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),

William J. Gould Associates, Inc.

is authorized to discharge from the facility located at

Gould Farm Wastewater Treatment Facility
100 Gould Road
Monterey, MA 01245

to receiving water named

Rawson Brook (Housatonic River Watershed)

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

This permit shall become effective August 1, 2007.

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

This permit supersedes the permit issued on August 14, 1975.

This permit consists of 11 pages in Part I including effluent limitations, monitoring requirements, **Attachment A (Freshwater Chronic Toxicity Test Procedure and Protocol)**, **Attachment B (Sludge Compliance Guidance),** and Part II including General Conditions and Definitions.

Signed this 30th day of May, 2007

/S/ SIGNATURE ON FILE

Stephen S. Perkins, Director	Glenn Haas, Director
Office of Ecosystem Protection	Division of Watershed Management
Environmental Protection Agency	Department of Environmental Protection
Boston, MA	Commonwealth of Massachusetts
	Boston, MA

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A.1. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge from outfall serial number **001** to Rawson Brook. Such discharges shall be limited and monitored by the permittee as specified below.

EFFLUENT CHARACTERISTIC	**UNITS**	**EFFLUENT LIMITS**			**MONITORING REQUIREMENTS**[3]	
PARAMETER		**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**MAXIMUM DAILY**	**MEASUREMENT FREQUENCY**	**SAMPLE TYPE**
FLOW[2]	MGD	0.012	*********	Report MGD	1/Day, 5Days/Week	Grab
BOD_5[4] BOD_5[4]	mg/l lbs/day	30 3.0	45 4.5	Report *********	2/Month *********	8-Hour Composite[5] *********
TSS[4] TSS[4]	mg/l lbs/day	30 3.0	45 4.5	Report *********	2/Month *********	8-Hour Composite[5] *********
pH Range[1]	6.5-8.3 SU (See Permit Page 6 of 11, Paragraph I.A.1.b)				1/Day, 5 Days/Week	Grab
Total Residual Chlorine[1,7]	mg/l	0.179	*********	0.309	2/Day, 5 Days/Week	Grab
Fecal Coliform[1,6]	cfu/ 100 ml	200	*********	400	2/Week	Grab
Copper, Total[8]	µg/l	Report	*********	Report	4/Year (March, June, September, December)	8-Hour Composite[5]

EFFLUENT CHARACTERISTIC	**UNITS**	**EFFLUENT LIMITS**			**MONITORING REQUIREMENTS**[3]	
PARAMETER		**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**MAXIMUM DAILY**	**MEASUREMENT FREQUENCY**	**SAMPLE TYPE**
Phosphorus, Total	mg/l	Report	*********	Report	2/Month	Grab
Ortho-phosphorus, dissolved[*13] (Nov.1-March 31)	mg/l	Report	*********	Report	2/Month	Grab
Whole Effluent Toxicity[9,10,11,12]	Acute - LC_{50}: ≥ 100 % Chronic NOEC: Report				2/Year	8-Hour Composite[5]

Footnotes:

1. Required for State Certification.

2. The limit is a monthly average.

3. All required effluent samples shall be collected in the well house, prior to mixing with other sources. Any change in sampling location must be reviewed and approved in writing by the Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP).

   A routine sampling program shall be developed in which samples are taken at the same location, day(s), and time(s) of every month. Any deviations from the routine sampling program shall be documented in correspondence appended to the applicable discharge monitoring report that is submitted to EPA.

   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. All samples shall be 24-hour composites unless specified as a grab sample in 40 CFR § 136.

4. Sampling required for influent and effluent. The 8-hour composite influent and effluent samples shall be collected on the same day.

5. An 8-hour composite sample of the effluent shall consist of at least eight (8) grab samples taken during one working day, either collected at equal intervals and combined proportional to flow or continuously collected proportional to flow.

   An 8-hour composite sample of the influent shall be a time-composited sample and shall consist of at least eight (8) grab samples of equal volume collected at specific time intervals and then combined.

6. Fecal coliform discharges shall not exceed a monthly geometric mean of 200 colony forming units (cfu) per 100 ml, nor shall they exceed 400 cfu per 100 ml as a daily maximum. This monitoring shall be conducted concurrently with the total residual chlorine (TRC) sampling.

7. Total residual chlorine (TRC) monitoring is required whenever chlorine is added to the treatment process. The limitations are in effect year-round.

