STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

May 17, 2007

DAVID P. LITTELL
COMMISSIONER

Mr. William Daniels
McCain Foods USA, Inc.
319 Richardson Road
Easton, Maine 04740

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0036218
Maine Waste Discharge License (WDL) Application #W008085-5N-D-R
Final Permit

Dear Mr. Daniels:

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: Steve Sutter, Abutter and Interested Party
Bill Sheehan, DEP
Lori Mitchell, DEP
Sandy Lao, USEPA
File #8085

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769-2094
(207) 764-0477 FAX: (207) 760-3143

web site: www.maine.gov/dep

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

DEPARTMENT ORDER

IN THE MATTER OF

MCCAIN FOODS USA, INC.	)	MAINE POLLUTANT DISCHARGE
PRESQUE ISLE, AROOSTOOK COUNTY	)	ELIMINATION SYSTEM PERMIT
FOOD PROCESSING FACILITY	)	AND
#ME0036218	)	WASTE DISCHARGE LICENSE
#W008085-5N-D-R **APPROVAL**	)	**RENEWAL**

Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, §1251, *et seq.*, and Maine law, 38 M.R.S.A., §414-A *et seq.*, and applicable regulations, the Maine Department of Environmental Protection (Department) has considered the application of MCCAIN FOODS USA, INC. (McCain), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

McCain has applied to the Department for a renewal of Waste Discharge License (WDL) #W008085-5N-C-M / Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0036218, which was issued on June 11, 2002, and is scheduled to expire on June 11, 2007. The 6/11/02 MEPDES permit authorized the monthly average discharge of up to 2.5 million gallons per day (MGD) (Tier #1 production for Easton Plant I) and a monthly average discharge of up to 4.0 MGD (Tier #2 production for Easton Plant I and Plant II) of treated process and sanitary waste waters from a potato processing facility located in Easton, Maine, to the Aroostook River, Class C, in Presque Isle, Maine.

PERMIT SUMMARY

This permitting action is similar to the 6/11/2002 permitting action in that it is <u>for both Tier #1 and Tier #2</u>:

1. Carrying forward the monthly average discharge flow limit and daily maximum reporting requirement;

2. Carrying forward the technology-based, monthly average concentration and mass limits for biochemical oxygen demand (BOD_5);

3. Carrying forward the technology-based, monthly average concentration and mass limits for suspended solids (TSS);

PERMIT SUMMARY

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

5. Carrying forward the technology-based, monthly average and daily maximum concentration limits for total residual chlorine (TRC);

6. Carrying forward the weekly average concentration and mass limits for total phosphorous;

7. Carrying forward the technology-based pH range limitation;

For Administrative Outfall #100 (Internal Waste Stream for Sanitary Wastewater):

8. Carrying forward the monthly average and daily maximum discharge flow reporting requirements; and

9. Carrying forward the year-round, monthly average and daily maximum concentration limits for *Escherichia coli* bacteria.

This permitting action is different from the 6/11/2002 permitting action in that it is for both Tier #1 and Tier #2:

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

2. Revising the daily maximum concentration and mass limits for BOD_5 by establishing new, more stringent, technology-based limits for this parameter;

3. Revising the seasonal, daily maximum concentration and mass limits for TSS by establishing new year-round, technology-based limits for this parameter;

4. Eliminating the monthly average and daily maximum concentration and mass reporting requirements for total ammonia (as N);

5. Establishing monthly average and daily maximum concentration and mass reporting requirements for total phosphorous;

6. Establishing monthly average concentration and mass limits and testing requirements for total aluminum based on the results of facility testing;

7. Revising/establishing whole effluent toxicity (WET), priority pollutant and analytical chemistry testing requirements to be consistent with Department rule Chapter 530, *Surface Water Toxics Control Program*;

8. Establishing C-NOEL limitations of 2.56% and 3.43% for Tier #1 and Tier #2, respectively, and an A-NOEL limit of 4.01% for Tier #2 for the water flea based on the results of facility testing; and

9. Establishing Special Condition I, *Chapter 530 Statement for Reduced Toxics Testing*; for reduced surveillance level brook trout and analytical chemistry testing.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated May 15, 2007, and subject to the Conditions listed below, the Department makes the following conclusions:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.

2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.

3. The provisions of the State's antidegradation policy, 38 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 Maine law, 38 M.R.S.A., §414-A(1)(D).

ACTION

THEREFORE, the Department APPROVES the above noted application of MCCAIN FOODS USA, INC. to discharge a monthly average flow of up to 2.5 million gallons per day (MGD) (Tier #1) and up to 4.0 MGD (Tier #2) of treated process and sanitary waste waters from a food processing facility to the Aroostook River, Class C, in Presque Isle, 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.

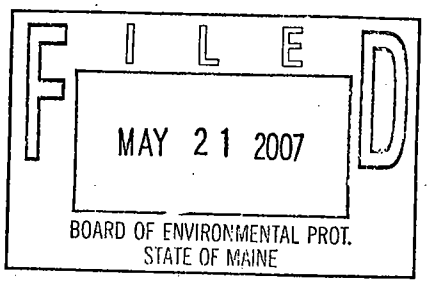
DONE AND DATED AT AUGUSTA, MAINE, THIS 17TH DAY OF May, 2007.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAVID P. LITTELL, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: December 18, 2006
Date of application acceptance: December 22, 2006



Date filed with Board of Environmental Protection: _____.

This Order prepared by William F. Hinkel, BUREAU OF LAND & WATER QUALITY
#ME0036218 / #W008085-5N-D-R May 15, 2007

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. **TIER #1** The permittee is authorized to discharge **treated process and sanitary waste waters from Outfall #001A** to the Aroostook River at Presque Isle. 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]*	2.5 MGD *[03]*	---	Report MGD *[03]*	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
BOD_5 *[00310]*	497 lbs./day *[26]*	---	994 lbs./day *[26]*	36 mg/L *[19]*	---	72 mg/L *[19]*	3/Week *[03/07]*	24-Hour Composite *[24]*
TSS *[00530]*	1,608 lbs./day *[26]*	---	3,216 lbs./day *[26]*	116 mg/L *[19]*	---	231 mg/L *[19]*	3/Week *[03/07]*	24-Hour Composite *[24]*
Settleable Solids *[00545]*	---	---	---	---	---	0.3 ml/L *[25]*	3/Week *[03/07]*	Grab *[GR]*
Total Residual Chlorine[2] *[50060]*	---	---	---	0.1 mg/L *[19]*	---	0.3 mg/L *[19]*	3/Week *[03/07]*	Grab *[GR]*
Total Phosphorus[3] **(June 1 – Sept. 30)** *[00665]*	Report lbs./day *[26]*	91 lbs./day *[26]*	Report lbs./day *[26]*	Report mg/L *[19]*	6.6 mg/L *[19]*	Report mg/L *[19]*	3/Week *[03/07]*	24-Hour Composite *[24]*
Aluminum (Total) [4] *[01105]*	63 lbs./day *[26]*	---	Report lbs./day *[26]*	4.5 mg/L *[19]*	---	Report mg/L *[19]*	2/Year *[02/YR]*	24-Hour Composite *[24]*
pH *[00400]*	---	---	---	---	---	6.0 – 9.0 SU *[12]*	3/Week *[03/07]*	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 10 through 13 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

2. **TIER #1 (Outfall #001A)** Whole effluent toxicity, analytical chemistry and priority pollutant testing requirements.

SURVEILLANCE LEVEL - Beginning upon issuance and lasting until 12 months prior to permit expiration.

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						
Ceriodaphnia dubia (Water flea) *[TDA3B]*	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TDA6F]*	---	---	---	Report % *[23]*	1/2 Years *[01/2Y]*	Composite *[24]*
Chronic – NOEL						
Ceriodaphnia dubia (Water flea) *[TBP3B]*	---	---	---	2.6 % *[23]*	1/Year *[01/YR]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TBQ6F]*	---	---	---	Report % *[23]*	1/2 Years *[01/2Y]*	Composite *[24]*
Analytical Chemistry (7) *[54177]*	---	---	---	Report ug/L *[28]*	1/2 Years *[01/2Y]*	Composite/Grab *[24]*

SCREENING LEVEL - Beginning 12 months prior to permit expiration and lasting through permit expiration and every five years thereafter.

	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity(6)						
Acute – NOEL						
Ceriodaphnia dubia (Water flea) *[TDA3B]*	---	---	---	Report % *[23]*	2/Year *[02/YR]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TDA6F]*	---	---	---	Report % *[23]*	2/Year *[02/YR]*	Composite *[24]*
Chronic – NOEL						
Ceriodaphnia dubia (Water flea) *[TBP3B]*	---	---	---	2.6 % *[23]*	2/Year *[02/YR]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TBQ6F]*	---	---	---	Report % *[23]*	2/Year *[02/YR]*	Composite *[24]*
Analytical Chemistry (7) *[54177]*	---	---	---	Report ug/L *[28]*	1/Quarter *[01/90]*	Composite/Grab *[24]*
Priority Pollutant (8) *[50008]*	---	---	---	Report ug/L *[28]*	1/Year *[01/YR]*	Composite/Grab *[24]*

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 10 through 13 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

3. **TIER #2** The permittee is authorized to discharge **secondary treated municipal (sanitary and industrial) waste waters from Outfall #002A** to the Aroostook River at Presque Isle. Such discharges shall be limited and monitored by the permittee as specified below[1]. Tier #2 limits shall become effective upon written Department approval following notification by the permittee that Tier #2 production levels are scheduled to commence to a monthly average value exceeding 2.9 million pounds per day.

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]*	4.0 MGD *[03]*	---	Report MGD *[03]*	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
BOD_5 *[00310]*	794 lbs./day *[26]*	---	1,588 lbs./day *[26]*	36 mg/L *[19]*	---	71 mg/L *[19]*	3/Week *[03/07]*	24-Hour Composite *[24]*
TSS *[00530]*	2,569 lbs./day *[26]*	---	5,137 lbs./day *[26]*	116 mg/L *[19]*	---	231 mg/L *[19]*	3/Week *[03/07]*	24-Hour Composite *[24]*
Settleable Solids *[00545]*	---	---	---	---	---	0.3 ml/L *[25]*	3/Week *[03/07]*	Grab *[GR]*
Total Residual Chlorine[2] *[50060]*	---	---	---	0.1 mg/L *[19]*	---	0.3 mg/L *[19]*	3/Week *[03/07]*	Grab *[GR]*
Total Phosphorus[3] **(June 1 – Sept. 30)** *[00665]*	Report lbs./day *[26]*	91 lbs./day *[26]*	Report lbs./day *[26]*	Report mg/L *[19]*	6.6 mg/L *[19]*	Report mg/L *[19]*	3/Week *[03/07]*	24-Hour Composite *[24]*
Aluminum (Total) [4] *[01105]*	64 lbs./day *[26]*	---	Report lbs./day *[26]*	2.9 mg/L *[19]*	---	Report mg/L *[19]*	2/Year *[02/YR]*	24-Hour Composite *[24]*
pH *[00400]*	---	---	---	---	---	6.0 – 9.0 SU *[12]*	3/Week *[03/07]*	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 10 through 13 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

4. **TIER #2 (Outfall #002A)** Whole effluent toxicity, analytical chemistry and priority pollutant testing requirements.

SURVEILLANCE LEVEL - Beginning upon issuance and lasting until 12 months prior to permit expiration.

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						
Ceriodaphnia dubia (Water flea) *[TDA3B]*	---	---	---	4.0 % *[23]*	1/Year *[01/YR]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TDA6F]*	---	---	---	Report % *[23]*	1/2 Years *[01/2Y]*	Composite *[24]*
Chronic – NOEL						
Ceriodaphnia dubia (Water flea) *[TBP3B]*	---	---	---	2.6 % *[23]*	1/Year *[01/YR]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TBQ6F]*	---	---	---	Report % *[23]*	1/2 Years *[01/2Y]*	Composite *[24]*
Analytical Chemistry (7) *[54177]*	---	---	---	Report ug/L *[28]*	1/2 Years *[01/2Y]*	Composite/Grab *[24]*

SCREENING LEVEL - Beginning 12 months prior to permit expiration and lasting through permit expiration and every five years thereafter.

	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity(6)						
Acute – NOEL						
Ceriodaphnia dubia (Water flea) *[TDA3B]*	---	---	---	4.0 % *[23]*	2/Year *[02/YR]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TDA6F]*	---	---	---	Report % *[23]*	2/Year *[02/YR]*	Composite *[24]*
Chronic – NOEL						
Ceriodaphnia dubia (Water flea) *[TBP3B]*	---	---	---	2.6 % *[23]*	2/Year *[02/YR]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TBQ6F]*	---	---	---	Report % *[23]*	2/Year *[02/YR]*	Composite *[24]*
Analytical Chemistry (7) *[54177]*	---	---	---	Report ug/L *[28]*	1/Quarter *[01/90]*	Composite/Grab *[24]*
Priority Pollutant (8) *[50008]*	---	---	---	Report ug/L *[28]*	1/Year *[01/YR]*	Composite/Grab *[24]*

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 10 through 13 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

5. **TIER #1 and TIER #2** The permittee is authorized to discharge **secondary treated sanitary waste waters from a package treatment plant via internal Outfall #100.** Such discharges shall be sampled prior to mixing with any other waste streams and shall be limited and monitored by the permittee as specified below[1]:

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average as specified	Daily Maximum as specified	Monthly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow *[50050]*	Report GPD *[07]*	Report GPD *[07]*	---	---	Continuous *[99/99]*	Recorder *[RC]*
***E. coli* Bacteria**[9] *[31663]*	---	---	142 col/100 ml[10] *[13]*	949 col/100 ml *[13]*	2/Week *[02/07]*	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 10 through 13 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 Human Services.

   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 D 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. **TRC Monitoring** – Monitoring for TRC is only required when elemental chlorine or chlorine-based compounds are in use for effluent disinfection. TRC shall be tested using Amperometric Titration or the DPD Spectrophotometric Method. The USEPA approved methods are found in Standard Methods for the Examination of Water and Waste Water, (Most current edition), Method 4500-CL-E and Method 4500-CL-G or USEPA Manual of Methods of Analysis of Water and Wastes. For the purposes of Discharge Monitoring Report (DMR) reporting when a facility has not disinfected with chlorine-based compounds for an entire reporting period, enter **"NODI-9" indicating "monitoring not required this monitoring period."**

3. **Total Phosphorus** – Total phosphorus monitoring shall be performed in accordance with Attachment A of this permit entitled, *Protocol For Total P Sample Collection and Analysis for Waste Water and Receiving Water Monitoring Required by Permits – Finalized May 2006*, and dated unless otherwise specified by the Department.

4. **Aluminum Monitoring** – The permittee shall conduct monitoring for total aluminum at a minimum frequency of twice per year during the period of June – September to coincide with the period in which aluminum-based compounds are in use for phosphorous removal. Monitoring events shall be spaced a minimum of 14 days apart.

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 during the first 12 months following issuance of this permit. 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 by this permit or required to determine compliance with interim limitations established pursuant to Department rule Chapter 519, 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)** – Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions bracketing the critical acute and chronic thresholds of 2.6% and 2.2%, respectively, for Tier #1 or critical acute and chronic thresholds of 4.0% and 3.5%, respectively, for Tier #2), 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. The critical acute and chronic thresholds were derived as the mathematical inverse of the applicable acute and chronic dilution factors of 39:1 and 46:1, respectively, for Tier #1 and applicable acute and chronic dilution factors of 25:1 and 29:1, respectively, for Tier #2.

   a. **Surveillance level testing** – Beginning upon issuance of this permit and lasting through twelve months prior to permit expiration, the permittee shall initiate surveillance level WET testing at a minimum frequency of once per year for the water flea (*Ceriodaphnia dubia*) and once every two years (reduced testing) for the brook trout (*Salvelinus fontinalis*). Tests shall be conducted in a different calendar quarter each year.

   b. **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 twice per year (2/Year) for both species. There shall be at least six (6) months between testing events. Acute and chronic tests shall be conducted on the water flea (*Ceriodaphnia dubia*) and the brook trout (*Salvelinus fontinalis*).

SPECIAL CONDITIONS

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

FOOTNOTES:

WET 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 3.4% and 2.9%, respectively.

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. Short Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Water to Freshwater Organisms, Fourth Edition, October 2002, EPA-821-R-02-013.

b. Methods for Measuring the Acute Toxicity of Effluent and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, October 2002, EPA-821-R-02-012.

Results of WET tests shall be reported on the "Whole Effluent Toxicity Report Fresh 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 five (5) parameters specified in the WET chemistry section and the twelve (12) parameters specified in the analytical chemistry section on the "WET and Chemical Specific Data Report Form" form included as Attachment D of this permit each time a WET test is performed.**

7. **Analytical chemistry** – Pursuant to Department rule Chapter 530 Section 2.C.4, 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 hardness, total lead, total nickel, total silver, total zinc and total residual chlorine.

   a. **Surveillance level testing** – Beginning upon permit issuance and lasting until 12 months prior to permit expiration, the permittee shall conduct analytical chemistry testing at a minimum frequency of once every other year (1/2 Years). Tests are to be conducted in a different calendar quarter of each year.

   b. **Screening level testing** – Beginning 12 months prior to permit expiration and every five years thereafter, the permittee shall conduct analytical chemistry testing at a minimum frequency of once per calendar quarter (1/Quarter) for four consecutive calendar quarters.

SPECIAL CONDITIONS

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

FOOTNOTES:

8. **Priority pollutant testing** – Priority pollutants are those parameters listed by Department rule, Chapter 525, Section 4 (IV).

   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 priority pollutant testing at a minimum frequency of once per year (1/Year).

   Surveillance level priority pollutant testing is not required pursuant to Department rule Chapter 530.

   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 Department rule Chapter 584 *Surface Water Quality Criteria for Toxic Pollutants*. For the purposes of DMR reporting, enter a "1" for yes, testing done this monitoring period or "NODI-9" monitoring not required this period.

9. **Bacteria Limits** – *E. coli* bacteria limits and monitoring requirements are in effect on a year-round basis.

10. **Bacteria Reporting** – The monthly average *E. coli* bacteria limitation is a geometric mean limitation and sample results shall be reported as such.

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 cause visible discoloration or turbidity in the receiving waters, which would impair the usages designated by the classification of the receiving waters.

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

C. DISINFECTION

If chlorination is used as the means of disinfection, an approved chlorine contact tank providing the proper detention time consistent with good engineering practice must be utilized followed by a dechlorination system if the imposed total residual chlorine (TRC) limit cannot be achieved by dissipation in the detention tank. The total residual chlorine in the effluent shall at no time cause any demonstrable harm to aquatic life in the receiving waters. The dose of chlorine applied shall provide a TRC concentration that will effectively reduce *E. coli* bacteria levels to or below those specified in Special Condition A, *Effluent Limitation and Monitoring Requirements,* above.

D. TREATMENT PLANT OPERATOR

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

E. AUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from Outfall #001A and internal administrative Outfall #100. 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.

F. LIMITATIONS FOR INDUSTRIAL USERS

Pollutants introduced into the waste water collection and treatment system by a non-domestic source (user) shall not pass through or interfere with the operation of the treatment system.

SPECIAL CONDITIONS

G. 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:

Department of Environmental Protection
Northern Maine Regional Office
Bureau of Land and Water Quality
Division of Water Quality Management
1235 Central Park Drive - Skyway Park
Presque Isle, Maine 04769

H. NOTIFICATION REQUIREMENTS

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

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

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

   a. The quality 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.

SPECIAL CONDITIONS

I. CHAPTER 530 STATEMENT FOR REDUCED 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.

J. OPERATIONS AND MAINTENANCE (O&M) PLAN

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

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

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

SPECIAL CONDITIONS

K. 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.

L. 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

Protocol for Total Phosphorus
Sample Collection and Analysis for Waste Water and Receiving Water Monitoring Required by Permits

Approved Analytical Methods: EPA 365.2, SM 4500-P B.5 E

Sample Collection: The Maine DEP is requesting that total phosphorus analysis be conducted on composite effluent samples, unless a facility's Permit specifically designates grab sampling for this parameter. Facilities can use individual collection bottles or a single jug made out of glass or polyethylene. Bottles and/or jugs should be cleaned prior to each use with dilute HCL. This cleaning should be followed by several rinses with distilled water. The sampler hoses should be cleaned, as needed.

Sample Preservation: During compositing the sample must be at 0-4 degrees C. If the sample is being sent to a commercial laboratory or analysis cannot be performed the day of collection then the sample must be preserved by the addition of 2 mls of concentrated H_2SO_4 per liter and refrigerated at 0-4 degrees C. The holding time for a preserved sample is 28 days.

Note: Ideally, Total P samples are preserved as described above. However, if a facility is using a commercial laboratory then that laboratory may choose to add acid to the sample once it arrives at the laboratory. The Maine DEP will accept results that use either of these preservation methods.

QA/QC: Run a distilled water blank and at least 2 standards with each series of samples. If standards do not agree within 2% of the true value then prepare a new calibration curve.

Every month run a blank on the composite jug and sample line. Automatically, draw distilled water into the sample jug using the sample collection line. Let this water set in the jug for 24 hours and then analyze for total phosphorus. Preserve this sample as described above.

Finalized May 2006

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
FRESH 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**

	water flea	trout
A-NOEL		
C-NOEL		

Effluent Limitations

A-NOEL	
C-NOEL	

Data summary

	water flea			trout		
	% survival		no. young	% survival		final weight (mg)
QC standard	**A>90**	**C>80**	**>15/female**	**A>90**	**C>80**	**> 2% increase**
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

for trout show final wt and % incr for both controls

Reference toxicant

	water flea		trout	
	A-NOEL	C-NOEL	A-NOEL	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 (Fresh Water Version), March 2007."

ATTACHMENT D

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) | **Acute dilution factor** | **Chronic dilution factor** | **Human health dilution factor** | **Criteria type: M(arine) or F(resh)**

Flow for Day (MGD)[1] | **Date Sample Collected**

Flow Avg. for Month (MGD)[2] | 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)** WET Result, % Do not enter % sign	Reporting Limit Check	**Possible Exceedence [7]**		
	WHOLE EFFLUENT TOXICITY		Acute	Chronic					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
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	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									

Maine Department of Environmental Protection
WET and Chemical Specific Data Report Form
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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									

Maine Department of Environmental Protection
WET and Chemical Specific Data Report Form
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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:

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
MAINE WASTE DISCHARGE LICENSE

FACT SHEET

DATE: **MAY 15, 2007**

PERMIT NUMBER: **#ME0036218**
WASTE DISCHARGE LICENSE: **#W008085-5N-D-R**

NAME AND ADDRESS OF APPLICANT:

MCCAIN FOODS USA, INC.
319 RICHARDSON ROAD
EASTON, MAINE 04740

COUNTY: **AROOSTOOK**

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

MCCAIN FOODS USA, INC.
STATE ROUTE 167
PRESQUE ISLE, MAINE

RECEIVING WATER/CLASSIFICATION: **AROOSTOOK RIVER/CLASS C**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **MR. WILLIAM DANIELS**
(207) 488-1399

1. APPLICATION SUMMARY

Application: McCain Foods USA, Inc. (MCCAIN) has applied to the Maine Department of Environmental Protection (Department) for a renewal of Waste Discharge License (WDL) #W008085-5N-C-M / Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0036218, which was issued on June 11, 2002, and is scheduled to expire on June 11, 2007. The 6/11/02 MEPDES permit authorized the monthly average discharge of up to 2.5 million gallons per day (MGD) (Tier #1 production for Easton Plant I) and a monthly average discharge of up to 4.0 MGD (Tier #2 production for Easton Plant I and Plant II) of treated process and sanitary waste waters from a potato processing facility located in Easton, Maine, to the Aroostook River, Class C, in Presque Isle, Maine.

2. PERMIT SUMMARY

a. Terms and Conditions: **This permitting action is similar to the 6/11/2002 permitting action in that it is for both Tier #1 and Tier #2:**

1. Carrying forward the monthly average discharge flow limit and daily maximum reporting requirement;

2. Carrying forward the technology-based, monthly average concentration and mass limits for biochemical oxygen demand (BOD_5);

3. Carrying forward the technology-based, monthly average concentration and mass limits for suspended solids (TSS);

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

5. Carrying forward the technology-based, monthly average and daily maximum concentration limits for total residual chlorine (TRC);

6. Carrying forward the weekly average concentration and mass limits for total phosphorous;

7. Carrying forward the technology-based pH range limitation;

For Administrative Outfall #100 (Internal Waste Stream for Sanitary Wastewater):

8. Carrying forward the monthly average and daily maximum discharge flow reporting requirements; and

9. Carrying forward the year-round, monthly average and daily maximum concentration limits for *Escherichia coli* bacteria.

This permitting action is different from the 6/11/2002 permitting action in that it is for both Tier #1 and Tier #2:

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

2. Revising the daily maximum concentration and mass limits for BOD_5 by establishing new, more stringent, technology-based limits for this parameter;

3. Revising the seasonal, daily maximum concentration and mass limits for TSS by establishing new year-round, technology-based limits for this parameter;

4. Eliminating the monthly average and daily maximum concentration and mass reporting requirements for total ammonia (as N);

2. PERMIT SUMMARY (cont'd)

5. Establishing monthly average and daily maximum concentration and mass reporting requirements for total phosphorous;

6. Establishing monthly average concentration and mass limits and testing requirements for total aluminum based on the results of facility testing;

7. Revising/establishing whole effluent toxicity (WET), priority pollutant and analytical chemistry testing requirements to be consistent with Department rule Chapter 530, *Surface Water Toxics Control Program*;

8. Establishing C-NOEL limitations of 2.6% and 3.4% for Tier #1 and Tier #2, respectively, and an A-NOEL limit of 4.0% for Tier #2 for the water flea based on the results of facility testing; and

9. Establishing Special Condition I, *Chapter 530 Statement for Reduced Toxics Testing*; for reduced surveillance level brook trout and analytical chemistry testing.

b. History: This section provides a summary of significant licensing/permitting actions and milestones that have been completed for McCain facility.

December 2, 1999 – The U.S. Environmental Protection Agency (USEPA) issued National Pollutant Discharge Elimination System (NPDES) permit #ME0036218 to McCain for a five-year term.

January 12, 2001 – The Department received authorization from the USEPA to administer the NPDES permit program in Maine, excluding areas of special interest to Maine Indian Tribes. From this point forward, the program has been referred to as the Maine Pollutant Discharge Elimination System (MEPDES) program.

June 11, 2002 – The Department issued WDL Renewal and Modification #W008085-5N-C-M / MEPDES permit #ME0036218 to McCain for a five-year term. The 6/11/02 WDL/Permit superseded WDL #W008085-5N-A-N issued on July 22, 1999.

April 10, 2006 – The Department modified the 6/11/02 permit to incorporate testing requirements of Department rule Chapter 530 (the toxics rule).

December 18, 2006 –McCain submitted a timely and complete General Application to the Department for renewal of the 6/11/02 MEPDES permit. The application was accepted for processing on December 22, 2006 and was assigned WDL #W008085-5N-D-R / MEPDES #ME0036218.

c. Source Description: McCain Foods USA, Inc. is a potato processing facility located in Easton, Maine. McCain's waste water treatment facility receives process waste waters generated by the production of frozen French-fried potatoes and other specialty potato products. A map showing the location of the processing facility, outfall location and receiving water is included as Attachment A of this fact sheet.

2. PERMIT SUMMARY (cont'd)

McCain is proposing an expansion (referred to as Phase II) of their food processing facility and their waste water treatment plant at the Easton site. The Phase II expansion of the processing facility includes expansion of a previously permitted cold storage facility from 80,000 square feet to 101,420 square feet and to construct a new 193,400-square foot potato processing facility. As for the waste water treatment facility, McCain proposes to modify the facility by constructing a new screening building, one new primary clarifier, a new lime feed system for the primary sludge and a new secondary clarifier to accommodate additional flows from the covered anaerobic lagoon. These construction activities have been reviewed and approved by the Department pursuant to Site Location of Development Amendment #L-19771-26-D-A, dated May 31, 2001. In a letter to the Department dated, February 12, 2007, McCain's Plant Manager indicated that the design work for the proposed expansion project is 90% complete and remains viable as current product demand is high.

McCain has proposed to increase production for processing of raw potatoes from a current long-term average of 2,923,640 lbs./day to a projected long-term average of 4,670,000 lbs/day. McCain originally proposed to realize the production increase by late fall of calendar year 2001, but a downturn in market conditions has resulted in the expansion being put on hold for the foreseeable future. However, McCain has requested the Department carry forward Tier II limitations and monitoring requirements for the proposed production increase to expedite the construction activities when market conditions improve.

Raw potatoes are processed by washing, peeling and slicing and then coated, deep fried, frozen and packaged for shipment. Sanitary waste waters generated by workers at the facility are also treated on-site by a small package treatment facility. The permittee has submitted a breakdown of waste waters flows generated at the facility as follows:

Tier #1 Production

Operation	Average Flow (gpd)
Steam generation	80,500
Process wastewater	1,178,000
Cleaning	464,000
Mechanical equipment operation	757,500
Sanitary flows	20,000
Total Flows	2,500,000 (gpd)

Tier #2 Production

Operation	Average Flow (gpd)
Steam generation	130,000
Process wastewater	1,897,000
Cleaning	735,000
Mechanical equipment operation	1,218,000
Sanitary flows	20,000
Total Flows	4,000,000 (gpd)

2. PERMIT SUMMARY (cont'd)

Based on information provided by the applicant on Department Form DEPLW1999-19, *Food Processing Facilities*, current average and maximum frozen French-fried potato production figures for the McCain facility are as follows:

Pounds per Day Processed		Processing Period Each Year		MGD Daily Effluent Flows	
Average lbs./day	Maximum lbs./day	#Weeks per Year	Months processing	Average	Maximum
2,020,818	3,109,457	42	Jan-Dec	1.6 MGD	2.4 MGD

McCain stated that the long-term average production rate that should be utilized for purposes of calculating effluent limitations is 2,923,640 lbs./day.

McCain accepts waste waters into its waste water treatment facility from the J.M. Huber Company's Wood Products Mill located in Easton, Maine. The permittee indicates that it accepts boiler blowdown (approximately 20,000 gallons per day), process waste water (waferizer water sprays, 5 gpd), and log pond waters (500 gpd) from the wood mill.

It is noted that all make-up water for the McCain food processing facility and potable water for use by employees is derived from independent drilled wells owned by McCain. The process make-up water is pumped from three wells at McCain's existing well field in Presque Isle and is capable of delivering 3.4 million gallons per day. Due to the proposed expansion, McCain is proposing to develop additional wells in their existing well field. Potable water is pumped from two existing wells located on McCain processing facility site.

A water use schematic is included as Attachment B of this fact sheet.

d. Wastewater Treatment: The process wastewater treatment facility includes a pumping station, two screens, a screened effluent wet well, a covered anaerobic lagoon with a biogas handling system, an activated sludge system including an aeration tank and a secondary clarifier.

The production plant effluent potato solids is separated by a screening system. Potato solids from the screens is sent to the McCain Tater Meal Facility for further processing to animal feed. The screened wastewater is discharged into a screened effluent wet well equipped with three (3) transfer pumps. Two of the pumps are the lead with the third being the backup to prevent overflow of the structure in case of pump failure. The wet well pump system is also equipped with an emergency generator in case of electrical failure.

Adjacent to the screened effluent is an existing lagoon that was formally part of the waste treatment system prior to the year 2000. Separating the two is a storm water drainage swale. McCain has requested that this lagoon be used as an emergency overflow for the screened effluent wet well in the event of emergency shutdown and cessation of

2. PERMIT SUMMARY (cont'd)

production of the facility due to electrical and/or pump failure. McCain stated in its application that the use of this lagoon will prevent any overflow of the wet well from entering the storm water swale and the storm water pond ultimately affecting the Prestile Stream. All flows from the emergency bypass will start being reintroduced into the waste stream within 24 hours of wet well failure corrections and completed as soon as possible. Therefore, this permitting action authorizes the use of this lagoon in emergency situations as described to prevent discharges to Prestile Stream.

Anaerobic System:

The pretreatment system includes a covered anaerobic lagoon (CAL) with the primary purpose of reducing the Biochemical Oxygen Demand (BOD_5) content. The CAL has a volume of 20.275 million gallons and is covered with an insulated floating HDPE membrane. This cover allows for a biogas removal system where the gas produced is captured and flared off by means of a biogas blower system and propane flare or utilized in the production facility boiler system. The pretreated effluent is discharged to a nitrification activated sludge system.

Activated Sludge System:

The aeration basin in the activated sludge system has a variable volume of 2.4 to 3.2 million gallons depending on process conditions. The primary purpose of this basin is to remove BOD and ammonia from the wastewater through biological action.

Seasonal phosphorous removal is accomplished in the activated sludge system by the addition of sodium aluminate to the aeration basin prior to the outlet to secondary clarification.

Secondary Clarification:

A secondary clarifier accommodates the flow from the aeration basin. The clarifier is 90-feet in diameter with 6300 ft^2 of surface area. The clarifier is approximately 11.5- feet deep with a side water depth of 8.2 feet. The waste sludge from the clarifier is pumped into the CAL for digestion.

Final effluent is conveyed for discharge to the Aroostook River via a six-mile long pipeline to a diffuser located in the middle of the Aroostook River. The six-mile long pipeline was installed in 1999 and is constructed of high density polyethylene (HPDE) pipe that is 18-inches in diameter. The diffuser in the Aroostook River is constructed of perforated HDPE piping that is 18-inches in diameter and 100-feet long. The diffuser was designed and strategically placed in the Aroostook River to provide for rapid and complete mixing of the effluent from the McCain facility with the Aroostook River, which the Department's Division of Environmental Assessment has determined is achieved.

2. PERMIT SUMMARY (cont'd)

Sanitary waste from the McCain facility is processed by a 20,000 gal/day intermittent cycle extended aeration system sequencing batch reactor (SBR) package plant. This plant combines continuous flow activated sludge technology with intermittent system operation. It also provides chlorine disinfection for the effluent. The system uses a single vessel in which the activated sludge is aerated over a number of cycles. Solids-liquid separation occurs during the air-off part of the cycle. During the latter part of the air-off cycle, treated effluent is decanted from the liquid surface. Continuous flow is accommodated at all times.

A wastewater treatment process flow schematic is included as Fact Sheet Attachment C.

Tier #2 production – Due to the increased flows and pollutant loadings to be treated from the proposed Phase II expansion, McCain is proposing to modify its waste water treatment system. Modifications include the addition of a new screening building, one primary clarifier, a lime feed system for the primary sludge generated and one additional secondary clarifier. A wastewater schematic is included as Attachment C of this fact sheet.

The new screening building will accommodate a new production line effluent pump station, two screens from the existing system and an additional rotary screen for the new production line waste waters and primary sludge de-watering centrifuges. The new lime storage and make-up system will provide for bulk storage of bulk lime and slurry hydrated lime into a lime feed system.

Flows to the secondary waste water treatment facility will combine waste water flows from two potato processing plants; one existing, one proposed. After being screened, the combined waste water will flow by gravity to a lime addition mixing and flow splitter chamber, then to a new primary clarifier. The primary clarifier is being designed to remove phosphorus and potato starch solids. The primary sludge will be drawn from the clarifier, centrifuged, and then conveyed to the McCain Tater Meal Facility for use in the production of livestock feed. The primary clarifier effluent will be pumped to the existing covered anaerobic lagoon (CAL). The CAL does not require re-design as installation of a new primary clarifier will result in organic loads to the CAL at or slightly less than Tier #1 levels. As with the existing waste water treatment system, flow from the CAL is conveyed to the nitrifying activated sludge system then to two secondary clarifiers prior to being pumped to the Aroostook River as previously described.

3. CONDITIONS OF PERMIT

Maine law, 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 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 467 subsection C (1)(d) classifies the Aroostook River from its confluence with Presque Isle Stream to a point located 3.0 miles upstream of the intake of the Caribou water supply, including all impoundments, which includes the receiving water at the point of discharge, as Class C waters. Maine law, 38 M.R.S.A., Section 465 subsection 4 describes the standards for Class C 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 a 24.2-mile reach of the Aroostook River above Caribou, Maine (Hydrologic Unit Code #ME0101000412 / Waterbody ID #148R) as, *"Category 2: Rivers and Streams Attaining Some Designated Uses – Insufficient Information for Other Uses."* The Report lists all of Maine's fresh waters as, *"Category 4-B-3: Waters Impaired by Atmospheric Deposition of Mercury. Regional or National TMDL may be Required."* Impairment in this context refers to a statewide fish consumption advisory due to elevated levels of mercury in some fish tissues. The Report states, *"the impairment is presumed to be from atmospheric contamination and deposition. The advisory is based on probability data that a stream, river, or lake may contain some fish that exceed the advisory action level. Any freshwater may contain both contaminated and uncontaminated fish depending on size, age and species occurrence in that water."* Pursuant to Maine law, 38 M.R.S.A. §420 subsection 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.

