



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER SUPPLY
Nashville Environmental Field Office
711 R.S. Gass Blvd.
Nashville, Tennessee 37216

April 5, 2011

The Honorable Aaron Prince
Mayor, City of Lakewood
3401 Hadley Avenue
Old Hickory, Tennessee 37138

RE: Sanitary Survey
Lakewood Water Department
PWSID# 0000528, Davidson County

Dear Mayor Prince:

On March 24, 2011, staff from the Division of Water Supply (DWS) conducted a Sanitary Survey of the Lakewood Water Department water system. A Sanitary Survey is comprised of an on-site inspection and file review to evaluate the operational performance of the water system. As a result of the items noted during the Sanitary Survey, the Lakewood Water Department water system has earned a score of **one hundred (100)**. This places the water system in the "**Approved**" category of public water systems in Tennessee.

In regard to the Sanitary Survey conducted on the water system, the following comments and recommendations are provided as assistance to the water system:

1. During the Sanitary Survey, division staff collected a chlorine residual measurement of 0.40 mg/L, a pH measurement of 6.98, and a temperature reading of 14.1° C from the dead-end alley behind the propeller shop (located on Hadley Avenue). Although above the minimum of 0.2 mg/L, additional flushing may be needed to ensure that a good chlorine residual is maintained throughout the distribution system;
2. The Division would like to remind the water system it is scheduled to begin Stage 2 Disinfection Byproducts monitoring starting November 5, 2013. According to the Division approved Stage 2

DRINKING WATER MONITORING PROGRAM

Lakewood Water Department

Distribution 1

PWSID# 0000528, Davidson County

Facility ID# CC01

April 2011

The following Drinking Water Monitoring Program has been developed in accordance with Division Rules 1200-5-1-.07 and 1200-5-1-.17(3). Please place this monitoring program in an easily accessible location for water system personnel to review. Unless stated otherwise, all test results must be reported on the Monthly Operation Report.

1. Distribution System

- A. Free Chlorine Residual: Collect representative chlorine residuals from dead-end or low usage lines **five (5) days per week*** excluding holidays. Specific site locations must be recorded on the Monthly Operation Report.
- B. Total Coliform Bacteria Analysis; Refer to Bacteriological Site-Sampling Plan for more information.
 - 1. Chlorine Residual (Free) collected at the same time and location as bacteriological samples and reported on bacteriological sample slip.
 - 2. Bacteriological - **Three routine (3) samples per month.** A state-certified laboratory must conduct analyses and the dates, locations, and chlorine residuals associated with these samples (as well as any other compliance samples analyzed during the month) must be recorded in the appropriate spaces designated on the Monthly Operation Report
- C. Pumpage. Daily water pumpage must be included on the Monthly Operations Report.

* Week consists of Monday through Sunday

PUBLIC WATER SYSTEM DATA

PWSID NUMBER

Name of Water System:	Lakewood Water Department	0000528
Mailing Address: 3401 Hadley Avenue		
City: Old Hickory	County: Davidson	
Zip Code: 37138	Office Phone: 847-8030	Fax: 847-3524

Title of Person	Name	Certification	Interviewed	Correspondence
Mayor	Aaron Prince			X
City Manager	Bobby Franklin			X
Certified Operator	Brad Hutchinson	DS-1	X	X

Bacteriological Samples: Three (3) per month		intake location	mark one			treatment											
No	Source	USGS Map - LATITUDE LONGITUDE River mile:	s u r f a c e	g r o u n d	p u r c h a s e	a e r a t i o n	p r e c i p i t a t i o n	c o a g u l a t i o n	s e d i m e n t a t i o n	f i l t r a t i o n	c o r r e c t i o n	s o f t e n i n g	t a s t e + o d o r	i r o n r e m o v a l	f l u o r i d e a d	d i s i n f i c t i o n	
1	Old Hickory UD (PWSID #0000527)	36.248611			X												
	Meter #1	86.64222															
2	OHUD Meter #2	36.250045			X												
		86.640829															
3																	
4																	

Name of Systems Served by this System	Other Systems Connected to this System
	Metro Nashville Water Department #1

Plant Classification: N/A	
Distribution Classification: DS-1	Date Laboratory Certified: N/A
Design Capacity: N/A	Filter Area: N/A
Raw Water Pump Capacity: N/A	Filter Rate: N/A
Distribution Storage, gravity flow: N/A	Finished Water Pump Capacity: N/A
Clearwell Capacity: N/A	Emergency Power Only: N/A
Date of Last Inorganic Chemical Analysis: *	Date Cross-Connection Program Approved: 4/25/03
Date of Last SOC Chemical Analysis *	Date of Last VOC Chemical Analysis: *
Date of Last Radionuclide Analysis: *	
Date Emergency Plan Approved Last: 12/07/07	Date of Last Survey: 2/11/2010
	Rating: 97
Number of Wholesale Customers: 0	Number of Meters: 1,029
Remarks: *- Chemical analyses provided by Old Hickory Utility District	

