



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES

Columbia Environmental Field Office
1421 Hampshire Pike
Columbia, TN 38401
Phone 931-380-3371 Statewide 1-888-891-8332 Fax 931-380-3397

October 1, 2015

Spring Hill Water Department
Hon. Rick Graham, Mayor
Town Center Parkway
PO Box 789
Spring Hill, TN 37174

Certified Mail
Return Receipt Requested
91 7199 9991 7034 0319 3545

RE: **Sanitary Survey Community Water System**
Spring Hill Water Department
PWSID #0000667
Maury County

Dear Mayor Graham:

On September 2, 2015, personnel from the Division of Water Resources (DWR) visited the Spring Hill Water Department and performed a Sanitary Survey. The survey consisted of a records review to document the operational performance of the system and an on-site inspection of the distribution system. The survey covered the time period from September, 2013 to August, 2015. The Division would like to thank all of your staff for their courtesy, willingness to work with the Division, and timely responses to Division requests. In accordance with the Sanitary Survey Manual the Spring Hill Water Department earned 599 points out of a possible 599 points for a numerical score of one hundred percent (**100%**). This rating retains the Spring Hill Water Department in the State's "**Approved**" category.

The following deficiencies, comments, and/or recommendations as outlined in the Sanitary Survey Rating Form were identified during the survey and should be addressed as applicable:

1. Section 1: System Management and Operation

• **Subsection H. Emergency Operations Plan**

The system last updated its Emergency Operations Plan (EOP) August, 2012. EOPs should be reviewed and updated every two years. Copies of the most recent version

of the plan should be available at the water plant, distribution office, city hall and any other location where city personnel have reason to access the plan. According to system personnel, the EOP is under revision at this time. A copy should be submitted to the Columbia Environmental Field Office as soon as the revision is complete.

2. Section 6: Finished Water Storage

- **Subsection B. Inspection and Maintenance of Reservoirs, Tanks and Clearwell**

Water tanks are to be professionally inspected every five years with a written report produced. The last professional inspection reports for Southside, Northside, and City Hall tanks were from November 2010. The system is reminded that these tanks are due for inspection during 2015.

The clearwell at the water plant should also be inspected on the same frequency and manner as the other water tanks.

3. Section 8: Distribution System and Cross Connection Controls

- **Subsection H. Unaccounted Water Loss**

Based on information provided by the system, Spring Hill's water loss is approximately 12%. The sources of water loss within the system should continue to be investigated and addressed.

General Observations, Comments, and Other Recommendations

1. The Spring Hill Water Department now has a total of 14,622 connections serving an estimated population of 37,166. Due to a rise in population served, the number of bacteriological samples required to be collected each month has increased to 40, beginning October 1, 2015.
2. The updated Monitoring Program for the system in accordance with Rule 0400-45-01-0.17(3) is enclosed.
3. In accordance with Rule 0400-45-01-.14(1)(a), State approval for the analysis of turbidity, chlorine, pH, alkalinity, temperature and orthophosphate is granted to Ms. Caryl Giles and Mr. Jeremy Vanderford. All turbidity analysis equipment used for compliance purposes must be calibrated at least every ninety days and according to the manufacturer's recommendations. Values are to be assigned to secondary standards for the benchtop turbidimeter. Daily verification of combined filter effluent turbidimeters and bench top turbidimeters is required. Individual filter effluent turbidimeters are

required to be verified weekly. The continuous chlorine analyzer is required to be verified at least once every five days. Calibration and verification activities must be documented and kept on file. This approval is effective until the next sanitary survey and is contingent upon proper operation, calibration and maintenance of the analysis equipment.

Again, I would like to thank the Spring Hill Water Department personnel for their assistance and courtesy. If you have any questions or need additional information, please contact me at the Columbia Environmental Field Office. My telephone number is (931) 490-3933.

