UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I - NEW ENGLAND
OFFICE OF ECOSYSTEM PROTECTION
ONE CONGRESS STREET
BOSTON, MASSACHUSETTS 02114-2023

FACT SHEET

DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

DATE OF PUBLIC NOTICE:

NPDES PERMIT NO.: MA0029327

NAME AND ADDRESS OF APPLICANT:

Agri-Mark, Inc.
P.O. Box 5800
Lawrence, MA 01842

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Agri-Mark, Inc.
958 Riverdale Street
West Springfield, MA 01089

RECEIVING WATERS: Bagg Brook to the Connecticut River
(Connecticut River Basin MA35-05)

CLASSIFICATION: B

I. Proposed Action, Type of Facility, and Discharge Location.

The above named applicant has requested that the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MADEP) reissue its existing NPDES permit to discharge into the designated receiving waters. The facility is engaged in the manufacture of heavy cream, condensed milk, non-fat dry milk, and butter. The discharge is from process condensate water.

II. Description of Discharge.

Recent plant effluent monitoring data submitted to EPA by Agri-Mark, Inc. on monthly Discharge Monitoring Reports (DMR) were reviewed and used to develop this permit, and are summarized in Fact Sheet Table 1.

III. Limitations and Conditions.

The effluent limitations of the draft permit, the monitoring requirements, and implementation schedule (if required) may be found in the draft NPDES permit.

IV. Facility Preamble.

NPDES Permit History

Agri-Mark Inc. has been discharging condensate and cooling water from its plant in Springfield, Massachusetts under a five year NPDES permit issued on March 31, 1986, which expired on March 31, 1991. The 1986 permit has been administratively continued as the permittee has satisfied the conditions listed in Title 40 of the Code of Federal Regulations ("CFR") Section 122.6 and Title 314 of the Code of Massachusetts Regulation ("CMR") Section 3.08. No permit modifications were issued.

Watershed Initiative

The facility is in the Connecticut watershed basin. The next scheduled permitting year for this watershed is calendar year 2005. Typically EPA would issues a permit which expired in 2005 in order to be consistent with MADEP's watershed cycle. However, since this would result in a permit term of only 2 years, EPA has proposed a permit term of 5 years, even though it is not consistent with the watershed cycle. If new information becomes available during the term of the permit, EPA may re-open the permit and propose appropriate modifications.

Description, Discharge History, and Facility Upgrades

Agri-Mark is engaged in manufacturing various dairy products: heavy cream, condensed milk, non-fat dry milk, and butter. The discharge is to the city storm sewer system, which exists within the property boundaries. The storm sewer discharges to Bagg Brook, a tributary of the Connecticut River. For purposes of effluent limitations and monitoring requirements the draft permit considers the facility discharge point to be where the process water enters the storm water conveyance system.

Although Agri-Mark has not changed the equipment in the facility, it has upgraded the equipment and increased the operations hours. In 1986 the operation of the plant was 14 - 16 hours per day without the pre-heater. This operation has changed to a more efficient mode for the machinery. For the past ten years Agri-Mark has operated the evaporator with normally 30 hours per evaporator cycle. In 1992 Agri-Mark upgraded the equipment to allow Mechanical Vapor Compression or Thermal Vapor Compression. This has marginally increased the capacity. During 1999-2000 Agri-Mark upgraded its technology to SCADA system for more accurate control process.

The wastewater flow measured at the NPDES discharge manhole is associated mostly with the evaporated milk condensate or cow water. The flow is directly related to production of condensed and dry milk. The evaporator evaporates water from the milk for the production of milk products. Steam is used for heat for the process. This evaporated water is condensed and discharged with the steam condensate.

The Weiglund evaporator is designed to processes 167,000 pounds of skim milk per hour. The process creates condensed milk or dry milk. The milk evaporation produces excess water. This water is referred to as cow water. Condensed milk produces 106,000 pounds of cow water per hour and dry milk produces 112,000 pounds of cow water per hour. The maximum steam utilization is 10,000 lbs per hour. The ultimate potential of dry milk and steam condensate at full continuous production is estimated to be 360,000 gallons per day. The evaporative water is passed through heat exchangers prior to discharge. The process change from the initial 16 hours of production in 1986 to 30 hours of production, reflects the most efficient operation of the equipment. After 30 hours of production, the equipment is flushed and cleaned through an automated process. The discharge from this operation is through the industrial pretreatment system.

The process is controlled through the main computer terminals located in the control room adjacent to the production area. The production controls for dry / condensed milk includes temperature, pressure and flow monitoring. The condensed water temperature and turbidity levels are continuously monitored. The condensate, through the operation of a control valve within the process operation, may be discharge to the Connecticut River or the existing wastewater pretreatment system with ultimate discharge to municipal sanitary sewer. The process water is not treated prior to discharge.

