ENERGY AND ENVIRONMENT CABINET

Steven L. Beshear
Governor

Office of General Counsel
Environmental Protection Legal Division
John G. Horne, II
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200 Fair Oaks Lane
Frankfort, Kentucky 40601
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Leonard K. Peters
Secretary

December 15, 2008

Public Service Commission
211 Sower Blvd.
P. O. Box 615
Frankfort, Kentucky 40602-0615

RE: Case No. 2008-00443

Dear Ms. Stumbo and Members of the Commission,

Enclosed is the Division of Water's written sworn testimony, filed this date in the above-captioned case in response to the Commission's Order entered on November 24, 2008. I apologize to the Commission for the late filing of this testimony, which is due to my illness this past Friday, December 12, 2008.

Sincerely,

Mary Stephens
Counsel for the Energy and Environment Cabinet

cc: Randall Hardin
Thomas Howard
Billy J. Rowe, Sr.
Hon. David Edward Spenard
James W. Hoskins
Judy Jackson
A. David Blankenship

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

AN INVESTIGATION INTO THE ADEQUACY OF THE WATER SUPPLY OF MAGOFFIN COUNTY WATER DISTRICT	)))	CASE NO. 2008-00443

TESTIMONY OF WILLIAM CALDWELL
ON BEHALF OF THE ENERGY AND ENVIRONMENT CABINET
DIVISION OF WATER

Adequacy of the quantity source of water: historical hydrologic records:

All drinking water distributed by MCWD is purchased from Salyersville Water Works (PWSID #0770566). The primary source of water supply is the Licking River, located in the uppermost reaches of the Licking River basin. At the point of withdrawal the drainage area above the intake is approximately 107 square miles.

Historical streamflow records for the Licking River near Salyersville are available for a 63-year period of record from 1939 through 1997 and 2001-2004. The record was evaluated to identify the occurrence of drought events of sufficient intensity and duration to create a water-supply deficit at the primary Licking River source. Each deficit that was identified was compared to the amount of water available from the backup wells (estimated to be 300,000 gallons per day) and from the "buffer" created from the stored water behind the dam on the Licking River at the intake site (estimated to be 2.5 million gallons).

The results indicate that drought events in the 1940s and 1950s were likely severe enough to cause some level of water-supply deficit under today's current demands. Most of these events occur late in the summer and early fall of the year. A repeat of these drought events could require some level of supplemental water supply above what could be supplied by the SWW river intake or backup wells (Table 3.).

Table 3. Estimated water supply shortfall at Salyersville Water Works for the period 1939 through 1997 under an assumed demand of 700,000 gpd.

		Supplemental Water Supply Requirement	
Drought Year	~Duration of Water Supply Deficit	Average	Maximum
	(days)	(million gallons per day)	
1943	34	0.275	0.400

1948	21	0.360	0.400
1953	45	0.240	0.400
1955	65	0.285	0.400
1957	8	0.250	0.400

Compared to the instrumental record that began in 1895, the 30-years between 1930 and 1960 were characterized by a higher frequency and severity of drought events than any other similar period. Prior to the events of 2007 and 2008, significant water supply deficits at SWW were essentially absent for more than 50 years.

Adequacy of the quantity of source of water: modern-day water shortages

Following the last extreme droughts of the 1950s extreme hydrologic drought was virtually absent for a 30-year period until the mid to late 1980s. The drought of 1988 reached extreme status in central and eastern Kentucky by mid-July but flows in the Licking River remained well above a critical level at Salyersville. A more severe drought in 1999 caused some concerns at Salyersville, but no actions beyond voluntary measures under a water shortage advisory were necessary. MCWD issued a voluntary advisory on June 24, 1999 following the announcement of a water shortage advisory by SWW. During the summer of 1999 flows in the Licking River remained at a useable level and drought conditions abated in early October.

The recent shortages and subsequent water-supply emergency in Magoffin County are the result of a two-year drought event that has had severe impacts to the hydrologic conditions in the upper Licking River watershed. Based on historical climate and hydrologic records, the 2007-2008 drought in Magoffin County ranks as one of the five (5) most severe droughts of the instrumental record. Furthermore, measured flows in the Licking River at Salyersville and Red River in Wolfe County suggest that this two-year drought is the most severe two-year hydrologic drought on record in the area comprising the upper Licking River and upper Red River basins.

As is the case with many water systems in Kentucky, MCWD is exposed to periodic occurrences of drought that have the potential to negatively impact the adequacy of the source of supply. Historical records indicate that the upper Licking River basin does not have a history of routinely reaching the level of hydrologic impact that developed by August of 2008. In most years and under the more common drought scenarios, a combination of the Licking River and backup wells can be expected to provide an adequate supply provided SWW and MCWD can effectively limit total water demand to no more than 700,000 gallons per day. Common drought scenarios will be those in which flows in the Licking River fall below a level that can fully meet the demands for raw water by SWW and MCWD, and where supplemental water from the backup wells is sufficient to meet the deficit. This level of drought can be expected to recur on a routine basis, at least one or two years each decade. It is not possible to place an upper limit on the "safe yield" of the combined sources of supply to SWW and MCWD. However, as demands on these sources increase so that 700,000 gpd is no longer an achievable conservation goal, the adequacy of these sources will become less certain under common drought scenarios. Hydrologic records and recent events confirm that there is potential for more extreme hydrologic drought in this area that can result in a loss of nearly all of the available flow in the Licking River. This level of drought may be statistically uncommon, but the potential consequences of having no options beyond the river and backup wells could be a significant threat to human health and safety when these droughts recur. Under these conditions the sources of supply to MCWD via SWW will not be adequate to meet demands. Increases in demand for water by MCWD either from population growth or line extensions to un-served areas will only exacerbate this condition.

I adopt the foregoing as my sworn testimony, and state that the statements are true and correct to the best of my knowledge, information and belief formed after a reasonable inquiry.

William Caldwell
Division of Water

My analysis and conclusions came from the raw data for the USGS streamflow gages for Licking River at Salyersville and Red River, near Hazel Green, available at the site below:

http://waterdata.usgs.gov/ky/nwis/rt

Individual links to the gage-specific information that I used are provided below:

Red River near Hazel Green; USGS # 03282500

http://waterdata.usgs.gov/nwis/dv?cb_00060=on&format=rdb&begin_date=1954-04-01&end_date=2008-12-03&site_no=03282500&referred_module=sw

Licking River near Salyersville; USGS # 03248500

http://waterdata.usgs.gov/nwis/dv?cb_00060=on&format=rdb&begin_date=1938-10-01&end_date=1997-09-30&site_no=03248500&referred_module=sw

Licking River below Mason Fork near Salyersville; USGS # 03248300

http://waterdata.usgs.gov/nwis/dv?cb_00060=on&format=rdb&begin_date=2001-04-25&end_date=2008-12-03&site_no=03248300&referred_module=sw

CERTIFICATE OF SERVICE

I hereby certify that on the 15th day of December, 2008, a true and accurate copy of the foregoing Testimony of William Caldwell was mailed, postage prepaid, to the following:

Randall Hardin, Chair
Magoffin County Water District
749 Parkway Road
P.O. Box 490
Salyersville, Kentucky 41465

James W. Hoskins, Superintendent
Magoffin County Water District
749 Parkway Road
P.O. Box 490
Salyersville, Kentucky 41465

Thomas Howard, Superintendent
Salyersville Water Works
401 College Street
Salyersville, Kentucky 41465

Judy Jackson, Chair
Salyersville Water Works
401 College Street
Salyersville, Kentucky 41465

Billy J. Rowe, Sr.
HC 60 Box 255
Salyersville, Kentucky 41465

Honorable David Edward Spenard
Assistant Attorney General
Office of the Attorney General
Utility & Rate Intervention Division
1024 Capital Center Drive Suite 200
Frankfort, Kentucky 40601-8204

A. David Blankenship, Esq.
Blankenship Law Office, LC
328 E. Court Street
Prestonsburg,Kentucky 41653
COUNSEL FOR PAINTSVILLE UTILITIES COMMISSION

Mary Stephens

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

AN INVESTIGATION INTO THE ADEQUACY OF THE WATER SUPPLY OF MAGOFFIN COUNTY WATER DISTRICT	)))	CASE NO. 2008-00443

Testimony of Julie Roney
Energy and Environment Cabinet
Department for Environmental Protection
Division of Water

Magoffin County Water District (MCWD), PWSID# KY0770525, is identified as a surface water purchaser under the Safe Drinking Water Act as implemented in Kentucky. This means that MCWD does not have a water treatment plant and therefore does not produce its own potable water. Presently, all drinking water distributed by MCWD is purchased from Salyersville Water Works (SWW), PWSID #0770566. SWW has one (1) surface water treatment plant that relies primarily on the Licking River for source water. During emergency situations, SWW has two (2) limited-capacity groundwater wells that can be used. However, the wells can only supply 30% of the rated one million gallon per day (1 MGD) design flow of the SWW treatment plant.

During the drought situation in Magoffin County in 2008, it became necessary for SWW to utilize the two wells to supplement customer demand and lessen the stress on the Licking River. In addition, SWW engaged in stream-channel trenching to release water that was stored in pools upstream of the water supply intake and transferred water from a pool below the intake back into the water supply pool. Both of these actions were implemented by SWW as efforts to maintain a useable level of water in the water supply pool on the Licking River.

As a water system that treats surface water, SWW must conduct testing on the filtered water at the treatment plant as well as test the finished water in the distribution system. MCWD, as a purchasing system, conducts less monitoring than that required of SWW and only on the water distributed by this public water system. Therefore, there are fewer compliance criteria placed on purchasing systems than those that treat raw source water.

The quality of the drinking water distributed to MCWD customers is related to the quality of water supplied by SWW and influenced by the layout of the MCWD distribution system.

Primary Safe Drinking Water Act (SDWA) Contaminants:

SWW has had eleven (11) violations of the SDWA since 2003: seven (7) for not meeting total organic carbon removal and four (4) for exceeding haloacetic acid (disinfection by-product) maximum contaminant levels. SWW is now in compliance with TOC removal.

MCWD has had four (4) violations of the SDWA since 2003: two (2) for monitoring issues associated with the Total Coliform Rule and two (2) for Consumer Confidence Report content.

Turbidity:

As a result of the decreasing water quality in the Licking River, SWW exceeded the treatment technique (TT) requirements of the Long Term 1 Surface Water Treatment Rule for turbidity removal in October. The TT requirements are 2-fold:

- No more than 5%[1] of the filtered water turbidity results can exceed 0.3 Turbidity Units (NTU)
- At no time will the filtered water turbidity exceed 1 NTU

As of October 27, 2008, SWW exceeded 0.3 NTU in 30% of the filtered water turbidity readings and one (1) NTU fourteen (14) times. SWW will receive two notices of

[1] In the Division of Water's October 29, 2008 Response to Commission staff's information request it is stated, incorrectly, that the treatment technique requirements include that, "No more than 95% of the filtered water turbidity results can exceed 0.3 turbidity Units (NTU)". The correct statement of the requirement is that, "No more than 5% of the filtered water turbidity results can exceed 0.3 turbidity Units (NTU)".

violation for the month of October 2008 for violation of turbidity TT requirements and will be required to conduct public notification.

In addition, SWW failed to collect sufficient turbidity readings on 5 days through October 26, 2008 and will so receive a Notice of Violation for a Monitoring and Reporting violation.

As MCWD purchases water from SWW, they, too, have purchased and distributed water with elevated turbidity and will also be required to notify their customers via a public notification process.

On October 7, 2008, a county-wide Boil Water Advisory (BWA) was issued due to the elevated turbidity levels. The BWA will remain in effect until the turbidity levels decrease to and remain below the regulatory treatment technique limit of 0.3 NTU. Testing conducted by the Division of Water for Secondary Maximum Contaminants Levels (SMCLs, see below) indicate the turbidity to be due to color from oxidized manganese—treatment has been adjusted at the SWW treatment plant to improve manganese removal.

