

# STATE OF COLORADO

Bill Ritter, Jr., Governor  
James B. Martin, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S.      Laboratory Services Division  
Denver, Colorado 80246-1530      8100 Lowry Blvd.  
Phone (303) 692-2000      Denver, Colorado 80230-6928  
TDD Line (303) 691-7700      (303) 692-3090  
Located in Glendale, Colorado  
<http://www.cdphe.state.co.us>



Colorado Department  
of Public Health  
and Environment

April 13, 2009

PWSID# CO-0145780  
Vroman Water Company  
Attention: Carol S. Wilson  
P.O. Box 36  
Manzanola, CO 81058

Certified Mail Number: 7007 0220 0001 0160 6105

**RE: Service of Amendment to Enforcement Order Number: DC-020617-2**

Dear Ms. Wilson:

Vroman Water Company is hereby issued the enclosed amendment to the Enforcement Order that was issued to Vroman Water Company on June 17, 2002. This order amendment is issued by the Colorado Department of Public Health and Environment's Water Quality Control Division (the "Division") pursuant to the authority given to the Division by §25-1.5-203 of the Colorado Revised Statutes.

Should you desire to discuss this matter with the Division or if you have any questions regarding the order amendment(s), please don't hesitate to contact Jackie Whelan at (303) 692-3617 or by electronic mail at [jackie.whelan@state.co.us](mailto:jackie.whelan@state.co.us).

Sincerely,

Kristi-Raye Beaudin, Legal Assistant  
Compliance Assurance and Data Management Section  
WATER QUALITY CONTROL DIVISION

cc: Otero County Health Department  
Compliance Monitor / Drinking Water File

ec: Dave Knope, Engineering Section, CDPHE  
Dick Parachini, Watershed Program, CDPHE  
Betsy Beaver, Facility Operators Program, CDPHE  
Shawn McCaffrey, EPA Region VIII  
Jeff Lawrence, Director Consumer Protection Division, CDPHE  
Carolyn Schachterle, OPA

Enclosures



**COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT  
WATER QUALITY CONTROL DIVISION**

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**AMENDMENT TO ENFORCEMENT ORDER NUMBER: DC-020617-2  
NUMBER TWO**

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**IN THE MATTER OF: VROMAN WATER COMPANY  
PUBLIC WATER SYSTEM IDENTIFICATION NUMBER: CO0145780  
OTERO COUNTY, COLORADO**

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Pursuant to the authority vested in the Colorado Department of Public Health and Environment (the "Department") by §25-1-109 and §25-1.5-203 of the Colorado Revised Statutes ("C.R.S."), which authority has been delegated to the Department's Water Quality Control Division (the "Division"), the Division hereby makes the following findings and issues the following Enforcement Order Amendment:

**GENERAL FINDINGS**

1. On June 17, 2002, the Division issued Enforcement Order Number: DC-020617-2 to Vroman Water Company citing violations of the Colorado Primary Drinking Water Regulations for failure to comply with the maximum contaminant levels for combined radium-226 and radium-228. The Enforcement Order is attached hereto as Exhibit A and is incorporated herein by reference.
2. After re-evaluating the difficulties associated with complying with the radionuclides maximum contaminant levels and in coordination with the Division's CORADS initiative, the Division is amending Enforcement Order number DC-020617-2 as follows:

**AMENDMENT NUMBER TWO**

3. Effective as of the issued date of this Amendment, Enforcement Order Number: DC-020617-2 is therefore amended to revise the Enforcement Order as follows:
  - A. Paragraph 10 is superseded and replaced with the following new paragraph 3(A)(i):
    - i. A review of the radiological monitoring data from January 1, 2001, to present provided to the Department by the System, establishes that the running annual average of samples obtained by the System as required exceeds the maximum

contaminant level of 5 picocuries per liter (pCi/L) for combined radium-226 and radium-228.

