

V 9-18-06

DATE RECEIVED	FACILITY NAME	COUNTY No.	PROGRAM AREA CODE	FACILITY TYPE CODE	SUBJECT AREA CODE
7/28/88	City of Farmersburg	22	CP	CO1	12.4 355
RULE REFERENCE	DESIGN STANDARD REFERENCE	DECISION		APPEAL ACTION	
64.2(9)	12.4	Approved 8/18/88			
ENGINEER		VARIANCE BASIS			
13 IIN Engineers & Surveyors		14 64.2(9)C			

15. DESCRIPTION OF VARIANCE REQUESTED: At the present time the effluent from the controlled discharge lagoon serving the City of Farmersburg is discharged to a dry run which drains to a sinkhole located approximately 600 feet from the lagoon. The field office staff has been working with the city officials to eliminate the discharge to the sinkhole. Agreement has been reached to reroute the effluent around the sinkhole by constructing approximately 2500 feet of 8-inch outfall sewer to convey discharges to Howard Creek which is located north of the lagoon. (See attached location map) The new outfall sewer will also eliminate discharges of effluent onto the adjacent land of a property owner who has complained of wet soil conditions from seepage due to such discharges. In order to finance the project with available funds it is proposed to construct the new outfall sewer of corrugated polyethylene pipe. Inasmuch as this pipe material is not included in the listing of acceptable sewer pipe materials in Chapter 12 of our design standards, a variance has been requested to use such pipe material for this project.

16. ENGINEERS JUSTIFICATION:

1. This pipe material is proposed in order to get the cost of project into line with the City of Farmersburg's very limited budget.
2. The corrugated material would not be a disadvantage in handling lagoon discharge water devoid of solids.
3. This pipe is solid wall nonperforated pipe so there will not be any infiltration of silt.
4. The City of Farmersburg will bar anyone from making connections to this line and will prevent it from being used for surface or subsurface drains.
5. The pipe is to be installed by a trencher with laser control and the embedment material will meet the requirements of PVC type 3 bedding.
6. This material will be shipped in 800 foot rolls minimizing the number of joints and these joints are made up using a factory fabricated coupler then taped with a vinyl tape to make an essentially water tight joint. (See attached sheet for additional justification)

17. DEPARTMENTS JUSTIFICATION: We concur with the engineer's proposal to use corrugated polyethylene pipe material for the outfall sewer based upon the above justification and the following reasons:

1. Chapter 12 of our design standards pertaining to sewer systems permits the use of other sewer pipe materials where there are appropriate ASTM specifications.
2. Jerry Rattenborg of the field office is familiar with the engineer's proposal for the lagoon outfall sewer at Farmersburg and he is in concurrence with the design.
3. This pipe material would not be acceptable for collector sewer however, for conveyance of treated effluent from a control discharge lagoon, we feel the pipe will perform satisfactorily.

18. PRECEDENTS USED: None

19. STAFF REVIEWER:

20. SUPERVISOR:

21. AUTHORIZED BY:

Frank M. Evans

8/17/88

James J. Evans

8/17/88

Daniel M. Albate

8/18/88

16. Engineers Justification (Continued)

7. The availability of this pipe material in long lengths reduces the number of joints and thereby reduces cost.
8. The pipe is substantially cheaper than SDR 35 PVC pipe.
9. With proper bedding and compaction of backfill any pipe deflection will be minimized.
10. Should the outfall line become damaged it can be easily taken out of service and repaired because the line is used only periodically for lagoon discharge.
11. The pipe is covered under ASTM Specification F667 and is approved by the Iowa DOT.
12. Corrugated polyethylene tubing is a proven product. Many, many miles it have been installed by the DOT for road subgrade drainage. Many more miles have been installed for agricultural drainage.