MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

AND

MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: **December 20, 2002**

PERMIT NUMBER: **ME0100218**

LICENSE NUMBER: **W002650-5L-E-R**

NAME AND ADDRESS OF APPLICANT:

Falmouth Water Pollution Control Facility
271 Falmouth Road
Falmouth, ME. 04105

COUNTY: **Cumberland County**

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

250 Clearwater Drive
Falmouth, ME. 04105

RECEIVING WATER(S)/CLASSIFICATION: **Presumpscot River Estuary/Class SC**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Robert "Peter" Clark, Supt.**
(207) 781-4462

1. APPLICATION SUMMARY

a. Application: The applicant has applied to the Department for modification and renewal of Department Waste Discharge License (WDL) #W002650-5L-C-R which was issued on September 23, 1999 and is due to expire on September 23, 2004. The 9/23/98 WDL authorized the discharge of up to a monthly average flow of 1.56 million gallons per day (MGD) of secondary treated sanitary waste waters from a publicly owned treatment works facility to the Presumpscot River estuary, Class SC, in Falmouth, Maine.

The permittee has requested the Department modify the existing WDL to incorporate the terms and conditions of the MEPDES permitting program.

2. PERMIT SUMMARY

b. Regulatory: On January 12, 2001, the Department received authorization from the U. S. Environmental Protection Agency (EPA) to administer the National Pollutant Discharge Elimination System (NPDES) permitting program in Maine. From this point forward, the program will be referenced as the MEPDES permit program. NPDES permit #ME0100218 last issued on September 2, 1993, will be replaced by the final MEPDES permit upon issuance. Once replaced, all terms and conditions of the NPDES become null and void.

c. Permit Summary: This permitting action is similar to the 3/23/99 WDL action in that it is;

1. Carrying forward the monthly average flow limit of 1.56 MGD.

2. Carrying forward the monthly average weekly average and daily maximum technology based mass and concentration limits for biochemical oxygen demand (BOD_5) and total suspended solids (TSS).

3. Carrying forward the daily maximum technology based concentration limit for settleable solids.

4. Carrying forward the monthly average and daily maximum water quality based limits for fecal coliform bacteria and the requirement to disinfect the discharge on a year-round basis.

5. Carrying forward the monthly average and daily maximum water quality based limits for total residual chlorine.

6. Carrying forward the requirement for surveillance and screening level whole effluent toxicity (WET) and chemical specific testing and the WET limit of 9.1% for the sea urchin.

7. Carrying forward the daily maximum water quality based mass and concentration limits for cyanide.

This permitting action is different than the 9/23/99 WDL action in that it is;

8. Revising the daily maximum technology based pH range limit from 6.0 – 8.5 standard units to 6.0 – 9.0 standard units based on a new Department regulation.

9. Establishing monthly average and daily maximum water quality based mass and concentration limits for copper.

2. PERMIT SUMMARY (cont'd)

10. Eliminating the monthly average water quality based mass and concentrations limits for ammonia, arsenic and bis (2-ethylhexyl-pthalate).

11. Establishing a requirement to develop or update the wet weather flow management plan for the facility.

12. Establishing a requirement to maintain an up-to-date Operations and Maintenance Plan for the facility.

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

September 2, 1993 – The EPA issued a renewal of NPDES permit #ME0100218 for a five-year term.

September 23, 1999– The Department issued WDL #W002650-5L-C-R for a five-year term.

January 24, 2000 – The Department administratively modified WDL #W002650-5L-C-R by requiring the waste water facility to disinfect on a year-round basis as the Maine Department of Marine Resources determined the discharge was causing the closure of a shellfish area in Mackworth Cove.

May 23, 2000 – Pursuant to Department rule Chapter 519*, Interim Effluent Limitations and Controls for the Discharge of Mercury*, the Department administratively modified the 9/23/99 WDL by establishing interim average and maximum concentration limits for the discharge of mercury.

September 21, 2000 – The EPA issued a formal "public notice" draft NPDES permit renewal for the waste water treatment facility. The NPDES permit was never issued as final document by the EPA due to the transition of the State of Maine receiving authorization from the EPA to administer the NPDES program in Maine.

December 16, 2002 – The Town of Falmouth filed an application with the Department to modify and renew WDL #W002650-5L-C-R.

e. Source Description: The waste water treatment facility was originally constructed and went on-line in 1971 and currently serves a population of approximately 7,350 users**.** The treatment facility receives sanitary waste waters generated by residential and commercial entities and does not have any industrial users contributing more than 10% of the flow or pollutant loading to the collection and or waste water treatment facility.

2. PERMIT SUMMARY (cont'd)

The sanitary sewer collection system consists of approximately forty-five (45) miles of piping with twenty-two (22) pump stations. Nine (9) of the pump stations are equipped with on-site back-up power and thirteen (13) are equipped with visual and audio alarms and served by portable generators. The sanitary collection system is completely separated from the storm water collection system and as a result, there are no combined sewer overflow (CSO) points in the collection system. The facility is authorized to receive up to and treat 8,000 gallons per day of septage from local septage haulers.

d. Waste Water Treatment: The facility provides a secondary level of treatment via an activated sludge system often referred to as a package treatment plant. The treatment plant headworks includes flow measurement in two Parshall flumes, a climber screen for rag removal and an aerated grit chamber for grit removal. Waste water is then treated in two Oxigest "Package Plant" type treatment units. These units include aeration, clarification and sludge digestion tanks. Effluent from the clarifiers is then disinfected using sodium hypochlorite in a chlorine contact tank and dechlorinated using sodium bisulfite. The treatment facility has back-up power to power flow instrumentation and chlorination/dechlorination equipment in the event of a power outage. The treated effluent is conveyed to the river through a 20-inch diameter 234-foot long pipe without a diffuser. The pipe is above high tide and discharges to the intertidal zone. At low tide, effluent flows in a ditch, through saltmarsh and mudflat and combines with Skitterygusset Creek, before reaching the main channel of the Presumpscot River estuary. High tide comes up to the base of the outfall structure. See Attachment A of this Fact Sheet for a schematic of the treatment facility.

The sludge handling equipment at the plant includes an aerobic digester with a capacity of 120,000 gallons, the two digesters in the package treatment units mentioned above with a capacity of 65,000 gallons each, a "Bird" centrifuge dewatering unit and three "Reed bed" storage basins. Dewatered sludge is composted by a contract vendor and liquid sludge is land applied. To date, it has not been necessary to dispose of sludge stored in the reed beds.

3. CONDITIONS OF PERMITS

Maine law, 38 M.R.S.A. Section 414-A, requires that the effluent limitations prescribed for discharges require application of best practicable treatment, 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, Maine law, 38 M.R.S.A., Section 420, and Department Regulation Chapter 530.5, *Surface Water Toxics Control Program* requires the regulation of toxic substances at the levels set forth for Federal Water Quality Criteria as published by the U.S. Environmental Protection Agency pursuant to the Clean Water Act.

4. RECEIVING WATER STANDARDS

Maine law 38 M.R.S.A., §469(8) classifies the Presumpscot River estuary as a Class SC waterway. Maine law, 38 M.R.S.A., §465-B(3) describes the standards for classification of Class SC waterways.

5. EXISTING WATER QUALITY CONDITIONS

Table Category 3 entitled, *Estuarine and Marine Water With Insufficient Data or Information to Determine Attainment*, in a document entitled, State of Maine Department of Environmental Protection, 2002 Intergrated Water Quality Monitoring and Assessment Report, published by the Department lists the Portland-Falmouth area (DMR area #14) Class SB/SC and Falmouth-Cumberland area (DMR area #14A) Class SB with insufficient data to determine attainment. Attainment in this context is in regard to the designated use of harvesting of shellfish. Currently, DMR shellfish harvesting area #14 and #14A are closed to the harvesting of shellfish due to insufficient (limited) ambient water quality data to meet the standards in the National Shellfish Sanitation Program. Therefore, areas #14 and #14A remain closed. Compliance with the fecal coliform bacteria limits in this permitting action ensure that the Falmouth waste water treatment facility will not cause or contribute to the shellfish harvesting closure.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

a. Dilution Factors - Department Regulation Chapter 530.5, *Surface Water Toxics Control Program*, §D(3)(b) 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 or CORMIX.

The previous licensing action established dilution factors as follow:

Acute = 8.3:1 Chronic = 11:1 Harmonic mean [(1)] = 33:1

Footnote:

(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 USEPA 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 & MONITORING REQUIREMENTS (cont'd)

The dilution factors associated with the discharge from the Falmouth waste water treatment facility have been debated between the Town of Falmouth, the Department and the EPA for over ten years. The debate has centered around the fact that over the majority of time between high tide cycles, the discharge flows over exposed mudflats, mixes with flows from Skitterygussett Creek and travels over additional mudflats before mixing with the main stem of the Presumpscot River in the estuary.

The 9/2/93 NPDES permit issued by the EPA indicates the acute and chronic dilution factor for the discharge was deemed to be 4.55:1 and applicable water quality based limits in the permit were established based on these dilutions. The 9/21/00 formal "public notice" draft NPDES permit also stated the acute and chronic dilution factors were 4.55:1. In subsequent letters and memorandums back and forth between the Town of Falmouth, EPA and the Department, the EPA was suggesting that the 4.55:1 was generous and that a case could be made that the dilution factors should be 1:1 given the discharge is to the mudflats at most of the tide cycle rather than the Presumpscot River.

In a letter dated October 25, 2000, from the Department to the EPA commenting on the 9/21/00 draft NPDES permit, the Department recommended the EPA revise the dilution factors to be consistent with the dilution factors in the 9/23/99 WDL issued by the Department. The letter states:

> *"The dilution calculations that were developed for the 1999 Maine waste discharge license (WDL) were based upon an EPA dye study conducted in 1989. The acute value of 8.3:1 was derived from the 2nd low tide occurrence since this dye run was determined to represent an equilibrium state in the estuary. The chronic dilution of 11:1 was derived from the average of the low and high tide runs. The derivation of these dilution ratios is consistent with the Department's Chapter 530.5 regulations and should be used in the final NPDES permit."* It is noted the 1999 dilution calculations took into consideration a fifteen-minute travel time in the Presumpscot River.

To address the EPA's concern that the discharge might be have an adverse impact on the marine life in the mudflats between the discharge outfall and the Presumpscot River, the closing paragraph of the 10/25/00 letter states in part:

> *"The Department conducted a qualitative marine life survey in the area of the Falmouth outfall location on June 21 and July 8, 1996 to determine whether the Falmouth discharge was having an adverse impact on marine life in the area. Observations conducted at that time in the area upstream and downstream of the discharge outfall, as well as a reference site adjacent to the discharge, revealed no observed effects of the Falmouth discharge compared to the other areas. (See attached memorandum, dated July 23, 1998 from David Courtemanch and Lee Doggett). The Department believes that the 1996 surveys indicate the Class SC*

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

marine life goals are being achieved. Further studies are not likely to result in a different conclusion, and the Department is not planning to conduct any further studies in this area. Alternatives such as extending the outfall across the inter-tidal area to the Presumpscot River would not appreciably change the MEDEP's dilution calculations, and would likely cause significant environmental impact to the salt marsh. Accordingly, the MEDEP does not believe that any further studies in the area would yield significantly different results than the July 1996 conclusions."

The acute, chronic and harmonic mean dilution factors of 8.3:1, 11:1, and 33:1 repectively, are being carried forward in this permitting action.

b. Flow: The previous licensing action established a monthly average flow limitation of 1.56 MGD that is being carried forward in this permitting action as it remains representative of the monthly average design capacity of the facility.

c. Biochemical Oxygen Demand (BOD5) & Total Suspended Solids (TSS): - The previous licensing established monthly and weekly average BOD5 and TSS best practicable treatment (BPT) concentration limits of 30 mg/L and 45 mg/L respectively, that were based on secondary treatment requirements of the Clean Water Act of 1977 §301(b)(1)(B) as defined in 40 CFR 133.102 and Department rule Chapter 525(3)(III). The maximum daily BOD5 and TSS concentration limits of 50 mg/L were based on a Department best professional judgment of BPT. All three concentration limits are being carried forward in this permitting action.

As for mass limitations, the previous licensing action established monthly average, weekly average and daily maximum mass limitations that are being carried forward in this permitting action and are based on a monthly average limit of 1.56 MGD. The mass limits were derived as follows:

Monthly average: (1.56 MGD)(8.34)(30 mg/L) = 390 lbs/day
Weekly average: (1.56 MGD)(8.34)(45 mg/L) = 585 lbs/day
Daily Maximum: (1.56 MGD)(8.34) (50 mg/L) = 650 lbs/day

This permitting action also establishes a new requirement of 85% removal for BOD and TSS pursuant to Department rule Chapter 525(3)(III)(a&b)(3).

Monitoring frequencies for BOD and TSS of 2/week established in the previous licensing action are being carried forward in this permitting action and are based on Department policy for facilities with a monthly average flow greater than 1.0 MGD but less than 5.0 MGD.

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

d. Settleable Solids – The previous licensing established a daily maximum concentration limit of 0.3 ml/L for settleable solids that is being carried forward in this permitting action and is considered a Department best professional judgment of BPT for secondary treated waste waters.

e. Fecal coliform bacteria – The previous licensing action established a seasonal monthly average and daily maximum limits of 15 colonies/100 ml and 50 colonies/100 ml respectively, that are consistent with the National Shellfish Sanitation Program. The limits are being carried forward in this permitting action. The limits are in effect in on a year-round basis.

f. Total Residual Chlorine: Limits on total residual chlorine are specified to ensure attainment of the in-stream water quality criteria for chlorine and that BPT technology is utilized to abate the discharge of chlorine. Permits issued by this Department impose the more stringent of the calculated water quality based or BPT based limits. The previous licensing action established seasonal monthly average and daily maximum water quality based limitations of 0.08 mg/L and 0.1 mg/L respectively. End-of-pipe water quality based thresholds for TRC may calculated as follows:

Acute (A) Criterion	Chronic (C) Criterion	A & C Dil. Factors	Calculated Acute Limit	Chronic Limit
13 ug/L	7.5 ug/L	8.3:1, 11:1	0.11 mg/L	0.08 mg/L

Example calculation: Acute (0.019 mg/L)(8.3) = 0.11 mg/L

The Department has established a daily maximum best practicable treatment (BPT) limitation of 1.0 mg/L for facilities that disinfect their effluent with elemental chlorine or chlorine based compounds unless the calculated acute water quality based threshold is lower than 1.0 mg/L. For facilities that need to de-chlorinate the discharge to meet water quality based thresholds, the Department has established daily maximum and monthly average best practicable treatment limits of 0.3 mg/L and 0.1 mg/L respectively. In the case of the Falmouth, the acute water quality based threshold calculated of 0.1 mg/L is lower than the BPT limit of 0.3 mg/L, thus the water quality based limit of 0.1 mg/L is imposed as a daily maximum limit. As for the monthly average limit, the chronic water quality based threshold calculated of 0.08 mg/L is lower than the BPT limit of 0.1 mg/L thus the water quality based limit of 0.8 mg/L is imposed as a monthly average limit.

g. pH – The previous licensing action established a pH range limit of 6.0 – 8.5 standard units that were considered BPT. This permitting action is establishing a pH range limit of 6.0 –9.0 standard units pursuant to a new Department rule found at Chapter 525(3)(III)(c). The limits are considered BPT.

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

h. Whole Effluent Toxicity (WET) and Chemical Specific Testing – Maine Law, 38 M.R.S.A., Sections 414-A and 420, prohibits the discharge of effluents containing substances in amounts which 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 U.S. EPA. Department Rules, 06-096 CMR Chapter 530.5, *Surface Water Toxics Control Program*, set forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

WET and chemical specific (priority pollutant) monitoring, as required by Chapter 530.5, is included in order to fully characterize the effluent. The permit also provides for reconsideration of effluent limits and monitoring schedules after evaluation of toxicity testing results. The monitoring schedule includes consideration of results currently on file, the nature of the waste water, existing treatment and receiving water characteristics.

WET monitoring is required to assess and protect against impacts upon water quality and designated uses caused by the aggregate effect of the discharge on specific aquatic organisms. Acute WET tests are performed on invertebrate species mysid shrimp (*Mysidopsis bahia*) and vertebrate species Inland silverside (*Menidia beryllina*). Chronic WET tests are performed on sea urchin (*Arbacia punctulata*) and Inland silverside. Chemical specific, or "priority pollutant (PP)," 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.

Pursuant to criteria established in Department Rule Chapter 530.5, the facility has been placed in the high frequency category for WET testing as the facility has a chronic dilution factor less than 20:1 and in the high frequency category for chemical specific (priority pollutant) testing as the facility is permitted to discharge greater than 1.0 MGD. A recent review of Falmouth's data indicates that they have fulfilled the Chapter 530.5 testing requirements to date. See Attachment B of this Fact Sheet for a summary of the WET test results and Attachment C of this Fact Sheet for a summary of the chemical specific test dates.

Department Regulation Chapter 530.5 and Protocol E(1) of a document entitled *Maine Department of Environmental Protection, Toxicity Program Implementation Protocols*, dated July 1998, states that statistical evaluations shall be periodically performed on the most recent 60 months of WET and chemical specific data for a given facility to determine if water quality based limitations must be included in the permit for a facility.

Chapter 530.5 §C(2) states when a discharge *"...contains pollutants at levels that have a reasonable potential to cause or contribute to an ambient excursion in excess of a numeric or narrative water quality criterion, appropriate water quality based limits must be established in the permit upon issuance."*

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

Chapter 530.5 §C(3) also states that if data indicates that a discharge is causing an exceedance of applicable AWQC, then*:"(1) the Department must notify the licensee of the exceedance; (2) the licensee must submit a toxicity reduction evaluation (TRE) plan for review and approval within 30 days of receipt of notice and implement the TRE after Department approval; (3) the Department must modify the waste discharge license to specify effluent limits and monitoring requirements necessary to control the level of pollutant and meet receiving water classification standards within 180 days of the Department's approval of the TRE."*

It is noted, the previous licensing action established a water quality based C-NOEL limitation of 9.1% for the sea urchin, and monthly average and or daily maximum water quality based concentration and mass limitations for ammonia (seasonal), arsenic, bis (2-ethlyhexyl pthalate) and cyanide based on a statistical evaluation at that time.

On December 6, 2002, the Department conducted an evaluation on the aforementioned tests results in accordance with the statistical approach outlined in EPA's March 1991 document *entitled Technical Support Document (TSD) for Water Quality Based Toxics Control*, Chapter 3.3.2 and Maine Department of Environmental Protection Guidance, July 1998, entitled *Toxicity Program Implementation Protocols*.

WET testing

The 12/06/02 statistical evaluation indicates that a 6/20/99 test result of 12% for the sea urchin has a reasonable potential to exceed the critical chronic water quality threshold of 9.1% (mathematical inverse of the chronic dilution factor of 8.3:1). Therefore, pursuant to Chapter 530.5§C(2), a C-NOEL limit of 9.1% is being carried forward in this permitting action. The Department establishes monitoring frequencies in permits for WET species that exceed or have a reasonable potential to exceed critical water quality thresholds based on the timing, severity and frequency of the results of concern.

A more in-depth review of the WET data in Attachment B of this Fact Sheet indicates Falmouth has conducted six C-NOEL tests on the sea urchin subsequent to the 6/20/99 test result and none of the results exceed or have a reasonable potential to exceed the critical chronic water quality threshold. As a result, the monitoring frequency of 1/Year (equivalent to surveillance level) is being established for the sea urchin in this permitting action.

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

As for the remaining WET test species tested to date (inland silverside and mysid shrimp), none of the test results in the 60-month evaluation period exceed or have a reasonable potential to exceed applicable critical water quality thresholds. Therefore, this permitting action is establishing a surveillance level (1/Year) reporting and monitoring frequency for the first four years of the permit. Beginning twelve months prior to the expiration date of the permit, Falmouth must revert back to a screening level of testing (1/Quarter) for four consecutive calendar quarters.

Chemical Specific testing

The 12/06/02 statistical evaluation indicates the discharge from the Falmouth waste water treatment facility has three data points for copper that have a reasonable potential to exceed the acute and chronic ambient water quality criteria (AWQC) and one data point that has a reasonable potential to exceed the acute and chronic AWQC for cyanide. A summary of the results of concern is as follows:

			Reasonable Potential?	
Parameter	Date	Test Result	Acute	Chronic
Copper	12/14/98	26.4 ug/L	Yes	Yes
	12/09/01	21.0 ug/L	Yes	Yes
	06/08/98	19.0 ug/L	Yes	Yes
Cyanide	06/08/98	7.0 ug/L	Yes	Yes

In accordance with Chapter 530.5 §C(2), this permitting action establishes monthly average and daily maximum limits for the chemical specific parameters of concern based on the following calculations:

Acute

Parameter	Acute[1] Criterion	Acute Dilution Factor	Calculated EOP[2] acute Con.	Month Avg. Mass Limit
Copper	2.9 ug/L	8.3:1	24 ug/L	0.31 lbs/day
Cyanide	1.0 ug/L	8.3:1	8.3 ug/L	0.11 lbs/day