Agri-mark placed a turbitity meter on the effluent line to monitor the discharge. This is part of their own internal quality control. Although not equivalent to suspended solids, any change in the turbidity of the discharge would indicate to Agri-Mark that the quality of the condensate water had changed. Agri-Mark has a composite sampler on the discharge for monitoring.

The operating and design values for the evaporator are:

1985	MVR mode annual skim milk design to evaporator	1,350,000 lb/day
2000	Operation volume to evaporator	3,120,000 lb/day
2001	Design skim milk to evaporator	4,017,600 lb/day (167,000 lb/hr)

The values for the operation of the system are summarized in the following table:

ITEM	1985 *	1992	2001
Skim Milk Production lb/day **	1,350,000	------	2,100,000
Skim Milk lb/hr	90,000	130,000	167,000
Condensate lb/hr	65,000	90,000	110,000
Condensate gal/day (design)	90,000	258,000	315,000
Cooling Water seal water gpd	20,000		16,500
Cooling Water - Chiller water gpd	10,000	10,000	0
Total Flow gpd	120,000	268,000	331,500

* 1985 limited production day 12 - 16 hours production cycle, 8 hour clean;
** Actual annual production values, 30 hour production cycle, 6 hour clean.
NOTE: The chiller was converted from water-cooled operation to mechanical-cool operation.

Receiving Water and Dilution

The plant effluent is discharged to the City's storm water sewer system, which empties into Bagg Brook, before reaching the main stem of the Connecticut River, located approximately 2000 feet away. Bagg Brook, in the area of the plant discharge provides no significant dilution.

Water Quality Standards and Designated Uses

Bagg Brook has been classified as Class B under the Massachusetts Surface Water Quality Standards. Title 314 Code of Massachusetts Regulations ("CMR") 4.05(3)(b) states that Class B waters have the following designated uses: *These waters are designated as habitat for fish, other aquatic life, and wildlife, and for primary and secondary contact recreation. Where designated they shall be suitable as a source of public water supply with appropriate treatment, They shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses. These waters shall have consistently good aesthetic value.*

Section 303(d) of the Federal Clean Water Act (CWA) requires states to identify those water-bodies that are not expected to meet surface water quality standards after the implementation of technology-based controls and, as such require the development of total maximum daily loads (TMDL).

The 1998 303(d) report lists Bagg Brook as a water body not attaining water quality standards. Though the Connecticut River (MA34-05), from Holyoke Dam to the Connecticut State Line, which includes the confluence of Bagg Brook, is not attaining water quality standards due to Priority Organics, Pathogens, and Suspended Solids.

The Connecticut River 1998 Water Quality Assessment Report does not document any effects that Agri-Mark MA00293279 has on the Connecticut River (Segment MA34-05). (Page 84).

V. Permit Basis and Explanation of Effluent Limitation Derivation.

A. General Requirements

The Clean Water Act (CWA) prohibits the discharge of pollutants to waters of the United States without a National Pollutant Discharge Elimination System (NPDES) permit unless such a discharge is otherwise authorized by the CWA. The NPDES permit is the mechanism used to implement technology and water quality-based effluent limitations and other requirements including monitoring and reporting. This draft NPDES permit was developed in accordance with various statutory and regulatory requirements established pursuant to the CWA and any applicable State regulations. The regulations governing the EPA NPDES permit program are generally found at 40 CFR Parts 122, 124, 125, and 136.

EPA is required to consider (a) technology-based requirements, (b) water quality-based requirements, and (c) all limitations and requirements in the current/existing permit, when developing permit limits. These requirements are described in the following paragraphs.

B. Technology-Based Requirements

Technology-based requirements represent the minimum level of control that must be imposed under Sections 301(b) and 402 of the CWA (see 40 CFR §125 Subpart A). For existing sources, technology-based requirements according to best practicable control technology currently available (BPT) are applied for conventional, non-conventional, and toxic pollutants. Sections 301 (b)(2)(A) and (E) of the CWA require industrial dischargers to meet limitations based on Best Available Technology Economically Achievable (BAT) for toxic pollutants and Best Conventional Pollutant Control Technology (BCT) for conventional pollutants by July 1, 1984.

Final regulations establishing BPT, BAT, and BCT requirements for Dairy Products Processing Point Source Category, Subpart I – Condensed Milk Subcategory, were promulgated on May 28, 1974 at 39 Federal Register (FR) 18597. Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available are listed in 40 CFR §405.92.

C. Water Quality-Based Requirements

Under Section 301(b)(1)(C) of the CWA and EPA regulations, NPDES permits must contain effluent limits more stringent than technology-based limits where more stringent limits are necessary to maintain or achieve state or federal water quality standards.

Water quality standards consist of three parts: (1) beneficial designated uses for a water-body or a segment of a water-body; (2) numeric and/or narrative water quality criteria sufficient to protect the assigned designated use(s); and (3) anti-degradation requirements to ensure that once a use is attained it will not be degraded. The Massachusetts Surface Water Quality Standards, found at 314 CMR 4.00, include these elements. The state will limit or prohibit discharges of pollutants to surface waters to assure that surface water quality standards of the receiving waters are protected and maintained or attained. These standards also include requirements for the regulation and control of toxic constituents and require that EPA criteria, established pursuant to Section 304(a) of the CWA, shall be used unless a site specific criteria is established.

The draft permit must limit any pollutant or pollutant parameter (conventional, non-conventional, toxic, and whole effluent toxicity) that is or may be discharged at a level that causes or has the "reasonable potential" to cause or contribute to an excursion above any water quality standard (40 CFR §122.44(d)). An excursion occurs if the projected or actual in-stream concentration exceeds an applicable water quality criterion. In determining "reasonable potential", EPA considers: (1) existing controls on point and non-point sources of pollution; (2) pollutant concentration and variability in the effluent and receiving water as determined from the permit's re-issuance application, monthly discharge monitoring reports (DMRs), and State and Federal Water Quality Reports; (3) sensitivity of the indicator species used in toxicity testing; (4) known water quality impacts of processes on waste waters; and (5) where appropriate, dilution of the effluent in the receiving water.

D. State Certification

Under Section 401 of the CWA, EPA is required to obtain certification from the state in which the discharge is located which determines that all water quality standards, in accordance with Section 301(b)(1)(C) of the CWA, will be satisfied. Regulations governing state certification are set forth in 40 CFR §124.53 and §124.55. EPA regulations pertaining to permit limits based upon water quality standards and state requirements are contained in 40 CFR §122.44(d).

The 1986 permit did not include limits in accordance with state water quality standards and state certification requirements. This draft permit contains limits for temperature and delta pH as a state certification requirement.

1986 NPDES Permit

In the permit Fact Sheet dated January 30, 1986, production based limits were considered using 1,350,000 lbs/day for the average daily skim milk condensed and National Effluent Guidelines for Dairy Products Processing Industry Point Source Category listed in 39 FR 18606, published on Tuesday May 28, 1974, Subpart I -- Condensed Milk subcategory, Section 405.93, entitled: *Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology* (BAT) *economically achievable*. These BAT guidelines are shown below.

Federal Register, Vol 39, No 103 - Tuesday May 28, 1974 Subpart I – Condensed Milk Category, Section 405.93(a) for plants condensing more than 100,000 lb/day of milk equivalent (more than 10,390 lb/day of BOD_5 input) English units (pounds per 100 lb of BOD_5 input)		
	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD_5	0.076	0.038
TSS	0.095	0.048
pH	Within the range of 6.0 to 9.0 su	

Production data provided by the applicant indicated that the average daily amount of skim milk condensed was 1,350,000 lbs.

(1,350,000 lb Skim milk /day) x (7.44 lb BOD_5 / 100 lbs of skim milk) = 100,440 lbs BOD_5 per day

where 7.44 lb BOD_5 / 100 lbs skim milk is from the Development Document for the Dairy Product Processing Guidelines, Table 9 entitled: *Composition of Common Dairy Products Processing Materials*, EPA-440/1-74-021-a

The criteria values listed above would have allowed the following values in BOD_5 and TSS:

Calculations in 1986 draft permit, from 39 FR 18606, Section 405.93(a)				
	Average	Maximum	Average	Maximum
Flow (MGD)	0.12	0.17	--------	--------
BOD_5	38.16 lb/day	76.33 lb/day	38.12 mg/l	53.83 mg/l
TSS	48.21 lb/day	95.41 lb/day	48.17 mg/l	67.29 mg/l

The calculations of allowable discharge amounts of BOD_5 and TSS based on 40 CFR 405.93(a) resulted in values significantly higher than the amounts of these pollutants reported in the permit application. Because of this, the actual proposed permit limitations for BOD_5 and TSS in the 1986 permitting action were established at levels between those allowed by the guidelines and those reported in the July 15, 1985 NPDES permit application and were based on Best Professional Judgement (BPJ) in accordance with Section 402(a)(1) of the Clean Water Act (CWA).

The BPJ limitation (mg/l) for average monthly BOD_5 was calculated as two (2) times the average daily value reported for BOD_5 in the permit application. The maximum daily BOD_5 limitation was calculated as 1.5 times the average monthly limitation.

