

7045.0592 GROUND WATER QUALITY ASSESSMENT PROGRAM.

Subpart 1. **Program outline.** The owner or operator shall prepare an outline of a ground water quality assessment program. The outline must describe a more comprehensive ground water monitoring program than that described in part 7045.0590, subparts 4, 5, and 6. The program must be capable of determining:

A. whether hazardous waste or hazardous waste constituents have entered the ground water;

B. the rate and extent of migration of hazardous waste or hazardous waste constituents in the ground water; and

C. the concentrations of hazardous waste or hazardous waste constituents in the ground water.

Subp. 2. **Comparison of analysis results.** For each indicator parameter specified in part 7045.0590, subpart 6, item B, subitem (3), and determined pursuant to part 7045.0590, subpart 6, item B, subitem (4), the owner or operator shall calculate the arithmetic mean and variance, based on at least four replicate measurements on each sample, for each well monitored in accordance with part 7045.0590, subpart 6, item D, and compare these results with its initial background arithmetic mean. The comparison must consider individually each of the wells in the monitoring system, and must use the Student's t-test at the 0.01 level of significance as described in Code of Federal Regulations, title 40, part 265, appendix IV, as amended, to determine statistically significant increases and, in the case of pH, decreases from initial background.

Subp. 3. **Additional sampling.** If the comparisons for the upgradient wells made under subpart 2 show a significant increase or pH decrease, the owner or operator shall submit this information in accordance with part 7045.0590, subpart 8, item A, subitem (2).

If the comparisons for downgradient wells made under subpart 2 show a significant increase or pH decrease, the owner or operator shall then immediately obtain additional ground water samples from those downgradient wells where a significant difference was detected, split the samples in two, and obtain analyses of all additional samples to determine whether the significant difference was a result of laboratory error.

Subp. 4. **Notification.** Notification requirements are as follows:

A. If the analyses performed under subpart 3 confirm the significant increase or pH decrease, the owner or operator shall provide written notice to the commissioner, within seven days of the date of such confirmation, that the facility may be affecting ground water quality.

B. Within 15 days after the notification under item A, the owner or operator shall develop and submit to the commissioner a specific plan, based on the outline required under

subpart 1 and certified by a qualified geologist or geotechnical engineer, for a ground water quality assessment program at the facility.

C. The plan to be submitted under item B or part 7045.0590, subpart 5, item A must specify:

- (1) the number, location, and depth of wells;
- (2) sampling and analytical methods for those hazardous wastes or hazardous waste constituents in the facility;
- (3) evaluation procedures, including any use of previously gathered ground water quality information; and
- (4) a schedule of implementation.

D. The owner or operator shall implement the ground water quality assessment plan which satisfies the requirements of item C and determine:

- (1) the rate and extent of migration of the hazardous waste or hazardous waste constituents in the ground water; and
- (2) the concentrations of the hazardous waste or hazardous waste constituents in the ground water.

E. The owner or operator shall make the first determination under item D as soon as technically feasible, and, within 15 days after determination, submit to the commissioner a written report containing an assessment of the ground water quality.

F. If the owner or operator determines, based on the results of the first determination under item D, that no hazardous waste or hazardous waste constituents from the facility have entered the ground water, then he or she may reinstate the indicator evaluation program described in part 7045.0590, subpart 6, item B, subitems (1) and (2). If the owner or operator reinstates the indicator evaluation program, he or she shall so notify the commissioner in the report submitted under item E.

G. If the owner or operator determines, based on the first determination under item D, that hazardous waste or hazardous waste constituents from the facility have entered the ground water, then he or she:

- (1) shall continue to make the determinations required under item D, on a quarterly basis until final closure of the facility, if the ground water quality assessment plan was implemented prior to final closure of the facility; or
- (2) may cease to make the determinations required under item D, if the ground water quality assessment plan was implemented during the postclosure care period.

Subp. 5. **Completion requirement.** Notwithstanding any other provision of this part, any ground water quality assessment to satisfy the requirements of subpart 4, item D, which

is initiated prior to final closure of the facility must be completed and reported in accordance with subpart 4, item E.

Subp. 6. **Annual evaluation.** Unless the ground water is monitored to satisfy the requirements of subpart 4, item D, the owner or operator shall evaluate at least annually the data on ground water surface elevations obtained under part 7045.0590, subpart 6, item E, to determine whether the requirements under part 7045.0590, subpart 4, for locating the monitoring wells continues to be satisfied. If the evaluation shows that part 7045.0590, subpart 4, is no longer satisfied, the owner or operator shall immediately modify the number, location, or depth of the monitoring wells to bring the ground water monitoring system into compliance with this requirement.

Subp. 7. **Record keeping and reporting.** If the ground water is monitored to satisfy the requirements of subpart 4, item D, the owner or operator shall:

A. keep records of the analyses and evaluations specified in the plan, which satisfies the requirements of subpart 4, item C, throughout the active life of the facility, and for disposal facilities, throughout the postclosure care period as well; and

B. annually, until final closure of the facility, submit to the commissioner a report containing the results of the ground water quality assessment program which includes, but is not limited to, the calculated or measured rate of migration of hazardous waste or hazardous waste constituents in the ground water during the reporting period. This report must be submitted as part of the annual report.

Statutory Authority: *MS s 116.07*

History: *9 SR 115; L 1987 c 186 s 15; 20 SR 715*

Published Electronically: *October 10, 2013*