December 20, 2007

Mr. David Bolstridge
City of Rockland
Pollution Control Facility
40 Tillson Avenue
Rockland, Maine 04841

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0100595
Maine Waste Discharge License (WDL) Application #W000681-5M-G-R
Final MEPDES Permit Renewal

Dear Mr. Bolstridge:

Enclosed, please find a copy of your **final** MEPDES permit and Maine WDL, which was approved by the Department of Environmental Protection. Please read the permit/license 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 287-7659.

Sincerely,

Bill Hinkel
Division of Water Quality Management
Bureau of Land and Water Quality

Enc.

cc: Jim Crowley, DEP
Lori Mitchell, DEP
Sandy Lao, USEPA
File #681

IN THE MATTER OF

CITY OF ROCKLAND	)	MAINE POLLUTANT DISCHARGE
ROCKLAND, KNOX COUNTY, MAINE	)	ELIMINATION SYSTEM PERMIT
PUBLICLY OWNED TREATMENT WORKS	)	AND
#ME0100595	)	WASTE DISCHARGE LICENSE
#W000681-5M-G-R **APPROVAL**	)	**RENEWAL**

Pursuant to the provisions of the *Federal Water Pollution Control Act*, Title 33 USC, §1251, *Conditions of licenses*, 38 M.R.S.A. § 414-A, and applicable regulations, the Department of Environmental Protection (Department) has considered the application of the CITY OF ROCKLAND (City), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

The City has applied to the Department for renewal of Waste Discharge License (WDL) #W000681-5M-E-R / Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0100595, which was issued on June 13, 2001, and expired on June 13, 2006. The 6/13/01 MEPDES permit authorized the City to discharge a monthly average flow of up to 3.3 million gallons per day (MGD) of secondary treated municipal wastewater and an unspecified quantity of primary treated municipal wastewater from a publicly owned treatment works (POTW) to the Atlantic Ocean at Rockland Harbor, Class SC, in Rockland, Maine. The 6/13/01 permit and the June 9, 2003 administrative modification (see below) authorized the discharge of an unspecified quantity of excess combined sanitary and storm water wastewater from four (4) combined sewer overflow (CSO) points to the Atlantic Ocean to Rockland Harbor and Lermond Cove, Class SC, in Rockland, Maine.

It is noted that the previous permit erroneously listed Outfalls #001A and #001B (now referred to as Outfall #001C) as CSO points. Outfall #001A is the secondary treated wastewater outfall. Outfall #001C is not a physical outfall pipe and does not convey untreated CSO flows. Rather, it is an administrative outfall designator used to track primary treated wastewater flows from the swirl separators and high-rate disinfection system. Primary treated flows from Outfall identifier #001C may be discharged through Outfall #001A or #002A depending on hydraulic conditions.

On June 9, 2003, the Department administratively modified the 6/13/01 permit to incorporate CSO discharge point #008 (South End Sandy Beach) into Special Condition N of the permit.

On January 20, 2004, the Department administratively modified the 6/13/01 permit to modify Special Condition D, *Treatment Plant Operator*, to require the facility to be operated by a person holding a Grade V wastewater treatment plant certificate.

On April 10, 2006, the Department amended the 6/13/01 permit by incorporating the whole effluent toxicity (WET), analytical chemistry and priority pollutant testing requirements of *Surface Water Toxics Control Program*, 06-096 CMR 530 (effective October 9, 2005).

PERMIT SUMMARY

This permitting action is similar to the 6/13/01 permitting action, two administrative modifications and one permit amendment in that it is:

Secondary Treated Wastewater (Outfall #001A)

1. Carrying forward the daily maximum discharge flow reporting requirement;

2. Carrying forward the monthly average, weekly average and daily maximum concentration limits for total suspended solids (TSS);

3. Carrying forward the monthly average and weekly average technology-based mass limits for TSS;

4. Carrying forward the daily maximum mass reporting requirements for biochemical oxygen demand (BOD_5) and TSS;

5. Carrying forward the requirement for a minimum of 85% removal of TSS;

6. Carrying forward the daily maximum technology-based concentration limit for settleable solids;

7. Carrying forward the seasonal monthly average and daily maximum concentration limits for fecal coliform bacteria;

8. Carrying forward the technology-based monthly average and water quality-based daily maximum concentration limits for total residual chlorine (TRC);

9. Carrying forward the pH range limit of 6.0 to 9.0 standard units (SU);

10. Carrying forward authorization to accept and introduce into the treatment works a daily maximum of up to 2,000 gallons per day of septage wastes from local haulers;

11. Carrying forward whole effluent toxicity (WET), priority pollutant and analytical chemistry testing requirements pursuant to 06-096 CMR 530;

12. Carrying forward the minimum monitoring frequency requirements for all monitored parameters, except TSS percent removal, TRC, and bacteria;

PERMIT SUMMARY (cont'd)

CSO-Related Bypasses of Secondary Treatment (Outfall #001C)- For the purposes of this permitting action, this term refers to structures and or processes at the waster water treatment facility that provide equivalent to primary treatment and disinfection of waste waters that bypass the biological treatment portion of the facility in an effort to mitigate the discharge of untreated combined sanitary waste waters and storm water from the two CSOs listed in Special Condition N of this permit.

13. Carrying forward the daily maximum reporting requirements for discharge flow, BOD_5, and TSS;

14. Carrying forward the daily maximum concentration limits for fecal coliform bacteria and TRC;

15. Carrying forward the monthly average reporting requirements for discharge flow, BOD_5 percent removal and TSS percent removal, and overflow occurrences; and

Combined Sewer Overflows

16. Carrying forward authorization to discharge excess combined sanitary and storm water wastewater via Outfalls #003 and #009.

This permitting action is different from the 6/13/01 permitting action, two administrative modifications and one permit amendment in that it is

Secondary Treated Wastewater (Outfall #001A)

1. Eliminating the monthly average discharge flow limit of 3.3 MGD and establishing a report only requirement;

2. Revising the monthly average, weekly average, and daily maximum concentration limits for BOD_5;

3. Revising the monthly average and weekly average mass limitations for BOD_5;

4. Establishing a requirement for a minimum of 85% removal of BOD_5;

5. Establishing numeric limitations for both the mysid shrimp and sea urchin based on results of facility testing;

6. Establishing Special Condition H, *06-096 CMR 530(2)(D)(4) Statement for Reduced/Waived Toxics Testing*;

7. Revising the daily maximum water quality-based concentration and mass limits for total copper based on the results of facility testing;

8. Revising the daily maximum water quality-based concentration and mass limits and establishing monthly average concentration and mass limits for total cyanide based on facility testing;

PERMIT SUMMARY (cont'd)

9. Establishing monthly average water quality-based concentration and mass limitations for inorganic arsenic and Special Condition J, *Schedule of Compliance – Inorganic Arsenic*, for imposition of the limits;

10. Eliminating the numeric monthly average concentration and mass limits for total arsenic;

11. Establishing a daily maximum concentration reporting requirement for total arsenic;

12. Establishing a Special Condition I, *Toxicity Reduction Evaluation,* for exceedences of the ambient water quality criteria for inorganic arsenic and free cyanide;

13. Revising the minimum monitoring frequency requirements for fecal coliform bacteria and TRC;

CSO-Related Bypasses of Secondary Treatment (Outfall #001C) - For the purposes of this permitting action, this term refers to structures and or processes at the waster water treatment facility that provide equivalent to primary treatment and disinfection of waste waters that bypass the biological treatment portion of the facility in an effort to mitigate the discharge of untreated combined sanitary waste waters and storm water from the two CSOs listed in Special Condition N of this permit.

14. Establishing a number primary treated waste water bypass threshold of 5.7 MGD to take effect on April 1, 2008;

15. Revising the administrative outfall identifier from "Outfall #001B" to "Outfall #001C" to maintain continuity of data in the Permit Compliance Tracking System (PCS) database for this outfall pipe;

16. Eliminating the daily maximum reporting requirements for settleable solids, BOD_5 percent removal, TSS percent removal, and the daily maximum pH range limitation;

CSO-Related Bypasses of Secondary Treatment (Outfall #002A)

17. Establishing daily maximum reporting requirements for discharge flow, BOD_5, and TSS;

18. Establishing daily maximum concentration limits for fecal coliform bacteria of 200 colonies/100 ml and 1.0 mg/L for TRC;

19. Establishing monthly average reporting requirements for discharge flow, BOD_5 percent removal, TSS percent removal, and surface loading rate;

Combined Sewer Overflows

20. Removing CSO Outfall #002A from the CSO Program, as this waste stream is considered an (non-permitted) emergency bypass point or receives a primary level of treatment and is regulated as a primary treated wastewater discharge in this permitting action;

21. Eliminating authorization to discharge excess combined sanitary and storm water wastewater via Outfall #008 (Crescent Street) as this CSO point has been eliminated

Facility-Wide Requirements

22. Establishing a requirement for the facility to submit, for Department review and comment, a revised facility-wide Operations and Maintenance Manual; and

23. Establishing a requirement for the facility to submit, for Department review and comment, a revised facility-wide Wet Weather Management Plan.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated December 20, 2007, and subject to the Conditions listed below, the Department makes the following CONCLUSIONS:

Secondary Treatment and CSO Related Bypasses of Secondary Treatment:

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, *Classification of Maine waters*, 38 M.R.S.A. § 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 water 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 discharges (including the three CSO points) will be subject to effluent limitations that require application of best practicable treatment as defined in 38 M.R.S.A. § 414-A(1)(D).

ACTION

THEREFORE, the Department APPROVES the above noted application of the CITY OF ROCKLAND to discharge an unspecified quantity[1] of secondary treated municipal wastewater, and an unspecified quantity of primary treated wastewater to the Atlantic Ocean at Rockland Harbor, Class SC, in Rockland, Maine, and an unspecified quantity of untreated excess combined sanitary and storm water from two (2) combined sewer overflow (CSO) points during wet weather events to the Atlantic Ocean at Rockland Harbor, Class SC, in Rockland, 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. The expiration date of this permit is five (5) years from the date of signature below.

DONE AND DATED AT AUGUSTA, MAINE, THIS 21st DAY OF DECEMBER, 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: March 29, 2006
Date of application acceptance: March 30, 2006

Date filed with Board of Environmental Protection: _____.

This Order prepared by William F. Hinkel, BUREAU OF LAND & WATER QUALITY
#ME0100595 / #W000681-5M-G-R December 20, 2007

---

1 For administrative purposes and calculation of effluent limitations, an average flow of 3.3 MGD shall be utilized, which is consistent with the average design criterion for this facility.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge **secondary treated sanitary wastewater from Outfall #001A** to the Atlantic Ocean at Rockland Harbor. Such discharges shall be limited and monitored by the permittee as specified below[(1)]:

Effluent Characteristic	Discharge Limitations			Minimum Monitoring Requirements				
	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow *[50050]*	Report MGD *[03]*	---	Report MGD *[03]*	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
BOD_5 *[00310]*	826 lbs./day *[26]*	1,238 lbs./day *[26]*	Report lbs./day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	3/Week *[03/07]*	24-Hour Composite *[24]*
BOD_5 Percent Removal[(2)] *[81010]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
TSS *[00530]*	826 lbs./day *[26]*	1,238 lbs./day *[26]*	Report lbs./day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	3/Week *[03/07]*	24-Hour Composite *[24]*
TSS Percent Removal[(2)] *[81011]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
Settleable Solids *[00545]*	---	---	---	---	---	0.3 ml/L *[25]*	1/Day *[01/01]*	Grab *[GR]*
Fecal Coliform Bacteria[(3)] *[31616]*	---	---	---	15/100 ml[(4)] *[13]*	---	50/100 ml *[13]*	5/Week *[05/07]*	Grab *[GR]*
Total Residual Chlorine[(5)] *[50060]*	---	---	---	0.1 mg/L *[19]*	---	0.085 mg/L *[19]*	2/Day *[02/01]*	Grab *[GR]*
pH *[00400]*	---	---	---	---	---	6.0 – 9.0 SU *[12]*	1/Day *[01/01]*	Grab *[GR]*

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.

FOOTNOTES: See Pages 12 through 17 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

2. ***SURVEILLANCE LEVEL*** - Beginning upon issuance and lasting until 12 months prior to permit expiration **(1)**.

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity(6) **Acute – NOEL** *Mysidopsis bahia* (Mysid Shrimp) *[TDA3E]*	---	---	---	15.38 % *[23]*	1/Year *[01/YR]*	Composite *[24]*
Chronic – NOEL *Arbacia punctulata* (Sea Urchin) *[TBH3A]*	---	---	---	1.37% *[23]*	1/2 Years *[01/2Y]*	Composite *[24]*
Analytical Chemistry (7) *[51168]*	---	---	---	Report µg/L *[28]*	1/2 Years *[01/2Y]*	Composite/Grab *[24]*
Arsenic (Total) **(9)** *[01002]* *(Upon permit issuance)*	---	---	---	Report µg/L *[28]*	1/Quarter *[01/90]*	Composite *[24]*
Arsenic (Inorganic) **(10)** *[01252]* *(Upon test method approval)*	0.13 lbs./Day *[26]*	---	4.6 µg/L *[28]*	---	1/Quarter *[01/90]*	Composite *[24]*
Copper (Total) *[01042]*	---	0.81 lbs./Day *[26]*	---	44.4 µg/L *[28]*	1/Quarter *[01/90]*	Composite *[24]*
Cyanide (Free) *[00720]*	---	0.13 lbs./Day *[26]*	---	7.7 µg/L *[28]*	1/Quarter *[01/90]*	Grab *[GR]*

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.

FOOTNOTES: See Pages 12 through 17 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

3. ***SCREENING LEVEL*** **-** Beginning 12 months prior to permit expiration and lasting through permit expiration and every five years thereafter[(1)].

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity[(6)] **Acute – NOEL** *Mysidopsis bahia* (Mysid Shrimp) *[TDA3E]*	---	---	---	15.38% *[23]*	2/Year *[02/YR]*	Composite *[24]*
Chronic – NOEL *Arbacia punctulata* (Sea Urchin) *[TBH3A]*	---	---	---	1.37% *[23]*	2/Year *[02/YR]*	Composite *[24]*
Analytical Chemistry [(7)] *[51168]*	---	---	---	Report µg/L *[28]*	1/Quarter *[01/90]*	Composite/Grab *[24]*
Priority Pollutants [(8)] *[51168]*	---	---	---	Report µg/L *[28]*	1/Year *[01/YR]*	Composite/Grab *[24]*
Arsenic (Total) **(9)** *[01252]* *(Upon permit issuance)*	---	---	---	Report µg/L *[28]*	1/Quarter *[01/90]*	Composite *[24]*
Arsenic (Inorganic) **(10)** *[01002]* *(Upon test method approval)*	0.13 lbs./Day *[26]*	---	4.6 µg/L *[28]*	---	1/Quarter *[01/90]*	Composite *[24]*
Copper (Total) *[01042]*	---	0.81 lbs./Day *[26]*	---	44.4 µg/L *[28]*	1/Quarter *[01/90]*	Composite *[24]*
Cyanide (Free) *[00720]*	---	0.13 lbs./Day *[26]*	---	7.7 µg/L *[28]*	1/Quarter *[01/90]*	Grab *[GR]*

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.

FOOTNOTES: See Pages 12 through 17 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

4. The permittee is authorized to discharge **primary treated waste waters** from **OUTFALL #001C (SWIRL SEPARATOR)** to Rockland Harbor (**via Outfall #001A)** **(1)**. **Beginning April 1, 2008 and lasting through permit expiration**, such discharges may only occur in response to wet weather events when the flow rate through secondary treatment exceeds an instantaneous flow rate of 3,958 gpm (5.7 MGD) **(11)** or in accordance with the most current approved High Flow Management Plan and shall be limited and monitored as specified below. Approval of said bypass will be reviewed and may be modified or terminated pursuant to Special Condition Q, *Reopening of Permit For Modification*, if there is a substantial change in the volume or character of pollutants in the collection/treatment system, if new information regarding CSO management becomes available or if necessary for implementation of an approved CSO Master Plan. Also see supplemental report form, *DEP-49-CSO Form For Use With Dedicated CSO Primary Clarifier*, Attachment A of this permit.

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average as specified	Daily Maximum as specified	Monthly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow ***[50050]***	Report Total MGD *[03]*	---	---	Report MGD *[03]*	Continuous *[99/99]*	Recorder *[RC]*
Surface Loading Rate(12) ***[50997]***	---	Report, GPD/SF *[07]*	---	---	1/Discharge Day(13) *[01/DD]*	Calculate *[CA]*
Overflow Use, Occurrences(14) ***[74062]***	---	---	Report, # of Days *[93]*	---	1/Discharge Day(13) *[01/DD]*	Record Total *[RT]*
BOD_5 ***[00310]***	---	---	---	Report mg/L *[19]*	1/Discharge Day(13) *[01/DD]*	24-Hour Composite *[24]*
BOD_5 Percent Removal(15) ***[81010]***	---	---	Report % *[23]*	---	1/Discharge Day(13) *[01/DD]*	Calculate *[CA]*
TSS ***[00530]***	---	---	---	Report mg/L *[19]*	1/Discharge Day(13) *[01/DD]*	24-Hour Composite *[24]*
TSS Percent Removal(15) ***[81011]***	---	---	Report % *[23]*	---	1/Discharge Day(13) *[01/DD]*	Calculate *[CA]*
Fecal Coliform Bacteria(3), (16) ***[31616]***	---	---	---	200/100 ml *[13]*	1/Discharge Day(13) *[01/DD]*	Grab *[GR]*
Total Residual Chlorine(16) ***[50060]***	---	---	---	1.0 mg/L *[19]*	1/Discharge Day(13) *[01/DD]*	Grab *[GR]*

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.