Residual Disinfectant:

The SDWA and 401 KAR 8:150 Section 1(1)(a)(4) require that chlorine residuals be checked daily at representative points throughout the system. MCWD will receive a notice of violation for a Monitoring and Reporting violation; specifically for failure to monitor the distribution system for chlorine residual on a **daily** basis. However, of the chlorine residual levels reported, none were less than the minimum of 0.2 mg/L.

Secondary SDWA Contaminants

EPA has regulated Secondary Maximum Contaminant Levels (SMCL) for contaminants that are not health-based but rather mean to address aesthetic concerns such as taste, odor or color. Should such contaminants be detected in the source water and not adequately removed through treatment, the finished water can be considered unsatisfactory in appearance or taste to customers. SMCLs are not considered "enforceable" but "the cabinet may direct that supplier to modify the treatment procedure or to locate a more suitable source of water" (401 KAR 8:600 Section 1(7)).

Decreasing source-water levels and diminished flow in the Licking River can result in increased levels of secondary contaminants that cause discolored water. The Division of Water, in an effort to determine the cause of the elevated filtered water turbidity at the SWW plant, collected water samples from the Licking River, the producing water wells, the water treatment plant tap and a distribution site within the SWW distribution system. The samples were analyzed for pH, turbidity, iron, manganese, color and total organic carbon.

- The Licking River exceeded the SMCLs for iron, manganese and color.
- The water sampled at the treatment plant tap exceeded the SMCL for manganese.
- The sample of the SWW distribution exceeded the SMCL for manganese.
- The two wells continue to show good quality water

Manganese above the secondary standard of 0.050 mg/L can result in discolored water and a metallic taste. Treatment was adjusted at the water treatment plant on October 20, 2008 to improve removing the manganese from the Licking River.

Table 1. 4-Hour Compliance Turbidity Readings for October through 10/26/08—No more than 5% over 0.3 NTU/None over 1 NTU

Date	Hours Operated	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
1	17	0.13	0.13	0.13	0.13	0.13	0.12
2	13	0.12	0.12	0.12	0.12	0.11	0.12
3	14.3	0.12	0.12	0.12	0.12	0.11	0.11
4	14.3	0.1	0.1	0.1	0.16	0.16	0.17
5	13.3	0.17	0.17	0.11	0.13		
6	16.3	0.22	0.22	0.24	***0.53***		
7	11.5						
8	19.2		***3.9***	***3.4***	***1.04***	***2.78***	***1.1***
9	17.3	***0.90***	***0.70***	***3.17***	***2.62***	***0.33***	***0.51***
10	19.5	***0.55***	***1.09***			***1.2***	***0.60***
11	16.3	***0.75***	***1.22***	***1.09***		***0.99***	***0.49***
12	20.0	***0.56***	***1.54***	***3.29***	0.24	0.20	***0.40***
13	16.3	0.10	0.10	0.10	0.13		
14	15.5	***0.89***	0.15	0.24	0.14	0.30	***0.32***
15	10.3	***0.34***	***0.34***	***0.33***	0.25	0.16	***0.52***
16	11.3	0.23		0.09	0.11	0.08	0.10
17	15.3	0.11		0.17	0.24	0.16	***0.52***
18	12.3	***0.83***	***0.92***	0.10	0.10	0.11	0.13
19	12.2	***0.37***	***0.34***	***1.93***	0.09	0.10	***0.60***
20	10.5	0.12		0.13	0.12	0.11	0.10
21	23.2	0.09		0.22	***0.33***	0.12	***0.38***
22	17.1	***0.53***	0.21	0.20	0.17	0.18	0.21
23	20.5	0.13	0.17	0.17	0.11	0.28	0.19
24	19.7	0.11	0.11	0.17	0.14	0.16	0.26
25	20.6	0.16	***0.32***	0.13	0.09	0.22	0.16
26	14.3	0.13	0.18	0.13	0.10	0.14	0.15
27							
28							
29							
30							
31							

42 readings over 0.3 NTU out of 138 readings taken = 30%

Table 2. Secondary Maximum Contaminant Level (SMCL) Monitoring—Collected 10/14/08

Parameter	Licking River @ Intake	Well #1	Well #2	WTP Tap	Salyersville Wastewater Plant	SMCL (mg/L)
Total organic carbon	3.97	0.556	0.732	1.86	1.46	

(mg/L)						
Color (S.U.)	23.5	4.82	ND	3.61	ND	15
pH	7.5	8.4	8.2	7.8	7.9	6.5 – 8.5
Iron (mg/L)	0.577	0.0495	0.110	0.0192	ND	0.3
Manganese (mg/L)	1.300	0.00452	0.00348	***1.14***	***0.0895***	0.05
Turbidity (NTU)	8.2	0.98	0.36	***1.15***	0.67	See table above

Supplement to Testimony Originally Presented to PSC on October 24, 2008
Magoffin County Water Supply Issues

Salyersville Municipal Water:

The water supply concerns lessened in November 2008 in Magoffin County as rain moved through the area, resulting in 3" of rainfall (November Monthly Operation Report for Salyersville) and increased flow in the Licking River. However, water quality became an issue due to poor source water conditions.

Due to color in the Licking River, increased turbidity in the finished drinking water occurred in mid-November. The color, primarily due to dissolved manganese and organics, also resulted in a significant chlorine demand that could not be handled by the current processes at the water treatment plant. This led to chlorine residuals in the distribution system that were below the required 0.2 mg/L free chlorine, prompting a Boil Water Advisory from November 13 until it was lifted by the DOW on November 25.

Samples collected by DOW staff on November 21, 2008 confirmed the decreasing levels of manganese in the raw and distributed water:

Site	TOC (mg/L)	Iron (mg/L)	Manganese(mg/L)
Licking River	4.06	0.534	0.056
Plant Tap	3.33	0.0247	0.012
Fire Station	4.00	0.0843	0.034

Secondary Maximum Contaminant Level: Iron 0.3 mg/L
Manganese 0.05 mg/L

In November, Salyersville violated Treatment Techniques two times: once exceeding 1 NTU turbidity in the filtered water and once exceeding 0.3 NTU in more than 5% of the filtered water turbidity values. They also violated distribution system chlorine residuals with detection below 0.2 mg/L in more than 5% of the monthly readings for 2 consecutive months. Preliminary data also indicate that Salyersville violated the Maximum Contaminant Level for trihalomethanes and haloacetic acids for the 4th quarter of 2008. Salyersville will be issued an NOV for the above violations and will be required to do Public Notification for Tier 2 violations (customer notification within 30 days of receipt of the violation). I and other Division staff conducted an inspection of the Salyersville water system on November 21, 2008 and observed numerous operational, maintenance, design and management deficiencies. An Inspection Report noting these deficiencies has been mailed to Salyersville and the Division will be referring them to the Division of Enforcement for resolution of the deficiencies by a formal Agreed Order.

Magoffin County Water District:

Magoffin County Water District (MCWD) has the ability to boost the chlorine residual in the distributed water at several locations in their distribution system. This enabled them

to maintain a sufficient chlorine residual during November when Salyersville was having difficulty doing so.

MCWD will also be required to conduct Public Notification for Salyerville's turbidity and disinfection by-product violations in November.

To prepare my testimony I reviewed the documents submitted herewith as:

1. Cabinet's Exhibit 1 - Monthly Operation Report (MOR), 10/2008 Magoffin County Water District PWS ID: KY0770525

2. Cabinet's Exhibit 2 - Monthly Operation Report (MOR), 10/2008 Salyersville Water Works PWSID: KY0770566

3. Cabinet's Exhibit 3 - Kentucky Division of Water/Drinking Water Branch, Monthly Operating Report (MOR) Plant Summary Form, Salyersville Water Works PWS ID: KY0770566 Monitoring Period 10/2008

4. Cabinet's Exhibit 4 – response letter and Division of Water Drinking Water Sanitary Survey, Salyersville Water Works, PWS ID: KY0770566, dated 5/07/2007

5. Cabinet's Exhibit 5 - Inspection Letter, dated December 11, 2008

I certify that the foregoing statements are true and accurate to the best of my knowledge after reasonable investigation, and adopt them as my sworn testimony, as if under oath.

Julie W. Roney

Julie Roney
Division of Water

CERTIFICATE OF SERVICE

I hereby certify that on the _____ day of _____, 2008, a true and accurate copy of the foregoing Testimony of Julie Roney and Exhibits thereto were mailed, postage prepaid, to the following:

Randall Hardin, Chair
Magoffin County Water District
749 Parkway Road
P.O. Box 490
Salyersville, Kentucky 41465

James W. Hoskins, Superintendent
Magoffin County Water District
749 Parkway Road
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Salyersville, Kentucky 41465

Thomas Howard, Superintendent
Salyersville Water Works
401 College Street
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Judy Jackson, Chair
Salyersville Water Works
401 College Street
Salyersville, Kentucky 41465

Billy J. Rowe, Sr.
HC 60 Box 255
Salyersville, Kentucky 41465

Honorable David Edward Spenard
Assistant Attorney General
Office of the Attorney General
Utility & Rate Intervention Division
1024 Capital Center Drive Suite 200
Frankfort, Kentucky 40601-8204

A. David Blankenship, Esq.
Blankenship Law Office, LC
328 E. Court Street
Prestonsburg,Kentucky 41653
COUNSEL FOR PAINTSVILLE UTILITIES COMMISSION

_____
Mary Stephens

SCANNED / QC
AC 11-6-08

2008 NOV -5 AM 9:55
DIVISION OF WATER

KENTUCKY DIVISION OF WATER
DRINKING WATER BRANCH

Revised 7/1/06

MONTHLY OPERATION REPORT (MOR)--ALL WATER SYSTEMS

MONTH & YEAR OF: 10/2008

DEP Form 4012--Revised 07/2006

PWS ID :	KY0770525	PLANT ID:	PLANT NAME:		
PWS NAME:	Magoffin County Water Dist.		PLANT CLASS:		DIST CLASS: II-D
AGENCY INTEREST (AI):	34014		DATE MAILED:	11/03/2008	
SOURCE NAME:	Salyersville Water Works		COUNTY:	Magoffin	
	OPERATOR(S) RESPONSIBLE / IN-CHARGE		CLASS	CERTIFICATION NUMBER	
WTP SHIFT 1:					
WTP SHIFT 2:					
WTP SHIFT 3:					
DISTRIBUTION:	James W. Hoskins		II-D	2803	

THIS REPORT MUST BE RECEIVED BY THE DIVISION OF WATER AND APPLICABLE FIELD OFFICE NO LATER THAN 10 DAYS AFTER THE END OF THE MONTH.

TREATMENT PLANTS COMPLETE:

1. DESIGN CAPACITY (gpm):
2. TYPE OF FILTRATION USED:
3. DESIGN FILTRATION RATE (gpm/sq. ft.):
4. PERCENT BACKWASH WATER USED:
5. DATE FLOCCULATION BASIN(S) LAST CLEANED:*
6. DATE SETTLING BASIN(S) LAST CLEANED:

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. See KRS 224.99-010 and 401 KAR 8:020. (Penalities under this statute and regulation may include fines up to $25,000 per violation or by imprisonment for not more that one year, or both).

