STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

November 15, 2007

Ms. Marjorie Stratton
Town of Vinalhaven
P.O. Box 815
Vinalhaven, Maine, 04863

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0102491
Maine Waste Discharge License (WDL) Application #W008146-5L-B-R
Final MEPDES Permit Renewal

Dear Ms. Stratton:

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

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

If you have any questions regarding the matter, please feel free to call me at 287-7659.

Sincerely,

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

Enc.

cc: Denise Behr, DEP
Lori Mitchell, DEP
Sandy Lao, USEPA
File #8146

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

DEPARTMENT ORDER

IN THE MATTER OF

TOWN OF VINALHAVEN	) MAINE POLLUTANT DISCHARGE
VINALHAVEN, KNOX COUNTY, MAINE	) ELIMINATION SYSTEM PERMIT
PUBLICLY OWNED TREATMENT WORKS	) AND
#ME0102491	) WASTE DISCHARGE LICENSE
#W008146-5L-B-R **APPROVAL**	) **RENEWAL**

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

APPLICATION SUMMARY

The Town has applied to the Department for renewal of Waste Discharge License (WDL) #W008146-5L-A-N / Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0102491, which was issued on November 25, 2002, and is scheduled to expire on November 25, 2007. The 11/25/02 MEPDES permit authorized the Town to discharge a monthly average flow of up to 0.129 million gallons per day (MGD) of secondary treated municipal wastewater from a publicly owned treatment works (POTW) to the Atlantic Ocean, Class SB, in Vinalhaven, Maine.

On April 10, 2006, the Department amended the 11/25/02 permit by incorporating the whole effluent toxicity (WET), analytical chemistry and priority pollutant screening level testing requirements of *Surface Water Toxics Control Program*, 06-096 CMR 530 (effective October 9, 2005).

PERMIT SUMMARY

This permitting action is similar to the 11/25/02 permitting action and the 4/10/06 amendment in that it is:

1. Carrying forward the monthly average discharge flow limit of 0.129 MGD;

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

3. Carrying forward the requirement for a minimum of 85% removal of BOD_5 and TSS;

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

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

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

7. Carrying forward screening level whole effluent toxicity (WET), priority pollutant and analytical chemistry testing requirements; and

8. Carrying forward the minimum monitoring frequency requirements for all monitored parameters, except settleable solids and pH and TSS during the first year of the permit.

This permitting action is different from the 11/25/02 permitting action and the 4/10/06 amendment in that it is:

1. Establishing a daily maximum discharge flow reporting requirement;

2. Waiving the requirement to perform surveillance level WET, priority pollutant and analytical chemistry testing pursuant to 06-096 CMR 530;

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

4. Establishing a seasonal (June 1– September 30) monitoring and reporting requirement for oil and grease during calendar year 2008 only;

5. Establishing a mercury testing requirement to facilitate the development of interim mercury limitations;

6. Revising the minimum monitoring frequency requirements for settleable solids and pH; and

7. Requiring the submission of a revised Operations and Maintenance Plan for Department review and comment.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated November 13, 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, *Classification of Maine waters*, 38 M.R.S.A. § 464(4)(F), will be met, in that:

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

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

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

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

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

4. The discharge will be subject to effluent limitations that require application of best practicable treatment as defined in 38 M.R.S.A. § 414-A(1)(D).

ACTION

THEREFORE, the Department APPROVES the above noted application of the TOWN OF VINALHAVEN to discharge a monthly average flow of up to 0.129 million gallons per day of secondary treated municipal wastewater to the Atlantic Ocean, Class SB, in Vinalhaven, Maine, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including:

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

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

3. The expiration date of this permit is five (5) years from the date of signature below.

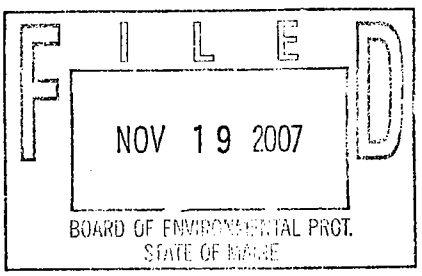
DONE AND DATED AT AUGUSTA, MAINE, THIS 15TH DAY OF November, 2007.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____, for
DAVID P. LITTELL, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: October 1, 2007
Date of application acceptance: October 2, 2007



Date filed with Board of Environmental Protection: _____.

This Order prepared by William F. Hinkel, BUREAU OF LAND & WATER QUALITY
#ME0102491 / #W008146-5L-B-R November 13, 2007

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow *[50050]*	0.129 MGD *[03]*	---	Report MGD *[03]*	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
BOD_5 *[00310]*	32 lbs./day *[26]*	48 lbs./day *[26]*	54 lbs./day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	1/Week *[01/07]*	Composite *[CP]*
BOD_5 Percent Removal[(2)] *[81010]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
TSS *[00530]* ***Permit Issuance Through December 31, 2008***	32 lbs./day *[26]*	48 lbs./day *[26]*	54 lbs./day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	2/Week *[02/07]*	Composite *[CP]*
TSS *[00530]* ***January 1, 2009 Through Permit Expiration***	32 lbs./day *[26]*	48 lbs./day *[26]*	54 lbs./day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	1/Week *[01/07]*	Composite *[CP]*
TSS Percent Removal[(2)] *[81011]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*

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

FOOTNOTES: See Pages 8 through 11 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

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

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Settleable Solids *[00545]*	---	---	---	---	---	0.3 ml/L *[25]*	5/Week *[05/07]*	Grab *[GR]*
Fecal Coliform Bacteria[3] *[31616]* *May 15 – September 30*	---	---	---	200/100 ml[4] *[13]*	---	400/100 ml *[13]*	1/Week *[01/07]*	Grab *[GR]*
pH *[00400]*	---	---	---	---	---	6.0 – 9.0 SU *[12]*	5/Week *[05/07]*	Grab *[GR]*
Oil and Grease *[00552]* *June 1 – September 30, 2008*	---	---	---	---	---	Report mg/L *[19]*	1/Week *[01/07]*	Grab *[GR]*
Mercury (Total)[5] *[71900]*	---	---	---	---	---	Report ng/L *[3L]*	1/Quarter *[01/90]*	Grab *[GR]*

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

FOOTNOTES: See Pages 8 through 11 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