FOOTNOTES: See Pages 12 through 17 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

5. The permittee is authorized to discharge **primary treated waste waters** from **OUTFALL #002A (SWIRL SEPARATOR)** to Rockland Harbor at Lermond Cove **(1)**. **Beginning April 1, 2008 and lasting through permit expiration**, such discharges may only occur in response to wet weather events when the flow rate through secondary treatment exceeds an instantaneous flow rate of 3,958 gpm (5.7 MGD) **(11)** or in accordance with the most current approved High Flow Management Plan and shall be limited and monitored as specified below. Approval of said bypass will be reviewed and may be modified or terminated pursuant to Special Condition Q, *Reopening of Permit For Modification*, if there is a substantial change in the volume or character of pollutants in the collection/treatment system, if new information regarding CSO management becomes available or if necessary for implementation of an approved CSO Master Plan. Also see supplemental report form, *DEP-49-CSO Form For Use With Dedicated CSO Primary Clarifier*, Attachment A of this permit.

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average as specified	Daily Maximum as specified	Monthly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow ***[50050]***	Report Total MGD *[03]*	---	---	Report MGD *[03]*	Continuous *[99/99]*	Recorder *[RC]*
Surface Loading Rate(12) ***[50997]***	---	Report, GPD/SF *[07]*	---	---	1/Discharge Day(13) *[01/DD]*	Calculate *[CA]*
Overflow Use, Occurrences(14) ***[74062]***	---	---	Report, # of Days *[93]*	---	1/Discharge Day(13) *[01/DD]*	Record Total *[RT]*
BOD_5 ***[00310]***	---	---	---	Report mg/L *[19]*	1/Discharge Day(13) *[01/DD]*	24-Hour Composite *[24]*
BOD_5 Percent Removal(15) ***[81010]***	---	---	Report % *[23]*	---	1/Discharge Day(13) *[01/DD]*	Calculate *[CA]*
TSS ***[00530]***	---	---	---	Report mg/L *[19]*	1/Discharge Day(13) *[01/DD]*	24-Hour Composite *[24]*
TSS Percent Removal(15) ***[81011]***	---	---	Report % *[23]*	---	1/Discharge Day(13) *[01/DD]*	Calculate *[CA]*
Fecal Coliform Bacteria(3), (16) ***[31616]***	---	---	---	200/100 ml *[13]*	1/Discharge Day(13) *[01/DD]*	Grab *[GR]*
Total Residual Chlorine(16) ***[50060]***	---	---	---	1.0 mg/L *[19]*	1/Discharge Day(13) *[01/DD]*	Grab *[GR]*

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.

FOOTNOTES: See Pages 12 through 17 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

FOOTNOTES:

1. **Sampling** – Sampling and analysis 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, or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of 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. See Attachment C of this permit for a list of the Department's current RLs. If a non-detect analytical test result is below the respective RL, the concentration result shall be reported as <Y where Y is the actual 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. Compliance with this permit will be evaluated based on whether or not a compound is detected at or above the Department's RL.

2. **Percent Removal –** The treatment facility shall maintain a minimum of 85 percent removal for both biochemical oxygen demand and total suspended solids for all flows receiving secondary treatment. The percent removal shall be calculated based on influent and effluent concentration values. The percent removal shall be waived when the monthly average influent concentration is less than 200 mg/L.

3. **Bacteria Limits –** Fecal coliform bacteria limits and monitoring requirements (for secondary and primary treated waste waters) are seasonal and apply between May 15 and September 30 of each year. The Department reserves the right to require disinfection on a year-round basis to protect the health and welfare of the public.

4. **Bacteria Reporting –** The monthly average fecal coliform bacteria limitation is a geometric mean limitation and sample results shall be reported as such.

5. **TRC Monitoring** – Monitoring for TRC is only required when elemental chlorine or chlorine-based compounds are in use for effluent disinfection. TRC shall be tested using Amperometric Titration or the DPD Spectrophotometric Method. The USEPA approved methods are found in Standard Methods for the Examination of Water and Waste Water, (Most current edition), Method 4500-CL-E and Method 4500-CL-G or USEPA Manual of Methods of Analysis of Water and Wastes.

SPECIAL CONDITIONS

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

FOOTNOTES:

6. **Whole Effluent Toxicity (WET) Testing** – Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions bracketing the critical acute and chronic thresholds of 15.38% and 1.37%, respectively), 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.

   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 using the mysid shrimp (*Mysidopsis bahia*) and once every two years using the sea urchin (*Arbacia punctulata*). Acute tests shall be conducted on the mysid shrimp; chronic tests shall be conducted on the sea urchin. Surveillance tests shall be conducted in a different calendar quarter than the previous test.

   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 twice per year using the mysid shrimp and sea urchin. Screening level tests shall be conducted in the calendar period between January and June and the other test conducted six months later.

   Test results must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days of their availability before submitting them. The permittee shall evaluate test results being submitted and identify to the Department possible exceedences of the critical acute and chronic water quality thresholds of 15.38% and 1.37%, respectively.

   Toxicity tests must be conducted by an experienced laboratory approved by the Department. The laboratory must follow procedures as described in the following USEPA methods manuals.

   a. U.S. Environmental Protection Agency. 2002. *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, 5th ed. EPA 821-R-02-012. U.S. Environmental Protection Agency, Office of Water, Washington, D.C., October 2002 (the acute method manual)

SPECIAL CONDITIONS

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

FOOTNOTES:

b. U.S. Environmental Protection Agency. 2002. *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organism*s, 3rd ed. EPA 821-R-02-014. U.S. Environmental Protection Agency, Office of Water, Washington, D.C., October 2002 (the marine chronic method manual)

Results of WET tests shall be reported on the "Whole Effluent Toxicity Report Marine Waters" form included as Attachment B of this permit each time a WET test is performed. The permittee is required to analyze the effluent for the analytical chemistry parameters specified on the "WET and Chemical Specific Data Report Form" form included as Attachment C of this permit each time a WET test is performed.

7. **Analytical Chemistry** – Refers to a suite of twelve (12) chemical tests consisting of 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 permit issuance and lasting through 12 months prior to permit expiration, the permittee shall conduct analytical chemistry testing at a minimum frequency of once every two years (except for those analytical chemistry parameters otherwise regulated in this permit). Surveillance tests shall be conducted in a different calendar quarter than the previous test.

   b. **Screening level testing** – Beginning 12 months prior to 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 for four consecutive calendar quarters.

8. **Priority Pollutant Testing –**Priority pollutants are those parameters specified at *Effluent Guidelines and Standards*, 06-096 CMR 525(4)(IV) (effective January 12, 2001).

   a. **Screening level testing** – Beginning 12 months prior to and lasting through permit expiration and every five years thereafter, the permittee shall conduct priority pollutant testing at a minimum frequency of once per year.

   Surveillance level priority pollutant testing is not required pursuant to 06-096 CMR 530(2)(D).

SPECIAL CONDITIONS

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

FOOTNOTES:

Analytical chemistry and priority pollutant testing shall be conducted on samples collected at the same time as those collected for whole effluent toxicity tests, when applicable, and shall be conducted using methods that permit detection of a pollutant at existing levels in the effluent or that achieve the most current minimum reporting levels of detection as specified by the Department.

Analytical chemistry and priority pollutant 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 laboratory reports for up to 10 business days of their availability before submitting them. The permittee shall evaluate test results being submitted and identify to the Department, possible exceedences of the acute, chronic or human health AWQC as established in 06-096 CMR 584. 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 to determine compliance with interim limitations established pursuant to *Interim Effluent Limitations and Controls for the Discharge of Mercury*, 06-096 CMR 519 (last amended October 6, 2001), 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.

9. **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 9.2 ug/L (See page 27 of the Fact Sheet attached to this permit) 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.

SPECIAL CONDITIONS

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

FOOTNOTES:

10. **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.

11. **Instantaneous Flow Rate –** The instantaneous flow rate limitation of 3,958 gallons per minute (5.7 MGD) is based on "*Table 2-1 Rockland, Maine WWTF Upgrade and CSO Abatement Program Design Criteria August 1997*." This limitation becomes effective on April 1, 2008 and remains in effect through permit expiration. Additionally, the permittee is authorized to discharge primary treated wastewater to Lermond Cove via Outfall #002A only when the deep-water outfall (Outfall #001A) is hydraulically limited.

12. **Surface Loading Rate** – The surface loading rate is the average hourly rate per overflow occurrence in a discharge day. The permittee must provide this information to establish data on the effectiveness of peak flows receiving primary treatment.

13. **Discharge Day** – For the purposes of this permitting action, a discharge day is defined as a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling.

14. **Overflow Occurrences –** An overflow occurrence is defined as the period of time between initiation of flow from the primary bypass and ceasing discharge from the primary bypass. Overflow occurrences are reported in discharge days.

    Multiple intermittent overflow occurrences in one discharge day are reported as one overflow occurrence and are sampled according to the measurement frequency specified. One composite sample for BOD_5 and total suspended solids shall be collected per discharge day and shall be flow proportioned from each intermittent overflow during that 24-hour period. Only one grab sample for fecal bacteria and total residual chlorine is required to be collected per discharge day.

    For overflow occurrences exceeding one day in duration, sampling shall be performed each day of the event according to the measurement frequency specified. For example, if an overflow occurs for all or part of three discharge days, the permittee shall take three composite samples for BOD_5 and TSS, initiating samples at the start of the overflow and each subsequent discharge day thereafter and terminating samples at the end of the

SPECIAL CONDITIONS

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

FOOTNOTES:

discharge day or the end of the overflow occurrence. Samples shall be flow-proportioned.

15. **BOD & TSS removal** – The permittee shall analyze both the influent of the treatment plant and effluent of the primary swirl separator for BOD_5 and TSS during the discharge of treated excess combined sewer waste waters via Outfall #001C or Outfall #002A, and report the percent removal on the monthly Discharge Monitoring Report (DMR). As an attachment to the DMR, the permittee shall report the individual BOD_5 and TSS test results used to calculate the percent removal rates reported. For the purpose of calculating BOD_5 and TSS percent removals on the treated excess combined sewer waste water, the influent sample shall only be collected during overflow occurrences.

16. **Grab samples** – Grab samples for fecal coliform bacteria and total residual chlorine are not required to be collected when Outfall #001C or #002A are active for a single continuous discharge event lasting less than 60 minutes or during intermittent discharge events over a course of a 24-hour period lasting less than 120 minutes and sampling is only required if said event(s) occur between the hours of 7:00 AM – 4:00 PM during the normal work week (Monday through Friday, holidays excluded).

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 impart color, taste, turbidity, toxicity, radioactivity or other properties which cause those waters to be unsafe for the designated uses and characteristics ascribed to their classification.

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

SPECIAL CONDITIONS

C. DISINFECTION

If chlorination is used as the means of disinfection, an approved chlorine contact tank providing the proper detention time consistent with good engineering practice must be utilized followed by a dechlorination system if the imposed total residual chlorine (TRC) limit cannot be achieved by dissipation in the detention tank. The total residual chlorine in the effluent shall at no time cause any demonstrable harm to aquatic life in the receiving waters. The dose of chlorine applied shall provide a TRC concentration that will effectively reduce fecal coliform bacteria levels to or below those specified in Special Condition A, *Effluent Limitation and Monitoring Requirements,* above.

D. 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 *Sewerage Treatment Operators,* 32 M.R.S.A. § 4171-4182. 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.

E. AUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with: 1) the permittee's General Application accepted for processing by the Department on March 30, 2006; and 2) the terms and conditions of this permit and only from Outfall #001A (secondary treated wastewater), #001C (primary treated wastewater), #002A (primary treated wastewater) and the two (2) combined sewer overflow outfalls (Outfalls #003 and #009) listed in Special Condition L, *Combined Sewer Overflows,* of this permit. Discharges of wastewater from any other point source are not authorized under this permit, and shall be reported in accordance with Standard Condition B(5), *Bypasses,* of this permit.

SPECIAL CONDITIONS

F. NOTIFICATION REQUIREMENTS

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

1. Any introduction of pollutants into the waste water collection and treatment system from an indirect discharger in a primary industrial category discharging process waste water; and

2. Any substantial change in the volume or character of pollutants being introduced into the waste water collection and treatment system by a source introducing pollutants to the system at the time of permit issuance.

3. 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 impact of the change in the quantity or quality of the waste water to be discharged from the treatment system.

G. 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 (13th) day of the month or hand-delivered to the Department's Regional Office such that the DMR's are received by the Department on or before the fifteenth (15th) 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 assigned inspector (unless otherwise specified by the Department) at the following address:

Department of Environmental Protection
Bureau of Land and Water Quality
Division of Water Quality Management
17 State House Station
Augusta, Maine 04333-0017

SPECIAL CONDITIONS

G. MONITORING AND REPORTING (cont'd)

Additional monthly reporting requires submitting an electronic version of *"DEP-49-CSO Form For Use With Dedicated CSO Primary Clarifiers"* (Attachment D of this permit) to the Department inspector at the address above and to the CSO Coordinator at the address below:

CSO Coordinator
Department of Environmental Protection
Bureau of Land & Water Quality
Division of Water Quality Management
17 State House Station
Augusta, Maine 04333
e-mail: CSOCoordinator@maine.gov

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

This permitting action establishes reduced surveillance level testing for the sea urchin. On or before December 31st of each year of the effective term of this permit ***[PCS Code 95799]***, the permittee shall provide the Department with statements 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.

Further, the Department may require that annual 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.

I. TOXICITY REDUCTION EVALUATION (TRE)

Within forty-five (45) days of the effective date of this permit, *[PCS code 02199]* the permittee shall submit to the Department for review and approval, a TRE plan which outlines a strategy to identify the source(s) and action items to be implemented to mitigate or eliminate exceedences of ambient water quality criteria associated with arsenic and cyanide.

SPECIAL CONDITIONS

J. SCHEDULE OF COMPLIANCE – INORGANIC ARSENIC

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. OPERATIONS AND MAINTENANCE (O&M) PLAN

On or before April 1, 2008, the permittee shall submit to the Department a current written comprehensive Operation & Maintenance (O&M) Plan ***[PCS Code 09699]***. 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 wastewater 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 USEPA personnel upon request.

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

SPECIAL CONDITIONS

L. WET WEATHER MANAGEMENT PLAN

The treatment facility staff shall develop and maintain a Wet Weather Management Plan to direct the staff on how to operate the facility effectively during periods of high flow. The Department acknowledges that the existing collection system may deliver flows in excess of the monthly average design capacity of the treatment plant during periods of high infiltration and rainfall.

On or before April 1, 2008, the permittee shall submit to the Department for review and approval, a new or revised Wet Weather Management Plan that conforms to Department guidelines for such plans ***[PCS Code 06799]***. The revised plan shall include operating procedures for a range of intensities, address solids handling procedures (including septic waste and other high strength wastes if applicable) and provide written operating and maintenance procedures during the events.

Once the Wet Weather Management Plan has been approved, the permittee shall review their plan annually and record any necessary changes to keep the plan up to date.

M. DISPOSAL OF SEPTAGE WASTE IN WASTEWATER TREATMENT FACILITY

During the effective period of this permit, the permittee is authorized to receive and introduce into the treatment process or solids handling stream **a maximum of 2,000 gallons per day** of septage, subject to the following terms and conditions:

1. This approval is limited to methods and plans described in the application and supporting documents. Any variations are subject to review and approval prior to implementation.

2. At no time shall addition of septage cause or contribute to effluent quality violations. If such conditions do exist, the introduction of septage into the treatment process or solids handling stream shall be suspended until effluent quality can be maintained.

3. The permittee shall maintain records which shall include, as a minimum, the following by date: volume of septage received, source of the septage (name of municipality), the hauler transporting the septage, the dates and volume of septage added to the waste water treatment influent and test results.

4. Addition of septage into the treatment process or solids handling stream shall not cause the treatment facilities design capacity to be exceeded. If, for any reason, the treatment process or solids handling facilities become overloaded, introduction of septage into the treatment process or solids handling stream shall be reduced or terminated in order to eliminate the overload condition.

SPECIAL CONDITIONS

M. DISPOSAL OF SEPTAGE WASTE IN WASTEWATER TREATMENT FACILITY (cont'd)

5. Septage known to be harmful to the treatment processes shall not be accepted. Wastes which contain heavy metals, toxic chemicals, extreme pH, flammable or corrosive materials in concentrations harmful to the treatment operation shall be refused.
6. During wet weather events, septage may be received into the septage holding facilities but shall not be added to the treatment process or solids handling facilities.

7. Except as noted in item #9 below, holding tank waste water shall not be recorded as septage and should be reported in the treatment facility's influent flow.

8. Any trucked-in waste that has the characteristics of septage, specifically with regard to biochemical oxygen demand (5,000 mg/L or greater) and total suspended solids (10,000 mg/L or greater) shall be considered as septage and is subject to the above mentioned 2,000-gallon per day limit.

9. If conditions change within the permittee's septage management program, the permittee shall provide the Department with an updated septage management plan that reflects such changes, pursuant to *Standards for the Addition of Septage to Waste Water Treatment Facilities*, 06-096 CMR 555 (last amended January 29, 1989).

N. EFFLUENT CONDITIONS AND LIMITATIONS FOR COMBINED SEWER OVERFLOWS (CSOs)

Pursuant to *Combined Sewer Overflow* Abatement 06-096 CMR 570 (last amended February 8, 1978), the permittee is authorized to discharge from the following locations of combined sewer overflows (CSOs) (storm water and sanitary wastewater) subject to the conditions and requirements herein.