Sincerely,



Lane Smith
Columbia Environmental Field Office
Division of Water Resources

cc: Nashville Central Office
Victor Lay, City Administrator
Jeff Foster, Public Works Director
Caryl Giles, Water Plant Superintendent
T.C. Norman, Distribution Operator

PWSID: #0000667

Water System Name: Spring Hill Water Department

Survey Date: Sep 2, 2015

System Category (Points): 599

421 - Consecutive Systems/Distribution Only
488 - Treatment Systems/Wholesalers
599 - Both Treatment and Distribution**1. System Management and Operation (94)**

Requirement	Points Range	Deduction	Comments
A. Record Keeping 0400-45-01-.20	(0)	Narrative	OK
B. Construction Projects 0400-45-01-.05, 0400-45-01-.17	(1-5)	0	Submit "Start Notice" prior to beginning new construction.
C. Submission of Monthly Operations Reports 0400-45-01-.17	(0)	Narrative	OK
D. Reporting Requirements 0400-45-01-.18	(4-30)	0	OK
E. Public Notification 0400-45-01-.19	(3-10)	0	OK
F. Facility Maintenance Fee	(0)	Narrative	OK
G. Enforcement – TCA §68-221-701 et seq.	(4-10)	0	OK
H. Emergency Operations Plan 0400-45-01-.17	(3)	0	Submit as soon as update is complete.
	Deficiency Subtotal	0	

2. Operator Compliance (23)

Requirement	Points Range	Deduction	Comments
A. Certified Operator – Plant and Distribution System 0400-45-01-.17(1) and 0400-49-01-.04	(3-15)	0	Caryl Giles - WT-4 Jeff Foster - DS-2 T.C. Norman - DS-2
	Deficiency Subtotal	0	

3. Source (25)

Requirement	Points Range	Deduction	Comments
A. Source Adequacy 0400-45-01-.02, .05, .16, .17(13) and .34(3)	(3-5)	0	OK
B. Intake 0400-45-01-.05, .17	(2)	0	OK
C. Wellhead/Springbox Construction 0400-45-01-.05(12), .16 and .17(3) and (16)	(2)	0	OK
D. Source Protection Plans 0400-45-01-.34	(1-2)	0	OK
	Deficiency Subtotal	0	

7. Treatment (155)

<u>Requirement</u>	<u>Points Range</u>	<u>Deduction</u>	<u>Comments</u>
A. Aerator 0400-45-01-.05, .17	(2)	0	OK
B. Chemicals/Chemical Feeders 0400-45-01-.05(8), and .17, .36	(2)	0	OK
C. Mixing 0400-45-01-.02, .05, .17	(2)	0	OK
D. Flocculation 0400-45-01-.02, .05, .17	(2)	0	OK
E. Sedimentation 0400-45-01-.02, .05, .17	(2)	0	OK
F. Filtration/Alternative Technology 0400-45-01-.17(12) and (27)	(2-30)	0	OK
G. Re-wash/Filter-to-waste 0400-45-01-.17 (35)	(2)	0	OK
H. Turbidimeters/Calibration 0400-45-01-.05 (11).17, .31, .39	(2-4)	0	OK
I. Disinfection 0400-45-01-.02, .17, .31, .36	(2-30)	0	OK
J. Disinfection Contact Time 0400-45-01-.02, .17, .31	(2-4)	0	OK
K. Master Meter 0400-45-01-.17 (2) and (3)	(1-2)	0	OK
L. Maintenance of Equipment, Buildings and Grounds 0400-45-01-.02, .17(3), (17) and (19)	(1)	0	OK
M. Laboratory Facilities 0400-45-01-.02, .14, .17(3)	(1-3)	0	OK
N. Safety 0400-45-01-.02	(2)	0	OK
O. Sludge Handling/Backwash Handling 0400-45-1-.05	(2)	0	OK
P. Sanitary Conditions 0400-45-01-.17 (17)	(2)	0	OK
Q. Fluoridation Techniques 0400-45-01-.06, .12, .17	(2)	0	OK
R. Design Capacity 0400-45-01-.05 (10)	(2-4)	0	Currently Plant at approximately 68.0% capacity.
S. Filter Backwash Recycling 0400-45-01-.31 (9)	(1)	0	OK
	Deficiency Subtotal	0	

