ENVIRONMENTAL PROTECTION RULE

CHAPTER 4

POLLUTION ABATEMENT FACILITY OPERATOR RULE

STATE OF VERMONT

AGENCY OF NATURAL RESOURCES

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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Subchapter 1. GENERAL PROVISIONS

§ 4-101. PURPOSE

This Rule is intended to protect public health and the environment by establishing personnel requirements for the operation of pollution abatement facilities in the State of Vermont, to be implemented in conjunction with the "Administrative Rules for Pollution Abatement Facility Operators" established by the Office of Professional Regulation pursuant to 26 V.S.A. Chapter 99 (the OPR Rule).

§ 4-102. AUTHORITY

(a) This Rule is adopted pursuant to the Vermont Water Pollution Control Statute, 10 V.S.A. Chapter 47, in particular §§ 1251a(a), 1263(d), and 1265(d), to require proper operation and maintenance of pollution abatement facilities.

(b) 26 V.S.A. Chapter 99 sets forth prohibitions and exceptions, license application procedure, license renewal, license fee, and conduct requirements for pollution abatement facility operators. Pursuant to 26 V.S.A. Chapter 99, the Director of the Office of Professional Regulation conducts operator licensing and has adopted the OPR Rule to provide minimum standards of experience and knowledge required of each grade of pollution abatement facility operators.

(c) This Rule establishes the pollution abatement facility classification to which the OPR Rule's license types and grades correspond. The owner of a pollution abatement facility is responsible for compliance with this Rule.

Subchapter 2. DEFINITIONS

§ 4-201. DEFINITIONS

As used in this Rule, the following terms shall have the specified meaning. If a term is not defined, it shall have its common meaning.

(1) "Agency" means the Vermont Agency of Natural Resources.

(2) "Assistant chief operator" means the person who performs operations duties under the supervision of the chief operator and makes operational decisions in the absence of the chief operator.

(3) "Chief operator" means an individual designated by the owner to be the licensed operator who makes the process control decisions that directly impact the quality or quantity, or both, of wastewater.

(4) "Commissioner" means the Commissioner of the Vermont Department of Environmental Conservation.

(5) “Department” means the Vermont Department of Environmental Conservation.

(6) “Director” means the Director of the Vermont Office of Professional Regulation.

(7) “Domestic wastewater” means wastewater discharges from residences or from employee or public washrooms in institutions, businesses, or industrial establishments.

(8) “Emergency Situation” means a situation that poses an immediate risk to health, life, property, or the environment.

(9) “Indirect Discharge System,” for the purposes of this Rule, means a pollution abatement facility that engages in the indirect discharge of waste and is issued a discharge permit pursuant to the Indirect Discharge Rules (Environmental Protection Rules, Chapter 14), as they may from time to time be modified or retitled.

(10) “Industrial wastewater” means wastewater, other than domestic, discharged from institutions, businesses, or industrial establishments that is amenable to treatment by means of biological, mechanical, or chemical wastewater treatment.

(11) “License” means a current authorization granted by the Director pursuant to 26 V.S.A. Chapter 99 and the OPR Rule permitting the practice of pollution abatement facility operation.

(12) “Operational change” means an activity which directly affects the operations of the wastewater treatment facility (e.g. adjusting valves, increasing aeration rates, etc.)

(13) “OPR Rule” means the “Administrative Rules for Pollution Abatement Facility Operators,” established by the Secretary of State Office of Professional Regulation, as they may from time to time be modified or retitled.

(14) “Owner” means the discharge permit holder who is legally responsible for the operation of the pollution abatement facility.

(15) “Permit,” when used as a noun, means an authorization by the Agency of Natural Resources to operate a pollution abatement facility.

(16) “Pollution Abatement Facility” means a facility regulated pursuant to 10 V.S.A. § 1263.

(17) “Pollution Abatement Facility Operator”, “Operator” or “Licensed Operator” means a person holding a valid license to engage in the practice of pollution abatement facility operation.

(18) “Practice of pollution abatement facility operation” means the operation and maintenance of a facility regulated under 10 V.S.A. § 1263 by a person required by the

terms of a permit to hold particular credentials, including those of an "operator," "assistant chief operator," or "chief operator."

(19) "Provisionally Licensed Operator" means a person who holds a provisional license consistent with the OPR Rule.

(20) "Secretary" means the Secretary of the Vermont Agency of Natural Resources.

(21) "Wastewater treatment facility," for the purposes of this Rule, means a pollution abatement facility that is issued a discharge permit pursuant to the Water Pollution Control Permit Regulations (Environmental Protection Rules, Chapter 13), as they may from time to time be modified or retitled, to allow for the treatment of domestic or industrial wastewaters, or both, and the discharge of resulting effluent directly or indirectly to state waters.

Subchapter 3. GENERAL REQUIREMENTS FOR POLLUTION ABATEMENT FACILITY OWNERS

§ 4-301. FACILITY OPERATION BY LICENSED OPERATOR

(a) An owner of a pollution abatement facility with a discharge permit issued pursuant to 10 V.S.A. §§ 1263 or 1265, when such permit requires facility operation by licensed operator(s), shall employ licensed operators, including a chief operator for any wastewater treatment facility and a chief operator for any indirect discharge system where the indirect discharge permit requires a chief operator.

Note: Operators employed by businesses providing contract operations services to pollution abatement facilities shall be licensed in accordance with this Rule and the OPR Rule as if such operators were employed directly by the owner of the pollution abatement facility at which such services are provided.

(b) Notwithstanding Subsection (a), a permit issued pursuant to 10 V.S.A. §§ 1263 or 1265 that requires facility operation by licensed operator(s) may allow the Commissioner or delegated authority, on a case-by-case basis in emergency situations, to waive the licensed operator requirement for up to one year. To allow such waiver, the owner of the pollution abatement facility must provide evidence satisfactory to the Department that an emergency exists at the facility and that a suspension of the licensed operator requirement is the only means by which the facility can continue to safely operate.

(c) Except as otherwise provided in this Rule, chief operators of pollution abatement facilities are required to hold a license in the numerical grade and facility type equal to the numerical grade and facility type of the pollution abatement facility at which they are employed.

(d) Assistant chief operators of pollution abatement facilities are required to hold a license

not more than two numerical grades below the numerical grade of the pollution abatement facility at which they are employed. Assistant chief operators of pollution abatement facilities are required to hold a license in the facility type equal to the facility type of the pollution abatement facility at which they are employed.

(e) Notwithstanding Subsection (c), in the event of the chief operator leaving a pollution abatement facility, the assistant chief operator or an experienced operator with adequate knowledge of that specific facility may act as chief operator for a maximum of 6 months without obtaining the license required to become chief operator.

(f) Notwithstanding Subsection (c), for a pollution abatement facility that is industrial dairy or industrial metal, the Department may approve in writing the employment of a chief operator with a domestic-type license, provided that:

(1) The proposed operator holds a license in the numerical grade equal to or greater than the numerical grade of the facility; and

(2) The Secretary finds that:

(A) the facility is primarily engaged in the manufacturing of non-dairy food and beverages, which may include beer, distilled spirits, soy products, and fermented beverages;

(B) the facility treats wastewater using biological processes similar to those used at a domestic wastewater treatment facility (e.g., Activated sludge, bioreactors, etc); or

(C) an operator with a license equivalent to the facility type is not available within a reasonable distance to the facility.

(g) The owner of a pollution abatement facility shall require each chief operator, assistant chief operator, and other operator of the facility to prominently display his or her license in the facility, in a common area reasonably calculated to be accessible to employees, inspectors, and visitors to the facility, or, if such a common area does not exist, the owner shall maintain a record of such license and make it available for viewing upon request of any such person.

(h) A provisionally licensed operator cannot make operational changes at a pollution abatement facility without the oversight of a non-provisionally licensed operator.

§ 4-302. ADEQUATE STAFFING OF FACILITY

(a) Each pollution abatement facility shall employ the number of licensed operators necessary to ensure proper operation and maintenance of the facility.

(1) The Department may recommend, in writing, facility-specific staffing levels based on the type, complexity, and permitted flow of the facility, or the facility's needs.

(2) Absent a different recommendation by the Department, facility owners should refer to the New England Interstate Water Pollution Control Commission (NEIWPCC) publication "The Northeast Guide for Estimating Staffing at Publicly and Privately-Owned Wastewater Treatment Plants," as it may from time to time be modified or retitled, in determining adequate staffing levels.

(b) Pollution abatement facilities that are required by their discharge permits to employ licensed operators must do so continuously.

(c) Contingency planning for wastewater treatment facilities. Upon changes in personnel, wastewater treatment facilities must contact the Department stating the number of operators on staff, their licenses, number of hours on site per week, and a plan to ensure adequate staffing levels.

(d) Part-time coverage by a chief operator for wastewater treatment facilities.

(1) The chief operator must be on-site at the wastewater treatment facility a minimum of 8 hours per week and available to make day-to-day process decisions and respond to emergencies.

(2) The Department may require a chief operator to be on-site for more than 8 hours per week, based on the type, complexity, or permitted flow of the facility, or as otherwise determined by the Department based on the facility's needs.

(3) If the wastewater treatment facility is not normally staffed full time, the chief operator must be on-site a minimum of 4 hours per week and available to make day-to-day process decisions and respond to emergencies.

Subchapter 4. POLLUTION ABATEMENT FACILITY CLASSIFICATION

(a) The classification of a pollution abatement facility shall be determined using the following steps:

(1) Identify which of the following facility types the facility is:
(A) domestic wastewater treatment facility;
(B) domestic indirect discharge system;
(C) industrial dairy;
(D) industrial metal; or
(E) industrial paper.

(2) Calculate the total points for the facility using the point system in Table B by adding the points from each category applicable to the facility, taking into account that the points for a single category shall not be above the maximum total points for the category regardless of the actual point sum for the category.

(3) Identify the facility type and numerical grade associated with the facility in

Table A by using the facility type identified from Subsection (b)(1) and the point total from Subsection (b)(2).

