



Variance to Chap. 15.2.4.2.1

STATE OF IOWA

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

DEPARTMENT OF NATURAL RESOURCES
JEFFREY R. VONK, DIRECTOR

March 29, 2004

Quentin Mayberry
City Administrator
City of Reinbeck
414 Main Street
Reinbeck, IA 50069

SUBJECT: Variance from IA 15.2.4.2.1

Reinbeck, Iowa
CS192258 01

Dear Mr. Mayberry:

The Iowa Department of Natural Resources in accordance with Subrule 567—64.2 (9) c of the Iowa Administrative Code has approved your March 16, 2004 request for a variance from the Department Rule 567—64.2 (9) b, I.A.C. and Chapter 15.2.4.2.1 of the Iowa Wastewater Facilities Design Standards, which requires a minimum of 5/8-inch opening for the mechanical screen. Based on the documentation presented by the design engineer, it is the determination of this Department that satisfactory justification has been presented to warrant the granting of a variance to the City of Reinbeck for using a minimum clear opening of 1/4-inch for the mechanical stair screen.

This decision is based on our review of justification presented to support the request and our concurrence that the resulting project will provide substantially equivalent effectiveness as would be provided by technical compliance with the design standard on this issue.

If there are any questions, please feel free to contact Emy Liu at 515/281-8509.

Sincerely,

Wayne Farrand, P.E., Supervisor
Wastewater Section
Water Quality Bureau

c: Veenstra & Kimm, Inc, West Des Moines
FO #2

✓ 9-8-06

VARIANCE REQUEST

Iowa Department of Natural Resources

1. Date: March 29, 2004
2. Review Engineer: Emy W. Liu
3. Date Received: March 16, 2004
4. Facility Name: Reinbeck WWTP
5. County Number: 38(Grundy)
6. Program Area: CP(Wastewater Construction)
7. Facility Type: C04(Physical Treatment)
8. Subject Area: 329 (bar racks and screens)
9. Rule Reference: 567-64.2(9)a
10. Design Std Ref: 15.2.4.2.1 (bar spacing)
11. Consulting Engr: Veenstra & Kimm, Inc./Des Moines
12. Variance Rule: 567-64.2(9)c

13. Decision: *approved*
Date: *3/29/04*

14. Appeal:
Date:

15. Description of Variance Request:

Utilize a mechanical screen with 1/4-inch openings as opposed to the minimum 5/8-inch clear openings required by Iowa Design Standards.

16. Consulting Engineer's Justifications

A fine screen is proposed because of the requirement of removing plastic material from the wastewater flow. A 5/8-inch stair screen does not remove all the plastic material from the wastewater flow. The plastic accumulates in the digesters and is ultimately land applied. One of the primary objections of local landowners to the land application of biosolids is the plastic material within the biosolids.

17. Department's Justifications

1. Mechanical screens with openings less than 5/8-inch are an accepted engineering design practice and have been proved by numerous Iowa wastewater treatment facilities.
2. Ten State Standards (1997) do not include a minimum sizing for the traditional mechanical bar screens.

18. Precedents Used

Cherokee, Humbolt, Wellman, West Liberty, Altoona, Osage, Nora Springs, Clear Lake, Waukee, Corning, etc.

19. Staff Reviewer: *Emy W. Liu*
20. Supervisor:
21. Authorized by: *Don Jaccard*

Date: *March 29, 2004*
Date:
Date: *3/29/04*