1. CSO Locations

Outfall #	Outfall Location	Receiving Water and Class
003	Park Street Pump Station	Rockland Harbor, Class SC
009	Public Landing	Rockland Harbor, Class SC

SPECIAL CONDITIONS

N. EFFLUENT LIMITATIONS AND CONDITIONS FOR CSO'S (cont'd)

2. Prohibited Discharges

   a. The discharge of dry weather flows is prohibited. All such discharges shall be reported to the Department in accordance with Standard Condition D (1) of this permit.

   b. No discharge shall occur as a result of mechanical failure, improper design or inadequate operation or maintenance.

   c. No discharges shall occur at flow rates below the maximum design capacities of the wastewater treatment facility, pumping stations or sewerage system.

3. Narrative Effluent Limitations

   a. The effluent shall not contain a visible oil sheen, settled substances, foam, or floating solids at any time that impair the characteristics and designated uses ascribed to the classification of the receiving waters.

   b. The effluent shall not contain materials in concentrations or combinations that are hazardous or toxic to aquatic life; or which would impair the usage designated by the classification of the receiving waters.

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

4. CSO Master Plan [see 06-096 CMR 570(3) and 06-096 CMR 570(4)]

   The permittee shall implement CSO control projects in accordance with the approved CSO Master Plan entitled, *Combined Sewer Overflow Facilities Plan, Rockland, Maine, March 1998*, prepared by Earth Tech, and the modified plan and schedule contained in the City's consultant's, Wright-Pierce, March 8, 2005, letter entitled, *City of Rockland - Modification to the CSO Facilities Plan*, as approved by the Department on April, 5, 2005.

   On or before January 31, 2010, ***[PCS Code 06699]*** the permittee shall submit a CSO Master Plan Update evaluating the success of the abatement projects and the possibility of closing all of the remaining CSOs.

   To modify the dates and or projects specified above, the permittee must file an application with the Department to formally modify the permit. The remaining work items identified in the abatement schedule may be amended from time to time based on mutual agreements between the permittee and the Department. The permittee must notify the Department in writing prior to any proposed changes to the implementation schedule.

SPECIAL CONDITIONS

N. EFFLUENT LIMITATIONS AND CONDITIONS FOR CSO'S (cont'd)

5. Nine Minimum Controls (NMC) [see 06-096 CMR 570(5)]

   The permittee shall implement and follow the Nine Minimum Control documentation as approved by EPA on May 29, 1997. Work preformed on the Nine Minimum Controls during the year shall be included in the annual CSO Progress Report (see below).

6. CSO Compliance Monitoring Program [see 06-096 CMR 570(6)]

   The permittee shall conduct flow monitoring according to an approved *Compliance Monitoring Program* on all CSO points, as part of the CSO Master Plan. Annual flow volumes for all CSO locations shall be determined by actual flow monitoring, or by estimation using a model such as EPA's Storm Water Management Model (SWMM).

   Results shall be submitted annually as part of the annual *CSO Progress Report* (see below), and shall include annual precipitation, CSO volumes (actual or estimated) and any block test data required. Any abnormalities during CSO monitoring shall also be reported. The results shall be reported on the Department form "CSO Activity and Volumes," included as Attachment D of this permit, or similar format and submitted to the Department on diskette.

   CSO control projects that have been completed shall be monitored for volume and frequency of overflow to determine the effectiveness of the project toward CSO abatement. This requirement shall not apply to those areas where complete separation has been completed and CSO outfalls have been eliminated.

7. Additions of New Wastewater [see 06-096 CMR 570(8)]

   06-096 CMR 570(8) lists requirements relating to any proposed addition of wastewater to the combined sewer system. Documentation of the new wastewater additions to the system and associated mitigating measures shall be included in the annual *CSO Progress Report* (see below). Reports must contain the volumes and characteristics of the wastewater added or authorized for addition and descriptions of the sewer system improvements and estimated effectiveness.

8. Annual CSO Progress Reports [see 06-096 CMR 570(7)]

   By March 1 of each year ***[PCS Event 11099],*** the permittee shall submit *CSO Progress Reports* covering the previous calendar year (January 1 to December 31). The CSO Progress Report shall include, but is not necessarily limited to, the following topics as further described in 06-096 CMR 570: CSO abatement projects, schedule comparison, progress on inflow sources, costs, flow monitoring results, CSO activity and volumes, nine minimum controls update, sewer extensions, and new commercial or industrial flows.

SPECIAL CONDITIONS

N. EFFLUENT LIMITATIONS AND CONDITIONS FOR CSO'S (cont'd)

The CSO Progress Reports shall be completed on a standard form entitled, "*Annual CSO Progress Report*" furnished by the Department, and submitted in electronic form, if possible, to the following address:

CSO Coordinator
Department of Environmental Protection
Bureau of Land and Water Quality
Division of Water Quality Management
17 State House Station
Augusta, Maine 04333
e-mail: CSOCoordinator@maine.gov

9. Signs

If not already installed, the permittee shall install and maintain an identification sign at each CSO location as notification to the public that intermittent discharges of untreated sanitary wastewater occur. The sign must be located at or near the outfall and be easily readable by the public. The sign shall be a minimum of 12" x 18" in size with white lettering against a green background and shall contain the following information:

CITY OF ROCKLAND
WET WEATHER
SEWAGE DISCHARGE
CSO # AND NAME OF OUTFALL

10. Definitions

For the purposes of this permitting action, the following terms are defined as follows:

a. Combined Sewer Overflow - a discharge of excess waste water from a municipal or quasi-municipal sewerage system that conveys both sanitary wastes and storm water in a single pipe system and that is in direct response to a storm event or snowmelt.

b. Dry Weather Flows - flow in a sewerage system that occurs as a result of non-storm events or are caused solely by ground water infiltration.

c. Wet Weather Flows - flow in a sewerage system that occurs as a direct result of a storm event, or snowmelt in combination with dry weather flows.

SPECIAL CONDITIONS

O. PUMP STATION EMERGENCY BYPASSES

Discharges from emergency bypass structures in pump stations are not authorized by this permit. The permittee shall make provisions to monitor the pump station identified below via an electronic flow estimation system to record frequency, duration and estimation of flow discharged.

Outfall Number	Outfall Location	Receiving Water and Class
002A	TP Wet Weather PS	Lermond Cove, Class SC

Discharges from the pump station shall be reported in accordance with Standard Condition B(5), *Bypasses*, of this permit.

P. INDUSTRIAL PRETREATMENT PROGRAM

1. Pollutants introduced into POTW's by a non-domestic source (user) shall not pass-through the publicly owned treatment works (POTW) or interfere with the operation or performance of the works.

    a. The permittee shall develop and enforce specific effluent limits (local limits) for Industrial User(s), and all other users, as appropriate, which together with appropriate changes in the POTW facilities or operation, are necessary to ensure continued compliance with the POTW's MEPDES permit or sludge use or disposal practices. Specific local limits shall not be developed and enforced without individual notice to persons or groups who have requested such notice and an opportunity to respond.

Within 180 days of the effective date of this permit, *[PCS code 95979]* the permittee shall prepare and submit a written technical evaluation to the Department analyzing the need to revise local limits. As part of this evaluation, the permittee shall assess how the POTW performs with respect to influent and effluent of pollutants, water quality concerns, sludge quality, sludge processing concerns/inhibition, biomonitoring results, activated sludge inhibition, worker health and safety and collection system concerns. In preparing this evaluation, the permittee shall complete the "Re-Assessment of Technically Based Local Limits" form included as Attachment E of this permit with the technical evaluation to assist in determining whether existing local limits need to be revised. Justifications and conclusions should be based on actual plant data if available and should be included in the report. Should the evaluation reveal the need to revise local limits, the permittee shall complete the revisions within 120 days of notification by the Department and submit the revisions to the Department for approval. The permittee shall carry out the local limits revisions in accordance with EPA's document entitled, *Local Limits Development Guidance (July 2004).*

SPECIAL CONDITIONS

P. INDUSTRIAL PRETREATMENT PROGRAM (cont'd)

2. The permittee shall implement the Industrial Pretreatment Program in accordance with the legal authorities, policies, procedures, and financial provisions described in the permittee's approved Pretreatment Program, and the General Pretreatment Regulations, found at 40 CFR 403 and *Pretreatment Program*, 06-096 CMR 528 (effective January 12, 2001). At a minimum, the permittee must perform the following duties to properly implement the Industrial Pretreatment Program (IPP):

   a. Carry out inspection, surveillance, and monitoring procedures which will determine, independent of information supplied by the industrial user, whether the industrial user is in compliance with the Pretreatment Standards. At a minimum, all significant industrial users shall be sampled and inspected at the frequency established in the approved IPP but in no case less than once per year and maintain adequate records.

   b. Issue or renew all necessary industrial user control mechanisms within 90 days of their expiration date or within 180 days after the industry has been determined to be a significant industrial user.

   c. Obtain appropriate remedies for noncompliance by an industrial user with any pretreatment standard and/or requirement.

   d. Maintain an adequate revenue structure for continued implementation of the Pretreatment Program.

   e. The permittee shall provide the Department with an annual report describing the permittee's pretreatment program activities for the twelve-month period ending 60 days prior to the due date in accordance with federal regulation found at 40 CFR 403.12(i) and 06-096 CMR 528(12)(i). **The annual report shall be consistent with the format described in the "MEPDES Permit Requirements For Industrial Pretreatment Annual Report" form included as Attachment F of this permit and shall be submitted no later than October 15 of each calendar year.**

   f. The permittee must obtain approval from the Department prior to making any significant changes to the industrial pretreatment program in accordance with federal regulation found at 40 CFR 403.18(c) and 06-096 CMR 528(18).

   g. The permittee must assure that applicable National Categorical Pretreatment Standards are met by all categorical industrial users of the POTW. These standards are published in the federal regulations found at 40 CFR 405.

SPECIAL CONDITIONS

P. INDUSTRIAL PRETREATMENT PROGRAM (cont'd)

h. The permittee must modify its pretreatment program to conform to all changes in the federal regulations and State rules that pertain to the implementation and enforcement of the industrial pretreatment program. **Within 180 days of the effective date of this permit,** *[PCS code 95979]* the permittee must provide the Department in writing, proposed changes to the permittee's pretreatment program deemed necessary to assure conformity with current federal regulations and State rules. At a minimum, the permittee must address in its written submission the following areas: (1) Enforcement response plan; (2) revised sewer use ordinances; and (3) slug control evaluations. The permittee will implement these proposed changes pending the Department's approval under federal regulation 40 CFR 403.18 and 06-096 CMR 528(18). This submission is separate and distinct from any local limits analysis submission described in section 1(a) above.

Q. REOPENING OF PERMIT FOR MODIFICATION

Upon evaluation of the tests results in 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.

R. SEVERABILITY

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

ATTACHMENT D
MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
CSO ACTIVITY AND VOLUMES

MUNICIPALITY OR DISTRICT	MEPDES / NPDES PERMIT NO.
REPORTING YEAR	SIGNED BY:
YEARLY TOTAL PRECIPITATION INCHES	DATE:

CSO EVENT NO.	START DATE OF STORM	PRECIP. DATA		FLOW DATA (GALLONS PER DAY) OR BLOCK ACTIVITY("1")							
		TOTAL INCHES	MAX. HR. INCHES	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	EVENT OVERFLOW GALLONS	EVENT DURATION HRS
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
	TOTALS										

Note 1: Flow data should be listed as gallons per day. Storms lasting more than one day should show total flow for each day.

Note 2: Block activity should be shown as a "1" if the block floated away.

ATTACHMENT E

RE-ASSESSMENT OF TECHNICALLY BASED INDUSTRIAL DISCHARGE LIMITS

Pursuant to federal regulation 40 CFR Part 122.21(j)(4) and Department rule Chapter 528, all Publicly Owned Treatment Works (POTWs) with approved Industrial Pretreatment Programs (IPPs) shall provide the Department with a written evaluation of the need to revise local industrial discharge limits under federal regulation 40 CFR Part 403.5(c)(1) and Department rule Chapter 528(6)**.**

Below is a form designed by the U.S. Environmental Protection Agency (EPA - New England) to assist POTWs with approved IPPs in evaluating whether their existing Technically Based Local Limits (TBLLs) need to be recalculated. The form allows the permittee and Department to evaluate and compare pertinent information used in previous TBLLs calculations against present conditions at the POTW. **Please read the directions below before filling out the attached form.**

ITEM I.

* In Column (1), list what your POTW's influent flow rate was when your existing TBLLs were calculated. In Column (2), list your POTW's present influent flow rate. Your current flow rate should be calculated using the POTW's average daily flow rate from the previous 12 months.

* In Column (1) list what your POTW's SIU flow rate was when your existing TBLLs were calculated. In Column (2), list your POTW's present SIU flow rate.

* In Column (1), list what dilution ratio and/or 7Q10 value was used in your previous MEPDES permit. In Column (2), list what dilution ration and/or 7Q10 value is presently being used in your reissued MEPDES permit.

  The 7Q10 value is the lowest seven day average flow rate, in the river, over a ten-year period. The 7Q10 value and/or dilution ratio used by the Department in your MEPDES permit can be found in your MEPDES permit "Fact Sheet."

* In Column (1), list the safety factor, if any, that was used when your existing TBLLs were calculated.

* In Column (1), note how your bio-solids were managed when your existing TBLLs were calculated. In Column (2), note how your POTW is presently disposing of its biosolids and how your POTW will be disposing of its biosolids in the future.

ITEM II.

* List what your existing TBLLs are - as they appear in your current Sewer Use Ordinance (SUO).

RE-ASSESSMENT OF TECHNICALLY BASED INDUSTRIAL DISCHARGE LIMITS

ITEM III.

* Identify how your existing TBLLs are allocated out to your industrial community. Some pollutants may be allocated differently than others, if so please explain.

ITEM IV.

* Since your existing TBLLs were calculated, identify the following in detail:

  (1) if your POTW has experienced any upsets, inhibition, interference or pass-through as a result of an industrial discharge.

  (2) if your POTW is presently violating any of its current MEPDES permit limitations - include toxicity.

ITEM V.

* Using current sampling data, list in Column (1) the average and maximum amount of pollutants (in pounds per day) received in the POTW's influent. Current sampling data is defined as data obtained over the last 24 month period.

  All influent data collected and analyzed must be in accordance with federal regulation 40 CFR Part 136. Sampling data collected should be analyzed using the lowest possible detection method(s), e.g. graphite furnace.

  Based on your existing TBLLs, as presented in Item II., list in Column (2) each Maximum Allowable Industrial Headworks Loading (MAIHL) value corresponding to each of the local limits derived from an applicable environmental criteria or standard, *e.g.* water quality, sludge, MEPDES permit, inhibition, etc. For each pollutant, the MAIHL equals the calculated Maximum Allowable Headwork Loading (MAHL) minus the POTW's domestic loading source(s). For more information, please see, *Local Limits Development Guidance (July 2004).*

ITEM VI.

* Using current sampling data, list in Column (1) the average and maximum amount of pollutants (in micrograms per liter) present your POTW's effluent. Current sampling data is defined as data obtained during the last 24 month period.

  All effluent data collected and analyzed must be in accordance with federal regulation 40 CFR Part 136. Sampling data collected should be analyzed using the lowest possible detection method(s), *e.g.* graphite furnace.

RE-ASSESSMENT OF TECHNICALLY BASED INDUSTRIAL DISCHARGE LIMITS

* List in Column (2A) what the Ambient Water Quality Criteria (AWQC) (found in Department rule Chapter 584 –*Surface Water Quality Criteria For Toxic Pollutants, Appendix A,* October 2005) were (in micrograms per liter) when your TBLLs were calculated. Please note what hardness value was used at that time. Hardness should be expressed in milligrams per liter of Calcium Carbonate.

List in Column (2B) the current AWQC values for each pollutant multiplied by the dilution ratio used in your reissued MEPDES permit. For example, with a dilution ratio of 25:1 at a hardness of 20 mg/l - Calcium Carbonate (copper's chronic freshwater AWQC equals 2.36 ug/l) the chronic MEPDES permit limit for copper would equal 45 ug/l. Example calculation:

EOP concentration = [Dilution factor x 0.75 x AWQC] + [0.25 x AWQC]
Chronic AWQC = 2.36 ug/L

Chronic EOP = [25 x $0.75^{(1)}$ x 2.36 ug/L] + [0.25 x 2.36 ug/L] = 45 ug/L

(1) Department rule Chapter 530, *Surface Water Toxics Control Program*, October 2005) requires that 10% of the AWQC be set aside for background that may be present in the receiving water and 15% of the AWQC be set aside as a reserve capacity for new dischargers or expansion of existing discharges.

ITEM VII.

* In Column (1), list all pollutants (in micrograms per liter) limited in your reissued MEPDES permit. In Column (2), list all pollutants limited in your previous MEPDES permit.

ITEM VIII.

* Using current sampling data, list in Column (1) the average and maximum amount of pollutants in your POTW's biosolids. Current data is defined as data obtained during the last 24-month period. Results are to be expressed as total dry weight.

All biosolids data collected and analyzed must be in accordance with federal 40 CFR Part 136.

In Column (2A), list current State and/or Federal sludge standards that your facility's biosolids must comply with. Also note how your POTW currently manages the disposal of its biosolids. If your POTW is planing on managing its biosolids differently, list in Column (2B) what your new biosolids criteria will be and method of disposal.

If you have any questions, please contact your pretreatment representative at the Maine Department of Environmental Protection, Bureau of Land & Water Quality, Division of Water Quality Management, State House Station #17, Augusta, ME. 04333. The telephone number is (207) 287-3901.

REASSESSMENT OF TECHNICALLY BASED LOCAL LIMITS (TBLLs)

POTW Name & Address : _____

MEDES Permit # : _____

Date EPA approved current TBLLs : _____

Date EPA approved current Sewer Use Ordinance : _____

ITEM I.

In Column (1) list the conditions that existed when your current TBLLs were calculated. In Column (2), list current conditions or expected conditions at your POTW.

	Column (1)	**Column (2)**
	EXISTING TBLLs	PRESENT CONDITIONS
POTW Flow (MGD)	_____	_____
SIU Flow (MGD)	_____	_____
Dilution Ratio or 7Q10 from the MEPDES Permit)	_____	_____
Safety Factor	_____	N/A
Biosolids Disposal Method(s)	_____	_____

REASSESSMENT OF TECHNICALLY BASED LOCAL LIMITS (TBLLs)

ITEM II.

EXISTING TBLLs

POLLUTANT	NUMERICAL LIMIT (mg/l) or (lb/day)	POLLUTANT	NUMERICAL LIMIT (mg/l) or (lb/day)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

ITEM III.

Note how your existing TBLLs, listed in Item II., are allocated to your Significant Industrial Users (SIUs), i.e. uniform concentration, contributory flow, mass proportioning, other. Please specify by circling.

ITEM IV.

Has your POTW experienced any upsets, inhibition, interference or pass-through from industrial sources since your existing TBLLs were calculated?

If yes, explain. _____
_____

Has your POTW violated any of its MEPDES permit limits and/or toxicity test requirements?

If yes, explain. _____
_____

REASSESSMENT OF TECHNICALLY BASED LOCAL LIMITS (TBLLs)

ITEM V.

Using current POTW influent sampling data fill in Column (1). In Column (2), list your Maximum Allowable Industrial Headwork Loading (MAIHL) values used to derive your TBLLs listed in Item II. In addition, please note the environmental criteria for which each MAIHL value was established, *i.e.* water quality, sludge, MEPDES, etc.

Pollutant	**Column (1)** Influent Data Analyses Maximum (lb/day)	Average (lb/day)	**Column (2)** MAIHL Values (lb/day)	Criteria
Arsenic	_____	_____	_____	_____
Cadmium	_____	_____	_____	_____
Chromium	_____	_____	_____	_____
Copper	_____	_____	_____	_____
Cyanide	_____	_____	_____	_____
Lead	_____	_____	_____	_____
Mercury	_____	_____	_____	_____
Nickel	_____	_____	_____	_____
Silver	_____	_____	_____	_____
Zinc	_____	_____	_____	_____
Other (List)				
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

REASSESSMENT OF TECHNICALLY BASED LOCAL LIMITS (TBLLs)

ITEM VI.

Using current POTW effluent sampling data, fill in Column (1). In Column (2A) list what the Ambient Water Quality Criteria (AWQC) were at the time your existing TBLLs were developed. List in Column (2B) current AWQC values multiplied by the dilution ratio used in your reissued MEPDES permit.

	Column (1) Effluent Data Analyses		**Columns (2A)** Water Quality Criteria (AWQC)	**(2B)**
	Maximum (ug/l)	Average (ug/l)	From TBLLs (ug/l)	Today (ug/l)
Pollutant				
Arsenic	_____	_____	_____	_____
Cadmium*	_____	_____	_____	_____
Chromium*	_____	_____	_____	_____
Copper*	_____	_____	_____	_____
Cyanide	_____	_____	_____	_____
Lead*	_____	_____	_____	_____
Mercury	_____	_____	_____	_____
Nickel*	_____	_____	_____	_____
Silver	_____	_____	_____	_____
Zinc*	_____	_____	_____	_____
Other (List)				
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

*Hardness Dependent (mg/l - CaCO3)

RE-ASSESSMENT OF TECHNICALLY BASED LOCAL LIMITS (TBLLs)

ITEM VII.

In Column (1), identify all pollutants limited in your reissued MEPDES permit. In Column (2), identify all pollutants that were limited in your previous MEPDES permit.

Column (1) REISSUED PERMIT		**Column (2)** PREVIOUS PERMIT	
Pollutants	Limitations (ug/l)	Pollutants	Limitations (ug/l)

ITEM VIII.

Using current POTW biosolids data, fill in Column (1). In Column (2A), list the biosolids criteria that was used at the time your existing TBLLs were calculated. If your POTW is planing on managing its biosolids differently, list in Column (2B) what your new biosolids criteria would be and method of disposal.

	Column (1) Biosolids Data Analyses Average (mg/kg)	**Columns (2A)** Biosolids Criteria From TBLLs (mg/kg)	**(2B)** New (mg/kg)
Pollutant			
Arsenic			
Cadmium			
Chromium			
Copper			
Cyanide			
Lead			
Mercury			
Nickel			
Silver			
Zinc			
Molybdenum			
Selenium			
Other (List)			

ATTACHMENT F

MEPDES PERMIT REQUIREMENTS FOR INDUSTRIAL PRETREATMENT ANNUAL REPORT

The information described below shall be included in the pretreatment program annual reports:

1. An updated list of all industrial users by category, as set forth in federal regulation 40 CFR Part 403.8(f)(2)(i) and Department rule Chapter 528(9) indicating compliance or noncompliance with the following:

   - baseline monitoring reporting requirements for newly promulgated industries
   - compliance status reporting requirements for newly promulgated industries
   - periodic (semi-annual) monitoring reporting requirements,
   - categorical standards, and
   - local limit.

2. A summary of compliance and enforcement activities during the preceding year, including the number of:

   - significant industrial users inspected by POTW (include inspection dates for each industrial user);
   - significant industrial users sampled by POTW (include sampling dates for each industrial user);
   - compliance schedules issued (include list of subject users);
   - written notices of violations issued (include list of subject users);
   - administrative orders issued (include list of subject users),
   - criminal or civil suits filed (include list of subject users); and
   - penalties obtained (include list of subject users and penalty amounts).

3. A list of significantly violating industries required to be published in a local newspaper in accordance with federal regulation 40 CFR Part 403.8(f)(2)(vii) and Department rule Chapter 528(f)(2)(vii).

4. A narrative description of program effectiveness including present and proposed changes to the program, such as funding, staffing, ordinances, regulations, rules and/or statutory authority.

5. A summary of all pollutant analytical results for influent, effluent, sludge and any toxicity or bioassay data from the wastewater treatment facility. The summary shall include a comparison of influent sampling results versus threshold inhibitory concentrations for the POTW and effluent sampling results versus water quality standards. Such a comparison shall be based on the sampling program described in the paragraph below or any similar sampling program described in this permit.

MEPDES PERMIT REQUIREMENTS
FOR
INDUSTRIAL PRETREATMENT ANNUAL REPORT

At a minimum, annual sampling and analysis of the influent and effluent of the POTW shall be conducted for the following pollutants:

a.) Total Cadmium	f.) Total Nickel
b.) Total Chromium	g.) Total Silver
c.) Total Copper	h.) Total Zinc
d.) Total Lead	i.) Total Cyanide
e.) Total Mercury	j.) Total Arsenic

The sampling program shall consist of one 24-hour, flow-proportioned, composite and at least one grab sample that is representative of the flows received by the POTW. The composite shall consist of hourly, flow-proportioned grab samples taken over a 24-hour period if the sample is collected manually, or shall consist of a minimum of 48 samples collected at 30-minute intervals if an automated sampler is used. Cyanide shall be taken as a grab sample during the same period as the composite sample. Sampling and preservation shall be consistent with federal regulation 40 CFR Part 136.

6. A detailed description of all interference and pass-through that occurred during the past year.

7. A thorough description of all investigations into interference and pass-through during the past year.

8. A description of monitoring, sewer inspections and evaluations which were done during the past year to detect interference and pass-through, specifying parameters and frequencies.

9. A description of actions being taken to reduce the incidence of significant violations by significant industrial users.

10. The date of the latest adoption of local limits and an indication as to whether or not the City is under a State or Federal compliance schedule that includes steps to be taken to revise local limits.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: **DECEMBER 20, 2007**

PERMIT NUMBER: **#ME0100595**
WASTE DISCHARGE LICENSE: **#W000681- 5M -G-R**

NAME AND ADDRESS OF APPLICANT:

CITY OF ROCKLAND
40 TILLSON AVENUE
ROCKLAND, ME 04841-3417

COUNTY: **KNOX**

NAME AND ADDRESS WHERE DISCHARGE(S) OCCUR(S):

ROCKLAND WASTEWATER TREATMENT FACILITY
40 TILLSON AVENUE
ROCKLAND, ME 04841-3417

RECEIVING WATER/CLASSIFICATION: **ROCKLAND HARBOR/CLASS SC**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **MR. DAVID BOLSTRIDGE**
(207) 594-0324

1. APPLICATION SUMMARY

Application: The City of Rockland (City) has applied to the Department of Environmental Protection (Department) for renewal of Waste Discharge License (WDL) #W000681-5M-E-R / Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0100595, which was issued on June 13, 2001, and expired on June 13, 2006. The 6/13/01 MEPDES permit authorized the City to discharge a monthly average flow of up to 3.3 million gallons per day (MGD) of secondary treated municipal wastewater and an unspecified quantity of primary treated municipal wastewater from a publicly owned treatment works (POTW) to the Atlantic Ocean at Rockland Harbor, Class SC, in Rockland, Maine. The 6/13/01 permit and the June 9, 2003 administrative modification (see below) authorized the discharge of an unspecified quantity of excess combined sanitary and storm water wastewater from four (4) combined sewer overflow (CSO) points to the Atlantic Ocean to Rockland Harbor and Lermond Cove, Class SC, in Rockland, Maine.

1. APPLICATION SUMMARY (cont'd)

It is noted that the previous permit erroneously listed Outfalls #001A and #001B (now referred to as Outfall #001C) as CSO points. Outfall #001A is the secondary treated wastewater outfall. Outfall #001C is not a physical outfall pipe and does not convey untreated CSO flows. Rather, it is an administrative outfall designator used to track primary treated wastewater flows from the swirl separators and high-rate disinfection system. Primary treated flows from Outfall identifier #001C may be discharged through Outfall 001A or #002A depending on hydraulic conditions.

On June 9, 2003, the Department administratively modified the 6/13/01 permit to incorporate CSO discharge point #008 (South End Sandy Beach) into Special Condition N of the permit.

On January 20, 2004, the Department administratively modified the 6/13/01 permit to modify Special Condition D, *Treatment Plant Operator*, to require the facility to be operated by a person holding a Grade V wastewater treatment plant certificate.

On April 10, 2006, the Department amended the 6/13/01 permit by incorporating the whole effluent toxicity (WET), analytical chemistry and priority pollutant testing requirements of *Surface Water Toxics Control Program*, 06-096 CMR 530 (effective October 9, 2005).

2. PERMIT SUMMARY

a. Terms and Conditions: **This permitting action is similar to the 6/13/01 permitting action, two administrative modifications and one permit amendment in that it is:**

Secondary Treated Wastewater (Outfall #001A)

1. Carrying forward the daily maximum discharge flow reporting requirement;

2. Carrying forward the monthly average, weekly average and daily maximum concentration limits for total suspended solids (TSS);

3. Carrying forward the monthly average and weekly average technology-based mass limits for TSS;

4. Carrying forward the daily maximum mass reporting requirements for biochemical oxygen demand (BOD_5) and TSS;

5. Carrying forward the requirement for a minimum of 85% removal of TSS;

6. Carrying forward the daily maximum technology-based concentration limit for settleable solids;

7. Carrying forward the seasonal monthly average and daily maximum concentration limits for fecal coliform bacteria;

2. PERMIT SUMMARY (cont'd)

8. Carrying forward the technology-based monthly average and water quality-based daily maximum concentration limits for total residual chlorine (TRC);

9. Carrying forward the pH range limit of 6.0 to 9.0 standard units (SU);

10. Carrying forward authorization to accept and introduce into the treatment works a daily maximum of up to 2,000 gallons per day of septage wastes from local haulers;

11. Carrying forward whole effluent toxicity (WET), priority pollutant and analytical chemistry testing requirements pursuant to 06-096 CMR 530;

12. Carrying forward the minimum monitoring frequency requirements for all monitored parameters, except TSS percent removal, TRC, and bacteria;

CSO-Related Bypasses of Secondary Treatment (Outfall #001C)- For the purposes of this permitting action, this term refers to structures and or processes at the waster water treatment facility that provide equivalent to primary treatment and disinfection of waste waters that bypass the biological treatment portion of the facility in an effort to mitigate the discharge of untreated combined sanitary waste waters and storm water from the two CSOs listed in Special Condition N of this permit.

13. Carrying forward the daily maximum reporting requirements for discharge flow, BOD_5, and TSS;

14. Carrying forward the daily maximum concentration limits for fecal coliform bacteria and TRC;

15. Carrying forward the monthly average reporting requirements for discharge flow, BOD_5 percent removal and TSS percent removal, and overflow occurrences; and

Combined Sewer Overflows

16. Carrying forward authorization to discharge excess combined sanitary and storm water wastewater via Outfalls #003 and #009.

2. PERMIT SUMMARY (cont'd)

This permitting action is different from the 6/13/01 permitting action, two administrative modifications and one permit amendment in that it is

Secondary Treated Wastewater (Outfall #001A)

1. Eliminating the monthly average discharge flow limit of 3.3 MGD and establishing a report only requirement;

2. Revising the monthly average, weekly average, and daily maximum concentration limits for BOD_5;

3. Revising the monthly average and weekly average mass limitations for BOD_5;

4. Establishing a requirement for a minimum of 85% removal of BOD_5;

5. Establishing numeric limitations for both the mysid shrimp and sea urchin based on results of facility testing;

6. Establishing Special Condition H, *06-096 CMR 530(2)(D)(4) Statement for Reduced/Waived Toxics Testing*;

7. Revising the daily maximum water quality-based concentration and mass limits for total copper based on the results of facility testing;

8. Revising the daily maximum water quality-based concentration and mass limits and establishing monthly average concentration and mass limits for total cyanide based on facility testing;

9. Establishing monthly average water quality-based concentration and mass limitations for inorganic arsenic and Special Condition J, *Schedule of Compliance – Inorganic Arsenic*, for imposition of the limits;

10. Eliminating the numeric monthly average concentration and mass limits for total arsenic;

11. Establishing a daily maximum concentration reporting requirement for total arsenic;

12. Establishing a Special Condition I, *Toxicity Reduction Evaluation,* for exceedences of the ambient water quality criteria for inorganic arsenic and total cyanide and the mysid shrimp;

13. Revising the minimum monitoring frequency requirements for fecal coliform bacteria and TRC;

2. PERMIT SUMMARY (cont'd)

CSO-Related Bypasses of Secondary Treatment (Outfall #001C) - For the purposes of this permitting action, this term refers to structures and or processes at the waster water treatment facility that provide equivalent to primary treatment and disinfection of waste waters that bypass the biological treatment portion of the facility in an effort to mitigate the discharge of untreated combined sanitary waste waters and storm water from the two CSOs listed in Special Condition N of this permit.

14. Establishing a number primary treated waste water bypass threshold of 5.7 MGD to take effect on April 1, 2008;

15. Revising the administrative outfall identifier from "Outfall #001B" to "Outfall #001C" to maintain continuity of data in the Permit Compliance Tracking System (PCS) database for this outfall pipe;

16. Eliminating the daily maximum reporting requirements for settleable solids, BOD_5 percent removal, TSS percent removal, and the daily maximum pH range limitation;

CSO-Related Bypasses of Secondary Treatment (Outfall #002A)

17. Establishing daily maximum reporting requirements for discharge flow, BOD_5, and TSS;

18. Establishing daily maximum concentration limits for fecal coliform bacteria of 200 colonies/100 ml and 1.0 mg/L for TRC;

19. Establishing monthly average reporting requirements for discharge flow, BOD_5 percent removal, TSS percent removal, and surface loading rate;

Combined Sewer Overflows

20. Removing CSO Outfall #002A from the CSO Program, as this waste stream is considered an (non-permitted) emergency bypass point or receives a primary level of treatment and is regulated as a primary treated wastewater discharge in this permitting action;

21. Eliminating authorization to discharge excess combined sanitary and storm water wastewater via Outfall #008 (Crescent Street) as this CSO point has been eliminated;

2. PERMIT SUMMARY (cont'd)

Facility-Wide Requirements

22. Establishing a requirement for the facility to submit, for Department review and comment, a revised facility-wide Operations and Maintenance Manual; and

23. Establishing a requirement for the facility to submit, for Department review and comment, a revised facility-wide Wet Weather Management Plan.

b. History: This section provides a summary of the most recent significant licensing and permitting actions completed for the Rockland facility as well as other significant regulatory actions. Additional history information is included in Section 1(b) of the 6/13/01 permitting action.

March 6, 1998 – Pursuant to *Combined Sewer Overflow Abatement*, 06-096 CMR 570 (last amended February 8, 1978), the City submitted a combined sewer overflow (CSO) Master Plan to the Department.

August 25, 1998 – The USEPA issued a renewal of National Pollutant Discharge Elimination System (NPDES) permit #ME0100595 to the City. The 8/25/98 permit superseded NPDES permits issued to the City by the USEPA on May 14, 1993 and May 29, 1985 (earliest NPDES permit on file with the Department).