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

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity [6] **Acute – NOEL** *Mysidopsis bahia* (Mysid Shrimp) *[TDA3E]*	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Composite *[CP]*
Chronic – NOEL *Arbacia punctulata* (Sea Urchin) *[TBH3A]*	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Composite *[CP]*
Analytical Chemistry [7] *[51477]*	---	---	---	Report µg/L *[28]*	1/Quarter *[01/90]*	Composite/Grab *[CP]*
Priority Pollutants [8] *[51168]*	---	---	---	Report µg/L *[28]*	1/Year *[01/YR]*	Composite/Grab *[CP]*

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

FOOTNOTES: See Pages 8 through 11 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

FOOTNOTES:

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

   All detectable analytical test results shall be reported to the Department including results which are detected below the respective reporting limits (RLs) specified by the Department. See Attachment A of this permit for a list of the Department's current RLs. If a non-detect analytical test result is below the respective RL, the concentration result shall be reported as <Y where Y is the actual detection limit achieved by the laboratory for each respective parameter. Reporting a value of <Y that is greater than an established RL is not acceptable and will be rejected by the Department. For mass, if the analytical result is reported as <Y or if a detectable result is less than a RL, report a <X lbs/day, where X is the parameter specific limitation established in the permit. Compliance with this permit will be evaluated based on whether or not a compound is detected at or above the Department's RL.

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

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

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

SPECIAL CONDITIONS

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

FOOTNOTES:

5. **Mercury Monitoring for Interim Limits** – The permittee is required to conduct mercury testing at a minimum frequency of once per calendar quarter for four consecutive calendar quarters ending no later than December 31, 2008. Test results shall be reported in units of parts per trillion (nanograms per liter, ng/L). The permittee shall complete the "Effluent Mercury Test Report" form included as Attachment B of this permit in addition to reporting the results on the DMR.

   All mercury sampling required pursuant to *Interim Effluent Limitations and Controls for the Discharge of Mercury*, 06-096 CMR 519 (last amended October 6, 2001), shall be conducted in accordance with EPA's "clean sampling techniques" found in EPA Method 1669, Sampling Ambient Water For Trace Metals At EPA Water Quality Criteria Levels. All mercury analysis shall be conducted in accordance with EPA Method 1631, Determination of Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Fluorescence Spectrometry.

6. **Whole Effluent Toxicity (WET) Testing** – Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions bracketing the critical acute and chronic thresholds of 1.8% and 0.4%, respectively), which provides a point estimate of toxicity in terms of No Observed Effect Level, commonly referred to as NOEL or NOEC. A-NOEL is defined as the acute no observed effect level with survival as the end point. C-NOEL is defined as the chronic no observed effect level with survival, reproduction and growth as the end points.

   a. **Screening level testing - Beginning 12 months prior to permit expiration and lasting through permit expiration and every five years thereafter**, the permittee shall conduct **screening level WET testing** at a minimum frequency of once per year using the mysid shrimp (*Mysidopsis bahia*) and sea urchin (*Arbacia punctulata*). Acute tests shall be conducted on the mysid shrimp; chronic tests shall be conducted on the sea urchin.

   Pursuant to 06-096 CMR 530, surveillance level testing is waived for this facility.

   Test results must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days of their availability before submitting them. The permittee shall evaluate test results being submitted and identify to the Department possible exceedences of the critical acute and chronic water quality thresholds of 1.8% and 0.4%, respectively.

SPECIAL CONDITIONS

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

FOOTNOTES:

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

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

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

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

7 **Analytical Chemistry** – Refers to a suite of twelve (12) chemical tests consisting of: ammonia nitrogen (as N), total aluminum, total arsenic, total cadmium, total chromium, total copper, total cyanide, total lead, total nickel, total silver, total zinc and total residual chlorine.

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

Pursuant to 06-096 CMR 530, surveillance level testing is waived for this facility.

SPECIAL CONDITIONS

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

FOOTNOTES:

8. **Priority Pollutant Testing** – Priority pollutant testing refers to analysis for levels of priority pollutants listed in *Effluent Guidelines and Standards*, 06-096 CMR 525(4)(IV) (effective January 12, 2001).

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

   Pursuant to 06-096 CMR 530, surveillance level testing is not required for this facility.

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

   Test results must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days of their availability before submitting them. The permittee shall evaluate test results being submitted and identify to the Department, possible exceedences of the acute, chronic or human health AWQC as established in *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 (effective October 9, 2005). For the purposes of DMR reporting, enter a "1" for yes, testing done this monitoring period or "NODI-9" monitoring not required this period.

   Reporting forms are attached and are also available at:
   http://www.maine.gov/dep/blwq/docstand/wd/toxics/ .

SPECIAL CONDITIONS

B. NARRATIVE EFFLUENT LIMITATIONS

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

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

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

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

C. TREATMENT PLANT OPERATOR

The treatment facility must be operated by a person holding a minimum of a **Grade II** certificate (or by a Maine registered professional engineer) pursuant to *Sewerage Treatment Operators*, 32 M.R.S.A. §§ 4171-4182. All proposed contracts for facility operation by any person must be approved by the Department before the permittee may engage the services of the contract operator.

D. AUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with: 1) the permittee's General Application for Waste Discharge Permit, accepted for processing on October 2, 2007; 2) the terms and conditions of this permit; and 3) only from Outfall #001A. Discharges of wastewater from any other point source are not authorized under this permit, and shall be reported in accordance with Standard Condition B(5), *Bypasses*, of this permit.

SPECIAL CONDITIONS

E. NOTIFICATION REQUIREMENTS

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

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

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

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

   a. The quality and quantity of waste water introduced to the waste water collection and treatment system; and

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

F. MONITORING AND REPORTING

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

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

SPECIAL CONDITIONS

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

On or before December 31st of each year of the effective term of this permit ***[PCS Code 95799]***, the permittee shall provide the Department with statements describing the following:

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

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

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

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

H. OPERATIONS AND MAINTENANCE (O&M) PLAN

On or before October 1, 2008, the permittee shall submit to the Department, for review and comment, a revised written comprehensive Operation & Maintenance (O&M) Plan ***[PCS Code 09699]***. The plan shall provide a systematic approach by which the permittee shall at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit.

