

VARIANCE REQUEST

Iowa Department of Natural Resources

1. Date: April 4, 1996
2. Review Engineer: Bill Graham
3. Date Received: March 11, 1996
4. Facility Name: Sully WWTF
5. County Number: 50, Jasper
6. Program Area: CP (wastewater)
7. Facility Type : C09
8. Subject Area : 320
9. Rule Reference: 567-64.2(9)a
10. Design Std Ref: 17.3.5.3
11. Consulting Engr: Shive-Hattery Engrs., Iowa city, Iowa
12. Variance Rule: 567-64.2(9)c

13. Decision: *Approved*
Date: *4/10/96*

14. Appeal:
Date:

15. Description of Variance Request:

The City of Sully wants to use an existing lagoon to temporarily store sludge generated by a Biolac activated sludge treatment process. The lagoon would not provide the degree of aeration and mixing required by design standard 17.3.5.3, Mixing and Air Requirements.

16. Consulting Engineer's Justifications

1. The sludge will be very stable since the solids detention time in the aeration basin will be 60 days and volatile solids will be reduced to 15% or less.
2. The volume of sludge generated daily will be relatively low, about 1700 gpd of wasted sludge which would be 225 gallons after thickening and supernatant withdrawal.
3. Lagoon storage of sludge utilizes an existing resource.
4. Some mixing will be provided by devices which the city already owns.

17. Department's Justifications

Approval is recommended based on the stability of the generated sludge, the remoteness of the site, and the similarity of the situation to that of aerated lagoons which store sludge in the aeration basins. The lagoon is currently one cell in an existing aerated lagoon. The intention of the design standard is to prevent nuisance odors. Due to the sludge stability and remoteness of the site it is unlikely that odors would become a problem. A condition in the construction permit will require that addition mixing and aeration be installed if odors become a nuisance and that sludge be periodically removed for land application.

18. Precedents Used

There are several precedents for approving variances for providing less aeration in sludge storage facilities than that required by the design standards. Some of these facilities are in the cities of Grinnell, Ames, Belmond, Iowa Falls, and Marshalltown.

19. Staff Reviewer: William Graham

Date: *4/5/96*

20. Supervisor: *[Signature]*

Date: *4/5/96*

21. Authorized by:

Date: