



STATE OF IOWA

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

DEPARTMENT OF NATURAL RESOURCES
JEFFREY R. VONK, DIRECTOR

April 11, 2002

The Honorable John Mardis
Mayor of Evansdale
123 N. Evans Road
Evansdale, Iowa 50707-1199

SUBJECT: Variance from IA 17.3.5.3
Evansdale, Iowa
6-07-23-0-01

Dear Mayor Mardis:

The Iowa Department of Natural Resources in accordance with Subrule 567—64.2 (9) c of the Iowa Administrative Code has approved your request for a variance from the Department Rule 567—64.2 (9) b, I.A.C. and Chapter 17.3.5.3 of the Iowa Wastewater Facilities Design Standards, which requires a minimum of 1.0 horsepower per 1,000 ft³ aeration for a sludge storage lagoons, if mechanical aerators are utilized. Based on the documentation presented by the designing engineer, it is the determination of this Department that satisfactory justification has been presented to warrant the granting of a variance to the City of Evansdale for using the new sludge storage lagoon without aeration and mixing. In the future, however, if the Department determines that the proposed facility is causing any odor or other operational problems due to the absence of aeration and mixing, the City shall obtain a construction permit and install aeration equipment as required by paragraph 17.3.5.3 of the Iowa Design Standards within 18 months of written notification.

This approval does not relieve the city from any responsibilities to insure that the proposed sludge storage lagoons are properly designed, constructed, operated and maintained to meet Iowa Wastewater Facilities Design Standards and to minimize any adverse environmental impacts.

Sincerely,



Jack Riessen
Bureau Chief
Water Quality Bureau

cc: Shive-Hattery, Inc., Iowa City
Field Office #1

✓ 9-8-06

VARIANCE REQUEST

Iowa Department of Natural Resources

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| 1. Date: April 11, 2002 | 13. Decision: <i>Approved</i> |
| 2. Review Engineer: Emy W. Liu | Date: <i>4/12/02</i> |
| 3. Date Received: January 23, 2002 | |
| 4. Facility Name: City of Evansdale Wastewater Treatment | 14. Appeal: |
| 5. County Number: 07, Black Hawk | Date: |
| 6. Program Area: CP (Wastewater) | |
| 7. Facility Type: C05 | |
| 8. Subject Area: 320 | |
| 9. Rule Reference: 567-64.2(9)a | |
| 10. Design Stds Ref: 17.3.5.3 | |
| 11. Consulting Engr: Shive Hattery, Iowa City, Iowa | |
| 12. Variance Rule: 567-64.2(9)c | |

15. Description of Variance Request:

The City of Evansdale is requesting that the mixing and aeration requirements stipulated in design standard IA 17.3.5.3 not be required for their digested sludge storage lagoon.

16. Consulting Engineer's Justifications:

1. The primary purpose of the sludge holding lagoon is the storage of digested sludge.
2. The sludge should be well stabilized at the point that it is transferred to this basin and further aeration should not be necessary.
3. The consulting engineers have provided adequate electric service as part of this project to allow for the installation of mechanical aerators if in the future odor becomes a problem in the sludge holding lagoon.
4. One of the objectives of this project is to reduce odor problem the WWTP used to have. A comprehensive plan for odor reduction includes a). Remove the primary clarifier, which is a major source of odor, from service and convert it into an aerobic digestion tank; b). Provide adequate air to the sludge digestion tank; c) Better stabilize the sludge entering the digester through increasing aeration, aeration tank detention time (size), sludge concentration, or temperature in the aeration tanks prior to the digester.

17. Department's Justifications:

1. The lagoon meets the minimum separation distance criteria, i.e. 400 feet separation from lakes and public impoundments. If there is any slight odor, it will dissipate before reaching the residential habitats.
2. A condition on the construction permit will require that the mixing and aeration equipment will be installed if odors become a nuisance in future operation.

18. Precedents Used:

City of Sully, IA Approved 10/4/96 (Biolac sludge)
City of Maquoketa, IA Approved 10/26/95 (SBR sludge)
City of Ames, IA Approved 3/9/87 (Anaerobic sludge)

City of Carroll, IA Approved 5/8/84 (Anaerobic sludge)

19. Staff Reviewer:



Date:

4/1/02

20. Supervisor:



Date:

4/11/02

21. Authorized by:


J. Kiessen

Date:

4/12/02