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

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

SPECIAL CONDITIONS

I. WET WEATHER MANAGEMENT PLAN

The treatment facility staff shall maintain a Wet Weather Management Plan to direct the staff on how to operate the facility effectively during periods of high flow. The Department acknowledges that the existing collection system may deliver flows in excess of the monthly average design capacity of the treatment plant during periods of high infiltration and rainfall. A specific objective of the plan shall be to maximize the volume of wastewater receiving secondary treatment under all operating conditions. The revised plan shall include operating procedures for a range of intensities, address solids handling procedures (including septic waste and other high strength wastes if applicable) and provide written operating and maintenance procedures during the events.

Once the Wet Weather Management Plan has been approved, the permittee shall review their plan at least annually and record any necessary changes to keep the plan up to date. The Department may require review and update of the plan as it is determined to be necessary.

J. REOPENING OF PERMIT FOR MODIFICATION

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

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

ATTACHMENT A

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

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

Licensed Flow (MGD) | **Flow for Day (MGD)**[1] | **Flow Avg. for Month (MGD)**[2]
Acute dilution factor
Chronic dilution factor
Human health dilution factor
Criteria type: M(arine) or F(resh)

Date Sample Collected | Date Sample Analyzed

Laboratory _____ Telephone _____
Address _____
Lab Contact _____ Lab ID # _____

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

FRESH WATER VERSION

Please see the footnotes on the last page.

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

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

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

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

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V	ACROLEIN	NA									
V	ACRYLONITRILE	NA									
V	BENZENE	5									
V	BROMOFORM	5									
V	CARBON TETRACHLORIDE	5									
V	CHLOROBENZENE	6									
V	CHLORODIBROMOMETHANE	3									
V	CHLOROETHANE	5									
V	CHLOROFORM	5									
V	DICHLOROBROMOMETHANE	3									
V	ETHYLBENZENE	10									
V	METHYL BROMIDE (Bromomethane)	5									
V	METHYL CHLORIDE (Chloromethane)	5									
V	METHYLENE CHLORIDE	5									
V	TETRACHLOROETHYLENE (Perchloroethylene or Tetrachloroethene)	5									
V	TOLUENE	5									
V	TRICHLOROETHYLENE (Trichloroethene)	3									
V	VINYL CHLORIDE	5									

Notes:

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

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

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

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

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

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

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

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

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

Comments:

ATTACHMENT B

Maine Department of Environmental Protection

Effluent Mercury Test Report

Name of Facility: _____ Federal Permit # ME _____

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

SAMPLE COLLECTION INFORMATION

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

Sampling Location:

Weather Conditions: _____

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

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

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

ANALYTICAL RESULT FOR EFFLUENT MERCURY

Name of Laboratory: _____

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

Please Enter Effluent Limits for your facility

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

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

CERTIFICATION

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

By: _____ Date: _____

Title: _____

PLEASE MAIL THIS FORM TO YOUR ASSIGNED INSPECTOR

ATTACHMENT C

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
WHOLE EFFLUENT TOXICITY REPORT
MARINE WATERS

Facility Name _____ MEPDES Permit # _____

Facility Representative _____ Signature _____

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

Facility Telephone # _____ Date Collected _____ (mm/dd/yy) Date Tested _____ (mm/dd/yy)

Chlorinated? _____ Dechlorinated? _____

Results

	% effluent	
	mysid shrimp	**sea urchin**
A-NOEL		
C-NOEL		

Effluent Limitations

A-NOEL	
C-NOEL	

Data summary

	mysid shrimp % survival	**sea urchin % fertilized**
QC standard	**>90**	**>70**
lab control		
receiving water control		
conc. 1 (%)		
conc. 2 (%)		
conc. 3 (%)		
conc. 4 (%)		
conc. 5 (%)		
conc. 6 (%)		
stat test used		

place * next to values statistically different from controls

Salinity Adjustment

brine	
sea salt	
other	

Reference toxicant

	mysid shrimp A-NOEL	sea urchin C-NOEL
toxicant / date		
limits (mg/L)		
results (mg/L)		

Comments _____

Laboratory conducting test

Company Name _____ Company Rep. Name (Printed) _____

Mailing Address _____ Company Rep. Signature _____

City, State, ZIP _____ Company Telephone # _____

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

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: **NOVEMBER 13, 2007**

PERMIT NUMBER: **#ME0102491**
WASTE DISCHARGE LICENSE: **#W008146- 5L -B-R**

NAME AND ADDRESS OF APPLICANT:

TOWN OF VINALHAVEN
P.O. BOX 815
VINALHAVEN, MAINE 04863

COUNTY: **KNOX**

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

VINALHAVEN WASTEWATER TREATMENT PLANT
SANDS ROAD
VINALHAVEN, MAINE 04863

RECEIVING WATER/CLASSIFICATION: **ATLANTIC OCEAN/CLASS SB**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **MS. MARJORIE STRATTON**
(207) 863-2042

1. APPLICATION SUMMARY

Application: The Town of Vinalhaven (Town) has applied to the Department of Environmental Protection (Department) for renewal of Waste Discharge License (WDL) #W008146-5L-A-N / Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0102491, which was issued on November 25, 2002, and is scheduled to expire on November 25, 2007. The 11/25/02 MEPDES permit authorized the Town to discharge a monthly average flow of up to 0.129 million gallons per day (MGD) of secondary treated municipal wastewater from a publicly owned treatment works (POTW) to the Atlantic Ocean, Class SB, in Vinalhaven, Maine.

On April 10, 2006, the Department amended the 11/25/02 permit by incorporating the whole effluent toxicity (WET), analytical chemistry and priority pollutant testing requirements of *Surface Water Toxics Control Program*, 06-096 CMR 530 (effective October 9, 2005).

2. PERMIT SUMMARY

a. Terms and Conditions: **This permitting action is similar to the 11/25/02 permitting action and the 4/10/06 amendment in that it is:**

1. Carrying forward the monthly average discharge flow limit of 0.129 MGD;

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

3. Carrying forward the requirement for a minimum of 85% removal of BOD_5 and TSS;

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

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

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

7. Carrying forward screening level whole effluent toxicity (WET), priority pollutant and analytical chemistry testing requirements; and

8. Carrying forward the minimum monitoring frequency requirements for all monitored parameters, except settleable solids and pH and TSS during the first year of the permit.

