



COPY

March 30, 2005 *Protecting, maintaining and improving the health of all Minnesotans*

Refer to: License Number 27058 (TN 3434A)

Mr. Daniel Owens
Naval Facilities Engineering Command
Southern Division
2155 Eagle Drive
North Charleston, South Carolina 29406

Mr. John Henrich
Bergerson-Caswell, Inc.
5115 Industrial Street
Maple Plain, Minnesota 55359

Dear Mr. Owens and Mr. Henrich:

Subject: Amendment to Variance TN 3434 for Monitoring Well Construction in Anoka County Riverfront Park, Located in the NE ¼ of the NE ¼ of the NW ¼ of Section 27, Township 30 North, Range 24 West, Anoka County, Minnesota

Variance TN 3434 was issued by the Minnesota Department of Health (MDH) to you on March 9, 2005, to allow construction of three monitoring wells, Minnesota Unique Well Numbers 725500, 725504, and 725506, with 2-inch diameter PVC casing to a total depth of 75 feet. Minnesota Rules, part 4725.6650, subpart 1 requires that a monitoring well may be constructed with flush threaded polyvinyl chloride (PVC) casing and screens only if the screen intersects the water table, the total depth of the well is 50 feet or less, the well is completed in unconsolidated materials, and the flush threaded PVC casing used meets the standards in Schedule 40 as referenced in ASTM Standard 1785-88.

On March 29, 2005, Mr. Rob Caho of Bergerson-Caswell, Inc. contacted Mr. Ed Schneider of the MDH to request that the variance be amended to include five additional monitoring wells, Minnesota Unique Well Numbers 724649, 725501, 725502, 725503, and 725505. Mr. Caho explained that these wells were originally expected to be completed at depths of less than 50 feet. However, recently obtained geological information suggests that some or all of these five wells will need to be completed at depths greater than 50 feet. The wells will be constructed similar to the three originally approved wells, with 2-inch diameter flush thread PVC well casing, 5 to 10 feet of screen at the bottom of each well, and completed at total depths of no more than 75 feet.

The proposed well depth is necessary to delineate the distribution and degradation of injected vegetable oil. The use of steel casing is not desirable, as it would interfere with future downhole geophysical work.

In accordance with Minnesota Rules, Chapter 4725, and based on the information provided, **Variance TN 3434 is amended to allow construction of up to eight monitoring wells constructed with 2-inch diameter flush thread PVC well casing and completed at depths of no more than 75 feet.** The variance is approved for monitoring wells with Minnesota Unique Well Numbers 724649, 725500, 725501, 725502, 725503, 725504, 725505, and 725506. The variance is granted because of the need for monitoring and remediation of the groundwater at the site.

Mr. Daniel Owens
Mr. John Henrich
Page 2
March 30, 2005

The variance is granted with the following conditions:

1. You must contact MDH staff, Mr. Steve Bennett at 651/643-2113 or Mr. Ronald Thompson at 651/643-2108 at least 24 hours prior to beginning well construction.
2. The flush threaded PVC casing must meet the standards of ASTM F480-02, and the standards in Schedule 40 as referenced in ASTM Standard D1785-04.
3. The annular space between the casing and the bore hole must be filled with neat-cement grout, pumped through a tremie pipe from within 10 feet of the top of the screen up to the ground surface.
4. All other requirements of Minnesota Rules, Chapter 4725, are in effect.

Alternative measures or conditions attached to a variance have the force of law and effect of applicable rule. If a party violates the alternative measures or conditions attached to the variance, the party is subject to enforcement actions and penalties provided in the applicable law or rule.

The variance is conditioned upon the applicable acceptance of and compliance with the conditions of the variance. Failure by the applicant to comply with the conditions prescribed in the variance will result in the immediate expiration of the variance.

If you have any questions, please contact Mr. Schneider at 651/215-0827 or Mr. Bennett at 651/643-2113.

Sincerely,



Daniel A. Wilson, Manager
Well Management Section
Environmental Health Division
P.O. Box 64975
St. Paul, Minnesota 55164-0975

DAW:ECS:dg

cc: Jeff Perry, Anoka County Department of Parks and Recreation
David Douglas, Minnesota Pollution Control Agency
Venky Venkatesh, CH2M Hill, Inc.