



C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment.

September 6, 2007

Town of Denmark
Attn: Carrie Simmons
4768 Carolina Highway
Denmark, SC 29042

RE: Sanitary Survey
System #0510002
Bamberg County

Dear Ms. Simmons:

On August 23, 2007 a sanitary survey was conducted on the Town of Denmark public water system. The intent of the sanitary survey is to evaluate the public water system's ability to provide a continuous supply of safe drinking water to its customers.

The Town of Denmark public water system received an overall rating of **Needs Improvement**. Enclosed is a copy of the survey and a report, which includes a description of the public water system, specific findings made during the sanitary survey, and recommendations for correcting any deficiencies. This survey and the report should be kept on file for no less than ten (10) years and be made available to the public or DHEC upon request. It is requested that all parties responsible for the operation and maintenance of the water system review this report promptly.

If you have any questions or if I can be of any assistance, please call me at (803) 641-7670.

Sincerely,

Jennifer Hughes
Region 5 EQC, Aiken

cc: Marty Chaney, Bureau of Water Compliance Assurance Division

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL
CONTROL
REGION 5 EQC

SANITARY SURVEY REPORT

*Town of Denmark
Water System # 0510002
Bamberg County*

Introduction

The South Carolina Department of Health and Environmental Control recently conducted a sanitary survey of the Town of Denmark Public Water System (Water System # 0510002). This survey consisted of a review of the Department files and an on-site inspection by Department personnel on August 23, 2007. The following persons participated in the on-site inspection:

Jennifer Hughes SCDHEC – Region 5 EQC, Aiken
Tim Freeman Town of Denmark

This report includes a description of the water system, a list of findings and recommendations noted during the survey.

System Description

The Town of Denmark owns and operates a groundwater facility and associated potable water distribution system that serves approximately 3800 by approximately 1501 service connections. Information on the system's wells is given in the table below.

Well Information

	Type	Horsepower	Yield	Regulated Capacity	Treatment
Well One Brooker Center	NOT IN SERVICE				
Well Two Voorhees	Turbine	60	330 gpm	316.80 TGD	Gaseous Chlorine
Well Three League Street	NOT IN SERVICE				

Three (3) elevated storage tanks with a total volume of approximately 475,000 gallons serve the Town of Denmark public water system.

Storage Capacity

Tank	Capacity (gallons)
City Hall Elevated Tank	100,000
Nibco Elevated Tank	250,000
Voorhees Elevated Tank	125,000

Currently, the Town of Denmark public water system has the following operators:

Operator	License	Certification #	Class
Tim Freeman	Treatment	06651	D
	Distribution	01830	G
JP Robinson	Treatment	02418	D
	Distribution	00472	D

Findings and Recommendations

- 1) The system maintained an Unsatisfactory rating for Leak Detection and Repair Program. At the time of the survey a water audit was not available for review. This deficiency has been noted on past surveys. In addition, the water audit should include purchased water from Bamberg Public Works.
- 2) The system maintained a Needs Improvement for Storage Appurtenances. The Town of Denmark has been extending overflow pipes to within the required distance of 12 to 24 inches when maintenance is scheduled at the tanks. The City Hall Tank overflow has been extended. The Voorhees Tank overflow pipe still needs to be extended.
- 3) The system received a Satisfactory rating for Storage Maintenance. As noted on the past survey, the City Hall Tank is showing some exterior rust. It is requested that the system submit to the Department a complete maintenance plan and schedule for addressing all storage tank deficiencies and maintenance schedules.
- 4) The system received an Unsatisfactory rating for Flow Measuring Device. At the time of the survey, the flow meter at Voorhees Well was out of service. Parts had been ordered to repair the flow meter.

- 5) The system received a Needs Improvement rating for Fire Flow. Documentation of flow test showed that some hydrants were last tested in 2004 and the flow test must be updated. In addition hydrant # 39 and # 41 had no flow test data. All hydrants that do not meet the 500 GPM requirement must be properly color coded or bagged. It is also import to note in the fire flow program that due to two of the wells being off-line and the use of Bamberg's water, water dynamics of the system have changed and the fire flow data needs to be updated to reflect these changes.
- 6) The system received an Unsatisfactory rating for Protection from Contamination. The town has taken two wells out of service. Samples taken in 2006 from two of the town's three wells detected contamination above an EPA established Maximum Contaminant Level (MCL). Neither well has exceeded the MCL in the past. The Brooker Center Well test showed slightly elevated levels of tetrachloroethylene, also known as PCE. PCE is commonly used as a dry cleaner solvent. The Brooker Center well is within 1200 feet of the closed Colonial Dry Cleaners, which is a potential source for this PCE contamination. The site is in the process of being cleaned up. The Legare Street/Clark Street well has shown contamination of trichloroethylene, also known as TCE. The town, along with DHEC, is actively investigating the source of the contamination.

Conclusions

The past year has been a very challenging year for the water system. The Department would like to thank the town for their cooperation and proactive steps taken to address the contamination issues with Brooker and League Street wells. However, the system has several deficiencies that have been noted on the past surveys. The system must take the necessary steps to address these deficiencies. The Department looks forward to working with the water system in the future to ensure that the residents of Denmark continue to receive the highest quality of drinking water.