This permitting action is different from the 11/25/02 permitting action and the 4/10/06 amendment in that it is:

1. Establishing a daily maximum discharge flow reporting requirement;

2. Waiving the requirement to perform surveillance level WET, priority pollutant and analytical chemistry testing pursuant to 06-096 CMR 530;

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

4. Establishing a seasonal (June 1– September 30) monitoring and reporting requirement for oil and grease during calendar year 2008 only;

5. Establishing a mercury testing requirement to facilitate the development of interim mercury limitations;

6. Revising the minimum monitoring frequency requirements for settleable solids and pH; and

7. Requiring the submission of a revised Operations and Maintenance Plan for Department review and comment.

2. PERMIT SUMMARY (cont'd)

b. History: This section provides a summary of the most recent significant licensing and permitting actions completed for the Vinalhaven facility.

November 25, 2002 – The Department issued a new combination WDL / MEPDES permit to the Town for the Vinalhaven Wastewater Treatment Plant (WTP), a new POTW constructed on Vinalhaven Island. The Vinalhaven WTP commenced operation in September 2004.

April 10, 2006 – The Department amended the 11/25/02 permit to incorporate testing requirements of 06-096 CMR 530.

October 1, 2007 – The Town submitted a timely and complete General Application to the Department for renewal of the 11/25/02 MEPDES permit. The application was accepted for processing on October 2, 2007 and was assigned WDL #W008146-5L-B-R / MEPDES #ME0102491.

c. Source Description: The Vinalhaven WTP currently treats waste waters from a total of 450 equivalent users (approximately 351 connections) on the island of Vinalhaven. The Town has successfully completed Phases I and II of the phased build-out and has no plans to proceed with a previously proposed Phase III construction project.

The collection system consist of the following ten (10) pump stations: 1) Sand Street; 2) High Street; 3) Town Garage; 4) Chestnut Street; 5) School Street; 6) Indian Creek; 7) Lane's Island; 8) Leo's Lane; 9) Fire Station; and 10) Sewer Plant. Emergency power for the pumps stations listed as 1-8 in this fact sheet is provided by a portable back-up generator. The Fire Station and Sewer Plant pump stations each have dedicated back-up generators. The flow from pump stations 2-8 is pumped to the Fire Station pump station, which is then pumped to the Sewer Plant pump station and to the treatment plant. The Sands Street pump station pumps directly to the Sewer Plant pump station. There are no combined sewer overflow (CSO) points or industrial users associated with the collection system. The Town has not applied for, and is not authorized to, accept septage wastes at the Vinalhaven WTP.

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

d. Wastewater Treatment: The Town provides a secondary level of treatment at the Vinalhaven WTP via trickling filters. Currently, waste waters are conveyed to a splitter box at the facility, which evenly distribute the flow to six (6) treatment trains operated in parallel. Each treatment train utilizes two 8,000-gallon septic tanks where the waste water will receive primary treatment (clarification). The waste water is then conveyed to two random-packed trickling media reactors for biological treatment. Primary treated waste water enters the media units from the top of the structure and trickles down over the media to a reservoir in the bottom of the system. In total, Phases I and II include 12 septic tanks and 12 trickling filters.

2. PERMIT SUMMARY (cont'd)

Waste water from the reservoir is pumped back to the front end of the treatment unit mixed with incoming primary treated waste water from the septic tanks and aerated with outside air that is drawn into the system via venturi injectors. The waste water is sprayed over the media and trickles down to the reservoir for another cycle. Once the desired level of treatment is achieved, the treated wastewater is conveyed from the trickling filter unit to one of two decant settling basins. From the settling basins, the final effluent is conveyed for discharge to the Atlantic Ocean at Vinalhaven via an outfall pipe consisting of a six-inch diameter force main pipe flowing to an eight-inch diameter gravity line that extends offshore approximately 330 feet to a multi-port diffuser. The diffuser ports are spaced ten feet on center and have approximately 20 feet of water over the diffuser at mean low water and approximately 28 feet over the diffuser at mean high water.

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

3. CONDITIONS OF PERMITS

Conditions of licenses, 38 M.R.S.A. § 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require application of best practicable treatment (BPT), be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, 38 M.R.S.A., § 420 and 06-096 CMR 530 require the regulation of toxic substances not to exceed levels set forth in *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 (effective October 9, 2005), and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

4. RECEIVING WATER QUALITY STANDARDS

Classification of marine and estuarine waters, 38 M.R.S.A. § 469 classifies all estuarine and marine waters lying within the boundaries of the State and which are not otherwise classified as Class SB waters. The marine waters at the point of discharge are not otherwise classified by 38 M.R.S.A. § 469 and are thus Class SB waters. Standards for c*lassification of estuarine and marine waters*, 38 M.R.S.A. § 465-B(2) describes the standards for Class SB waters.

5. RECEIVING WATER QUALITY CONDITIONS

The State of Maine 2004 Integrated Water Quality Monitoring and Assessment Report, prepared by the Department pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists the estuarine and marine waters at Vinalhaven as, *"Category 5-B-1: Estuarine and Marine Waters Impaired Only by Bacteria (TMDL Required)"* (Waterbody ID#722-13) and lists sources causing impairment as discharges from overboard discharge systems, boats, and non-point source pollution. The Department has not scheduled a total maximum daily load (TMDL) study for the estuarine and marine waters at Vinalhaven at this time. The Department will identify sources contributing to the non-attainment status of the receiving waters and will allocate waste loads to point source dischargers as necessary once a TMDL has been completed for this waterbody.

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

The Maine Department of Marine Resources (DMR) assesses information on shellfish growing areas to ensure that shellfish harvested are safe for consumption. The DMR has authority to close shellfish harvesting areas wherever there is a pollution source, a potential pollution threat, or poor water quality. The DMR traditionally closes shellfish harvesting areas if there are known sources of discharges with unacceptable bacteria levels (instream thresholds established in the National Shellfish Sanitation Program) or maintains shellfish harvesting closure areas due to lack of updated information regarding ambient water quality conditions. In addition, the DMR prohibits shellfish harvesting in the immediate vicinity of all wastewater treatment outfall pipes as a precautionary measure in the event of a failure in the treatment plant's disinfection system. Thus, shellfish harvesting area #C30-D is closed to the harvesting of shellfish due to insufficient or limited ambient water quality data to determine that the area meets the standards in the National Shellfish Sanitation Program. The shellfish closure area is identified on the map included as Fact Sheet Attachment A. The Department is making the determination that compliance with the fecal coliform bacteria and other secondary wastewater treatment limits established in this permitting action ensure that the discharge of secondary treated wastewater from the Vinalhaven Wastewater Treatment Plant will not cause or contribute to the failure of the receiving waters to meet the standards of its designated classification.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

a. Flow: The previous permitting action established a monthly average discharge flow limit of 0.129 MGD based on the design capacity of the treatment facility, which is being carried forward in this permitting action.

