

✓ 9-13-06 17.3.1.1.c.2

VARIANCE REQUEST

Iowa Department of Natural Resources

1. Date:	September 2, 1994	13. Decision:	
2. Review Engineer:	Bill Graham	14. Appeal:	
3. Date Received:	August 30, 1994		Date:
4. Facility Name:	Grinnell Wastewater Works		
5. County Number:	79		Date:
6. Program Area:	CP (wastewater construction)		
7. Facility Type:	C09		
8. Subject Area:	334 Digester access openings		
9. Rule Reference:	900-64.2(9)a		
10. Design Stds Ref:	17.3.1.1 c (2)		
11. Consulting Engr:	Fox Engineering		
12. Variance Rule:	900-64.2(9)c		

15. Description of Variance Request:

Design Standard 17.3.1.1 c (2) requires that a separate sidewall manhole be provided in anaerobic digesters. The city is proposing two 36 inch manholes in the new digester cover.

16. Consulting Engineer's Justifications

The consultant has requested a variance from this requirement because this is an existing digester which has been operated for many years without a sidewall access manhole, the digester has an 8 inch tee and valve on the sludge withdrawal line at the base of the tank which has worked well for digester cleaning and maintenance in the past, and the new digester cover will provide two 36 inch manholes.

17. Department's Justifications

Departmental approval for the variance request is recommended because the existing digester has not had maintenance problems in the past and the purpose of the standard is to provide access to the bottom of the digester to remove accumulated grit. Also, the new cover will provide two 36 inch manholes rather than the two 24 inch manholes required by the design standards and there is grit removal equipment in the plant headworks.

18. Precedents Used

1. A variance was approved in 1987 for the city of West Union's anaerobic digester to be built without a sidewall manhole due to the steep slope of the digester walls and because the entire cover could be removed for maintenance and cleaning. The steep walls funneled grit to the sludge withdrawal pipe.

2. A variance was approved for the city of Ankeny's anaerobic digester to be built without a sidewall manhole because the digesters were to be buried in the ground and because 48 inch manholes were to be provided in the cover. The city also said that submersible pumps could be lowered into the digester to remove grit.

19. Staff Reviewer:

Date:

20. Supervisor:

Date:

21. Authorized by:

Date: