

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WASTEWATER MANAGEMENT DIVISION
WATER SUPPLY DIVISION

PROCEDURE FOR PERMITTING UNDER 10 V.S.A. CHAPTER 64 POTABLE WATER
SUPPLIES THAT CONTAIN NATURALLY OCCURRING CONTAMINANTS WITH
CHRONIC (NON-ACUTE) HEALTH EFFECTS

Background:

There are several areas of Vermont that have bedrock that contains arsenic compounds or similar contaminants of concern. Drinking water from wells drilled in these areas may contain elevated arsenic and therefore under our present protocols be determined to be failed supplies. Correction of a failed supply will require treatment of the water or abandonment of the well. This is true of other contaminants, but arsenic is the one of immediate concern. The Department has not previously considered treatment a viable option for single family residences; although, until now, the contaminant of concern has been pathogens, an acute health risk, rather than inorganics, usually a chronic health risk.

At present, the Water Supply Division allows small Public Water Systems regulated under 10 V.S.A. Chapter 56 (a transient non-community system, for example) to treat the water and be permitted under an operating permit. The Water Supply Division and the Health Department agree it is acceptable in certain circumstances for single family residences to be allowed to use treatment for non-acute-risk naturally-occurring contaminants provided that the permit dictates operating and compliance review conditions to assure that the treatment is effective and ongoing.

Procedure:

This procedure addresses water supplies with naturally-occurring contaminants that pose a non-acute health risk, with the exception of radionuclides. It does not apply to water supplies contaminated by man-made contaminants such as petroleum-related products. Water supplies with radionuclides are addressed by another Department procedure. The procedure also applies to the disposal of waste by-products from treatment systems for these supplies.

Principle 1: This procedure relates only to water systems that provide potable water for human consumption.

- Principle 2:** The Department, in all situations, recommends treatment systems without a discharge that violates the groundwater standards.
- Principle 3:** Treatment system discharges shall be disposed of in a properly sized system with the rest of the domestic wastewater. Separate systems for disposal of discharges may be allowed in special circumstances when it is prudent to do so to protect the existing domestic wastewater system. These approved separate systems will be considered to meet the definition of domestic wastewater systems for purposes of the Underground Injection Control (UIC) rule.
- Principle 4:** For **existing** water supplies, if it is necessary to choose a treatment system that discharges to the groundwater in violation of the groundwater quality standards, we will allow treatment systems that are the cost-effective solution that do not make the current groundwater situation worse, until a final disposal solution is determined that will protect the groundwater. Water used to backwash the treatment device may be provided from the treated water or untreated water from the drinking water source because either method will result in essentially the same mass balance of contaminants to the waste disposal system as is currently being released.
- Principle 5:** Treatment system discharges may include salts and other materials when used as necessary for operation of the water treatment system. Any constituents added to the backwash as part of the treatment process may be disposed of with the rest of the domestic wastewater. Subsurface disposal systems accepting backwash must assure that those added materials meet the groundwater standards at points of compliance.
- Principle 6:** For **new** projects, only treatment systems with no groundwater discharge or with a discharge that meets groundwater quality will be allowed.
- Principle 7:** Disposal of all waste products and filters or other devices used for treatment must be in accord with all federal, state and local requirements including the solid waste and hazardous rules, if applicable.
- Principle 8:** Use of the treatment systems serving other than owner-occupied single family residences will require written notification to the other users that the water is being treated for naturally-occurring contaminants.
- Principle 9:** Any proposal to change the point of disposal for an existing system or treatment unit will be evaluated to determine whether it will create a public health or environmental concern.

Permits will require operation of the treatment process to provide water that meets the drinking water standards, although the Department will not require compliance reporting. The permit will require that data from a one-time laboratory analysis of a

sample of the treated drinking water involved be submitted to the Department, in order to demonstrate that the treatment system chosen and installed is bringing contaminant levels down to acceptable health levels.

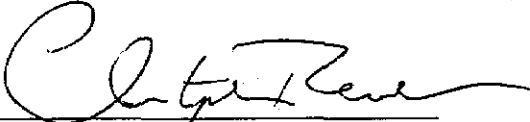
Any person wishing to dispose of treatment system discharges into a wastewater disposal system regulated under 10 V.S.A. Chapter 64, or the Indirect Discharge Rules shall obtain prior approval from the Department. The wastewater disposal system shall be sized to accept the additional hydraulic loading.

Systems for individual homes should be installed in accord with the principles listed above and in accord with the town wastewater disposal rules, if any apply.

Treatment system discharges shall not be discharged to any surface waters of the state, including those designated as wetlands, either directly or by overland flow without prior written approval.

Notwithstanding any of the above principles and provisions, the Department may impose additional measures as required to ensure public health protection and compliance with the groundwater standards.

Compliance with these guidelines shall in no way relieve a person's obligations under Title 10, Chapter 48, Subchapter 4 related to the protection of groundwater.

Signed: 
Christopher Recchia, Commissioner

Date: 2-13-03