<b>Combined Radium226+228 (in pCi/L)</b>					
<b>Sampling Point</b>	<b>Compliance Period/Date/Result</b>	<b>Compliance Period/Date/Result</b>	<b>Compliance Period/Date/Result</b>	<b>Compliance Period/Date/Result</b>	<b>Annual Average</b>
001T	Q1 2001 03/27/01 12	Q2 2001 06/28/01 12	Q3 2001 08/14/01 14	Q4 2001 12/31/01 12	13
	Q2 2001 06/28/01 12	Q3 2001 08/14/01 14	Q4 2001 12/31/01 12	Q1 2002 03/28/02 12	13
	Q3 2001 08/14/01 14	Q4 2001 12/31/01 12	Q1 2002 03/28/02 12	Q2 2002 06/10/02 9	12
	Q4 2001 12/31/01 12	Q1 2002 03/28/02 12	Q2 2002 06/10/02 9	Q3 2002 08/13/02 13	12
	Q1 2002 03/28/02 12	Q2 2002 06/10/02 9	Q3 2002 08/13/02 13	Q4 2002 12/11/02 5 (radium-226 only)	>10
	Q2 2002 06/10/02 9	Q3 2002 08/13/02 13	Q4 2002 12/11/02 5 (radium-226 only)	Q1 2003 03/17/03 12.1	>10
	Q3 2002 08/13/02 13	Q4 2002 12/11/02 5 (radium-226 only)	Q1 2003 03/17/03 12.1	Q2 2003 06/15/03 10.6	>10
	Q4 2002 12/11/02 5 (radium-226 only)	Q1 2003 03/17/03 12.1	Q2 2003 06/15/03 10.6	Q3 2003 07/22/03 11	>10
	Q1 2003 03/17/03 12.1	Q2 2003 06/15/03 10.6	Q3 2003 07/22/03 11	Q4 2003 No sample submitted	11
	Q2 2003 06/15/03 10.6	Q3 2003 07/22/03 11	Q4 2003 No sample submitted	Q1 2004 02/02/04 and 03/23/04 11.7 and 12.6	11
	Annual 2005 01/31/05 12.2				12
	Annual 2006 03/06/06 13.1				13
	Annual 2007 03/05/07 16.7				17
002	Annual 2007 10/09/07 13				13
	Annual 2008 05/20/08 15.4				15

- B. The compliance schedule specified in paragraph 14 is superseded and replaced with the following new paragraph 3(B)(i):
- i. In order to ensure long-term compliance with the maximum contaminant levels for combined radium-226 and radium-228, the Vroman Water Company shall evaluate and upgrade, as needed, the System's water sources and/or treatment process(es) in accordance with the following schedule:
    - a. By April 30, 2009, retain a qualified Professional Engineer (licensed in Colorado and experienced in drinking water systems) to evaluate and recommend radiological treatment technologies or alternate water sources to the Vroman Water Company to ensure compliance with the maximum contaminant level for combined radium-226 and radium-228.
    - b. By October 31, 2009, submit for Department review and comment a finalized Preliminary Engineering Report for system improvements to comply with the maximum contaminant levels for combined radium-226 and radium-228. If an alternate water source is proposed, submit for Department review and comment a detailed description of the alternate water source along with a copy of the laboratory analyses supporting that the alternate water source is suitable.
    - c. The Preliminary Engineering Report submittal package must be developed consistent with the Colorado Drinking Water Preliminary Engineering Report Guidance & Review Checklist Form. (see [http://www.cdphe.state.co.us/wq/opa/pdf/19\\_CPERGuideChecklistDW.pdf](http://www.cdphe.state.co.us/wq/opa/pdf/19_CPERGuideChecklistDW.pdf))
    - d. If an alternate water source is proposed, submit for Department review and comment a detailed description of the alternate water source along with a copy of the laboratory analyses supporting that the alternate water source is suitable.
    - e. The Preliminary Engineering Report (if applicable) must clearly identify the specific treatment technology the Vroman Water Company will use to ensure compliance with the maximum contaminant levels for combined radium-226 and radium-228.
    - f. The Preliminary Engineering Report (if applicable) must include a process flow schematic of the distribution system from wellheads to points of use, including flow rates, treatment facilities, storage tanks and all service connections supplied by the wells. Alternative treatment locations for the selected treatment process or processes must be evaluated with a recommended location selection. The process flow schematic information and evaluation must be included to ensure all water from the System is treated.

- g. The Preliminary Engineering Report (if applicable) must include a proposal for management of residuals from the treatment technology selected.
- h. The Preliminary Engineering Report submittal package must include design calculations showing the proposed treatment system is properly sized and chlorine contact times can be met for expected flow rates.

