

✓ 9-8-06

VARIANCE REQUEST

Iowa Department of Natural Resources

1. Date: February 12, 1999
2. Review Engineer: Terry L. Kirschenman
3. Date Received: 12/7/98
4. Facility Name: City of Rockwell City
5. County Number: 13
6. Program Area: CP
7. Facility Type: CO5
8. Subject Area: 390 - Primary Sludge Piping
9. Rule Reference: 567-64.2(9)a
10. Design Stds Ref: 16.4.2.3
11. Consulting Engr: Veenstra and Kimm, Inc.
12. Variance Rule: 567-64.2(9)c

13. Decision:
Date: 2/15/99

14. Appeal:
Date:

15. Description of Variance Request:

Install a primary sludge withdrawal line for the new primary clarifier with a sizing of 4 inches rather than 6 inches.

16. Consulting Engineer's Justifications

The Penn Valley sludge pump has a capacity of 80 gpm to match the existing 4 inch sludge withdrawal lines. If 6 inch lines were installed for the existing and new primary clarifiers, the pumping capacity would have to be increased to 264 gpm to maintain a velocity of 3 feet per second in the withdrawal line. Such a large withdrawal rate may pull a hole through the sludge blanket for such small clarifiers, diameters of only 26 and 35 feet. The four inch line for the existing 26 foot diameter primary clarifier has been in use for over 20 years.

17. Department's Justifications

The proposal will match existing 4 inch piping and a recently installed sludge pump (Penn Valley). A sufficient number of cleanouts will be required to maintain continuity of service.

18. Precedents Used

City of Rockwell City

19. Staff Reviewer: Terry Kirschenman

Date: 2/12/99

20. Supervisor: [Signature]

Date: 2/15/99

21. Authorized by: [Signature]

Date: 2/15/99



Variance File
TCL

16.4.2.3

THOMAS J. VILSACK
GOVERNOR

SALLY J. PEDERSON,
LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
PAUL W. JOHNSON, DIRECTOR

February 12, 1999

The Honorable John F. Block
Mayor of Rockwell City
335 Main Street, PO Box 232
Rockwell City, Iowa 50579-0232

RE: Primary Sludge Piping
Rockwell City, Iowa
CS192120 01

Dear Mayor Block:

This letter is in response to the December 7, 1998, request from Veenstra and Kimm, Inc. for a variance from Iowa Wastewater Facilities Design Standard 16.4.2.3. The City of Rockwell City is proposing to use a 4 inch primary sludge withdrawal line for the new primary clarifier rather than a 6 inch line. The proposal is substantially equivalent to the design standard based on their prior experience. A sufficient number of cleanouts, however, shall be provided for reliability to maintain continuity of service for primary treatment.

Should you have any questions, please contact Terry L. Kirschenman at 515-281-8885.

Sincerely,

Darrell McAllister, Chief
Water Quality Bureau

c: Veenstra and Kimm, Inc., West Des Moines
Field Office 3