   The permittee shall collect and analyze at least two TRC grab samples per day, 5 days per week. For every day that more than two samples are analyzed, the monthly DMR shall include an attachment documenting the individual grab sample results for that day, the date and time of each sample, the analytical method, and a summary of any operational modifications implemented in response to the sample results. This requirement applies to all samples taken, including screening level and process control samples. All test results

utilizing an EPA approved analytical method shall be used in the calculation and reporting of the monthly average and maximum daily data submitted on the DMR (see Part II. Section D.1.d.(2)).

The minimum level (ML) for chlorine is defined as 20 µg/l. This value is the minimum level at which chlorine can be detected using EPA-approved methods found in the most currently approved version of Standard Methods for the Examination of Water and Wastewater, Method 4500 CL-E and G, or USEPA Manual of Methods for the Chemical Analysis of Water and Wastes, Method 330.5. One of these EPA-approved methods must be used to determine total residual chlorine. For effluent limitations less than 20 µg/l, compliance/non-compliance will be determined based on the ML. Sample results of 20 µg/l or less shall be reported as zero on the discharge monitoring report.

8. The minimum detection level (ML) for copper is 3 µg/l. This value is the minimum level for copper that can be detected using the Furnace Atomic Absorbtion analytical method (EPA method 220.2). Sampling results of 3 µg/l or less shall be reported as zero on the discharge monitoring reports.

   The permittee shall monitor for copper once during the months of March, June, September, and December.

9. The permittee shall conduct chronic (and modified acute) toxicity tests two (2) times per year. The chronic test may be used to calculate the acute LC_{50} at the 48-hour exposure interval. The test organisms to be used are the daphnid, *Ceriodaphnia dubia,* and the fathead minnow, *Pimephales promelas*. Toxicity test samples shall be collected during the second week of the months of July and October. The test results shall be submitted by the last day of the month following completion of the test. Therefore, the results are due August 31st and November 30th, respectively. The tests must be performed in accordance with the test procedures and protocols specified in **Attachment A** of this permit.

Test Dates Second Week in	**Submit Results by:**	**Test Species**	**Acute Limit LC_{50}**	**Chronic Limit C-NOEC**
July October	August 31st November 30th	*Ceriodaphnia dubia* (daphnid) and *Pimephales promelas* (fathead minnow) See **Attachment A**	≥ 100%	Report

After submitting **one year** and a **minimum** of two (2) consecutive sets of WET test results, all of which demonstrate compliance with the WET permit limits, the permittee may request a reduction in the WET testing requirements. The permittee is required to

continue testing at the frequency specified in the permit until notice is received by certified mail from the EPA that the WET testing requirement has been changed.

10. The LC_{50} 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.

11. 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.

12. If toxicity test(s) using receiving water as the diluent show the receiving water to be toxic or unreliable, the permitee shall follow the procedures outlined in **Attachment A Section IV., Dilution Water,** in order to obtain permission to use an alternate dilution water. In lieu of individual approvals for alternate dilution water required in **Attachment A,** EPA-New England has developed a Self-Implementing Alternative Dilution Water Guidance document (called "Guidance Document") which may be used to obtain automatic approval of an alternate dilution water, including the appropriate species for use with that water. If this Guidance document is revoked, the permittee shall revert to obtaining approval as outlined in **Attachment A.** The "Guidance Document" has been sent to all permittees with their annual set of DMRs and Revised Instructions for Completing EPA's Pre-Printed NPDES Discharge Monitoring Report (DMR) Form 3320-1 and is not intended as a direct attachment to this permit. This guidance may also be found on the EPA Region-I website at: http://www.epa.gov/region1/enforcementandassistance/dmr2005.pdf. If this guidance is revoked, the permittee shall revert to obtaining individual approval as outlined in **Attachment A**. Any modification or revocation to this "Guidance Document" will be transmitted to the permittees as part of the annual DMR instruction package. However, at any time, the permittee may choose to contact EPA-New England directly using the approach outlined in **Attachment A.**

13. The maximum daily concentration values reported for dissolved ortho-phosphorus shall be the values from the same day that the maximum daily total phosphorus concentration values were measured.

Part I.A.1. (Continued)

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 at any time.

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 permittee's treatment facility shall maintain a minimum of 85 percent removal of both total suspended solids and biochemical oxygen demand. The percent removal shall be based on monthly average values.

f. The permittee shall minimize the use of chlorine while maintaining adequate bacterial control.

g. The results of sampling for any parameter above its required frequency must also be reported.

h. If the average annual flow in any calendar year exceeds 80 percent of the facility's design flow, the permittee shall submit a report to MassDEP by March 31st of the following calendar year describing its plans for further flow increases and describing how it will maintain compliance with the flow limit and all other effluent limitations and conditions.

2. The permittee must provide adequate notice to the Director of the following:

a. Any substantial change in the volume or character of pollutants being introduced into the treatment system;

b. For purposes of this paragraph, adequate notice shall include information on:

(1) the quantity and quality of flow introduced into the treatment system; and

(2) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the treatment system.

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 MassDEP 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 (CWA), 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.

B. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfall listed in Part I A.1. 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 of Part II of this Permit (Twenty-four hour reporting).

C. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM

Operation and maintenance of the sewer system shall be in compliance with the General Requirements of Part II and the following terms and conditions:

1. Maintenance Staff

   The permittee shall provide an adequate staff to carry out the operation, maintenance, repair, and testing functions required to ensure compliance with the terms and conditions of this permit.

2. Preventative Maintenance Program

   The permittee shall maintain an ongoing preventative maintenance program to prevent overflows and bypasses caused by malfunctions or failures of the sewer system infrastructure. The program shall include an inspection program designed to identify all potential and actual unauthorized discharges.

3. Alternative Power Source

   In order to maintain compliance with the terms and conditions with this permit, the permittee shall provide an alternative power source with which to sufficiently operate its treatment works (as defined at 40 CFR § 122.2).

D. SLUDGE CONDITIONS

1. The permittee shall comply with all existing federal and state laws and regulations that apply to sewage use and disposal practices and with the CWA Section 405(d) technical standards.

2. The permittee shall comply with the more stringent of either the state or federal (40 CFR Part 503), requirements.

3. The requirements and technical standards of 40 CFR Part 503 apply to facilities which perform one or more of the following use or disposal practices:

   a. Land application - the use of sewage sludge to condition or fertilize the soil
   b. Surface disposal – the placement of sewage sludge in a sludge-only landfill
   c. Sewage sludge incineration in a sludge-only incinerator

4. The 40 CFR Part 503 conditions do not apply to facilities which place sludge within a municipal solid waste landfill. These conditions also do not apply to facilities which do not dispose of sewage sludge during the life of the permit but rather treat the sludge (e.g., lagoons-reed beds), or are otherwise excluded under 40 CFR 503.6.

5. The permittee shall use and comply with the attached compliance guidance document to determine appropriate conditions. Appropriate conditions contain the following elements;

   - General requirements
   - Pollutant limitations
   - Operational Standards (pathogen reduction requirements and vector attraction reduction requirements)
   - Management practices
   - Record keeping
   - Monitoring
   - Reporting

   Depending upon the quality of material produced by a facility, all conditions may not apply to the facility.

6. The permittee shall monitor the pollutant concentrations, pathogen reduction and vector attraction reduction at the following frequency. This frequency is based upon the volume of sewage sludge generated at the facility in dry metric tons per year:

less than 290	1/year
290 to less than 1500	1/quarter
1500 to less than 15000	6/year
15000 +	1/month

7. The permittee shall sample the sewage sludge using the procedures detailed in 40 CFR 503.8.

8. The permittee shall submit an annual report containing the information specified in the guidance. Reports are due annually **by February 19**. Reports shall be submitted to the address contained in the reporting section of the permit. Sludge monitoring is not

required by the permittee when the permittee is not responsible for the ultimate sludge disposal. The permittee must be assured that any third party contractor is in compliance with appropriate regulatory requirements. In such case, the permittee is required only to submit an annual report **by February 19** containing the following information:

- Name and address of contractor responsible for sludge disposal
- Quantity of sludge in dry metric tons removed from the facility by the sludge contractor

E. MONITORING AND REPORTING

1. Reporting

Monitoring results obtained during each calendar month shall be summarized and reported on Discharge Monitoring Report Forms (DMRs) 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, MA 02114

The State Agency is:

Massachusetts Department of Environmental Protection
Western Regional Office - Bureau of Resource Protection
436 Dwight Street
Springfield, MA 01103

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, MA 01608

F. STATE PERMIT CONDITIONS

This NPDES Permit is issued jointly by the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) 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 MassDEP pursuant to M.G.L. Chap. 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 that any portion of this Permit is declared, invalid, illegal or otherwise issued in violation of State law, this 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.