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: **ME0102016**

LICENSE NUMBER: **W006306-5L-D-R**

NAME AND ADDRESS OF APPLICANT:

TOWN OF LUBEC
Publicly Owned Treatment Works
40 School Street
Lubec, Maine 04652

COUNTY: **Washington County**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

Waste Water Treatment Facility
Pleasant Street
Lubec, Maine 04652

RECEIVING WATER **Passamaquoddy Bay (Lubec Narrows)**

CLASSIFICATION: **Class SB**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER:

Mr. Jon Carmen
JMC Wastewater Services
Contract Operator
(207) 948 - 1744

1. APPLICATION SUMMARY

a. Application - The Town of Lubec has applied to the U.S. Environmental Protection Agency (EPA) and Maine Department of Environmental Protection for the renewal of a combined Section 301(h) Modified National Pollutant Discharge Elimination System (NPDES) permit #ME0102016 and Maine Waste Discharge License (WDL) #W006306-5L-C-R, that was issued on July 7, 2003 and expired on July 7, 2008. The permit/license (permit hereinafter) approved the discharge of up to monthly average flow of 0.166 million gallons per day (MGD) of primary treated sanitary waste water to Passamaquoddy Bay (Lubec Narrows), Class SB, in Lubec, Maine. See Attachment A of this Fact Sheet for a location map.

b. Source Description: Sanitary waste water received at the treatment facility is generated by residential and commercial entities in the Town of Lubec. The facility does not receive more than 10% of its flows from industrial sources. The discharge of municipal waste waters via any other outfall is forbidden and not authorized by this permit. The waste water collection system consists of five (5) miles of gravity collector sewers and force mains and four (4) submersible pump stations. There are no combined sewer overflow (CSO) outfalls in the collection system. The collection system in Lubec consists of a duplex submersible effluent pump station at the treatment plant, 2,600 linear feet of
10-inch diameter force main and 450 feet of 8-inch diameter outfall pipe which discharges treated waste water to the tidal waters of Lubec.

c. Waste Water Treatment: The treatment facility provides a primary level of treatment and consists of (1) an influent pump station, (2) screening and grit removal,
(3) two primary treatment Imhoff tanks (4) prechlorination (if needed), (4) chlorination facility, (5) effluent pump station, (6) sampling of effluent quality, (7) sludge removal, mixing, drying, stabilization, and dumping facilities (8) lime, polymer and potasium permanganate chemical addition facilities, and (9) a Control Building. There is a dechlorination facility at the terminus of the effluent force main approximately 2,600 feet from the main treatment facility. The dechlorination facility consists of effluent flow metering, dechlorination chemical addition facilities, a effluent sampling access manhole, and the dechlorination operations building. Disinfection of the effluent is conducted during the summer season (May 15 to September 30).

Waste water enters the influent pump station wet well through a 10-inch diameter gravity sewer. The waste water is pumped by the influent self-priming centrifugal pumps to the headworks channel for screening and grit removal. A weir controlled splitting structure at the end of the headworks channels controls flow to the two (2) Imhoff primary treatment tanks. The sludge and scum are stored in the lower compartments of the tanks for anaerobic digestion and then seasonally disposed of by liquid sludge land application or dewatered in drying beds and either land applied, landfilled or sent to another facility for further treatment and disposal. The waste water flows from the Imhoff tanks to the effluent pump station wet well. Sodium hypochlorite is injected into the force main in a chemical addition manhole to disinfect the waste water.

A static mixer is provided in this manhole to thoroughly combine the waste water with the chemical additions. A 10-inch diameter force main between the treatment plant and the dechlorination facility acts to provide the necessary detention time to provide disinfection of the waste water flow. The 10-inch diameter force main from the effluent pump station at the treatment plant terminates at the dechlorination facility. Effluent flow monitoring and sampling are conducted at the dechlorination facility. If need be, the waste water is dechlorinated with liquid sodium bisulfite which is injected into the force main in another chemical addition manhole. The waste water flows from the dechlorination facility via an 8-inch diameter gravity outfall pipe and is discharged at Lubec Narrows at a depth of 18 feet below mean low tide. See Attachment B of this Fact Sheet for a schematic of the waste water treatment processes.

2. PERMIT SUMMARY

a. Regulatory - On January 12, 2001, the State of Maine received authorization from the EPA to administer the NPDES permit program in Maine. Section 301(h) of the CWA 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 Maine Department of Environmental Protection (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 0.166 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 seasonal (May 15 – September 30) monthly average (geometric mean) and daily maximum water quality based concentration limits of 15 colonies/100 ml and 50 colonies/100 ml respectively, for fecal coliform bacteria.

6. The daily maximum technology based concentration limit of 1.0 mg/L for total residual chlorine.

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

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

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

9. Eliminating the requirement to report influent BOD and TSS 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.

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

11. Establishing an annual certification requirement pursuant to Department rule, 06-096 CMR Chapter 530, *Surface Water Toxics Control Program*, promulgated on October 12, 2005.

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

December 1982 - The Town of Lubec submitted a final application to the EPA for a variance from secondary treatment requirements (primary treatment only) pursuant to Section 301(h) of the CWA.

March 6, 1985 - The Department issued WDL #W006306-45-A-N for a five-year term that authorized the discharge of untreated sanitary waste waters to the tidewaters of Lubec. The license did not contain any effluent limitations or monitoring requirements.

May 9, 1985 - The EPA tentatively approved the request for a variance from secondary treatment requirements.

December 18, 1985 - Pursuant to section 401 of the CWA, the Department issued a certification of the public notice draft NPDES permit #ME0102016.

December 31, 1985 - The EPA issued NPDES permit #ME0102016 for a five-year term. At the time of permit issuance, the existing sewer system for Lubec consisted of a combined system that discharged untreated waste waters to the tidewaters of Lubec via thirteen (13) CSO outfalls. Condition C(2) of the permit outlined a schedule of compliance for the elimination of the CSO's by May 1, 1988. The permit contain effluent limitations and monitoring requirements similar to other NPDES permits and State licenses issued at that time for facilities with a variance from secondary treatment requirements.

October 1993 - The primary treatment facility for the Town of Lubec commenced operations.

October 3 1995 – The Department renewed the WDL by issuing #W006306-59-B-R for a five-year term.

January 12, 2001 – The Department received authorization from the EPA to administer the NPDES program in Maine for all areas of the state other than Indian Lands. 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 Department and EPA.

July 7, 2003 – The EPA and Department issued combination Section 301(h) Modified NPDES permit #ME0102016 and Maine WDL #W006306-5L-C-R for a five-year term.

April 10, 2006 – The Department modified the 7/3/03 WDL by incorporating the testing requirements of the newly promulgated (10/12/05) Department rule, Chapter 530, *Surface Water Ambient Toxics Program.*

July 29, 2008 - The Town of Lubec submitted a complete application to the EPA and the Department for the renewal of combination NPDES permit #ME0102016 and WDL W006306-5L-C-R.

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 2006 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 C-58, Lubec and South Lubec, is closed to the harvesting of shellfish. See Attachment C of this Fact Sheet for the delineation of Area C-58. 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 issued the closure notice on August 4, 2006, based on ambient water quality sampling indicated elevated levels of bacteria. Compliance with the monthly average and daily maximum limitations for fecal coliform bacteria in this permit will ensure the discharge from the Lubec facility will not cause or contribute to the closure 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 Department 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 Lubec on May 9, 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 re-issuance of the Town of Lubec'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 Rives and Cove Brook. Renewal of Eastport's NPDES permit would allow the continuation of the discharge of primary treated waste waters to the coastal waters of Passamaquoddy Bay.

ESA Determination: Because of the low flow volume of the discharge and because the waste waters 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 Lubec discharge (N44 ^{o} 51' 30", W66 ^{o} 58' 71") is Passamaquody Bay, Maine:

10' x 10' latitude and longitude squares included in this bay areas follows;

N 44°50' W 66°50'; N 44°50' W 67°00'; N 44°50' W 67° 00'; N 45°00' W 67°10'

Species and Life Stage Designation

Species	Eggs	Larvae	Juveniles	Adults	Spawing Adults
Atlantic Salmon (*Salmo salar)*			F,M,S	F,M,S	
Atlantic cod *(Gadus morhua)*		S	S	S	
haddock *(Melanogrammus aeglefinus)*					
pollock *(Pollachius virens)*		S	M,S	S	
whiting *(Merluccius bilinearis)*			M,S	M,S	
offshore hake *(Merluccius albidus)*					
red hake *(Urophycis chuss)*			M,S	M,S	
white hake *(Urophycis tenuis)*			M,S	M,S	
redfish *(Sebastes fasciatus)*	n/a				
witch flounder *(Glyptocephalus cynoglossus)*					
winter flounder *(Pleuronectes americanus)*	M,S	M,S	M,S	M,S	M,S
yellowtail flounder *(Pleuronectes ferruginea)*	S	S			
windowpane flounder *(Scopthalmus aquosus)*	M,S	M,S	M,S	M,S	M,S
American plaice *(Hippoglossoides platessoides)*	S	S	M,S	S	S
ocean pout *(Macrozoarces americanus)*	S	S	S	S	S
Atlantic halibut *(Hippoglossus hippoglossus)*	S	S	S	S	S
Atlantic sea scallop *(Placopecten magellanicus)*	S	S	S	S	S
Atlantic sea herring *(Clupea harengus)*		M,S	M,S	M,S	
monkfish *(Lophius americanus)*					
bluefish *(Pomatomus saltatrix)*					
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)*			M,S	M,S	
summer flounder *(Paralicthys dentatus)*					
scup *(Stenotomus chrysops)*					
black sea bass *(Centropristus striata)*					
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)*					

Due to the low volume of the discharge and the lack of toxic potential of the waste water discharged, EPA believes that renewal of the Lubec 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 0.166 million gallons per day (MGD). The limitation is being carried forward in this permitting action but is being expressed as 166,000 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. A review of the DMR data for the period January 2005 – January 2008 inclusively, indicates the following:

Flow

Value	Limit (gpd)	Range (gpd)	Mean (gpd)
Monthly Average	166,000	28,000 – 97,000	44,000

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

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.

Based on the location and configuration of the outfall pipe, the Department determined in the 4/10/06 license modification that at the full permitted flow of 166,000 gpd, the discharge from the Lubec waste water treatment facility will be diluted by the following factors:

Acute = 1,900:1 Chronic = 4,700:1 Harmonic mean [(1)] = 14,100:1

Footnote:

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

c. 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 considers 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 301h 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)(0.166 MGD) = 281 lbs/day

TSS: 290 mg/L – [(290 mg/L)(0.50)] = 145 mg/L
(145 mg/L)(8.34)(0.166 MGD) = 201 lbs/day

A review of the DMR data for the period January 2005 – January 2008 inclusively, indicates the following:

BOD Mass

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)
Monthly Average	281	40 – 122	63

BOD Concentration

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	Report	122 – 436	195

BOD % removal

Value	Limit (%)	Range (%)	Average (%)
Monthly Average	30	11 – 60	35

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TSS Mass

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)
Monthly Average	201	16 - 43	23

TSS Concentration

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	Report	44 - 119	65

TSS % removal

Value	Limit (%)	Range (%)	Average (%)
Monthly Average	50	48 - 94	64

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

d. 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 been reported as <0.1 ml/L for all 24 months. Based on the historic data results, the Department is making a BPJ determination to reduce the monitoring frequency to 1/Week to be consistent with the monitoring frequencies for BOD and TSS.

e. Fecal coliform bacteria – The previous permitting action established seasonal (May 15 – September 30) monthly average (geometric mean) and daily maximum limits of 15 colonies/100 ml and 50 colonies/100 ml respectively, that are consistent with limitations in the National Shellfish Sanitation Program. The numeric limitations are being carried forward in this permitting action along with a monitoring frequency of 1/Week.

A review of the DMR data for the period calendar years May 2005 – September 2007 indicates the following:

Fecal coliform bacteria

Value	Limit (col/100 ml)	Range (col/100 ml)	Mean (col/100 ml)
Monthly Average	15	7.5 - 20	7
Daily Maximum	50	<10 - 58	14

f. Total residual chlorine(TRC) – The previous permitting action established a technology based daily maximum limitation of 1.0 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 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 BPT limits of 0.3 mg/L and 0.1 mg/L respectively.

End-of-pipe water quality based concentration thresholds may be calculated as follows:

Parameter	Acute Criteria	Chronic Criteria	Acute Dilution	Chronic Dilution	Acute Limit	Chronic Limit
Chlorine	13 ug/L	7.5 ug/L	1,900:1	4,700:1	25 mg/L	35 mg/L

Example calculation: Acute – 0.013 mg/L (1,900) = 25 mg/L

Being that the BPT limitation of 1.0 mg/L is more stringent than the water quality based thresholds calculated above, the daily BPT limitation of 1.0 mg/L is being carried forward in this permitting action.

A review of the seasonal DMR data for the period May 2005 – September 2007 indicates the daily maximum TRC discharged is as follows:

Total residual chlorine

Value	**Limit (mg/L)**	**Range (mg/L)**	**Mean (mg/L)**
Daily Maximum	1.0	0.16 – 0.98	0.63

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 waste water, existing treatment and receiving water characteristics.

WET monitoring is required to assess and protect against impacts upon water quality and designated uses caused by the aggregate effect of the discharge on specific aquatic organisms. Acute 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 Lubec facility falls into the Level IV frequency category as the facility has a chronic dilution factor >500:1 and a Q ≤1.0 MGD.

Chapter 530(2)(D)(1) specifies that default surveillance and screening level testing requirements are as follows:

Screening level testing

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

Surveillance level testing

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

*These routine testing requirements for Level IV are waived, except that the Department shall require an individual discharger to conduct testing under the following conditions.

(a) The discharger's permit application or information available to the Department indicate that toxic compounds may be present in toxic amounts; or

(b) Previous testing conducted by the discharger or similar dischargers indicates that toxic compounds may be present in toxic amounts.

Additionally, new or substantially changed dischargers assigned to Level IV must conduct testing during the first two years of the discharge. Further testing is waived provided the testing done does not indicate any reasonable potential for exceedence as calculated pursuant to section 3(E).

Though the facility has never conducted WET or chemical specific testing pursuant to Department rule Chapter 530, the Department has made the determination the Lubec facility is not a new discharge nor has it substantially changed since issuance of the previous permit/license. Therefore the SSD qualifies for the waiver from the Chapter 530 testing requirements. Chapter 530 §(2)(D) states:

(4) 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.

Special Condition J, *Chapter 530 §(2)(D)(4) Certification,* of this permitting action requires the permittee to file an annual certification with the Department.

It is noted however, that if future WET testing results indicates the discharge exceeds critical water quality thresholds this permit will be reopened pursuant to Special Condition L, *Reopening of Permit For Modification,* of this permit to establish applicable limitations and monitoring requirements and require the permittee to submit a toxicity reduction evaluation (TRE) pursuant to Department rule, Chapter 530(3)(c).

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 Quoddy Times newspaper on or about July 29, 2008. 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 either the Department or EPA at the addresses given in Section 12 below. Upon review of the public comments and receipt of the Section 401 Water Quality Certification from the MEDEP, 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

Roger Janson CME
US EPA Region I
One Congress Street Suite 1100
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Phone: 617-918-1621
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13. RESPONSE TO COMMENTS

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