D. Monitoring, Data Verification and Compliance (175)

Requirement	Points Range	Deduction	Comments
A. Laboratory-Process Monitoring (excluding Turbidity and Chlorine Residual) 0400-45-01-.17(3)	(5)	0	OK
B. Bacteriological Monitoring	(2-6)	0	OK
C. Bacteriological Compliance 0400-45-01-.06	(4-7)	0	OK
D. Turbidity Monitoring	(2-3)	0	OK
E. Turbidity Compliance	(4-7)	0	OK
F. Chlorine Residual Monitoring 0400-45-01-.17, .31, .36	(2-3)	0	OK
G. Primary Chemicals Monitoring	(2-3)	0	OK
H. Primary Chemicals Compliance	(4)	0	OK
I. Lead and Copper Monitoring 0400-45-01-.33	(2-3)	0	OK
J. Lead and Copper Action Level 0400-45-01-.33	(3-5)	0	OK
K. Disinfection/Disinfection By-Products and Precursors Monitoring 0400-45-01-.36, .37, .38	(2-3)	0	OK
L. Disinfection/Disinfection By-Products and Precursors Compliance 0400-45-01-.06, .36	(2-30)	0	OK
M. Secondary Chemicals 0400-45-01-.12	(2)	0	OK
N. Secondary Chemicals Compliance 0400-45-01-.12	(3)	0	OK
O. Cryptosporidium Monitoring 0400-45-01-.39	(0)	Narrative	
	Deficiency Subtotal	0	

6. Finished Water Storage (25)

Requirement	Points Range	Deduction	Comments
A. Adequate Storage 0400-45-01-.17 (14)	(2-4)	0	Storage at approximately 67.4%
B. Inspection and Maintenance of Reservoirs, Tanks and Clearwell 0400-45-01-.17 (16), (17), (33) and (34)	(1-10)	0	3 tanks due for inspection in 2015
	Deficiency Subtotal	0	

7. Pumps, Pump Facilities and Controls (18)

Requirement	Points Range	Deduction	Comments
A. Pump Facilities 0400-45-01-.17 (9) and (13)	(1-4)	0	OK
B. Maintenance of Pumping Equipment 0400-45-01-.17(13)	(1-3)	0	OK
	Deficiency Subtotal	0	

8. Distribution System and Cross Connection Controls (86)

Requirement	Points Range	Deduction	Comments
A. Notification, Inspection, Disinfection and Sample Collection of New or Existing Facilities 0400-45-01-.17 (8) and (19)	(3-5)	0	OK
B. Flushing Program/Blow Offs 0400-45-01-.17(10) and (23)	(3-4)	0	OK
C. Fire Hydrants 0400-45-01-.17 (18)	(0)	Narrative	Certified letter to fire departments due every 5 yrs.
D. Adequate Pressure 0400-45-01-.17 (9)	(5)	0	OK
E. Map of Distribution System 0400-45-01-.17 (15)	(3)	0	Update every 5 yrs.
F. Approved Cross Connection Policy or Ordinance and Plan 0400-45-01-.17 (6)	(4)	0	Ordinance approved 9/18/06 Plan approved 4/16/13
G. Working Cross Connection Program 0400-45-01-.17(6)	(3-9)	0	Follow Plan
H. Unaccounted Water Loss	(0)	Narrative	Approximately 12%
	Deficiency Subtotal	0	

Total Deficiency Points: 0

Points Available: 599

Overall Rating: 100

Points Available

421 - Consecutive Systems/Distribution Only

488 - Treatment Systems/Wholesalers

599 - Both Treatment and Distribution

Inspector:

Rene Smith
April Grappa
E. J. ...
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Additional Comments/Explanations: