

AUTHORIZATION TO DISCHARGE UNDER THE  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act as amended, (33 U.S.C. §§1251 et seq.; the "CWA"), and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§26-53),

**Veryfine Products, Inc.**

is authorized to discharge from the facility located at

**20 Harvard Road  
Littleton, MA 01460**

to receiving water named

**Reedy Meadow Brook**

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective sixty (60) days after the date of signature.

This permit and the authorization to discharge expire at midnight, five (5) years from the effective date.

This permit supersedes the permit issued on March 22, 2000.

This permit consists of 10 pages in Part I including effluent limitations, monitoring requirements, Attachments A and B, and 35 pages in Part II including General Conditions and Definitions.

Signed this 1<sup>st</sup> day of SEPTEMBER, 2006

/s/ SIGNATURE ON FILE

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Director  
Office of Ecosystem Protection  
Environmental Protection Agency  
Boston, MA

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Director  
Division of Watershed Management  
Department of Environmental Protection  
Commonwealth of Massachusetts  
Boston, MA

**Part I.A.1.** During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge from outfall serial number **001**, treated beverage product effluent, reverse osmosis reject water, contact cooling water and non-contact cooling water to Reedy Meadow Brook. Such discharges shall be limited and monitored as specified below.

<u>EFFLUENT CHARACTERISTIC</u>	<u>EFFLUENT LIMITS</u>		<u>MONITORING REQUIREMENTS</u>	
<u>PARAMETER</u>	<u>AVERAGE MONTHLY</u>	<u>MAXIMUM DAILY</u>	<u>MEASUREMENT FREQUENCY</u>	<u>SAMPLE<sup>1</sup> TYPE</u>
Flow	<u>0.55 MGD<sup>2</sup></u>	<u>0.75 MGD</u>	<u>CONTINUOUS</u>	<u>RECORDER</u>
<u>BOD<sub>5</sub></u>	<u>10 mg/l</u>	<u>20 mg/l</u>	<u>2/WEEK</u>	<u>24-HOUR COMPOSITE<sup>3</sup></u>
<u>TSS</u>	<u>10 mg/l</u>	<u>20 mg/l</u>	<u>2/WEEK</u>	<u>24-HOUR COMPOSITE<sup>3</sup></u>
<u>Temperature, Effluent</u>	<u>-----</u>	<u>83 °F</u>	<u>1/WEEK</u>	<u>GRAB</u>
<u>Temperature<sup>4</sup>, Instream</u>	<u>-----</u>	<u>Report °F</u>	<u>1/MONTH</u>	<u>GRAB</u>
<u>pH RANGE</u>	<u>See Part I.A.1.b</u>		<u>1/DAY</u>	<u>GRAB</u>
<u>Dissolved Oxygen</u>	<u>7.0 mg/l minimum</u>		<u>2/WEEK</u>	<u>GRAB</u>
<u>Fecal Streptococcus<sup>5</sup>, colonies/100 ml</u>	<u>Report</u>	<u>Report</u>	<u>2/MONTH</u>	<u>GRAB</u>
<u>Escherichia coli<sup>5</sup>, colonies/100 ml</u>	<u>Report</u>	<u>Report</u>	<u>2/MONTH</u>	<u>GRAB</u>
<u>Oil and Grease</u>	<u>-----</u>	<u>15 mg/l</u>	<u>1/MONTH</u>	<u>GRAB</u>
<u>Total Residual Chlorine<sup>6</sup>, ug/l</u>	<u>Report</u>	<u>Report</u>	<u>1/WEEK</u>	<u>GRAB</u>
<u>Total Phosphorus (April-October)</u>	<u>0.23 lbs/day<sup>7</sup></u>	<u>1.25 lbs/day</u>	<u>1/WEEK</u>	<u>24-HOUR COMPOSITE<sup>3</sup></u>
<u>Total Phosphorus (November-March)</u>	<u>0.46 lbs/day<sup>7</sup></u>	<u>1.25 lbs/day</u>	<u>1/WEEK</u>	<u>24-HOUR COMPOSITE<sup>3</sup></u>
<u>Total Ammonia Nitrogen, as N</u>	<u>Report mg/l</u>	<u>Report mg/l</u>	<u>1/MONTH</u>	<u>24-HOUR COMPOSITE<sup>3</sup></u>
<u>Copper, Total<sup>8</sup></u>	<u>Report ug/l</u>	<u>Report ug/l</u>	<u>1/MONTH</u>	<u>24-HOUR COMPOSITE<sup>3</sup></u>
<u>Priority Pollutant Scan<sup>9</sup></u>	<u>Report ug/l</u>	<u>Report ug/l</u>	<u>1/QUARTER</u>	<u>24-HOUR COMPOSITE<sup>3</sup></u>
<u>Whole Effluent Toxicity<sup>10,11,12</sup></u>	<u>LC50 &gt; 100%; C-NOEC ≥ 91%</u>		<u>4/YEAR</u>	<u>24-HOUR COMPOSITE<sup>3</sup></u>

Part I.A.1.

- a. The discharge shall not cause a violation of the water quality standards of the receiving waters.
- b. The pH of the effluent shall not be less than 6.5 nor greater than 8.3 standard units at any time. The lowest and highest daily values shall be reported.
- c. The discharge shall not cause objectionable discoloration of the receiving waters.
- d. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.
- e. The results of sampling for any parameter above its required frequency must also be reported.

Footnotes:

1. Sampling for the parameters BOD, TSS, phosphorus and ammonia shall be conducted on the same day of the week, whenever feasible. All required effluent samples shall be collected as follows: Sampling for all parameters shall be conducted after ultraviolet (UV) disinfection and prior to mixing with any other stream. Any change in sampling location must be reviewed and approved in writing by EPA and MADEP. All samples shall be tested using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136.
2. For flow, report maximum and minimum daily rates and total flow for each operating date. Attach this data to each DMR form.
3. A 24-hour composite sample will consist of at least twelve (12) grab samples that are flow proportioned and taken during a 24 hour period (e.g. 7:00 A.M. Monday to 7:00 A.M. Tuesday).
4. The instream and downstream temperatures in the receiving water shall be monitored and reported once per month.
5. E.coli and fecal streptococci are state certification requirements and shall be monitored seasonally, between April 1 and October 31 of each year.
6. The monitoring frequency for TRC shall be once per week for the first (6) months of the permit and then once per month thereafter. When the reverse osmosis (RO) system is being cleaned, the TRC sampling shall be conducted within one hour of the termination of such cleaning.
7. The year round, daily maximum limit for phosphorus of 1.25 pounds per day is based on the concentration level of 0.2 mg/l and the daily maximum flow of 0.75 MGD. The monthly average phosphorus limit of 0.46 pounds per day for the period of November through March is based on the concentration level of 0.1 mg/l and the monthly average flow of 0.55 MGD. For the period of April through October, the final phosphorus limit of 0.23 pounds per day is based on the concentration level of 0.05 mg/l and the monthly average flow of 0.55 MGD. In addition, this limit is expressed as a sixty (60) day rolling average limit. The permittee shall comply with this 0.23 pounds per day limit in accordance with the schedule contained in Section D. below. Upon the effective date of the permit, and until the date specified in Section D. below for compliance with the total phosphorus final limit, an interim limit of 0.46 pounds per day shall be met, as a monthly average. Once the final limit is in effect, beginning on the 60<sup>th</sup> day after April 1, the 60 day average value for each day in a given month, must be calculated and the highest 60 day average value for that month must be reported on the monthly discharge monitoring report (DMR). For the months of April and May, the monthly average total phosphorus shall be reported. Consistent with Section B.1 of Part II of the Permit, the Permittee shall properly operate and maintain the phosphorus removal facilities in order to obtain the lowest effluent concentration possible.

8. The minimum level (ML) for copper is defined as 3 ug/l. This value is the minimum level for copper using the Furnace Atomic Absorption analytical method (EPA Method 220.2). Sample results of 3 ug/l or less shall be reported as zero on the Discharge Monitoring Report.
9. A priority pollutant scan shall be conducted once per quarter during the first calendar year of the permit and the results of the four scans shall be submitted with the March, June, September and December DMRs. These submittals shall include all test results. The list of parameters to be tested is from EPA's Form 2C application, although there are some portions of the pollutant list that are not required to be analyzed. The permittee shall analyze for parameters 1M through 13M, and parameters 1V through 31V of the Form 2C application. The sampling for two of these quarterly composite samples shall begin within one hour after the completion of a RO system cleaning, and shall be identified as such in the DMR cover letter.
10. The permittee shall conduct chronic and modified acute toxicity tests four times per year. The permittee shall test the fathead minnow, Pimephales promelas, only. Toxicity test samples shall be collected during the second week of January, April, July and October. The test results shall be submitted by the last day of the month following the completion of the test. The test results are due February 28<sup>th</sup>, May 31<sup>st</sup>, August 31<sup>st</sup>, and November 30<sup>th</sup>, respectively. The tests must be performed in accordance with test procedures and protocols specified in **Attachment A** of this permit. The permittee may use laboratory water as diluent and such diluent shall have characteristics such as hardness, pH, conductivity, alkalinity, organic carbon, and total suspended solids similar to those of the receiving water and shall not illicit a toxic response. Alternate dilution water tests must be run with a minimum of two controls: a receiving water (Reedy Meadow Brook) control and a toxic free alternate dilution water control. Chemical data of the receiving water and dilution water samples must be included in the whole effluent toxicity (WET) report. The analytical results from the WET tests for copper may be used to satisfy this requirement for the four months that WET testing is conducted. Two of these four quarterly tests per year shall be conducted during a period of reverse osmosis (RO) system cleaning.

Test Dates Second Week of	Submit Results By:	Test Species	Acute Limit LC <sub>50</sub>	C-NOEC limit
January April July October	February 28 <sup>th</sup> May 31 <sup>st</sup> August 31 <sup>st</sup> November 30 <sup>th</sup>	<u>Pimephales promelas</u> (Fathead Minnow)	≥ 100%	≥ 91%

11. The LC<sub>50</sub> is the concentration of effluent which causes mortality to 50% of the test organisms. Therefore, a 100% limit means that a sample of 100% effluent (no dilution) shall cause no more than a 50% mortality rate.
12. C-NOEC (chronic-no observed effect concentration) is defined as the highest concentration of toxicant or effluent to which organisms are exposed in a life cycle or partial life cycle test which causes no adverse effect on growth, survival, or reproduction at a specific time of observation as determined from hypothesis testing where the test results exhibit a linear dose-response relationship. However, where the test results do not exhibit a linear dose-response relationship, the permittee must report the lowest concentration where there is no observable effect. The final limit of "91% or greater" is defined as a sample which is composed of 91% or greater effluent, the remainder being dilution water. This limit derived as a percentage of the inverse of the dilution factor of 1.1.

A.2. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge from outfall serial number <b>002</b> , storm water to Reedy Meadow Brook. Such discharges shall be limited and monitored as specified below.			
<u>EFFLUENT CHARACTERISTIC</u>		<u>EFFLUENT LIMITS</u>	<u>MONITORING REQUIREMENTS</u>
<b>PARAMETER</b>	<b>MAXIMUM DAILY</b>	<b><u>MEASUREMENT FREQUENCY</u></b>	<b><u>SAMPLE</u><sup>1,2</sup> <u>TYPE</u></b>
FLOW	Report MGD	1/Month	Recorder
Total Suspended Solids	100 mg/l	1/Month	Grab
Oil and Grease	15 mg/l	1/Quarter	Grab
pH RANGE <sup>1</sup>	See part I.A.2.b. below	3/Quarter	Grab
Total Phosphorus	Report mg/l	1/Month	Grab

Part I.A.2. (Continued)

- a. The discharge shall not cause a violation of the water quality standards of the receiving waters.
- b. The range of 3 grab samples taken each quarter for pH shall be reported.
- c. The discharge shall not cause objectionable discoloration of the receiving waters.
- d. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.
- e. The results of sampling for any parameter above its required frequency must also be reported.

Footnotes:

1. All required effluent samples shall be collected as follows: Sampling for all parameters shall be conducted at the point that the detention basin discharges into the vault marked "S/N 002 monitoring point." Any change in sampling location must be reviewed and approved in writing by EPA and MADEP. All samples shall be tested using the analytical methods found in 40 CFR 136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR 136.