A summary of all discharge flow data as reported on the monthly Discharge Monitoring Reports (DMRs) since the facility commenced operation and that has been entered into the Department's permit compliance system database as of July 2007 (data for September 2004 – March 2007, number of DMRs = 30) indicates that the monthly average flow has ranged from 0.0052 MGD to 0.0310 MGD with an arithmetic mean of 0.02165 MGD.

b. Dilution Factors: 06-096 CMR 530(4)(A)(2)(a) states that, *"For discharges to the ocean, dilution must be calculated as near-field or initial dilution, or that dilution available as the effluent plume rises from the point of discharge to its trapping level, at mean low water level and slack tide for the acute exposure analysis, and at mean tide for the chronic exposure analysis using appropriate models determined by the Department such as MERGE, CORMIX or another predictive model."* Based on the configuration of Outfall #001A and a discharge flow limit of 0.0129 MGD, dilution factors associated with the discharge of secondary treated waste waters are as follows:

Acute = 56.0:1 Chronic = 225.0:1 Harmonic mean[1] = 675.0:1

c. Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TSS): The previous permitting action established, and this permitting action is carrying forward, monthly average and weekly average technology-based concentration limits of 30 mg/L and 45 mg/L, respectively, for BOD_5 and TSS based on the secondary treatment requirements specified at *Effluent Guidelines and Standards*, 06-096 CMR 525(3)(III) (effective January 12, 2001), and a daily maximum concentration limit of 50 mg/L, which is based on BPJ of BPT for secondary treated municipal wastewater. The technology-based monthly average, weekly average and daily maximum mass limits of 32 lbs./day, 48 lbs./day, and 54 lbs./day established in the previous permitting action for BOD_5 and TSS are also being carried forward in this permitting action.

This permitting action is carrying forward a 30-day average percent removal requirement of 85 percent for BOD_5 and TSS as required pursuant to 06-096 CMR 525(3)(III)(a&b)(3).

This permitting action is carrying forward a minimum monitoring frequency requirement of once per week for BOD_5 and TSS, which is based on Department guidance for facilities with a permitted flow limit between 0.1 MGD – 0.5 MGD. This permitting action is, however, establishing an increased monitoring frequency of twice per week

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

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

from permit issuance through December 31, 2008, for TSS based on the history of exceedences at the facility.

A summary of all effluent BOD_5 and TSS data as reported on the monthly DMRs since the facility commenced operation and that has been entered into the Department's permit compliance system (PCS) database as of July 2007 (data for September 2004 – March 2007, number of DMRs = 31) is as follows:

BOD_5	**Minimum**	**Maximum**	**Arithmetic Mean**	**Number of Exceptions**
Monthly Average	0.5 lbs./day	11.9 lbs./day	3.4 lbs./day	0
	3.8 mg/L	43.5 mg/L	17.8 mg/L	2
Weekly Average	0.6 lbs./day	28.3 lbs./day	5.8 lbs./day	0
	5.0 mg/L	97.0 mg/L	28.0 mg/L	3
Daily Maximum	0.5 lbs./day	28.3 lbs./day	5.7 lbs./day	0
	5.0 mg/L	97.0 mg/L	28.4 mg/L	2

TSS	**Minimum**	**Maximum**	**Arithmetic Mean**	**Number of Exceptions**
Monthly Average	0.2 lbs./day	6.3 lbs./day	2.4 lbs./day	0
	4.0 mg/L	35.0 mg/L	12.8 mg/L	4
Weekly Average	0.3 lbs./day	13.4 lbs./day	4.2 lbs./day	0
	3.0 mg/L	69.0 mg/L	20.7 mg/L	5
Daily Maximum	0.2 lbs./day	13.4 lbs./day	4.2 lbs./day	0
	4.0 mg/L	69.0 mg/L	21.4 mg/L	3

It is noted that additional DMR data not yet entered into the PCS database indicates the facility experienced one additional exceedence each of the weekly average and daily maximum BOD_5 concentration limits in April 2007.

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

A summary of all effluent settleable solids data as reported on the monthly DMRs since the facility commenced operation and that has been entered into the Department's permit compliance system database as of July 2007 (data for September 2004 – March 2007, number of DMRs = 31) indicates that the daily maximum settleable solids has ranged from <0.1 ml/L to 1.8 ml/L with an arithmetic mean of 0.24 ml/L. The facility reported two (2) exceptions of the daily maximum settleable solids limit of 0.3 ml/L.

This permitting action is revising the minimum monitoring frequency requirement from of once per day to five times per week for settleable solids to provide the facility staff with operational flexibility.

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

e. Fecal Coliform Bacteria: The previous permitting action established seasonal (May 15 – September 30 of each year) monthly average (geometric mean) and daiy maximum (instantaneous) fecal coliform bacteria limitations of 200 colonies / 100 ml and 400 colonies / 100 ml, respectively, based on best professional judgment of best practicable treatment for this discharge. The previous permitting action stated,

> *The Department has not established BPT limitations for ultra-violet disinfection systems. Therefore, this permitting action is establishing a seasonal monthly average and daily maximum limits of 200 colonies/100 ml and 400 colonies/100 ml respectively, based on a Department best professional judgment of the level of treatment expected for the ultra-violet disinfection system being designed for the facility. In establishing the limits, the Department consulted with the Maine Department of Marine Resources and considered the standards in the National Shellfish Sanitation Program and the large dilution factors associated with the discharge and considered information provided by manufacturers of ultra-violet disinfection systems. After two seasons of use, the Department will evaluate the bacteria test results and may reconsider establishing more stringent limits based on the actual performance of the system.*

A summary of effluent fecal coliform data as reported on the monthly DMRs since the facility commenced operation and that has been entered into the Department's permit compliance system database as of July 2007 (data for the applicable season from May 2003 – September 2006 available, number of DMRs = 11) is as follows:

Fecal Coliform Bacteria	Minimum	Maximum	Arithmetic Mean	Number of Exceptions
Monthly Average	2 col/100 ml	352 col/100 ml	63 col/100 ml	1
Daily Maximum	3 col/100 ml	6,000 col/100 ml	941 col/100 ml	3

It is noted that additional DMR data not yet entered into the PCS database indicates the facility experienced one additional exceedence of the daily maximum bacteria limit in June 2007, three exceedences of the daily maximum and one exceedence of the monthly average limits in July 2007.