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

Current Water Quality Assessment/Modeling

The Aroostook River Basin is the largest sub basin of the St. John River lying almost entirely within the State of Maine. The river segment of interest on the Aroostook begins in Ashland and flows to Washburn, Presque Isle, Caribou, Fort Fairfield and eventually the international border. In this segment of interest, there are seven point source discharges licensed to discharge organic waste loads to the Aroostook River: Ashland Water and Sewer District (AWSD), Town of Washburn, Presque Isle Sewer District (PISD), Caribou Utilities District (CUD), Loring Development Authority (LDA), Fort Fairfield Utilities District (FFUD), and McCain Foods, USA, Inc. (McCain). Additionally, two dams significantly impound water in this river segment. The Caribou dam is located approximately 15 river miles upstream of the international border and impounds water 4.5 river miles upstream of the international border. The Tinker dam is located in Canada, but impounds water 5 river miles upstream of the international border.

A study of the Aroostook River from Ashland to the United States-Canadian border (58 miles) began in the summer of 2001 involving the Department and a number of stakeholders, including McCain. Two data sets were collected in August of 2001 to calibrate and verify a water quality model, and in September 2004, the Department summarized the findings in a report entitled, *Aroostook River Modeling Report, Final Sept 2004* ("Modeling Report").

It is appropriate to note at this point that the Department has not established numeric nutrient criteria at this time, specifically for phosphorous. The Department is in the process of developing nutrient criteria (as required by the USEPA), methodologies for quantitatively evaluating benthic-attached algae, and developing water classification specific (Class A, Class B, and Class C) chlorophyll-a standards for Maine waters. These criteria and standards are anticipated to be finalized at the time McCain applies for renewal of this permit in 2011-12. At the time that the Department's Division of Environmental Assessment (DEA) evaluated the 2001 Aroostook River data, calibrated and verified the Aroostook River water quality model, and published the 2004 Modeling Report, certain assumptions were incorporated into the model to predict water quality conditions, such as utilizing a range of 8 to 12 ug/L for chlorophyll-a as the likely threshold level for algae blooms. Additionally, "there is currently no precedent on threshold levels of benthic algae where designated uses become inhibited, but it is likely that this could also be an issue on the Aroostook River after the nutrient criteria are developed...." (Modeling Report, p.51) In the Executive Summary of the Modeling Report (see #11 and #12), the Department concluded that "An additional data set should be taken at reduced point source phosphorous inputs" and "Total phosphorous license allocations for point sources should be re-evaluated by the model after collection of the additional data set recommended and nutrient criteria development are final." The Department stated in its response to comment #11 (see page 4 of the Modeling Report, *Response to Comments*), that "it [i]s important to make all stakeholders aware of the nutrient issue on the Aroostook River and give some idea for ballpark estimates of phosphorous allocations, given the current science and knowledge of this issue."

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

With these recommendations in mind, the Department is providing in this fact sheet a summary of significant findings and predictions of the 2001 data and 2004 Modeling Report.

The Department concluded in the Modeling Report that both 2001 data sets experienced chlorophyll-a levels exceeding the upper range of the 8 to 12 µg/L threshold from above the Caribou dam to the international border, and that algae blooms are projected for 13 to 23 miles of the river from Maysville to the international border, with chlorophyll-a levels as high as 17 µg/L. The model predicts that both minimum dissolved oxygen criteria and monthly average dissolved oxygen criteria (6.5 parts per million) should be met everywhere on the Aroostook River. Additionally, the Modeling Report states that "Although not quantitatively sampled, large levels of benthic algae were observed in the Aroostook River during the 2001 surveys. The benthic algae were evident from the confluence of the Presque Isle Stream to the head of the Caribou dam impoundment, but most abundant from below the Caribou dam to the head of the Tinker Dam impoundment in Fort Fairfield." The Modeling Report states that dissolved oxygen data collected in 2001 are characterized by large diurnal fluctuations due to the significant growths of both bottom-attached (benthic) and floating algae (phytoplankton)." There is a trend of less fluctuation (generally around 1-2 ppm) above the major point source discharges as compared to average diurnal fluctuations below the major point source discharges (ranging from 5 to 9 ppm in shallower flowing sections and 1 to 4 ppm in impoundments).

Phosphorous is ordinarily the limiting nutrient in fresh water systems, which must be reduced in order to alleviate eutrophication. Component analysis was undertaken by comparing input loads of point and non-point sources of ultimate BOD and total phosphorous. This analysis demonstrates that at 7Q10 river conditions, McCain and PISD are the major sources of phosphorous in the river, assuming that both are discharging at licensed flows with contributions of 43% and 17% of the total river phosphorous load, respectively. See Figure 16 of the Modeling Report. Assuming that all dischargers are discharging their licensed BOD_5 loads at 7Q10 flow, McCain, LDA, CUD, and PISD are all significant inputs with contributions of 29%, 15%, 15%, and 14%, respectively, of the total ultimate BOD load. For both phosphorous and BOD, base flow non-point source and background sources are not significant, accounting collectively for 4% and 13% of the total river load for phosphorous and BOD, respectively. See Figure 17 of the Modeling Report.

Different levels of point source reductions were investigated to estimate the amount needed to alleviate eutrophication on the Aroostook River, given the model assumptions described above. See Table 10 of the Modeling Report. Large reductions of point source phosphorous are recommended to reduce algae to a non-eutrophic state. Model prediction runs undertaken with reduced phosphorous inputs from McCain and PISD, which collectively have been identified as the two largest sources of phosphorous to the river, provide guidance as to the necessary reductions. The model runs suggest that a total phosphorous effluent mass limit for the McCain and PISD facilities based upon permitted flow and a total phosphorous concentration of 0.5 ppm would result in a maximum chlorophyll-a concentration of 9 ppb, which approaches the lower end of the 8-12 ppb range at which algae blooms are expected in the river.

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

The Modeling Report states that phosphorous limits "should proceed only after the collection of an additional data set under reduced phosphorous inputs and the establishment of nutrient criteria." And, "Given the high levels of benthic and floating algae, and the large swings in DO and pH on the Aroostook [River], it is obvious that nutrients are an issue here and some reductions of phosphorous are likely in the near future. It is hoped that McCain's and other stakeholders take this issue seriously and at least consider what the targeted P-reductions investigated in the report will mean for them. It is also hoped that some of the stakeholders will agree to voluntary P-reduction in a future summer under which more data can be collected." (See response to comment #11 of the Modeling Report, *Response to Comments*.) In this permitting action, the Department is emphasizing the importance of investigating phosphorous reduction at the major point source dischargers and additional ambient data collection to support future arguments on the establishment of limitations and monitoring requirements following completion of the nutrient criteria. Additionally, concerns regarding the analytical model utilized by the Department for the Modeling Report (QUAL2MDEP version of QUAL2EU) should be discussed with the Department's Division of Environmental Assessment during the early part of the effective term of this permit to ensure any changes in model calibration/verification, model runs or data collection can be completed prior to application for renewal of this permit.

Due to uncertainties in final nutrient criteria and how these final criteria will affect the 2004 Modeling Report results, this permitting action is carrying forward the seasonal (June 1 – September 30) weekly average total phosphorous mass and concentration limits of 91 lbs./day and 6.6 mg/L for both Tier #1 and Tier #2 with a minimum monitoring frequency requirement of three times per week. This permitting action is establishing monthly average and daily maximum mass and concentration limits for total phosphorous to provide additional information regarding the effluent phosphorous levels.

The Department has no information at this time that the discharge from the McCain facility, as permitted, will cause or contribute to the failure of the receiving water to meet the designated uses of its assigned classification.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

a. Applicability of National Effluent Guidelines: Title 40, Part 407, *Canned and Preserved Fruits and Vegetables Processing Point Source Category*, Subpart D, *Frozen Potato Products Subcategory*, of the Code of Federal Regulations applies to the discharge from the McCain facility. Effluent limitation guidelines for BOD_5, TSS, and pH, which represent the standards of performance for new sources are promulgated at 40 CFR Part 407.45, and were utilized by the Department in the previous two licensing actions.

b. Tiered Limits: The previous permitting action established two tiers of effluent limitations: Tier #1 represents current production levels and Tier #2 represents proposed production levels following upgrade of the facility as described in Section 2 of this fact sheet. As of the date of this permitting action, McCain has not completed the upgrade of the treatment facility. However, on February 12, 2007, McCain submitted a letter to the Department stating the company's continued intention to expand the facility to process

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

more potatoes. Therefore, this permitting action is carrying forward two tiers of effluent limitations and monitoring requirements for current conditions and the proposed productions levels following facility expansion (Phase II build-out).

Tier #1 limitations and monitoring requirements are effective beginning upon issuance of this permit and remain in effect until such time that McCain notifies the Department of the completion of the Phase II expansion and that the facility is prepared to increase average production above 2,923,640 lbs./day. The previous permitting action utilized McCain's projected (Tier II) monthly average and daily maximum production figures of 4,670,000 lbs./day and 6,110,000 lbs./day, respectively, to calculate applicable loading limits for the discharge.

The previous permitting action established separate outfall identifiers for Tier #1 (Outfall #001) and Tier #2 (Outfall #002) conditions. In this permitting action, the Department is identifying that there is no physical change in the outfall structure associated with the Phase II facility expansion. However, for administrative purposes, this permitting action is carrying forward separate outfall identifiers of #001A and #002A for Tier #1 and Tier #2 conditions, respectively, following the Department's standard outfall pipe identifier convention.

c. Flow: The previous permitting action established, and this permitting action is carrying forward, a monthly average flow limitation of 2.5 million gallons per day (MGD) for Tier #1 based on the hydraulic design capacity of the existing waste water treatment facility.

A review of the monthly average flow data as reported on the Discharge Monitoring Reports submitted to the Department for the period January 2002 – October 2006 (n=55) indicates the monthly average flow has ranged from 1.08 MGD to 1.86 MGD with an arithmetic mean of 1.55 MGD, and the daily maximum flow discharged has ranged from 1.77 MGD to 2.70 MGD with an arithmetic mean of 2.17 MGD.

The previous permitting action established, and this permitting action is carrying forward, a monthly average flow limitation of 4.0 MGD for Tier #2 based on the hydraulic design capacity of the proposed upgrade of the waste water treatment facility.

d. Dilution Factors: Dilution factors associated with the permitted discharge flow of 2.5 MGD for Tier #1 were derived in accordance with Department rule, 06-096 CMR, Chapter 530 Section 4.A *Surface Water Toxics Control Program* and were calculated as follows.

Acute: 1Q10 = 148 cfs $\Rightarrow \frac{(148 \text{ cfs})(0.6464) + (2.5 \text{ MGD})}{(2.5 \text{ MGD})} = 39{:}1$

Chronic: 7Q10 = 174 cfs $\Rightarrow \frac{(174 \text{ cfs})(0.6464) + (2.5 \text{ MGD})}{(2.5 \text{ MGD})} = 46{:}1$

Harmonic Mean = 520 cfs $\Rightarrow \frac{(520 \text{ cfs})(0.6464) + (2.5 \text{ MGD})}{(2.5 \text{ MGD})} = 135{:}1$

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

Department rule Chapter 530 Section 4.B.1 states,

> *Analyses using numerical acute criteria for aquatic life must be based on 1/4 of the 1Q10 stream design flow to prevent substantial acute toxicity within any mixing zone and to ensure a zone of passage of at least 3/4 of the cross-sectional area of any stream as required by Chapter 581. Where it can be demonstrated that a discharge achieves rapid and complete mixing with the receiving water by way of an efficient diffuser or other effective method, analyses may use a greater proportion of the stream design flow, up to and including all of it, as long as the required zone of passage is maintained.*

The Department's Division of Environmental Assessment has determined that the outfall structure and diffuser associated with this discharge achieves complete and rapid mixing of the effluent with the receiving waters. Therefore, the Department is utilizing the entire 1Q10 stream design flow in acute evaluations.

Dilution factors associated with the permitted discharge flow of 4.0 MGD for Tier #2 were derived in accordance with Department rule, 06-096 CMR, Chapter 530 Section 4.A *Surface Water Toxics Control Program* and were calculated as follows.

