NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

AND

MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Prepared Jointly by the Maine Department of Environmental Protection and the U.S. Environmental Protection Agency – New England Office

Date: August 19, 2008

PERMIT NUMBER: **ME0101996**
LICENSE NUMBER: **W006279-5L-H-R**

NAME AND ADDRESS OF APPLICANT:

TOWN OF SEARSPORT
P.O. Box 499
Searsport, Maine 04974

COUNTY:

Penobscot County

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

45 Navy Street
Searsport, Maine 04974

RECEIVING WATER/CLASSIFICATION:

Penobscot Bay/Class SB

COGNIZANT OFFICIAL AND TELEPHONE NUMBER:

Mr. Howard M. Clark
Superintendent
(207) 548-6320

1. APPLICATION SUMMARY

a. Application - The Town has applied for renewal of a combined Section 301(h) modified National Pollutant Discharge Elimination System (NPDES) permit #ME0101966 and Maine Waste Discharge License (WDL) #W006279-5L-F-R, that was issued on June 12, 2002 and expired on June 12, 2007. The permit/license (permit hereinafter) approved the discharge of up to 0.20 million gallons per day (MGD) of primary treated sanitary waste water to Penobscot Bay, Class SB, in Searsport, Maine. See Attachment A of this Fact Sheet for a location map.

b. Source Description: Sanitary waste waters received at the treatment facility are generated by residential and commercial entities in the Town of Searsport. There are approximately 620 customers served by the treatment facilities. The facility does not receive any flows from industrial sources. The sewer collection system is a separated system and is not known to contain any combined sewer overflows (CSOs).

c. Waste Water Treatment: The facility provides a primary level of treatment for dry weather flows via a bar screen, a comminutor, flow measurement, primary settling via two rectangular clarifier tanks, an aerobic sludge digester for composting solids, chlorination and dechlorination. See Attachment B of this Fact Sheet for a schematic of the waste water treatment process. Polymer is added to the waste water flow at the headworks to enhance flocculation and solids removal in the clarifier tanks. The polymer is added at the bar screen where downgradient agitation provides rapid and complete mixing. All wastewater treated at the facility is discharged to the Searsport Harbor by way of a ten (10) inch diameter PVC pipe. The outfall pipe extends out into the receiving waters approximately 1,200 feet from the edge of the shoreline. The outfall discharges at –20.0 feet mean low tide elevation according to a plan prepared by T.Y. Lin Hunter-Ballew International, dated July 29, 1988, entitled “Ocean Outfall Plan, Town of Searsport, Water Pollution Control Facility.”

2. PERMIT SUMMARY

a. Regulatory - On January 12, 2001, the State of Maine received authorization from the EPA to administer the NPDES program in Maine. Section 301(h) of the Clean Water Act provides a vehicle by which a permittee may request a variance from secondary treatment requirements. Issuance of a permit granting such a variance may only be issued by the EPA as authorization to do so was not granted to the State of Maine on January 12, 2001. See section 2(c) of this Fact Sheet. In addition, pursuant to Maine law, anyone discharging pollutants to waters of the State must obtain a license to do so. Therefore, this document serves as a combination modified NPDES permit and a Maine WDL to satisfy both federal and state requirements. The EPA has authorized the Department to take the lead role in drafting the permit/license.

b. Terms and conditions - This permitting action is similar to the previous permitting action in that it carries forward;

1. The monthly average flow limitation of 0.20 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 water quality based concentration limit of 0.7 mg/L for total residual chlorine.

7. The technology based pH range limitation of 6.0 -9.0 standard units but reducing the monitoring frequency from 1/Day to 1/Week.

This permitting action is <u>different than</u> the previous permitting action in that it is;

1. Eliminating the monthly average concentration reporting requirement for settleable solids and reducing the monitoring frequency to 1/Week.

2. Eliminating the requirement to report influent BOD and TSS on data on the monthly Discharge Monitoring Repot (DMR). Influent values for both parameters shall continue to be reported on the monthly "49-Form" submitted to the Department.

3. Establishing technology based monthly average concentration limits for BOD and TSS.

4. Establishing whole effluent toxicity (WET) testing and chemical specific testing requirement pursuant to a revised Department rule, Chapter 530, Surface Water Toxics Control Program, promulgated on October 12, 2005.

c. <u>History:</u> The most recent permitting/licensing actions include the following:

December 28, 1982 - The Town of Searsport submitted a final application to the EPA for a variance from secondary treatment requirements pursuant to Section 301(h) of the Clean Water Act (CWA).

