



July 30, 1986

department of water, air and waste management

The Honorable Eugene Ruby
Mayor of Mystic
P.O. Box 67
Mystic, IA 52574

RE: Design Standard Variance Request
Wastewater Collection, Conveyance and Treatment System
Mystic, Iowa
C190968 02

Dear Mayor Ruby:

The city's consulting engineer in a letter dated July 10, 1986, requested on behalf of the city of Mystic, a variance from Section 13.10.4 of Chapter 12 of the Iowa Wastewater Design Standards, which concerns the location of valves on discharge lines of submersible pump stations.

The plans and specifications propose locating the gate valves inside of the grinder pump station wet wells in the horizontal portion of the discharge line. Your engineer's justification for the variance is based on the fact that these valves are included in the wet wells as part of the standard equipment package offered by manufacturers. Also, the proposed gate valves come complete with riser stems to allow operation of the valves from outside of the wet well. Should interior gate valves not be allowed, these valves must be located outside of the wet well in buried valve boxes which, in the opinion of your engineer, is less accessible than the valve inside the prefabricated pump station.

Although the above benefits may arise should the gate valves be located inside the wet wells, we feel that those benefits do not outweigh the fact that valves located inside wet wells will be in a very corrosive environment which will cause more frequent replacement. Furthermore, to replace a gate valve, the operator will be subjected to a high risk of personal injury because he must enter the wet well to replace inoperable valves.

Considering the minimal benefits of locating gate valves inside of wet wells and the possibility of a decreased useful life of those valves and personal injury to the operator, it is this Department's decision not to grant the variance.

Sincerely,

ENVIRONMENTAL PROTECTION DIVISION

A handwritten signature in dark ink, reading 'Darrell McAllister'.

Darrell McAllister, Chief
Surface and Groundwater Protection Bureau

cc: French-Reneker-Assoc., Inc., Fairfield
Field Office #5
DM:PG:CGW209F06.01

DATA ENTRY SUMMARY:

DATA ENTERED	DATE	INITIALS
	¹ 7/17/86	² PKG

DATE RECEIVED	FACILITY NAME	COUNTY NO.	PROGRAM AREA CODE	FACILITY TYPE CODE	SUBJECT AREA CODE
³ 7/11/86	⁴ MYSTIC, IA WWTF	⁵ 4	⁶ CP	⁷ CO2	⁸ 325 327 ^{WC7 8/11}
RULE REFERENCE	DESIGN STANDARD REFERENCE	DECISION		APPEAL ACTION	
⁹ N/A	¹⁰ 13.10.4	¹¹ DENIED 7/30/86		¹²	

BRIEF DESCRIPTION OF VARIANCE REQUESTED: Locate gate valve inside wet well of grinder pump station rather than in separate valve chamber.

JUSTIFICATION FOR DECISION: Although a majority of package grinder pump stations come equipped with the gate valves inside the wet well and a riser stem from the gate valve to near top of the basin, there may be occasions when the valve must be replaced. In order to replace the valve, the wet well must be dewatered and the operator must enter the wet well which is a very hazardous environment. Also, the atmosphere inside the wet well is very corrosive which can damage the gate valve and render it inoperable causing more frequent replacement. The cost savings which would occur by using a package type grinder pump station with an interior gate valve does not appear to offset the high risk of injury to the operator and the frequent replacement of the valves. The operability of a valve inside the wet well would not be significantly if any better than an outside gate valve. For the above reasons, a variance to the standard should be denied.

PRECEDENTS USED: Similar requests have always been denied in the past.

STAFF REVIEWER: Perry Gjersvik
 SUPERVISOR: _____
 AUTHORIZED BY: Dale 8/1/86