Table A: **Pollution Abatement Facility Classification by Facility Type and Numerical Grade**

	Numerical Grades:				
Facility Types:	**Grade I**	**Grade II**	**Grade III**	**Grade IV**	**Grade V**
Domestic Wastewater Treatment Facility	0-50	51-90	91-120	121-150	151+
Domestic Indirect Discharge System	0-50	51-90	91-120	121+	n/a
Industrial Paper	0-50	51-105	n/a	106-151+	n/a
Industrial Dairy	10-50[1]	51-105	n/a	106-151+	n/a
Industrial Metal	10-50[1]	51-105	n/a	106-151+	n/a

[1] NOTE: On a case by case basis for Grade I Industrial Dairy and Grade I Industrial Metal facilities with a point total of 12 or less, the Department may make a permitting determination that the facility's treatment components are so simple as to not require operation by a licensed operator. In all other cases, the discharge permit for a facility classified as Grade I or above will require operation by a licensed operator.

Table B: Point System for Pollution Abatement Facility Classification by Permitted Flow and Treatment Components

Permitted Flow (gallons per day (gpd))	**Points**
Less than 10,000	1
10,000 to 50,000	2
50,001 to 100,000	4
100,001 to 500,000	9
500,001 to 1,000,000	12
1,000,001 to 5,000,000	16
5,000,001 to 10,000,000	20
Greater than 10,000,000	25
Maximum Points for Category	**30**

Preliminary Treatment	**Points**
Influent / primary pump / sewage pump (on-site)	1
Pump stations (off-site) less than 10	1
Pump stations (off-site) 10 or more	2
Grit collection / removal	2
Comminutor / grinder	1
Coarse screen automatic / fine or micro-screen automatic	2
Septage receiving (sophistication)	2

Flow equalization basin(s)	2
Imhoff tank / other predigestion / sedimentation	1
Maximum Points for Category	**10**

Primary Treatment	**Points**
Primary settling tank(s)	1
Primary Clarifiers	2
Primary Clarifiers with chemical addition	3
Receives external industrial waste that requires a pretreatment permit	2
Metals Precipitation	5
Maximum Points for Category	**8**

Secondary Treatment	**Points**
Extended Aeration (EA)	20
Conventional Activated Sludge (AS)	20
with pure oxygen (add points)	5
Oxidation ditch or closed loop reactor	10
Aerated Lagoon(s)(AL)	5
Sequencing Batch Reactor(s) (SBR), other batch treatment	20
Rotating Biological Contactor(s) (RBC)	20
Chemical addition non-nutrient related (2 points each chemical added/max 10)	10
Secondary clarifiers	5
pH adjustment / control	5
Trickling Filter	5
Maximum Points for Category	**40**

Advanced Treatment	**Points**
Sand filter / recirculating sand filter	5
Sand filter multi-media / recirculating filter	5
Membrane (or cloth) filtration	5
Chemical phosphorus removal	10
Biological phosphorus removal	10
Nitrification (permit required)	5
Denitrification (permit required)	5
Computer based control system for the facility (SCADA or DCS)*	5
Reverse osmosis / electrodialysis	5
Sprayfield Operation / Disposal followed by direct discharge	5
Membrane BioReactor (MBR)	10
Moving Bed BioReactor (MBBR)	10
Maximum Points for Category	**50**

* SCADA = Supervisory Control And Data Acquisition
* DCS = Distributive Control System

Disinfection	**Points**
Chlorination	5
Dechlorination	5
Ultraviolet (UV) disinfection	10
Maximum Points for Category	**10**

Solids Handling, Sludge Processing and Management	**Points**
Sludge holding tank / decanting tank	2
Sludge concentrator mechanical	3
Sludge gravity thickener basin	3
Sand drying beds	1
Digester (aerobic)	5
Digester (anaerobic)	10
Dissolved Air Floatation (DAF)	10
Belt filter press / plate & frame / vac filter	10
Electrical generation using digester gas	10
Centrifuge	10
Rotary press	10
Lime stabilization	3
Two-stage digestion, ATAD	10
Maximum Points for Category	**25**

Biosolids Management	**Points**
Composting/Heat drying	10
Land Application	10
Maximum Points for Category	**10**

Odor Control	**Points**
Odor control, site (scrubber / carbon)	10
Site odor control (biofilter)	10
Other odor control (chemical, bacteria, spray)	2
Maximum Points for Category	**10**

Laboratory Controls (analysis performed by plant personnel)	**Points**
Basic laboratory (pH, chlorine, settleable solids, temperature, dissolved oxygen, etc.)	2
Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), or *Escherichia coli* bacteria (E. *coli*) (4 points each with max. of 10)	10
Phosphorus, Total Kjeldahl Nitrogen (TKN), or other nutrients (4 points each with max of 10 points)	10
Advanced metals	10
Microscope ID	5
Maximum Points for Category	**25**

Final Treatment and Disposal (applicable only to Indirect Discharge Facilities)	**Points**
Treated Effluent Storage	5
Sprayfield, each	5
Leachfield, each	5
Water Reuse	10
Maximum Points for Category	**20**

Other	**Points**
Emergency power (entire plant)	10
Emergency power (partial plant)	5
Multi-permit	5
Maximum Points for Category	**15**