June 7, 2000 – Pursuant to *Certain deposits and discharges prohibited*, 38 M.R.S.A. § 420 and *Waste discharge licenses*, 38 M.R.S.A. § 413 and *Interim Effluent Limitations and Controls for the Discharge of Mercury*, 06-096 CMR 519 (last amended October 6, 2001), the Department issued a *Notice of Interim Limits for the Discharge of Mercury* to the permittee thereby administratively modifying WDL #W000681-47-D-M by establishing interim monthly average and daily maximum effluent concentration limits of 6.0 parts per trillion (ppt) and 9.0 ppt, respectively, and a minimum monitoring frequency requirement of 4 tests per year for mercury. It is noted the limitations have not been incorporated into Special Condition A, *Effluent Limitations And Monitoring Requirements*, of this permit as limitations and monitoring frequencies are regulated separately through 38 M.R.S.A. § 413 and 06-096 CMR 519. However, the interim limitations remain in effect and enforceable and any modifications to the limits and or monitoring requirements will be formalized outside of this permitting document

June 13, 2001 – The Department issued WDL #W000681-5M-E-R / MEPDES permit #ME0100595 to the City for a five year term. The 6/13/01 permit superseded WDL Modification #W000681-47-D-M issued on December 6, 1995, WDL #W000681-47-C-R issued on May 28, 1991, WDL #W000681-47-A-R issued on October 23, 1985, and WDL #681 issued on August 13, 1980.

2. PERMIT SUMMARY (cont'd)

June 9, 2003 – The Department administratively modified the 6/13/01 MEPDES permit to incorporate combined sewer overflow (CSO) discharge point #008 (South End Sandy Beach) into Special Condition N of the permit.

January 20, 2004 – The Department administratively modified the 6/13/01 MEPDES permit to modify Special Condition D, *Treatment Plant Operator*, to require the facility to be operated by a person holding a Grade V wastewater treatment plant certificate.

March 29, 2006 – The City submitted a timely and complete General Application to the Department for renewal of the 6/13/01 MEPDES permit. The application was accepted for processing on March 30, 2006 and was assigned WDL #W000681-5M-F-R / MEPDES #ME0100595.

April 10, 2006 – The Department amended the 6/13/01 permit to incorporate testing requirements of 06-096 CMR 530.

c. Source Description: The City's wastewater treatment facility treats residential, commercial and industrial process waste waters from entities within the City of Rockland. The approximately 13-mile long collection system is approximately 25% separated and 75% combined, contains 10 pump stations and two (2) CSO points, as identified in Special Condition N of this permitting action. All ten pump stations are equipped with back-up power sources. The City eliminated CSO #008 (formerly located at Sandy Beach and most recently located at Crescent Street) in calendar year 2007. CSO #008 was relocated from Sandy Beach to Crescent Street in calendar year 2006.

The largest industrial facility is FMC Biopolymer which reduces seaweed to produce suspension aids for food grade products, such as toothpaste and ice cream. The facility also receives and treats landfill leachate from the City's landfill located in a quarry approximately three miles from the treatment facility. Leachate is conveyed to the treatment facility via a pipeline and pump stations. The City adds hydrogen peroxide at an intermediate pump station to control odors in the leachate piping system. Department records indicate landfill leachate flows treated on any given day may be as high as 0.50 MGD.

The facility is authorized to treat up to 2,000 gallons per day of septage from local septage haulers. The City has submitted an updated Septage Management Plan as part of their March 29, 2006 renewal application, which has been reviewed and approved by the Department. The septage plan is consistent with the requirements of *Regulations Relating To The Addition of Septage To Waste Water Treatment Facilities*, 06-096 CMR 555 (last amended January 29, 1989). Also see Special Condition M, *Disposal of Septage Waste In Waste Water Treatment Facility* of this permit.

2. PERMIT SUMMARY (cont'd)

It is noted that the previous permit erroneously listed Outfalls #001A and #001B (now referred to as Outfall #001C) as CSO points. Outfall #001A is the secondary treated wastewater outfall. Outfall #001C is not a physical outfall pipe and does not convey untreated CSO flows. Rather, it is an administrative outfall designator used to track primary treated wastewater flows from the swirl separators and high-rate disinfection system. Primary treated flows from Outfall identifier #001C may be discharged through Outfall 001A or #002A depending on hydraulic conditions. The City stated that Outfall #002A may convey primary treated effluent from the swirl separator and high-rate disinfection structures, untreated CSO from the plant's wet weather wet well, or effluent from the secondary treatment system. Based on personal communication between the Department's Combined Sewer Overflow Program Administrator and the City, the Department has determined that Outfall #002A is not considered an active CSO point because it will not overflow when properly operated and maintained. Discharges of untreated waste waters from Outfall #002A are not authorized by this permit and must be reported to the Department in accordance with Special Condition E of the permit associated with this fact sheet.

A map created by the Department showing the location of the treatment system and all outfall points is included as Fact Sheet Attachment A.

d. Wastewater Treatment: The City's wastewater treatment facility was upgraded in 1999-2000 to increase the monthly average design flow of the facility from 2.9 MGD to 3.3 MGD and provide the facility with the ability to provide primary treatment and disinfection for instantaneous peak wet weather flows of up 33.6 MGD through a swirl separator. The facility provides a secondary level of treatment for dry weather flows received at the facility via a dry and wet weather influent pump station, one mechanical bar screen, a grit chamber, a flow distribution structure, two primary clarifiers, six covered aeration basins with fine bubble diffused aeration, two secondary clarifiers and two chlorine contact chambers where seasonal disinfection is achieved using sodium-hypochlorite and dechlorination is achieved using sodium bisulfite. The outfall pipe for the secondary treated waste waters is a 36-inch diameter reinforced concrete pipe (RCP) that extends approximately 500 feet out into Rockland Harbor off of Park Street. The end of the outfall pipe is fitted with a diffuser made of high density polyethylene (HDPE) pipe, 24 inches in diameter and positioned perpendicular to the outfall pipe. The diffuser is 160 feet in length with 12 individual 8 inch diameter ports spaced 10 feet on-center. The top of the diffuser ports have approximately 10 feet of water over them at mean low water and 15 feet of water over them at mean tide.

In addition to the secondary wastewater treatment component of the facility, a wet weather treatment component is also in service at the facility. During rainfall and snowmelt events when excessive inflow and infiltration (I/I) in the collection system exceeds the capacity of the dry weather pumping capacity, excess flow is hydraulically diverted to the wet weather pumping wet well and then to the swirl concentrator and CSO disinfection tank**,** then to a point in the plant's outfall pipe after the chlorine contact chamber. The concentrated underflow from the swirl separator is conveyed back to the

2. PERMIT SUMMARY (cont'd)

headworks of the treatment facility for secondary treatment. The primary treated effluent is disinfected by a high rate disinfection system designed to meet Department best practicable treatment (BPT) daily maximum fecal coliform bacteria limits of 200 colonies/100 ml. It is noted that during extreme high tide events, the main outfall pipe #001A is subject to surcharging which, in turn, restricts the discharge flow rate.

When the swirl separator is active during a extreme high tide event, flows exceeding the restricted capacity of Outfall #001A are diverted to Outfall #002A, commonly referred to as the Lermond Cove outfall. Under an emergency condition, flows exceeding dry weather and wet weather pumping capacities will exit the wet weather wet well via a 42-inch diameter emergency bypass pipe where it is discharge, untreated, through Outfall #002A (Lermond Cove).

A schematic of the treatment system is included as Fact Sheet Attachment B.

3. CONDITIONS OF PERMITS

Conditions of licenses, 38 M.R.S.A. § 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., § 420 and 06-096 CMR 530 require the regulation of toxic substances not to exceed levels set forth in *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 (effective October 9, 2005), 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

Classifications of estuarine and marine waters, 38 M.R.S.A. § 469 classifies the Atlantic Ocean at Rockland Harbor and Lermond Cove, as Class SC waters. *Standards for classification of estuarine and marine waters*, 38 M.R.S.A. § 465-B(3) describes the standards for Class SC waters.

5. RECEIVING WATER QUALITY CONDITIONS

The State of Maine 2004 Integrated Water Quality Monitoring and Assessment Report, prepared by the Department pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists the estuarine and marine waters at Rockland as, *"Category 4-B-2: Estuarine and Marine Waters Impaired by Bacteria From Combined Sewer Overflows (TMDL Required Only if Control Plans are Insufficient)"* (Waterbody ID#722-40). The Report also lists the receiving waters as, *"Category 5-B-1: Estuarine and Marine Waters Impaired only by Bacteria (TMDL) Required"* (Waterbody ID #722-8) and lists sources causing impairment as discharges from sewage treatment plants, overboard discharge systems, boats, storm water, and non-point source pollution. The Department has not

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

scheduled a total maximum daily load (TMDL) study for Rockland Harbor at this time. The Department will identify sources contributing to the non-attainment status of the receiving waters and will allocate waste loads to point source dischargers as necessary once a TMDL has been completed for this waterbody.

The City has developed and implemented a CSO master plan for the elimination of all CSO points associated with the Rockland wastewater treatment facility collection system. The Department acknowledges that elimination of all CSO points is a costly and long-term project. As the City's treatment plant and sewer collection system are upgraded and maintained in according to the CSO Master Plan and Nine Minimum Controls, there should be reductions in the frequency and volume of CSO and primary treatment activities and, over time, improvement in the quality of the wastewater discharged to the receiving waters.

In addition, all estuarine and marine waters of the State are listed as, *"Category 4-B-3: Estuarine and Marine Waters Impaired by Atmospheric Deposition of Mercury"* and *"Category 5-D: Estuarine and Maine Waters Impaired by Legacy Pollutants."* Impairment in this context refers to the estuarine and marine waters partially supporting the designated use of fishing and harvesting of shellfish due to elevated levels of mercury, PCBs, dioxin, and other persistent bioaccumulating substances in tissues of some fish and in lobster tomalley. Pursuant to 38 M.R.S.A. § 420(1-B)(B), *"a facility is not in violation of the ambient criteria for mercury if the facility is in compliance with an interim discharge limit established by the Department pursuant to section 413 subsection 11."* The Department has established interim monthly average and daily maximum mercury concentration limits for this facility.

The Maine Department of Marine Resources (DMR) assesses information on shellfish growing areas to ensure that shellfish harvested are safe for consumption. The DMR has authority to close shellfish harvesting areas wherever there is a pollution source, a potential pollution threat, or poor water quality. The DMR traditionally closes shellfish harvesting areas if there are known sources of discharges with unacceptable bacteria levels (instream thresholds established in the National Shellfish Sanitation Program) or maintains shellfish harvesting closure areas due to lack of updated information regarding ambient water quality conditions. In addition, the DMR prohibits shellfish harvesting in the immediate vicinity of all wastewater treatment outfall pipes as a precautionary measure in the event of a failure in the treatment plant's disinfection system. Thus, shellfish harvesting area #29 is closed to the harvesting of shellfish due to insufficient or limited ambient water quality data to determine that the area meets the standards in the National Shellfish Sanitation Program. The shellfish closure area is identified on the map included as Fact Sheet Attachment A. The Department is making the determination that compliance with the fecal coliform bacteria and other secondary wastewater treatment limits established in this permitting action ensure that the discharge of secondary treated wastewater from the Rockland Wastewater Treatment Facility will not cause or contribute to the failure of the receiving waters to meet the standards of its designated classification.

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

Table 4-9 in Section 4-3 *Integrated Report Lists of Categories 1 Through 5* of *The State of Maine 2004 Integrated Water Quality Monitoring and Assessment Report* lists a 0.02 square mile area of estuarine and marine waters as non-attainment of the designated use of "recreation in and on the water" (*i.e.*, swimming) for Class SC waters. This non-attainment segment refers to a permanent beach closure at Sandy Beach in Rockland due to the lack of available ambient water quality data to determine compliance with *E. coli* bacteria thresholds for Class SC waters. The permittee has voluntarily agreed to participate in an ambient water quality monitoring program in conjunction with the Maine Healthy Beaches Program, a USEPA-funded partnership between the Maine State Planning Office/Coastal Program, Maine Bureau of Health, Maine Departments of Conservation and Environmental Protection, the University of Maine Cooperative Extension/Sea Grant, local municipalities and the beach-going public.

The Maine Healthy Beaches Program website (http://www.mainehealthybeaches.org/index.html) contains the following information:

> *The exceedance criteria, or level at which a sample fails, is 104 Enterococci bacteria per 100 milliliters of sample water, or Enterococci levels exceed the geometric mean of 35 counts of Enterococci per 100 mL of water in at least five samples collected over a 30-day period. This is one consideration for placing advisories at the beach. For the other considerations for advising against recreational water activities or for closing a beach click on How Beach Advisories are Determined.*
>
> *The Maine Healthy Coastal Beaches Program is providing the State of Maine with a system to monitor public beaches and notify the public when there is a potentially hazardous condition.*
>
> *The Maine Healthy Coastal Beaches Program ensures healthy, informed opportunities for swimming and other recreational water activities along the coast of Maine. Monitoring coastal water quality for swimming and other water contact usage is the responsibility of the local jurisdiction. It is not a mandated requirement from the State, nor does the State of Maine monitor public beaches other than those of their ownership.*

Historical data maintained on the Maine Healthy Beaches Program website indicates that there were no bacteria data available for Sandy Beach until June 2007. The status of Sandy Beach specified by the Maine Healthy Beaches Program was "OPEN" as of June 7, 2007. The City of Rockland has provided the Department with a written agreement between them and the Maine Healthy Beaches Program for ambient bacteria monitoring at this location.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

a. Flow: The previous permitting action established a monthly average discharge flow limit of 3.3 MGD based on the design capacity for the treatment facility, and a daily maximum discharge flow reporting requirement. After considerable discussion and negotiation with the permittee, this permitting action is eliminating the monthly average discharge flow limitation in order to encourage the facility to maximize its secondary treatment capability. This action shall in no way be interpreted or construed to mean that the average design capacity for the treatment plant is greater than or less than the 3.3 MGD design criterion. Mass limitations established in this permitting action shall be calculated based on an average discharge flow (design capacity) of 3.3 MGD.

The City informed the Department during meetings in the spring of calendar year 2007 that the effluent flow meter was not in proper calibration and that the effluent flow values reported to the Department are suspected as being lower than the actual discharge rate. The flow meter was recalibrated in July 2006. The Department has evaluated effluent flow data from August 2006 through April 2007, which indicates the following:

Discharge Flow (Secondary Treated Waste Waters)	Minimum	Maximum	Arithmetic Mean	# DMRs
Monthly Average	1.3 MGD	3.7 MGD	2.0 MGD	9
Daily Maximum	1.8 MGD	5.1 MGD	3.2 MGD	9

Swirl Separator (Primary Treated Waste Waters)

The previous permitting action established monthly average and daily maximum discharge flow reporting requirements for primary treated waste waters discharge via the swirl separator (Outfall #001C).

The Department has evaluated effluent flow data for primary treated waste waters from September 2006 through April 2007, which indicates the flow has ranged from 2.1 MGD to 10.1 MGD with an arithmetic mean of 5.7 MGD (# DMRs = 7).

This permitting action is carrying forward the monthly average and daily maximum discharge flow reporting requirements for primary treated waste waters discharged via the swirl separator (Outfall #001C) consistent with the monitoring and reporting requirements established in MEPDES permits for other facilities authorized to discharge primary treated waste waters. This permitting action is establishing identical discharge flow monitoring requirements for Outfall #002A.

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

b. Dilution Factors: 06-096 CMR 530(4)(A)(2)(a) states that, *"For discharges to the ocean, dilution must be calculated as near-field or initial dilution, or that dilution available as the effluent plume rises from the point of discharge to its trapping level, at mean low water level and slack tide for the acute exposure analysis, and at mean tide for the chronic exposure analysis using appropriate models determined by the Department such as MERGE, CORMIX or another predictive model."* Based on the configuration of Outfall #001A and a monthly average discharge flow design criterion of 3.3 MGD, dilution factors associated with the discharge of secondary treated waste waters are as follows:

Acute = 6.5:1 Chronic = 73.0:1 Harmonic mean[1] = 219.0:1

c. Biochemical Oxygen Demand (BOD_5): The following table specifies the BOD_5 limits established in the previous permitting action, the secondary treatment requirements as defined in *Effluent Guidelines and Standards*, 06-096 CMR 525(3)(III)(a) (effective January 12, 2001), and the permit limitations established in this permitting action.

BOD_5	**Monthly Average**	**Weekly Average**	**Daily Maximum**	**Monthly Average**	**Weekly Average**	**Daily Maximum**
Previous Permit	1,514 lbs./day	2,064 lbs./day	Report lbs./day	55 mg/L	75 mg/L	85 mg/L
Secondary Treatment Requirements	826 lbs./day	1,239 lbs./day	1,376 lbs./day	30 mg/L	45 mg/L	50 mg/L
This Permit	826 lbs./day	1,239 lbs./day	Report lbs./day	30 mg/L	45 mg/L	50 mg/L

The previous monthly average, weekly average, and daily maximum concentration limits of 55 mg/L, 75 mg/L and 85 mg/L, respectively, for BOD_5 are less stringent than the secondary treatment requirements as defined in 06-096 CMR 525(3)(III)(a). In cases where publicly owned treatment works (POTWs) accept waste waters from industrial sources, the secondary treatment requirements for BOD_5 may be adjusted upward provided they meet the criteria outlined in 06-096 CMR 525(3)(IV)(b). The rule provides for adjustment of the monthly average and weekly average limits of 30 mg/L and 45 mg/L, respectively, provided: 1) the permitted discharge of BOD_5, attributable to the industrial category, would not be greater than that which would be permitted under Section 306 of the Clean Water Act (CWA) if such industrial category were to discharge

[1] The harmonic mean dilution factor is approximated by multiplying the chronic dilution factor by three (3). This multiplying factor is based on guidelines for estimation of human health dilution presented in the U.S. EPA publication, *"Technical Support Document for Water Quality-Based Toxics Control"* (Office of Water; EPA/505/2-90-001, page 88), and represents an estimation of harmonic mean flow on which human health dilutions are based in a riverine 7Q10 flow situation.

