

Wastewater Management Division
103 South Main Street - Sewing Bldg.
Waterbury, Vermont 05671-0405Telephone: (802) 241-3822
Fax: (802) 241-2596
www.anr.state.vt.us/dec/ww/wwmd.cfm

September 21, 2007

Roger Donegan
Burlington Electric Department
111 Intervale Road
Burlington, VT 05401**Re: Final Discharge Permit #3-1219**

Dear Mr Donegan:

Enclosed is your copy of the above referenced permit, which has been signed by the Director of the Wastewater Management Division for the Commissioner of the Department of Environmental Conservation. Please read the permit carefully and familiarize yourself with all its terms and conditions. Your attention is particularly directed to those conditions which may require written responses by certain dates.

During the public notice period, comments from Burlington Electric Department, were received and the comments (paraphrased) and responses are included below:

1. Comment: BED requests that the effective date of the permit be October 1, 2007 due to changes in the monitoring regime.

Response: The Department agrees and the effective date of the final permit is October 1, 2007.

2. Comment: BED requests that the turbidity monitoring requirement of S/N 001 be deleted or changed to monthly. Since August 1996, only one turbidity measurement from S/N 002 was greater than 10 NTU and only six were greater than 4 NTU. The average was <2 NTU.

Response: The Department agrees that the S/N 001 discharge may contain less turbidity than the S/N 002 discharge and has changed the monitoring to monthly in the final permit.

3. Comment: BED believes that 37.4 pounds of phosphorus is a rounding error back-calculated from 0.017 metric tons. The original value was calculated using $0.1 \text{ mg/l} \times 0.125 \text{ MGD}$ (monthly average flow for S/N 002) $\times 365 \text{ days/yr} \times 8.34 = 38.05$ pounds. Please correct total annual pounds to 38.05 pounds from the 37.47 pounds in the draft permit.



Response: The EPA approved 2002 *Lake Champlain Phosphorus TMDL* document has allocated a phosphorus loading to the Burlington Electric Department of 0.017 metric tons per year (page 23). On page 22, the document states that "However, phosphorus load limits in discharge permits are generally given in units of pounds per day. To facilitate comparison, the following conversions may be used. 1.0 mt/yr = 1000 kg/yr = 6.04 lbs/day".

Thus, Burlington Electric Department's limit of 0.017 metric tons per year x 6.04 x 365 days = 37.4782. In order not to exceed the total phosphorus loading from Vermont facilities of 55.8 mt/yr, the amount has been rounded down to 37.47 pounds.

4. Comment: BED requests that the language in D.2. on page 5 of the permit be modified to read "The Permittee is required to submit monitoring results as specified on Discharge Monitoring Report Forms WR-43, WR-43PO4, or approved alternate form".

Response: The Department agrees to modify the language to say "The Permittee is required to submit monitoring results as specified on Discharge Monitoring Report Forms WR-43 and WR-43PO4 (or other forms as approved by the Secretary)."

If you have any questions concerning your permit, please contact Carol Carpenter at 241-3828.

Sincerely,



Brian D. Kooiker, Chief
Discharge Permits Section

Enclosure

cc: John Irving, Burlington Electric Department

AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WASTEWATER MANAGEMENT DIVISION
103 SOUTH MAIN STREET, - THE SEWING BUILDING
WATERBURY, VERMONT 05671-0405

Permit No. 3-1219
File No. 04-03
Project ID No. EJ95-0448
NPDES No. VT0020401

DISCHARGE PERMIT

In compliance with the provisions of the Vermont Water Pollution Control Act, as amended, (10 V.S.A. Chapter 47 §1251 et. seq), and the Federal Clean Water Act, as amended (33 U.S.C. § 1251 et. seq),

Burlington Electric Department
585 Pine Street
Burlington, VT 05401

(hereinafter referred to as the "permittee") is authorized, by the Secretary, Agency of Natural Resources, to discharge from a facility located at:

Joseph C. McNeil Generating Station
111 Intervale Road
Burlington, Vermont

To the Winooski River, Class B at the point of discharge in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III hereof.

This permit shall become effective on October 1, 2007.

This permit and the authorization to discharge shall expire on September 30, 2012.

