury effluent limitations have not been incorporated into Special Condition A, *Effluent Limitations And Monitoring Requirements*, of this permit as the limits and monitoring frequencies are regulated separately through Maine law, 38 M.R.S.A. §413 and Department rule Chapter 519. The interim mercury limits remain in effect and enforceable and modifications to the limits and/or monitoring frequencies will be formalized outside of this permitting document pursuant to Maine law, 38 M.R.S.A. §413 and Department rule Chapter 519.

### B. OUTFALL #002 (Filter Backwash)

1) Flow - The previous permitting action established a reporting requirement only for flow that is being carried forward in this permitting action. A review of the DMR data for the period April 2005 – April 2007 indicates the mean daily maximum flow is approximately 2.5 MGD. The Department considers this flow as being representative of the long-term discharge from this outfall and is therefore establishing it as a monthly average flow limitation in this permitting action.

2) Total Suspended Solids – The previous licensing action established monthly average and daily maximum concentration limits of 20 mg/L and 60 mg/L respectively, that are being carried forward in this permitting action and are considered a Department best practicable treatment determination for such a discharge. A review of the DMR data for the period April 2005 – April 2007 indicates both the monthly average and daily maximum concentrations have ranged from 0.1 mg/L to 16 mg/L with an arithmetic mean of 5.0 mg/L.

## 7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

### B. OUTFALL #002 (Filter Backwash)

3) Total Residual Chlorine (TRC) – The previous permitting action established a water quality based daily maximum concentration limit of 1.33 mg/L as a result of statistical evaluation of the TRC data reported in the 10/97 NPDES permit application indicated that the discharge had a reasonable potential to exceed acute and chronic AWQC. However, because the discharge is an intermittent discharge, it was evaluated and limited based on acute conditions. A daily maximum limitation of 1.33 mg/L was established based on a dilution factor of 70:1 and the acute AWQC for chlorine of 19 ug/L. The dilution factor was derived using a discharge flow of 2.5 MGD and a receiving water flow of 176 MGD. (1Q10 = 300 cfs or 194 MGD minus the process water withdrawal of 18.0 MGD equals 176 MGD).

   The daily maximum limit is being carried forward in this permitting action as a review of the DMR data for the period April 2005 – April 2007 indicates the daily maximum concentration has ranged from 0.13 mg/L to 0.78 mg/L with an arithmetic mean of 0.38 mg/L.

4) pH - The pH range of 5.0 - 9.0 standard units (SU) in the previous licensing action is being carried forward in this permitting action and remains representative of the discharge. A review of the DMR data for the period April 2005 – April 2007 indicates the limitation range has not been exceeded.

### C. OUTFALL #003 (Non-contact Cooling Water)

1) Flow - The previous permitting action established a daily maximum flow limitation of 12.0 MGD and a reporting requirement for the monthly average flow. A review of the DMR data for the period April 2005 – April 2007 indicates the daily maximum flow has ranged from 3.97 MGD – 11.07 MGD with an arithmetic mean of 8.12 MGD. As for the monthly average, the flow has ranged from 2.02 MGD – 9.18 MGD with an arithmetic mean of 5.07 MGD. The daily maximum flow limitation and the monthly average reporting requirement are being carried forward in this permitting action as they remain representative of the discharge.

2) Temperature – The previous permitting action established a daily maximum temperature limit of 110°F. A review of the DMR data for the period April 2005 – April 2007 indicates the temperature has ranged from 91.4 °F – 104.4 °F with an arithmetic mean of 95.8 °F. The limitation is being carried forward in this permit and is considered representative of the discharge.

3) Thermal load – See the discussion in Section 7(A)(6) of this Fact Sheet.

4) pH - The pH range of 5.0 - 9.0 standard units (SU) in the previous licensing action is being carried forward in this licensing action and remains representative of the discharge. A review of the DMR data for the period April 2005 – April 2007 indicates the limitation range has not been exceeded.

## 8. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As permitted, the Department has determined the existing water uses will be maintained and protected and the discharge will not cause or contribute to the failure of the Presumpscot River to meet standards of its assigned Class C classification.

## 9. PUBLIC COMMENTS

Public notice of this application was made in the Portland Press Herald newspaper on or about June 20, 2007. 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.

## 10. DEPARTMENT CONTACTS

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

Gregg Wood
Department of Environmental Protection
Bureau of Land & Water Quality
Division of Water Quality Management
State House Station #17
Augusta, ME. 04333
E-mail: gregg.wood@maine.gov

## 11. RESPONSE TO COMMENTS

During the period of September 19, 2007 through October 19, 2007, the Department solicited comments on the proposed draft Maine Pollutant Discharge Elimination System Permit to be issued to SDW for the proposed discharge. The Department received written comments on the proposed draft permit from SDW in a letter dated October 19, 2007. There was only one comment that resulted in a substantive revision to the draft permit. The comment and the Department response are as follows:

*Comment* – SDW requested the Department carry forward the thermal load limits from the previous permitting action for a period of 12-18 months. The 12-18 month period would provide the company with the opportunity to investigate the possibility of converting the No. 3 recovery boiler (currently mothballed) into a solid fuel boiler to burn a biomass product. If the investigation found restarting the boiler was not technically or economically feasible, the more stringent thermal loads limitations established in the 9/19/07 propose draft would automatically become effective.

**11. RESPONSE TO COMMENTS (cont'd)**

*Response:* The Department finds the request by the permittee to be reasonable and has therefore established two tiers of thermal load limitations in the final permit. Beginning June 1, 2008 and lasting through September 30, 2008, the permittee is limited to a weekly average thermal load of 3.517 BTUs/day and a daily maximum thermal load of 4.04 BTUs/day. Unless the permittee presents a firm proposal to the Department to restart the No.3 recovery boiler, beginning June 1, 2009, the weekly average thermal load limitation will be reduced to 2.325 BTUs/day and the daily maximum thermal load will be reduced to 2.674 BTUs/day.