

14.2.3

9-11-06

VARIANCE REQUEST

Iowa Department of Natural Resources

1. Date : 3/16/90 13. Decision: Approved
 2. Review Engineer : Gabe Lee Date: 3-31-90
 3. Date Received : 3/12/90
 4. Facility Name : Chillicothe 14. Appeal:
 5. County Number : 90 Date:
 6. Program Area : CP
 7. Facility Type : C05
 8. Subject Area : 308
 9. Rule Reference : 64.2(9)
 10. Design Std. Ref. : 14.2.3
 11. Consulting Engr. : IIN
 12. Variance Rule : 64.2(9)c

15. Description of Variance Request

A new intermittent sand filter was proposed for this project. Three sites were investigated for this project. Site #1 was the site chosen by the engineer. However, this site does not meet our separation distance requirement. Site #2 was later proposed as an alternate site, again this site does not meet our distance requirement. Both these sites are within the 1000' feet from a inhabited residence. The property owner denied the waiver for either sites. The City decided to accept Site #2 as the project site. Site #3 was investigated. Site #3 will meet our separation distance of a 1000'. However, according to the engineer, Site #3 will increase the project cost up 40%. The City has asked for a variance to the separation distance for site #2. DNR approved the variance on Dec 11, 1989.

The engineer sent us a letter dated March 7, '90 indicating that Site #2 will increase the project to \$30,000 to \$35,000 compare to Site #1. The City now requested for another variance for site #1.

The house is approx 500' east of site #1. There are no public shallow wells within 1000' of the site #1. There are no deep public + private wells within 400' of site #1. The homeowner of the house is resistant to sign the waiver because he is afraid of his well being contaminated. A benonite seal will be incorporated to prevent groundwater pollution from the filters.

16. Consulting Engineer's Justification

1. The site #1 will save about \$30,000 to \$35,000 (10% to 15%) of the project cost while providing better effectiveness.
2. Site #2 is in the backwaters of a 25-yr floodplain. However, majority of the site #1 will be above the 100-yr floodplain. About 10% of the treatment area remains in the floodplain.

16. Consulting Engineer's Justification (cont.)

17. Department's Justification

1. The site #1 provided better ^{flood} protection than site #2. Therefore, site #1 is more effective.
2. Site #1 also save the city \$30,000 - \$35,000 which is significantly 10% - 15% of the project cost. For a town of 131 people, this saving could significantly reduce the user charge.

The justification submitted by the engineer meets our requirement to grant a variance. Justification shows that it improve effectiveness and also reduce cost significantly.

18. Precedents Used

Bronson - approved	7-11-85	Chillicothe - approved	12-11-89
Troy Mills, S.D. - approved	9-8-85		
Eddyville - approved	6-25-85		
Riverview Estates - approved	11-10-86		

19. Staff Reviewer	: Gabe Lee	Date: 3-19-90
20. Supervisor	: [Signature]	Date: 3/19/90
21. Authorized by	: [Signature]	Date: 3/21/90



TERRY E. BRANSTAD, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
LARRY J. WILSON, DIRECTOR

April 4, 1990

City of Chillicothe
City Hall
Chillicothe, Iowa 52548

Attn: The Honorable Mayor Terry Price

RE: Wastewater and Collection Facilities
Variance Request

Dear Mayor Price:

We have received a variance request to Iowa Wastewater Design Standards Chapter 14.2.3 from your consulting engineer, IIW Engineers and Surveyors of Dubuque, Iowa. Chapter 14.2.3 specify that all treatment facility shall maintain a distance of greater than 1000 feet from the nearest inhabitable structure. It was determined that the separation distance from the nearest inhabited structure to the proposed site is approximately 500 feet. This proposed site, however, does meet all other separation distances criteria.

We have reviewed your request and have decided to approve your variance request to Iowa Wastewater Facilities Design Standards Chapter 14.2.3. Justifications submitted by your consulting engineer meet our criteria to approve a variance.

We suggest that the City sample the well water of the inhabitable structure in question. A complete and detailed analysis of the well water constituents should give the City some background information.

Should you have any questions please call Gabriel Lee at (515) 281-6253.

Sincerely,

DARRELL McALLISTER, BUREAU CHIEF
SURFACE AND GROUNDWATER PROTECTION BUREAU
ENVIRONMENTAL PROTECTION DIVISION

cc: IIW Engr., Dubuque, Iowa
Field Office 6



TERRY E. BRANSTAD, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES

LARRY J. WILSON, DIRECTOR

File: Chillicothe - WI
G52

May 16, 1990

City of Chillicothe
c/o Nancy Annis, City Clerk
P.O. Box 199
Fremont, Iowa 52561

Attn: The Honorable Mayor Price

RE: Variance Request
Wastewater Collection and Treatment Project. 1990

Dear Mayor Price:

We have received a variance request to Iowa Wastewater Facilities Design Standards Chapter 13.10.4 in a letter from your consulting engineer, IIW Engineers of Dubuque, Iowa. The request addresses the need of a valve vault for the lift station piping.

That letter also included your reasons to justify the variance request. It stated that major advantage of eliminating a valve vault is cost savings. These shut-off valves would have extended operators. Bypass connector is located on top of the pumps.

The Iowa Administrative Code, Chapter 567--64.2(9)c allows for a variance from design standards when it will result in at least equivalent or improved effectiveness. We have reviewed your request and have decided to deny the variance for the following reasons:

1. Cost savings is not a criteria in granting a variance. A variance can only be approved if justification can show equivalent or improved effectiveness.
2. Maintenance and repairs on the valves are not possible without removing the earth cover. The proposal shows an earth cover of approximately 11.5 feet and excavation will be required for any repairs. The proposal in fact is less effective.

We have reviewed your plans and specifications and have a suggestion for the lift station piping and valves which may

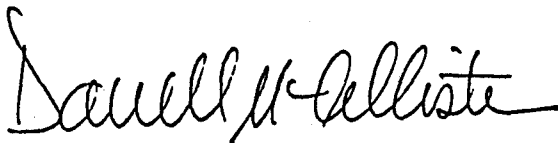
City of Chillicothe
May 16, 1990
Page 2

result in a cost savings. The emergency pump connection could be relocated between shutoff valve and the pump on one of the two effluent lines with the use of a tee-section.

The City should be aware that the check valves should be located within a valve pit. As addressed earlier in our previous letter of May 9, 1990, the check valves were not identified. The design of the valve vault shall conform to the applicable requirements listed in the design standards chapter 13.5, 13.10.4 and other pertinent chapters.

In addition, please remove all references of Polyethylene (PE) pipe from your project plans and specifications. PE pipe is not an IDNR approved material either as a water or wastewater pressure pipe. Should you have any questions please call Gabriel Lee at (515) 281-6253.

Sincerely,



DARRELL McALLISTER, BUREAU CHIEF
SURFACE AND GROUNDWATER PROTECTION BUREAU
ENVIRONMENTAL PROTECTION DIVISION

cc: IIW Engineering, Dubuque, IA
Jim Carroll, FmHA, Des Moines, IA
Field Office 6



ENGINEERS AND SURVEYORS P.C.

3210 St. Joseph Dr. • Dubuque, IA 52001 • (319) 556-2464

March 7, 1990

File - Chillicothe

GSL

Carl B. Schoenhard, L.S.
Dennis F. Waugh, P.E., S.E.
Charles A. Cate, P.E.
Gary D. Sejkora, P.E.
Warner R. Wright, P.E., L.S.
Ronald J. Turner, L.S.
Ross K. Abbott, L.S.I.T.

Mr. Gabriel S. Lee
Surface and Groundwater Protection Bureau
Department of Natural Resources
Wallace State Office Building
900 East Grand
Des Moines, IA 50319

Re: City of Chillicothe, Iowa
Wastewater Treatment Facilities
Request for Variance Modification
IIW Project No. 90037-2

Dear Gabe:

On December 11, 1989, the DNR granted a variance from siting criteria for the wastewater treatment facilities to serve the City of Chillicothe, Iowa. The variance allows the intermittent buried sand filter system to be constructed within 1000 feet of an inhabited residence provided that the nearest well is at least 400 feet from the sand filters. The variance was granted for what has been termed the "alternate site" which is 200 to 300 feet southwest of the "original site". The original site is the one designated in the November 23, 1988, preliminary design report.

Subsequent to receiving the variance to locate the buried sand filters on the alternate site we proceeded with project design and preparation of drawings and specifications. Based on these completed drawings and specifications we prepared a detailed estimate of project construction costs. We found that moving the sand filters from the original site to the alternate site added \$30,000 to \$35,000 to the project costs.

Because of very limited funding available, the City of Chillicothe would find it difficult, if not impossible, to obtain 10% to 15% more money to complete the project. Therefore, after considering alternatives, the Council decided to request a modification of the DNR variance and site approval.

On behalf of the City of Chillicothe we ask that the DNR approve the original site (along the county road) and reissue the variance to allow construction of the sand filters at the original site. Construction at the original site would save an estimated \$30,000 to \$35,000. Nearly all of the original site is outside of the 100 year flood. The higher elevation of the alternate site (approximately 1.6 feet) provides better protection during a 100 year flood. Access to the original site is better than to the alternate site. The original site meets the conditions set forth in the original variance.

Gabriel Lee
March 7, 1990
Page 2

As you and I discussed prior to the DNR granting the variance, the original site is a better location from an engineering point of view. Indeed, you asked which site the city wanted the variance to cover. Our opinion was and remains that the original site is the best site for this project.

With grant funds being less available than in the past, it is becoming very difficult to design systems that small unsewered communities can afford to build and operate. With the continuing assistance from and understanding of the DNR we feel that wastewater collection and treatment facilities can be built and successfully operated in Chillicothe.

We thank you for your assistance in obtaining a modification to the variance.

Sincerely,

IIW ENGINEERS AND SURVEYORS, P.C.

*Gary Sejkora*_{rw}

Gary Sejkora, P.E.

GS/rw

Copy: Nancy Annis, City Clerk
Bill Dew, City Attorney
Al Heuton, Area XV
John Pyle, FmHA