

✓ 9-8-06

Variance File  
Screen opening size  
15-2.4

### VARIANCE REQUEST

Iowa Department of Natural Resources

1. Date: December 10, 2004  
 2. Review Engineer: Satya P. Chennupati  
 3. Date Received: December 9, 2004  
 4. Facility Name: City of Cedar Falls STP  
 5. County Number: 7 (Black Hawk)  
 6. Program Area: CP (Wastewater Construction)  
 7. Facility Type: C04 (Physical Treatment)  
 8. Subject Area: 329  
 9. Rule Reference: 567-64.2(9)a  
 10. Design Stds Ref: 15.2.4.2.1  
 11. Consulting Engr: Kirkham Michael Engineers  
 12. Variance Rule: 567-64.2(9)c

13. **Decision:** *approved*  
 Date: *12/10/04*  
 14. **Appeal:**  
 Date:

15. Description of Variance Request: City of Cedar Falls through their Engineer is requesting a variance to allow installation of a mechanically cleaned bar screen with 1/2" clear spacing instead of the minimum 5/8" clear spacing required by the Iowa Wastewater Design Standards.

16. Consulting Engineer's Justifications

- Consulting Engineer has extensive experience with mechanical bar screens with finer openings.
- The Des Moines WRF has 3/8-inch openings in the headworks (5 units) in Building No. 5 and has worked successfully since 1999.
- Specification section 11225 requires 1/2-inch clear openings in order to remove more plastics and ragging materials from the wastewater flow.
- The screenings will be washed to remove putrescibles and compacted to remove free water.

17. Department's Justifications

**Recommend Approval.**

- Successful past operating history in several municipal wastewater treatment installations in Iowa up to 1/4-inch screen opening.
- Mechanical screens with openings less than 5/8" have been an accepted engineering design practice.
- Ten States Standards (1997) does not specify minimum size of screen openings.

18. Precedents Used  
 Walford, Clear Lake S.D., Osage, Tama, Newton, Altoona, Cherokee, West Liberty, Waukee, Carroll, Indianola, etc.

19. Staff Reviewer: *Satya Chennupati* Date: *12/10/04*  
 20. Supervisor: \_\_\_\_\_ Date: \_\_\_\_\_  
 21. Authorized by: *[Signature]* Date: *12/10/04*



# STATE OF IOWA

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

DEPARTMENT OF NATURAL RESOURCES  
JEFFREY R. VONK, DIRECTOR

December 10, 2004

Mr. Bruce Sorenson  
Public works Director  
City of Cedar Falls  
220 clay Street  
Cedar Falls, Iowa 50613

Subject: Variance Request from IA 15.2.4.2.1  
Cedar Falls Wastewater Treatment Facility Improvements, Cedar Falls, Iowa

Dear Mr. Sorenson:

The Iowa Department has considered and *approved* your December 6, 2004 request for a variance from Rule 567-64.2(9)b of the Iowa Administrative Code and Chapter 15.2.4.2.1 of the Iowa Wastewater Facilities Design Standards, which requires a minimum 5/8 inch opening for the mechanically cleaned bar screen. Based on the documentation presented by the City, it is the determination of this Department that satisfactory justification has been presented to warrant the granting of a variance to the City of Cedar Falls for using a minimum clear opening of 1/2-inch for the mechanically cleaned bar 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 you have any questions, please call Satya P. Chennupati, P.E. at 515-281-8995.

Sincerely,

A handwritten signature in black ink, appearing to read "Wayne Farrand". The signature is fluid and cursive, with a large loop at the end.

Wayne Farrand, P.E.  
Wastewater Section Supervisor

cc: Field Office #1  
DNR File 6-07-09-0-01  
Kirkham Michael Engineers, Omaha, NE

S2005-0165

December 6, 2004

RE: Second Stage Filter Renovation  
Cedar Falls WWTP Improvements *Black Hawk Co. (7)*  
KM-0405223

Mr. Satya Chennupathi, P.E.  
Iowa DNR  
502 East 9<sup>th</sup> Street  
Des Moines, Iowa 50319

Dear Mr. Chennupathi:

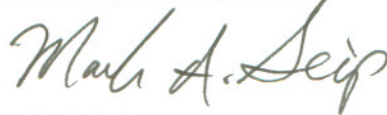
This letter is written for the City of Cedar Falls to request a variance on Iowa DNR regulations limiting bar screen openings to minimum 5/8 inch.

We have had extensive experience with mechanical bar screens with finer openings. The Des Moines WRF has 3/8-inch openings in the head works (5 units) in Building No. 5 and has worked successfully since 1999. Section 11225 requires 1/2 inch clear openings in order to remove more plastics and ragging materials. The screenings will be washed to remove putrescibles and compacted to remove free water.

Please call if further information is needed.

Yours very truly,

KIRKHAM MICHAEL



Mark Seip, P.E.  
Project Manager

MAS/sjt

Copy to: Bruce Sorensen, Lyle Krueger – City of Cedar Falls  
R. Robinson, R. Coffey, L. Cummins – KM Omaha

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