



Variance 176

STATE OF IOWA

THOMAS J. VILSACK, GOVERNOR
SALLY J. PEDERSON, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
JEFFREY R. VONK, DIRECTOR

December 9, 2003

Mr. Scott Langel
City Administrator
City of LeMars
40 Central Ave. SE
P.O. Box 1130
LeMars, Iowa 51031-1130

Subject: City of LeMars, Iowa
2003 Wastewater Treatment Facilities Improvements – Phase I
Variance Request, IA 13.5.2
IDNR Project No. S2001-114
SRF Project No. CS192214-01

Dear Mr. Langel:

This is in response to Bolton & Menk, Inc. request for a variance from Chapter 13.5.2 of the Iowa Wastewater Facilities Design Standards. Design Standard 13.5.2 states *"Check valves shall be suitable for the material being handled and shall be placed on the horizontal portion of discharge piping except for ball checks, which may be placed in the vertical run."*

The design variance for the proposed pumping station design including vertically positioned check valves is approved as substantially equivalent to the requirements of Design Standard 13.5.2 in accordance with Subrule 567 IAC 64.2(90) with the following conditions:

1. Only check valves that are approved by the manufacturer for vertical installation shall be used.
2. A cover plate on the check valve shall be provided which can be removed to inspect the entire valve on the discharge side.
3. Piping alignment shall be sized and configured to allow for the addition of check valves in the horizontal portion of the discharge piping, as required by Chapter 13.10.4.

If you have any questions, please call Jim Hallmark at 515-281-7767.

Sincerely,



Wayne Farrand, P.E.
Supervisor
Wastewater Section

cc: Bolton & Menk, Inc.
Field Office #3
DNR File

✓ 9-11-06

VARIANCE REQUEST

Iowa Department of Natural Resources

1. Date: December 8, 2003
2. Review Engineer: James A. Hallmark
3. Date Received: December 5, 2003
4. Facility Name: City of LeMars
5. County Number: Plymouth (75)
6. Program Area: CP (Wastewater Construction)
7. Facility Type : C02 (Pumping)
8. Subject Area : 314
9. Rule Reference: 567-64.2(9)a
10. Design Stds Ref: 13.5.2
11. Consulting Engr: Bolton & Menk
12. Variance Rule: 567-64.2(9)c

13. Decision:

Date:

approved
12/9/03

14. Appeal:

Date:

15. Description of Variance Request: A request was received from Bolton & Menk, Inc. to locate the check valves in the sludge lines in the vertical position rather than the horizontal position as required by Iowa Wastewater Facilities Design Standards Chapter 13.5.2

16. Consulting Engineer's Justifications

- The vertical design has been used for many years and has not been a source of plugging.
- The check valves are not located at a raw wastewater lift station.
- The City of LeMars currently has vertically installed check valves and has not experienced any problems.
- This type of design has been approved by the department on several occasions (City of Webster City, City of Lenox)
- Manufacturer states that valves can be installed in either the horizontal or vertical position.

17. Department's Justifications

- Not aware of any significant problems with this design.
- Concurrence with Engineers Justification.

18. Precedents Used

Oskaloosa (1982), Carlisle (1985), Perry (1988), Kellogg (1988), Fort Dodge (1991), Van Meter (1991), Alden (1996), and North Liberty (1998)

19. Staff Reviewer:

Date:

James A. Hallmark

12/9/03

20. Supervisor:

Date:

[Signature]

21. Authorized by:

Date:

12/9/03