Date of Survey	Number of Connections	Household Factor	Population Served	Average Daily Pumpage (million gallons)	Maximum Daily Pumpage (million gallons)	Surveyed By	Rating	Year
2/24	1,029	2.30	2,367	0.159	0.234	WS/JS	100	2011
2/11	1,128	2.30	2,594	0.175	0.236	EW/MM	97	2010
1/29	1,014	2.30	2,332	0.159	0.257	WW / EW	96	2009
11/26	1,000	2.30	2,300	0.153	0.221	TAK/SO	85	2007
9/14	988	2.30	2,272	0.161	0.232	EJW/WWS	69	2006
10/16	950	2.30	2,185	0.230	0.337	EJW/TAK	76	2003
10/19	950	2.36	2,242	0.246	0.388	EJW/MS	73	2001

Sanitary Survey Rating

System: Lakewood Water Dept (#528)

Date: 3/24/2011

I. System Management and Operation (94)

	Requirement	Points Range	Deduction	Comments	
A.	Record Keeping 1200-5-1-.20	(0)	Narrative	<u>OK</u>	
B.	Construction Projects 1200-5-1-.05, 1200-5-1-.17	(1-5)		<u>1 construction project (2 Blow-offs) OK</u>	
C.	Submission of Monthly Operations Reports 1200-5-1-.17	(0)	Narrative	<u>OK</u>	
D.	Reporting Requirements 1200-5-1-.18	(4-30)			
E.	Public Notification 1200-5-1-.19	(3-10)			
F.	Facility Maintenance Fee	(0)	Narrative		
G.	Enforcement – T.C.A. §68-221-701 et seq.	(4-10)			
H.	Emergency Operations Plan 1200-5-1-.17	(3)			
Deficiency Subtotal					<u>Ø</u>

2. Operator Compliance (23)

	Requirement	Points Range	Deduction	Comments
A.	Certified Operator - Plant and Distribution System 1200-5-1-.17(1) and 1200-5-3-.04	(3-15)		<u>Bard Hutchinson, DS-1 (has approved SOP)</u>
Deficiency Subtotal				<u>Ø</u>

3. Source (25)

	Requirement	Points Range	Deduction	Comments
A.	Source Adequacy 1200-5-1-.02, .05, .16, .17(13) and .34(3)	(3-5)		<u>Ø</u>
B.	Intake 1200-5-1-.05, .17	(2)		<u>↓</u>

5. Monitoring, Data Verification and Compliance (175)

Requirement	Points Range	Deduction	Comments
A. Laboratory-Process Monitoring (excluding Turbidity and Chlorine Residual) 1200-5-1-.17(3)	(2)		OK
B. Bacteriological Monitoring	(2-6)		Bacti Plan Approved 7/26/10; system is collecting from lead ends and across the distribution system
C. Bacteriological Compliance 1200-5-1-.06	(4-7)		
D. Turbidity Monitoring	(2-3)		N/A
E. Turbidity Compliance	(4-7)		↓
F. Chlorine Residual Monitoring 1200-5-1-.17, .31, .36	(2-3)		
G. Primary Chemicals Monitoring	(2-3)		
H. Primary Chemicals Compliance	(4)		
I. Lead and Copper Monitoring 1200-5-1-.33	(2-3)		OK
J. Lead and Copper Action Level 1200-5-1-.33	(3-5)		↓
K. Disinfection/Disinfection By-Products and Precursors Monitoring 1200-5-1-.36, .37, .38	(2-3)		DISE Apprval 6/28/10
L. Disinfection/Disinfection By-Products and Precursors Compliance 1200-5-1-.06, .36	(2-30)		OK
M. Secondary Chemicals 1200-5-1-.12	(2)		↓
N. Secondary Chemicals Compliance 1200-5-1-.12	(3)		
O. Cryptosporidium Monitoring 1200-5-1-.39	(0)	Narrative	N/A
Deficiency Subtotal			∅

6. Finished Water Storage (25)

Requirement	Points Range	Deduction	Comments
A. Adequate Storage 1200-5-1-.17(14)	(2-4)		N/A
B. Inspection and Maintenance of Reservoirs, Tanks and Clearwell 1200-5-1-.17(16), (17), (33) and (34)	(1-10)		↓
Deficiency Subtotal			∅