May 14, 1985 - EPA tentatively approved the request for a variance from secondary treatment requirements.

January 22, 1986 - The Department issued a Water Quality Certification, pursuant to section 401, of the public notice draft National Pollutant Discharge Elimination System (NPDES) permit #ME0101966 granting the Section 301(h) waiver from secondary treatment requirements.

February 12, 1986 – The EPA issued NPDES permit #ME0101966 for the Searsport facility for a five-year term. At the time of permit issuance, the existing sewer system for Searsport consisted of a combined system that discharged untreated waste waters to the tidewaters of Searsport via six (6) combined sewer overflow points. Condition C(1)(a-e) of the permit outlined a schedule of compliance for the construction of a primary treatment facility and compliance with new limitations stipulated in the permit.

July 23, 1987 - The Department issued WDL #W006279-45-B-R that authorized the discharge of untreated municipal waste water from six combined sewer overflow points until a primary treatment facility was constructed. The WDL established a deadline of July 1, 1988 for the completion of the treatment facility. Upon commencement of operation of the waste water treatment facility, the WDL authorized the discharge of up to 0.2 million gallons per day (MGD) of primary treated waste water.

July 1, 1988 - The primary treatment facility for Searsport commenced operations.

September 22, 1989 - The Department issued WDL amendment #W006279-59-C-M that authorized the treatment facility to accept a maximum of 2,000 gallons per day and up to 30,000 gallons per year of septage into the plant's aerated digesters.

April 4, 1990 - The Department issued WDL amendment #W006279-59-D-M that authorized the treatment facility to accept a maximum of 2,000 gallons per day, 7,000 gallons per month and up to 70,000 gallons per year of septage.

September 22, 1995 – The Department issued WDL renewal #W006279-59-E-R that authorized the continued discharge of primary treated wastewater from the municipal facility in Searsport.

July 10, 2000 – The Department initiated a WDL modification by establishing interim average and maximum concentration limits of 412 parts per thousand (ppt) and 618 ppt, respectively, for mercury.

January 12, 2001 – The Department received authorization from the EPA to administer the NPDES program in Maine, however, the authority to grant a variance from secondary treatment requirements pursuant to Section 301(h) of the CWA was not granted to the State of Maine. Because this permit is being issued under a variance from secondary treatment requirements under the CWA, this modified 301(h) permit must be issued by EPA and, herein, the permit is being proposed for joint issuance with the Maine Department of Environmental Protection and EPA.

April 25, 2002 – The Department issued a Section 401 Water Quality Certification to EPA indicating that the proposed primary treatment discharge would not cause or contribute to failure of the water body to attain the standards of its assigned classification.

June 12, 2002 – The Department and EPA issued a combined WDL and NPDES permit (#W006279-5L-F-R and ME0101966) authorizing the discharge of primary treated waste water from the permittee's facility.

February 27, 2007 – The Town of Searsport submitted an application to the Department and EPA for renewal of the June 12, 2002 license/permit. The Department accepted the application for processing on February 28, 2007.

3. CONDITIONS OF PERMITS

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

4. RECEIVING WATER QUALITY STANDARDS

Maine law, 38 M.R.S.A., Section 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. 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.

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, indicates that the Maine Department of Marine Resources (DMR) shellfish Area #33, Searsport, is closed to the harvesting of shellfish. See Attachment C of this Fact Sheet for the delineation of Area #33. The DMR 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.

DMR does not have sufficient field data for Area #33 to open it at this time however, compliance with the monthly average and daily maximum limitations for fecal coliform bacteria will ensure the Searsport facility will not cause or contribute to the closures of the shellfish harvesting area.

In the summer of 1995, the DEP and the EPA conducted a portion of the Biological Monitoring requirements (TVS sampling) and Water Quality Monitoring contained in the previous State waste discharge license and federal NPDES permit at certain 301(h) facilities. The DEP and EPA agreed that the SCUBA inspection was too dangerous as a result of the swift current in the receiving waters. The Department has made the determination that, based on the sampling to date and past effluent monitoring data, the discharge complies with 40 CFR, §125.57(a)(2). According to a document entitled "301(h) Facilities in Maine, Report of 1995 Monitoring Activities," prepared by the Department, dated July 1996 and submitted to EPA, "Water quality, sediment, and photographic information indicates that these [301(h)-type] discharges are not causing any significant impact to the receiving waters". That document concluded that no further ambient monitoring be conducted, and recommended that effluent monitoring be continued. By letter dated February 17, 1995 from EPA Regional Administrator, the EPA found there would be little risk of adverse impacts to the receiving waters from these discharges provided that the permittee perform effluent monitoring as part of the regular permit conditions.