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

directly into navigable waters, and 2) the POTW receives more than 10% of its design flow or loading from an industrial category.

The secondary treatment requirement of 50 mg/L is based on a Department best professional judgment of best practicable treatment for secondary treated municipal wastewater.

In calendar year 2006, the City determined that the influent flows from the facility's largest user, FMC Biopolymer, were not being measured or considered when reporting influent BOD_5 values to the Department. Therefore, influent BOD_5 data reported prior to August 2006 are not considered representative of the actual influent strength of the combined sanitary and industrial flows. The City began monitoring all flows to the treatment facility by August 2006, and has proposed to complete a *Headworks and Industrial User BOD_5 Quantification Study* to accurately determine influent and effluent BOD_5 loadings associated with the treatment system.

The Department has considered data from August 2006 through April 2007 in developing appropriate effluent BOD_5 limitations for this facility. The arithmetic mean of the monthly average influent BOD_5 values reported to the Department for the period of August 2006 through April 2007 is 226 mg/L (range of 162 mg/L to 307 mg/L). According to the USEPA's *Onsite Wastewater Treatment Systems Manual*, dated February 2002, table 3-7 entitled "Constituent Mass Loadings and Concentrations in Typical Residential Wastewater" high-end range of values for influent BOD_5 and TSS may be assumed to be 300 mg/L. The average influent BOD_5 value of 226 mg/L is consistent with what the USEPA considers to be typical residential wastewater. Therefore, the Department is making a best professional judgment determination that the representative data on file and information in the record do not justify establishing effluent limits that are less stringent than the standard secondary treatment requirements of 06-096 CMR 525. Should a larger data set (a minimum of 12 months of representative influent data) indicate the influent strength is significantly higher than typical domestic wastewater, the City may submit an application to the Department to reconsider effluent limitations for BOD_5.

This permitting action is revising the monthly average and weekly average BOD_5 limits from 55 mg/L, 75 mg/L and 85 mg/L, respectively, to 30 mg/L, 45 mg/L and 50 mg/L, respectively.

The Department has evaluated effluent BOD_5 concentration data for secondary treated waste waters from August 2006 through April 2007, which indicates the following:

BOD_5	**Minimum**	**Maximum**	**Arithmetic Mean**	**# DMRs**
Monthly Average	9.3 mg/L	28.8 mg/L	18.5 mg/L	9
Weekly Average	11.2 mg/L	42 mg/L	27.6 mg/L	9
Daily Maximum	16.9 mg/L	59 mg/L	36.6 mg/L	8

Note: The Department did not include the August 2006 daily maximum value of 201 mg/L in this evaluation as it is considered an outlier and significantly skews the data.

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

This permitting action is revising the previously established monthly average and weekly average mass limits of 1,514 pounds per day and 2,064 pounds per day, respectively, for BOD_5 based on the revised concentration limits as follows:

Monthly Average Mass Limit: (30 mg/L)(8.34 lbs./gallon)(3.3 MGD) = 826 lbs./day
Weekly Average Mass Limit: (45 mg/L)(8.34 lbs./day)(3.3 MGD) = 1,238 lbs./day

To encourage the treatment facility to maximize its secondary treatment capacity during wet weather events, this permitting action is carrying forward a report only requirement for the daily maximum BOD_5 mass value.

This permitting action is carrying forward the minimum monitoring frequency requirement of three times per week based on Department guidance for POTWs permitted to discharge between 1.5 and 5.0 MGD.

This permitting action is establishing a 30-day average percent removal requirement of 85 percent for BOD_5 as required pursuant to 06-096 CMR 525(3)(III)(a)(3). The Department has no data on record for BOD_5 percent removal for this facility.

Swirl Separator (Primary Treated Wastewaters)

The previous permitting action established a daily maximum concentration reporting requirement, and monthly average and daily maximum percent removal reporting requirements for BOD_5 for primary treated waste waters discharge via the swirl separator (Outfall #001C).

The Department has evaluated effluent BOD_5 data for primary treated waste waters from August 2006 through April 2007, which indicates the reported values have ranged from 14 mg/L to 74 mg/L with an arithmetic mean of 53 mg/L (# DMRs = 7).

This permitting action is carrying forward the daily maximum concentration reporting requirement and the monthly average percent removal reporting requirement, and is eliminating the daily maximum percent removal reporting requirement for BOD_5 for primary treated waste waters discharged via the swirl separator (Outfall #001C) consistent with the monitoring and reporting requirements established in MEPDES permits for other facilities authorized to discharge primary treated waste waters. This permitting action is establishing identical BOD_5 monitoring requirements for Outfall #002A.

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

d. Total Suspended Solids (TSS): The previous permitting action established, and this permitting action is carrying forward, technology-based monthly average and weekly average TSS concentration limits of 30 mg/L and 45 mg/L, respectively, based on secondary treatment requirements 06-096 CMR 525(3)(III); and carrying forward a technology-based daily maximum TSS concentration limit of 50 mg/L, which is based on a Department best professional judgment of best practicable treatment. The previous permitting action established, and this permitting action is carrying forward, monthly average and weekly average mass limits based on calculations using the monthly average discharge flow design criterion of 3.3 MGD and the appropriate concentration limits as follows:

Monthly Average Mass Limit: (30 mg/L)(8.34 lbs./gallon)(3.3 MGD) = 826 lbs./day
Weekly Average Mass Limit: (45 mg/L)(8.34 lbs./day)(3.3 MGD) = 1,238 lbs./day

To encourage the treatment facility to maximize its secondary treatment capacity during wet weather events, this permitting action is carrying forward a report only requirement for the daily maximum TSS mass value.

The Department has evaluated effluent TSS concentration data for secondary treated waste waters from August 2006 through April 2007, which indicates the following:

TSS	Minimum	Maximum	Arithmetic Mean	# DMRs
Monthly Average	20.1 mg/L	40 mg/L	28.8 mg/L	9
Weekly Average	24.4 mg/L	72 mg/L	37.1 mg/L	9
Daily Maximum	38.8 mg/L	167 mg/L	69.6 mg/L	9

The previous permitting action established, and this permitting action is carrying forward, a requirement to achieve a minimum 30-day average removal of 85 percent for TSS pursuant to 06-096 CMR 525(3)(III)(b)(3). The City reported that influent samples collected prior to July 27, 2006 did not include wastewater from the system's largest user, FMC Biopolymer. Therefore, TSS percent removal values reported to the Department prior to August 2006 are not representative of actual conditions. The facility reported TSS percent removal values of 90% (August 2006), 91% (October 2006) and 73% (November 2006) since measurement/sampling of all influent flows commenced in August 2006.

The previous permitting action established, and this permitting action is carrying forward, a minimum monitoring frequency requirement of three times per week for TSS based on Department guidance for POTWs permitted to discharge between 1.5 and 5.0 MGD.

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

Swirl Separator (Primary Treated Wastewaters)

The previous permitting action established a daily maximum concentration reporting requirement, and monthly average and daily maximum percent removal reporting requirements for TSS for primary treated waste waters discharge via the swirl separator (Outfall #001C).

The Department has evaluated effluent TSS data for primary treated waste waters from August 2006 through April 2007, which indicates the reported values have ranged from 18 mg/L to 268 mg/L with an arithmetic mean of 116 mg/L (# DMRs = 8).

This permitting action is carrying forward the daily maximum concentration reporting requirement and the monthly average percent removal reporting requirement, and is eliminating the daily maximum percent removal reporting requirement for TSS for primary treated waste waters discharged via the swirl separator (Outfall #001C) consistent with the monitoring and reporting requirements established in MEPDES permits for other facilities authorized to discharge primary treated waste waters. This permitting action is establishing identical TSS monitoring requirements for Outfall #002A.

e. Settleable Solids: The previous permitting action established, and this permitting action is carrying forward, a technology-based daily maximum concentration limit of 0.3 ml/L for settleable solids, which is considered a best practicable treatment limitation (BPT) for secondary treated wastewater.

The Department has evaluated effluent settleable solids data for secondary treated waste waters from August 2006 through April 2007, which indicates the reported values have ranged from 0.0 ml/L to 26.3 ml/L (# DMRs = 9). The facility reported three (3) exceptions of the daily maximum settleable solids limit (0.3 ml/L) during said reporting period (3.9 ml/L, 16.7 ml/L and 26.3 ml/L).

This permitting action is carrying forward the minimum monitoring frequency requirement of once per day for settleable solids based on Department guidance for POTWs permitted to discharge between 1.5 and 5.0 MGD.

Swirl Separator (Primary Treated Wastewaters)

The previous permitting action established a daily maximum concentration reporting requirement for settleable solids for primary treated waste waters discharge via the swirl separator (Outfall #001C). The Department has since reconsidered appropriate parameters and monitoring requirements for the discharge of primary treated waste waters from publicly owned treatment works and has determined that a settleable solids monitoring and reporting requirement is not necessary to evaluate the performance of the primary treatment system and impacts to receiving water quality. Therefore, this permitting action is eliminating the daily maximum settleable solids reporting

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

requirement for primary treated waste waters consistent with the monitoring and reporting requirements established in MEPDES permits for other facilities authorized to discharge primary treated waste waters.

f. Fecal Coliform Bacteria: The previous permitting action established, and this permitting action is carrying forward, seasonal monthly average and daily maximum concentration limits of 15 colonies/100 ml and 50 colonies/100 ml, respectively, for fecal coliform bacteria, which are consistent with the National Shellfish Sanitation Program. Bacteria limits are seasonal and apply between May 15 and September 30 of each year, however, the Department reserves the right to require year-round disinfection to protect the health, safety and welfare of the public.

The Department has evaluated effluent fecal coliform bacteria concentration data for secondary treated waste waters from August 2006 through April 2007 (only 2 DMRs evaluated for this period), which indicates the monthly average bacteria values have ranged from 3.3 col/100 ml to 8.2 col/100 ml and the daily maximum values have ranged from 8.0 col/100 ml to 49 col/100 ml.

This permitting action is revising the minimum monitoring frequency requirement for fecal coliform bacteria from three times per week, which is based on Department guidance for POTWs permitted to discharge between 1.5 and 5.0 MGD, to five times per week based on best professional judgment in consideration of the bacteria test results on file with the Department.

Swirl Separator (Primary Treated Wastewaters)

The previous permitting action established a seasonal (May 15-Septebmer 30) daily maximum concentration limitation of 200 colonies/100 ml for fecal coliform bacteria for primary treated waste waters discharge via the swirl separator (Outfall #001C). This limitation is based on based on Department best professional judgment of best practicable treatment for primary treated waste waters.

The Department has evaluated effluent fecal coliform bacteria concentration data for primary treated waste waters from August 2006 through April 2007 (only 1 DMR evaluated for this period), which indicates the daily maximum test result from 12/21/06 was > 200 col/100 ml.

This permitting action is carrying forward the daily maximum technology-based limit of 200 colonies/100 ml for fecal coliform bacteria for primary treated waste waters discharged via the swirl separator (Outfall #001C) consistent with the monitoring and reporting requirements established in MEPDES permits for other facilities authorized to discharge primary treated waste waters. This permitting action is establishing identical fecal coliform bacteria monitoring requirements for Outfall #002A.

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

g. Total Residual Chlorine (TRC): The previous permitting action established technology-based monthly average and water quality-based daily maximum concentration limits of 0.1 mg/L and 0.085 mg/L, respectively, for TRC. Limitations on TRC are specified to ensure that ambient water quality standards are maintained and that BPT technology is being applied to the discharge. Department permitting actions impose the more stringent of either a water quality-based or BPT-based limit. With dilution factors as determined above, end-of-pipe (EOP) water quality-based concentration thresholds for TRC may be calculated as follows:

Acute (A) Criterion	Chronic (C) Criterion	A & C Dilution Factors	Calculated Acute Threshold	Chronic Threshold
0.013 mg/L	0.0075 mg/L	6.5:1 (A) 73.0:1 (C)	0.085 mg/L	0.55 mg/L

The Department has established a daily maximum BPT limitation of 1.0 mg/L for facilities that disinfect their effluent with elemental chlorine or chlorine-based compounds. For facilities that need to dechlorinate the discharge in order to meet water quality based thresholds, the Department has established daily maximum and monthly average BPT limits of 0.3 mg/L and 0.1 mg/L, respectively. The City dechlorinates the effluent prior to discharge in order to consistently achieve compliance with the water quality-based thresholds. The calculated acute water quality-based threshold of 0.085 mg/L is more stringent than the daily maximum technology-based standard of 0.3 mg/L and is therefore being carried forward in this permitting action. The monthly average technology-based standard of 0.1 mg/L is more stringent than the calculated chronic water quality-based threshold of 0.55 mg/L and is therefore being carried forward in this permitting action.

The Department has evaluated effluent TRC concentration data for secondary treated waste waters from August 2006 through April 2007 (only 2 DMRs evaluated for this period), which indicates the monthly average TRC values have been reported as 0.1 mg/L on both the August and September 2006 DMRs ranged and the daily maximum values have ranged from 0.02 mg/L (9/2006) to 0.12 mg/L (8/2006).

This permitting action is revising the minimum monitoring frequency for TRC from once per day to twice per day, which is based on Department guidance for POTWs permitted to discharge between 1.5 and 5.0 MGD and best professional judgment in consideration of the TRC test results on file with the Department. Effluent limitations for TRC are in effect any time the facility utilizes chlorine or chlorine-based compounds for effluent disinfection. TRC shall be tested using Amperometric Titration or the DPD Spectrophotometric Method. The USEPA approved methods are found in Standard Methods for the Examination of Water and Waste Water, (Most current edition), Method 4500-CL-E and Method 4500-CL-G or USEPA Manual of Methods of Analysis of Water and Wastes.

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

Swirl Separator (Primary Treated Wastewaters)

The previous permitting action established a daily maximum concentration limitation of 1.0 mg/L for TRC for primary treated waste waters discharge via the swirl separator (Outfall #001C). This limitation is based on based on Department best professional judgment of best practicable treatment for primary treated waste waters.

The Department has evaluated effluent TRC concentration data for primary treated waste waters from August 2006 through April 2007 (only 1 DMR evaluated for this period), which indicates the daily maximum values reported for 12/21/06 was 0.01 mg/L.

This permitting action is carrying forward the daily maximum technology-based limit of 1.0 mg/L for TRC for primary treated waste waters discharged via the swirl separator (Outfall #001C) consistent with the monitoring and reporting requirements established in MEPDES permits for other facilities authorized to discharge primary treated waste waters. This permitting action is establishing identical TRC monitoring requirements for Outfall #002A.

h. pH: The previous permitting action established, and this permitting action is carrying forward, a technology-based pH limit of 6.0 – 9.0 standard units (SU), which is based on 06-096 CMR 525(3)(III), and a minimum monitoring frequency requirement of once per day (1/Day), which is based on Department guidance for POTWs permitted to discharge between 1.5 and 5.0 MGD.

The Department has evaluated effluent pH data for secondary and primary treated waste waters from August 2006 through April 2007, which indicates there have been no reported exceptions of the range limitation.

Swirl Separator (Primary Treated Wastewaters)

The previous permitting action established a daily maximum pH range limitation of 6.0 – 9.0 SU for primary treated waste waters discharge via the swirl separator (Outfall #001C). The Department has since reconsidered appropriate parameters and monitoring requirements for the discharge of primary treated waste waters from publicly owned treatment works and has determined that a pH range limitation is not necessary to evaluate the performance of the primary treatment system and impacts to receiving water quality. Therefore, this permitting action is eliminating the daily maximum pH range limitation for primary treated waste waters consistent with the monitoring and reporting requirements established in MEPDES permits for other facilities authorized to discharge primary treated waste waters.

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

i. Whole Effluent Toxicity (WET), Priority Pollutant, and Analytical Chemistry Testing: 38 M.R.S.A. § 414-A and 38 M.R.S.A. § 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. 06-096 CMR 530 sets forth effluent monitoring requirements and procedures to establish safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected and narrative and numeric water quality criteria are met. 06-096 CMR 584 sets forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

WET, priority pollutant and analytical chemistry testing, as required by 06-096 CMR 530, is included in this permit in order to characterize the effluent. WET monitoring is required to assess and protect against impacts upon water quality and designated uses caused by the aggregate effect of the discharge on specific aquatic organisms. Acute WET tests are performed on invertebrate species mysid shrimp (*Mysidopsis bahia*); chronic WET tests are performed on sea urchin (*Arbacia punctulata*). Chemical-specific monitoring is required to assess the levels of individual toxic pollutants in the discharge, comparing each pollutant to acute, chronic, and human health water quality criteria. Priority pollutant testing refers to the analysis for levels of priority pollutants listed in 06-096 CMR 525(4)(VI). Analytical chemistry refers to a suite of twelve (12) chemical tests for ammonia-nitrogen, total aluminum, total cadmium, total chromium, total copper, total lead, total nickel, total silver, total zinc, total arsenic, total cyanide and total residual chlorine.

06-096 CMR 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 no information on the background levels of metals in the water column in Rockland Harbor. Therefore, a default background concentration of 10% of applicable water quality criteria is being used in the calculations of this permitting action.

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

06-096 CMR 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 applicable water quality criteria used in the calculations of this permitting action.

