

## Mickelson, George M

---

**From:** Mickelson, George M  
**Sent:** Friday, April 18, 2003 1:22 PM  
**To:** 'jeffk@samsdrilling.com'; 'jdidion@didionmilling.com'  
**Subject:** didion milling high cap wells

I have started to work on the high capacity well approval.

I need more information, as follows:

1. Location of the proposed wells. The application included three maps, a plat map showing the property in the SE 1/4 of the NE 1/4 of Section 6, but another map indicated that the property is east of highway 146 and north of Cabbage road. This location appears to be in the S 1/2 of the NW 1/4 of Section 5. I need to know exactly where the wells will be.

2. The detail provided below on the non-pressurized storage vessel is inadequate for issuing an approval, I need detailed design plans. Please refer to NR 812.33, for guidance on the level of detail that I need for the approval. I copied and pasted part of that code into the e-mail, below. Also, I need to know if it will be limited to process water or if the water from that vessel will be used for potable purposes. If for example, all potable needs will be supplied by a small pressurized tank(s) and if the non-pressurized storage vessel is used for non-potable uses only, that may expedite review.

If you prefer, I can continue to work on the well approval without approving the storage vessel at this time. In this case, at this time I only need the information in item 1 above. Or, I can wait for you to submit the plans for the storage vessel. Please let me know which you prefer.

My fax number and phone number is below.

Pertinent part of NR 812.33 is as follows:

**(2) NONPRESSURE STORAGE VESSELS.** Nonpressure storage vessels, other than surge tanks, may not be used without approval. Vessel approval is based on methods of construction and sanitary provisions.

(a) *Surge tanks.* Surge tanks shall meet the requirements for pressure tanks described in s. NR 812.33 (1).

(b) *Reservoirs and elevated storage tanks.* A reservoir may be constructed to store water if it is constructed above the groundwater level and in accordance with this paragraph and figure 44A.

1. General construction specifications. a. Gravity supply pipes shall be located entirely above grade and shall be conducted to the reservoir through the roof or through the curbing for the manhole. The overflow pipe described in subpar. b. may be installed at such a level to provide a free-air gap. Buried supply pipe shall be maintained under a continuous pressure head which is greater than the ground surface elevation.

Note: The department recommends that trees and shrubs not be planted within 25 feet of a reservoir.

b. An exposed overflow pipe shall be located just under the roof of the reservoir or outside the elevated storage tank and shall extend at least 8 feet away. The overflow pipe shall terminate with a downturned, screened elbow located at least 12 inches above ground grade. The pipe shall discharge onto a splash plate and have sufficient diameter to permit wasting water at a rate in excess of the inflow from the water source.

2. Steel construction specifications. Steel reservoirs or elevated storage tanks shall meet the requirements of AWWA D100-84 for welded construction or AWWA D103-80 for bolted construction.

3. Access. Water storage structures shall be designed with convenient access for cleaning and maintenance.

4. Concrete construction specifications. Reservoirs constructed of concrete shall meet the following specifications:

a. The supply pipe and overflow pipe shall extend through the structure.

- b. An impervious flexible water stop strip for wall construction joint and a reservoir drain facility shall be installed before the concrete is poured.
- c. The floor of the reservoir shall be reinforced poured concrete with a thickness of at least 6 inches and shall have a curbing wall 6 inches high and 6 inches thick having a keyway or a flexible water stop strip for a construction joint with the walls.
- d. The walls of the reservoir shall be reinforced poured concrete at least 6 inches thick and terminate above the established ground grade.
- e. The roof shall be reinforced poured concrete at least 6 inches thick and shall extend at least 12 inches above established ground grade. An access manhole at least 20 inches in diameter or 20 inches square shall be constructed as an integral part of the roof. The manhole shall have a curbing wall extending at least 12 inches above the roof. The department recommends that the manhole shall be constructed entirely of 4-inch thick reinforced poured concrete, but may be fabricated of 1/4-inch steel or cast iron frame with a gasket and bolted cover. The curbing shall be provided with a snug fitting, overlapping cover with a minimum of 3-inch wide skirted sides. The department recommends that the cover be constructed with welded sheet steel, but may be constructed with reinforced poured concrete. Concrete shall be mixed according to the requirements in s. NR 812.26 (7) (b) 2. or 812.36 (2) (b) 1.

(3) PAINTING AND CATHODIC PROTECTION. Metal surfaces shall be protected by paints or other protective coatings, or by cathodic protective devices. Paint systems shall be consistent with AWWA standard D102 and approved. Cathodic protection shall be designed and installed by competent technical personnel. A copy of the AWWA standards are available for inspection at the office of the department of natural resources, the secretary of state's office and the office of the revisor of statutes, and may be obtained for personal use from AWWA, Inc., 6666 W. Quincy Avenue, Denver, Colorado 80235.

-----  
George Mickelson

Private Water Systems Section  
Bureau of Drinking Water and Groundwater  
Wisconsin DNR, Mail Code DG/2  
101 S. Webster - 53703  
P.O. Box 7921 - 53707-7921  
Madison, WI  
Phone = (608) 267-7652  
Fax = (608) 267-7650  
George.Mickelson@dnr.state.wi.us  
-----

-----Original Message-----

**From:** Jeff Kramer [mailto:jeffk@samsdrilling.com]  
**Sent:** Monday, March 31, 2003 9:35 AM  
**To:** Mickelson, George M  
**Subject:** FW: specifications for water tank

-----Original Message-----

**From:** John Didion [mailto:jdidion@didionmilling.com]  
**Sent:** Thursday, March 27, 2003 5:11 PM  
**To:** Jeff Kramer

**Subject:** specifications for water tank

Jeff, Below I've outlined the specifications for the well system water tank for your review.  
information:

The tank will be fabricated on site to the following specifications:

Custom designed and built to API 650 code

Capacity 240,000 gallons

36 foot diameter 32 foot side wall

Bottom of tank will be ¼ inch carbon steel

Sidewalls and top of tank will be 3/16 inch carbon steel

Outside painted surface

Include high and low limit switches

The well pump will discharge to the top tank and will include a backflow preventer.

Please let me know if you need additional information Thanks, John