2. A representative storm event grab sample shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours after a previously measurable (greater than 0.1 inches) storm event. Grab samples shall be collected within 60 minutes after the initiation of such rain event. If there is no storm event that meets this definition for a particular month, the permittee shall report "no discharge" on its DMR for that month.

Part I.A.

### 3. Toxics Control

- a. The permittee shall not discharge any pollutant or combination of pollutants in toxic amounts.
- b. Any toxic components of the effluent shall not result in any demonstrable harm to aquatic life or violate any state or federal water quality standard which has been or may be promulgated. Upon promulgation of any such standard, this permit may be revised or amended in accordance with such standards.

### 4. Numerical Effluent Limitations for Toxicants

EPA or DEP may use the results of the toxicity tests and chemical analyses conducted pursuant to this permit, as well as national water quality criteria developed pursuant to Section 304(a)(1) of the Clean Water Act, state water quality criteria, and any other appropriate information or data, to develop numerical effluent limitations for any pollutants, including but not limited to those pollutants listed in Appendix D of 40 CFR Part 122.

### 5. Notice of Significant Change in Product Mix or Treatment System

The permittee shall notify EPA and DEP whenever it is planning to make a significant change to its raw ingredients or final product mix, or when it is planning to undergo a change or addition to its treatment system that may alter the quality or composition of its discharges. Upon such notification, EPA and DEP will review the information and make a determination of whether or not any permit modification is necessary to address any such changes. This notification should be made as far enough in advance as possible in order for the agencies to have ample time to consider it and make the appropriate determination.

6. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"

(1) One hundred micrograms per liter (100 ug/l);

(2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;

(3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. §122.21(g)(7); or

(4) Any other notification level established by the Director in accordance with 40 C.F.R §122.44(f).

b. That any activity has occurred or will occur which would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"

(1) Five hundred micrograms per liter (500 ug/l);

(2) One milligram per liter (1 mg/l) for antimony;

(3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. §122.21(g)(7); or

(4) Any other notification level established by the Director in accordance with 40 C.F.R.§122.44(f).

c. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.

7. This permit may be modified, or revoked and reissued, on the basis of new information in accordance with 40 CFR §122.62.

## **B. UNAUTHORIZED DISCHARGES**

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfalls listed in Parts I A.1. and I.A.2. of this permit. Discharges of wastewater from any other point sources are not authorized by this permit and shall be reported in accordance with Section D.1.e. (1) of the General Requirements (Part II) of this permit (Twenty-four hour reporting).

## **C. STORM WATER POLLUTION PREVENTION PLAN (SWPPP)**

The permittee shall develop a Storm Water Pollution Prevention Plan (SWPPP) containing BMPs appropriate for this specific facility. The BMPs should include processes, procedures, schedules of activities, prohibitions on practices, and other management practices that prevent or reduce the discharge of pollutants in storm water runoff. The SWPPP must direct the permittee to thoroughly evaluate potential pollution sources at the facility and select and implement appropriate measures to prevent or control the discharge of pollutants in storm water runoff. The SWPPP shall specifically investigate the potential sources of phosphorus into the onsite storm water detention basin. See Permit **Attachment B** for specific SWPPP requirements. Although this SWPPP should focus on storm water discharges over which the permittee has control, a discussion of off-site sources entering the detention pond shall be included. The permittee should also consider how its turf management and landscaping measures may affect the water being discharged to this detention pond and conduct such measures in a manner that will minimize the contribution of pollutants from these activities to this detention pond.

The SWPPP must include: (1) formation of a team of qualified facility personnel who will be responsible for preparing the SWPPP and assisting the plant manager in its implementation; (2) assessment of potential storm water pollution sources; (3) selection and implementation of appropriate management practices and controls; and (4) periodic evaluation of the effectiveness of the plan to prevent storm water contamination and comply with the terms and conditions of the draft permit. The SWPPP shall be developed and implemented no later than 180 days after the permit's effective date.

The permittee shall maintain, update and implement the SWPPP to account for any changes that occur at the facility which could impact the plan. The permittee shall be required to provide annual certification to EPA and the MADEP documenting that the previous year's inspections and maintenance activities were conducted, results recorded, records maintained, and that the facility is in compliance with the SWPPP. This certification shall be signed in accordance with the requirements identified in 40 CFR §122.22 and a copy of the certification will be sent each year to EPA and MADEP as well as appended to the SWPPP within thirty (30) days of the annual anniversary of the effective date of the Draft Permit. The permittee shall keep a copy of the most recent SWPPP at the facility and shall make it available for inspection by EPA and MADEP.

#### **D. COMPLIANCE SCHEDULE FOR SEASONAL PHOSPHORUS LIMITS**

Upon the effective date of the permit, the permittee shall develop a process for determining how to consistently meet the effluent phosphorus limits at this Facility. The permittee should consider, at a minimum, the use of multiple dosing points for chemical addition, various dosage rates, increased monitoring of influent and effluent phosphorus concentrations, and the minimization of influent phosphorus loading to the treatment facility.

The final, monthly average phosphorus limit of 0.23 pounds per day (applicable during the period of April through October) will become effective no later than sixty (60) months after the effective date of the permit, as indicated by item 5 of the schedule below. During this time, the current effluent phosphorus limit of 0.46 pounds per day, which is the year round monthly average limit, will remain in effect. In order to comply with the permit limits, the permittee shall take the following actions with regard to total phosphorus:

1. Within twelve (12) months of the effective date of the permit, the permittee shall submit to EPA and DEP a report detailing monitoring and measuring efforts regarding the impacts on its treatment system of the installation of its Reverse Osmosis (RO) system and the Town of Littleton's corrosion control efforts.
2. Within twenty four (24) months of the effective date of the permit, the permittee shall have optimized its RO system and treatment system for phosphorus removal and shall have begun to assess additional and enhanced treatment options to meet the final effluent phosphorus limits.
3. Within thirty six (36) months of the effective date of the permit, the permittee shall have completed design of the Facility improvements required to achieve the final effluent phosphorus limits.

4. Within forty eight (48) months of the effective date of the permit, the Permittee shall have initiated construction of the Facility improvements required to achieve the final effluent phosphorus limits.
5. Within sixty (60) months of the effective date of the permit, the Permittee shall have completed construction of the Facility improvements required to achieve the total phosphorus limits.

## **E. MONITORING AND REPORTING**

### **1. Reporting**

Monitoring results obtained during each calendar month shall be summarized and reported on Discharge Monitoring Report Form(s) postmarked no later than the 15th day of the following month.

Signed and dated originals of these, and all other reports required herein, shall be submitted to the Director and the State at the following addresses:

Environmental Protection Agency  
Water Technical Unit (SEW)  
P.O. Box 8127  
Boston, Massachusetts 02114

The State Agency is:

Massachusetts Department of Environmental Protection  
Central Regional Office  
Bureau of Waste Prevention  
627 Main Street  
Worcester, MA 01608

and

Massachusetts Department of Environmental Protection  
Bureau of Waste Prevention  
Industrial Wastewater Section  
1 Winter Street  
Boston, MA 02108

Signed and dated Discharge Monitoring Report Forms and toxicity test reports required by this permit shall also be submitted to the State at:

Massachusetts Department of Environmental Protection  
Division of Watershed Management  
Surface Water Discharge Permit Program  
627 Main Street, 2nd Floor  
Worcester, Massachusetts 01608

## **F. STATE PERMIT CONDITIONS**

This Discharge Permit is issued jointly by the U. S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (DEP) under Federal and State law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the Commissioner of the MA DEP pursuant to M.G.L. Chapter 21, §43.

Each Agency shall have the independent right to enforce the terms and conditions of this permit. Any modification, suspension or revocation of this permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of this permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this permit is declared, invalid, illegal or otherwise issued in violation of State law such permit shall remain in full force and effect under Federal law as an NPDES permit issued by the U.S. Environmental Protection Agency. In the event this permit is declared invalid, illegal or otherwise issued in violation of Federal law, this permit shall remain in full force and effect under State law as a permit issued by the Commonwealth of Massachusetts.