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Agency of Natural Resources

August 14, 2014

Sen. Mark A. MacDonald, Chair.
Legislative Committee on Administrative Rules
State House
Montpelier, VT 05633-5301

Re: Final Proposed Underground Injection Control Rule
Summary of Changes Made to Rule Following Public Comment Period

Dear Senator MacDonald:

As required by the Final Proposed Rule Cover Page Form, the following is a list of the changes that were made to the proposed amendments to Vermont's Underground Injection Control Rule in response to comments received during the public comment period for the draft Rule and prior to filing with LCAR:

1. §11-104(c) was revised to read:

(c)

(1) The Secretary may, on a case by case basis, determine that a use not listed in Subsection (b) of this section ~~and that is not industrial or commercial~~ is a use that requires protection as a public trust use. In making this determination, the Secretary shall consider:

(A) the nature of the use~~,~~;

(B) whether ~~it~~the use serves a public purpose; and

(C) whether the use could have an adverse effect on the state's groundwater resources,

(2) Industrial and commercial uses of groundwater shall not be protected as public trust uses.

Reason for Change: During the comment period a question had been raised as to whether an industrial or commercial use of groundwater could be protected as a public trust under these Rules. This revision was made to clarify the rule in this regard.

2. §11-104(d) was added:

(d) In order to further protect groundwater resources of the State, the Secretary shall not issue a permit for a new injection well if a feasible alternative to the discharge is available. A feasible alternative is available when:

(1) a Wastewater Treatment Facility's collection system is within 500 feet of the project's property line;

(2) the Facility has sufficient uncommitted reserve capacity for the discharge of wastes which would otherwise be directed to the injection well;

(3) the waste to be discharged to the Facility will not interfere with, pass through without treatment, or otherwise be incompatible with the proper operation of the Facility; and

(4) the owner of the Facility has indicated in writing that it will accept the discharge and that it has allocated capacity for the discharge to the Facility.

Reason for Change: A primary reason for the Underground Injection Control Program is to protect underground sources of drinking water. The Program has had situations in the past where a municipal wastewater treatment facility collection system was a viable alternative to a discharge to groundwater via an injection well but there was no language in the UIC Rule which would require the use of that alternative and therefore ensure groundwater resource protection. The language contained in §11-104 (d) requires that an applicant utilize **a** municipal wastewater treatment facility for disposal when the conditions 1-4 are met. This protects the groundwater resource.

3. §11-201 (3) was revised to read:

Best Treatment and Disposal Technology – means a treatment and disposal technology for a type of waste that is based on ~~accepted~~ standard hydrogeologic and engineering principles and that is designed to achieve compliance with the primary enforcement standards of the Groundwater Protection Rule and Strategy.

Reason for Change: A comment was received that questioned the use of "accepted." "Standard" was deemed to be an acceptable alternative.

4. §11-201 (15) was revised to read:

> **Disposal System** – means a ~~subsurface~~ waste discharging system that may or may not depend on soil to treat the waste that is discharged where there is no overland flow.

Reason for Change: All disposal systems are not necessarily subsurface disposal systems.

5. §11-201 (34) was revised to read:

> **Soil-Based Disposal System** – means a disposal system that depends on naturally occurring soil to ~~absorb~~ receive the effluent from the system and to transmit the effluent away from the site without any overland flow. Soil-based disposal systems include, but are not limited to, those that have a septic tank with leachfield, an advanced treatment system with leachfield, or a spray disposal system.

Reason for Change: The soils beneath the system may or may not absorb the effluent based on the volume of the discharge and the nature of the soils.

6. §11-301(c) (5) was revised to read:

> storage of road salt and salt charged sand;

Reason for Change: We received this comment from someone familiar with road salting operations and made this change because the salt contained in the salt charged sand could pose a threat to the quality of groundwater.

7. §11-301(c) (8) was revised to read:

> (8) ~~funeral homes~~ chemical based body preparation and embalming;

Reason for Change: This was a comment received. The chemicals used for preparation and embalming constitute the threat to groundwater quality, not necessarily the funeral home itself. In addition, not all body preparation takes place at funeral homes and it is the activity that is the concern as opposed to the type of facility engaged in the activity.

8. §11-301(c) (10) was revised to read:

(10) petroleum distribution (fuel pumps, gas stations, etc.);

Reason for Change: This example was added to make it clear that injection wells at gas stations are prohibited.