This permitting action is carrying forward the seasonal monthly average and daily maximum effluent bacteria limitations consistent with the best professional judgment determination that was made by the Department as documented above. Bacteria limits are seasonal and apply between May 15 and September 30 of each year, however, the Department reserves the right to require year-round disinfection to protect the health, safety and welfare of the public.

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

This permitting action is carrying forward the minimum monitoring frequency requirement for fecal coliform bacteria of once per week based on Department guidance for POTWs permitted to discharge between 0.1 and 0.5 MGD.

f. Total Residual Chlorine (TRC): The previous permitting action did not establish effluent limitations for TRC as the facility does not utilize chlorine or chlorine-based compounds for effluent disinfection.

g. pH: The previous permitting action established, and this permitting action is carrying forward, a technology-based pH limit of 6.0 – 9.0 standard units (SU), which is based on 06-096 CMR 525(3)(III). This permitting action is revising the minimum monitoring frequency requirement from once per day to five times per week to provide the facility staff with operational flexibility.

A summary of all effluent pH data as reported on the monthly DMRs since the facility commenced operation and that has been entered into the Department's permit compliance system database as of July 2007 (data for September 2004 – March 2007, number of DMRs = 31) indicates the facility has been in compliance with the pH range limitation 100% of the time during said reporting period.

h. Oil and Grease (O&G): This permitting action is establishing a one-year, seasonal (June 1 – September 30, 2008 only) daily maximum concentration monitoring and reporting requirement for O&G due to potential issues at the facility caused by fats, oils and grease in the influent wastewater. This permitting action is establishing a minimum monitoring frequency requirement of once per week for O&G during the 2008 summer season.

i. Mercury: *Waste discharge licenses*, 38 M.R.S.A. § 413(11) states, "The department shall establish and may periodically revise interim discharge limits, based on procedures specified by rule, for each facility licensed under this section and subject to this subsection in order to reduce the discharge of mercury over time and achieve the ambient water quality criteria established in section 420, subsection 1-B." *Interim Effluent Limitations and Controls for the Discharge of Mercury*, 06-096 CMR 519(3) (last amended October 6, 2001) specifies that facilities required to conduct toxics testing, as the Vinalhaven WTP is, shall complete a minimum of four mercury tests to provide the Department with information on which to establish interim effluent limits for mercury. Therefore, this permitting action is establishing effluent mercury testing at a minimum frequency of once per calendar quarter for four consecutive calendar quarters ending no later than December 31, 2008. Upon completion of mercury testing required in this permit, the Department will establish interim mercury concentration limits and notify the facility as specified in 06-096 CMR 519.

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

j. Whole Effluent Toxicity (WET), Priority Pollutant, and Analytical Chemistry Testing:
38 M.R.S.A. § 414-A and 38 M.R.S.A. § 420 prohibit the discharge of effluents containing substances in amounts that would cause the surface waters of the State to contain toxic substances above levels set forth in Federal Water Quality Criteria as established by the USEPA. 06-096 CMR 530 sets forth effluent monitoring requirements and procedures to establish safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected and narrative and numeric water quality criteria are met. *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 sets forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

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

06-096 CMR 530(4)(C), states "*The background concentration of specific chemicals must be included in all calculations using the following procedures. The Department may publish and periodically update a list of default background concentrations for specific pollutants on a regional, watershed or statewide basis. In doing so, the Department shall use data collected from reference sites that are measured at points not significantly affected by point and non-point discharges and best calculated to accurately represent ambient water quality conditions." "The Department shall use the same general methods as those in section 4(D) to determine background concentrations. For pollutants not listed by the Department, an assumed concentration of 10% of the applicable water quality criteria must be used in calculations.*" The Department has no information on the background levels of metals in the water column in the Atlantic Ocean at Vinalhaven. Therefore, a default background concentration of 10% of applicable water quality criteria is being used in the calculations of this permitting action.

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

06-096 CMR 530(4)(E), states "*In allocating assimilative capacity for toxic pollutants, the Department shall hold a portion of the total capacity in an unallocated reserve to allow for new or changed discharges and non-point source contributions. The unallocated reserve must be reviewed and restored as necessary at intervals of not more than five years. The water quality reserve must be not less than 15% of the total assimilative quantity.*" Therefore, the Department is reserving 15% of applicable water quality criteria used in the calculations of this permitting action.

06-096 CMR 530(4)(F) requires evaluation of toxic pollutant impacts on a watershed basis. This section of the rule states, "*Where there is more than one discharge into the same fresh or estuarine receiving water or watershed, the Department shall consider the cumulative effects of those discharges when determining the need for and establishment of the level of effluent limits. The Department shall calculate the total allowable discharge quantity for specific pollutants, less the water quality reserve and background concentration, necessary to achieve or maintain water quality criteria at all points of discharge, and in the entire watershed.*" The Department is currently working to construct a computer program model to conduct this analysis. Until such time the model is complete and a multi-discharger statistical evaluation can be conducted, the Department is evaluating the impact of the Town's discharge assuming it is the only discharger to the receiving water. Should the multi-discharger evaluation indicate there are parameters that exceed or have a reasonable potential to exceed applicable AWQC, this permit may be reopened pursuant to Special Condition J, *Reopening of Permit For Modifications*, to incorporate additional limitations and or revise monitoring requirements.

This permit provides for reconsideration of effluent limits and monitoring schedules after evaluation of toxicity testing results. The monitoring schedule includes consideration of results currently on file, the nature of the wastewater, existing treatment, and receiving water characteristics. It is noted that reporting forms may be obtained at the following Department internet site: http://www.maine.gov/dep/blwq/docstand/wd/toxics/.

06-096 CMR 530(2)(B) categorizes dischargers subject to the toxics rule into one of four levels (Levels I through IV). Level III dischargers are "*Those dischargers having a chronic dilution factor of at least 100 but less than 500 to 1, or dischargers having a chronic dilution factor of more than 500 to 1 and a permitted flow of 1 million gallons per day or greater.*" The chronic dilution factor associated with the discharge from the Town's facility is 225 to 1; thus, the facility is considered a Level III facility for purposes of toxics testing. 06-096 CMR 530(2)(B)(D) specifies default WET, priority pollutant, and analytical chemistry test schedules for Level III as follows:

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

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

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

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

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

The previous permitting action established surveillance and screening level WET and chemical-specific testing pursuant to the toxics rule in effect at that time. On April 10, 2006, the Department amended the 11/25/02 permit to establish testing requirements required by 06-096 CMR 530, which became effective October 2005.