Allen McCoy — 11/03/2008

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT — DATE

EXHIBIT
tabbies
Cabinet's 1

WATER TREATMENT PLANT - MONTHLY OPERATIONS REPORT

PWS ID: KY0770525
PLANT ID:

ALLWATER SYSTEMS

REPORT MONTH/YEAR: 10/2008

DISTRIBUTION SYSTEM OPERATION

DAY	CHEMICALS ADDED: CHLORINE BOOSTER LBS	CHEMICALS ADDED: CHLORINE BOOSTER LBS		TEST RESULTS: TOTAL (T) AND FREE (F) CHLORINE RESIDUAL (ppm) NORTH T	NORTH F	SOUTH T	SOUTH F	EAST T	EAST F	WEST T	WEST F
1							1.2		1.0		
2							1.0				1.1
3					0.9				0.9		
4											
5											
6	<.5				0.8		1.1		0.7		1.0
7							1.3		0.9		
8					1.0		1.5				
9					1.0						0.9
10							1.8		1.2		
11											
12											
13	<.5				1.1		2.0		1.3		1.0
14							1.9				1.1
15					1.0				1.2		
16					1.2		1.8				
17									1.4		1.2
18											
19											
20	<.5				1.0		1.5		1.3		1.0
21					0.9		1.6				
22									1.2		0.9
23					1.1		1.5				
24							1.4				0.8
25											
26											
27	<.5				1.3		1.6		1.3		1.0
28					1.2				1.1		
29							1.7				1.1
30					1.1		1.5				
31									1.0		1.0
AVERAGE	<.5		Average		1.0		1.5		1.1		1.0
TOTAL	<2.0		Total Minimum								
			Free Minimum		0.8		1.0		0.7		0.8

Total # Chlorine Samples
Less than 0.2 mg/L/0.5 mg/L

Number of Free Residuals: 54
Number of Total Residuals:
Total # Less than 0.2 mg/L:
Total # Less than 0.5 mg/L:

Minimum Monthly Free Residual: 0.7
Minimum Monthly Total Residual:

Disinfectant Chloramines? (Y/N): N
Number of days of operation? 20

KENTUCKY DIVISION OF WATER / DRINKING WATER BRANCH
MONTHLY OPERATING REPORT (MOR) SUMMARY FORM

PWS ID KY0770525 MONITORING PERIOD (MMYYYY) 10/2008

AI 34014 NOTE: COMPLETE ALL APPLICABLE FIELDS!!! NOT ALL OF THE FIELDS ARE PRE-POPULATED FOR YOU!!!

WATER PURCHASED / WATER SOLD

APPLICABLE TO ALL WATER SYSTEMS

FROM WHOM? (PWS ID)	HOW MUCH? (gallons)	TO WHOM? (PWS ID)	HOW MUCH? (gallons)
KY0770566	12,658,630		

DISTRIBUTION RESIDUAL DISINFECTANT CONCENTRATION

APPLICABLE TO ALL WATER SYSTEMS

ANALYTE CODE 0999

Number of days of operation	20
Were samples taken each day of operation? (Y/N)	Y
Number of samples taken:	
FREE	54
TOTAL	
Lowest single FREE chlorine reading	0.7
Lowest single TOTAL chlorine reading	

Free Chlorine (for all disinfectants except chloramine)
Number of samples under 0 2 mg/L

Total Chlorine (when disinfectant is chloramine)
Number of samples under 0 5 mg/L

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein Based on my inquiry of those individuals immediately responsible for obtaining the information, the submitted information is true, accurate and complete I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment. Violations of 401 KAR Chapter 8 are subject to severe penalties prescribed in KRS 224 99-010 up to $25 000 fine per day per violation and in some cases a violation may subject the violator to prison

Signature of Principal Executive Officer or Authorized Agent

11/03/2008
Date

to maintain a sufficient chlorine residual during November when Salyersville was having difficulty doing so.

MCWD will also be required to conduct Public Notification for Salyerville's turbidity and disinfection by-product violations in November.

To prepare my testimony I reviewed the documents submitted herewith as:

1. Cabinet's Exhibit 1 - Monthly Operation Report (MOR), 10/2008 Magoffin County Water District PWS ID: KY0770525

2. Cabinet's Exhibit 2 - Monthly Operation Report (MOR), 10/2008 Salyersville Water Works PWSID: KY0770566

3. Cabinet's Exhibit 3 - Kentucky Division of Water/Drinking Water Branch, Monthly Operating Report (MOR) Plant Summary Form, Salyersville Water Works PWS ID: KY0770566 Monitoring Period 10/2008

4. Cabinet's Exhibit 4 – response letter and Division of Water Drinking Water Sanitary Survey, Salyersville Water Works, PWS ID: KY0770566, dated 5/07/2007

5. Cabinet's Exhibit 5 - Inspection Letter, dated December 11, 2008

I certify that the foregoing statements are true and accurate to the best of my knowledge after reasonable investigation, and adopt them as my sworn testimony, as if under oath.

Julie W. Roney

Julie Roney
Division of Water

CERTIFICATE OF SERVICE

I hereby certify that on the _____ day of _____, 2008, a true and accurate copy of the foregoing Testimony of Julie Roney and Exhibits thereto were mailed, postage prepaid, to the following:

Randall Hardin, Chair
Magoffin County Water District
749 Parkway Road
P.O. Box 490
Salyersville, Kentucky 41465

James W. Hoskins, Superintendent
Magoffin County Water District
749 Parkway Road
P.O. Box 490
Salyersville, Kentucky 41465

Thomas Howard, Superintendent
Salyersville Water Works
401 College Street
Salyersville, Kentucky 41465

Judy Jackson, Chair
Salyersville Water Works
401 College Street
Salyersville, Kentucky 41465

Billy J. Rowe, Sr.
HC 60 Box 255
Salyersville, Kentucky 41465

Honorable David Edward Spenard
Assistant Attorney General
Office of the Attorney General
Utility & Rate Intervention Division
1024 Capital Center Drive Suite 200
Frankfort, Kentucky 40601-8204

A. David Blankenship, Esq.
Blankenship Law Office, LC
328 E. Court Street
Prestonsburg,Kentucky 41653
COUNSEL FOR PAINTSVILLE UTILITIES COMMISSION

_____
Mary Stephens

SCANNED / QC
A.K. 11-7-08

2008 NOV -5 PM 4:00

DIVISION OF WATER

Revised 01/04/07

KENTUCKY DIVISION OF WATER
DRINKING WATER BRANCH
MONTHLY OPERATION REPORT (MOR)--ALL WATER SYSTEMS

MONTH & YEAR (mm/yyyy) 10/2008

DEP Form 4012--Revised 07/2006

Indicate one with "X"

- [X] SURFACE WATER
- [ ] GROUNDWATER
- [ ] PURCHASE/DISTRIBUTE ONLY

PWS ID :	KY0770566	PLANT ID: A	PLANT NAME:	Salyersville Water Works	
PWS NAME:	Salyersville Water Works		PLANT CLASS: 3-A	DIST. CLASS: 2-D	
AGENCY INTEREST (AI):	2889		DATE MAILED:		
SOURCE NAME:	Licking River		COUNTY:	Magoffin	
	Gardener Trail Wells				
	OPERATOR(S) RESPONSIBLE / IN-CHARGE		CLASS	CERTIFICATION NUMBER	
WTP SHIFT 1:	Nora Bauer		3-A	51050	
WTP SHIFT 2:					
WTP SHIFT 3:					
DISTRIBUTION:	Adam Hunley		2-D	2254	

THIS REPORT MUST BE RECEIVED BY THE DIVISION OF WATER AND APPLICABLE FIELD OFFICE NO LATER THAN 10 DAYS AFTER THE END OF THE MONTH.

TREATMENT PLANTS COMPLETE:

1. DESIGN CAPACITY (gpm):	695
2. TYPE OF FILTRATION USED:	Dual Media
3. DESIGN FILTRATION RATE (gpm/sq. ft.):	3
4. PERCENT BACKWASH WATER USED:	1.4
5. DATE FLOCCULATION BASIN(S) LAST CLEANED:	04/23/2008
6. DATE SETTLING BASIN(S) LAST CLEANED:	04/23/2008

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possiblity of fine and imprisonment. See KRS 224.99-010 and 401 KAR 8:020. (Penalities under this statute and regulation may include fines up to $25,000 per violation or by imprisonment for not more that one year, or both).

Nora Bauer — SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

11-3-08 — DATE

EXHIBIT
tabbies
Cabinet 2

KENTUCKY DIVISION OF WATER - DRINKING WATER BRANCH
WATER TREATMENT PLANT - MONTHLY OPERATING REPORT

PWS ID : KY0770566
PLANT ID: A

[redacted]

REPORT MONTH/YEAR: 10/2008

	RAW WATER TREATED	HOURS PLANT OPERATED	COAGULANT DELPAC 2020		COAGULANT		pH ADJUSTMENT LIME Pre		DISINFECTANT Chlorine Pre		DISINFECTANT Chlorine Post	
DAY	GALLONS		LBS	PPM	LBS	PPM	LBS	PPM	LBS	PPM	LBS	PPM
1	814,112	17.0	195.0	28.7			51.0	7.5	7.6	1.1	8.5	1.3
2	582,931	13.0	149.0	30.6			39.0	8.0	5.8	1.2	6.5	1.3
3	761,053	14.3	164.0	25.8			42.0	6.6	6.4	1.0	7.1	1.1
4	595,884	14.3	209.0	42.1			42.0	8.5	6.4	1.3	7.1	1.4
5	609,953	13.3	187.0	36.8			39.0	7.7	5.9	1.2	6.6	1.3
6	767,703	16.3	187.0	29.2			48.0	7.5	7.3	1.1	8.1	1.3
7	774,165	11.5	131.0	20.3			34.0	5.3	5.1	0.8	6.0	0.9
8	713,651	19.2	220.0	37.0			57.0	9.6	8.6	1.4	10.1	1.7
9	607,672	17.3	220.0	43.4			51.0	10.1	8.6	1.7	9.1	1.8
10	768,141	19.5	248.0	38.7			58.0	9.1	9.7	1.5	10.3	1.6
11	623,800	16.3	207.0	39.8			48.0	9.2	8.1	1.6	8.6	1.7
12	726,348	20.0	255.0	42.1			60.0	9.9	10.0	1.7	10.6	1.7
13	763,261	16.3	207.0	32.5			48.0	7.5	8.1	1.3	8.6	1.4
14	688,416	15.5	197.0	34.3			46.0	8.0	9.5	1.7	10.9	1.9
15	640,402	10.3	117.0	21.9			30.0	5.6	6.7	1.3	7.2	1.3
16	695,059	11.3	129.0	22.3			33.0	5.7	8.0	1.4	8.0	1.4
17	663,140	15.3	175.0	31.6			45.0	8.1	10.8	2.0	10.8	2.0
18	655,797	12.3	141.0	25.8			36.0	6.6	8.7	1.6	8.7	1.6
19	793,478	12.2	139.0	21.0			36.0	5.4	9.1	1.4	7.5	1.1
20	408,071	10.5	120.0	35.3			31.0	9.1	7.8	2.3	6.5	1.9
21	800,579	23.2	253.0	37.9			69.0	10.3	16.4	2.5	14.3	2.1
22	561,406	17.1	169.0	36.1			51.0	10.9	12.1	2.6	10.6	2.3
23	739,080	20.5	202.0	32.8			61.0	9.9	14.5	2.4	12.6	2.0
24	673,647	19.7	195.0	34.7			59.0	10.5	14.0	2.5	12.2	2.2
25	708,167	20.6	236.0	40.0			51.0	8.6	14.6	2.5	12.7	2.2
26	629,301	14.3	164.0	31.2			35.0	6.7	10.1	1.9	8.8	1.7
27	1,032,869	16.2	185.0	21.5			40.0	4.6	12.1	1.4	10.6	1.2
28	606,359	14.2	139.0	27.5			35.0	6.9	10.6	2.1	9.3	1.8
29	651,446	15.3	122.0	22.5			38.0	7.0	11.4	2.1	10.0	1.8
30	854,460	20.0	140.0	19.6			50.0	7.0	15.0	2.1	13.2	1.9
31	653,816	15.2	106.0	19.4			37.0	6.8	11.3	2.1	9.9	1.8
TOTAL	21,564,167		5508.0		0.0		1400.0		300.3		291.0	
AVERAGE	695,618		177.7	31.0	#DIV/0!	#DIV/0!	45.2	7.9	9.7	1.7	9.4	1.6
MAX	1,032,869											

NUMBER DAYS IN OPERATION 31

KENTUCKY DIVISION OF WATER - DRINKING WATER BRANCH
WATER TREATMENT PLANT - MONTHLY OPERATING REPORT

[redacted]

PWS ID : KY0770566
PLANT ID: A
REPORT MONTH/YEAR: 10/2008

	DISINFECTANT		FLUORIDE		CARBON		pH ADJUSTMENT Post		$KMnO_4$		CORROSION INHIBITOR			
DAY	LBS	PPM	LBS	PPM	LBS	PPM	LBS	PPM	LBS	PPM	LBS	PPM	LBS	PPM
			3.0	0.4										
			2.3	0.5										
			2.5	0.4										
			2.5	0.5										
			2.4	0.5										
			2.9	0.5										
			2.0	0.3										
			3.4	0.6										
			3.1	0.6										
			3.5	0.5										
			2.9	0.6										
			3.6	0.6										
			2.9	0.5										
			2.8	0.5										
			1.8	0.3										
			2.0	0.3										
			2.7	0.5										
			2.2	0.4										
			2.2	0.3										
			1.9	0.6										
			4.2	0.6										
			3.1	0.7										
			3.7	0.6										
			3.5	0.6										
			3.7	0.6										
			2.5	0.5										
			2.9	0.3										
			2.5	0.5										
			2.7	0.5										
			3.6	0.5										
			2.7	0.5										
TOTAL	0.0		87.7		0.0		0.0		0.0		0.0		0.0	
AVERAGE	#DIV/0!	#DIV/0!	2.8	0.5	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

KENTUCKY DIVISION OF WATER - DRINKING WATER BRANCH
WATER TREATMENT PLANT - MONTHLY OPERATING REPORT

PWS ID : KY0770566
PLANT ID: A

REPORT MONTH/YEAR: 10/2008

	pH			TOTAL ALKALINITY		TOTAL HARDNESS		CHLORINE RESIDUAL				TURBIDITY (NTU)		
								TOP OF FILTER		PLANT TAP				
DAY	RAW	TOP OF FILTER	TAP	RAW	TAP	RAW	TAP	TOTAL	FREE	TOTAL	FREE	RAW	SETTLED WATER	PLANT TAP
1	7.29	7.39	7.51	102	98	328	340	0.53	0.43	1.56	1.48	16.00	1.30	0.13
2	7.43	7.77	7.62	100	100	320	214	0.68	0.60	1.54	1.68	14.00	2.00	0.12
3	7.29	7.21	7.53	100	102	304	258	0.96	0.74	1.46	1.58	16.00	1.90	0.11
4	7.34	7.35	7.50	100	100	300	284	0.64	0.51	1.71	1.60	24.00	1.80	
5	7.40	7.61	7.50	104	102	308	288	0.71	0.62	1.67	1.55	21.00	1.80	
6	7.41	7.17	7.60	106	104	300	300	0.73	0.61	1.68	1.63	17.00	1.60	0.24
7	7.38	7.06	7.47	102	90	290	286	0.74	0.60	1.36	1.75	16.00	1.70	0.46
8	7.45	7.62	7.98	90	160	232	110	0.87	0.58	2.23	2.21	15.00	2.50	0.45
9	7.38	7.86	7.42	100	160	274	108	0.31	0.29	1.29	1.51	19.00	2.10	1.07
10	7.55	7.54	7.89	102	168	270	102	0.69	0.75	1.90	1.71	18.00	3.30	2.62
11	7.51	7.50	7.81	102				0.78	0.71	2.12	1.93	19.00	2.10	
12	7.53	7.57	7.77	100				0.53	0.41	2.19	2.00	20.00	2.30	
13	7.26	7.27	7.77	94	134	270	150	0.33	0.22	1.79	1.74	11.00	1.30	0.14
14	7.39	7.54	7.84	90	170	262	96	0.57	0.49	1.50	1.88	12.00	1.30	0.10
15	7.29	7.45	7.68	100	170	256	140	0.13	0.21	1.42	1.16	9.00	1.70	0.25
16	7.33	7.22	7.27	102	100	266	266	0.42	0.33	1.51	1.60	12.00	1.00	0.09
17	7.50	7.13	7.27	100	100	252	220	0.42	0.44	1.27	1.13	12.00	1.30	0.24
18	7.54	7.23	7.26	108	104	264	228	0.59	0.48	1.55	1.43	11.00	1.10	0.10
19	7.43	7.55	7.31	106	106	268	222	0.91	0.77	1.71	1.59	10.00	1.90	0.09
20	7.28	7.33	7.77	104	104	270	240	0.45	0.37	1.61	1.70	10.00	1.20	0.12
21	7.25	7.16	7.29	94	86	252	250	0.81	0.72	1.47	1.38	11.00	1.80	0.33
22	7.12	7.15	7.64	100	166	264	150	0.84	0.84	1.61	0.15	10.00	1.90	0.21
23	7.30	6.93	7.75	104	160	256	170	0.59	0.58	1.30	1.33	12.00	2.10	0.17
24	7.23	7.53	7.71	102	176	240	122	1.02	0.93	1.46	1.54	9.00	1.60	0.17
25	7.31	7.39	7.82	148	183	222	146	1.18	1.03	1.88	1.79	14.00	1.70	0.10
26	7.64	7.41	7.79	116	188	215	138	1.19	1.08	1.83	1.76	15.00	1.90	0.13
27	7.18	7.35	7.86	90	112	266	230	0.80	0.56	1.40	1.46	13.00	2.50	0.18
28	7.28	7.25	7.47	88	88	268	270	0.61	0.54	1.28	1.39	10.00	2.60	0.17
29	7.39	7.29	7.49	100	92	310	306	0.52	0.53	1.39	1.36	8.00	2.40	0.21
30	7.39	7.37	7.56	98	90	300	306	0.54	0.49	1.65	1.56	6.00	2.80	0.21
31	7.38	7.37	7.55	102	92	350	356	0.47	0.30	1.40	1.54	4.00	1.80	0.27
AVERAGE	7.4	7.4	7.6	102	124	275	217	0.66	0.57	1.60	1.55	13.35	1.88	0.31

KENTUCKY DIVISION OF WATER - DRINKING WATER BRANCH
WATER TREATMENT PLANT - MONTHLY OPERATING REPORT

PWSID: KY0770566
PLANT ID: A

REPORT MONTH/YEAR: 10/2008

*Please answer Y/N question below this chart.

DAY	FLUORIDE RAW	FLUORIDE TAP	IRON RAW	IRON TAP	MANGANESE RAW	MANGANESE TAP	RAW	TAP	Lowest Daily Chlorine Residual Plant Tap On-Line Chlorine Analyzer FREE	RAINFALL INCHES	WATER TEMP. DEGREES C*
1		0.88							1.42		18.4
2		1.06							1.68		17.2
3		0.92							1.37		16.4
4		0.99							1.34		17.0
5		1.08							1.48		16.8
6		1.64							1.33		16.3
7		0.81							1.11		15.9
8		1.54							1.11	0.1	17.5
9		1.55							1.49		17.2
10		1.64							1.35		17.4
11		1.31							1.56		17.1
12		1.28							1.98		16.9
13		1.32							1.72		17.2
14		1.50							1.78		17.3
15		1.37							1.16		17.5
16		0.88							1.50		17.5
17		0.97							1.13		17.2
18		0.97							1.51		17.0
19		1.01							1.90		16.5
20		1.38							1.55		15.6
21		0.76							1.38		13.5
22		1.26							1.54		14.6
23		1.24							1.33		14.2
24		1.28							1.32	0.7	14.9
25		1.15							1.32		14.4
26		1.09							1.65		14.2
27		0.85							1.45		14.6
28		0.64							1.39		11.0
29		0.87							1.36		9.8
30		0.86							1.51		9.1
31		0.78							1.37		8.8
AVERAGE	#DIV/0!	1.13	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	Monthly Minimum	Total Rainfall	15.5
									1.11		
									Number of readings 31	0.77	
									For Free Chlorine, # less than 0.2 mg/L 0		
									For Chloramines, # less than 0.5 mg/L		

Disinfectant Chloramines? (Y/N) N

KENTUCKY DIVISION OF WATER - DRINKING WATER BRANCH
WATER TREATMENT PLANT - MONTHLY OPERATING REPORT

PWS ID : KY0770566
PLANT ID: A
REPORT MONTH/YEAR: 10/2008

DAY	TOTAL WASH WATER GALLONS	No: 1 AREA (square feet) 225 WASHWATER GALLONS	FILT RUN HRS	No: 2 AREA (square feet) 225 WASHWATER GALLONS	FILT RUN HRS	No: AREA (square feet) WASHWATER GALLONS	FILT RUN HRS	No: AREA (square feet) WASHWATER GALLONS	FILT RUN HRS	No: AREA (square feet) WASHWATER GALLONS	FILT RUN HRS
1			17.00		17.00						
2			13.00		13.00						
3			14.30		14.30						
4			14.30		14.30						
5	40,000	20,000	13.30	20,000	13.30						
6			16.30		16.30						
7			11.45		11.45						
8	45,000	23,000	19.15	22,000	19.15						
9			17.30		17.30						
10			19.45		19.45						
11			16.30		16.30						
12	56,000	28,000	20.00	28,000	20.00						
13			16.30		16.30						
14			15.45		15.45						
15			10.30		10.30						
16			11.30		11.30						
17	45,000	23,000	15.30	22,000	15.30						
18			12.30		12.30						
19	44,000	22,000	12.15	22,000	12.15						
20			11.00		11.00						
21			23.00		23.00						
22			17.15		17.15						
23			20.45		20.45						
24			20.00		20.00						
25			21.00		21.00						
26			14.30		14.30						
27	42,000	21,000	16.15	21,000	16.15						
28			14.15		14.15						
29	34,000	17,000	15.30	17,000	15.30						
30			20.00		20.00						
31			15.15		15.15						
TOTAL	306,000	154,000	492.60	152,000	492.60	0	0.00	0	0.00	0	0.00
AVERAGE	43,714	22,000	15.890	21,714	15.890	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

COPY AS NEEDED

KENTUCKY DIVISION OF WATER - DRINKING WATER BRANCH
WATER TREATMENT PLANT - MONTHLY OPERATING REPORT

PWS ID : KY0770566
PLANT ID: A

REPORT MONTH/YEAR: 10/2008

DAY	CHEMICALS ADDED: CHLORINE BOOSTER LBS	CHEMICALS ADDED: CHLORINE BOOSTER LBS		TEST RESULTS: TOTAL (T) AND FREE (F) CHLORINE RESIDUAL (ppm) NORTH T	NORTH F	SOUTH T	SOUTH F	EAST T	EAST F	WEST T	WEST F
							0.65		0.71		
					0.45						0.58
							1.01		1.15		
					0.88						0.74
							0.90		0.64		
					0.50						0.46
							0.22		0.27		
					0.28						0.34
							0.11		0.19		
					0.30						0.42
							0.41		0.50		
					0.35						0.48
							0.53		0.55		
					1.05						1.03
							0.40		0.43		
					0.12						0.15
							0.16		0.12		
					0.40						0.68
							1.09		0.77		
					0.54						0.63
							0.68		0.76		
					0.22						0.19
							0.57		0.61		
					1.48						1.01
							1.09		0.65		
					0.42						0.38
							0.30		0.27		
					0.48						0.78
							0.75		1.05		
						0.12			0.20		
					0.33						0.42
AVERAGE	#DIV/0!	#DIV/0!	Average	#DIV/0!	0.52	0.12	0.59	#DIV/0!	0.55	#DIV/0!	0.55
TOTAL	0.0	0.0	Total Minimum			0.12					
			Free Minimum		0.12		0.11		0.12		0.15

Total # Chlorine Samples	0	15	1	15	0	16	0	15	
# Less than 0.2 mg/L/0.5 mg/L	0	1	1	2	0	2	0	2	

Number of Free Residuals	61	Minimum Monthly Free Residual	0.11
Number of Total Residuals	1	Minimum Monthly Total Residual	0.12
Total # Less than 0.2 mg/L	7		
Total # Less than 0.5 mg/L			

Disinfectant Chloramines? (Y/N) N

Number of days of operation? 31

KENTUCKY DIVISION OF WATER - DRINKING WATER BRANCH
WATER TREATMENT PLANT - MONTHLY OPERATING REPORT

TURBIDITY REPORT

PWS ID : KY0770566
PLANT ID: A
Report Period (MM/YYYY): 10/2008
PAGE: 8 OF 11

PWS Name: Salyersville Water Works

DAY									
	17.0	5	0.13	0.13	0.13	0.13	0.13	0.12	0.130
	13.0	4	0.12	0.12	0.12	0.12	0.11	0.12	0.120
	14.3	4	0.12	0.12	0.12	0.12	0.11	0.11	0.120
	14.3	4	0.10	0.10	0.10	0.16	0.16	0.17	0.170
	13.3	4	0.17	0.17	0.11	0.13		0.18	0.180
	16.3	5	0.22	0.22	0.24	0.53			0.530
	11.5	3							0.000
	19.2	5		3.90	3.40	1.04	2.78	1.10	3.900
	17.3	5	0.90	0.70	3.17	2.62	0.33	0.51	3.170
	19.5	5	0.55	1.09			1.20	0.60	1.200
	16.3	5	0.75	1.22	1.09		0.99	0.49	1.220
	20.0	5	0.56	1.54	3.29	0.24	0.20	0.40	3.290
	16.3	5	0.10	0.10	0.10	0.13			0.130
	15.5	4	0.89	0.15	0.24	0.14	0.30	0.32	0.890
	10.3	3	0.34	0.34	0.33	0.25	0.16	0.52	0.521
	11.3	3	0.23		0.09	0.11	0.08	0.10	0.231
	15.3	4	0.11		0.17	0.24	0.16	0.52	0.521
	12.3	4	0.83	0.92	0.10	0.10	0.11	0.13	0.920
	12.2	4	0.37	0.34	1.93	0.09	0.10	0.60	1.930
	10.5	3	0.12		0.13	0.12	0.11	0.10	0.125
	23.2	6	0.09		0.22	0.33	0.12	0.38	0.382
	17.1	5	0.53	0.21	0.20	0.17	0.18	0.21	0.528
	20.5	6	0.13	0.17	0.17	0.11	0.28	0.19	0.276
	19.7	5	0.11	0.11	0.17	0.14	0.16	0.26	0.259
	20.6	6	0.16	0.32	0.13	0.09	0.22	0.18	0.322
	14.3	4	0.13	0.18	0.13	0.10	0.14	0.15	0.178
	16.2	5	0.16	0.23	0.10	0.18	0.16	0.10	0.231
	14.2	4	0.08	0.16	0.17	0.24	0.17	0.22	0.240
	15.3	4	0.26	0.12	0.21	0.20	0.19	0.22	0.261
	20.0	5	0.10	0.21	0.30	0.21	0.15	0.35	0.352
	15.2	4	0.23		0.27	0.18	0.84	0.45	0.837
Total	491.6	138				TOTAL # OF TURBIDITY SAMPLES TAKEN →		166	3.900

ARE YOU USING EITHER CONVENTIONAL or DIRECT FILTRATION? (Y/N) Y
(Any type of filtration besides slow sand)

Number of samples exceeding → 0.1 NTU 150 0.3 NTU 46 1 NTU 14

For slow sand filtration, the number of samples exceeding → 1 NTU _____ 5 NTU _____

***NOTE: The "Number of Turbidity Samples Required" is the number of hours the plant operated divided by 4 rounded up to the next whole number.**

I certify that the above turbidity readings were taken every 4 hours during plant operation and in the time frames noted above.

Tom Sam — Signature of Principal Executive Officer or Authorized Agent

11-3-08 — Date

KENTUCKY DIVISION OF WATER / DRINKING WATER BRANCH
MONTHLY OPERATING REPORT (MOR) PLANT SUMMARY FORM

PWS ID **KY0770566** MONITORING PERIOD (MMYYYY) **10/2008**

NOTE: COMPLETE ALL APPLICABLE FIELDS!!! NOT ALL OF THE FIELDS ARE PRE-POPULATED FOR YOU!!!

APPLICABLE TO ALL PLANTS

PLANT ID	A	TOTAL WATER TREATED (gallons)	21,564,167
PLANT NAME	Salyersville Water Works	AVE. DAILY PRODUCTION (gallons)	695,618
AGENCY INTEREST	2889	MAXIMUM PUMPAGE (gallons per day)	1,032,869

APPLICABLE TO ALL PLANTS WITH FILTRATION

ANALYTE CODE **0100**

Was each filter monitored continuously? (Y/N)	Y
Were measurements recorded every 15 minutes? (Y/N)	Y
Was there a failure of the continuous monitoring equipment? (Y/N)	N
If Yes, (1) were individual filter effluent turbidity grab samples collected every four hours of operation? (Y/N)	
(2) was the continuously monitoring equipment repaired within 5 working days? (Y/N)	
Was individual filter level greater than 1.0 NTU in two consecutive measurements? (Y/N)	N
Was individual filter level greater than 0.5 NTU in two consecutive measurements after on line for more than four hours? (Y/N)	N
Was individual filter level greater than 1.0 NTU in two consecutive measurements in three consecutive months? (Y/N)	N
Was individual filter level greater than 2.0 NTU in two consecutive measurements in two consecutive months? (Y/N)	N

If any of the last 4 boxes are YES, fill out the Individual Filter Turbidity Sheet and submit with the MOR

APPLICABLE TO ALL PLANTS WITH FILTRATION

ANALYTE CODE **0100**

Number of hours of plant operation	491.6
Were samples taken every 4 hours of plant operation? (Y/N)	Y
Number of samples taken	166
Highest single turbidity reading	3.90
For all filtration except slow sand filtration:	
Number of samples exceeded 0.1 NTU	150
Number of samples exceeded 0.3 NTU	46
Number of samples exceeded 1 NTU	14
When filtration is slow sand filtration:	
Number of samples exceeded 1 NTU	
Number of samples exceeded 5 NTU	

APPLICABLE TO ALL PLANTS

ANALYTE CODE **0999**

Number of days of plant operation	31
Were samples taken each day of operation? (Y/N)	Y
Number of lowest chlorine samples recorded	31
Lowest single chlorine reading	1.11
If less than required:	
Was residual restored within 4 hours of plant operation? (Y/N)	
Free Chlorine (for all disinfectants except chloromine):	
Number of samples under 0.2 mg/L	0
Total Chlorine (when disinfectant is Chloramine):	
Number of samples under 0.5 mg/L	

APPLICABLE TO PLANTS UTILIZING CHLORINE DIOXIDE

ANALYTE CODE **1008**

Number of days of plant operation	31
Were samples taken each day of operation? (Y/N)	
Number of samples taken	0
Highest single chlorine dioxide reading	0.00
Number of chlorine dioxide samples exceeded 0.8 mg/L	0

APPLICABLE TO PLANTS UTILIZING CHLORINE DIOXIDE

ANALYTE CODE **1009**

Number of days of plant operation	31
Were samples taken each day of operation? (Y/N)	
Number of samples taken	0
Highest single chlorite reading	0.00
Number of chlorite samples exceeded 1 mg/L	0

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein Based on my inquiry of those individuals immediately responsible for obtaining the information, the submitted information is true, accur

Signature of Principal Executive Officer or Authorized Agent

11-3-08
Date

EXHIBIT
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KENTUCKY DIVISION OF WATER / DRINKING WATER BRANCH
MONTHLY OPERATING REPORT (MOR) SUMMARY FORM

PWS ID KY0770566 MONITORING PERIOD (MMYYYY) 10/2008

AI 2889

NOTE: COMPLETE ALL APPLICABLE FIELDS!!! NOT ALL OF THE FIELDS ARE PRE-POPULATED FOR YOU!!!

APPLICABLE TO ALL WATER SYSTEMS

FROM WHOM? (PWS ID)	HOW MUCH? (gallons)	TO WHOM? (PWS ID)	HOW MUCH? (gallons)
		KY0770525	15,883,000

APPLICABLE TO ALL WATER SYSTEMS

ANALYTE CODE 0999

Number of days of operation	31
Were samples taken each day of operation? (Y/N)	Y
Number of samples taken:	
FREE	61
TOTAL	1
Lowest single FREE chlorine reading	0.11
Lowest single TOTAL chlorine reading	0.12

Free Chlorine (for all disinfectants except chloramine)
Number of samples under 0.2 mg/L 7

Total Chlorine (when disinfectant is chloramine)
Number of samples under 0.5 mg/L

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein. Based on my inquiry of those individuals immediately responsible for obtaining the information, the submitted information is true. accur

Signature of Prinicipal Executive Officer or Authorized Agent

11/3/08
Date

AI 2889

Salyersville Water Works

401 College St.
Salyersville, Ky. 41465
Ph: 606-349-3743
Fax: 606-349-3752

2007 AUG 31 PM 1:20

PWSID-0770566

To: Kentucky Division of Water
Drinking Water Branch
14 Reilly Rd.
Frankfort, Ky. 40601

Re: 2007 Sanitary Survey
August 29, 2007

Attn: Leslie Harp

In response to the non-significant deficiencies noted in the 2007 Sanitary Survey,

1- Our facility does not have enough storage space for a 30-day supply of chemicals. However we do have an agreement with our supplier for a 24-48 hour delivery time when needed.
2- In case of a leak or spill, our chemical storage room has a floor drain which connects to the sanitary sewer. Personnel in our sewage dept. are aware of this and have assured us that a release would not cause any significant problems.

If we need to take additional measures or if you have any questions, please call

Martin Vanderpool
Ph: 606-349-3743

Thank you,

Martin Vanderpool

EXHIBIT
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ENVIRONMENTAL AND PUBLIC PROTECTION CABINET
KENTUCKY DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER

Drinking Water Sanitary Survey

PWS ID: KY0770566	Division: Water		Regional Office: Frankfort
Agency Interest Number 2889			
Site Name: Salyersville Water Works		Program: Drinking Water	
Site Address: 401 Collage St.			
City: Salyersville	State: KY	Zip: 41465	County: Magoffin
Inspection Type: Sanitary Survey	Purpose:		Not/Com #:
Inspection Dates: 5/07/2007	Time: Start 9 AM End 3 AM		
Latitude:	Longitude:		
Coordinate Collection Method:			

Drinking Water Data

Revision Code: #033006

(To be changed by Central Office Staff only)

SANITARY SURVEY CODE: 83
INSPECTOR EMPLOYEE CODE:

PWSID: KY0770566 **Plant Name:**Salyersville **Plant Contact:**Martin Vanderpool **Plant Type:** C (community) **Plant Class:**III (500,000-3,000,000 gpd)
Distribution Class:IID-Pop. 1500-15,000 **County:**Magoffin **Phone Number:**606-349-3743 **Fax Number:**606-349-3752 **E- Mail Address:**waterworks@foothills.net
System Service Connections:983 **System Population Served:**3244
Total No. Purchasers:1 **Total Population Served:**12000

Treatment

Primary Source: Licking River **Secondary Source:**2 wells **Maximum Pumping Rate:**720 gpm
Plant Capacity MGD:1 **Filter Design Rate:** 3MGD **Total Distribution Storage Capacity (gallons):**1 Million

Pre-sedimentation Size:NA **Aeration Code:**
Sedimentation (Primary) Code:T-Conventional/Tubes/Plates **Sedimentation 2 (if 2 different processes) Type:**
Filter (Primary) Code:M-High Rate/Mixed (sand/garnite/anthracite) **Filter 2 (if 2 different filter types) Type:**
Clear well Size (gallons):200,000

Chemicals

Pre-Disinfection/Treatment Code:G-Chlorine Gas **Post-Disinfection Code:** G-Chlorine Gas
Primary Coagulant Code:E-Polyaluminum chlorides/sulfates **Secondary Coagulant (Name):**
Filter Aid Name:
Corrosion Control Code:L-pH adjustment/Lime **Taste and Odor Code: Softening Code:**
Iron (and Manganese) Removal Code: Fluoride Supplement Code:S-Sodium Silicofluoride
Other Code: Other Name:

Legend – NA – Not Applicable **NI** – Not Inspected

I. Administrative Requirements

Comments:
Compliance Status - No violations observed

II. Operator Certification/Accreditation Requirements

(Check with Certification Section or in TEMPO)

Plant Class	Plant Capacity (MGD)	Hours operated per day (annual average)	Shifts Operated (per day)	Operator Class Required Plant	Distribution
III	1	18-20	3	III	IID

Does the plant have operators with the appropriate class certificate? Yes ☒ No ☐
Are the certifications up-to-date? Yes ☒ No ☐
Does the system appear well operated and maintained? Yes ☒ No ☐

List Operators and certification numbers:

Operator Name	Plant Certification #	Distribution Certification #
Martin Vanderpool	4A 202	
Christopher S Rowe	3A 1413	
Nora Bauer	3A 51050	
Adam Hunley		2D 2254

Comments: All operator certifications are on file and available for inspection.

