

✓ 9-11-06

13.5.2.2

## VARIANCE REQUEST

### Iowa Department of Natural Resources

1. Date: May 23, 2006  
 2. Review Engineer: Larry Bryant  
 3. Date Received: May 5, 2006  
 4. Facility Name: City of Gravity WWTF  
 5. County Number: 87 (Taylor)  
 6. Program Area: CP (Wastewater Construction)  
 7. Facility Type: C02 (Pumping)  
 8. Subject Area: 314 (Check Valve Location)  
 9. Rule Reference: 567-64.2(9)a  
 10. Design Stds Ref: 13.5.2.2; 13.10.4  
 11. Consulting Engr: S.I.R.W.A.  
 12. Variance Rule: 567-64.2(9)c

13. **Decision:** *approved*  
 Date: *5/23/06*  
 14. **Appeal:**  
 Date:

15. Description of Variance Request:

Allow the use of flapper-type check valves mounted in the vertical position located in the wet well. IA 13.5.2.2 requires that check valves be placed in the horizontal position, except for ball checks, which may be mounted in the vertical position. IA 13.10.4 requires that check valves be located in a separate valve chamber.

16. Consulting Engineer's Justifications

"This check valve is the manufacturers standard design and has been used in thousands of installations throughout the country. We are requesting a variance to the design standards to allow the installation of the manufacturers preferred design."

17. Department's Justifications

**Recommend variance approval:**

The application is a small lift station serving 35 people with package-type duplex grinder pump station. The check valves are standard with the pumps and can be removed with the pumps without entry to the wet well. The 2004 edition of 10-State's Standards allows for check valve mounting in the wet well provided that the valve can be removed with the pump. In addition, remote monitoring of this lift station will be provided by S.I.R.W.A.

18. Precedents Used

City of DeSoto - Approved 11/18/03

City of LeMars - Approved 12/9/03

City of Parkersburg - Approved 5/16/00

City of Marshalltown - Approved 10/18/89

City of Iowa Falls - Approved 1/7/91

19. Staff Reviewer:

Date: *5/23/06*

20. Authorized by:

Date: *5/23/06*