WET Evaluation

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

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

On October 9, 2007, the Department conducted a statistical evaluation on the most recent 60 months of WET test results on file with the Department for the Vinalhaven WTP in accordance with the statistical approach outlined above. **The 10/9/07 statistical evaluation indicates the discharge from the Vinalhaven WTP does not exhibit a reasonable potential to exceed the critical acute or chronic water quality thresholds for the mysid shrimp or the sea urchin.** See Attachment C of this Fact Sheet for a summary of the WET test dates and results.

Therefore, this permitting action is not establishing numeric limitations for the mysid shrimp or sea urchin.

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

06-096 CMR 530(2)(D)(3)(b) states, *"Dischargers in Levels III and IV may be waived from conducting surveillance testing for individual WET species or chemicals provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedence as calculated pursuant to section 3(E)."*

Based on the results on file with the Department, the Department is making a best profession judgment determination to waive surveillance level WET testing for this facility.

Priority Pollutant Evaluation

On October 9, 2007, the Department conducted a statistical evaluation on the most recent 60 months of chemical-specific tests results on file with the Department for the Vinalhaven WTP in accordance with the statistical approach outlined in the beginning of this section. **The 10/9/07 statistical evaluation indicates that the discharge from the Vinalhaven WTP does not exhibit a reasonable potential to exceed any of the parameters tested.** See Attachment D of this Fact Sheet for a summary of chemical-specific test dates.

Consistent with the provisions of 06-096 CMR 530(2)(D)(3)(b) referenced above, the Department s making a best profession judgment determination to waive surveillance level priority pollutant and analytical chemistry testing for this facility.

06-096 CMR 530(2)(D)(4) states, *"all dischargers having waived or reduced testing must file statements with the Department on or before December 31 of each year describing the following.*

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

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

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

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

7. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As permitted, the Department has determined the existing water uses will be maintained and protected and the discharge will not cause or contribute to the failure of the water body to meet standards for Class SB classification.

8. PUBLIC COMMENTS

Public notice of this application was made in *The Wind* newspaper on or about October 4, 2007. The Department receives public comments on an application until the date a final agency action is taken on the application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to *Application Processing Procedures for Waste Discharge Licenses,* 06-096 CMR 522 (effective January 12, 2001).

9. DEPARTMENT CONTACTS

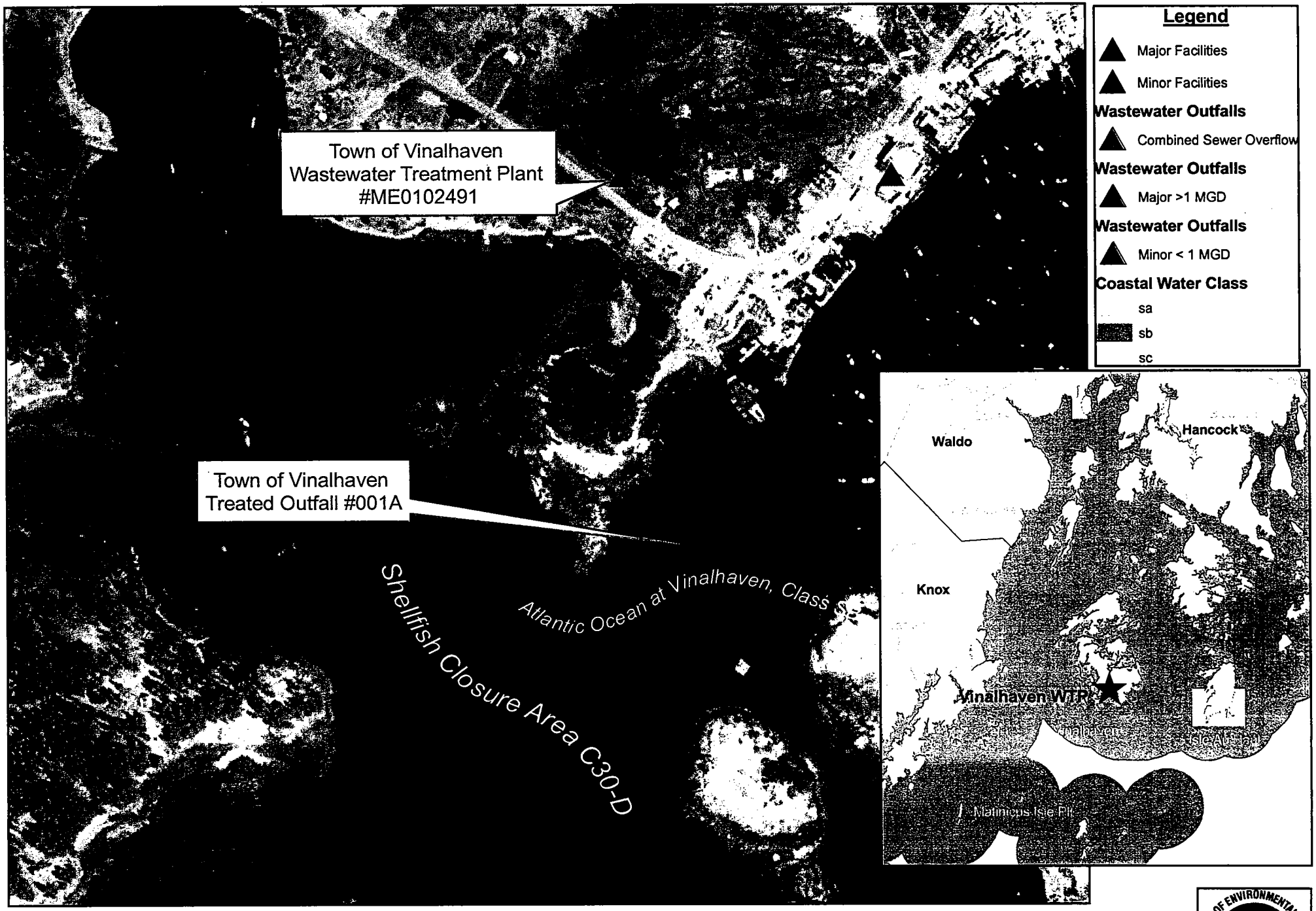
Additional information concerning this permitting action may be obtained from, and written comments sent to:

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

10. RESPONSE TO COMMENTS

During the period of October 9, 2007, through November 8, 2007, the Department solicited comments on the proposed draft Maine Pollutant Discharge Elimination System Permit to be issued to the Town of Vinalhaven for the proposed discharge. The Department did not receive significant comments on the draft permit. Therefore, a Response to Comments was not prepared.