Monthly average BOD_5 concentration limit = 12.3 mg/l (from 07/15/85 application) x 2
= 24.6 mg/l or 25 mg/l

Daily maximum BOD_5 concentration limit = 24.6 mg/l x 1.5
= 36.9 mg/l or 37 mg/l

Because of the low TSS levels reported in the application (2 - 2.9 mg/l), the method used to establish BOD_5 limitations was not used for TSS. Limits resulting from that method would be 4 and 6 mg/l for average monthly and maximum daily, respectively, and permit violations might occur due to variation in analytical analyses as opposed to actual variation in effluent TSS. The TSS limitations were established at 15 mg/l for both average monthly and maximum daily. EPA anticipated that this level should eliminate the chance of permit violations due to normal variability in the analysis of TSS.

The mass (lb/day) limitations for BOD_5 and TSS were calculated as the average monthly concentration BPJ limits times the average monthly flow, and the maximum daily concentration BPJ limits times the maximum daily flow.

Monthly average BOD_5 mass limit = 25 mg/l x 0.12 MGD x 8.34
= 25 lb/day

Daily maximum BOD_5 mass limit = 37 mg/l x 0.17 MGD x 8.34
= 52 lb/day

Monthly average TSS mass limit = 15 mg/l x 0.12 MGD x 8.34
= 15 lb/day

Daily maximum TSS mass limit = 15 mg/l x 0.17 MGD x 8.34
= 21 lb/day

The pH limitations in the current 1986 permit were based on the Dairy Product guidelines - Subpart I.

Flow limitations were established at levels representative of facility operations, as provided by the applicant, and were based on Best Professional Judgement in accordance with Section 402(a)(1) of the CWA.

1986 Permitted limits				
	Average	Maximum	Average	Maximum
Flow (MGD)	0.12	0.17	--------	--------
BOD_5	25 lb/day	52 lb/day	25 mg/l	37 mg/l
TSS	15 lb/day	21 lb/day	15 mg/l	15 mg/l
pH	6.0 - 9.0 su			

Significantly, the 1986 permit did not consider the need for water quality-based limits based on the impacts to Bagg Brook, a low flow stream. In developing this draft permit, EPA and MADEP considered these impacts and have proposed significantly more stringent water quality based effluent limitations for BOD and TSS. The **BOD and TSS limits** section of this fact sheet discusses the proposed limits

Amendments to the Code of Federal Regulations

Effluent Limitation Guidelines and Pretreatment Standards Application for Dairy Products Processing Industry Point Source Category Subpart I – Condensed Milk Subcategory were promulgated in the Federal Register at 39 FR 18597 on May 28, 1974; amended at 39 FR 32993, September 13, 1974; and amended at 60 FR 33935, June 29, 1995.

The amendment at 60 FR 33035 on Thursday, June 29, 1995 reads:

> ***§405.92 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.***
>
> *Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).*

The 2002 edition of the Code of Federal Regulations (CFR) now lists 40 CFR §405.93 as **[Reserved]**.

40 CFR Part 405 Dairy Products Processing Point Source Category Subpart I – Condensed Milk Category, §405.92 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available. §405.92(a) for plants condensing more than 100,000 lb/day of milk equivalent (more than 10,390 lb/day of BOD_5 input) English units (pounds per 100 lb of BOD_5 input)		
	Maximum for any 1 day	Average of daily values for 30 consecutive days
BOD_5	0.345	0.138
TSS	0.518	0.207
pH	Within the range of 6.0 to 9.0 su	

The National Effluent Guidelines for Dairy Products Processing Industry Point Source Category listed in 39 FR 18606, published on Tuesday May 28, 1974, Subpart I -- Condensed Milk subcategory, Section 405.93, are presently listed in 40 CFR §405.95 entitled: *Standards of performance for new sources.*

Reissued Permits under the Code of Federal Regulations and Anti-backsliding

Section 402(o) of the Clean Water Act requires reissued NPDES permits to retain effluent limitations as stringent or more stringent than the previous permit. Backsliding is prohibited under the provisions of 40 CFR §122.44(l), which reads as follows:

> *Reissued permits* (1) *Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued, interim effluent limitations, standards or conditions must be at least as stringent as the final conditions in the previous permit, (**unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued** and would constitute cause for permit modification or revocation and reissuance under §122.62).*

A list of exceptions to anti-backsliding are listed in 40 CFR §122.44(l)(2)(i). Exception (B)(1) reads:

> A permit.....may be...reissued to contain a less stringent effluent limitation applicable to the pollutant, if *information is available which was not available at the time of permit issuance....and which would have justified the application of a less stringent effluent limitation at the time of permit issuance.*

2001 Milk Production

(167,000 lb skim milk / hr) x (24 hr/day) x (7.44 lb BOD_5 / 100 lb skim milk) = 298,195 lb BOD_5 /day

Flow limits

In 1986 the operation at the plant was 14 - 16 hours per day without the pre-heater. The 1986 flows limits (0.12 MGD average monthly and 0.17 daily maximum) were based on actual plant performance. For the past 10 years, Agri-Mark has operated the evaporator for a 30 hour cycle, followed by a cleaning cycle with no discharge. Agri-Mark is currently generating approximately 330,000 gpd wastewater flow. Due to the delay in the permit re-issuance, to accommodate for the increased discharge to the storm water manhole, Agri-Mark currently discharges the excess condensate (greater than the permitted 120,000 gpd) to the West Springfield Sewer System.

Within the next five years, Agri-Mark may increase the percentage of dry solids or provide additional pre-heater to increase production values of the evaporator. This will probably not increase the average day values, but may be an alternative mode of operation which will increase the flow to 360,000 gpd on a maximum day. The permittee has requested that a daily maximum flow value of 0.36 MGD be included in this permitting action.

The flow limits in this draft permit have been maintained at the exiting permitted flow due to concerns with achieving water quality standards, including anti-degradation provisions in the low flow receiving water.

BOD_5 and TSS limits

The BOD_5 and TSS sampling in 1985 was done with grab samples and data included samples during the period when the evaporator was not in operation. In 2001 Agri-Mark installed a composite sampler, which samples the condensate discharge from the evaporator to the storm water manhole. Based on these actual operating values, the current permit's limits for BOD (average BOD_5 of 25 mg/l with a maximum day of 37 mg/l), are typically achieved. Agri-Mark consistently has TSS values well below the current limits. See Fact Sheet Table 1 for a summary of DMR data.

Water Quality based BOD and TSS limits have been established to ensure that water quality standards are met in Bagg Brook.. Due to the limited dilution afforded by Bagg Brook (versus the previous permit which assumed that the receiving water was the main stem of the Connecticut River), BOD and TSS mass limits have been established in the draft permit that limit the discharge to 5.0 lbs at permitted flow. EPA considered proposing effluent concentration limits of 5 mg/l, which are limits that are typically proposed for these pollutants for discharges to low flow or intermittent streams, but based on conversations with the discharger decided to propose mass limits based on 5 mg/l and the permitted flow of 0.12 mg/l in order to provide some flexibility to the discharger to limit the flow rate in circumstances where the effluent concentration slightly exceeds 5 mg/l.

BOD (lbs/day) = BOD (concentration) x flow (MGD) x 8.34

= 5 mg/l x 0.12 x 8.34
= 5 lbs/day

pH

The pH limits of 6.0 - 9.0 su in the current 1986 permit are consistent with federal regulations listed in 40 CFR §405 Subpart I. The pH limits of 6.0 - 9.0 su have been carried forward in this draft permit. More stringent pH limits can be included when the Massachusetts Department of Environmental Protection issues their State Certification document in accordance with 40 CFR §122.44(d), if more stringent limitations are needed to preserve water quality and the designated uses of the receiving water.

In addition, this draft has added a delta pH limit of 0.5 su on the monthly DMR, with a test frequency of twice per month.

Temperature

This draft permit has added temperature restrictions of 83°F daily maximum, and has limited the change in receiving water temperature to 3°F due to the discharge, consistent with the Massachusetts Surface Water Quality Standards. These limits have been added to ensure that water quality standards are achieved in Bagg Brook.

Total Residual Chlorine

Chlorine is not used in the condensate water prior to discharge to the storm sewer. City water is used for sanitary wastewater, at the truck bays, and in cleaning operations. Chlorine is used for cleaning within the facility. All of these drain lines are connected to the City's sanitary sewer and industrial pretreatment system. Refer to the Wastewater Schematic Flow Diagram provided in the permittee's 1991 NPDES permit application, and is listed in Fact Sheet Figure 1. The permittee is prohibited from adding Chlorine in the treatment process.

Storm Water

Storm water at the Springfield plant is covered under EPA's NPDES Storm Water Multi-Sector General Permit for Industrial Activities, dated October 30, 2000. Agri-Mark's MSGP number is MAR05C252 and was filed on April 26, 2001.

Additional limits and Requirements

The effluent monitoring requirements have been established to yield data representative of the discharge by the authority under Section 308(a) of the CWA in accordance with 40 CFR §122.41(j), §122.44, and §122.48.

VI. Essential Fish Habitat.

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801 et seq.(1998)), EPA is required to consult with the National Marine Fisheries Service (NMFS) if EPA's action or proposed actions that it funds, permits, or undertakes, "may adversely impact any essential fish habitat." 16 U.S.C. § 1855(b). The Amendments broadly define "essential fish habitat" (EFH) as: "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. 16 U.S.C. § 1802(10). Adversely impact means any impact which reduces the quality and/or quantity of EFH. 50 C.F.R. § 600.910(a). Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions. Id.

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

Based on the permit requirements and limitations identified in the draft permit and fact sheet that are designed to be protective of aquatic species, EPA has concluded that formal consultation with NMFS is not required because this authorized discharge is meeting Gold Book Criteria and State Water Quality Standards and is not likely to adversely affect federally managed species, their forage, or their habitat. If adverse effects do occur as a result of this permit action, or if new information becomes available that changes the basis for this conclusion, then NMFS will be notified and consultation promptly initiated.

VII. Endangered Species.

The proposed limits are sufficiently stringent to assure water quality standards, both for aquatic life protection and human health protection, will be met. The effluent limitations established in this draft permit ensure protection of aquatic life and maintenance of the receiving water as an aquatic habitat. The Region finds that adoption of the proposed permits is unlikely to adversely affect any threatened or endangered species or its critical habitat, particularly the short nosed sturgeon and dwarf mussel. If adverse effects do occur as a result of this permit action, or if new information becomes available that changes the basis for this conclusion, then EPA will notify and consultation promptly initiated with both the United States Fish and Wildlife Service and National Marine Fisheries Service.

VIII. Anti-backsliding.

A permit may not be renewed, reissued, or modified with less stringent limitations or conditions than those contained in the previous permit unless in compliance with the anti-backsliding requirements of the CWA. The anti-backsliding provisions found in 40 CFR 122.44(l) prohibit the relaxation of permit limits, standards, and conditions. Therefore, the technology-based effluent limits in a reissued permit must be at least as stringent as those in the previous permit. Relaxation is only allowed when cause for permit modification is met (see 40 CFR 122.62). Effluent limits based on BPJ, water quality, and state certification requirements must also meet the anti-backsliding provisions found under Section 402(0) and 303(d)(4) of the CWA, as described in 40 CFR 122.44(l). Effluent limits based on water quality and state certification

requirements must also meet the anti-backsliding provisions found under Section 402(o) and 303(d)(4) of the CWA, as described in 40 CFR 122.44(l). Expanding the production cycle from 16 hours to 30 hours and the addition of discharge flow constitute new information, and grounds for a permit modification.

IX. Antidegradation.

The Massachusetts Anti-degradation Policy is found at 314 CMR 4.04. All existing uses of Bagg Brook must be protected. This draft permit is being reissued with allowable discharge mass limits as or more stringent than the current permit with the exception of flow. There is not change in the outfall location. The Commonwealth of Massachusetts has indicated that there will be no lowering of water quality and no loss of existing water uses as a result of the re-issuance of this permit, and that no additional anti-degradation review is warranted.

The remaining general and special conditions of the permit are based on the NPDES regulations, 40 CFR Parts 122 through 125, and consist primarily of management requirements common to all permits.

X. State Certification Requirements.

EPA may not issue a permit in the Commonwealth of Massachusetts unless the Massachusetts Department of Environmental Protection (MADEP) certifies that the effluent limitations contained in the permit are stringent enough to assure that the discharge will not cause the receiving water to violate State Water Quality Standards. The staff of the MA DEP has reviewed the draft permit. EPA has requested permit certification by the state pursuant to 40 CFR 124.53 and expects that the draft permit will be certified.

XI. Comment Period, Hearing Requests, and Procedures for Final Decisions.

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to **Jonathan Britt, the U.S. EPA, One Congress Street, Suite 1100, Mail Code CPE, Boston, Massachusetts 02114-2023 and Paul Hogan, Department of Environmental Protection, Division of Watershed Management, 627 Main Street, 2nd Floor, Worcester, MA 01608.** Any person, prior to such date, may submit a request in writing for a public hearing to consider the draft permit to EPA and the State Agency. Such requests shall state the nature of the issues proposed to be raised in the

hearing. A public hearing may be held after at least thirty days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on the draft permit, the Regional Administrator will respond to all significant comments and make these responses available to the public at EPA's Boston office.

Following the close of the comment period, and after a public hearing, if such hearing is held, the Regional Administrator of EPA and the Director of DEP/DWM will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice.

XII. EPA Contact.

Additional information concerning the draft permit may be obtained between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays from:

Jonathan Britt
US Environmental Protection Agency
One Congress Street
Suite 1100 (CPE)
Boston, Massachusetts 02114-2023
Telephone: 617-918-1563
fax: 617-918-1505
e-mail: britt.jonathan@epa.gov

October 10, 2003
Date

Linda M. Murphy, Director*
Office of Ecosystem Protection
U.S. Environmental Protection Agency

* Comments should be addressed to both Jonathan Britt and Paul Hogan, not Linda M. Murphy.

FACT SHEET TABLE 1
AGRI-MARK, Inc. (MA0029327)
DISCHARGE MONITORING REPORT DATA

01/28/03

DMR DATA & VIOLATIONS REPORT

QL **********

001A PROCESS WASTEWATER 03/31/86 03/31/91

BOD, 5-DAY		Limits	25	52	LBS/DY	25	37 MG/L					
	E90	01/31/00	44.5	75.2		29	46	78	45	0	16	24
	E00	02/29/00	14.3	14.3		13	13	0	0	0	0	0
	E90	03/31/00	50	76		31	49	100	46	0	24	32
	E90	04/30/00	31	37.1		24	32	24	0	0	0	0
	E00	05/31/00	21.5	22		12	14	0	0	0	0	0
	E00	06/30/00	25	33		17	20	0	0	0	0	0
	E00	07/31/00	16	17		15	19	0	0	0	0	0
	E00	08/31/00	24	38		20	30	0	0	0	0	0
	E00	09/30/00	6	8		9	12	0	0	0	0	0
	E00	10/31/00	11	13		10	12	0	0	0	0	0
	E00	11/30/00	5	5		4.5	5	0	0	0	0	0
	E00	12/31/00	15	22		13.5	20	0	0	0	0	0
	E00	01/31/01	13.3	18		11.6	15	0	0	0	0	0
	E00	02/28/01	8.6	13		10	11	0	0	0	0	0
	E00	03/31/01	14	14		11	12	0	0	0	0	0
	E00	04/30/01	21	22		21	22	0	0	0	0	0
	E00	05/31/01	25	28		20	20	0	0	0	0	0
	E90	06/30/01	17	27		23	40	0	0	0	0	8
	E00	07/31/01	3	6		2	4	0	0	0	0	0
	E00	08/31/01	5	10		4	7	0	0	0	0	0
	E00	10/31/01	5	5		3	6	0	0	0	0	0
	E00	12/31/01	11	13		8	9	0	0	0	0	0
	E00	01/31/02	7	8		6	6	0	0	0	0	0
	E00	11/30/01	8	13		6	10	0	0	0	0	0
	E00	12/31/02	15	16		17	21	0	0	0	0	0
	E00	04/30/02	18	18		25	36	0	0	0	0	0
	E00	03/31/02	14	19		24	32	0	0	0	0	0
	E00	05/31/02	25	40		23	30	0	0	0	0	0
	E00	06/30/02	20	32		17	28	0	0	0	0	0
	E90	07/31/02	45	48		54	57	80	0	0	116	54

PH					Limits	6.0	9.0 SU					
	E00	01/31/00 E						0	0	0	0	0
	E00	02/29/00 E						0	0	0	0	0

	E90	03/31/00			5.8		7.3	0	0	3	0	0
	E90	04/30/00			5.7		6.3	0	0	5	0	0
	E00	05/31/00			6.5		7.7	0	0	0	0	0
	E00	06/30/00			6.1		8.2	0	0	0	0	0
	E00	07/31/00			7.2		8.1	0	0	0	0	0
pH	E00	08/31/00			7.9		8.7	0	0	0	0	0
	E00	09/30/00			6.7		7.1	0	0	0	0	0
	E00	10/31/00			6.3		8.8	0	0	0	0	0
	E00	11/30/00			6.4		7.8	0	0	0	0	0
	E00	12/31/00			7.7		7.7	0	0	0	0	0
	E00	01/31/01			6.2		8.3	0	0	0	0	0
	E00	02/28/01			6.0		7.9	0	0	0	0	0
	E00	03/31/01			6.4		7.7	0	0	0	0	0
	E00	04/30/01			6.9		7.3	0	0	0	0	0
	E00	05/31/01			6.9		7.6	0	0	0	0	0
	E00	06/30/01			6.1		7	0	0	0	0	0
	E00	07/31/01			7.1		8	0	0	0	0	0
	E00	08/31/01			7.4		7.7	0	0	0	0	0
	E00	10/31/01			7.8		8.1	0	0	0	0	0
	E90	11/30/01			8.3		9.4	0	0	0	0	4
	E00	12/31/01			6.4		7.6	0	0	0	0	0
	E00	01/31/02			7.2		7.4	0	0	0	0	0
	E00	02/28/02			6.85	7.11	7.47	0	0	0	0	0
	E00	03/31/02			7.1		8.8	0	0	0	0	0
	E00	04/30/02			7.2		7.4	0	0	0	0	0
	E00	05/31/02			7.4		7.7	0	0	0	0	0
	E00	06/30/02			7.0		7.4	0	0	0	0	0
	E00	07/31/02			6.9		7.3	0	0	0	0	0

SOLIDS, TOTAL SUSPENDED	Limit		15	21	LBS/DY	15	15	MG/L				
	E00	01/31/00	0	0		0	0	0	0	0	0	0
	E00	02/29/00	0	0		0	0	0	0	0	0	0
	E31	03/31/00				0	0	0	0	0	0	0
	E00	04/30/00	0	0		0	0	0	0	0	0	0
	E00	05/31/00	0	0		0	0	0	0	0	0	0
	E31	06/30/00				0	0	0	0	0	0	0
	E00	07/31/00	0	0		0	0	0	0	0	0	0
	E00	08/31/00	0	0		0	0	0	0	0	0	0
	E00	09/30/00	0	0		0	0	0	0	0	0	0
	E00	10/31/00	0	0		0	0	0	0	0	0	0
	E00	11/30/00	0	0		0	0	0	0	0	0	0
	E00	12/31/00	0	0		0	0	0	0	0	0	0
	E00	01/31/01	0	0		0	0	0	0	0	0	0
	E00	02/28/01	0	0		0	0	0	0	0	0	0
	E00	03/31/01	0	0		0	0	0	0	0	0	0
	E00	04/30/01	0	0		0	0	0	0	0	0	0
	E00	05/31/01	0	0		0	0	0	0	0	0	0
	E00	06/30/01	0	0		0	0	0	0	0	0	0
	E00	07/31/01	0	0		0	0	0	0	0	0	0

E00	08/31/01	0	0	0	0	0	0	0	0	0
E00	10/31/01	0	0	0	0	0	0	0	0	0
E00	11/30/01	0	0	0	0	0	0	0	0	0
E00	12/31/01	0	0	0	0	0	0	0	0	0
E00	01/31/02	0	0	0	0	0	0	0	0	0
E00	03/31/02	0	0	0	0	0	0	0	0	0
E00	04/30/02	0	0	0	0	0	0	0	0	0
E00	05/31/02	0	0	0	0	0	0	0	0	0
E00	06/30/02	0	0	0	0	0	0	0	0	0
E00	07/31/02	0	0	0	0	0	0	0	0	0

FLOW	Limit	0.12	0.17 MGD							
E90	01/31/00	0.13	0.20			8	18	0	0	0
E90	02/29/00	0.13	0.13			8	0	0	0	0
E90	03/31/00	0.20	0.22			67	29	0	0	0
E90	04/30/00	0.17	0.18			42	6	0	0	0
E90	05/31/00	0.19	0.25			58	47	0	0	0
E90	06/30/00	0.18	0.22			50	29	0	0	0
E90	07/31/00	0.18	0.19			50	12	0	0	0
E00	08/31/00	0.09	0.17			0	0	0	0	0
E00	09/30/00	0.05	0.15			0	0	0	0	0
E00	10/31/00	0.07	0.17			0	0	0	0	0
E00	11/30/00	0.06	0.16			0	0	0	0	0
E00	12/31/00	0.09	0.16			0	0	0	0	0
E00	01/31/01	0.09	0.17			0	0	0	0	0
E00	02/28/01	0.09	0.16			0	0	0	0	0
E00	03/31/01	0.09	0.16			0	0	0	0	0
E00	04/30/01	0.09	0.13			0	0	0	0	0
E00	05/31/01	0.12	0.17			0	0	0	0	0
E00	06/30/01	0.11	0.17			0	0	0	0	0
E00	07/31/01	0.11	0.17			0	0	0	0	0
E00	08/31/01	0.08	0.17			0	0	0	0	0
E00	10/31/01	0.11	0.17			0	0	0	0	0
E00	11/30/01	0.09	0.17			0	0	0	0	0
E00	12/31/01	0.12	0.17			0	0	0	0	0
E00	01/31/02	0.11	0.17			0	0	0	0	0
E00	12/31/02	0.12	0.17			0	0	0	0	0
E00	03/31/02	0.11	0.17			0	0	0	0	0
E00	04/30/02	0.12	0.17			0	0	0	0	0
E00	05/31/02	0.11	0.17			0	0	0	0	0
E00	06/30/02	0.12	0.17			0	0	0	0	0
E00	07/31/02	0.10	0.17			0	0	0	0	0