

AUTHORIZATION TO DISCHARGE UNDER CLEAN WATER ACT SECTION 301 (h)  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

In compliance with the provisions of the Federal Clean Water Act, as amended, (33 U.S.C. §1251 et seq.; the "CWA"), and Title 38 Maine Revised Statutes § 414-A et seq.,

**Bayville Village Corporation – ME0101664 - W002573-5L-E-R**

is authorized to discharge from a facility located at

**Bayville Village  
Boothbay Harbor, Maine**

to receiving water named

**Linekin Bay**

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This NPDES permit shall become effective November 1, 2008.

This Waste Discharge License (WDL) shall become effective immediately upon signature by the Commissioner of the Maine Department of Environmental Protection.

Both the NPDES permit and WDL and the authorization to discharge to the waters of the United States shall expire concurrently at midnight, five (5) years from the date of signature by the Commissioner of the Maine Department of Environmental Protection.

This permit supersedes the NPDES permit/WDL issued on March 12, 2002. This permit consists of the *Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits* (last revised July 1, 2002), *EPA NPDES Part II Standard Conditions* (January, 2007), copies attached, and the attached Special Conditions, including effluent limitations and monitoring requirements.

Signed this 9<sup>th</sup> day of September, 2008

Signed this 16<sup>th</sup> day of September

  
Stephen S. Perkins, Director  
Office of Ecosystems Protection  
Environmental Protection Agency  
Boston, Massachusetts

  
David P. Littell, Commissioner  
Maine Department of Environmental  
Protection  
Augusta, Maine

**IN THE MATTER OF**

BAYVILLE VILLAGE CORPORATION )  
BOOTHBAY HARBOR, LINCOLN COUNTY)  
PUBLICLY OWNED TREATMENT WORKS )  
ME0101664 )  
W002573-5L-E-R )  
**APPROVAL** )

PROTECTION AND IMPROVEMENT  
OF WATERS  
  
WASTE DISCHARGE LICENSE  
**RENEWAL**

Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, Section 1251, et seq., and 38 M.R.S.A., Section 414-A et seq., and applicable regulations, the U.S. Environmental Protection Agency (EPA hereinafter) and the Maine Department of Environmental Protection (Department hereinafter) have considered the application of the BAYVILLE VILLAGE CORPORATION (BVC hereinafter), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

**APPLICATION SUMMARY**

The BVC has applied for renewal of a combined Section 301(h) Modified National Pollutant Discharge Elimination System (NPDES) permit #ME0101664 and Maine Waste Discharge License (WDL) #W002573-58-C-R, that was issued on March 12, 2002 and is due to expire on March 12, 2007. The permit/license (permit hereinafter) approved the discharge of 0.015 million gallons per day (MGD) of primary treated sanitary waste water to Linekin Bay, Class SB, in Boothbay Harbor, Maine.

**PERMIT SUMMARY**

This permitting action is similar to the previous permitting action in that it carries forward;

1. The monthly average flow limitation of 0.015 MGD.
2. The monthly average technology based requirements to achieve a minimum of 30% removal of biochemical oxygen demand (BOD) and a minimum of 50% removal for total suspended solids (TSS).
3. The monthly average technology based mass limitations for BOD and TSS.
4. The daily maximum concentration reporting requirement for settleable solids.
5. The monthly average (geometric mean) and daily maximum water quality based concentration limits of 15 colonies/100 ml and 50 colonies/100 ml for fecal coliform bacteria.
6. The daily maximum technology based concentration limit of 1.0 mg/L for total residual chlorine.
7. The technology based pH range limitation of 6.0 -9.0 standard units.

### PERMIT SUMMARY (cont'd)

This permitting action is different than the previous permitting action in that it is;

1. Eliminating the monthly average concentration reporting requirement for settleable solids and reducing the monitoring frequency from 3/Week to 1/Month.
2. Modifying the footnote for test methods required for total residual chlorine.
3. Requiring the permittee to maintain an up-to-date Operations and Maintenance (O&M) plan.

### CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated February 23, 2007, and subject to the Conditions listed below, the Department makes the following conclusions:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.
2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.
3. The provisions of the State's antidegradation policy, 38 MRSA Section 464(4)(F), will be met, in that:
  - (a) Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;
  - (b) Where high quality waters of the State constitute an outstanding national resource, that water quality will be maintained and protected;
  - (c) The standards of classification of the receiving water body are met or, where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;
  - (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification, that higher water quality will be maintained and protected; and
  - (e) Where a discharge will result in lowering the existing quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.

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

**ACTION**

THEREFORE, the Department APPROVES the above noted application of the BAYVILLE VILLAGE CORPORATION, to discharge up to 0.015 MGD of primary treated waste waters to Linekin Bay, Class SB, in Boothbay Harbor, 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 Special Conditions on the following pages.
3. This permit expires five (5) years from the date of signature below.

DONE AND DATED AT AUGUSTA, MAINE, THIS 16<sup>TH</sup> DAY OF September, 2008.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:

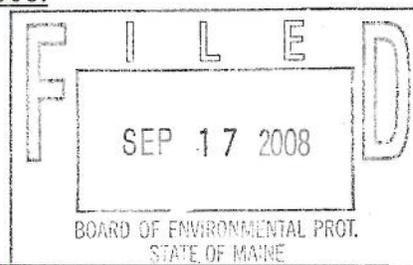
  
David P. Littell, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: December 1, 2006.

Date of application acceptance: December 4, 2006.

Date filed with Maine Board of Environmental Protection \_\_\_\_\_



This order prepared by GREGG WOOD, Bureau of Land & Water Quality

**SPECIAL CONDITIONS**

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

- The permittee is authorized to discharge treated primary treated sanitary waste waters from **Outfall 001** to Linekin Bay and must monitor and limit discharges as follows:

Effluent Characteristic	Discharge Limitations			Monitoring Requirement			
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	
Flow [50050]	15,000 gpd [07]	---	---	---	Continuous [99/99]	Recorder [RC]	
BOD [00310]	2.5 lbs/day [26]	Report lbs/day [26]	203 mg/L [19]	Report, mg/L [19]	1/Month [01/30]	Composite [24]	
BOD % Removal <sup>(1)</sup> [50076]	30 % [23]	---	30 % [23]	---	---	---	
TSS [00330]	18 lbs/day [26]	Report lbs/day [26]	145 mg/L [19]	Report, mg/L [19]	1/Month [01/30]	Composite [24]	
TSS % Removal <sup>(1)</sup> [81011]	50 % [23]	---	50 % [23]	---	---	---	
Settleable Solids [00545]	---	---	---	Report (ml/L) [25]	1/Month [01/30]	Grab [GR]	
Fecal Coliform Bacteria (May 1 <sup>st</sup> - September 30) [31615]	---	---	15/100 ml <sup>(2)</sup> [30]	50/100ml [30]	2/Month <sup>(3)</sup> [02/30]	Grab [GR]	
Total Residual Chlorine [50060] <sup>(4)</sup>	---	---	---	1.0 mg/L [19]	3/Week [03/07]	Grab [GR]	
pH (Std. Units) [00400]	The pH shall not be less than 6.0 or greater than 9.0 at any time.					1/Week [01/07]	Grab [GR]

The italicized numeric values bracketed in the table above are code numbers that Department personnel use to code the monthly Discharge Monitoring Reports (DMR's).

