

VARIANCE REQUEST

Iowa Department of Natural Resources

13.10.4

1. Date : 7/31/92
 2. Review Engineer : Fred Evans
 3. Date Received : 7/20/92
 4. Facility Name : City of Lockridge
 5. County Number : 51
 6. Program Area : CP
 7. Facility Type : CO2
 8. Subject Area : 327
 9. Rule Reference : 64.2(9)
 10. Design Std. Ref. : 13.10.4
 11. Consulting Engr. : French-Reneker-Assoc.
 12. Variance Rule : 64.2(9) C
 13. Decision: Denied
 Date: 8/5/92
 14. Appeal:
 Date:

15. Description of Variance Request

Chapter 13.10.4 of The design standards requires that valves for submersible pumps shall be located in a separate valve chamber. The consulting engineer is proposing to use submersible grinder pumps. The check valves will be an integral part of the pumps which can be removed with the pumps for servicing. The engineer proposes to bury the positive closure valves adjacent to the pump station in lieu of providing a separate valve chamber; therefore, a variance has been requested to delete the valve chamber.

16. Consulting Engineer's Justification

1. The valve chamber is intended to house the check valve of a non-grinder pump station. For non-grinder type lift stations, as long as a separate chamber is necessary for the check valve, (which cannot be buried) it makes sense to also locate the shut off valves in

16. Consulting Engineer's Justification (cont.)

The chamber. The modern grinder pumps have the check valve as an integral part of the pumps lift out assembly. Therefore, the chamber is not needed for these types of grinder pumps.

2. The ball valves on the force mains from the grinder pumps for this project are fully intended for direct bury. They are the same valves as used on water systems where they are routinely buried.

17. Department's Justification

The location of the check valves in the wet well would be acceptable since these valves are an integral part of the pump assembly and can be removed with the pump for servicing. The most recent revision of the 10 States Standards approves the location of check valves in wetwells if they are removable with the pumps. However, if the positive closure valves for the pumps are buried, additional time would be required to uncover the valves for servicing, and, therefore such a design would not provide for at least equivalent or improved effectiveness as required by our rules for variances. Therefore, it is recommended that the requested variance to delete the separate valve chamber be denied.

18. Precedents Used

Star MHP - denied 11/30/84
City of Mystic - denied 7/6/86
Oak Ridge Estate - denied 5/26/89
City of Chillicothe - denied 5/10/90

19. Staff Reviewer

:

Jack Evans

Date: 7/31/92

20. Supervisor

:

Don J. [Signature]

Date: 8/4/92

21. Authorized by

:

Bill [Signature]

Date: 8/5/92



TERRY E. BRANSTAD, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
LARRY J. WILSON, DIRECTOR

August 6, 1992

The Honorable William Luzzadder
Mayor of Lockridge
City Hall
Lockridge, IA 52635

SUBJECT: Variance Request Denial
Lockridge Sewerage Facilities
Lockridge, Iowa

Dear Mayor Luzzadder:

The city's consulting engineer, in a letter dated July 16, 1992, requested on behalf of the city of Lockridge, a variance from Iowa Wastewater Facilities Design Standard 13.10.4. This standard requires a separate valve chamber outside submersible pump lift stations for the location of the check valves and shutoff valves on the discharge lines from the submersible pumps.

We could allow the check valves to be located in the wet well if they are specifically designed as a component of the submersible pump which can be lifted out with the pump for servicing. We would, however, still require a separate valve chamber be provided for the shutoff valves to prevent the need of digging valves out for maintenance. Your request of burying a shutoff valve and a valve box adjacent to the wet well has been denied. A separate valve chamber will be required for this project.

If you have any questions concerning this letter, please do not hesitate to contact Mr. Fred M. Evans of this office at 515/281-8995.

Sincerely,

DARRELL MCALLISTER, CHIEF
SURFACE & GROUNDWATER PROTECTION BUREAU

bkp/S&GWW219P01.02

cc: French-Reneker Associates, Inc., Fairfield, IA
Field Office 6

FRENCH - RENEKER - ASSOCIATES, Inc.

Donald E. French, (1921-1982)

1501 S. MAIN STREET

PO BOX 135

FAIRFIELD, IOWA 52556

515-472-5145

CONSULTING ENGINEERS

Kenneth D. Bucklin, PE-LS

W. Daniel Reneker, PE

David H. Fredericks, PE

James I. Warner, PE

Jerry W. Long, PE

July 16, 1992

Mr. Fred Evans
Wastewater Permits Section
Iowa Department of Natural Resources
900 East Grand
Des Moines, Iowa 50319

Re: Lockridge Sewerage System (91-55)
Rome Sewerage System (91-60)

Dear Mr. Evans:

On behalf of the Cities of Lockridge and Rome, Iowa, I request a variance to IDNR Design Chapter 13.10.4 dealing with valve chambers adjacent to pump stations. I request that a valve chamber not be required outside of a grinder pump station.

The valve chamber is intended to house the check valve of a non-grinder type pump station. For non-grinder type lift stations, as long as a separate chamber is necessary for the check valve, (which cannot be buried), it makes sense to also locate the shut off valves in the chamber. The modern grinder pumps have the check valve as an integral part of the pump's lift out assembly. Therefore, the chamber is not needed for these types of grinder pumps. The ball valves on the forcemains from the grinder pumps for these projects are fully intended for direct bury. They are the same valves as used on water systems where they are routinely buried.

Thank you for your prompt response to this variance request.

Very truly yours,

Kent O. Rice
Kent O. Rice, P.E.

KOR/jc

cc: William Luzadder, Mayor of Lockridge
John Sammons, Mayor of Rome
Jim Carroll, FmHA