Compliance Status - No violations observed

III. Record Keeping Requirements

Records to be kept on site	Time it must be kept	Check Yes or No
Data Summaries (if actual data not retained)	Based on data replaced	Yes☐ No☐ N/A☒
Bacteriological Analyses	5 years	Yes☒ No☐
Chemical Analyses	10 years	Yes☒ No☐
Lead and Copper Data	12 years	Yes☒ No☐
Turbidity Analyses	1 year	Yes☒ No☐
Individual Filter Turbidity Data	3 years	Yes☒ No☐
Records of Violation Certification (required after May 1, 2002)	10 years	Yes☒ No☐ Yes☒ No☐
Records of Sanitary Surveys	10 years	Yes☒ No☐
Records of Variances and Exemptions	5 years	Yes☐ No☐ N/A☒
Distribution Maps	Updated 2006	Yes☒ No☐
O & M Manual	Updated 2006	Yes☒ No☐
Sampling Plans and Maps	Updated in progress	Yes☐ No☒
Consumer Confidence Report and Certification (CWS only)	On File	Yes☒ No☐ N/A☐
C-T Profiling Data		Yes☒ No☐
LT2 Cryptosporidium and E.coli Results	3 years after bin classification (see rule for applicable date—first one is April 2009)	Yes☐ No☐ N/A☒
LT2 Source Water Monitoring Avoidance	3 years	Yes☐ No☐ N/A☒
LT2 Toolbox Treatment Monitoring Results	3 years	Yes☐ No☐ N/A☒
Stage 2 IDSE Sampling Plan or 40/30 Certification	10 years	Yes☐ No☐ N/A☒
Stage 2 IDSE Report	10 years	Yes☐ No☐ N/A☒

Comments:

Compliance Status - No violations observed

IV. Reporting Requirements

(To be completed by Compliance Officer)

Reporting Item	**Normal Reporting** (list last reporting period and note any exceptions)	**Emergency Reporting** (List any reports to the public)
Asbestos	☒ 1 sample in the 1st 3 years of the 9 year compliance cycle	☐
Bacteriological	☒ per month	☐
Consumer Confidence Report (CCR)	☒ Annually by July 1 (by April 1 to consecutive systems)	☐
Dioxin	☒ With SOCs	☐
Fluoride (supplemental)	☒ 2 per month; 1 plant tap and 1 distribution (6-2005)	☐
Inorganic Chemicals (IOCs)	☒ Annually	☐
Lead & Copper	☒ every 3 years (June to September)	☐
Nitrate	☒ Annually	☐
Nitrite	☐ 1 sample annually in the 1st 3 years of the 9 year compliance cycle	☐
Operational Reports (MORs)	☒ Monthly	☐
Radionuclides (RADs)	☒ 2007 1 sample/quarter	☐
Secondary Contaminants (SECs)	☒ Annually	☐
Corrosivity	☒ Annually; can be done with secondaries	☐
Sodium	☒ 2 per year in wet and dry seasons; 1 can be done with secondaries [10-2006]	☐
Synthetic Organic Compounds (SOCs)	☒ >3300 2 quarterly samples in 12 consecutive months in 3 year period [9-2006]	☐
Total Trihalomethanes (TTHMs)	☒ per quarter [2007 1/quarter	☐
Turbidity (Greater than 1 or 5 NTUs report ASAP)	☒ 0.1 and 1 NTU	☐
Unregulated Contaminants (UCMR)	☒ Per EPA [Sampling in 2007]	☐
Volatile Organic Chemicals (VOCs)	☒ Annually [11-2006]	☐
Haloacetic Acids	☒ per quarter	☒ Violation in 2006. Notice mailed to customers
Chlorite (Chlorine Dioxide Only)	☐	☐
Bromate (Ozone only)	☐	☐

Chlorine/Chloramines	☒ Free chlorine monthly with compliance bacts; daily for MOR	☐
Chlorine Dioxide	☐	☐
Total Organic Carbon	☒ Raw TOC/Alkalinity and CFE TOC	☐
Emergency Reports (Immediate Notification)	☒ Line Breaks, ☐ Loss of Pressure, ☐ Loss of Disinfection	☐ Radio, Fax, TV, and health dept.
Sample Site Plan	☒ Bacts/LCR/DBPs	☐

Comments:

Compliance Status - No violations observed

V. Operation & Maintenance/Performance Requirements

MANAGEMENT AND SYSTEM OPERATION

Organization:

What is the utility's governing body? Water Board

What is the term of office for board or council members? 3

Are the members familiar with water treatment? Yes ☒ No ☐

How often does this body meet? Monthly

Do operators attend? Yes ☒ No ☐

Is there an organization chart? (Provide) Yes ☐ No ☒

Does the chart include the WTP? If not provide additional chart. Yes ☐ No ☐

Have there been any changes since the last Sanitary Survey? Yes ☐ No ☐

If yes, explain

Is the system subject to Public Service Commission regulations? Yes ☐ No ☒

What professional organizations does the water system belong to? KRWA & KWWOA

Communications:

Does the system have a Mission Statement? (Provide) Yes ☒ No ☐

Does the system have water quality goals? (Provide) Yes ☒ No ☐

What parameters are included in these goals? Safety

Are the operators aware of these goals? Yes ☒ No ☐

Is the system aware of the Area-wide Optimization Program, coordinated through the DOW's Drinking Water Branch? Yes ☒ No ☐

Does the system have regular staff meetings? Yes ☒ No ☐

How often? Daily

Who is involved? Treatment and Distribution workers

Do the administrators (including the managing body) visit the water plant?

Yes ☒ No ☐

How often? Monthly

Does the plant provide reports to the superintendent? Yes ☒ No ☐

Types Everything
Frequency Daily

Does the superintendent provide reports to administrators? Yes ☒ No ☐
Types Financial and Production
Frequency Monthly

Is there an Operations and Maintenance manual(s) for both the water plant and distribution system? Yes ☒ No ☐
Is the Operations and Maintenance Manuel updated annually? Yes ☐ No ☒
If not, how often is it up-dated? As needed
Who up-dates the manual? Manager
How are operators made aware of the O&M procedures? Verbally
Are copies maintained in a location other than the water plant for security reasons? Yes ☒ No ☐

Does the system provide any public relations or education activities? Yes ☒ No ☐
Who is responsible for providing this? Superintendent
What types of public relations or education are done? Schools education and a once a year project at the park
Who answers customer inquiries? Secretaries
Is a customer inquiry log maintained? Yes ☒ No ☐

Planning:

Does the system have any short-term needs? Yes ☒ No ☐
Are they documented? Yes ☒ No ☐
How are they developed? By their need
Who provides input into these needs? Operators and Engineers
Are the operators involved? Yes ☒ No ☐

Does the system have any long-term needs? Yes ☒ No ☐
Are they documented? Yes ☒ No ☐
How are they developed? By their need
Who provides input into these needs? Operators and Engineers
Are the operators involved? Yes ☒ No ☐

How are chemicals inventoried? By sight and residual levels
How are distribution materials inventoried? Organizational shelving and by sight
Is there a bid process for chemicals, pipe or other large item purchases? Yes ☒ No ☐
Does the system attend Area Development District Meetings? Yes ☒ No ☐

Security Issues:

In general, what security measures are in place at the water plant?Fence, locks, alarms, cameras
In general, what security measures are in place in the distribution system?Locks and fences
In general, what security measures are in place for data systems (SCADA, billing, Internet)?Power backup, passwords,data backup, virus software
Has the system developed procedures for protecting sensitive documents? Yes ☒ No ☐
Has the system developed procedures for securing computer/SCADA usage? Yes ☒ No ☐
Does the plant ever disable the SCADA system and run on manual? Yes ☐ No ☒
Has the system performed, or had performed, a Vulnerability Assessment? Yes ☒ No ☐

Has the system updated its Emergency Response Plan? Yes ☒ No ☐

How is the ERP communicated to all employees? Trainings

Is the ERP exercised? Yes ☒ No ☐

Is the utility a member of the Local Emergency Planning Council? Yes ☒ No ☐

How has communication been established with important external suppliers (electric company, chemical suppliers, etc)? Phone

Has the system developed procedures for protecting backup equipment? Yes ☐ No ☒

<u>Personnel:</u> Note: Detailed Operator Certification Information in a Separate Section

Certified Operators Number 4

Is the number of operators adequate to cover needed shifts, vacations, and vacancies? Yes ☒ No ☐

What is the attitude of the staff? Administration Good

Operators Good

Are the operators cross-trained (by shift, by plant, with distribution, with maintenance, etc)? Yes ☒ No ☐

Do the operators perform maintenance as well as operations? Yes ☒ No ☐

Is someone cross-trained with the plant lead operator/supervisor? Yes ☐ No ☒

Do you have contingency plans for replacing retiring system personnel?

Yes ☒ No ☐

How do the operators obtain the necessary Continuing Education Hours for license renewal? CE classes

Who are the training/technical assistance providers? DOW, KRWA, KWWOA

What type of training is typically obtained? CE

Does the system pay for registration, lodging and meals? Yes ☒ No ☐

Does the system allow operators to attend training on company time? Yes ☒ No ☐

<u>Plant Coverage:</u>

Is there shift operation at the plant? Yes ☒ No ☐

Length of shift 8

Number of operators per shift 1

Number of shifts/day 3

How are weekends and holidays covered? alternate

Does this system have unmanned operations? Yes ☐ No ☒

Do the operators ever leave the water plant property while the plant is producing water?

Yes ☐ No ☒

How long are the operators typically away from the plant?

What duties are the operators performing when they are away from the plant?

Are there safeguards for when operators may be doing work outside on the plant grounds?

Yes ☒ No ☐

What types of safeguards? alarms

<u>Financial:</u>

Does the system have a budget? Provide 1-page summary if available. Yes ☒ No ☐

Is the water plant meeting its expenses? Yes ☒ No ☐

Does the water plant revenue go to meet other city/district/association expenses (such as sewer or garbage)? Yes ☐ No ☒

Who prepares the budget? Superintendent and board

Does the system have an external audit process? Yes ☒ No ☐
Are training and license funds built into the budget? Yes ☒ No ☐
Do the operators have any input into the budget? Yes ☒ No ☐
Are general accounting procedures followed? Yes ☒ No ☐
Is there a policy for delinquent accounts? Yes ☒ No ☐
Is there a rate structure in place? Yes ☒ No ☐
When was the last rate increase? 2006
Are long-term needs built into rate increases? Yes ☐ No ☒
Do rates promote conservation in time of drought? Yes ☐ No ☒
Does the system have any long-term debts? Yes ☒ No ☐
Is the debt being paid on time? Yes ☒ No ☐
Does the system have a reserve account? Yes ☐ No ☒
Does the system have a good credit rating (for obtaining bonds, etc)? Yes ☒ No ☐
Where does the system typically go for financial assistance? FHA
Does the system have a capital improvement plan? Yes ☒ No ☐
How many years does the plan cover? 5 - 10 years
What is the day-to-day spending authority of the plant superintendent? $1000
What is the emergency spending authority of the plant superintendent?
Is there a purchase order process? Yes ☒ No ☐

General Observations: The plant, plant operations, files, storage supplies and grounds appeared to be in sufficient condition.