## SPECIAL CONDITIONS

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

#### Footnotes

**Sampling** – Sampling to demonstrate compliance with this permit shall be conducted after the last treatment process and shall be representative of normal operating conditions. All sampling must be conducted in accordance with (a) methods approved by 40 Code of Federal Regulations (CFR) Part 136, (b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136, (c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Health and Human Services.

1. **Percent removal** - The permittee shall achieve at least 30% removal for BOD and 50% removal for TSS. For the purposes of calculating a monthly average percent removal, the permittee shall assume an influent concentration of 290 mg/L for both BOD and TSS.
2. **Fecal coliform bacteria** – Limitations and monitoring requirements are seasonal and apply between May 15<sup>th</sup> and September 30<sup>th</sup> of each year. The monthly average limitation is a geometric mean limitation and results shall be reported as such. The Department reserves the right to require year round disinfection to protect the health, safety and welfare of the public.
3. **Fecal coliform bacteria** – There shall be at a minimum of 14 days between sampling events.
4. **Total residual chlorine (TRC)** – Limitations and monitoring requirements for TRC are in effect whenever elemental chlorine or chlorine based compounds are utilized for disinfection or cleaning. For the purposes of monthly Discharge Monitoring Report (DMR) reporting, when a facility has not disinfected during a calendar month, enter "NODI-9" indicating "monitoring not required this monitoring period."

### B. NARRATIVE EFFLUENT LIMITATIONS

1. The effluent shall not contain a visible oil sheen, foam or floating solids at any time or which would impair the usages designated by the classification of the receiving waters.
2. The effluent shall not contain materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the usages designated by the classification of the receiving waters.
3. The discharge shall not cause visible discoloration or turbidity in the receiving waters which would impair the usages designated by the classification of the receiving waters.

4. Notwithstanding specific conditions of this 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

Disinfection shall be used to reduce the concentration of bacteria to or below the level specified in Special Condition A, *Effluent Limitations and Monitoring Requirements*, of this permit. If chlorination and dechlorination are used as the means of disinfection, an approved chlorine disinfection system must be utilized. The total residual chlorine in the effluent shall at no time cause any demonstrable harm to aquatic or marine life in the receiving waters. The final effluent concentration of total residual chlorine, prior to dechlorination if present, must at all times be maintained at a concentration greater than test method detection limits in order to provide effective reduction of bacteria to levels

### D. TREATMENT PLANT OPERATOR

The treatment facility must be operated by a person holding a minimum of a **Grade I** certificate (or Registered Maine Professional Engineer) pursuant to Title 32 M.R.S.A. §4171 *et seq.* All proposed contracts for facility operation by any person must be approved by the Department before the permittee may engage the services of the contract operator.

### E. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report Forms (DMR's) provided by the Department and shall be postmarked by the thirteenth (13<sup>th</sup>) day of the month or hand-delivered to a Department Regional Office such that the DMR's are received by the Department by the fifteenth (15<sup>th</sup>) day of the month following the completed reporting period. A signed copy of the DMR's and all other reports required herein shall be submitted, unless otherwise specified, to the Department's facility inspector at following address:

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

Signed and dated originals of these, and all other reports required herein, shall be submitted to the Director at the following address:

Environmental Protection Agency  
Water Technical Unit (SEW)  
P.O. Box 8127  
Boston, Massachusetts 02114

## F. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge in accordance with the terms and conditions of this permit and only from **Outfall 001**. Discharges of waste water from any other point source are not authorized under this permit, and shall be reported in accordance with Standard Condition B(5) (Bypass) of this permit.

## SPECIAL CONDITIONS

### G. NOTIFICATION REQUIREMENT

In accordance with Standard Condition E, the permittee shall notify the Department and EPA of the following:

1. 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.
2. For the purposes of this section, adequate notice shall include information on:
  - a The quality or quantity of waste water introduced to the waste water collection and treatment system; and
  - b Any anticipated impact of the change in the quality or quantity of the waste water to be discharged from the treatment system.

### H. OPERATIONS AND MAINTENANCE MANUAL

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

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

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

**On or before December 1, 2008**, the permittee shall submit to the Maine Department of Environmental Protection for review and approval, a public education program designed to minimize the entrance of nonindustrial toxic pollutants and pesticides into the collection system and waste water treatment facility.

**On or before December 31, 2009**, the permittee shall provide written notice to the Maine Department of Environmental Protection, that the approved public education program has been implemented.

## **SPECIAL CONDITIONS**

### **I. SEPTIC TANK MAINTENCE AND SLUDGE CONDITIONS**

To ensure that the individual septic tanks are providing best practicable treatment and achieving desired percent removal levels for BOD5 and TSS, the permittee is be required to maintain a regular inspection and maintenance schedule for removing the solids from all the septic tanks.

The permittee shall maintain a log that documents the date of inspections, comments as to the solids contents and scum layers observed during each inspection, as well as the quantity of septage removed from each septic tank should pumping be deemed necessary. The logs must be kept current and available to the Department and EPA personnel for inspection during normal business hours.

The permittee shall comply with all existing federal and state laws and regulations that apply to sewage sludge use and disposal practices and with the CWA Section 405(d) technical standards.

The permittee shall comply with the more stringent of either the state or federal (40 CFR Part 503) requirements.

The requirements and technical standards of 40 CFR Part 503 apply to facilities which perform one or more of the following use or disposal practices.

- a. Land application - the use of sewage sludge to condition or fertilize the soil
- b. Surface disposal - the placement of sewage sludge in a sludge only landfill

c. Sewage sludge incineration in a sludge only incinerator

The 40 CFR Part 503 conditions do not apply to facilities which place sludge within a municipal solid waste landfill. These conditions also do not apply to facilities which do not dispose of sewage sludge during the life of the permit but rather treat the sludge (e.g., lagoons- reed beds), or are otherwise excluded under 40 CFR 503.6.

The permittee shall use and comply with the attached compliance guidance document to determine appropriate conditions. Appropriate conditions contain the following elements.

- General requirements
- Pollutant limitations
- Operational Standards (pathogen reduction requirements and vector attraction reduction requirements)
- Management practices
- Record keeping
- Monitoring
- Reporting

Depending upon the quality of material produced by a facility, all conditions may not apply to the facility.

The permittee shall monitor the pollutant concentrations, pathogen reduction and vector attraction reduction at the following frequency. This frequency is based upon the volume of sewage sludge generated at the facility in dry metric tons per year:

less than 290	1/ year
290 to less than 1500	1 /quarter
1500 to less than 15000	6 /year
15000 +	1 /month

The permittee shall sample the sewage sludge using the procedures detailed in 40 CFR 503.8.

The permittee shall submit an annual report containing the information specified in the guidance by February 19. Reports shall be submitted to the address contained in the reporting section of the permit. Sludge monitoring is not required by the permittee when the permittee is not responsible for the ultimate sludge disposal. The permittee must be assured that any third party contractor is in compliance with appropriate regulatory requirements. In such case, the permittee is required only to submit an annual report by February 19 containing the following information:

- Name and address of contractor responsible for sludge disposal
- Quantity of sludge in dry metric tons removed from the facility by the sludge contractor

#### **J. RE-OPENER CLAUSE**

Upon evaluation of test results required by the Special Conditions of this permitting action, additional site specific information or any other pertinent information or test result obtained during the term of this permit, the Department and EPA 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 the monitoring requirements and/or limitations based on new information.

#### **K. SEVERABILITY**

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

In Re:

BAYVILLE VILLAGE CORPORATION	)	
BOOTHBAY HARBOR, MAINE	)	TENTATIVE DECISION
PUBLICLY OWNED TREATMENT WORKS,	)	OF THE REGIONAL
APPLICATION FOR SECTION 301(h)	)	ADMINISTRATOR PURSUANT TO
VARIANCE FROM THE SECONDARY	)	40 CFR PART 125, SUBPART G
TREATMENT REQUIREMENTS OF THE	)	
CLEAN WATER ACT	)	
<hr/>		

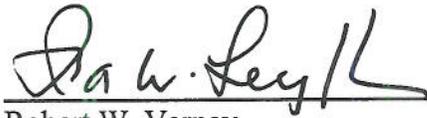
The Bayville Village Corporation (BVC hereinafter), is a publicly owned treatment works located in the Town of Boothbay Harbor, Maine. The BVC has submitted a waiver application pursuant to Section 301(h) of the Clean Water Act, as amended by the Water Quality Act of 1987 (the Act). The U.S. Environmental Protection Agency (EPA hereinafter) has reviewed the merits of this application for the waiver request. Based on this review, it is my tentative decision that the BVC should receive a 301(h) waiver from secondary treatment standards in accordance with the terms, conditions, and limitations proposed in the modified 301(h) National Pollutant Discharge Elimination System (NPDES) permit.

The BVC's application is seeking approval for the discharge of up to a monthly average of 15,000 gallons per day of primary treated waste water generated by 25 residential homes. The BVC is seeking renewal of its variance from the secondary treatment requirements of the Clean Water Act, granted pursuant to Section 301(h). The variance was originally granted by the EPA on December 4, 1985 and subsequently renewed on March 12, 2002. The BVC's application is based on an improved discharge as defined at 40 CFR § 125.58. It is my tentative decision that the BVC be granted a renewal of the variance in accordance with the terms, conditions, and limitations of the attached evaluation. This determination is subject to concurrence by the State of Maine as required by Section 301(h) of the Act. Region I has prepared a draft NPDES permit in accordance with this decision.

Because my decision is based on available evidence specific to this particular discharge, it is not intended to assess the need for secondary treatment by other publicly owned treatment works discharging to the marine environment. This decision and the NPDES permit implementing this decision are subject to revision on the basis of subsequently acquired information relating to the impacts of the less-than-secondary discharge on the marine environment.

Pursuant to the procedures of the NPDES Permit Regulations, 40 CFR Part 124, a public notice will be issued which describes the comment procedures that are available to interested persons in regard to this decision and its accompanying draft NPDES permit.

Date: 8/26/08

 ACTING FOR

Robert W. Varney  
Regional Administrator  
Environmental Protection Agency  
Region I

TENTATIVE DECISION DOCUMENT

ANALYSIS OF THE APPLICATION FOR A SECTION 301(h)

SECONDARY TREATMENT VARIANCE

FOR

THE BAYVILLE VILLAGE CORPORATION

WASTEWATER TREATMENT PLANT

ENVIRONMENTAL PROTECTION AGENCY  
REGION I - NEW ENGLAND

August 2008

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## ATTACHMENTS

## SUMMARY

The applicant, the Bayville Village Corporation (BVC hereinafter) is seeking a variance from secondary treatment requirements for the discharge of up to 15,000 gallon per day (gpd) of waste water (monthly average design flow). The treatment plant facility is located in the Town of Boothbay Harbor, Maine and discharges its effluent to Linekin Bay, a Class SB waterway according to 38 Maine Revised Statutes Annotated (M.R.S.A.) §469. See Attachment A of this document for a location map.

Since issuance of the last NPDES permit (March 12, 2002) the BVC has taken action to reduce the environmental impact of its discharge by relocating its outfall pipe. The BVC has demonstrated that relocation of the outfall has improved the mixing characteristics between the discharged effluent and the receiving water, allowing the treatment plant to comply with the requirements of Section 301(h) of the Clean Water Act, as amended by the Water Quality Act of 1987 and 40 Code of Federal Regulations (CFR), Part 125, Subpart G.

EPA followed the guidance provided in EPA's Amended Section 301(h) Technical Support Document (1994) for evaluating the improved discharge for a small applicant (average dry weather flows below 5.0 MGD). The Region relied on information in a document entitled "301(h) Facilities in Maine, Report of 1995 Monitoring Activities," prepared by the State of Maine's Department of Environmental Protection (MEDEP) and submitted to EPA in July 1996 as well as monthly compliance data generated by the BVC for the period March 2002 through February 2007 as required by the terms and conditions of the most current NPDES permit.

The applicant's receipt of a Section 301(h) variance from secondary treatment is contingent upon the following conditions:

1. The treatment system's ability to maintain an average monthly 30 percent (%) removal rate of five-day biochemical oxygen demanding (BOD<sub>5</sub>) material and 50% removal for total suspended solids (TSS) (State of Maine Section 401 Water Quality Certification Condition), and;
2. The discharge's ability to meet all water quality standards at the edge of the zone of initial dilution with the discharge from the improved outfall, and;
3. State Certification under 401 of the Act regarding compliance with State law and State Water Quality Standards, including a basis for the conclusion reached.

## I. INTRODUCTION

The Bayville Village Corporation (BVC hereinafter) has requested a renewal of its five-year variance from the secondary treatment requirements for its publicly owned treatment works (POTW) pursuant to Section 301(h) of the Clean Water Act, as amended by the Water Quality Act of 1987. This tentative decision document summarizes the findings, conclusions and recommendations of the New England Region of the Environmental Protection Agency (EPA) with regard to the BVC's 301(h) waiver request. The conclusions and recommendations in this document are based on the application of the requirements set forth in 40 CFR Part 125, Subpart G (revised on August 9, 1994) to the BVC's discharge.

The applicant's most recent Section 301(h) modified National Pollutant Discharge Elimination System (NPDES) permit is due to expire on March 12, 2007. The BVC submitted an application for a renewal of its Section 301(h) variance on December 1, 2006. The EPA applied the criteria established in 40 CFR Part 125, Subpart G, "Criteria for Modifying the Secondary Treatment Requirements Under Section 301(h) of the Clean Water Act," in acting on this request.

## II. DESCRIPTION OF TREATMENT FACILITY

The BVC's waste water treatment plant has a monthly average design flow of 15,000 gallons per day (gpd). The BVC waste water treatment facility provides a primary level of treatment via a series of septic tanks, and disinfection via chlorination and dechlorination prior to discharge. Sanitary waste water from twelve (12) residences flows by gravity to a 3,000-gallon septic tank which in turn is pumped to the first of two 6,000-gallon tanks set up in series. Thirteen (13) additional residences are tied into the first 6,000-gallon tank and then the combined waste streams are conveyed to the second 6,000-gallon tank for additional settling. The waste waters are disinfected in a chlorine contact tank using a flow based chemical feed of sodium hypochlorite. Sodium bisulfite is currently utilized to dechlorinate the effluent prior to discharge to Linekin Bay via a polyvinylchloride (PVC) outfall pipe measuring four inches in diameter that extends out into the receiving water approximately 200 feet. Coordinates of the end of the outfall pipe are as follows: 43°51'30" North latitude, 69°36'09" West longitude. The outfall pipe is submerged in 15-feet of water.

### III. DESCRIPTION OF RECEIVING WATER

Linekin Bay is a marine water subject to tidal action with a differences in tides (mean high to mean low) of up to 10 feet with very strong currents. Maine law, 38 M.R.S.A., §469 classifies the receiving waters at the point of discharge as Class SB waters. Maine law, 38 M.R.S.A., Section 465-B(2) contains the classification standards for Class SB waters. See Section V(B) of this document for a description of the designated uses as well as numeric and narrative water quality standards for Class SB waters.

### III. DESCRIPTION OF RECEIVING WATER (cont'd)

The BVC waste water treatment facility discharges to a shellfish harvesting area that the Maine Department of Marine Resources (DMR) has designated as shellfish Area #23, Boothbay Harbor - Damariscotta Island Area .(See Attachment B).

### IV. PHYSICAL CHARACTERISTICS OF THE DISCHARGE

#### A. Dilution Factors

Pursuant to 40 CFR 125.62(a), the outfall and diffuser must be located and designed to provide adequate initial dilution, dispersion, and transport of wastewater to meet all applicable water quality standards at and beyond the boundary of the zone of initial dilution (ZID) during periods of maximum stratification and during other periods when more critical situations may exist.

The effluent from the BVC waste water treatment facility is conveyed to Linekin Bay via a polyvinylchloride (PVC) outfall pipe measuring four (4) inches in diameter. At the time of the previous permitting action the outfall pipe extended out into the receiving water approximately 100 feet with approximately eight (8) feet of water over the crown of the pipe at mean low water. MEDEP Regulation Chapter 530.5 Surface Water Toxics Control Program, §4(a)(2) in effect at the time of the last permit renewal stated:

- (1) *For estuaries where tidal flow is dominant and marine discharges, dilution factors are calculated as follows. These methods may be supplemented with additional information such as current studies or dye studies.*
  - (a) *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.*

#### IV. PHYSICAL CHARACTERISTICS OF THE DISCHARGE (cont'd)

- (b) *For discharges to estuaries, dilution must be calculated using a method such as MERGE, CORMIX or another predictive model determined by the Department to be appropriate for the site conditions.*
- (c) *In the case of discharges to estuaries where tidal flow is dominant and marine waters, the human health criteria must be analyzed using a dilution equal to three times the chronic dilution factor.*

With the previous outfall location, the Department determined through CORMIX modeling, the dilution factors associated with the facility at the permitted flow of 15,000 gpd were as follows.

Acute = 250:1      Chronic = 730:1      Harmonic mean = 2,190

Pursuant to Department rule Chapter 530.5, "Surface Water Toxics Control Program", §4(2)(c), the harmonic mean dilution factor is approximated by multiplying the chronic dilution factor by a factor of three (3).

On October 12, 2005, the MEDEP promulgated revisions to Chapter 530.5 and renumbered the Rule to Chapter 530. The new rule contains the same language as the previous rule in regards to calculating dilution factors for marine dischargers. With the relocation (extension) of the outfall it now extends into the receiving water approximately 200 feet with 15 feet of water over the crown of the pipe at mean low water. Accordingly, the Department has recalculated the dilution factors using CORMIX as follows:

Acute = 500:1      Chronic = 1,460:1      Harmonic mean = 4,380<sup>(2)</sup>

#### V. APPLICATION OF STATUTORY AND REGULATORY CRITERIA

##### A. Primary or equivalent treatment requirements [40 CFR 125.60]

40 CFR 125.60 specifies that the applicant shall demonstrate that its effluent has received at least primary or equivalent treatment. Primary or equivalent treatment is defined as: "treatment by screening, sedimentation, and skimming adequate to remove 30 percent of the biochemical oxygen demanding (BOD) material and 30 percent of the total suspended solids (TSS) in the treatment works influent, and disinfection, where appropriate." (See definition at 40 CFR 125.58(r)). It is noted the MEDEP considers 50% removal of the TSS as best practicable treatment (BPT) and has required that this limit be included as a condition for obtaining CWA Section 401 certification. Due to the configuration of the BVC waste water treatment system (septic tanks for settling), the BVC does not have an acceptable influent sampling port, making the calculation for percent removal difficult. In the event the treatment facility is upgraded in the future,

the permittee shall consider providing for a sampling port prior to where the waste water enters the septic tanks.

## V. APPLICATION OF STATUTORY AND REGULATORY CRITERIA (cont'd)

The previous NPDES permit established monthly average technology-based mass and concentration limits for BOD and TSS with a monitoring frequency of 1/Month. The limitations were calculated based on an assumed influent concentration of 290 mg/L for each parameter and a 30% removal for BOD and a 50% removal for TSS. The assumed Influent concentration value is based on the EPA Design Manual, Onsite Wastewater Treatment and Disposal Systems, dated October 1980, table 4-3 entitled "Characteristics of Typical Residential Wastewater" high range of values for BOD5 and TSS. Derivation of the limits is as follows:

$$\begin{aligned} \text{BOD: } & 290 \text{ mg/L} - [(290 \text{ mg/L})(0.30)] = 203 \text{ mg/L} \\ & (203 \text{ mg/L})(8.34)(0.0150 \text{ MGD}) = 25 \text{ lbs/day} \end{aligned}$$

A review of the seasonal (April – October) DMR data for calendar years 2002-2006 inclusively, indicates the monthly average concentration of BOD discharged has ranged from 40 mg/L to 203 mg/L with an arithmetic mean of 154 mg/L. As for the monthly average mass of BOD discharged, the DMR data indicates the range has been from 0.43 lbs/day to 11 lbs/day with an arithmetic mean of 4 lbs/day.

$$\begin{aligned} \text{TSS: } & 290 \text{ mg/L} - [(290 \text{ mg/L})(0.50)] = 145 \text{ mg/L} \\ & (145 \text{ mg/L})(8.34)(0.0150 \text{ MGD}) = 18 \text{ lbs/day} \end{aligned}$$

A review of the seasonal (April – October) DMR data for the calendar years 2002-2006 inclusively, indicates the monthly average concentration of TSS discharged has ranged from 10 mg/L to 77 mg/L with an arithmetic mean of 38 mg/L. As for the monthly average mass of TSS discharged, the DMR data indicates the range has been from 0.2 lbs/day to 6 lbs/day with an arithmetic mean of 1.2 lbs/day.

Since issuance of the previous NPDES permit (March 2002) there has never been an excursion of the technology based mass and concentration limitations for BOD & TSS. Therefore, the facility currently meets the requirements of 40 CFR Part 125.60.

### B. Existence of and Compliance with Applicable Water Quality Standards [40 CFR 125.61]

40 CFR 125.61(a) specifies that there must be a water quality standard applicable to each pollutant for which a modification is requested. The applicant must: (1) demonstrate that the modified discharge will comply with such water quality standards (40 CFR 125.61(b)(1)), and; (2) provide a determination, signed by the "certifying authority" (i.e., the MEDEP), that the proposed modified discharge will comply with applicable provisions of State law, including water quality standards (40 CFR 125.61(b)(2)).

## V. APPLICATION OF STATUTORY AND REGULATORY CRITERIA (cont'd)

The State of Maine has adopted water quality standards including water use classifications. Linekin Bay is classified as Class SB pursuant to Maine law, 38 M.R.S.A., §469. Maine law 39 M.R.S.A §465-B(2) contains the standards for Class SB waters as follows:

Class SB waters must be of such quality that they are suitable for the designated uses of recreation in and on the water, fishing, aquaculture, propagation and harvesting of shellfish, industrial process and cooling water supply, hydroelectric power generation, navigation and as habitat for fish and other estuarine and marine life. The habitat must be characterized as unimpaired.

The dissolved oxygen content of Class SB waters must be not less than 85% of saturation. Between May 15th and September 30th, the numbers of enterococcus bacteria of human and domestic animal origin in these waters may not exceed a geometric mean of 8 per 100 milliliters or an instantaneous level of 54 per 100 milliliters. In determining human and domestic animal origin, the department shall assess licensed and unlicensed sources using available diagnostic procedures. The numbers of total coliform bacteria or other specified indicator organisms in samples representative of the waters in shellfish harvesting areas may not exceed the criteria recommended under the National Shellfish Sanitation Program, United States Food and Drug Administration.

Discharges to Class SB waters shall not cause adverse impact to estuarine and marine life in that the receiving waters shall be of sufficient quality to support all estuarine and marine species indigenous to the receiving water without detrimental changes in the resident biological community. There shall be no new discharge to Class SB waters which would cause closure of open shellfish areas by the Department of Marine Resources.

Federal regulation 40 CFR, Part 125, Subpart G, more specifically Part 125.57(a)(2), states that discharge of pollutants in accordance with such modified requirements [301(h)] will not interfere, alone or in combination with pollutants from other sources, with the attainment or maintenance of that water quality which assures protection of public water supplies and protection and propagation of a balanced indigenous population of shellfish, fish, and wildlife, and allows recreational activities in and on the water.

## V. APPLICATION OF STATUTORY AND REGULATORY CRITERIA (cont'd)

Maine law 38 M.R.S.A., Section 420 and Department rule 06-096 CMR Chapter 530, *Surface Water Toxics Control Program*, require the regulation of toxic substances not to exceed levels set forth in Department rule 06-096 CMR Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*, and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

The water quality standards applicable to the pollutants for which a 301(h) modified permit is requested are discussed below. Additional relevant water quality standards are discussed in Section V(C) of this document.

### (1) Dissolved Oxygen (DO) [40 CFR Section 125.61(a)(1)]

Maine law, 38 MRSA, §465-B(2)(A) specifies that Class SB waters shall have a dissolved oxygen content of at least 85% of saturation.

There is limited data in the vicinity of the discharge for average daily DO concentrations. EPA believes, based on this data and biological and water quality monitoring at other 301(h) facilities that the state water quality criteria requiring greater than 85 percent DO saturation is most likely achieved.

The 1985 301(h) permits issued in Maine required each permittee to perform biological monitoring in the vicinity of its discharge, including inspections by underwater divers ("SCUBA inspections"). Based on concerns from many of the 301(h) permittees, MEDEP and EPA later agreed that SCUBA inspections were too dangerous because of swift currents in the vicinity of most outfalls and did not require that they be performed. Instead, in 1995 EPA and MEDEP participated in remote inspections (using TV cameras) and water quality monitoring programs at selected 301(h) discharge sites. Based on these surveys, MEDEP prepared a report in July 1996 titled 301(h) Facilities in Maine, Report of 1995 Monitoring Activities which concluded that "water quality, sediment, and photographic information indicates that these [301(h)-type] discharges are not causing any significant impact to the receiving waters". By letter dated February 17, 1995, the Regional Administrator of EPA Region I agreed that there would be little risk of adverse impacts to the receiving water from these discharges provided that the permittees performed effluent monitoring as part of the regular permit conditions. The proposed draft NPDES permit includes such effluent monitoring.

## V. APPLICATION OF STATUTORY AND REGULATORY CRITERIA (cont'd)

With the extension of the outfall location from 100 feet offshore shore to 200 feet offshore and the increase in water depth over the crown of the pipe from 8 feet to 15 feet, the EPA believes that DO levels in the vicinity of the improved outfall will be similar to or better than those in the vicinity of the current outfall. Increased initial dilution will enhance the near-field dispersion of oxygen demanding material. This enhanced dispersion would ultimately result in a smaller decline in dissolved oxygen in the near-field. Therefore, EPA has determined that the DO levels in the vicinity of the improved discharge will likely meet the State water-quality standards.

### (2) Fecal coliform bacteria [40 CFR Section 125.61(a)(3)]

Maine law 38 M.R.S.A. §465-B(2)(C) specifies that the numbers of total coliform bacteria or other specified indicator organisms in samples representative of the waters in shellfish harvesting areas may not exceed the criteria recommended under the National Shellfish Sanitation Program.

The previous permitting action established monthly average (geometric mean) and daily maximum limits of 15 colonies/100 ml and 50 colonies/100 ml respectively, that are consistent with limitations in the National Shellfish Sanitation Program. The numeric limitations are being carried forward in this permitting action along with a monitoring frequency of 2/Month. To be consistent with other like permits issued by the Department and consistent with Maine law found at 38 M.R.S.A., Section 465-B(2)(B), this permitting action is establishing May 15<sup>th</sup> – September 30<sup>th</sup> as the season in which the limitations are in effect.

A review of the DMR data for the period calendar years 2002 – 2006 indicates the monthly average (geometric mean) fecal coliform bacteria levels discharged have ranged from 1 – 10 colonies/100 mL with an arithmetic mean of 2.4 colonies/100 mL and the daily maximum levels have ranged from 1 – 17 colonies/100 mL with an arithmetic mean of 3.7 colonies/100 mL. Since issuance of the previous NPDES permit (March 2002) there has never been any excursions of the water quality based concentration limitations for fecal coliform bacteria. Therefore, the facility currently meets the requirements of 40 CFR Part 125.60.

## V. APPLICATION OF STATUTORY AND REGULATORY CRITERIA (cont'd)

### (3) pH [40 CFR Section 125.61(a)(3)]

Maine law 38 M.R.S.A. §464(4)(A)(5) specifies that no discharge shall cause the pH of marine water to fall outside the range of 7.0 – 8.5 standard units. The previous NPDES permit established a BPT pH range limit of 6.0 –9.0 standard units pursuant to Department rule, Chapter 525(3)(III)(c), along with a monitoring frequency of 3/Week. A review of the DMR data for the period calendar years 2002 – 2006 indicates there has never been any excursions of the pH range limitation. Therefore, the facility currently meets the requirements of 40 CFR Part 125.60.

### (4) Toxic pollutants [40 CFR Section 125.61(a)(3)]

Maine law 38 M.R.S.A. § 420 prohibits dischargers from discharging toxic pollutants in toxic amounts. MEDEP rule Chapter 584 establishes numeric ambient water quality criteria for pollutants known to be toxic to aquatic life or harmful to humans. The only pollutant discharged from the BVC that may be discharged in toxic amounts is chlorine as it used as a disinfectant of the final effluent from the facility.

The March 2002 NPDES permit established a technology based daily maximum limitation of 1.0 mg/L. Limits on total residual chlorine are specified to ensure attainment of the in-stream water quality criteria for chlorine and that best practicable treatment (BPT) technology is utilized to abate the discharge of chlorine. Permits issued by the EPA impose the more stringent of the calculated water quality based or BPT based limits. The MEDEP 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 unless the calculated acute water quality based threshold is lower than 1.0 mg/L.

Water quality based thresholds for TRC can be calculated as follows:

Parameter	Acute Criteria	Chronic Criteria	Acute Dilution	Chronic Dilution	Acute Limit	Chronic Limit
Chlorine	0.013 mg/L	0.0075 mg/L	500:1	1,460:1	6.4 mg/L	11.0 mg/L

Example calculation: Acute – 0.013 mg/L (500) = 6.4 mg/L

Being that the MEDEP's BPT technology based daily maximum limit of 1.0 mg/L is more stringent than the daily end-of-pipe water quality threshold calculated above, the technology based limit of 1.0 mg/L was established in the March 2002 NPDES permit and is being carried forward in this permitting action.

## V. APPLICATION OF STATUTORY AND REGULATORY CRITERIA (cont'd)

A review of the DMR data for the period calendar years 2002 – 2006 indicates the daily maximum TRC discharged has ranged from <0.01 mg/L to 0.80 mg/L with an arithmetic mean of 0.02 mg/L and has never been exceeded during said period. Therefore, the facility currently meets the requirements of 40 CFR Part 125.60.

### C. Attainment or maintenance of water quality which assures protection of public water supplies; assures the protection and propagation of a balanced indigenous population (BIP) of shellfish, fish and wildlife; and allows recreational activities [40 CFR 125.62]

- (1) At the time the 301(h) modification becomes effective, the applicant's outfall and diffuser must be located and designed to provide adequate initial dilution, dispersion, and transport of wastewater such that the discharge does not exceed at or beyond the zone of initial dilution all applicable water quality standards [40 CFR 125.62(a)(1)(i)]

The State of Maine has applicable State water quality standards that directly correspond to the CWA Section 304(a)(1) water quality criterion. With the extension of the outfall pipe, modeling performed for this improved outfall indicates that it will provide adequate dilution, dispersion, and transport of wastewater such that the discharge will not exceed, at or beyond the zone of initial dilution, any applicable water-quality standards. See Section V(A)(1) of this document for the dilution factors calculated with the new outfall.

### (2) Impact of the Discharge on Public Water Supplies [40 CFR 125.62(b)]

The BVC's discharge will not have an impact on public drinking water supplies as the facility discharges to a marine environment and the EPA and MEDEP are not aware of any proposals to construct a desalination plant in the vicinity of the BVC's discharge location.

## V. APPLICATION OF STATUTORY AND REGULATORY CRITERIA (cont'd)

- (3) **Biological Impact of Discharge.** [40 CFR 125.62(c)]. The discharge must allow for the attainment or maintenance of water quality which assures protection and propagation of a balanced indigenous population (BIP) of fish, shellfish, and wildlife (40 CFR 125.62(c)(1)). A BIP must exist immediately beyond the boundary of the zone of initial dilution (ZID) and in all areas beyond the ZID that are actually or potentially affected by the applicant's discharge (40 CFR 125.62(c)(2)).

See the discussion in Section V(1) of this document.

- (4) **Conditions within the zone of initial dilution must not contribute to extreme adverse biological impacts, including, but not limited to, the destruction of distinctive habitats of limited distribution, the presence of a disease epicenter, or the stimulation of phytoplankton blooms which have adverse effects beyond the zone of initial dilution.** [40 CFR 125.62(c)(3)]

See the discussion in Section V(1) of this document.

- (5) **For modified discharges into saline estuarine water, the benthic population within the ZID must not differ substantially from the balanced indigenous populations which exist immediately beyond the boundary of the ZID; the discharge must not interfere with estuarine migratory pathways within the ZID; and the discharge must not result in the accumulation of toxic pollutants or pesticides at levels which exert adverse effects on the biota within the ZID.** [40 CFR 125.62(c)(4)(i), (ii), and (iii)]

See the discussion in Section V(1) of this document.

- (6) **Impact of Discharge on Recreational Activities.** The discharge must allow for the attainment or maintenance of water quality which allows for recreation activities beyond the zone of initial dilution, including, without limitation, swimming, diving, boating, fishing and picnicking, and sports activities along shorelines and beaches. [40 CFR 125.62(d)]

See the discussion in Section V(1) of this document.

- (7) **Additional requirements for applications based on improved or altered discharges** [40 CFR 125.62(e)].

See the discussion in Section V(1) of this document.

## V. APPLICATION OF STATUTORY AND REGULATORY CRITERIA (cont'd)

### (8) Stressed Waters [40 CFR 125.62(f)]

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, indicates that the Maine Department of Marine Resources (MEDMR) shellfish Area #23, Boothbay Harbor - Damariscotta Island Area, is closed to the harvesting of shellfish. See Attachment B of this document for the delineation of Area #23. The MEDMR has traditionally closed shellfish harvesting areas in the vicinity of outfall pipes when lack of field data on bacteria counts in the immediate area is insufficient, inconclusive or exceeds standards set in the National Shellfish Sanitation Program of the U.S. Department of Health and Human Services. The MEDMR does not have sufficient field data for Area #23 to open it at this time however, compliance with the monthly average and daily maximum limitations for fecal coliform bacteria will ensure the BVC facility will not cause or contribute to the closure of the shellfish harvesting area.

All estuarine and marine waters in Maine are listed in a table entitled, *Category 4-B-3: Estuarine and Marine Waters Impaired by Atmospheric Deposition of Mercury* of the aforementioned 305(b) report. Text in this category states that all waters in the category are partially supporting fishing (fish and shellfish consumption) due to elevated levels of mercury, PCBs and dioxin in tissues of some fish and lobster tomally. The MEDEP is not aware of any information that the BVC waste water treatment facility is discharging PCBs or dioxin that may be causing or contributing to the partial non-attainment. As for mercury, Department rule Chapter 519, *Interim Effluent Limitations and Controls for the Discharge of Mercury*, establishes controls on the discharge of mercury to the surface waters of the State through interim effluent limits and implementation of pollution prevention plans.

### D. Establishment of Monitoring Programs [40 CFR 125.63]

Federal regulation 40 CFR 125.63 requires that the applicant develop a monitoring program designed to evaluate the impact of the modified discharge on the marine biota, demonstrate compliance with applicable water quality standards, and measure toxic substances in the discharge. 40 CFR 125.63(a)(2) allows the Administrator to require revisions to the proposed monitoring program before issuance of a modified permit and during the term of any modified permit.

#### (1) Establishment of Monitoring Program [40 CFR 125.63(a)(1)]

See the discussion in Section V(1) of this document.

## V. APPLICATION OF STATUTORY AND REGULATORY CRITERIA (cont'd)

- (2) **Small applicants are not subject to the requirements of 40 CFR 125.63(b)(1)(ii)-(iv) if they discharge at depths greater than 10 meters and can demonstrate through a suspended solids deposition analysis that there will be negligible seabed accumulation in the vicinity of the modified discharge [40 CFR 125.63(b)(2)]**

See the discussion in Section V(1) of this document.

- (3) **For applicants seeking a section 301(h) modified permit based on an improved or altered discharge involving outfall relocation, the biological monitoring shall include the current discharge site until such discharge ceases (40 CFR 125.63(b)(3)(iii)(A)), and; shall provide baseline data at the relocation site (40 CFR 125.63(b)(3)(iii)(B))**

See the discussion in Section V(1) of this document.

- (4) **Water Quality Monitoring Program [40 CFR 125.63(c)]**

See the discussion in Section V(1) of this document.

- (5) **Effluent Monitoring Program [40 CFR 125.63(d)]**

The draft NPDES permit contains monitoring conditions which shall provide data on the quality of the effluent including flow, BOD, TSS, settleable solids, total residual chlorine and pH.

### E. **Effect of Modified Discharge on Other Point and Nonpoint Sources [40 CFR 125.64]**

40 CFR 125.64(a) states that no modified discharge may result in any additional pollution control requirements on any other point or nonpoint source.

40 CFR Part 125.64(b) requires that the applicant obtain a determination from the State or interstate agency having authority to establish waste load allocations indicating whether the applicant's discharge will result in any additional treatment pollution control, or other requirement on any other point or nonpoint source. The BVC anticipates receiving said determination from the MEDEP prior to issuance of the final NPDES permit.

**V. APPLICATION OF STATUTORY AND REGULATORY CRITERIA (cont'd)**

**F. Toxics Control Program [40 CFR 125.66]**

**(1) Identification of sources and Industrial Pretreatment Requirements [40 CFR 125.66(a)(1) and (2), 40 CFR 125.66(b), and 40 CFR 125.66(c)]**

Given the nature of the source of the discharge (25 seasonal residential entities) the BVC has determined to the best of their knowledge, there are no sources of toxic pollutants being conveyed to the treatment plant. Therefore, 40 CFR 125.66(a) - (c) does not apply.

**(2) Nonindustrial Source Control Program [40 CFR 125.66(d)]**

Under 40 CFR 125.66(d), the applicant must submit a proposed public education program designed to minimize the entrance of nonindustrial toxic pollutants and pesticides into its POTW. See the discussion in Section V(F)(1) of this document.

**G. Increase in Effluent Volume or Amount of Pollutants Discharged [40 CFR 125.67]**

**(1) 40 CFR 125.67(a) states that the applicant's discharge may not result in any new or substantially increased discharges of the pollutant to which the modification applies above the discharge specified in the Section 301(h) modified permit.**

Effluent limits for BOD<sub>5</sub> and TSS are specified within the draft permit as follows:

<u>Constituent</u>	<u>Monthly Average Limitations</u>
BOD <sub>5</sub>	203 mg/l (25 lbs/day)
TSS	145 mg/l (18 lbs/day)

The BVC's discharge will not result in any new or substantially increased discharge of these pollutants as the proposed limits are equal to the limits in the previous NPDES permitting action.

**(2) 40 CFR 125.67(b) requires that, where pollutants discharges are attributable in part to combined sewer overflows, the applicant minimize existing overflows and prevent increases in the amount of pollutants discharged.**

There are no CSO's associated with the BVC's collection system. Therefore, the BVC is in compliance with 40 CFR 125.67(b).

## V. APPLICATION OF STATUTORY AND REGULATORY CRITERIA (cont'd)

### H. Special conditions for section 301(h) modified permits [40 CFR 125.68]

Each section 301(h) modified permit issued shall contain, in addition to all applicable terms and conditions required by 40 CFR part 122, the following:

**(1) Effluent limits and mass loadings which will assure compliance with the requirements of this subpart (40 CFR 125.68(a)):**

The draft NPDES permit contains such effluent limits and mass loadings.

**(2) A schedule or schedules of compliance for (40 CFR 125.68(b)):**

**a. 40 CFR 125.68(b)(1), Pretreatment program development required by section 125.66(c), for POTWs with industrial users.**

The BVC is not required to have a pretreatment program because there are no known industrial contributors. Therefore, the permit does not contain a schedule for one.

**b. 40 CFR 125.68(b)(2), Nonindustrial toxics control program required by section 125.66(d).**

Given the nature of the source of the discharge (25 seasonal residential entities) the BVC has determined to the best of their knowledge, there are no sources of toxic pollutants being conveyed to the treatment plant. Therefore, 40 CFR 125.66(d) does not apply.

**c. 40 CFR 125.68(b)(3), Control of combined sewer overflows required by section 125.67.**

There are no CSO's associated with the BVC's collection system. Therefore the BVC is in compliance with 40 CFR 125.67.

**3. Monitoring program requirements that include (40 CFR 125.68(c)):**

**a. 40 CFR 125.68(c)(1), Biological monitoring requirements of section 125.63(b).**

See the discussion in Section V(1) of this document.

**b. 40 CFR 125.68(c)(2), Water quality requirements of section 125.63(c).**

See the discussion in Section V(1) of this document.

## V. APPLICATION OF STATUTORY AND REGULATORY CRITERIA (cont'd)

- c. **40 CFR 125.68(c)(3) Effluent monitoring requirements of sections 125.60(b), 125.62(c) and (d), and 125.63(d).**

The draft NPDES permit contains appropriate effluent monitoring and reporting requirements to satisfy the above regulatory requirements.

4. **Reporting requirements that include the results of the monitoring programs required by paragraph (c) of this section at such frequency as prescribed in the approved monitoring program (40 CFR 125.68(d)).**

The draft NPDES permit contains monthly reporting of the results of effluent monitoring requirements specified by the permit.

## VI. COMPLIANCE WITH PROVISIONS OF OTHER STATE, LOCAL OR FEDERAL LAWS

Pursuant to 40 CFR 125.59(b)(3), a modified NPDES permit may not be issued unless the proposed discharge complies with applicable provisions of state, local, or other federal laws or Executive Orders, including the Coastal Zone Management Act, 16 U.S.C. 1451 et seq., the Endangered Species Act, 16 U.S.C. 1531 et seq., and the Marine Protection, Research, and Sanctuaries Act 16 U.S.C. 1431 et seq. These requirements are discussed below.

### A. State Coastal Zone Management Program

A copy of the draft NPDES permit is being sent to the Maine's State Planning Office for a consistency determination. With the expected Section 401 Water Quality Certification from the MEDEP, the EPA anticipates an affirmative consistency determination prior to issuance of the NPDES permit as a final agency action.

### B. Endangered or Threatened Species

The United States Fish and Wildlife Service (USFWS) is responsible for making the determination that the BVC discharge will not harm endangered or threatened species. The EPA will consult with USFWS on Endangered Species Act (ESA) requirements as the USFWS will be provided with a copy of 30-day formal draft permit.

The National Marine Fisheries Service (NMFS) is charged with implementing the ESA for marine species. EPA will consult with NMFS on ESA requirements at the same time as the Essential Fish Habitat consultation (see below).

## **VI. COMPLIANCE WITH PROVISIONS OF OTHER STATE, LOCAL OR FEDERAL LAWS**

Both aforementioned agencies were provided with an opportunity to comment of the March 2002 NPDES permit. Neither agency object to the terms and conditions of the permit or recommended additional monitoring requirements. Being that discharge levels proposed in this draft permit are equivalent to the March 2002 levels, the EPA does not anticipate any objections to the proposed permitting action.

### **C. Marine Protection, Research and Sanctuaries Act**

The discharge is not located near any marine or estuarine sanctuary designated under Title III of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended, or the Coastal Zone Management Act of 1972, as amended.

### **D. Essential Fish Habitat (EFH)**

Under the 1996 Amendments (PL 104-297) to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801 et seq. (1998)), EPA is required to consult with the National Marine Fisheries Service (NMFS) if EPA's actions, or proposed actions that EPA funds, permits, or undertakes, "may adversely impact any essential fish habitat." 16 U.S.C. § 1855(b). The Amendments broadly define essential fish habitat as, "... those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." 16 U.S.C. § 1802(10). Adverse effect means any impact which reduces the quality and/or quantity of EFH. 50 C.F.R. § 600.910(a). Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions. Id.

EFH is only designated for species for which federal Fishery Management Plans exist (16 U.S.C. § 1855(b)(1)(A)). EFH designations were approved for New England by the U.S. Department of Commerce on March 3, 1999.

As the federal agency charged with authorizing the discharge from this facility, EPA is in the process of consulting with the National Marine Fisheries Service (NMFS) under section 305 (b)(2) of the Magnuson-Stevens Act for essential fish habitat (EFH). This consultation will be completed before the permit is finalized.

## **VII. STATE CONCURRENCE IN VARIANCE**

Permittees may not be granted a Section 301(h) variance, as specified under Section 301(h) of the Act and 40 CFR 125.59(i), until the appropriate State certification/concurrence is granted or waived pursuant to 40 CFR 124.54. A Section 301(h) waiver may not be granted if the State denies certification/ concurrence pursuant to 40 CFR 124.54. EPA

expects that the State of Maine will make such a determination upon review of the proposed draft permit conditions.

## VIII. CONCLUSION

EPA has determined that BVC's treated effluent, discharged through a new outfall location, located approximately 100 feet from the current location (an "improved" discharge), will provide enough initial dilution and mixing such that the discharge will comply with all of the requirements of Section 301(h) of the Clean Water Act, as amended by the Water Quality Act of 1987, and 40 CFR Part 125, Subpart G.

## IX. TENTATIVE DECISION

For the reasons discussed in this tentative decision document, EPA is tentatively approving BVC's request to discharge primary effluent from an improved outfall design located approximately 100 feet further out into the receiving water and 7 feet deeper from its previous position. This tentative decision is contingent upon the following conditions:

1. The BVC's treatment system maintaining 30 % removal of BOD<sub>5</sub> and 50% removal TSS (Maine BPT and Section 401 Water Quality Certification condition) , and;
2. State certification is granted under Section 401 of the Act, and;
3. The discharge will comply with all state water-quality standards.

This tentative decision will become final upon issuance of the NPDES permit.

**RESPONSE TO PUBLIC COMMENTS**  
**Bayville Village Corporation (BVC) Wastewater Treatment Plant**  
**National Pollutant Discharge Elimination System (NPDES) No. ME0101664**  
**Maine Waste Discharge License No. W002573-51-E-R**

The U.S. Environmental Protection Agency (EPA) and the Maine Department of Environmental Protection (DEP) are issuing a final National Pollutant Discharge Elimination System (NPDES) permit for the BVC Wastewater Treatment Plant in Boothbay Harbor, Maine. The Final Permit authorizes BVC to discharge wastewater to Linekin Bay in accordance with the requirements of the Federal Clean Water Act (CWA), 33 U.S.C. §§ 1251 *et. seq.*, and Title 38 Maine Revised Statutes § 414-A *et seq.*

The Draft Permit public comment period began September 24, 2007, and ended on October 23, 2007. Written comments were received from the Conservation Law Foundation (CLF) in a letter dated October 22, 2007.

The comment letter received by EPA and DEP is part of the administrative record. To obtain a copy of these comments and/or the Final Permit, please write or call Doug Corb, EPA Municipal NPDES Permits Program (CMP), 1 Congress Street, Suite 1100, Boston, MA 02114-2023; telephone: (617) 918-1565.

This document presents EPA's responses to public comments on the Draft Permit, in accordance with the provisions of 40 C.F.R. 124.17. This document also describes any changes in the Final Permit that have been made as a result of those comments. A summary of the changes made in the Final Permit is listed below.

Comment #1: The CLF asserts that the Clean Water Act (CWA) requires that the requested 301(h) variance be denied because the BVC facility discharges to an impaired saline estuarine waterbody. The CLF cites the following language in the CWA:

No permit issued under this section shall authorize the discharge of any pollutant into saline estuarine waters which at the time of application do not support a balanced indigenous population of shellfish, fish and wildlife, or allow recreation in and on the waters or which exhibit ambient water quality below applicable water quality standards adopted for the protection of public water supplies, shellfish, fish and wildlife or recreational activities, or such other standards necessary to assure support and protection of such uses. The prohibition contained in the preceding sentence shall apply without regard to the presence or absence of a causal relationship between such characteristics and the applicant's current or proposed discharge.

The impairments CLF cites are the closure of Maine Department of Marine Resources (DMR) shellfish Area #23 and partial support of the designated use of fishing due to elevated levels of mercury, PCBs and dioxin in tissues of some fish and lobster tomally.

Response #1: While Linekin Bay is an embayment, and therefore “semi-enclosed coastal water” it is not ‘near an estuary’ as there are no significant fresh water streams discharging to the bay. Therefore the EPA and the Department do not consider it a “saline estuarine water” within the meaning of the regulation. Federal regulation 40 CFR, §125.58(v) defines saline estuarine waters as “...those semi-enclosed coastal waters which have a free connection to the territorial sea, undergo net seaward exchange with the ocean waters, and have salinities comparable to those of the ocean. Generally, these waters are near the mouth of estuaries and have cross sectional annual mean salinities greater than twenty-five (25) parts per thousand.”

Federal regulation 40 CFR, §125.58(n) defines ocean waters as “... those coastal waters landward of the baseline of the territorial seas, the deep waters of the territorial seas or the waters of the contiguous zone. The term ‘ocean waters’ excludes saline estuarine waters.”

Section 301(h) of the CWA states “The Administrator, with concurrence of the state, may issue a permit under section 402 which modifies the requirements of subsection (b)(1)(B) of this section with respect to the discharge of any pollutant from a publicly owned treatment works into marine waters, if the applicant demonstrates to the satisfaction of the Administrator that- §(2) the discharge of pollutants in accordance with such modified requirements will not interfere, alone or in combination with pollutants from other sources, with the attainment or maintenance of that water quality which assures protection of public water supplies and the protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife, and allows recreational activities in and on the water.”

Based on the physical location of the BVC outfall, EPA and the Department have made the determination that the discharge is to marine waters not to a saline estuarine water. Therefore, as long as the discharge does not cause or contribute to the impairment of the waterbody, the discharge of primary treated wastewater is permissible for eligible publicly owned treatment works such as the BVC. As cited in the Section 10, *Discharge Impact On Receiving Waters*, of the Fact Sheet of the permit, “...the EPA and the DEP have determined 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 SB classification.” As a result, EPA and DEP support the issuance of the NPDES permit for the BVC facility.

The following changes are incorporated into the final permit:

- 1) The original performance dates for the following scheduled tasks have passed; therefore, revised dates have been added to the final permit.

**On or before December 1, 2008** (October 1, 2007 old date), the permittee shall submit to the Maine Department of Environmental Protection for review and approval, a public education program designed to minimize the introduction of nonindustrial toxic pollutants and pesticides into the collection system and waste water treatment facility.

**On or before December 31, 2009** (December 31, 2008 old date), the permittee shall provide written notice to the Maine Department of Environmental Protection and Environmental Protection Agency, that the approved public education program has been implemented.

- 2) Due to a word processing error; the following mailing address was omitted from the draft permit. The correction has been addressed in the final permit.

Signed and dated originals of these, and all other reports required herein, shall be submitted to the Director at the following address:

Environmental Protection Agency  
Water Technical Unit (SEW)  
P.O. Box 8127  
Boston, Massachusetts 02114