

13. 4.3

✓ 9-11-06

VARIANCE REQUEST

Iowa Department of Natural Resources

1. Date: June 13, 2000
2. Review Engineer: Suresh Kumar
3. Date Received: May 11, 2000
4. County Number: 9
5. Facility Name: Tripoli WWTP
6. Program Area: CP (Wastewater)
7. Facility Type: CO2
8. Subject Area: 344, pump clogging protection
9. Rule Reference: 567-64.2(9)a
10. Design Stds Ref: 13.4.3
11. Consulting Engr: Fox Engineering
12. Variance Rule: 567-64.2(9)c

13. Decision: *Approved*
Date: *6/13/00*

14. Appeal:
Date:

15. Description of Variance Request:

Install submersible influent Pumps capable of passing solids sized two inch instead of three inch as required by the design standard.

16. Consulting Engineer's Justifications

A grinder with an opening of 3/8 inch will be in operation ahead of the pumps

When the grinder is in maintenance or in repair a bar screen with one-inch space on bar racks will be in operation.

Flyght's new N-Series submersible pump impeller does a superior job in handling materials that are responsible for clogging standard solids handling pumps.

This impeller is more electrically and mechanically efficient compared to traditional impeller designs.

17. Department's Justifications

We are recommending the variance request to be approved based on the above justifications and the following reasons:

Iowa Wastewater Facilities Design Standards Chapter 13.5.1 and 13.12.1 permit specialized equipment and applications to vary from the design standards from the requirement of having force main and suction and discharge pipes of four inches in diameter. Operation of grinder ahead of pumps could be included in this category.

18. Precedents Used None

19. Staff Reviewer: *Suresh Kumar*
20. Supervisor: *John Jensen*
21. Authorized by: *Jack Riesen*

Date: *6/13/00*
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