06-096 CMR 530(4)(F) requires evaluation of toxic pollutant impacts on a watershed basis. This section of the rule 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 model to conduct this analysis. Until such time the model is complete and a multi-discharger statistical evaluation can be conducted, the Department is evaluating the impact of the City's discharge assuming it is the only discharger to the receiving water. Should the multi-discharger evaluation indicate there are parameters that exceed or have a reasonable potential to exceed applicable AWQC, this permit may be reopened pursuant to Special Condition P, *Reopening of Permit For Modifications*, to incorporate additional limitations and or revise monitoring requirements.

This permit 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.

06-096 CMR 530(2)(B) categorizes dischargers subject to the toxics rule into one of four levels (Levels I through IV). Level II dischargers are those "*having a chronic dilution factor of at least 20 but less than 100 to 1.*" The chronic dilution factor associated with the discharge from the Rockland facility is 73 to 1; thus, the facility is considered a Level II facility for purposes of toxics testing. 06-096 CMR 530(2)(B)(D) specifies default WET, priority pollutant, and analytical chemistry test schedules for Level II as follows:

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

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
II	2 per year	1 per year	4 per year

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

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

The previous permitting action established surveillance and screening level WET and chemical-specific testing pursuant to the toxics rule in effect at that time. On April 10, 2006, the Department amended the 6/13/01 permit to establish testing requirements required by 06-096 CMR 530, which became effective October 2005. The 4/10/06 modification established reduced (once every two years) surveillance level testing for the sea urchin and analytical chemistry, and full surveillance level testing for the mysid shrimp. (Surveillance level priority pollutant testing under 06-096 CMR 530 is not required for Level II facilities.) The 4/10/06 modification also established surveillance level testing for total arsenic at a frequency of twice per year. The 4/10/06 amendment established screening level WET testing at a frequency of twice per year, priority pollutant testing at once per year and analytical chemistry testing at once per calendar quarter.

A review of the data on file with the Department for the City indicates that they have fulfilled the WET and chemical-specific testing requirements of the previous permitting action and 4/10/06 amendment.

WET Evaluation

06-096 CMR 530(3)(E) states:

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

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

On October 3, 2007, the Department conducted a statistical evaluation on the most recent 60 months of WET test results on file with the Department for the Rockland facility in accordance with the statistical approach outlined above. **The 10/3/07 statistical evaluation indicates the discharge from the Rockland Wastewater Treatment Facility has on one occasion (minimum test result of 29.5% on 8/29/2004) demonstrated a reasonable potential to exceed the critical acute water quality threshold for the mysid shrimp. The 10/3/07 statistical evaluation indicates the discharge has one occasion (minimum test result of 1.37% on 4/9/2007) demonstrated a reasonable potential to exceed the critical chronic water quality threshold of 1.37% for the sea urchin.** See Attachment C of this Fact Sheet for a summary of the WET test dates and results.

06-096 CMR 530(3) states, in part,

> *The Department shall establish appropriate discharge prohibitions, effluent limits and monitoring requirements in waste discharge licenses if a discharge contains pollutants that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an ambient excursion in excess of a numeric or narrative water quality criteria or that may impair existing or designated uses. The licensee must also control whole effluent toxicity (WET) when discharges cause, have a reasonable potential to cause, or contribute to an ambient excursion above the narrative water quality criteria.*

Therefore, this permitting action is establishing a numeric limitation of 15.38% (mathematical inverse of the acute dilution factor) for the mysid shrimp and a numeric limitation of 1.37% (mathematical inverse of the chronic dilution factor) for the sea urchin.

06-096 CMR 530(2)(D)(3)(c) states, *"dischargers in Level II may reduce surveillance testing to one WET or specific chemical series every other year provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedence."* Based on the results on file with the Department, the City does not qualify for reduced surveillance level WET testing. Screening level WET testing is being carried forward from the 4/10/06 amendment based on the default monitoring frequencies specified above.

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

Priority Pollutant Evaluation

The previous permitting action established water quality-based monthly average concentration and mass limits of 23 µg/L and 0.84 lbs./day, respectfully, for total arsenic based on a April 24, 2001 statistical evaluation of effluent data on file with the Department, which indicated that five arsenic test results exhibited a reasonable potential to exceed the human health (organisms only) AWQC.

The previous permitting action established water quality-based daily maximum concentration and mass limits of 28 µg/L and 0.52 lbs./day, respectfully, for total copper based on the 4/24/01 statistical evaluation and indication that one copper test result exceeded the acute AWQC.

The previous permitting action established water quality-based daily maximum concentration and mass limits of 10 µg/L and 0.18 lbs./day, respectfully, for total cyanide based on the 4/24/01 statistical evaluation and indication that one cyanide test result exceeded the acute AWQC.

The previous permitting action established a minimum monitoring frequency requirement of once per calendar quarter for total arsenic, total copper and total cyanide. Additionally, the previous permitting action established Special Condition I, *Toxicity Reduction Evaluation (TRE),* as was required by the previous toxics rule for the copper and cyanide AWQC exceedences.

On October3, 2007, the Department conducted a statistical evaluation on the most recent 60 months of chemical-specific tests results on file with the Department for the Rockland facility in accordance with the statistical approach outlined in the beginning of this section. **The 10/3/07 statistical evaluation indicates a total of five (5) total arsenic test results ranging from 17 µg/L to 31 µg/L potentially exceed the human health (organisms only) ambient water quality criterion (AWQC) threshold for inorganic arsenic. All six (6) total arsenic tests results considered in the 8/3/07 evaluation potentially are reasonable potential to exceed the AWQC for inorganic arsenic. The 10/3/07 statistical evaluation indicates three (3) total cyanide test results (15 µg/L on 10/18/06, 28 µg/L 2/12/07, and 37 µg/L 8/14/07) demonstrate a reasonable potential to exceed the acute and chronic AWQC for free cyanide and the test results of 28 µg/L and 37 µg/L exceed the acute AWQC. The 10/3/07 statistical evaluation indicates two (2) total copper test results (22 µg/L on 1/9/07 and 21 µg/L on 2/12/07) demonstrate a reasonable potential to exceed the acute AWQC for total copper**. See Attachment D of this Fact Sheet for a summary of chemical-specific test dates, arsenic, copper and cyanide test results.

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

The 10/3/07 statistical evaluation indicates that the discharge does not exceed or have a reasonable potential to exceed the AWQC for any other parameters tested than those specified above. Based on the results of facility testing, this permitting action is revising the effluent limitations and monitoring requirements for total copper. This permitting action is establishing reduced surveillance level analytical testing at a minimum frequency of once every two years and screening level testing at a minimum frequency of four per year for all applicable parameters, except inorganic arsenic, total copper and free cyanide.

06-096 CMR 530(3) states, *"the Department shall establish appropriate discharge prohibitions, effluent limits and monitoring requirements in waste discharge licenses if a discharge contains pollutants that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an ambient excursion in excess of a numeric or narrative water quality criteria or that may impair existing or designated uses."* Therefore, this permitting action is establishing water quality-based monthly average concentration and mass limits for <u>inorganic</u> arsenic and for free cyanide, and is revising the daily maximum concentration and mass limits for total copper.

On October 9, 2005, 06-096 CMR 584 became effective. The rule establishes ambient water quality criteria for toxic pollutants in surface waters of the State. The human health (organisms only) AWQC for inorganic arsenic was revised from 0.14 µg/L, which was the basis for the previous total arsenic limits, to 0.028 µg/L. The current human health (water and organisms) AWQC for inorganic arsenic is 0.012 µg/L. This permitting action is establishing inorganic arsenic limitations based on the organisms only criterion on the basis that the receiving waters are not utilized (consumed) as a source of drinking water for humans.

<u>Inorganic Arsenic</u>

End-of-pipe (EOP), water quality-based, monthly average concentration and mass limits for inorganic arsenic may be calculated as follows:

EOP Concentration Limit = (Dilution Factor)[(0.75)(criterion)] + (0.25)(criterion)

EOP Human Health-Based Monthly Average Concentration Limit =
(219)[(0.75)(0.028 µg/L)] + (0.25)(0.028 µg/L) = 4.6 µg/L

EOP Arsenic Mass Limit = (EOP Conc. Threshold)(8.34 lbs./gallon)(discharge flow limit, MGD)

Monthly Avg. EOP Inorganic Arsenic Mass Limit =

$$\frac{(4.6\ \mu g/L)(8.34\ lbs./gallon)(3.3\ MGD)}{1000\ \mu g/mg} = 0.13\ lbs./day$$

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

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 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 4.6 ug/L for inorganic arsenic calculated on page 26 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 9.2 ug/L. The calculation is as follows:

$$\frac{\text{4.6 ug/L inorganic arsenic}}{\text{0.5 ug/L inorganic arsenic/ 1.0 ug/L total arsenic}} = \text{9.2 ug/L total arsenic}$$

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

Therefore, a total arsenic value greater than 9.2 ug/L is potentially exceeding the water quality based end-of pipe monthly average concentration value of 4.6 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 9.2 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 4.6 ug/L.

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

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

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

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

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

(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 27 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

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

exceedences 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 26 and 27 of this Fact Sheet.

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.

Total Copper

Previous Limits and Basis: The previous permitting action established water quality-based daily maximum concentration and mass limits of 28 µg/L and 0.52 lbs./day, respectfully, for total copper based on the 4/24/01 statistical evaluation and indication that one copper test result exceeded the acute AWQC.

New Permit Limits and Basis: 06-096 CMR 584 establishes acute AWQC for total copper of 5.78 µg/L, which is less stringent than the acute criterion in effect at the time the previous permit was issued (2.9 µg/L). However, as discussed above, the Department holds in reserve a total of 25% of the AWQC to account for background concentrations and future allocations. 06-096 CMR 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 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."* The arithmetic mean of 2.0 MGD is less than the design capacity of 3.3 MGD as discussed in Section 6.a of this fact sheet. As not to penalize the permittee for operating at flows less than the permitted flow, the Department is establishing concentration limits for total copper and total cyanide based on a factor of 1.5.

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

Based on the AWQC for copper, daily maximum water quality-based limits/thresholds for total copper may be calculated as follows:

Daily Maximum Conc. = (6.5)[(0.75)(5.78 µg/L)] + (0.25)(5.78 µg/L)
= 28.2 + 1.4
= 29.6 µg/L x 1.5
= **44.4 µg/L**

Daily Max. Mass = $\frac{(29.6\ \mu g/L)(8.34\ lbs./gallon)(3.3\ MGD)}{1000\ \mu g/mg}$ = **0.81 lbs./day**

The calculated water quality-based daily maximum concentration and mass limits of 44.4 µg/L and 0.81 lbs./day, respectively, are less stringent than the previous permit limits and are based on new information regarding copper toxicity in marine waters. These limitations represent the most sound science currently available and are therefore being established in this permitting action. This permitting action is carrying forward the minimum monitoring frequency requirement of once per calendar quarter for total copper.

Free Cyanide

Previous Limits and Basis: The previous permitting action established water quality-based daily maximum concentration and mass limits of 10 µg/L and 0.18 lbs./day, respectfully, for total cyanide based on the 4/24/01 statistical evaluation and indication that one cyanide test result exceeded the acute AWQC.

New Permit Limits and Basis: 06-096 CMR 584 establishes acute and chronic AWQC for ***free*** cyanide of 1.0 µg/L, which is the same as criteria in effect at the time the previous permit was issued. However, as discussed above, the Department holds in reserve a total of 25% of the AWQC to account for background concentrations and future allocations; thus the revised limits will be more stringent than the previous limits.

Based on the AWQC for cyanide, monthly average and daily maximum water quality-based limits for free cyanide are being established in this permitting action as follows:

Monthly Average Conc. = (73)[(0.75)(1.0 µg/L)] + (0.25)(1.0 µg/L)
= 54.6 + 0.3
= 54.9 µg/L x 1.5
= **82.4 µg/L**

Daily Maximum Conc. = (6.5)[(0.75)(1.0 µg/L)] + (0.25)(1.0 µg/L)
= 4.9 + 0.3
= 5.2 µg/L x 1.5
= **7.8 µg/L**

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

Monthly Avg. Mass = $\frac{(54.9\ \mu g/L)(8.34\ lbs./gallon)(3.3\ MGD)}{1000\ \mu g/mg}$ = **1.5 lbs./day**

Daily Max. Mass = $\frac{(5.2\ \mu g/L)(8.34\ lbs./gallon)(3.3\ MGD)}{1000\ \mu g/mg}$ = **0.1 lbs./day**

It is noted that the calculations above are calculated correctly in that the daily maximum limitations are more stringent than the monthly average as a result of the ratio of the acute to chronic dilution factors while the acute and chronic AWQC for free cyanide are equivalent.

The calculated daily maximum water quality-based limits of 7.8 µg/L and 0.1 lbs./day are more stringent than the previous permit limits of 10 µg/L and 0.18 lbs./day and are being carried forward based on the requirements of Department rules. This permitting action is carrying forward the minimum monitoring frequency requirement of once per calendar quarter for free cyanide.

Special Condition I of this permit establishes a requirement for the City to submit to the Department, for review and comment, and to implement a TRE for free cyanide as required by 06-096 CMR 530.

06-096 CMR 530(2)(D)(3)(c) states, *"dischargers in Level II may reduce surveillance testing to one WET or specific chemical series every other year provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedence."* Therefore, this permitting action is establishing reduced surveillance level analytical chemistry testing for those analytical chemistry parameters not otherwise limited in this permit. 06-096 CMR 530(2)(D)(4) states, *"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."

This permitting action establishes Special Condition H, *06-096 CMR 530 Statement for Reduced/Waived Toxics Testing*, pursuant to 06-096 CMR 530(2)(D)(4). It is noted, however, that if future testing indicates the discharge exceeds critical water quality thresholds, this permit will be reopened in accordance with Special Condition P, *Reopening of Permit For Modification,* to establish effluent limitations and monitoring requirements as necessary.

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

j. *Primary Treated Wastewater*

The permittee maintains a combined sewer system from which wet weather overflow have been documented. To address and control these events, the applicant has completed a Master Plan (Long Term Control Plan) for its sewer systems and has considered various control options. The Department approved the Master Plan on April 5, 2005. The plan addresses all of the relevant considerations contained in the USEPA's CSO Policy, section II.C. See Federal Register, April 19, 1994. One element of the applicant's Master Plan is to maximize existing infrastructure to covey as much excess wet weather flow to the treatment facility as practicable. However, due to the nature and volume of wet weather flows, it is not possible to provide secondary treatment for all flows that can be conveyed to the treatment plant site. Attempting to do so would cause upsets and damage to the secondary treatment process. Expansion of the secondary system would not be practicable since the facilities would be too large to effectively treat normal dry weather flows.

Given these circumstances, and consistent with the USEPA's April 19, 1994 CSO Policy, Section II.C.7, the Department has determined that primary treatment and disinfection (when required) is an appropriate means of best practicable treatment (BPT) for some excess CSO flows and this treatment can be accomplished at the existing treatment facility site. For those flows received at the treatment facility which are greater than that which can be treated to a secondary level of treatment, the Department has made a best professional judgment (BPJ) that primary treatment and disinfection constitute appropriate and best practicable treatment. This permitting action carries forward numeric daily maximum limitations of 200 colonies/100ml for fecal coliform bacteria and 1.0 mg/L for TRC based on Department BPJ of BPT for primary treated wastewater.

Bacterial contamination is the most direct water quality risk from wet weather discharge events and this permit contains limits for fecal coliform bacteria on a seasonal (May 15 – September 30) basis to protect the health, safety and welfare of the public. Since the primary effluent is somewhat more difficult to disinfect due to a higher organic content and flow variations, the use a daily maximum of 50 colonies/100mL for fecal coliform bacteria as in the secondary effluent would be inappropriate. The Department has made a best professional judgment determination that the limitation of 200 colonies/100 ml constitutes best practicable treatment for primary-treated wastewater that, with the available dilution, is protective of receiving water quality. The total residual chlorine limit of 1.0 mg/L was established using the same considerations as for the secondary effluent, see section 6(g) of this Fact Sheet.

It is noted that the previous permitting action assigned the outfall pipe associated with the discharge of primary treated effluent under normal tides #001B, however, this outfall pipe was not properly coded in the Department's permit compliance tracking system (PCS) database and all data entered for this outfall was entered under Outfall #001C. Therefore, to maintain continuity of data for this outfall, this permitting action is assigning a new identifier of Outfall #001C for the outfall pipe associate with the swirl separator discharge

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

to Rockland Harbor via outfall pipe #001A. See Attachment F of this fact sheet, City of Rockland Flow Diagram, Prepared by Department staff, John True, dated March 15, 2006.

For Outfall #001C (formerly identified as Outfall #001B) this permitting action is carrying forward, and for Outfall #002A (primary effluent discharge from swirl separator to Lermond Cove when Outfall #001C is hydraulically limited due to high tides) this permitting action is establishing primary treatment monitoring and reporting requirements for Discharge Flow, Surface Loading Rate, Overflow Occurrence, BOD_5, BOD_5 Percent Removal, TSS, TSS Percent Removal, Fecal Coliform Bacteria, and TRC based on a Department BPJ of data necessary to evaluate the performance of the primary treatment process.

7. PRETREATMENT

The permittee is required to administer a pretreatment program based on the authority granted under Federal regulations 40 CFR Part 122.44(j), 40 CFR Part 403, section 307 of the Federal Water Pollution Control Act (Clean Water Act), and *Pretreatment Program*, 06-096 CMR 528 (effective January 12, 2001). The permittee's pretreatment program received USEPA approval on August 16, 1983, and as a result, appropriate pretreatment program requirements were incorporated into the previous National Pollutant Discharge Elimination System (NPDES) permit that were consistent with that approval and federal pretreatment regulations in effect when the permit was issued. The State of Maine has been authorized by the USEPA to administer the federal pretreatment program as part of receiving authorization to administer the NPDES program.

