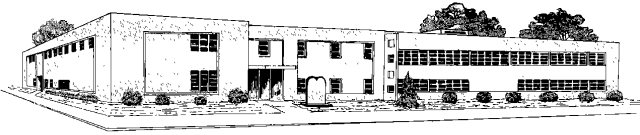


MOWER COUNTY

AUSTIN, MINNESOTA

55912



April 1, 1992

Minutes of 122nd Meeting of the Mower County Board of Adjustment

Members Present: Don Olson, Bill Milbrath

Members Absent: Merrill Chesebrough, Ken Trom

Others Present: Peter Zimmerman, Katie Losness-Larson,
Sandra Fredrickson, William C. Buckley,
James Johnson and Dennis Morrison

The special meeting of the Mower County Board of Adjustment was called to order by Don Olson on Wednesday, April 1, 1992, at 4:00 p.m. in the Conference Room of the Mower County Planning Department in Austin, Minnesota. Minutes of the March 18, 1992, meeting were approved as mailed on a motion made by Mr. Milbrath, seconded by Mr. Olson and passed unanimously.

Variance #WC1 to Allow a Cased and Grouted Galena Limestone Well of an Approximate Depth of 400 Feet - James Johnson:

The staff report was read. James Johnson is requesting a variance from Section 6-82 of the Mower County Well Code on property located in Section 10 of Adams Township (NW 1/4 NW 1/4 SW 1/4). The variance would allow a shallower aquifer with acceptable water quality to be used rather than drilling to the deeper sandstone aquifer.

Peter Zimmerman, Minnesota Department of Health, was called on to present the Minnesota Department of Health's procedure and background information on issuing well variances. Mr. Zimmerman explained that a Galena variance, as was being requested in this case, is considered reasonable by the Department of Health because of the restrictive nature of the Code regarding wells in much of Mower County. Mr. Zimmerman explained that the State Well Code requires a minimum of 50 feet of drift (soil) over the limestone within one mile of the location of the proposed well in order for the first limestone to be used for a water supply. Technically speaking, the Galena is still part of the first limestone formation. However, in much of Mower County the Dubuque-Maquoketa Shale is felt to be substantial enough to provide a barrier between the Cedar Valley limestone and the deeper Galena limestone formation and provides protection for the Galena aquifer. In this case, it is felt that where the Cedar Valley is the first limestone formation with an existing Maquoketa Dubuque Shale separating the two

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limestone formations, the Galena would be of acceptable quality to be used as a water supply rather than drilling to the St. Peter Sandstone, as would be required if the Code were strictly adhered to. The St. Peter Sandstone is 200-300 feet deeper than the Galena formation in much of Mower County.

The petitioner, Mr. Johnson, explained that his request for a variance was due to the fact that an adequate water supply was felt to be present in the Galena formation and that it would be considerably more expensive to drill to the St. Peter formation. Mr. Johnson further explained that his well driller expressed concerns and mentioned problems with drilling to the St. Peter versus the Galena formations. Problems such as losing drill bits and dry wells or cave-ins have been encountered with wells in the St. Peter Sandstone.

Commissioner Olson noted that the Minnesota Department of Health has issued a letter of approval to the County for the variance, but has placed conditions on the granting of the variance. Mr. Olson then stated that the State Statute requirements for granting a variance were satisfactory as it is consistent with the Ordinance and the Comprehensive Plan and that by requiring drilling to the St. Peter formation there would be practical difficulties involved that could be avoided by drilling to the Galena, as requested in the variance.

A motion was then made by Don Olson that the Board of Adjustment approve the variance requested by Mr. James Johnson with the approval and conditions previously granted by the Minnesota Department of Health as follows:

1. The variance is valid only with the written approval of Mower County. Approval must be obtained prior to construction and in accordance with the Mower County Water Well Ordinance (Article VII). All conditions from the granted state approval shall be included within the county's final variance decree.
2. The Galena formation at the well location is overlain by the Maquoketa, Dubuque, and Cedar Valley formations.
3. The well shall not be completed in the Maquoketa, Dubuque, or Cedar Valley formations.
4. The well must be cased and grouted a minimum of 15 feet into the Galena formation and at least 10 feet below the pumping level in the well.

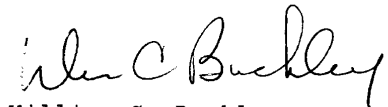
5. The well must be constructed in an oversized hole which is at least 3.5 inches larger than the outer diameter of the casing. If couplings are used, the borehole must be at least 3.5 inches larger than the outer diameter of the couplings. The annular space around the casing must be filled with neat cement grout.
6. The well shall be test pumped and the well water sampled prior to grouting. The water sample taken from the well must meet water quality standards for coliform bacteria (less than 1.0 organism/100 milliliter (ml) MF method or less than 2.2 organisms/100 ml MPN method) and nitrate nitrogen (less than 10.0 milligrams/liter (mg/l)). If the water quality in the Galena formation is unsatisfactory, the well must be cased and grouted into an underlying safe aquifer or be sealed in accordance with Minnesota Rules, Chapter 4725.
7. Water from this well shall be tested annually for nitrate nitrogen for a period of three years. The results of this test must be forwarded to the Minnesota Department of Health, Southeastern District Office, Campus Center Building, 2116 Campus Drive S.E., Rochester, Minnesota 55904-4744, and the Mower County Environmental Health Department.
8. Representative samples of drill cuttings shall be collected for each 5-foot drilled interval. These samples shall be collected in bags which will be sent to you under separate cover. The Minnesota Geological Survey (MGS) will pick up the sample bags.
9. The MGS (612/627-4788) shall be contacted after the borehole is drilled so that a gamma-log of the well may be obtained. The gamma-log and cuttings shall be analyzed before the casing is grouted in place to assure the well will be cased and grouted at least 15 feet into the Galena limestone. If it is determined that the well is completed in the Maquoketa, Dubuque, or Cedar Valley formations, the contractor will be required to extend the oversized hole and casing at least 15 feet into the Galena formation.
10. The MDH, Southeastern District Office and county shall be notified at least 24 hours prior to the construction of the well.
11. The well must be constructed in accordance with all other provisions of Minnesota Rules, Chapter 4725.

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and; with the exception that in condition #6, the nitrate content shall be no greater than five parts per million, as stated under Section 6-83 of the Mower County Code. The motion was seconded by Mr. Milbrath with both Board members voting for the motion.

A motion to adjourn was then made by Mr. Milbrath and seconded by Don Olson with both members voting in favor of the motion.

Respectfully submitted,



William C. Buckley
Environmental Health Director

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