6. WAIVER OF SECONDARY TREATMENT REQUIREMENTS

Under Section 301(b)(1)(B) of the Clean Water Act (CWA), publicly owned treatment works (POTWs) in existence on July 1, 1977 were required to meet effluent limitations based on secondary treatment, which is defined in terms of the parameters BOD, TSS and pH. National effluent limitations for these pollutants were promulgated and included in POTW permits issued under Section 402 of the CWA.

Congress subsequently amended the CWA, adding Section 301(h), which authorizes the EPA Administrator, with State concurrence, to issue NPDES permits which modify the secondary treatment requirements with respect to the discharge of pollutants from a POTW into marine waters, provided that the applicant meet several conditions.

EPA issued a 301(h) waiver to the Town of Searsport on May 14, 1985 based upon the following findings:

- That the discharge will comply with the State of Maine water quality standards for dissolved oxygen and suspended solids.
- That the proposed discharge will not adversely impact public water supplies or interfere with the protection and propagation of a balanced indigenous population of marine life and will allow for recreational activities.
- That no industrial wastes are discharged into the collection system.
- That the discharge will not result in an additional treatment requirements on other point and non-point sources.
- That the State of Maine concurs with the approval of the 301(h) waiver.

Federal regulation 40 CFR, Part 125, Subpart G, more specifically Part 125.57(a)(3), states that the applicant must establish a system for monitoring the impact of such discharge on a representative sample of aquatic biota, to the extent practicable, and the scope of such monitoring is limited to include only those scientific investigations which are necessary to study the effects of the proposed discharge. EPA has made a BPJ determination that the scope of effluent limitations and monitoring requirements in Special Condition A(1) of this permit are sufficient to provide the necessary information to study the effects of the discharge on the receiving waters.

Because all of the prior 301(h) conditions have been maintained and because there has been no new or substantially increased discharge from the permitee's facility, EPA proposes, through the reissuance of the Town of Searsport's permit, to carry forward the original 301(h) waiver decision.

7. ENDANGERED SPECIES ACT

Purpose: Section 7(a)(2) of the Endangered Species Act (ESA) requires federal agencies to ensure, in consultation with the Services, that actions an agency authorizes, funds or carries out are not likely to jeopardize the continued existence of federally listed endangered and threatened species, or result in the destruction or adverse modification of listed species' designated critical habitat. EPA believes that Section 7(a)(2) of the Endangered Species Act applies when EPA carries out actions approving State or Tribal water quality standards and NPDES permitting programs under the CWA.

ESA Designation: On November 17, 2000, the U.S. Fish and Wildlife Service and the National Marine Fisheries Service listed wild Atlantic Salmon in eight Maine rivers as endangered. Those eight rivers are the Dennys, East Machias, Machias, Pleasant, Narraguagus, Ducktrap, and Sheepscot Rivers and Cove Brook. Renewal of the Searsport NPDES permit would allow the continuation of the discharge of primary treated wastewaters to the coastal waters of Penobscot Bay approximately 10 miles from the Ducktrap River and equal distance to the Penobscot River estuary.

7. ENDANGERED SPECIES ACT

ESA Determination: Because of the low flow volume of the discharge and because the wastewaters are not known to contain pollutants at concentrations which could be toxic to aquatic life, and because the discharge is not released directly to a Maine DPS Atlantic Salmon River, EPA has determined that the action of renewal of the existing NPDES permit for the discharge of treated domestic waste water is not likely to adversely affect listed species or their critical habitat under NMFS jurisdiction.

8. EFH (ESSENTIAL FISH HABITAT) DETERMINATION

Under the 1996 Amendments (PL 104-267) 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 Services (NMFS) if EPA's action or proposed actions that it 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: "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. 16 U.S.C. § 1802 (10). Adversely impact 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. Essential fish habitat is only designated for species for which federal fisheries management plans exist. 16 U.S.C. § 1855(b) (1) (A). EFH designations for New England were approved by the U.S. Department of Commerce on March 3, 1999.
National Marine Fisheries Service designation of Essential Fish Habitat for the 10 minute square that includes the Searsport discharge (N44 ^{o} 27' 17", W68 ^{o} 54' 39"). 10' x 10' Square Coordinates:

Boundary	North	East	South	West
Coordinate	44° 30.0' N	68° 50.0' W	44° 20.0' N	69° 00.0' W

Square Description (i.e. habitat, landmarks, coastline markers): Gulf of Maine waters within the square within Penobscot Bay affecting the following: the northern part of Isleboro Island and Cape Jellison, south of Searsport, ME., and east of Belfast, ME, within Belfast Bay, and around Sears Island.

8. EFH (ESSENTIAL FISH HABITAT) DETERMINATION (cont'd)

Species and Life Stage Designation

Species	Eggs	Larvae	Juveniles	Adults
Atlantic Salmon (*Salmo salar)*			X	X
Atlantic cod *(Gadus morhua)*		X	X	X
haddock *(Melanogrammus aeglefinus)*				
pollock *(Pollachius virens)*			X	
whiting *(Merluccius bilinearis)*			X	X
offshore hake *(Merluccius albidus)*				
red hake *(Urophycis chuss)*			X	X
white hake *(Urophycis tenuis)*			X	X
redfish *(Sebastes fasciatus)*	n/a			
witch flounder *(Glyptocephalus cynoglossus)*				
winter flounder *(Pleuronectes americanus)*	X	X	X	X
yellowtail flounder *(Pleuronectes ferruginea)*	X	X		
windowpane flounder *(Scopthalmus aquosus)*	X	X	X	X
American plaice *(Hippoglossoides platessoides)*	X	X	X	X
ocean pout *(Macrozoarces americanus)*	X	X	X	X
Atlantic halibut *(Hippoglossus hippoglossus)*				
Atlantic sea scallop *(Placopecten magellanicus)*	X	X	X	X
Atlantic sea herring *(Clupea harengus)*		X	X	X
monkfish *(Lophius americanus)*				
bluefish *(Pomatomus saltatrix)*			X	X
long finned squid *(Loligo pealei)*	n/a	n/a		
short finned squid *(Illex illecebrosus)*	n/a	n/a		
Atlantic butterfish *(Peprillus triacanthus)*				
Atlantic mackerel *(Scomber scombrus)*			X	X
summer flounder *(Paralicthys dentatus)*				
scup *(Stenotomus chrysops)*	n/a	n/a		
black sea bass *(Centropristus striata)*	n/a			
surf clam *(Spisula solidissima)*	n/a	n/a		
ocean quahog *(Artica islandica)*	n/a	n/a		
spiny dogfish *(Squalus acanthias)*	n/a	n/a		
tilefish *(Lopholatilus chamaeleonticeps)*				
bluefin tuna *(Thunnus thynnus)*				X

8. EFH (ESSENTIAL FISH HABITAT) DETERMINATION (cont'd)

Due to the low volume of the discharge and the lack of toxic potential of the wastewater discharged, EPA believes that renewal of the Searsport permit is unlikely to adversely impact the above-designated Essential Fish Habitat. EPA has, therefore, not requested an EFH consultation with the National Marine Fisheries Service in regard to the renewal of this permit

9. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

a. Flow – The previous permit contained a monthly average flow limitation of 0.20 million gallons per day (MGD). The limitation is being carried forward in this permitting action but is being expressed as 200,000 gallons per day (gpd) rather than MGD. The limit was proposed by the permittee in 1982 when it submitted the application to the EPA for a variance from secondary treatment requirements. Federal regulations found at 40 CFR §122.45(b)(i) require that effluent limitations be calculated based on deign flow which is found in the Permit Application. A review of the DMR data for the period April 2005 - March 2007 inclusively, indicates the monthly average flow discharged has ranged from 0.069 MGD (69,000 gpd) to 0.13 MGD (130,000 gpd) with an arithmetic mean of 0.086 MGD (86,000 gpd).

b. Dilution Factors: Department Regulation Chapter 530 *Surface Water Toxics Control Program*, §4(a)(2) states:

(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.

(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.

Using plan and profile information of the outfall and the CORMIX model, the Department has determined the dilution factors for the discharge of 0.20 MGD from the waste water treatment facility are as follows:

Acute = 54:1 Chronic = 188:1 Harmonic mean = 564:1[(1)]

(1) Pursuant to Department rule Chapter 530, "*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).

b. Biochemical oxygen demand (BOD) and total suspended solids (TSS) - Federal regulations state that primary or equivalent treatment means treatment by screening, sedimentation, and skimming adequate to remove at least thirty percent (30%) of the BOD and 30% of the TSS material in the treatment works influent. The Department and EPA consider a thirty percent (30%) removal of BOD and a fifty percent (50%) removal of TSS from the influent loading as a best professional judgment (BPJ) determination of best practicable treatment (BPT) for primary facilities. These percent removal requirements were established in the previous permitting action and are being carried forward in this permitting action as the percent removal is the foundation for the permitting of 301(h) facilities.

The previous permit established monthly average technology based mass and concentration limits for BOD and TSS with a monitoring frequency of 1/Week. 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. This assumed 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:

BOD: 290 mg/L – [(290 mg/L)(0.30)] = 203 mg/L
(203 mg/L)(8.34)(0.20 MGD) = 338 lbs/day

A review of the DMR data for the period April 2005 – March 2007 inclusively, indicates the monthly average effluent concentration of BOD discharged has ranged from 94 mg/L to 173 mg/L with an arithmetic mean of 135 mg/L. As for the monthly average mass of BOD discharged, the DMR data indicates the range has been from 71 lbs/day to 186 lbs/day with an arithmetic mean of 87 lbs/day. Monthly percent removal rates for BOD for this time period range from 42% - 59% with an arithmetic mean of 50%.

TSS: 290 mg/L – [(290 mg/L)(0.50)] = 145 mg/L
(145 mg/L)(8.34)(0.20 MGD) = 242 lbs/day

A review of the DMR data for the period calendar years April 2005 – March 2007 inclusively, indicates the monthly average effluent concentration of TSS discharged has ranged from 39 mg/L to 83 mg/L with an arithmetic mean of 64 mg/L. As for the monthly average mass of TSS discharged, the DMR data indicates the range has been from 27 lbs/day to 109 lbs/day with an arithmetic mean of 47 lbs/day. Monthly percent removal rates for TSS for this time period range from 52% - 84% with an arithmetic mean of 68%.

The technology based mass and concentration limitations and monitoring requirements for BOD & TSS are being carried forward in this permitting action and are based on a BPJ determination by the Department and EPA given the size and type of treatment.

c. Settleable solids – The previous permitting action established monthly average and daily maximum concentration reporting requirements for settleable solids with a 1/Day monitoring frequency. A review of the DMR data for the period April 2005 – March 2007 indicates the monthly average and daily maximum concentrations have ranged from <0.1 ml/L to 0.4 ml/L with an arithmetic mean of 0.1 ml/L. Based on the historic data results, the Department and EPA are making a BPJ determination to reduce the monitoring frequency to 1/Week to be consistent with the monitoring frequencies for BOD and TSS.

d. Fecal coliform bacteria – 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 Fact Sheet of the previous permitting action indicated the limitations were in effect on a year-round basis (rather than seasonal May 15-September 30) but gave no justification. The numeric limitations are being carried forward in this permitting action along with a monitoring frequency of 1/Week. 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 15th – September 30th as the season in which the limitations are in effect.

A review of the DMR data for the period calendar years April 2005 – March 2007 inclusively indicates the monthly average (geometric mean) fecal coliform bacteria levels discharged have ranged from 2 – 15 colonies/100 mL with an arithmetic mean of 5 colonies/100 mL and the daily maximum levels have ranged from <4 – >240 colonies/100 mL with an arithmetic mean of 24 colonies/100 mL.

e. Total residual chlorine(TRC) – The previous permitting action established a water quality based daily maximum limitation of 0.7 mg/L with monitoring frequency of 1/Day. Limits on total residual chlorine are specified to ensure attainment of the in-stream water quality criteria for chlorine and that BPT technology is utilized to abate the discharge of chlorine. Permits issued by this Department impose the more stringent of the calculated water quality based or BPT based limits. The Department has established a daily maximum best practicable treatment (BPT) limitation of 1.0 mg/L for facilities that disinfect their effluent with elemental chlorine or chlorine based compounds unless the calculated acute water quality based threshold is lower than 1.0 mg/L. For facilities that need to de-chlorinate the discharge to meet water quality based thresholds, the Department has established daily maximum and monthly average best practicable treatment limits of 0.3 mg/L and 0.1 mg/L respectively

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	54:1	188:1	0.70 mg/L	1.4 mg/L

Example calculation: Acute – 0.013 mg/L (54) = 0.70 mg/L

Being that the acute water quality based daily maximum threshold calculated above is more stringent than the Department's BPT limit of 1.0 mg/L, the water quality based limit of 0.70 mg/L is being carried forward in this permitting action along with the monitoring frequency of 1/Day.

A review of the DMR data for the period April 2005 – March 2007 indicates the daily maximum TRC discharged has ranged from 0.3 mg/L to 0.7 mg/L with an arithmetic mean of 0.6 mg/L.

g. pH – The previous permitting action establishing 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 1/Day. A review of the DMR data for the period April 2005 –March 2007 indicates the pH range limitation has never been exceeded. Therefore, this permitting action is reducing the monitoring frequency 1/Week based on the historical data and compliance record.

h. Whole Effluent Toxicity (WET) & Chemical-Specific Testing: Maine law, 38 M.R.S.A., Sections 414-A and 420, prohibit the discharge of effluents containing substances in amounts that would cause the surface waters of the State to contain toxic substances above levels set forth in Federal Water Quality Criteria as established by the USEPA. Department Rules, 06-096 CMR Chapter 530, *Surface Water Toxics Control Program*, and Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants* set forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

WET, priority pollutant and analytical chemistry testing, as required by Chapter 530, is included in this permit in order to fully characterize the effluent. This permit also provides for reconsideration of effluent limits and monitoring schedules after evaluation of toxicity testing results. The monitoring schedule includes consideration of results currently on file, the nature of the wastewater, existing treatment and receiving water characteristics.

WET monitoring is required to assess and protect against impacts upon water quality and designated uses caused by the aggregate effect of the discharge on specific aquatic organisms. Acute and chronic WET tests are performed on invertebrate and vertebrate species. Priority pollutant and analytical chemistry testing is required to assess the levels of individual toxic pollutants in the discharge, comparing each pollutant to acute, chronic, and human health water quality criteria as established in Chapter 584.

Chapter 530 establishes four categories of testing requirements based predominately on the chronic dilution factor. The categories are as follows:

1) Level I – chronic dilution factor of <20:1.
2) Level II – chronic dilution factor of ≥20:1 but <100:1.
3) Level III – chronic dilution factor ≥100:1 but <500:1 or >500:1 and Q ≥1.0 MGD
4) Level IV – chronic dilution >500:1 and Q ≤1.0 MGD

Department rule Chapter 530 (2)(D) specifies the criteria to be used in determining the minimum monitoring frequency requirements for WET, priority pollutant and analytical chemistry testing. Based on the Chapter 530 criteria, the Searsport facility falls into the Level III frequency category as the facility has a chronic dilution factor ≥100:1 but <500:1. Chapter 530(2)(D)(1) specifies that surveillance and screening level testing requirements are as follows:

Screening level testing

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

Surveillance level testing

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

The Department's files do not contain any WET, analytical chemistry or priority pollutant testing for the Town of Searsport. Therefore, this permit establishes surveillance level and screening level testing as described above.

10. DISCHARGE IMPACT ON RECEIVING WATERS

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

11. PUBLIC COMMENTS

Notice of the application being filed with the Department and EPA for renewal of the permit was placed in the Republican Journal and Waldo Independent newspapers on or about February 21, 2007. Notice of the draft permit will be placed in a regional Maine newspaper for a minimum 30-day comment period during which time, written comments may be directed to both the Department and EPA at the addresses given on page 16 of this Fact Sheet. Upon review of the public comments and receipt of Maine DEP Water Quality Certification, EPA will make a final decision whether to issue this permit.

12. CONTACTS

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

Gregg Wood
Division of Water Quality Management
Bureau of Land & Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017
Phone: 207-287-7693
Email: gregg.wood@maine.gov

Doug Corb CME
US EPA Region I
One Congress Street Suite 1100-CMP
Boston, MA 02114
Phone: 617-918-1565
Email: corb.doug@epa.gov

13. RESPONSE TO COMMENTS:

Reserved until the close of the 30-day comment period.