Upon issuance of this permit, the permittee is obligated to modify (if applicable) its pretreatment program to be consistent with current federal regulations and State rules. Those activities that the permittee must address include, but are not limited to, the following: (1) develop and enforce Department-approved specific effluent limits (technically-based local limits - last approved by the USEPA on October 9, 1996); (2) revise the local sewer-use ordinance or regulation, as appropriate, to be consistent with federal regulations and State rules; (3) develop an enforcement response plan; (4) implement a slug control evaluation program; (5) track significant non-compliance for industrial users; and (6) establish a definition of and track significant industrial users. These requirements are necessary to ensure continued compliance with the POTWs MEPDES permit and its sludge use or disposal practices.

In addition to the requirements described above, this permit requires that **within 180 days prior to the expiration date of this permit,** the permittee shall submit to the Department in writing, a description of proposed changes to permittee's pretreatment program deemed necessary to assure conformity with current federal and State pretreatment regulations and rules, respectively. These requirements are included in the permit to ensure that the pretreatment program is consistent and up-to-date with all pretreatment requirements in effect. **By July 1 of each calendar year,** the permittee must submit a pretreatment annual report detailing the activities of the program for the twelve-month period ending 60 days prior to the due date.

8. COMBINED SEWER OVERFLOWS

This permit does not contain effluent limitations on the individual CSO outfalls listed in the table below.

Outfall #	Description	Outfall Location	Receiving Water and Class
003	Untreated sanitary/storm water	Park Street Pump Station	Rockland Harbor, Class SC
009	Untreated sanitary/storm water	Public Landing	Rockland Harbor, Class SC

Combined Sewer Overflow Abatement 06-096 CMR 570 (last amended February 8, 1978) states that for discharges from overflows from combined municipal storm and sanitary sewer systems, the requirement of "best practicable treatment" specified in 38 M.R.S.A. 414-A(1)(D) may be met by agreement with the discharger, as a condition of its permit, through development of a plan within a time period specified by the Department. The City submitted to the Department a CSO Master Plan entitled, *Combined Sewer Overflow Facilities Plan, Rockland, Maine, March 1998*, prepared by Earth Tech, and the modified plan and schedule contained in the City's consultant's, Wright-Pierce, March 8, 2005, letter entitled, *City of Rockland - Modification to the CSO Facilities Plan*, as approved by the Department on April, 5, 2005.

The City has been actively implementing the recommendations of the Master Plan and to date has significantly reduced the volume of untreated combined sewer overflows to the receiving water. Special Condition N, *Conditions For Combined Sewer Overflows*, of this permit contains a schedule of compliance for items in the most current up-to-date abatement plan which must be completed.

The Department acknowledges that the elimination of the three remaining CSOs in the collection system and the secondary bypass (primary treated only) of sanitary wastewater is a costly, long-term project. As the Rockland treatment facility and the sewer collection system is upgraded and maintained in according to the CSO Master Plan and Nine Minimum Controls, there should be reductions in the frequency and volume of CSO activities and in the wastewater receiving primary treatment only at the treatment plant, and, over time, improvement in the quality of the wastewater discharged to the receiving waters.

9. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

The Department acknowledges that the elimination of the two (2) CSOs in the collection system are costly long-term projects. As the City's sewer collection system is upgraded and maintained in accordance with the City's CSO Master Plan and Nine Minimum Controls, there should be reductions in the frequency and volume of CSO activities and in the waste water receiving primary treatment only at the treatment plant over time. The Department expects these reductions to show an improvement in the ambient water quality of the receiving waters impacted by CSO discharges. Based on information to date, the Department has determined the existing water uses will be maintained and protected provided the permittee complies with the terms and condition established herein.

10. PUBLIC COMMENTS

Public notice of this application was made in the *Courier Gazette* newspaper on or about March 28, 2006. The Department receives public comments on an application until the date a final agency action is taken on the 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 *Application Processing Procedures for Waste Discharge Licenses*, 06-096 CMR 522 (effective January 12, 2001).

11. DEPARTMENT CONTACTS

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

William F. Hinkel
Division of Water Quality Management
Bureau of Land & Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone: (207) 287-7659 Fax: (207) 287-3435
e-mail: bill.hinkel@maine.gov

12. RESPONSE TO COMMENTS

During the period of August 3, 2007 through September 4, 2007, the Department solicited comments on the proposed draft Maine Pollutant Discharge Elimination System Permit to be issued to the City for the proposed discharges. Additionally, the Department issued preliminary draft permits for the Rockland facility to the City and FMC Biopolymer, an interested party in this matter, on April 3, 2006, October 3, 2006, and April 26, 2007. The Department received several significant comments from the City and FMC Biopolymer on the proposed draft permit. The City's comments were received via letter dated August 30, 2007, and the City noted that all previously submitted comments remain relevant to the proposed draft. The City submitted written comments to the Department in letters dated, November 7, 2006 and May 23, 2007. FMC Biopolymer's comments were received via letter dated August 31, 2007, and FMC Biopolymer noted that comments submitted on October 23, 2006, May 25, 2007 and July 31, 2007 remain relevant to the proposed draft. The comments and Department responses are summarized below.

Comment #1: The City and FMC Biopolymer objected to the revision of the effluent limitations for BOD_5.

In their comments of November 27, 2006, the City stated that the dataset the Department utilized to evaluate and establish appropriate effluent limitations for BOD_5 was "flawed and did not include or represent the influence of wastewater from the WPCF's single largest industrial user, FMC Biopolymer." The City continued, "Therefore, the samples collected by the sampler unit prior to July 27, 2006 [and submitted to the ME DEP in Discharge Monitoring Reports (DMRs)] did not include any wastewater from FMC. This applies to all samples collected, not just BOD." The City stated that "loadings to the WPCF are much higher than have historically (and are currently) been reported to the ME DEP." The City "strongly requests that the BOD effluent concentration limits from the June 2001 MEPDES Permit be carried forward in the Final MEPDES Permit."

In their comments of August 31, 2007, FMC Biopolymer stated that "it will be very difficult for the Facility to consistently achieve the proposed lowered Biochemical Oxygen Demand (BOD) limits of 30/45/50 as well as the limits in the current permit for Total Suspended Solids (TSS) limits of 30/45/50. While influent loading data over the last 6 months supports the lower limits, this data is limited and has been collected over too short a period. The longer term loadings clearly are in the range that justifies higher discharge limits. As was agreed (in principle) at our January 5, 2007 meeting, the MDEP should plan to reassess loadings at the next permit renewal, and incorporate the current permit BOD limits of 45/70/75 in the permit that is to be issued this year."

12. RESPONSE TO COMMENTS (cont'd)

Response #1: The Department was informed by the City during the summer of calendar year 2006 that influent wastewater from FMC Biopolymer was not being measured or sampled prior to July 27, 2006. Given the characteristics, quantity and quality of this industrial source of wastewater entering the City's treatment system that was not sampled or monitored prior to July 2006, the Department has made a determination to consider monitoring results for those samples collected after July 2006 in evaluating appropriate effluent limitations for BOD_5. The Department has considered data from August 2006 through April 2007 in developing appropriate effluent BOD_5 limitations for this facility. The arithmetic mean of the monthly average influent BOD_5 values reported to the Department for the period of August 2006 through April 2007 is 226 mg/L (range of 162 mg/L to 307 mg/L). According to the USEPA's *Onsite Wastewater Treatment Systems Manual*, dated February 2002, table 3-7 entitled "Constituent Mass Loadings and Concentrations in Typical Residential Wastewater" high-end range of values for influent BOD_5 and TSS may be assumed to be 300 mg/L. The average influent BOD_5 value of 226 mg/L is consistent with what the USEPA considers to be typical residential wastewater. Therefore, the Department is making a best professional judgment determination that the representative data on file and information in the record do not justify establishing effluent limits that are less stringent than the standard secondary treatment requirements of 06-096 CMR 525. Should a larger data set (a minimum of 12 months of representative influent data) indicate the influent strength is significantly higher than typical domestic wastewater, the City may submit an application to the Department to reconsider effluent limitations for BOD_5 through modification of this permit.

Comment #2: The City and FMC Biopolymer objected to the decision to carry forward the effluent limitations for TSS.

In their letter of August 30, 2007, the City stated that meeting a daily maximum TSS concentration limit of 50 mg/L during wet weather high flows would be problematic. "The 50 mg/l limit is not a Chapter 525 requirement. Therefore, it is requested maximum daily TSS concentration be a report only requirement."

In their letter of August 31, 2007, FMC Biopolymer stated, "FMC understands that it is a goal of the Maine Department of Environmental Protection (MDEP) to encourage all dischargers to improve performance. FMC further understands that an 85% reduction and application of best conventional treatment limits for publicly owned treatment works is the MDEP's preferred approach. However, for reasons described in detail in the enclosed comments, due to the nature and volume of the industrial waste component in the discharge from the Facility, FMC believes that adjusted effluent limits, as authorized by 40 CFR Section 133.103 and Maine DEP regulations at Ch. 525(3)(IV) are warranted. There is precedent for adjustment of BCT limits in other MEPDES permitting situations." Additional comments on TSS from FMC Biopolymer are summarized in Comment #1 above.

12. RESPONSE TO COMMENTS (cont'd)

Response #2: The previous permitting action established a requirement to achieve a minimum 30-day average removal of 85 percent for TSS pursuant to 06-096 CMR 525(3)(III)(b)(3). The City reported that influent samples collected prior to July 27, 2006 did not include wastewater from the system's largest user, FMC Biopolymer. Therefore, TSS percent removal values reported to the Department prior to August 2006 are not representative of actual conditions. The facility reported TSS percent removal values of 90% (August 2006), 91% (October 2006) and 73% (November 2006) since measurement/sampling of all influent flows commenced in August 2006. Therefore, the Department is making a best professional judgment determination that the representative data on file and information in the record do not justify establishing effluent limits that are less stringent than the standard secondary treatment requirements of 06-096 CMR 525. The daily maximum concentration limit of 50 mg/L is a long-standing standard based on Department best professional judgment of best practicable treatment established for publicly owned treatment works, including large facilities with CSOs, such as the Portland Water District, the City of Bangor and the City of Saco. Additionally, the City has not demonstrated to the Department that it has made every reasonable effort to maximize effluent TSS quality through its pretreatment program and proper operation of the treatment facility. The Department concludes that the City has not satisfactorily demonstrated that elimination of the daily maximum TSS concentration limit of 50 mg/L, which has been in effect over several five-year permit cycles, or that adjustment of effluent limitations pursuant to 06-096 CMR 525(3)(IV) is justified at this time. This permitting action does establish a report only requirement for the daily maximum mass discharge to encourage the facility to maximum the use of its secondary treatment system.

Comment #3: The City and FMC Biopolymer objected to the "trigger" flow value of 5.7 MGD for use of the swirl separator.

In their letter of August 31, 2007, the City stated, "In several locations in the draft permit, wet weather flow rate to the secondary system must meet or exceed an instantaneous flow rate of 5.7 MGD, or in accordance with the most current approved High Flow Management Plan. The 5.7 MGD threshold requirement would lead to violations of the permitted TSS concentration and/or mass limit(s). If higher plant flow rates are required, higher TSS concentration and mass limits would be necessary, or a more realistic flow threshold would need to be established during the development of the DEP approved High Flow Management Plan. Therefore, maximum wet weather flow should be based on actual plant performance." The City stated, "Regardless of design specifications, actual plant observations demonstrate unacceptable plant performance at flow rates exceeding the permit flow of 3.3 MGD."

In their August 30, 2007 letter, FMC Biopolymer stated, "FMC submits that the recalibration of the Facility's effluent flow meter in late March of 2007 and May 1, 2007 is an important change that is not fully understood at the present time. It certainly appears that much of the past marginal BOD and TSS performance is linked to high influent flows that were under-reported with the previous calibration. We appreciate that MDEP is willing to delay the implementation of a trigger flow for the Swirl Unit to allow the City time to develop a high flows management plan. FMC is concerned that MDEP's expectations for a trigger flow

12. RESPONSE TO COMMENTS (cont'd)

during sustained wet weather conditions may be too high, and this issue is only being deferred until the high flows management plan is submitted to the Department. It would be helpful if there was some acknowledgement that a multi-tiered trigger flow is anticipated with lower trigger flows during sustained wet weather conditions."

Response #3: The instantaneous flow rate limitation of 3,958 gallons per minute (5.7 MGD) is based on "*Table 2-1 Rockland, Maine WWTF Upgrade and CSO Abatement Program Design Criteria August 1997*." The Department has established a report only requirement for BOD_5 and TSS daily maximum mass to encourage the facility to process as much high flow through the secondary treatment system as possible while still providing best practicable treatment of the wastewater. The Department's CSO Coordinator has evaluated this primary wastewater discharge threshold and has determined that it is consistent with the range of thresholds established for other CSO communities. Additionally, data submitted to the Department by the City indicates that the swirl separator has been utilized during periods when the instantaneous flows through the treatment facility were less than the average dry weather design flow rate of 3.3 MGD. This information suggests that the swirl separator has been used in response to solids process control problems at the facility. The permit allows the facility to discharge primary treated waste waters in accordance with an approved wet weather management plan. The Department concludes that establishing a primary treated wastewater discharge threshold based on the engineered design of the facility is appropriate and justified. Specific situations in which swirl separator discharges below the 5.7 MGD threshold are acceptable must be identified and defined in the wet weather management plan. Where justified and described in the wet weather management plan, this permit authorizes discharges of primary treated waste waters when the instantaneous flow rate is less than 5.7 MGD.

Comment #4: The City and FMC Biopolymer objected to the terms and conditions of arsenic limits and monitoring requirements.

In their letter of August 30, 2007, the City stated, "Due to the lack of an approved test method for inorganic arsenic, DEP should reconsider compliance deadlines until an approved test method is developed. DEP's current plan to assume total arsenic results are 50% organic and 50% inorganic has no scientific basis. Therefore, an approved inorganic arsenic test method should be developed prior to establishing inorganic arsenic compliance deadlines."

In their letter of August 31, 2007, FMC Biopolymer stated, "…there is significant scientific evidence that the human health criteria for arsenic are fundamentally flawed. FMC submits that the MDEP should seriously consider abandoning the use of the human health criteria for arsenic until better data is available, and rely on the use of the aquatic toxicity criteria under Chapter 584."

12. RESPONSE TO COMMENTS (cont'd)

Response #4: There are no provisions in Maine law or Department rule to abandon ambient water quality criteria established in 06-096 CMR 584. Although the Department is aware of the arguments concerning the human health criteria for arsenic, the criteria has been adopted into rule and must be implemented in permits, where appropriate. The Department has worked closely with the regulated community, the Maine Rural Water Association and the Maine Wastewater Control Association to develop a reasonable strategy to implement arsenic limitations and monitoring requirements in permits for facilities that have demonstrated through total arsenic testing an exceedence or a reasonable potential to exceed the ambient water quality criteria for inorganic arsenic. The criteria developed by the USEPA and adopted by 06-096 CMR 584 is for inorganic arsenic. While the Department agrees that lack of an approved test method for inorganic arsenic for wastewater is problematic, this does not relieve this Department from implementing limits and monitoring requirements for this toxic metal. The arsenic protocol described in this permit and fact sheet represent the Department's exhaustive effort to develop a reasonable approach to fulfilling the requirement to implement the arsenic criteria in permits.

Comment #5: The City objected to the requirement to monitor fecal coliform bacteria once per day and requested that this monitoring frequency be reduced to five times per week.

Response #5: In consideration that the City participated in the Maine Healthy Beaches Program in 2007, and that the public beach at Rockland is now listed as open for recreation, the Department has revised the minimum monitoring frequency requirement for fecal coliform bacteria to five times per week.

Comment #6: The City stated that the draft permit establishes effluent limits for total cyanide. However, 06-096 CMR 584 establishes ambient water quality criteria for free cyanide. The City stated that the analytical methods for free cyanide require collection of grab samples rather than composite samples, as specified in the draft permit.

Response #6: The Department concurs that cyanide should be regulated as free cyanide and that grab samples should be required. These changes have been made to the final permit.

12. RESPONSE TO COMMENTS (cont'd)

Comment #7: The City stated that WET test results for April 9, 2007 were incorrectly entered into the Department's database and resulted in the incorrect determination by the Department that the 4/9/07 test result exceeded the critical acute and chronic thresholds for the mysid shrimp.

Response #7: The Department concurs that the acute and chronic dilution limits rather than the actual test results were entered into the Department's database for the 4/9/07 WET test. This information has been corrected in the final permit. This correction resulted in a determination that the 4/9/07 test results do not exceed the critical acute or chronic thresholds and a TRE plan for the mysid shrimp is not required. Special Condition I of the permit has been revised to eliminate the requirement to perform a TRE for the mysid shrimp. The Department ran an updated statistical evaluation of the WET and chemical-specific data on October 3, 2007 based on this information. The 10/3/07 evaluation indicated a total cyanide test result of 37 ug/L on August 14, 2007 also exceeds the acute AWQC for free cyanide.

Comment #8: The City requested that the final permit be revised to extend the deadline for submission of a wet weather management plan from March 1, 2008 to April 1, 2008 to allow adequate time to develop the plan based on seasonal variations in plant operations.

.

Response #8: The Department has revised Special Condition L of the draft permit to extend the submission deadline to April 1, 2008, as requested.