9. §11-302(a)(1)(A)(xiv) was added:

(xiv) leather tanning and finishing (SIC 3111);

Reason for Change: This activity occurs in Vermont and utilizes chemicals and processes which could pose a moderate risk to groundwater quality.

10. 8. §11-302(a)(2) was revised to read:

(2) injection wells at aircraft de-icing facilities;

Reason for Change: This change was made to clarify what de-icing facilities were referring to as opposed to any de-icing activity.

11. §11-302 (a) (4) and (5) were revised to read:

(a) No person shall construct, operate, maintain, modify, convert, abandon, or close the following types of Class V wells without first obtaining a permit from the Secretary:

(4) injection wells that receive boiler blowdown water from boilers ~~with a heating capacity of greater than 250,000 British thermal units (BTUs)~~ generating steam that use chemicals other than sulfite-based oxygen scavengers and/or phosphate-based cleaners;

(5) injection wells that receive blowdown water from cooling towers associated with a heating system ~~with a heating capacity of greater than 250,000 British Thermal Units(BTUs);~~

Reason for Changes: Boilers generating steam also produce blowdown. Limiting exemptions from permitting blowdowns to systems without chemical treatment is not believed to be a practical approach. Chemicals such as sulfite are added to scavenge oxygen from the water to decrease potential for

corrosion. The result is a weak solution of sulfuric acid which, when discharged to an injection well at the concentrations of sulfite generally utilized, would not pose a threat to groundwater quality. In addition, there are phosphate-based cleaners which prevent calcium deposits from forming on tankage and piping. Blowdown containing phosphorus compounds is also not deemed to be a threat to groundwater quality.

There are other chemicals which may be utilized in steam boiler systems and so a blanket exemption for steam boiler blowdown is not warranted.

Blowdown from cooling towers directed to injection wells will require a permit because there are additional chemicals added for these systems which will warrant examination.

12. §11-303(a) was revised to read:

(a) The following types of injection wells are exempt from the ~~permitting requirements of~~ requirement to obtain a permit under this Chapter provided the specified conditions are met:

Reason for Change: Change made for clarity.

13. §11-303 (a)(6)(B) and (C) were added:

(6) injection wells where mining wastes are discharged provided:

(A)

(i) the waste that is to be discharged has been sampled and does not contain contaminants in excess of the primary groundwater enforcement standards of the GWPRS; or

(ii) the waste that is to be discharged has been sampled and does not contain contaminants that, when discharged, would result in a violation of the GWPRS at the compliance point;

(B) the owner of the injection well notifies the Secretary on the form provided that he or she is operating under the exemption; and

(C) the owner of the injection well retains a copy of the sampling results and any hydrogeologic analysis for seven (7) years from the date of the notification.

Reason for Change: During a public hearing on the rule a commenter asked about the process for exemptions. We have added (b) and (c) to provide further guidance to the stone finishing industry as to what was required for documentation of meeting the exemption requirements for UIC wells that receive discharges of "mining waste" as defined in the Rule.

14. §11-502(e) was corrected to read:

(e) **Facility Site Plan;** An application shall include a detailed facility site plan drawn to an accurate scale of 1" = 100' or ~~larger~~ smaller showing the following features and information within a 1000 foot radius of the proposed injection well:

Reason for Change: A larger scale, for example, could be interpreted as 1" = 500' which would provide less detail on the facility site plan. We intended to request a level of detail provided by 1" = 100' or smaller (say 1" = 20').

15. §11-502 (g)(2)(C) was revised to read:

(C) a determination that the hydrogeologic capacity of the site shall be sufficient to receive the design flow for the injection well without resulting in surfacing of the waste~~water~~ within 300 feet of the well;

Reason for Change: The term "wastewater" is not used in these Rules to describe discharges to underground injection control wells. The term that is used is "waste" to be consistent with the enabling statute for the Rules – 10 V.S.A. Chapter 47.

16. §11-503(a) was revised to read:

(a) Injection wells in existence as of the effective date of these Rules that have not received a permit before the effective date of these rules shall submit the application information required for new injection wells under §11-502 of these Rules within one year of receiving notification from the Secretary.

Reason for Change: A commenter asked when would owners of these existing injection wells have to submit the required application. Given the fact that the application materials would take some time to assemble, and the fact that the injection well was already existing, a one-year time frame was considered to be reasonable.

17. §11-601 (c) was revised to read:

(c) When a final permitting decision is made by the Secretary, a copy of the final permit or the permit denial and the response to comments received shall be sent to all persons who received a copy of the draft permit.

Reason for Change: We will distribute the response to comments received to everyone who received a copy of the draft permit. The document explains if the permit was issued and, if so, what changes were made based on comments received. Just notifying interested parties of the decision was not deemed to be sufficient.

18. §11-604 (a) was revised to read:

(a) Notwithstanding the requirements of §11-602 of these Rules, the Secretary may make administrative amendments to a permit without complying with the notice and comment requirements of Subchapter 4 of these rules if the Secretary has determined that the amendments pose ~~little to~~ no risk to groundwater. Administrative amendments include, but are not limited to, amendments that:

Reason for Change: Administrative amendments of permits are to be used in situations where changes made to the permit do not add any risk to the quality of groundwater.

19. Table 9-1 was revised to read:

Public Transient Non-Community Water Systems	500[see (iv)]	500[see (iv)]	500[see (iv)]

Reason for change: The isolation distances specified in the table for Public Transient Non-Community Water Systems are now all 500 feet. This makes the level of protection consistent with the minimum level of protection given Non-Transient, Non-Community Water Systems. In addition, the note was revised to allow for some flexibility.

20. §11-902 (b) was revised to read:

(b) The design and standards for injection wells not covered by subsection (a) of this section shall be based on the best treatment and disposal technology. Construction standards shall be based on ~~accepted~~ standard engineering principles and practices.

Reason for Change: A comment was received that questioned the use of "accepted." "Standard" was deemed to be an acceptable alternative.

21. §11-904 Table 9-1 note (iv) was revised to read:

(iv) The separation between an injection well and a Public Non-Community System source ~~shall be determined by~~ may be increased or decreased using the methods identified in the Vermont Water Supply Rules.

Reason for Change: The footnote was revised to allow for the default isolation distance of 500 feet to be increased or decreased based on site specific conditions.

22. §11-904 Table 9-1 note (vi) was revised to read:

(vi) The isolation distance shall be measured from the top of the bank. For the purposes of this note, "Top of Bank" means that ~~vertical~~ point along a stream bank where an abrupt change in slope is evident. For streams in wider valleys it is the point where the stream is generally able to overflow the banks and enter the floodplain. For steep and narrow valleys, it will generally be the same as the top of slope.

Reason for Change: A vertical point is a one-dimensional feature which cannot adequately describe the top of bank which is a three-dimensional feature (has length, width and height).

23. §11-905 (d) was revised to read:

All sampling and analysis procedures for testing and monitoring shall be conducted by a competent laboratory. A competent laboratory is one that ~~has annually demonstrated successful analysis of proficiency samples obtained from accredited providers for all parameters required to be analyzed~~ maintains accreditation by the National Environmental Laboratory Accreditation Program (NELAP), or other DEC recognized certification/accreditation programs. Laboratories must clearly state the status of accreditation for each reported parameter, which allows appropriate interpretation of the validity of the results.

~~Note: Two organizations are accredited providers of proficiency samples: The American Association for Laboratory Accreditation and ACLASS.~~

Reason for Change: We received comments on this section from the lab director of a commercial

laboratory familiar with the procedures described as well as Department personnel familiar with these procedures. The revised language was suggested by these individuals.

24. §11-906 (a) was revised to read:

(a) The permittee shall be required to contract with a professional engineer to conduct an annual inspection of the injection well and its associated infrastructure, including any treatment system. The engineer shall provide a report of the results of the inspection to the Secretary in accordance with the conditions of the permit. On a case by case basis, the Secretary may waive the requirement that a professional engineer perform the annual inspection if the Secretary determines that a different type of professional, such as a geologist, is qualified to conduct the inspection.

Reason for Change: In response to a comment received, the language was revised to provide flexibility for the Secretary to allow a different types of professionals, such as geologists, to conduct inspections of injection wells when the Secretary determines that a specific individual with appropriate training would be qualified to evaluate the injection well.

25. §11-907 (c) was revised to read:

closure plans shall be based on ~~accepted~~ standard hydrogeologic principles and engineering practices

Reason for Change: A comment was received that questioned the use of "accepted." "Standard" was deemed to be an acceptable alternative.

Sincerely,

Deborah Markowitz, Secretary
Agency of Natural Resources