



CHESTER J. CULVER, GOVERNOR
PATTY JUDGE, LT. GOVERNOR

STATE OF IOWA

DEPARTMENT OF NATURAL RESOURCES
RICHARD A. LEOPOLD, DIRECTOR

July 25, 2007

Chad Coburn, Executive Director
Poweshiek Water Association
125 Industrial Drive
Box 504
Brooklyn IA 52211

RE: Variance Request
Wastewater Collection and Treatment System
Conroy, Iowa County, Iowa DNR

Dear Mr. Coburn:

The Iowa Department of Natural Resources, in accordance with subrule 567 IAC 64.2(9), has reviewed the variances requested by your organization in the May 31, 2007 letter from your consulting engineer, Garden & Associates, Ltd. These decisions are based on our review of justification presented to support your requests and our concurrence that the resulting project will provide substantially equivalent effectiveness as would be provided by technical compliance with the design standards on these issues.

Items 1&2: A variance from Design Standard 12.5.1 allowing the use of 6" sewer with the minimum slope of 0.5% in place of the minimum 8" sizing allowed by the standards is approved.

Item 3: A variance from Design Standard 12.5.7 to allow a maximum manhole spacing of 600 feet is approved. A written assurance from you dated May 23, 2007 was provided to the Department that sewer cleaning equipment capable of cleaning this distance will be made available when necessary.

Item 4: No variance is needed to utilize glue joints for directional bored PVC SDR 21 sewer pipes. This method of installation is approved.

Item 5: A variance from Design Standard 18C.5.1 to allow a two-cell controlled discharge lagoon system in lieu of the minimum three cells required by the standards for all facilities greater than one acre total surface area is approved.

Item 6: A variance from Design Standard 18C.7.4.4 to allow installation of the influent lines at or above the elevation of the pond seal is approved provided

the influent lines placed at or above the pond seal must be properly anchored.

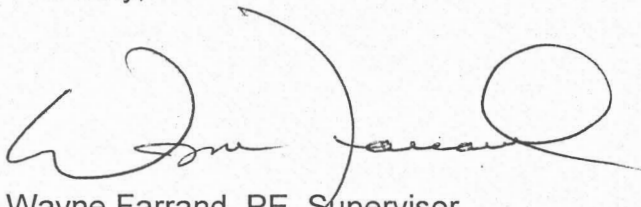
Item 7: A variance from Design Standard 18C.7.4.6 to eliminate the saucer-shaped depression at the discharge point of the influent lines required by the standards is approved.

Item 8: A variance from Design Standard 18C.7.7 to allow prefilling of lagoons to one foot level instead of two feet is approved. Conroy is currently building a water treatment facility.

Item 9: A variance from Design Standard 18C.10.6 to allow pond level measurement via riser piping in lieu of pond level gauges as required by the standards is approved provided that another acceptable means of cell depth measurement will be installed if freezing proves to be a problem.

Should you have any questions, please feel free to contact Gabe Lee at gabe.lee@dnr.state.ia.us or at 515.262.8456.

Sincerely,

A handwritten signature in black ink, appearing to read 'Wayne Farrand', with a large, stylized loop at the end.

Wayne Farrand, PE, Supervisor
Wastewater Construction

Cc: Garden & Associates, Oskaloosa, IA
Field Office 6

VARIANCE REQUEST
Iowa Department of Natural Resources

1. Date: July 3, 2007
2. Review Engineer: Gabe Lee
3. Date Received: May 31, 2007
4. Facility Name: Conroy
5. County Number: 48 (Iowa)
6. Program Area: CP (Wastewater Construction)
7. Facility Type: C05 (Biological Treatment)
8. Subject Area: Collection System
Treatment System
9. Rule Reference: 567-64.2(9)a
10. Design Stds Ref: See below
11. Consulting Engr: Garden & Associates, Oskaloosa
12. Variance Rule: 567-64.2(9)c

13. Decision: *approved*

Date: 7/25/07

14. Appeal:

Date:

15. Description of Variance Request:

Project Background

The City of Conroy is an unsewered community proposing a new gravity collection system and a controlled discharge lagoon. The ADW and AWW design flows are 0.015 MGD and 0.0208 MGD, respectively. As this is a USDA-RD funded project, the City is proposing several variances from the design standards regarding the collection and treatment system. However, it should be noted that the Poweshiek Water Association will own, operate and maintain the treatment works.

Variance Request

Collection System:

1. Design Std 12.5.1 - Allow 6-inch sewer instead of 8-inch a minimum diameter for collection system
2. Design Std 12.5.3 - Allow installation of 6-inch sewer at 0.5% slope
3. Design Std 12.5.7.1 - Allow maximum manhole spacing and cleanout spacing up to 600 feet
4. Allow directional boring of sewer using PVC SDR 21 glue joint pipe

Treatment System

5. Design Std 18C.5.1 - A two cell controlled discharged lagoon with a total surface area of approx. 4 acres
6. Design Std 18C.7.4.4 - Installation of influent line at or above pond seal
7. Design Std 18C.7.4.6 - Eliminate saucer-shaped depression at discharge point at primary and secondary cell
8. Design Std 18C.7.7 - Allow prefilling of lagoon to one foot level
9. Design Std 18C.10.6 - Pond measurement to be accomplished in riser piping in lieu of pond gauges

16. Consulting Engineer's Justifications

Cost savings, equivalent effectiveness. These variances have been approved as part of the small unsewered community pilot program in the 1990's. Small facilities with these variances in their design had proved to be equally effective in the treatment of the wastewater.

The collection system variance requests are suitable for the small community of Conroy because a stable population. The maintenance requirements are readily available to PWA. Item 4 listed above is not a requirement in the design standards.

The variances requested are suitable for a community the size of Conroy. These variances have been approved for previous small community projects and have proven equivalent effectiveness.

PWA is a multi-county utility that has adequate staff and resources to maintain project with these kinds of

variances.

17. Department's Justifications

Recommend variance approval:

These variances have been previously approved for the pilot projects. There were no problems reported.

18. Precedents Used

Persia (Shelby County RWA) - Approved 7/3/95 (5.4 acres)

Arispe (Southern Iowa RWA) - Approved 7/15/96

Exline (Wapello RWA) - Approved 1/3/97

Crawfordsville (Wapello RWA) - Approved 11/15/99 (4.31 acres)

Martinsburg (RUSS) - Approved 10/2/03

Tingley (Southern Iowa RWA) - Approved 7/11/96

Floris (Wapello RWA) - Approved 8/1/95

Unionville (Rathbun RWA) - Approved 2/19/98

Kinross (RUSS) - Approved 7/19/2001

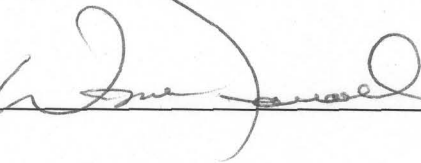
Webster (RUSS) - Approved 10/2/03

19. Staff Reviewer:



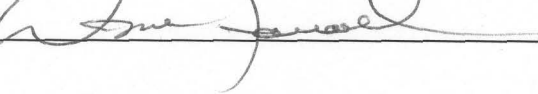
Date: 7/25/07

20. Supervisor:



Date:

21. Authorized by:



Date: 7/25/07