

MA

9-8-06

15.2.4.2.1

VARIANCE REQUEST

Iowa Department of Natural Resources

1.	Date: July 11, 1997	13.	Decision: <i>Approved</i>
2.	Review Engineer: Bill Graham		Date: 7/14/97
3.	Date Received: July 11, 1997		
4.	Facility Name: Muscatine WWTF	14.	Appeal:
5.	County Number: 70		Date:
6.	Program Area: CP (wastewater)		
7.	Facility Type: C04		
8.	Subject Area: 329(bar racks)		
9.	Rule Reference: 900-64.2(9)a		
10.	Design Stds Ref: 15.2.4.2.1		
11.	Consulting Engr: Stanley Cons. Muscatine		
12.	Variance Rule: 900-64.2(9)c		

15. Description of Variance Request:

The design standard requires a minimum bar spacing of 5/8 inch. The City of Muscatine has proposed a mechanically cleaned bar screen with 3/8 inch bar spacing.

16. Consulting Engineer's Justifications

Stanley Consultants proposes construction of two mechanically cleaned bar screens with 3/8 inch bar spacing and an a manually cleaned screen with 9/8 inch bar spacing as backup. Screens with larger bar spacing than 3/8 will not catch smaller plastics and gravel that are found in the city's wastewater. Muscatine has some combined sewers. Each of the three screens can handle MWW flows so there is sufficient redundancy should one of the screens become blinded. The screenings are pressed and trucked to a landfill.

17. Department's Justifications

Departmental approval for this variance is recommended since the 3/8 inch bar spacing will increase the screens effectiveness at removing plastic and gravel which could harm downstream treatment units. Negative impact from the spacing would include increased screenings volume and odor potential and decreased reliability should one of the screens become blinded. Screenings handling by the plant will be effective in reducing volume by pressing and frequent disposal will minimize odor potential.

18. Precedents Used

Winterset and Ames have bar screens with 1/2 inch spacing and Tama has a bar screen with 3/8 inch spacing.

19.	Staff Reviewer: Bill Graham	Date: July 11, 1997
20.	Supervisor: <i>Don Dand</i>	Date: 7/11/97
21.	Authorized by: <i>Dan V. Allst</i>	Date: 7/14/97