ATTACHMENT A



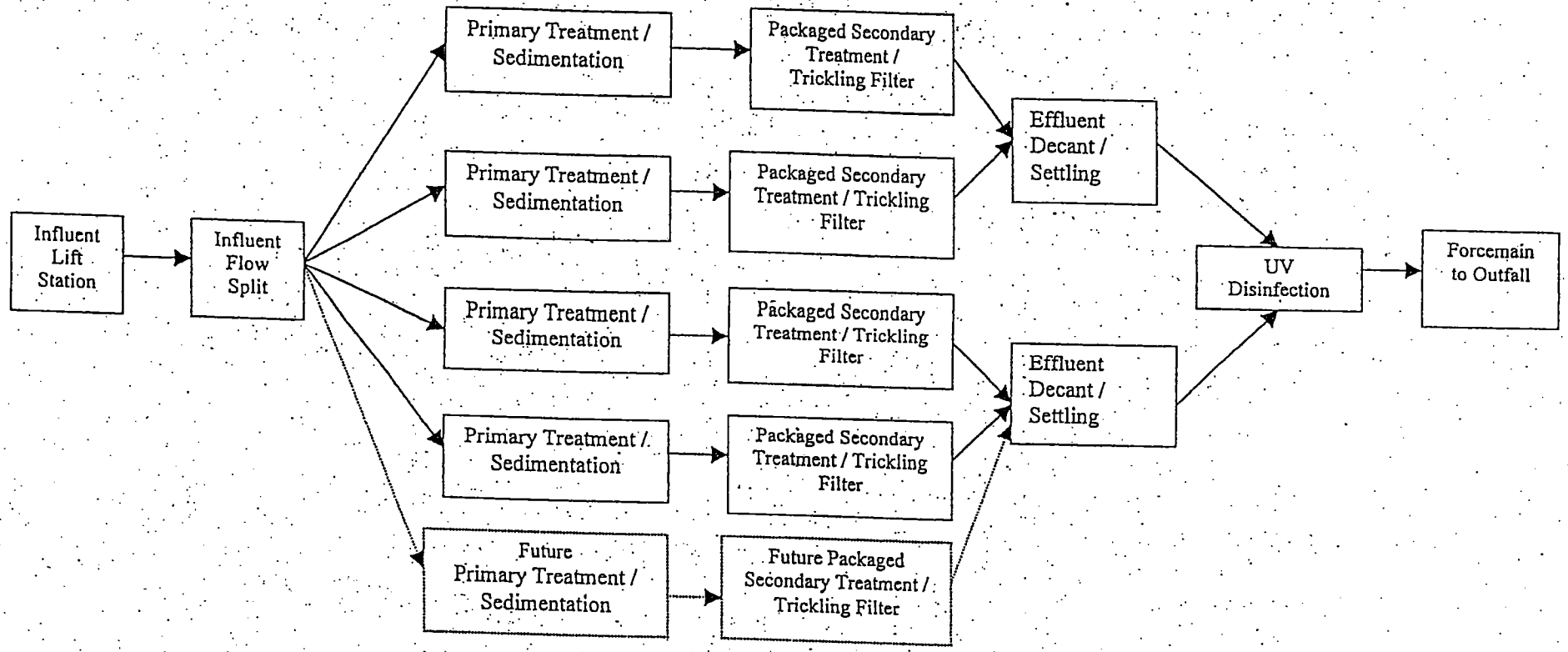
Vinalhaven, Maine

Map created by Maine DEP
August 23, 2007

DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE OF MAINE

ATTACHMENT B

Vinalhaven Wastewater Treatment Plant Process Flow Diagram



ATTACHMENT C

VINALHAVEN
PENOBSCOT BAY

Flow: 0.1 MGD
Chronic dilution: 225.0:1
Acute dilution: 56.0:1

10/09/2007

Species	Test	Test Result %	Sample Date
MYSID SHRIMP	A_NOEL	10.00	11/20/2005
MYSID SHRIMP	LC50	75.00	11/20/2005
SEA URCHIN	C_NOEL	100	11/20/2005
MYSID SHRIMP	A_NOEL	7.5	08/28/2006

ATTACHMENT D

Priority Pollutant Scan Sample Dates

VINALHAVEN
PENOBSCOT BAY

11/21/2005	11
08/28/2006	14

Toxicity Reports--Single Facility

VINALHAVEN, TOWN OF

ME0102491

For period Jan 1, 2001 To Oct 6, 2007

WET test Reports submitted:	3	Reports with WET Exceedences:	0
Priority Pollutant scans submitted:	1	PP Scans with exceeded parameters:	0
Metals/non-conventional tests submitted:	0	Metals/non-conventional exceeded parameters:	0

TYPE	EVENT	DATE	STAFF	COMMENTS
F	ACHEMRPT	9/19/2007	DFB	Analytical results rec'd for September 07 sampling.
F	WETRPT	6/26/2007	DFB	WET test rec'd; Date of sampling 6/26/07 LOTIC mysid shrimp; A-Noel = 3.9 Sea urchin; C-Noel = 10, forwarded to Phil Garwood.
F	ACHEMRPT	6/26/2007	DFB	Analytical results rec'd for 6/26/07.
F	PPRPT	6/26/2007	DFB	Priority Pollutant test results rec'd for 6/26/07-07/17/07Wright Pierce plus subcontractor, Maine Env Lab.
F	WETRPT	8/28/2006	DFB	WET test received on correct form this time. Date of sampling: 8/28-29/06, LOTIC, Mysid shrimp: A-NOEL: 7.5;
F	WETRPT	11/20/2005	DFB	First WET test performed; forwarded to Phil Garwood; Mysid shrimp = LC50: 75%; A-Noel = 10%; sea urchin: c-noel =100%. Per Phil; tests results are ok.