Acute: 1Q10 = 148 cfs $\Rightarrow \frac{(148 \text{ cfs})(0.6464) + (4.0 \text{ MGD})}{(4.0 \text{ MGD})} = 25{:}1$

Chronic: 7Q10 = 174 cfs $\Rightarrow \frac{(174 \text{ cfs})(0.6464) + (4.0 \text{ MGD})}{(4.0 \text{ MGD})} = 29{:}1$

Harmonic Mean = 520 cfs $\Rightarrow \frac{(520 \text{ cfs})(0.6464) + (4.0 \text{ MGD})}{(4.0 \text{ MGD})} = 85{:}1$

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

e. Biochemical Oxygen Demand (BOD_5):

Tier #1

The following table summarizes the previous and current effluent limits for BOD_5 for Tier #1:

BOD_5	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Previous Permit	497 lbs./day	1,335 lbs./day	36 mg/L	96 mg/L
This Permit	497 lbs./day	994 lbs./day	36 mg/L	72 mg/L

The previous permitting action established technology-based monthly average and daily maximum BOD_5 mass limits based on the new source performance standards (NSPS) at 40 CFR Part 407.45. The guidelines are expressed in terms of pounds of pollutant per 1,000 pounds of raw material (lbs./lbs. production). The guidelines for BOD_5 are 0.34 lbs./per 1,000 lbs. raw material (daily maximum) and 0.17 lbs./1,000 lbs. (monthly average). The Department utilized average and maximum production values of 2,923,640 lbs./day and 3,927,270 lbs./day, respectively, in calculating the previous limits. The previous permitting action established monthly average and daily maximum concentration limits by back-calculating from the applicable mass limitations.

The *Aroostook River Modeling Report, Final Sept 2004* identifies that McCain is a significant input (29%) of the total ultimate BOD load to the receiving water (using Tier II production figures). However, the Modeling Report identifies that the statutory minimum dissolved oxygen criteria for Class C and Class B waters should be met everywhere on the Aroostook River, even with all dischargers inputting licensed loads at 7Q10 flow conditions. The Modeling Report does not recommend establishing water quality-based effluent limits for BOD_5. Therefore, this permitting action is establishing technology-based effluent limits for BOD_5 based on the NSPS at 40 CFR Part 407.45 and the long-term average production rate for the facility. The previous permitting action established daily maximum limitations using the maximum production rate and the daily maximum effluent guideline. The Department is acknowledging in this permitting action that using the maximum production rate is not correct in that the difference in the monthly average and daily maximum effluent guidelines accounts for variability in effluent quality. Using the long-term average production rate to establish both monthly average and daily maximum limitations is consistent with USEPA guidance on developing technology-based effluent limitations. *U.S. EPA NPDES Permit Writers' Manual*, December 1996.

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

With a long-term average production figure of 2,923,640 lbs./day, monthly average and daily maximum technology-based mass limitations for BOD_5 for Tier #1 were derived as follows:

Daily Maximum: $\frac{(2{,}923{,}640 \text{ lbs./day})(0.34)}{1{,}000} = 994 \text{ lbs./day}$

Monthly Average: $\frac{(2{,}923{,}640 \text{ lbs./day})(0.17)}{1{,}000} = 497 \text{ lbs/day}$

A review of the monthly average data as reported on the Discharge Monitoring Reports submitted to the Department for the period January 2002 – October 2006 (n=54) indicates the monthly average BOD_5 mass discharge has ranged from 52 lbs./day to 529 lbs./day with an arithmetic mean of 171 lbs./day. The daily maximum BOD_5 mass discharge has ranged from 102 lbs./day to 2,066 lbs./day with an arithmetic mean of 521 lbs./day.

Department rule Chapter 523, *Waste Discharge License Conditions*, Section 6, *Calculating NPDES permit conditions*, subsection f(2) states that "*...pollutants limited in terms of mass additionally may be limited in terms of other units of measurement and the permit shall require the permittee to comply with both limitations.*" To ensure best practicable treatment is being applied to the discharge from McCain at all times, the Department has made a best professional judgment determination that establishing monthly average and daily maximum technology-based concentrations limits for BOD_5 is appropriate. The concentration limits were derived by back-calculating values from the applicable mass limits calculated above and the monthly average flow limit established in Section 6 a. of this fact sheet. A review of the discharge flow data as summarized in Section 6 a. of this fact sheet indicates the monthly average flow has an arithmetic mean of 1.55 MGD, which is less than the design capacity of 2.5 MGD. As not to penalize the permittee for operating at flows less than the permitted flow and to encourage water conservation at the facility, the Department is establishing BOD_5 and TSS concentration limits based on a factor of 1.5 as was done in the previous permitting action. Therefore, the monthly average and daily maximum BOD_5 concentration limits were derived as follows:

Daily Maximum: $\frac{(994 \text{ lbs/day})(1.5)}{(8.34)(2.5 \text{ MGD})} = 72 \text{ mg/L}$

Monthly Average: $\frac{(497 \text{ lbs/day})(1.5)}{(8.34)(2.5 \text{ MGD})} = 36 \text{ mg/L}$

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

A review of the monthly average data as reported on the Discharge Monitoring Reports submitted to the Department for the period January 2002 – October 2006 (n=54) indicates the monthly average BOD_5 concentration discharge has ranged from 4 mg/L to 36 mg/L with an arithmetic mean of 12.5 mg/L. The daily maximum BOD_5 concentration discharge has ranged from 8 mg/L to 132 mg/L with an arithmetic mean of 34.3 mg/L.

This permitting action is revising the minimum monitoring frequency requirement from five times per week to three times per week (3/Week) for BOD_5 for both Tier #1 and Tier #2 based on Department best professional judgment.

Tier #2
The following table summarizes the previous and current effluent limits for BOD_5 for Tier #2:

BOD_5	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Previous Permit	794 lbs./day	2,077 lbs./day	36 mg/L	96 mg/L
This Permit	794 lbs./day	1,588 lbs./day	36 mg/L	71 mg/L

The previous permitting action utilized McCain's projected monthly average and daily maximum production figures of 4,670,000 lbs./day and 6,110,000 lbs./day, respectively, to calculate loading limits for BOD_5. As discussed above, daily maximum production-based limits shall be based on the average production figure of 4,670,000 lbs./day and the applicable effluent guideline.

Monthly average and daily maximum technology-based BOD_5 mass and concentration limitations for Tier #2 in this permitting action were derived as follows:

Daily Maximum Mass: $\frac{(4{,}670{,}000 \text{ lbs./day})(0.34)}{1{,}000} = 1{,}588 \text{ lbs./day}$

Monthly Average Mass: $\frac{(4{,}670{,}000 \text{ lbs./day})((0.17)}{1{,}000} = 794 \text{ lbs./day}$

Daily Maximum Conc.: $\frac{(1{,}588 \text{ lbs/day})(1.5)}{(8.34)(4.0 \text{ MGD})} = 71 \text{ mg/L}$

Monthly Average Conc.: $\frac{(794 \text{ lbs/day})(1.5)}{(8.34)(4.0 \text{ MGD})} = 36 \text{ mg/L}$

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

f. Total Suspended Solids (TSS): The *Aroostook River Modeling Report, Final Sept 2004* does not recommend establishing water quality-based effluent limits for TSS. Therefore, this permitting action is establishing technology-based effluent limits for TSS based on the NSPS at 40 CFR Part 407.45 and the long-term average production rate for the facility. The NSPS guidelines for TSS are 0.55 lbs./per 1,000 lbs. raw material (monthly average) and 1.10 lbs./1,000 lbs. (daily maximum).

Tier #1
The following table summarizes the previous and current effluent limits for TSS for Tier #1:

TSS	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Previous Permit – Tier #1 and Tier #2	1,608 lbs./day (Year-round)	2,475 lbs./day (Jul 1-Sep 30) 3,650 lbs./day (Oct 1-Jun 30)	116 mg/L (Year-round)	178 mg/L (Jul 1-Sep 30) 262 mg/L (Oct 1-Jun 30)
This Permit – Tier #1	1,608 lbs./day	3,216 lbs./day	116 mg/L	231 mg/L
This Permit – Tier #2	2,569 lbs./day	5,137 lbs./day	116 mg/L	231 mg/L

The technology-based, monthly average mass and concentration limits for Tier #1 are being carried forward in this permitting action and were derived as follows:

Monthly Average Mass: $\frac{(2{,}923{,}640 \text{ lbs./day})(0.55)}{1{,}000} = 1{,}608 \text{ lbs./day}$

Monthly Average Conc.: $\frac{(1{,}608 \text{ lbs/day})(1.5)}{(8.34)(2.5 \text{ MGD})} = 116 \text{ mg/L}$

The seasonal daily maximum mass and concentration limits were carried forward from the July 22, 1999 licensing action and the limits were referred to as "water quality-based." The origin of these limits is not known and they are suspected as being best professional judgment limits rather than actual water quality-based limits rather.

The Department's Division of Environmental Assessment attempted to conduct marcoinvertebrate biomonitoring at several locations in the Aroostook River in calendar year 2004. Due to high river flows in 2004, the biomonitoring baskets were washed away and results from this effort are not available. Biomonitoring sampling is typically conducted on five-year cycles; thus the next sampling effort on the Aroostook River is scheduled for calendar year 2009. Results of a macroinvertebrate biomonitoring study conducted in calendar year 2001 at Station #595 located approximately 1 mile downstream from the McCain outfall indicates that the receiving water at that point is

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

achieving Class B standards for aquatic life. The Department has no information at this time that the Aroostook River is not attaining the aquatic life standards for the river's ascribed classifications of Class B or Class C. Therefore, this permitting action is establishing year-round technology-based daily maximum limits for TSS. New information regarding receiving water quality is available which was not available at the time the previous permit was issued. As a result, the Department concludes that revising the daily maximum limit limits for TSS to a year-round technology based limit that is more stringent than the previous non-summer limit is justified and appropriate at this time and satisfies the anti-backsliding provisions of Department rule Chapter 523. The Department reserves the right to reopen this permit, with notice to the permittee, in accordance with Special Condition K to establish more stringent water quality-based limits for TSS based on the results of future biomonitoring efforts conducted in the Aroostook River.

Technology-based daily maximum TSS mass and concentration limits for Tier #1 were derived as follows:

Daily Maximum: $\frac{(2{,}923{,}640 \text{ lbs./day})(1.10)}{1{,}000} = 3{,}216 \text{ lbs./day}$

Daily Maximum: $\frac{(3{,}216 \text{ lbs/day})(1.5)}{(8.34)(2.5 \text{ MGD})} = 231 \text{ mg/L}$

A review of the monthly average and daily maximum data as reported on the Discharge Monitoring Reports submitted to the Department for the period January 2002 – October 2006 (n=55) indicates the monthly average TSS mass discharge has ranged from 111 lbs./day to 1,400 lbs./day with an arithmetic mean of 388 lbs./day. The monthly average TSS concentration discharge has ranged from 9 mg/L to 99 mg/L with an arithmetic mean of 29 mg/L. The daily maximum TSS mass discharge has ranged from 240 lbs./day to 3,475 lbs./day with an arithmetic mean of 1,002 lbs./day. The daily maximum TSS concentration discharge has ranged from 61 mg/L to 222 mg/L with an arithmetic mean of 69 mg/L.

Based on the projected long-term average production rate for Tier #2, monthly average and daily maximum technology-based TSS mass and concentration limitations for Tier #2 were derived as follows:

Daily Maximum Mass: $\frac{(4{,}670{,}000 \text{ lbs./day})(1.1)}{1{,}000} = 5{,}137 \text{ lbs./day}$

Monthly Average Mass: $\frac{(4{,}670{,}000 \text{ lbs./day})(0.17)}{1{,}000} = 2{,}569 \text{ lbs./day}$

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

Daily Maximum Conc.: $\frac{(5{,}137 \text{ lbs/day})(1.5)}{(8.34)(4.0 \text{ MGD})} = 231 \text{ mg/L}$

Monthly Average Conc.: $\frac{(2{,}569 \text{ lbs/day})(1.5)}{(8.34)(4.0 \text{ MGD})} = 116 \text{ mg/L}$

This permitting action is revising the minimum monitoring frequency requirement from five times per week to three times per week (3/Week) for TSS for both Tier #1 and Tier #2 based on Department best professional judgment and consistent with other routine monitoring requirements established in this permit.

g. Settleable Solids – The previous permitting action established, for both Tier #1 and Tier #2, and this permitting action is carrying forward, for both Tier #1 and Tier #2, 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 review of the daily maximum data as reported on the Discharge Monitoring Reports submitted to the Department for the period January 2002 – October 2006 (n=55) indicates the daily maximum settleable solids concentration discharge has ranged from 0.0 ml/L to 1.0 ml/L with an arithmetic mean of 0.23 ml/L. The facility has been in compliance with the 0.3 ml/L limitation 95% of the time during said reporting period.

This permitting action is revising the minimum monitoring frequency requirement from once per day to three times per week (3/Week) for settleable solids for both Tier #1 and Tier #2 based on Department best professional judgment and consistent with other routine monitoring requirements established in this permit.

h. Total Residual Chlorine (TRC): The previous permitting action established year-round monthly average and daily maximum technology (BPT)-based concentration limitations of 0.1 mg/L and 0.3 mg/L, respectively, for TRC. Limitations on TRC are specified to ensure that ambient water quality standards are maintained and that BPT technology is being applied to the discharge. Department licensing/permitting actions impose the more stringent of either a water quality-based or BPT-based limit.

With acute and chronic dilution factors associated with Tier #1 of this permit, end-of-pipe acute and chronic water quality-based concentration thresholds for Tier #1 may be calculated as follows:

Acute (A) Criterion	Chronic (C) Criterion	A & C Dilution Factors	Calculated Acute Threshold	Calculated Chronic Threshold
0.019 mg/L	0.011 mg/L	39:1 (A) 46:1 (C)	0.74 mg/L	0.51 mg/L

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

With acute and chronic dilution factors associated with Tier #2 of this permit, end-of-pipe acute and chronic water quality-based concentration thresholds for Tier #2 may be calculated as follows:

Acute (A) Criterion	Chronic (C) Criterion	A & C Dilution Factors	Calculated Acute Threshold	Calculated Chronic Threshold
0.019 mg/L	0.011 mg/L	25:1 (A) 29:1 (C)	0.48 mg/L	0.32 mg/L

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. For facilities that need to dechlorinate the discharge in order 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. McCain dechlorinates the effluent prior to discharge in order to consistently achieve compliance with the chronic water quality-based threshold. The daily maximum and monthly average BPT-based limits of 0.3 mg/L and 0.1 mg/L, respectively, are more stringent than the water quality-based thresholds above and are therefore being carried forward in this permitting action for both Tier #1 and Tier #2.

A review of the monthly average and daily maximum data as reported on the Discharge Monitoring Reports submitted to the Department for the period of May 2002 – October 2006 (n=50) indicates the monthly average TRC discharge has ranged from 0 mg/L to 0.08 mg/L with an arithmetic mean of 0.43mg/L and the daily maximum TRC discharge has ranged from 0.02 mg/L to 0.23 mg/L with an arithmetic mean of 0.073 mg/L . The DMR data indicate the facility has been in compliance with both the monthly average and daily maximum limitations 100% of the time during said reporting period.

This permitting action is revising the minimum monitoring frequency from once per week to three times per week (3/Week) for TRC, for both Tier #1 and Tier #2, based on Department best professional judgment and consistent with other routine monitoring requirements established in this permit.

i. pH: The previous permitting action established, for both Tier #1 and Tier #2, and this permitting action is carrying forward, for both Tier #1 and Tier #2, a technology based pH range limitation of 6.0 – 9.0 standard units based on the NSPS standards promulgated at 40 CFR Part 407.45, which is being carried forward in this permitting action.

A review of the pH data as reported on the Discharge Monitoring Reports submitted to the Department for the period of January 2002 – October 2006 (n=54) indicates the facility has been in compliance with the pH range limitation 100% of the time during said reporting period.

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

This permitting action is revising the minimum monitoring frequency from once per day to three times per week (3/Week) for pH, for both Tier #1 and Tier #2, based on Department best professional judgment and consistent with other routine monitoring requirements established in this permit.

j. Total Ammonia: The previous permitting action established, for both Tier #1 and Tier #2, monthly average and daily maximum concentration and mass reporting requirements and a minimum monitoring frequency requirement of once per week for total ammonia (as N) on a year-round basis to gather seasonal data on the discharge in an effort supplement data gathered during the summer of 2001 for modeling purposes.

A review of the total ammonia data as reported on the Discharge Monitoring Reports submitted to the Department for the period of June 2002 – October 2006 indicates the monthly average mass discharge has ranged from 0.14 lbs./day to 24.75 lbs./day with an arithmetic mean of 3.82 lbs./day (n=51). The monthly average total ammonia concentration discharge has ranged from 0.01 mg/L to 1.63 mg/L with an arithmetic mean of 0.27 mg/L (n=50).

A review of the total ammonia for the period of June 2002 – October 2006 indicates the daily maximum mass discharge has ranged from 0.21 lbs./day to 152.2 lbs./day with an arithmetic mean of 13.3 lbs./day (n=50). The daily maximum total ammonia concentration discharge has ranged from 0.02 mg/L to 10.7 mg/L with an arithmetic mean of 0.99 mg/L.

On February 8, 2007, the Department conducted a statistical evaluation of the most recent 60 months of total ammonia data on fie with the Department in accordance with the statistical approach in Section 3.3.2 and Table 3-2 of USEPA's *"Technical Support Document for Water Quality-Based Toxics Control"* which demonstrated that the discharge does not exhibit a reasonable potential to exceed the critical acute or chronic ambient water quality control criteria for ammonia. The *Aroostook River Modeling Report, Final Sept 2004* does not recommend limiting the discharge of ammonia from this or any other facility on the Aroostook River. The Modeling Report states that at almost all river locations, the measured value of ammonia nitrogen was under the detection limit of 0.04 ppm. Therefore, this permitting action is eliminating the monthly average and daily maximum concentration and mass reporting requirements for total ammonia.

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

k. Total Phosphorus (Total-P): The previous permitting action established, for both Tier #1 and Tier #2, seasonal weekly average water quality-based mass and concentration limits of 91 lbs./day and 6.6 mg/L, respectively, for total-P. These limits were carried forward from the July 22, 1999 licensing action, which stated that the limits were derived based on USEPA guidance of 100 ug/L taken from *Quality Criteria for Water, 1986*. It is noted that the Department issued a letter of correction to McCain on October 22, 2002 regarding the effective dates for the total-P limits. The letter administratively modified the effective dates from May 15th – September 30th to June 1st – September 30th.

A review of the weekly average total-P data as reported on the Discharge Monitoring Reports submitted to the Department for the period of June 2002 – June 2006 (n=20) indicates the total-P mass discharge has ranged from 29 lbs./day to 91 lbs./day with an arithmetic mean of 58.9 lbs./day and the weekly average concentration has ranged from 2.1 mg/L to 6.1 mg/L with an arithmetic mean of 4.16 mg/L.

A discussion of phosphorous and receiving water quality is provided in Section 5 of this fact sheet and should be reviewed for its relevance to phosphorous limitations and monitoring requirements established herein.

This permitting action is carrying forward the seasonal weekly average mass and concentration limits of 91 lbs./day and 6.6 mg/L, respectively, and establishing monthly average and daily maximum mass and concentration reporting requirements for total phosphorous. Upon renewal of this permit in 2012 and development of final nutrient criteria, the Department will re-evaluate phosphorous limitations for this discharge.

Total-P limits/monitoring requirements are effective June 1 through September 30, inclusive, of each year. This permitting action is carrying forward the minimum monitoring frequency requirement of three times per week based on best professional judgment.

l. Whole Effluent Toxicity (WET), Priority Pollutant, and Analytical Chemistry Testing: Maine law, 38 M.R.S.A., §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 rule, 06-096 CMR Chapter 530, *Surface Water Toxics Control Program* ("toxics rule") 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. Department rule 06-096 CMR Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*, sets forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

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

WET, priority pollutant and analytical chemistry testing, as required by Chapter 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 and chronic WET tests are performed on invertebrate water flea (*Ceriodaphnia dubia*) and vertebrate brook trout (*Salvelinus fontinalis*). 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 Department rule Chapter 525 Section 4.VI. Analytical chemistry refers to a suite of chemical tests for ammonia-nitrogen, total aluminum, total cadmium, total chromium, total copper, total hardness (fresh water only), total lead, total nickel, total silver, total zinc, total arsenic, total cyanide and total residual chlorine.

Chapter 530 Section 2 A. specifies the dischargers subject to the rule as, *"all licensed dischargers of industrial process wastewater or domestic wastes discharging to surface waters of the State must meet the testing requirements of this section. Dischargers of other types of wastewater are subject to this subsection when and if the Department determines that toxicity of effluents may have reasonable potential to cause or contribute to exceedences of narrative or numerical water quality criteria."* McCain discharges both industrial process and domestic (sanitary) waste waters to the Aroostook River and is therefore subject to the testing requirements of the toxics rule.

Chapter 530 Section 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 Aroostook River. Therefore, a default background concentration of 10% of applicable water quality criteria is being used in the calculations of this permitting action.

Chapter 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.

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

One aspect of the new Chapter 530 rule found in Section 4(F) is evaluating toxic pollutant impacts on a watershed basis. Section 4(F) 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 McCain's discharge assuming it is the only discharger to the river. 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 K, *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.

Chapter 530 Section 2.B. categorizes dischargers subject to the toxics rule into one of four levels (Levels I through IV). Level II dischargers are those *"having a chronic dilution factor of at least 20 but less than 100 to 1."* The chronic dilution factor associated with the discharge from the McCain facility at Tier #1 conditions is 46 to 1, and the chronic dilution factor at Tier #2 is 29:1; thus, the facility is considered a Level II facility for purposes of toxics testing. Chapter 530 Section 2.D specifies default WET, priority pollutant, and analytical chemistry test schedules for Level II dischargers as follows:

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	2 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	2 per year

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

The previous permit established one year of WET testing on the water flea (1/quarter), fathead minnow (2/year) and brook trout (2/year) to be conducted during the first four consecutive calendar quarters following issuance of the previous permit. The previous permit established one year of chemical-specific testing at a frequency of once per year during the first year of the permit only. On April 10, 2006, the Department modified the 6/11/02 permit to incorporate testing requirements of Department rule Chapter 530, which became effective October 2005. The 4/10/06 permit modification established screening level testing requirements consistent with those specified in the table above; established reduced surveillance level WET testing for the brook trout and analytical chemistry at once every other year; and established full surveillance level testing for the water flea at once per year and aluminum at twice per year.

A review of the data on file with the Department for this facility indicates that, to date, McCain has completed a total of 9 rounds of WET testing (8 using water flea, 4 using brook trout and 5 using fathead minnow), and a total of two priority pollutant scans since September 2002. See Attachment D of this Fact Sheet for a summary of the WET test results, and Attachment E of this Fact Sheet for a summary of priority pollutant test dates and aluminum test results.

WET Evaluation

Chapter 530 Section 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 February 8, 2007, the Department conducted a statistical evaluation on the most recent 60 months of WET test results on file with the Department for McCain in accordance with the statistical approach outlined above (for both Tier I and Tier II production scenarios). The 2/8/07 statistical evaluation indicates the discharge from McCain has on one occasion (minimum test result of <3.4% on 12/01/2002) exceeds the critical chronic water quality thresholds of 2.6% and 3.4% at Tier #1 and Tier #2 dilutions, respectively, for the water flea. The 2/8/07 statistical evaluation indicates the discharge has on one occasion (minimum test result of 4.0% on 6/15/2004) demonstrated a reasonable potential (RP) to exceed the critical acute Tier #2 water quality threshold of 4.0% for the water flea. The statistical evaluation indicates the discharge does not exceed or demonstrate RP to exceed the critical water quality thresholds of for any other WET species tested to date for either Tier #1 or Tier #2.

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

Department rule Chapter 530 Section 3.C. states, in part, that if *"the discharge is causing an exceedence of applicable water quality criteria, then: (1) the licensee must, within 45 days of becoming aware of an exceedence, submit a [Toxicity Reduction Evaluation] plan for review and approval and implement the TRE after Department approval of the TRE plan, modify the waste discharge license to specify effluent limits and monitoring requirements necessary to control the level of pollutants and meet receiving water classification standards."*

The *State of Maine Department of Environmental Protection, Toxics Control Program Reference Manual, November 1998*, ("TRE Reference Manual")states that, *"a single WET test violation should not require a full TRE, but it should trigger additional accelerated toxicity testing. Any additional exceedence in subsequent accelerated testing could require a full TRE."* The permittee has completed a total of seven WET tests since the minimum test result date of 12/01/2002 with no results demonstrating exceedence or RP for the water flea. The TRE Reference Manual states that *"if accelerated testing, previous testing and other plant records indicates continued absence of effluent toxicity and lack of any suspected or known toxics discharge sources, then the initial exceedence could be considered as an isolated event such as an accidental spill or plant upset, and a TRE may not be required."* The Department is making a best professional judgment that the permittee has satisfactorily demonstrated through subsequent testing that the 12/01/2002 exceedence was an isolated event and that there is no data to suggest continued toxicity of the effluent. Therefore, this permitting action is not establishing a TRE requirement, but is establishing C-NOEL numeric limitations of 2.6% and 3.4% for Tier #1 and Tier #2, respectively, and an A-NOEL limit of 4.0% for Tier #2 for the water flea.

Department rule Chapter 530 Section 2.D.3.c states, *"dischargers in Level II may reduce surveillance testing to one WET or specific chemical series every other year provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedence."* Based on this provision and Department best professional judgment, this permitting action is establishing reduced surveillance level WET testing for the brook trout only at a frequency of once every other year. Based on the 12/01/2002 and 6/15/2004 WET test results, this facility does not quality for reduced testing for the water flea.

Department rule Chapter 530 Section 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."

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

This permitting action establishes Special Condition I, *Chapter 530 Statement for Reduced Toxics Testing*, pursuant to Chapter 530 Section 2.D.4. It is noted, however, that if future WET testing indicates the discharge exceeds or demonstrates a reasonable potential to exceed the critical water quality thresholds for either test species, this permit will be reopened in accordance with Special Condition K, *Reopening of Permit For Modification,* to establish effluent limitations and revised monitoring requirements as necessary.

Priority Pollutant Evaluation

On February 8, 2007, the Department conducted a statistical evaluation on the most recent 60 months of chemical-specific tests results on file with the Department for McCain in accordance with the statistical approach outlined above (for both Tier I and Tier II production scenarios). **The 2/8/07 statistical evaluation indicates one total aluminum test result (8,500 µg/L on 5/5/03) exceeds both the Tier #1 and Tier #2 chronic ambient water quality criterion (AWQC) thresholds. The evaluation indicates that the discharge does not exceed or have a reasonable potential to exceed the AWQC thresholds for any other parameters tested.**

Therefore, this permitting action is establishing monthly average water quality-based concentration and mass limits for total aluminum.

Department rule Chapter 530 Section 3 paragraph D(1) states, *"for specific chemicals, effluent limits must be expressed in total quantity that may be discharged and in effluent concentration. In establishing concentration, the Department may increase allowable values to reflect actual flows that are lower than permitted flows and/or provide opportunities for flow reductions and pollution prevention provided water quality criteria are not exceeded."* The arithmetic mean of 1.55 MGD is less than the design capacity of 2.5 MGD as discussed in Section 6 c. of this fact sheet. The water quality-based concentration limits for total aluminum for Tier #1 and Tier #2 are being increased by a factor of 1.5 so as not to penalize the permittee for operating at flows less than the permitted flow and to promote water conservation at the facility.

Based on the applicable AWQC, the chronic dilution factors and discharge flow rates for Tier #1 and Tier #2, monthly average water quality-based limits for total aluminum may be calculated as follows:

Concentration Limit Formula =

$$(\text{Dilution Factor})[(0.75)(\text{criterion})] + (0.25)(\text{criterion})$$

Mass Limit Formula =

$$\frac{(\text{Conc. Limit, µg/L})(8.34\ \text{lbs./gallon})(\text{flow limit, MGD})}{1000\ \text{µg/mg}}$$

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

Tier #1:

Monthly Average Concentration = (46)[(0.75)(87 µg/L)] + (0.25)(87 µg/L)
= 3,002 + 22
= 3,024 µg/L x 1.5
= 4,536 µg/L
= **4.5 mg/L**

Monthly Average Mass = $\frac{(3{,}024\ \mu g/L)(8.34\ lbs./gallon)(2.5\ MGD)}{1000\ \mu g/mg}$ = **63 lbs./day**

Tier #2:

Monthly Average Concentration = (29)[(0.75)(87 µg/L)] + (0.25)(87 µg/L)
= 1,892 + 22
= 1,914 µg/L x 1.5
= 2,871 µg/L
= **2.9 mg/L**

Monthly Average Mass = $\frac{(1{,}914\ \mu g/L)(8.34\ lbs./gallon)(4.0\ MGD)}{1000\ \mu g/mg}$ = **64 lbs./day**

The permittee has completed a total of five total aluminum tests subsequent to the 5/5/03 maximum test result of 8,500 µg/L. None of the subsequent test results demonstrates reasonable potential to exceed the AWQC for aluminum and the Department is making a best professional judgment determination based on the *State of Maine Department of Environmental Protection, Toxics Control Program Reference Manual, November 1998* to not require a TRE for aluminum at this time. The Department will monitor the results of total aluminum testing required by this permit and will reopen this permit as necessary if the results demonstrate on-going, unresolved toxicity problems for total aluminum.

m. Outfall #100 – Internal Waste Stream – Package Treatment Plant:

The previous permitting action established, and this permitting action is carrying forward, monthly average and daily maximum discharge flow monitoring requirements for the extended aeration, sequencing batch reactor (SBR) package plant utilized to treat sanitary waste waters generated by workers at the production facility. The permittee has indicated that the package treatment plant is designed to treat up to 20,000 gallons per day (gpd) on a monthly average basis. The previous permit also established, and this permitting action is carrying forward, year-round monthly average and daily maximum *Escherichia coli* bacteria concentration limits of 142 colonies/100 ml (geometric mean) and 949 colonies/100 ml (instantaneous level), respectively, which were based on the State of Maine Water Classification Program criteria for Class C waters found at 38 M.R.S.A. §465(4)(B), and a minimum monitoring frequency requirement of twice per week.

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

n. Mercury: Maine law, 38 M.R.S.A. §413 subsection 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." Department rule Chapter 519, *Interim Effluent Limitations and Controls for the Discharge of Mercury*, Section 3 specifies that facilities required to conduct toxics testing, as McCain 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 during the initial 12-month period following issuance of the permit. Upon completion of mercury testing required in this permit, the Department will establish interim mercury concentration limits and notify the facility as specified in Chapter 519.

7. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

Based on all available information, the Department has determined, as permitted, 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 C classification.

8. PUBLIC COMMENTS

Public notice of this application was made in the *Presque Isle Star Herald* newspaper on or about December 6, 2006. 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 Chapter 522 of the Department's rules.

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 April 13, 2007 through May 14, 2007, the Department solicited comments on the proposed draft Maine Pollutant Discharge Elimination System Permit to be issued to McCain for the proposed discharge. The Department received one significant comment (comment #1 below) on the proposed draft permit from the Department's Division of Water Quality Management, and one significant comment (comment #2 below) from Steve Sutter, an abutter and interested party in this matter.

Comment #1: The calculation for the Tier II total aluminum limitation is incorrect.

Response #1: The Department has corrected the Tier II concentration calculation for total aluminum on page 28 of this fact sheet. The corrected limitation of 64 lbs./day is more stringent than the incorrect limit of 94 lbs./day that appeared in the draft permit. Special Condition A of this permit has also been corrected to reflect this change.

Comment #2: Mr. Sutter stated,

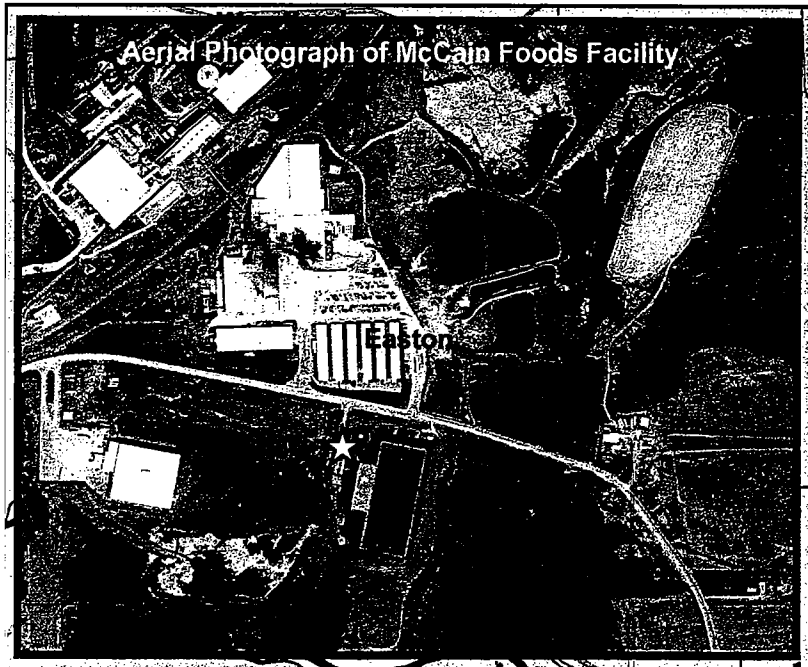
> *The proposed seasonal limits and reporting for phosphorus should be **extended**. Instead of June 1 to September 30, the period should at least be April 1 to September 30. Based on historical USGS data for a discontinued surface water quality monitoring station near Caribou, April and May are the months of exceptionally high suspended sediment discharge, as measured in tons per day.*
>
> *Phosphorus bound to sediments in rivers may become available for biological uptake at a later date. The USGS web-based data also show phosphorus concentrations as elevated (relative to the rest of the year) from October 1 to March 31, an argument for **year around** phosphorus limits.*
>
> *My resolve that phosphorus controls be strengthened in this licensing action is due to the fact that MDEP bio-monitoring in 2001 at Station #595 located approximately one mile downstream from the McCain outfall indicates that the receiving water at that point is achieving (higher) Class B standards for aquatic life (Draft Fact Sheet page 17). And in the e-mail that has these comments attached, I include two pictures of my riverfront property shoreline (under a mile below McCain's discharge) taken August 2005 and August 2006. Clearly there is an excess of algae that visibly discolors the water.*

10. RESPONSE TO COMMENTS (cont'd)

Response #2: The *Aroostook River Modeling Report, Final Sept 2004* states that phosphorous limits "should proceed only after the collection of an additional data set under reduced phosphorous inputs and the establishment of nutrient criteria." And, "Given the high levels of benthic and floating algae, and the large swings in DO and pH on the Aroostook [River], it is obvious that nutrients are an issue here and some reductions of phosphorous are likely in the near future. It is hoped that McCain's and other stakeholders take this issue seriously and at least consider what the targeted P-reductions investigated in the report will mean for them. It is also hoped that some of the stakeholders will agree to voluntary P-reduction in a future summer under which more data can be collected." (See response to comment #11 of the Modeling Report, *Response to Comments*.) In this permitting action, the Department is emphasizing the importance of investigating phosphorous reduction at the major point source dischargers and additional ambient data collection to support future arguments on the establishment of limitations and monitoring requirements following completion of the nutrient criteria.

The phosphorous monitoring requirements in the draft permit have not been modified and are consistent with the monitoring periods established for other dischargers to riverine systems where nutrients are of concern.

ATTACHMENT A



Aroostook River, Class C

Caribou

Fort Fairfield Utilities District and Outfall to Aroostook River

Boralex Fort Fairfield and Outfall to Aroostook River (shared with FFUD)

Fort Fairfield

CANADA

Town and County Apartments and Outfall to Aroostook River

Aroostook River, Class B

Presque Isle Sanitary District and Outfalls to Presque Isle Stream

Presque Isle

Mapleton

Presque Isle Drinking Water Treatment Plant and Outfall to Presque Isle Stream

McCain Foods Outfall to Aroostook River #ME0036218

Easton

McCain Foods Facility in Easton #ME0036218

Chapman

Legend

- Wastewater_Facilities
- Wastewater_Outfalls
- Ponds_and_Lakes

Major_Roads.lyr

JURISDICTION

- State aided
- State hwy
- Toll highway

Class

- AA
- A
- B
- C
- SB

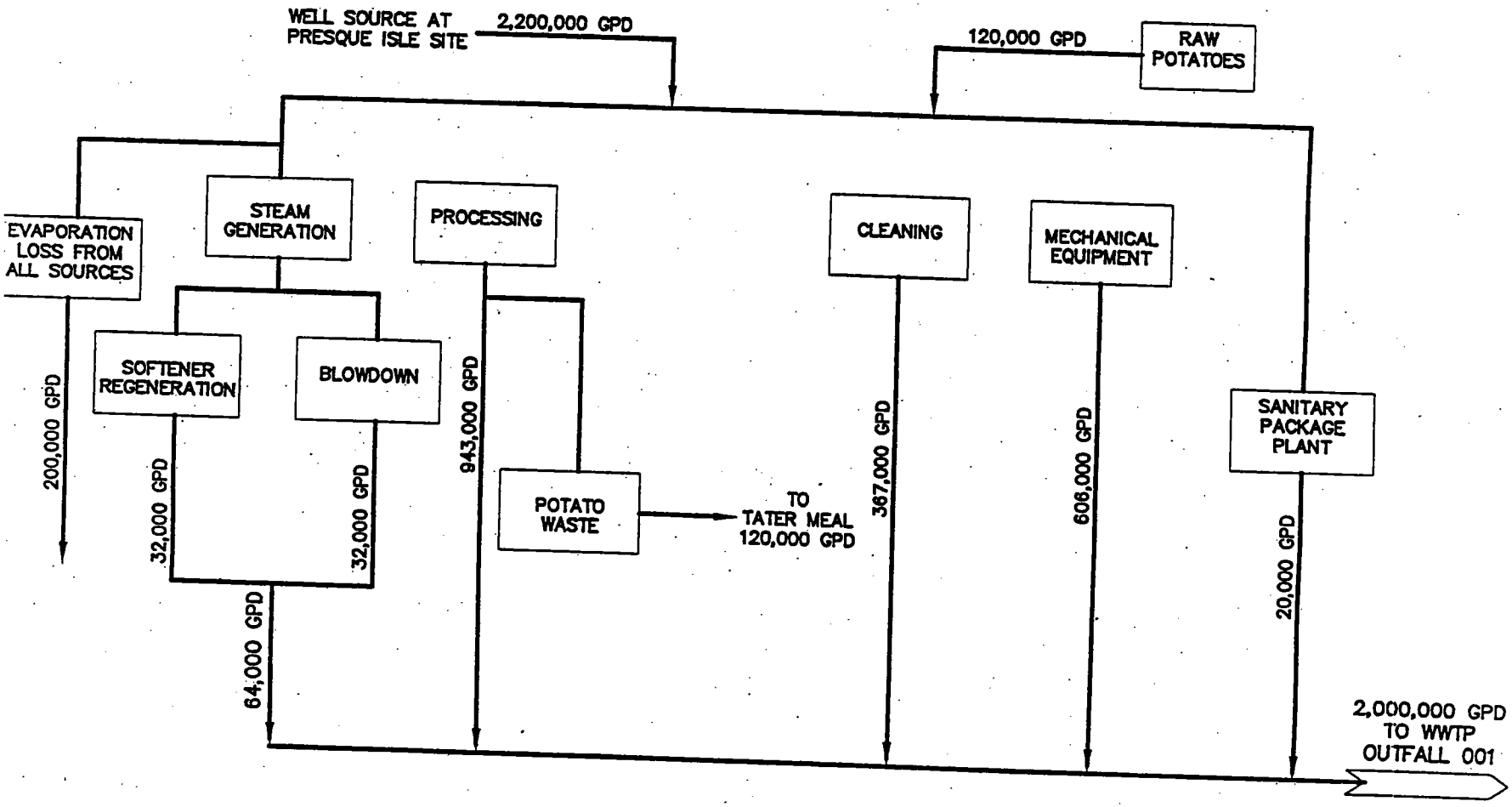
0 2.5 5 10 Miles

N W E S

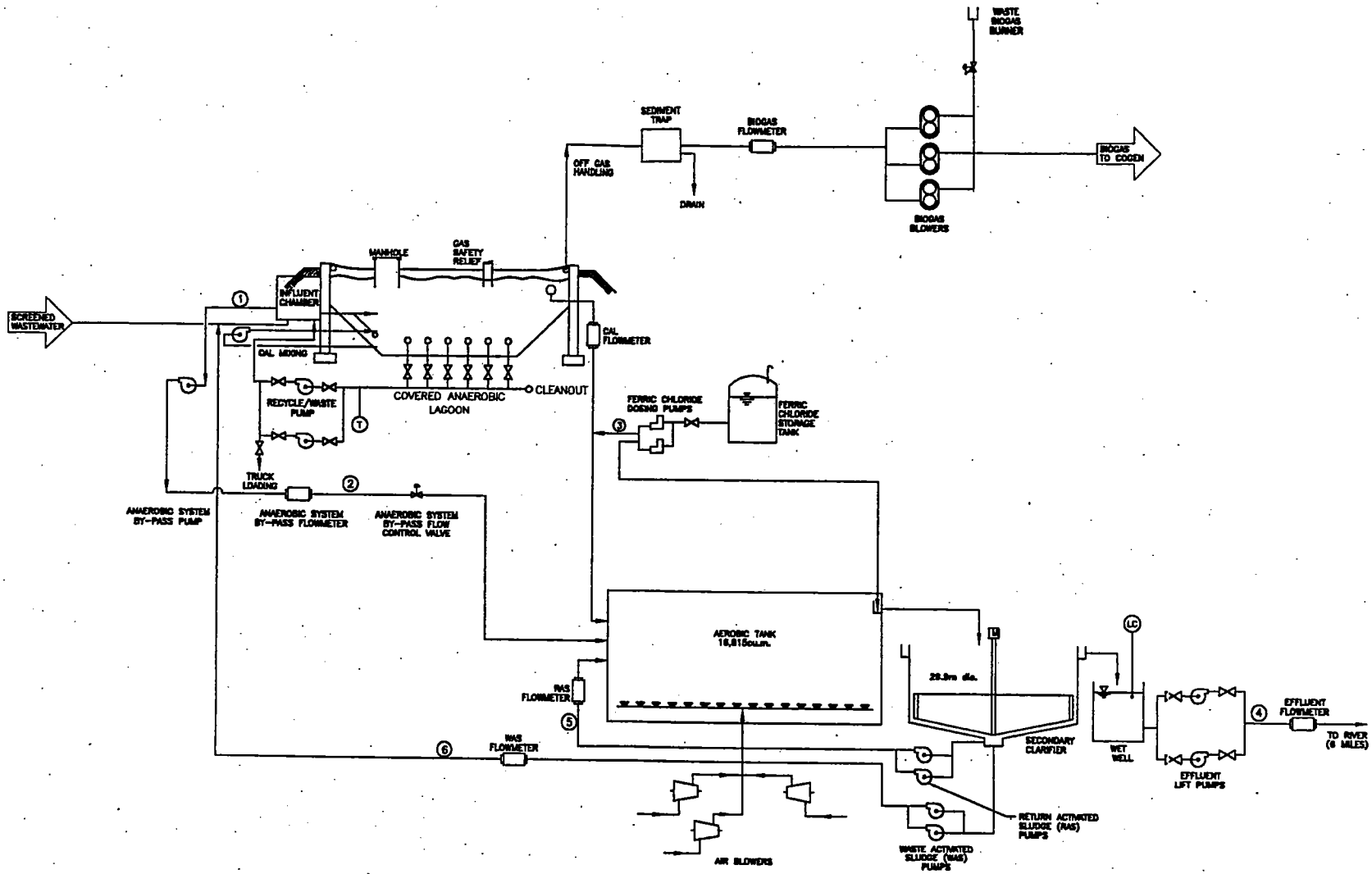
Map created by Maine DEP
April 13, 2007

McCain Foods USA, Inc., Aroostook River, Aroostook County, Maine

ATTACHMENT B


WELL SOURCE AT PRESQUE ISLE SITE
2,200,000 GPD
120,000 GPD
RAW POTATOES
EVAPORATION LOSS FROM ALL SOURCES
STEAM GENERATION
PROCESSING
CLEANING
MECHANICAL EQUIPMENT
SOFTENER REGENERATION
BLOWDOWN
SANITARY PACKAGE PLANT
200,000 GPD
32,000 GPD
32,000 GPD
943,000 GPD
POTATO WASTE
TO TATER MEAL 120,000 GPD
367,000 GPD
606,000 GPD
20,000 GPD
64,000 GPD
2,000,000 GPD TO WWTP OUTFALL 001

ATTACHMENT C



McCain Dwg # 201-0201-8500-G604

NO.	DATE	REVISION	BY
4	9/AUG/99	REVISIONS TO ELEVATIONS	JSP
3	6/JUNE/99	ISSUED FOR CONSTRUCTION	JSP
2			
1	15/JAN/99	ISSUED FOR TENDER	JPA

DESIGN/BUILD CONTRACTOR:

OWNER: McCAIN FOODS USA, INC. EASTON, MAINE

ENGINEER: Dufresne-Henry Consulting Engineers
22 FREE STREET
Portland, ME 04101
Tel. (207) 775-3211
FAX (207) 775-8434
www.d-hinc.com

PROCESS
FLOW SCHEMATIC
McCAIN FOODS INC.
EASTON, MAINE

DATE: NOV. 2, 1998	PROJ. NO.: W4708
DESIGN BY: R.S.	DWG. NO.: P-03
FILE NO.: W4708P03-4	SCALE: AS SHOWN

ATTACHMENT D

Species	Test	Test Result %	Sample Date
TROUT	A_NOEL	100	09/08/2002
TROUT	C_NOEL	100	09/08/2002
TROUT	LC50	>100	09/08/2002
WATER FLEA	A_NOEL	100	09/08/2002
WATER FLEA	C_NOEL	50	09/08/2002
WATER FLEA	LC50	>100	09/08/2002
FATHEAD	A_NOEL	100	12/01/2002
FATHEAD	C_NOEL	100	12/01/2002
FATHEAD	LC50	>100	12/01/2002
WATER FLEA	A_NOEL	83.3	12/01/2002
WATER FLEA	C_NOEL	<3.4	12/01/2002
WATER FLEA	LC50	>100	12/01/2002
FATHEAD	A_NOEL	100	01/20/2003
FATHEAD	C_NOEL	100	01/20/2003
FATHEAD	LC50	>100	01/20/2003
WATER FLEA	A_NOEL	56.2	01/20/2003
WATER FLEA	LC50	82	01/20/2003
WATER FLEA	LC50	82.0	01/20/2003
FATHEAD	A_NOEL	100	02/16/2003
FATHEAD	C_NOEL	100	02/16/2003
FATHEAD	LC50	>100	02/16/2003
WATER FLEA	A_NOEL	100	02/16/2003
WATER FLEA	C_NOEL	50	02/16/2003
WATER FLEA	LC50	>100	02/16/2003
TROUT	A_NOEL	100	05/04/2003
TROUT	C_NOEL	100	05/04/2003
TROUT	LC50	>100	05/04/2003
WATER FLEA	A_NOEL	83.3	05/04/2003
WATER FLEA	C_NOEL	25	05/04/2003
WATER FLEA	LC50	>100	05/04/2003
TROUT	A_NOEL	100	06/15/2004
TROUT	C_NOEL	100	06/15/2004
WATER FLEA	A_NOEL	4	06/15/2004
WATER FLEA	C_NOEL	4	06/15/2004
FATHEAD	A_NOEL	100	08/24/2004
FATHEAD	C_NOEL	100	08/24/2004
WATER FLEA	A_NOEL	100	08/24/2004
WATER FLEA	C_NOEL	50	08/24/2004
TROUT	A_NOEL	100	12/07/2004
TROUT	C_NOEL	100	12/07/2004
WATER FLEA	A_NOEL	100	12/07/2004

Species	Test	Test Result %	Sample Date
FATHEAD	A_NOEL	100	03/08/2005
FATHEAD	C_NOEL	100	03/08/2005
WATER FLEA	A_NOEL	100	03/08/2005
WATER FLEA	C_NOEL	50	03/08/2005
TROUT	A_NOEL	50	12/26/2006
TROUT	C_NOEL	100	12/26/2006
WATER FLEA	A_NOEL	100	12/26/2006
WATER FLEA	C_NOEL	100	12/26/2006

ATTACHMENT E

Sample Date: 09/08/2002
Plant flows not provided

al Tests:	135
sing Compounds:	1
:s With High DL:	0

M = 0 V = 0 A = 0
BN = 0 P = 0 other = 0

Sample Date: 10/03/2006
Plant flows provided

l Tests:	129
ing Compounds:	0
s With High DL:	0

mon.(MGD)= 1.705
day(MGD)= 1.663

M = 0 V = 0 A = 0
BN = 0 P = 0 other = 0

PP Data for "Hits" Only

CAIN PROCESSING INC.
)OSTOOK RIVER

JMINUM
MDL

Conc, ug/l	MDL	Sample Date	Date Entered
110.000000	NS	09/08/2002	12/27/2002
128.000000	NS	12/01/2002	02/26/2003
205.000000	NS	12/07/2004	01/28/2005
280.000000	NS	01/20/2003	10/20/2003
290.000000	NS	08/24/2004	10/06/2004
580.000000	NS	10/03/2006	01/12/2007
650.000000	NS	06/15/2004	08/23/2004
1040.00000	NS	03/08/2005	05/16/2005
8500.00000	NS	05/05/2003	06/26/2003

ENIC
= 5 ug/l

	Conc, ug/l	MDL	Sample Date	Date Entered
	1.000000	OK	09/08/2002	11/04/2002
<	5.000000	OK	10/03/2006	01/12/2007