{Please note that, prior to construction, the Department must give final approval to any modifications to the System's water source or treatment process. The Department will not perform a detailed review and final approval of any proposed modifications until the final design plans and specifications have been received pursuant to paragraph 3(B)(i)(k) below.}

- i. By February 28, 2010, submit for Department review and comment the final Design Report for the Vroman Water Company System improvements to comply with the maximum contaminant levels for combined radium-226 and radium-228.
- j. By August 1, 2010, submit Final Design Plans and Specifications for the System improvements for Department review and approval in accordance with the State of Colorado Design Criteria for Potable Water Systems.
- k. The Final Design Plans and Specifications submittal package must include specifications for treatment equipment and/or chemical additives that come in contact with the water that indicate ANSI standards 60 and 61 are met (NSF certification).
- l. By October 15, 2011, complete construction/implementation of the Department approved System improvements to ensure long-term compliance with the maximum contaminant levels combined radium-226 and radium-228.
- m. By December 1, 2011, submit the Professional Engineer's Certification that the System improvements to comply with the maximum contaminant levels for combined radium-226 and radium-228 were constructed/installed as approved by the Department.

C. The following new paragraphs are incorporated into Enforcement Order Number DC-020617-2

- i. By no later than April 30, 2009, the Vroman Water Company shall complete an evaluation to determine appropriate interim measures to ensure that the System is providing the best possible quality of water available until the System implements improvements to ensure long-term compliance with the radiological maximum contaminant levels. The Vroman Water Company shall submit a written report of

the results of this evaluation to the Division for review and comment. Implementation of the interim measures identified by the Vroman Water Company shall become a condition of this Enforcement Order unless notified by the Division, in writing, that alternate or additional interim measures are appropriate. If the Division imposes alternate or additional interim measures, they shall also become a condition of this Enforcement Order.

- ii. By no later than April 30, 2009, and every three (3) months thereafter, the Vroman Water Company shall issue a public notice in accordance with 5 CCR 1003-1, Article 9.2 for each radiological maximum contaminant level violation identified in this Enforcement Order until the Vroman Water Company has effectively addressed and returned to compliance with the radiological maximum contaminant levels outlined in 5 CCR 1003-1, §2.6, Table 2-7. Within ten (10) calendar days of completion of each required public notification, the Vroman Water Company shall submit to the Department, along with the mandatory Public Notification certification of delivery, a representative copy of notices distributed, published, posted, and/or made available to the persons served by the system and/or to the media. (Attached are copies of procedures and forms to assist you with the public notification requirements.)
  - iii. The Vroman Water Company shall submit "System Improvement Project - Progress Reports" to the Division every ninety (90) calendar days. The first report shall be submitted to the Division by April 30, 2009. At a minimum, each report shall clearly indicate the status of the system improvement project at the time the report is filed and outline activities to be undertaken within the next ninety (90) calendar days. Each report shall also detail any public notification provided during that period. These reports shall be required until the System has effectively addressed and returned to compliance with the radiological maximum contaminant levels outlined in 5 CCR 1003-1, §2.6, Table 2-7.
  - iv. All documents submitted under this Order Amendment shall use the same titles as stated in the Order Amendment, and shall reference both the number of the Order, Amendment number, and the paragraph number pursuant to which the document is required.
- D. For all documents, plans, records, reports, and replies required to be submitted by the Order, Vroman Water Company shall submit an original and one copy (electronic is preferred) to the Division at the following address:

Colorado Department of Public Health and Environment  
Water Quality Control Division / WQCD-WQP-B2  
Compliance Assurance and Data Management Section / Enforcement Team  
Attention: Jackie Whelan  
4300 Cherry Creek Drive South  
Denver, Colorado 80246-1530  
Email: [jackie.whelan@state.co.us](mailto:jackie.whelan@state.co.us)

*(For any facsimile transmittals, please include a cover sheet addressed to Ms. Whelan.)*

**SCOPE OF AMENDMENT NUMBER TWO**

The scope of this Amendment Number Two to Enforcement Order Number DC-020617-2 is limited to the revisions outlined above. All other terms and conditions of the Enforcement Order shall remain unchanged and in effect.

Issued at Denver, Colorado, this 13<sup>th</sup> day of April, 2009.

**FOR THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT**



Lori M. Gerzina, Section Manager  
Compliance Assurance and Data Management Section  
Water Quality Control Division