Signed this 20th day of September, 2007.

Justin G Johnson, Acting Commissioner
Department of Environmental Conservation

By Christine Thompson
Christine Thompson, Director
Wastewater Management Division

PART I**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

1. Until September 30, 2012, the permittee is authorized to discharge from outfall serial number **S/N 001**: cooling water blowdown combined with S/N 002 (low volume wastewater). Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow	0.365 MGD	0.500 MGD	Continuous	Daily Total
Total Metals (1)	Monitor only		1 x quarterly	24-hour composite
Temperature (2)		99°F	Continuous	Daily Maximum
Turbidity	Monitor only		1 x monthly	Grab
Priority Pollutants	See Special Condition I.A.3.d.			
pH	Between 6.4 and 8.6 Standard Units (3)		Continuous	Daily, Min/Max
Free Available Chlorine (4)	0.2 mg/l	0.5 mg/l	1 x daily	Grab
Total Residual Chlorine (4)	Monitor only		1 x daily	Grab

- (1) Total Metals shall include Cadmium, Chromium, Copper, Iron, Lead, Nickel, and Zinc.
- (2) See Special Condition I.A.3.b.
- (3) See Special Condition I.A.3.c.
- (4) Monitoring for free available chlorine and total residual chlorine shall be conducted only during periods of chlorinated cooling water discharge. Neither may be discharged for more than 2 hours in any one day.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At a point following the combination of all wastestreams and prior to discharge to the Winooski River.

2. Until September 30, 2012, the permittee is authorized to discharge from outfall serial number **S/N 002** (internal wastestream): Low volume wastes including boiler blowdown, demineralizer rinse water, reverse osmosis reject water, filter backwash, and floor drains wastewater. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow	0.125 MGD	0.500 MGD	Continuous	Daily Total
Total Suspended Solids		30 mg/l	1 x monthly	24-hour composite
Total Phosphorus	0.8 mg/l	37.47 Total Annual Pounds (1)	1 x monthly	24-hour composite
Oil and Grease	10 mg/l	15 mg/l	1 x monthly	Grab

- (1) **Total Annual Pounds of Phosphorus** discharged shall be defined as the sum of all the **Total Monthly Pounds of Phosphorus** discharged for the calendar year.

Total Monthly Pounds of Phosphorus discharged shall be calculated as follows:
 (Monthly Average Phosphorus Concentration) x (Total Monthly Flow) x 8.34
 (See *Total Phosphorus monitoring report form WR43-PO4*).

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Prior to combining with the S/N 001 discharge.

3. Special Conditions:

- a. This discharge shall not cause a violation of the water quality standards of the receiving water.
- b. In accordance with Section 2-04 of the Vermont Water Quality Standards, this permit establishes a mixing zone in the Winooski River for temperature not to exceed 200 feet from the outfall. Within the mixing zone, Section 3-01B.1. is waived up to the temperature discharge limitation of 99° F.
- c. In accordance with Section 2-04 of the Vermont Water Quality Standards, this permit establishes a mixing zone in the Winooski River for pH not to exceed 200 feet downstream from the outfall. Within the mixing zone, Section 3-01B.9. is waived but not to exceed the pH discharge limitation of 6.4 – 8.6 Standard Units.
- d. The permittee shall submit the results by **December 31, 2010** of one priority pollutant scan collected in the year 2010 on the S/N 001 combined discharge. Priority pollutants include the volatile organics, pesticides, and metals listed in Appendix A of 40 CFR Part 423.

- e. The permittee is limited to using those chemicals which are similar in composition, concentration, and toxicity to those identified in the permit application unless substantially different chemicals are approved by the Department. A significant increase in the dosage rate or a substantial change in the chemicals used must be reviewed by the Department to assure that no adverse impact will occur in the receiving water. A substantial change in chemicals shall be defined as those chemicals that are not similar in composition, concentration, and toxicity to those identified in the application.
- f. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

B. REAPPLICATION

If the permittee desires to continue to discharge after the expiration date of this permit, the permittee shall apply on the application forms then in use at least 180 days before the permit expires.

Reapply for a Discharge Permit by: March 31, 2012.

C. OPERATING FEES

This discharge is subject to operating fees. The permittee shall submit the operating fees in accord with the procedures provided by the Secretary.

D. MONITORING AND REPORTING

1. Sampling and Analysis

The sampling, preservation, handling, and analytical methods used shall conform to regulations published pursuant to Section 304(g) of the Clean Water Act, under which such procedures may be required. Guidelines establishing these test procedures have been published in the Code of Federal Regulations, Title 40, Part 136 (Federal Register, Vol. 56, No. 195, July 1, 1999 or as amended).

If applicable, *Escherichia coli* shall be tested using one of the following methods:

- a. "Most Probable Number" (MPN) method 9223B found in Standard Methods for the Examination of Water and Wastewater, 18th or subsequent approved edition(s) Premade formulations are available as Colilert and Colilert 18 from IDEXX Labs Inc., Westbrook, ME;
- b. EPA "membrane filtration" (MF) method 1603 using modified mTEC; or
- c. A single step membrane filtration (MF) method using mColiBlue 24 available from Hach Company, Loveland, CO.

Samples shall be representative of the volume and quality of effluent discharged over the sampling and reporting period. All samples are to be taken during normal operating hours. The permittee shall identify the effluent sampling location used for each discharge.

2. Reporting

The Permittee is required to submit monitoring results as specified on Discharge Monitoring Report Forms WR-43 and WR-43PO4 (or other forms as approved by the Secretary). Reports are due on the 15th day of each month, beginning with the month following the effective date of this permit.

If, in any reporting period, there has been no discharge, the permittee must submit that information by the report due date.

Signed copies of these, and all other reports required herein, shall be submitted to the Secretary at the following address:

Agency of Natural Resources
Department of Environmental Conservation
Wastewater Management Division
103 South Main Street, The Sewing Building
Waterbury, Vermont 05671-0405

All reports shall be signed:

- a. In the case of corporations, by a principal executive officer of at least the level of vice president, or his/her duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge described in the permit form originates;
- b. In the case of a partnership, by a general partner;
- c. In the case of a sole proprietorship, by the proprietor;
- d. In the case of a municipal, State, or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

3. Recording of Results

The permittee shall maintain records of all information resulting from any monitoring activities required including:

- a. The exact place, date, and time of sampling;
- b. The dates and times the analyses were performed;
- c. The person(s) who performed the analyses;
- d. The analytical techniques and methods used including sample collection handling and preservation techniques;
- e. The results of all required analyses;
- f. The records of monitoring activities and results, including all instrumentation and calibration and maintenance records;
- g. The original calculation and data bench sheets of the operator who performed analysis of the influent or effluent pursuant to requirements of Section I.(A) of this permit.

The results of monitoring requirements shall be reported (in the units specified) on the Vermont reporting form WR-43 or other forms approved by the Secretary.

4. Additional Monitoring

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report Form WR-43. Such increased frequency shall also be indicated.

PART II

A. MANAGEMENT REQUIREMENTS

1. Facility Modification / Change in Discharge:

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit. Such a violation may result in the imposition of civil and/or criminal penalties as provided for in Section 1274 and 1275 of the Vermont Water Pollution Control Act. Any anticipated facility expansions, production increases, or process modifications which will result in new, different, or increased discharges of pollutants must be reported by submission of a new permit application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the permit issuing authority of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.

2. Noncompliance Notification

In the event the permittee is unable to comply with any of the conditions of this permit due, among other reasons, to:

- a. breakdown or maintenance of waste treatment equipment (biological and physical-chemical systems including, but not limited to, all pipes, transfer pumps, compressors, collection ponds or tanks for the segregation of treated or untreated wastes, ion exchange columns, or carbon absorption units),
- b. accidents caused by human error or negligence, or
- c. other causes such as acts of nature,

the permittee shall notify the Secretary within 24 hours of becoming aware of such condition or by the next business day and shall provide the Secretary with the following information, in writing, within five (5) days:

- i. cause of non-compliance;

- ii. a description of the non-complying discharge including its impact upon the receiving water;
- iii. anticipated time the condition of non-compliance is expected to continue or, if such condition has been corrected, the duration of the period of non-compliance;
- iv. steps taken by the permittee to reduce and eliminate the non-complying discharge; and
- v. steps to be taken by the permittee to prevent recurrence of the condition of non-compliance.

3. Operation and Maintenance

All waste collection, control, treatment, and disposal facilities shall be operated in a manner consistent with the following:

- a. The permittee shall, at all times, maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.
- b. The permittee shall provide an adequate operating staff which is duly qualified to carry out the operation, maintenance, and testing functions required to insure compliance with the conditions of this permit; and
- c. The operation and maintenance of this facility shall be performed only by qualified personnel.

4. Quality Control

The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at regular intervals to ensure accuracy of measurements, or shall ensure that both activities will be conducted.

The permittee shall keep records of these activities and shall provide such records upon request of the Secretary.

The permittee shall demonstrate the accuracy of the S/N 001 and S/N 002 flow measurement devices (meters 6219 and 6208) monthly and report the results on the monthly report forms. The acceptable limit of error is $\pm 10\%$.

The permittee shall analyze any additional samples as may be required by the Agency of Natural Resources to ensure analytical quality control.

5. Bypass

The diversion or bypass of facilities, necessary to maintain compliance with the terms and conditions of this permit, is prohibited, except where authorized under terms and conditions of an emergency pollution permit issued pursuant to 10 V.S.A. Section 1268.

6. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any adverse impact to waters of the State resulting from non-compliance with any condition specified in this permit, including accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge.

7. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed, calibration and maintenance of instrumentation, and recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, and shall be submitted to Department representatives upon request. This period shall be extended during the course of unresolved litigation regarding the discharge of pollutants or when requested by the Secretary.

8. Solids Management

Collected screenings, sludges, and other solids removed in the course of treatment and control of wastewaters shall be stored, treated and disposed of in accord with 10 V.S.A., Chapter 159 and with the terms and conditions of any certification, interim or final, transitional operation authorization or order issued pursuant to 10 V.S.A., Chapter 159 that is in effect on the effective date of this permit or is issued during the term of this permit.

9. Emergency Pollution Permits

Maintenance activities, or emergencies resulting from equipment failure or malfunction, including power outages, which result in an effluent which exceeds the effluent limitations specified herein, shall be considered a violation of the conditions of this permit, unless the permittee immediately applies for, and obtains, an emergency pollution permit under the provisions of 10 V.S.A., Chapter 47, Section 1268. The permittee shall notify the Department of the emergency situation by the next working day.

10 V.S.A., Chapter 47, Section 1268 reads as follows:

"When a discharge permit holder finds that pollution abatement facilities require repairs, replacement or other corrective action in order for them to continue to meet standards specified in the permit, he may apply in the manner specified by the secretary for an emergency pollution permit for a term sufficient to effect repairs,

replacements or other corrective action. The permit may be issued without prior public notice if the nature of the emergency will not provide sufficient time to give notice; provided that the secretary shall give public notice as soon as possible but in any event no later than five days after the effective date of the emergency pollution permit. No emergency pollution permit shall be issued unless the applicant certifies and the secretary finds that:

- (1) there is no present, reasonable alternative means of disposing of the waste other than by discharging it into the waters of the state during the limited period of time of the emergency;
- (2) the denial of an emergency pollution permit would work an extreme hardship upon the applicant;
- (3) the granting of an emergency pollution permit will result in some public benefit;
- (4) the discharge will not be unreasonably harmful to the quality of the receiving waters;
- (5) the cause or reason for the emergency is not due to wilful or intended acts or omissions of the applicant."

Application shall be made to the Secretary of the Agency of Natural Resources, Department of Environmental Conservation, 103 South Main Street, Waterbury, Vermont 05671-0405.

10. Power Failure

In order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:

- a. Provide an alternative power source sufficient to operate the wastewater control facilities, or if such alternative power source is not in existence,
- b. Halt, reduce, or otherwise control production and/or all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

B. RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the Secretary or authorized representative, upon the presentation of proper credentials:

- a. to enter upon the permittee's premises in which an effluent source or any records required to be kept under terms and conditions of the permit are located;

- b. to have access to and copy any records required to be kept under the terms and conditions of the permit;
- c. to inspect any monitoring equipment or method required in the permit; or
- d. to sample any discharge of pollutants.

2. Transfer of Ownership or Control

This permit is not transferable without prior written approval of the Secretary. All application and operating fees must be paid in full prior to transfer of this permit. In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the permittee shall provide a copy of this permit to the succeeding owner or controller and shall send written notification of the change in ownership or control to the Secretary. The permittee shall also inform the prospective owner or operator of their responsibility to make an application for transfer of this permit. This application must include as a minimum; a written statement from the prospective owner or operator certifying:

- a. The conditions of the operation that contribute to, or affect, the discharge will not be materially different under the new ownership.
- b. The prospective owner or operator has read and is familiar with the terms of the permit and agrees to comply with all terms and conditions of the permit.
- c. The prospective owner or operator has adequate funding to operate and maintain the treatment system and remain in compliance with the terms and conditions of the permit.
- d. The date of the sale or transfer.

The Department may require additional information dependent upon the current status of the facility operation, maintenance, and permit compliance.

3. Confidentiality

Pursuant to 10 V.S.A. 1259(b):

“Any records, reports or information obtained under this permit program shall be available to the public for inspection and copying. However, upon a showing satisfactory to the secretary that any records, reports or information or part thereof, other than effluent data, would, if made public, divulge methods or processes entitled to protection as trade secrets, the secretary shall treat and protect those records, reports or information as confidential. Any records, reports or information accorded confidential treatment will be disclosed to authorized representatives of the state and the United States when relevant to any proceedings under this chapter.”

4. Permit Modification

After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

- a. violation of any terms or conditions of this permit;
- b. obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
- c. a change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

5. Toxic Effluent Standards

That if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under section 307(a) of the Federal Act for a toxic pollutant which is present in the permittee's discharge and such standard or prohibition is more stringent than any limitation upon such pollutant in the permit, the secretary shall revise or modify the permit in accordance with the toxic effluent standard or prohibition and so notify the permittee.

6. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under 10 V.S.A. §1281.

7. Civil and Criminal Liability

Except as provided in, "Bypass" (Part II, paragraph A.5.), "Power Failure" (Part II, paragraph A.10.), and "Emergency Pollution Permits" (Part II, paragraph A.9.), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Civil penalties, as authorized under 10 V.S.A. §1274 and 10 V.S.A. §8010, shall not exceed \$10,000 a day for each day of violation. Criminal penalties, as authorized under 10 V.S.A. §1275, shall not exceed \$25,000 for each day of violation, imprisonment for up to six months, or both.

8. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act.

9. Property Rights

Issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

10. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

11. Authority

This permit is issued under authority of 10 V.S.A. §1259 which states that: "No person shall discharge any waste, substance, or material into waters of the State, nor shall any person discharge any waste, substance, or material into an injection well or discharge into a publicly owned treatment works any waste which interferes with, passes through without treatment, or is otherwise incompatible with those works or would have a substantial adverse effect on those works or on water quality, without first obtaining a permit for that discharge from the Secretary", and under the authority of Section 402 of the Clean Water Act, as amended.

PART III**A. OTHER REQUIREMENTS**

This permit shall be modified, suspended or revoked to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b) (2) (C), and (D), 304(b) (2), and 307 (a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
2. Controls any pollutant not limited in the permit.

The permit as modified under this paragraph shall also contain any other requirements of the Vermont Water Pollution Control Act then applicable.

B. DEFINITIONS

For purposes of this permit, the following definitions shall apply.

The Act - The Vermont Water Pollution Control Act, 10 V.S.A. Chapter 47

Annual Average - The highest allowable average of daily discharges calculated as the sum of all daily discharges (mg/l, lbs or gallons) measured during a calendar year divided by the number of daily discharges measured during that year.

Average - The arithmetic means of values taken at the frequency required for each parameter over the specified period.

The Clean Water Act - The federal Clean Water Act, as amended.

Composite Sample - A sample consisting of a minimum of one grab sample per hour collected during a 24-hour period (or lesser period as specified in the section on Monitoring and Reporting) and combined proportionally to flow over that same time period.

Daily Discharge - The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling.

For pollutants with limitation expressed in pounds the daily discharge is calculated as the total pounds of pollutants discharged over the day.

For pollutants with limitations expressed in mg/l the daily discharge is calculated as the average measurement of the pollutant over the day.

Grab Sample - An individual sample collected in a period of less than 15 minutes.

Incompatible Substance (Pollutant) - Any waste being discharged into the treatment works which interferes with, passes through without treatment, or is otherwise incompatible with said works or would have a substantial adverse effect on these works or on water quality. This includes all pollutants required to be regulated under the Federal Clean Water Act.

Instantaneous Maximum - A value not to be exceeded in any grab sample.

Major Contributing Industry - One that: (1) has a flow of 50,000 gallons or more per average work day; (2) has a flow greater than five percent of the flow carried by the municipal system receiving the waste; (3) has in its wastes a toxic pollutant in toxic amounts as defined in standards issued under Section 307(a) of the Act; or (4) has a significant impact, either singly or in combination with other contributing industries, on a publicly owned treatment works or on the quality of effluent from that treatment works.

Maximum Day (maximum daily discharge limitation) - The highest allowable "daily discharge" (mg/l, lbs or gallons).

Mean - The mean value is the arithmetic mean.

Monthly Average - (Average monthly discharge limitation) - The highest allowable average of daily discharges (mg/l, lbs or gallons) over a calendar month, calculated as the sum of all daily discharges (mg/l, lbs or gallons) measured during a calendar month divided by the number of daily discharges measured during that month.

NPDES - The National Pollutant Discharge Elimination System.

Secretary - The Secretary of the Agency of Natural Resources

State Certifying Agency Agency of Natural Resources
 Department of Environmental Conservation
 Wastewater Management Division
 103 South Main Street
 Waterbury, Vermont 05671-0405

Weekly Average - (Average weekly discharge limitation) - The highest allowable average of daily discharges (mg/l, lbs or gallons) over a calendar week, calculated as the sum of all daily discharges (mg/l, lbs or gallons) measured during a calendar week divided by the number of daily discharges measured during that week.

AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WASTEWATER MANAGEMENT DIVISION
103 SOUTH MAIN STREET
WATERBURY, VERMONT 05671-0405

FACT SHEET
(August 2007)

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

NPDES NO: VT0020401
FILE NO: 04-03
PERMIT NO: 3-1219
PROJECT ID NO: EJ95-0448

NAME AND ADDRESS OF APPLICANT:

Burlington Electric Department
585 Pine Street
Burlington, VT 05401

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Joseph C McNeil Generating Station
111 Intervale Road
Burlington, Vermont

RECEIVING WATER: Winooski River

CLASSIFICATION: Class B. Class B waters are suitable for bathing and recreation, irrigation and agricultural uses; good fish habitat; good aesthetic value; acceptable for public water supply with filtration and disinfection.

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

The above named applicant applied on June 27, 2006 to the Vermont Department of Environmental Conservation for renewal of the permit to discharge into the designated receiving water. At this time the Department has made a tentative decision to reissue the discharge permit. The facility is engaged in the operation of a 50 MW electrical generating station fired with purchased wood fuel. The discharge is located about 200 feet north or downstream from the Central Vermont Railroad Bridge.

II. Description of Discharge

A quantitative description of the discharge in terms of significant effluent parameters is based on state and federal laws and regulations, the discharge permit application, and the recent self-monitoring data.

III. Limitations and Conditions

The effluent limitations of the permit, the monitoring requirements, and any implementation schedule (if required), may be found on the following pages of the permit:

Effluent Limitations: Pages 2 and 3 of 14
Monitoring Requirements: Page 2 and 3 of 14

IV. Permit Basis and Explanation of Effluent Limitation Derivation

The Burlington Electric Department owns and operates the Joseph C McNeil Generating Station, a 50 MW biomass fired steam/turbine electrical generation plant located on Intervale Road in Burlington. The discharge consists of cooling tower blowdown (S/N 001) and low volume wastes (S/N 002) specifically boiler blowdown, demineralized rinse water, reverse osmosis reject water, filter backwash, and treated floor drainage. S/N 002 combines with S/N 001 and discharges via the S/N 001 outfall.

The federal regulations for Steam Electric Power Generating Point Source Category (40 CFR Part 423) are specific for fossil-type fuels and nuclear fuel and do not include solid waste fuel units (i.e. woodchips). However, since the discharge from units such as the McNeil facility are similar to fossil fuel units, these regulations along with the Vermont Water Quality Standards have served as guidance in establishing discharge effluent limitations for permit issuance.

S/N 001: Combined Discharge - Cooling Water and Low Volume Wastestream

Flow - The effluent flow limitations remain at 0.365 MGD, monthly average, and 0.500 MGD, maximum day. A requirement to demonstrate the accuracy of the flow measurement devices monthly (and report findings) is proposed in the permit (it was inadvertently left out of the previous permit).

Turbidity – The requirement for turbidity monitoring is changed from the S/N 002 internal wastestream to the S/N001 discharge. Monitoring remains at monthly.

pH - The pH limitation is proposed to be changed from 6.5 - 8.5 Standard Units as specified in Section 3-01 B.9. in the Vermont Water Quality Standards to 6.4 – 8.6 Standard Units because infrequently the discharge may exceed the range of 6.5 – 8.5 S.U. by ± 0.1 S.U despite use of the neutralization system. As a result, the permit also establishes a 200 foot mixing zone under Section 2-04 of the WQS. Monitoring remains at continuous.

Total Metals – The permit retains the quarterly monitoring requirement with the exception of iron which is proposed to be changed from monthly to quarterly, consistent with the other metals monitoring regime (cadmium, chromium, copper, lead, nickel, and zinc).

Free Available and Total Residual Chlorine – The permit retains the free available chlorine limits of 0.2 mg/l, monthly average, and 0.5 mg/l, daily maximum. The permit retains the total residual chlorine ‘monitor only’ requirement. Both include a daily monitoring requirement when chlorine is being discharged and a two hour limit in any one day period.

Temperature – The previous permit contained temperature requirements based on obtaining results from grab samples collected from along the river bank upstream and downstream of the discharge in the Winooski River. A site visit by WWMD staff in 2006 revealed that it is virtually impossible to collect a representative sample in this manner. In addition, the 2002 permit incorrectly stipulated a 300 foot mixing zone for temperature in the Winooski River. Under both Vermont statute (Chapter 47, §1251) and the Vermont Water Quality Standards, Section 2-04, a mixing zone may not exceed 200 feet in length. As a result, the permittee contracted with Aquaterre to determine if an effluent temperature of up to 100° F could be permitted such that the instream temperature would not be raised by more than 1° F at the end of a 200 foot mixing zone.

Results of that report, dated July 16, 2007, indicate that during both the summer and winter periods the temperature of the river will not be raised by more than 1° F at the end of a 200 foot mixing zone. The proposed permit therefore stipulates the establishment of a 200 foot mixing zone for temperature. An effluent limit of 99° F is proposed with continuous monitoring (as measured at 15 minute intervals) to determine compliance.

Priority Pollutants – The permit proposes that a priority pollutant scan be obtained once, in 2010, during the term of the permit. The list of constituents is located in Appendix A of 40 CFR Part 423 of the federal regulations.

Total Dissolved Solids (TDS) – The ‘monitor only’ requirement for TDS is proposed to be eliminated from the permit.

S/N 002: Low Volume Internal Wastestream

Flow - The effluent flow limitations remain at 0.125 MGD, monthly average, and 0.500 MGD, maximum day.

Total Suspended Solids – The proposed permit maintains the daily maximum TSS limit of 30 mg/l and monthly monitoring. The permit proposes that the pounds limit of 31.3 lbs per day be deleted as self monitoring results indicate consistently that the discharge is well below the permitted limit.

Total Phosphorus – The previous permit contained a concentration limit of 0.10 mg/l, monthly average, (0.10 lbs/day) and 0.70 mg/l, daily maximum (0.73 lbs/day). This permit proposes a monthly average limit of 0.8 mg/l consistent with requirements in Title 10, Chapter 47 §1266a.

In addition, the 2002 “Lake Champlain Phosphorus Total Maximum Daily Load” established a phosphorus mass loading allocation for the facility utilizing an effluent concentration of 0.1 mg/l at the permitted flow of the facility (0.125 MGD for S/N 002).

That allocation (0.017 metric tons per year or 37.47 pounds per year) is being incorporated into this permit.

The annual total pounds is the sum of the twelve monthly totals, which are calculated by multiplying the total monthly flow x the monthly average phosphorus concentration x 8.34. The annual total must be submitted with the December monthly monitoring report and the running total pounds for each calendar year shall be included with each month's self-monitoring report.

Oil and Grease – The limits of 10 mg/l, monthly average, and 15 mg/l, daily maximum, remain unchanged from the previous permit. The pounds limits have been deleted from the proposed permit as self monitoring results indicate that this discharge is consistently well below those limits. Monitoring remains at monthly.

Biochemical Oxygen Demand (BOD) – The quarterly 'monitor only' requirement is proposed to be deleted from the permit as self monitoring results indicate consistently very low amounts of BOD in the discharge.

Total Kjeldahl Nitrogen (TKN) - The quarterly 'monitor only' requirement is proposed to be deleted from the permit as self monitoring results indicate consistently very low amounts of TKN in the discharge.

Special Conditions:

Special Condition A.3.a. states that the discharge shall not cause a violation of the Water Quality Standards in the receiving water.

Special Condition A.3.b. establishes a 200 foot mixing zone for temperature in the Winooski River based on Sections 2-04 and 3-01 of the Water Quality Standards. The temperature will not be raised by more than 1° F. at the end of the mixing zone.

Special Condition A.3.c. establishes a 200 foot mixing zone for pH excursions in the Winooski River based on Sections 2-04 and 3-01 of the Water Quality Standards. The effluent pH may exceed the permitted range of 6.5 – 8.5 Standard Units by ±0.1 S.U. in compliance with the excursion language in the permit.

Special Condition A.3.d. requires that one priority pollutant scan be conducted on the discharge during the year 2010 and the results submitted to the Department by December 31, 2010.

Special Condition A.3.d. addresses chemical use at the facility.

Special Condition A.3.e. prohibits the discharge of PCBs consistent with 40 CFR Part 423.

V. Procedures for Formulation of Final Determinations

The public comment period for receiving comments on this draft permit is from August 20 through September 19, 2007 during which time interested persons may submit their written views on the draft permit. All written comments received by 4:30 PM on

September 19, 2007 will be retained by the Department and considered in the formulation of the final determination to issue, deny or modify the draft permit. The period of comment may be extended at the discretion of the Department.

Written comments should be sent to:

Vermont Agency of Natural Resources
Department of Environmental Conservation
Wastewater Management Division - Sewing Building
103 South Main Street
Waterbury, VT 05671-0405

Comments may also be faxed to: 802-241-2596.

Any interested person or groups of persons may request or petition for a public hearing with respect to this draft permit. Any such request or petition for a public hearing shall be filed within the public comment period described above and shall indicate the interest of the party filing such request and the reasons why a hearing is warranted.

The Department will hold a hearing if there is significant public interest in holding such a hearing. Any public hearing brought in response to such a request or petition will be held in the geographical area of the proposed discharge or other appropriate area, at the discretion of the Department and may, as appropriate, consider related groups of draft permits. Any person may submit oral or written statements and data concerning the draft permit at the public hearing. The Department may establish reasonable limits on the time allowed for oral statements and may require the submission of statements in writing. All statements, comments, and data presented at the public hearing will be retained by the Department and considered in the formulation of the final determination to issue, deny, or modify the draft permit.

The complete application, draft permit, and other information are on file and may be inspected at the VTDEC, Wastewater Management Division, Waterbury Office. Copies will be made at a cost based on the current Secretary of State Official Fee Schedule for Copying Public Records from 8:00 AM to 4:30 PM, Monday through Friday. The draft permit and fact sheet may also be viewed on the Division's website at www.anr.state.vt.us/dec/ww/wwmd.cfm .

During the public notice period comments were received from Burlington Electric Department. Responses are included in the cover letter to the final permit.

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McNeil
Station

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