Example Calculation:

$$\text{Copper} - \frac{(2.9\ \text{ug/L})(8.3)(8.34)(1.56\ \text{MGD})}{1000\ \text{ug/mg}} = 0.31\ \text{lbs/day}$$

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

Parameter	Chronic[(1)] Criterion	Chronic Dilution Factor	Calculated EOP[(2)] Chronic Con.	Month Avg. Mass Limit
Copper	2.9 ug/L	11:1	32 ug/L	0.42 lbs/day
Cyanide	1.0 ug/L	11:1	11 ug/L	0.14 lbs/day

Example Calculation:

$$\text{Copper} - \frac{(2.9\ \text{ug/L})(11.0)(8.34)(1.56\ \text{MGD})}{1000} = 0.42\ \text{lbs/day}$$

Footnotes:

(1) Based on EPA's 1986 ambient water quality criteria (AWQC).
(2) End-of-pipe.

The calculations on the above are correct in that the monthly average limits are higher than the daily maximum limits. This anomaly occurs when the acute and chronic AWQC is the same, which is the case with the marine criteria for copper and cyanide, but the chronic dilution factor is greater than the acute dilution factor. As a result, the Department is establishing the more stringent of the two, the daily maximum limits.

Concentration limits in this permitting action are based on Department rule Chapter 523, §6(f)(2) which states that pollutants limited in terms of mass additionally may be limited in terms of other units of measurement and the permit shall require the permittee to comply with both limitations.

In addition, *EPA's Technical Support Document For Water Quality Based Toxics Control*, March 1991, Chapter 5, Section 5.7, recommends that permit limits for both mass and concentration be specified for effluents discharging into waters with less than 100 fold dilution to ensure attainment of water quality standards. As not to penalize facilities for operating at flows less than permitted design flow of the waste water plant, the Department has increased the calculated concentration limit by a factor of 1.5. This represents an effluent concentration that is achievable through proper operation and maintenance of the treatment plant. Therefore, end-of-pipe concentration limits are as follows:

Parameter	Calculated EOP Concentration	Daily Maximum Conc. Limit
Copper	24 ug/L	36 ug/L
Cyanide	8.3 ug/L	12 ug/L

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

As with WET testing, the Department establishes monitoring frequencies in permits for chemical specific parameters that exceed or have a reasonable potential to exceed acute, chronic or human health AWQC based on the timing, severity and frequency of the results of concern. A more in-depth review of the chemical specific data in Attachment C of this Fact Sheet indicates that for copper, five of the last six test results do not have a reasonable potential to exceed acute or chronic AWQC and therefore does not indicate an on-going problem at the facility. As a result, this permitting action is establishing a 2/Year monitoring requirement for copper.

A more in-depth review of the chemical specific data in Attachment C of this Fact Sheet indicates that the 06/08/98 test result for cyanide is the only test result of the twelve data points reported to the Department that is above the Department's reporting limit of 5 ug/L and will fall outside the 60-month evaluation period on 6/08/03. As a result, the Department is carrying forward the 1/Year monitoring requirement from the previous licensing action.

As for the remaining chemical specific parameters tested to date, none of the test results in the 60-month evaluation period exceed or have a reasonable potential to exceed applicable acute, chronic or human health AWQC. Therefore, this permitting action is establishing a surveillance level (1/Year) reporting and monitoring frequency for the first four years of the permit. Beginning twelve months prior to the expiration date of the permit, Falmouth must revert back to a screening level of testing (1/Quarter) for four consecutive calendar quarters.

It is noted the interim average and maximum limits and monitoring requirements for mercury are not being incorporated into this permitting document but remain in effect and enforceable.

7. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As permitted, the Department has made a determination based on a best professional judgment that the existing water uses will be maintained and protected and the discharge will not cause or contribute to the failure of the waterbody to meet standards for Class SC classification.

8. PUBLIC COMMENTS

Public notice of this application was made in the Portland Press Herald newspaper on or about December 12, 2002. The Department receives public comments on an application until the date a final agency action is taken on that application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

9. DEPARTMENT CONTACTS

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

Gregg Wood
Division of Water Resource Regulation
Bureau of Land and Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone (207) 287-3901

10. RESPONSE TO COMMENTS