Water Purchased

Purchased From	Number of Master Meters	Amount Monthly (average)	Amount Available by Contract (monthly)

Observations:

Water Sold

Water sold To	Number of Master Meters	Amount	Contract Amount
Magoffin	9	15MGD	19MGD

Observations:

PLANT AND DISTRIBUTION SYSTEM OPERATIONS

Include a plant schematic (if available) indicating the following details

- **Source water type/location**
- **Major unit processes (including baffling factors and volumes)**
- **Flow measurement locations**
- **Chemical injection locations**
- **Piping Flexibility (including number of raw and finished water mains)**
- **Waste handling**

Source

Name	Water Withdrawal Number	Permitted Amount	Is Capacity Adequate?	Are there Water Quality issues?
Licking River	**0196**	**.750**	Yes☒ No☐	Yes☒ No☐
			Yes☐ No☐	Yes☐ No☐
			Yes☐ No☐	Yes☐ No☐
			Yes☐ No☐	Yes☐ No☐

List upstream land uses: residential, farming, oil production, mining
List upstream discharges (Within 5 miles):
Is there a source water protection plan in place? Yes ☒ No ☐
Are there any sources of Cryptosporidium in the watershed? Yes ☒ No ☐
Describe the sources: pasture. wildlife, sewage discharges from homes.
Is the system drought-vulnerable? Yes ☒ No ☐
Describe any water quality monitoring done on the source water:
If multiple sources are available, is the one in use the "best" in terms of both water quality and quantity? Yes ☐ No ☐
Observations: There are two wells that are used as emergency backup.

Intake Structure

Location	Type	Number of Inlets	Screen Size	Is Flooding a problem?	Is silt build-up a problem?
Licking River	submersible pumps	2	1/4"	Yes☐ No☒	Yes☐ No☒
				Yes☐ No☐	Yes☐ No☐
				Yes☐ No☐	Yes☐ No☐
				Yes☐ No☐	Yes☐ No☐

Is raw water pumped? ☒ **Or gravity fed?** ☐
Number of raw water mains 1
Is raw water flow measured? Yes ☒ No ☐
If so when was the meter last calibrated? 2002
List any chemicals fed at the source:

If source is a reservoir is it aerated? Yes ☐ No ☐
List depths of intake levels (normal pool): 5'
Are screens stationary? ☒ **Or mechanical?** ☐
Is screen clogging a problem? Yes ☐ No ☒
Are Zebra mussels a problem? Yes ☐ No ☒
If yes list actions taken:
How often are the submerged portions of the intake inspected? as needed usually after any flood event
When was the date of the last inspection?
Observations:

Electrical/Emergency Power Not Applicable

Are emergency power generators available at the intake? Yes ☐ No ☐
Are emergency power generators available at the water plant? Yes ☐ No ☐
If available, can they support the entire plant? Yes ☐ No ☐
If the entire plant cannot be supported, are necessary systems provided power? Yes ☐ No ☐
Are emergency power generators available in the distribution system? Yes ☐ No ☐
Are emergency power generators available for main office functions? Yes ☐ No ☐
Are standby emergency generators exercised regularly? Yes ☐ No ☐
Is other standby equipment exercised regularly? Yes ☐ No ☐
Is there the ability to utilize natural gas, propane or other sources of fuel for power? Yes ☐ No ☐
Have arrangements been made with outside contractors, other utilities, etc to provide needed emergency equipment? Yes ☐ No ☐
If equipment is shared with the wastewater plant, how is the equipment disinfected prior to use at the water plant?
Observations:

Emergency Interconnections/Supplies Not Applicable

Are emergency interconnections with other water supplies available? Yes ☐ No ☒
If yes list supplies and PWSID numbers:
If the system has an inactive water plant, is the plant exercised to maintain preparedness for emergencies? Yes ☐ No ☐
How often?
How is the plant disinfected prior to bringing it back on line?
Observations: There is a interconnection with Paintsville but it has been rendered unusable.

General Plant Description: Conventional

Pre-sedimentation Not Applicable

Capacity (gallons)	Flexibility to Bypass	Chemical Feed Capability	List Chemicals Fed
	Yes☐ No☐	Yes☐ No☐	
	Yes☐ No☐	Yes☐ No☐	

Are treatment chemicals fed at the inlet to the pre-sedimentation basin? Yes ☐ No ☐

If so, is the chemical fed all the time Yes ☐ **or intermittently?** Yes ☐
Is algae growth a problem? Yes☐ No☐
How often is the pre-sedimentation basin(s) cleaned?
Observations:

Aeration Not Applicable

Type	Capacity (gallons)	Reason for Aeration

Observations:

Rapid Mix Inspected

Type	Number	Volume (gallons)	Physical Condition
Mechanical Mixer	1	403	Good

List chemicals fed in order they are fed at the rapid mix: chlorine,lime,fluoride,delpac, carbon if needed
Is adequate mixing of chemicals taking place? Yes ☒ No ☐
Are there flow splits after the quick mix? Yes ☐ No ☒
If so is the flow distribution even? Yes ☐ **No** ☐
Observations:

Flocculation Basins Inspected

Type	# Trains	Stages	Variable Speed Drive	Volume (gallons)	Physical Condition
Vertical Paddle	1	Multipl	Yes☒ No☐	32,335	Good
			Yes☐ No☐		
			Yes☐ No☐		
			Yes☐ No☐		
			Yes☐ No☐		
			Yes☐ No☐		

List any chemicals fed in the flocculation process:
What is the size OK **and appearance of the floc?** OK
How often are flocculation basins cleaned? twice annually
Are the flocculation speeds tapered (decreased) through the flocculation stages?
Yes ☒ No ☐
Are there flow splits after flocculation? Yes ☒ No ☐
Is flow distribution even? Yes ☒ No ☐
Observations:

Sedimentation Basins Inspected

Type	Number of Trains/ Stages	Volume (gallons)	% with tube settlers	Physical Condition
Conven. w/ tubes	2 2	54,191	35	Good

List any chemicals fed in the sedimentation process:
What is the sedimentation turbidity goal? <1
What is the overflow rate of the basins?
If an Actiflo process, what is the rise rate?
How often are the basins cleaned? semi annually
How often is sludge removed from the basins? 2Xweek
Is sludge removal mechanical? ☒ **Or manual?** ☐
What is the sludge depth at the time of the inspection? 2'
What is the settled water turbidity at the time of the inspection? 1.65
Is there evidence of short-circuiting (Flow or density currents)? Yes ☐ No ☒
Is baffling present in the basins? Yes ☒ No ☐
If yes, describe the baffling settling tubes
If multiple sedimentation basins, describe the piping from the basins to the filters: flow enters common duct which splits again for filters
Is there evidence of floc carryover to the filters? Yes ☐ No ☒
Observations:

Filters

Number of Filters 2

Type	Media Type	Filter Rate (at inspection)*	Filter control	Surface Wash Type	Filter to Waste	Filter Area	Physical Condition
High Rate	Mixed M	1.2 gpm sq ft	None	Rotary	Yes☒ no☐	228	good
					Yes☐ no☐		
					Yes☐ no☐		
					Yes☐ no☐		
					Yes☐ no☐		
					Yes☐ no☐		
					Yes☐ no☐		
					Yes☐ no☐		
					Yes☐ no☐		
					Yes☐ no☐		

***Plant flow rate divided by total square footage of filters in service at the time of inspection**

List any chemicals fed in the filtration process:

What is the filtered water turbidity goal? .05

Does this apply to the combined filter effluent? Yes ☒ No ☐ **to individual filter effluents?** Yes ☒ No ☐

What Criteria are used for filter backwash? turbidity, loss of head

What is the backwash rate in gallons per minute? 4000

Is filter backwash rate ramped up and down? Yes ☒ No ☐

Is backwash flow rate measured? Yes ☒ No ☐

Are filters ever bumped? Yes ☐ No ☒

Is air scouring used? Yes ☐ No ☒

Record the CFE turbidity at time of inspection 0.12

Are individual filters monitored for turbidity? Yes ☒ No ☐

Is this turbidity continuously recorded? Yes ☒ N o☐

Can this data be retrieved in usable from storage (tape or CDs) Yes ☒ No ☐

Is filter to waste (rewash) present? Yes ☒ No ☐

Is it used? Yes ☒ No ☐

Can turbidity be measured while filtering to waste? Yes ☒ No ☐

Are flows adjusted on remaining in-service filters during a backwash? Yes ☐ No ☒

Observations

Residuals Handling

What percent of plant production is used for in-plant processes (backwash, chemical feed, sanitary)? 3

How are spent backwash water and other liquid residuals handled? holding tank, decant discharged to river

If applicable, is the spent backwash holding tank/lagoon volume adequate? Yes ☒ No ☐

Does the plant discharge water from this tank/lagoon back to a body of water? Yes ☒ No ☐

Does the plant have a KPDES discharge permit? Yes ☒ No ☐

Permit Number KYG640078

Is the discharge meeting permit requirements? Yes ☒ No ☐

Is the discharge point upstream of the intake? Yes ☐ No ☒

If Yes, how far upstream is the discharge point from the intake?

Is spent backwash water recycled? Yes ☐ No ☒

Is it recycled as a "slug"? ☐ Or as a constant flow? ☐

What % of the flow is recycled?

Are chemical feed rates adjusted during recycle? Yes ☐ No ☐

Are raw water flows adjusted during recycle? Yes ☐ No ☐

Are all recordkeeping requirements of the Filter Backwash Rule being followed? Yes ☐ No ☐

How are solid residuals handled?Liscensed septic tank pumper removes it from the lagoon and disposes of it.

Observations:

Chemical Feed Equipment

Chemical Name	Purpose	Feeder Type	Feed Point	Number &Condition
Polyaluninum Cl/SO4	Coagulati	Metering	Quick/Flasl	2 Good
Lime	pH Adjust	Volumeti	Quick/Flasl	1 Good
Sodium silicofluoride	Dental He	Volumeti	Quick/Flasl	1 Good
Powdered Activated Car	Taste Od	Volumeti		1 Good

How are chemical feeders calibrated? time weight

How often are chemical feeders calibrated? annually

Are chemical dosages calculated? Yes ☒ No ☐

How often are dosages calculated? daily

Are chemicals NSF or United Laboratories approved? Yes ☒ No ☐

Do the bulk liquid feed systems have day tanks? Yes ☐ No ☒
Are at least two feeders provided for essential processes (such as coagulation, disinfection)? Yes ☒ No ☐
Are spare parts available? Yes ☒ No ☐
Is there enough storage for at least 30 days supply of chemicals used? Yes ☐ No ☒
Are there containment areas around the chemicals in case of spills or leaks? Yes ☐ No ☒
Are in-plant water supplies protected from back-flow? (Cross connections): Yes ☒ No ☐
Does a certified tester test backflow prevention devices? Yes ☐ No ☒
What is the testing frequency? **Last Tested**
Observations:

Disinfection

Type	Application Point	Redundancy Available	Feeder Type
Chlorine gas	Quick/Flash M	Yes ☒ No ☐	Chlorinator
Chlorine gas	**Clearwell**	Yes ☒ No ☐	Chlorinator
		Yes ☐ No ☐	
		Yes ☐ No ☐	

What is the means used to measure disinfectant chemical usage? Rotometers, scales
How is the disinfectant residual monitored? lab meter
Is there an on-line, recording chlorine analyzer on the plant tap? Yes ☐ No ☒
Are C-Ts calculated daily? Yes ☒ No ☐
Observations:

Clearwells

Volume (gallons)	Baffling Type	Disinfectant Residual Total	Free
200,000	0.1--None	1.87	1.97

List chemicals in the order in which they are fed into the clearwell: chlorine
If multiple clearwells are they in series (one following the other) Yes ☒ **or parallel (side by side and not connected)** Yes ☒
Are hatches secured? Yes ☒ No ☐
Are vents screened? Yes ☒ No ☐
How often are clear wells cleaned? never
Observations:

Water Plant Pumps

(Low service/raw water, high service/finished water and backwash)

Flow Stream	Location	Number of Pumps	Capacity (gpm)	Pump Type	Flow Control Method
Primary Raw Wate	intake at river	2	680	Centrifugal	Manual
Finished Water	pipe gallery	2	800	Vertical Tur	Manual
Backwash water	pipe gallery	1	4000	Vertical Tur	Manual

Observations:

Water Plant On-line Instrumentation

Type	Flow Stream (Location)	Manufacturer	Last Calibration Date
Turbidity	Individual Fi	Hach	
	Tap	Hach	5/4/07
	Raw Water	Hach	
pH	Tap	Hach	5/4/07

Observations:

Laboratory (Plant)

Parameters Tested	Frequency	Equipment Used	Calibration Method
Turbidity - raw	2 hrs	Hach 2100	standards
finished	4 hrs	Hach 2100	
top of filter	2 hrs	Hach 2100	
Chlorine finished	4 hrs	Hach	
top of filter	4 hrs	Hach	
Ph raw			
finished	4 hrs	Hach	standards
top of filter			
Fluoride	1 day	titration	
Alkalinity	1 day	titration	
Hardness	1 day	titration	

Is space adequate? Yes☒ No ☐
Is lighting adequate? Yes ☒ **No** ☐
Are analyses conducted according to Standard Methods? Yes ☒ **No** ☐
Are daily log sheets used to record day-to-day operations, testing, etc? Yes ☒ No ☐
If so, are they on the computer Yes ☒ **or are they hand-written** Yes ☒
Observations:

In-Plant Sampling
(for example, top and bottom of filters)

Site PLANT TAP	Cl. Free:1.87 Total: 1.97 pH: 7.92 Turbidity: 0.11
Site TOP OF FILTERS	Cl. Free:0.82 Total: 0.97 pH: 7.73 Turbidity: 1.65
Site COMBINED FILTER	Cl. Free:0.67 Total: 0.76 pH: 7.74 Turbidity: 0.12
Site	Cl. Free: Total: pH: Turbidity:
Site	Cl. Free: Total: pH: Turbidity:
Site	Cl. Free: Total: pH: Turbidity:
Site	Cl. Free: Total: pH: Turbidity:
Site	Cl. Free: Total: pH: Turbidity:
Site	Cl. Free: Total: pH: Turbidity:

Observations:NO TAPS TO CATCH INDIVIDUAL FILTER EFFLUENTS

Distribution Storage Facilities Inspected

Location	Volume (gal)	Tank Type	Overflow Screen/ Flapper	Overflow >10' From tank	Last Cleaned/ Inspected	Telemetry	% Turnover (Per day)
RT 7	500,000	Ground	Yes ☒ No ☐	Yes ☒ No ☐		Yes ☒ No ☐	50
CHURCH STREET	200,000	Ground	Yes ☒ No ☐	Yes ☒ No ☐		Yes ☐ No ☒	30
RT 40	100,000	Ground	Yes ☒ No ☐	Yes ☒ No ☐		Yes ☐ No ☒	66
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐	
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐	
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐	
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐	
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐	
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐	
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐	
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐	
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐	
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐	
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐	
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐	
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐	
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐	
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐	
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐	

Observations:THE GROUNDS AROUND THE TANKS SHOULD BE BETTER MAINTAINED, MOWED ECT.

Distribution Booster Pumps and or Booster Disinfection Facilities

Location	Pump = P Disinfection = D	Number & Capacity of pumps (gpm)	Disinfection Type	Auxiliary Power
RT 40	P ☒ D ☐	2 @ 120		Yes ☐ No ☒
	P ☐ D ☐	@		Yes ☐ No ☐
	P ☐ D ☐	@		Yes ☐ No ☐
	P ☐ D ☐	@		Yes ☐ No ☐
	P ☐ D ☐	@		Yes ☐ No ☐
	P ☐ D ☐	@		Yes ☐ No ☐
	P ☐ D ☐	@		Yes ☐ No ☐
	P ☐ D ☐	@		Yes ☐ No ☐
	P ☐ D ☐	@		Yes ☐ No ☐
	P ☐ D ☐	@		Yes ☐ No ☐
	P ☐ D ☐	@		Yes ☐ No ☐
	P ☐ D ☐	@		Yes ☐ No ☐
	P ☐ D ☐	@		Yes ☐ No ☐
	P ☐ D ☐	@		Yes ☐ No ☐

Does a certified distribution operator oversee distribution activities? Yes☒ No ☐
If there are separate distribution system areas, are they interconnected with each other?
Yes ☐ No ☐
If they are not interconnected, how many separate areas are there?
What prevents these systems from being interconnected?
How many pressure zones are there? 1
What is the range of distribution pressures? 30-120
Do any distribution areas require reduced pressure valves? YES
What piping materials are included in the distribution system (in general)?
AC,DUCTILE,P.E., CAST IRON, P.V.C.
Is there a formal flushing schedule? Yes☒ No☐ **Written Procedure?** Yes☒ No☐
Describe the process for sterilizing new mains/main breaks: CONTRACTORS RESPONSIBLE FOR NEW MAINS, BREAKS ARE REPAIRED,FLUSHED, BWA ISSUED AND SAMPLES ARE TAKEN BEFORE BWA LIFTED.
Are there maintenance schedules and procedures? Yes ☒ No ☐
What types of on-line instrumentation are located at booster or pump stations and tanks?
NONE
Is there corrosion protection in the tanks? Yes☐ No ☒
How often are tanks inspected? Cleaned?
Is there a valve exercise/replacement program? Yes☒ No ☐
Is water loss tracked? Yes ☒ No ☐
If so what is the percentage of water lost? 5%
Is there a water meter replacement program? Yes☐ No☒
Does the utility have distribution maps? Yes☒ No☐
Are there main break/emergency notification procedures? Yes☒ No ☐
Does the system have a cross-connection prevention program? Yes☐ No☒

Does a certified tester test the backflow prevention devices on a regular basis?
Yes☐ No☒

Has a calibrated hydraulic model been developed for the system? Yes☐ No☒

Observations:

Distribution Sampling

Site 1	Cl. Free:1.43 Total: 1.67 pH: 7.48 Turbidity: .10 Other:				
Site 2	Cl. Free:1.38 Total: 1.69 pH: 7.33 Turbidity: .12 Other:				
Site 3	Cl. Free:1.55 Total: 1.77 pH: 7.45 Turbidity: .77 Other:				
Site	Cl. Free:	Total:	pH:	Turbidity:	Other:
Site	Cl. Free:	Total:	pH:	Turbidity:	Other:
Site	Cl. Free:	Total:	pH:	Turbidity:	Other:
Site	Cl. Free:	Total:	pH:	Turbidity:	Other:
Site	Cl. Free:	Total:	pH:	Turbidity:	Other:
Site	Cl. Free:	Total:	pH:	Turbidity:	Other:

Observations:1. FALCON, 2. RT 114, 3. OLD STP

Gas Chlorine Safety:

Is the chlorine room enclosed and separate from other operating areas? Yes☒ No☐
Is there a working exhaust fan in the chlorine room? Yes☒ No☐
Does it provide one complete air change per minute? Yes☒ No☐
Does it exhaust from floor level? Yes☒ No☐
Is intake air near the ceiling? Yes☒ No☐
Are switches located outside the chlorine room? Yes☒ No☐
Are chlorine tanks secured? Yes☒ No☐
Are the scales operational? Yes☒ No☐
Is automatic switchover of chlorine cylinders provided? Yes☒ No☐
Is there a shatterproof viewing window in chlorine room? Yes☒ No☐
Is there a crash bar on the door of the chlorine room? Yes☒ No☐
Does it open out and to the exterior of the building? Yes☒ No☐
Is there a SCBA unit meeting NIOSH standards out side the chlorine room? Yes☒ No☐
Are personnel trained to use the SCBA? Yes☒ No☐
Is the "buddy system" practiced when changing or moving chlorine cylinders?
Yes☒ No☐
Is leak detection provided? Yes☒ No☐
If so is there an external audible and visual alarm? Yes☒ No☐
Is there a chlorine tank repair kit? Yes☒ No☐
Are personnel trained and certified to use the kits? Yes☐ No☒
Is ammonia available for chlorine leak detection? Yes☒ No☐
Is a lockout tag-out system used for electrical repairs? Yes☒ No☐
Observations:

Chlorine Dioxide Safety: Not Applicable

Is sodium chlorite stored in a separate room? Yes☐ No☐
Is it stored away from organic material? Yes☐ No☐
Many materials will catch fire and burn violently when in contact with chlorite.

Observations:

Gas (Anhydrous) Ammonia Safety: Not Applicable

Is the ammonia room enclosed and separate from other operating areas? Yes ☐ No ☐
Is there a working exhaust fan in the ammonia room? Yes ☐ No ☐
Does it provide one complete air change per minute? Yes ☐ No ☐
Does it exhaust from ceiling level? Yes ☐ No ☐
Is intake air near the floor? Yes ☐ No ☐
Are switches located outside the ammonia room? Yes ☐ No ☐
Are ammonia tanks secured? Yes ☐ No ☐
Is there a shatterproof viewing window in ammonia room? Yes ☐ No ☐
Is there a crash bar on the door of the ammonia room? Yes ☐ No ☐
Does it open out and to the exterior of the building? Yes ☐ No ☐
Is there a SCBA unit meeting NIOSH standards out side the ammonia room? Yes ☐ No ☐
Are personnel trained to use the SCBA? Yes ☐ No ☐
Is leak detection provided? Yes ☐ No ☐
If so is there an external audible and visual alarm? Yes ☐ No ☐
How are ammonia leaks detected?
Is a lockout tag-out system used for electrical repairs? Yes ☐ No ☐
Observations:

Maintenance:

Is plant housekeeping adequate? Yes ☒ No ☐
Is distribution storage housekeeping adequate? Yes ☒ No ☐
Are adequate supplies of spare parts kept on hand? Yes ☒ No ☐
Are needed tools available? Yes ☒ No ☐
What is the general condition of operating equipment? GOOD
Is there a written preventive maintenance program? Yes ☐ No ☒
If not, is preventive maintenance performed? Yes ☒ No ☐
Observations:

Comments:

Compliance Status - No violations observed

VI. Discharge/Emission Compliance

Comments:

Compliance Status - No violations observed

VII. Monitoring/Analyses Evaluation

Comments:

Compliance Status - Not Inspected

VIII. Environmental /Health Impact

Work Site Hazard Assessment : ☒ ATTACHED ☒ REVIEWED

Comments:

Compliance Status – No violations observed

IX. Documentation

- ☐ **Samples taken by DEP**
- ☐ **Samples taken by outside source**
- ☒ **Instrument readings taken by DEP regional office**
- ☐ **Photographs obtained by DEP**
- ☐ **Copies of records obtained by DEP**
- ☐ **Other documentation**

Inspector: Damon D White	Title: Environmental Inspector III	Date: 5/14/07

Compliance/TAO:
Title:
Date:

Overall Compliance Status
☐ **No Violations Observed**
☐ **No Violations Observed, but impending violation trends observed** – Advisory Action Taken
☐ **Out of Compliance. Non-recurrent deficiency noted** – Verbal notice given or violation corrected at time of insp.
☐ **Out of Compliance. Non-recurrent administrative or O & M deficiency noted** – Warning Notice issued
☐ **Out of Compliance** – NOV issued

Comments:

Delivery Method: E-mail	Cert. Mail #:

System Contact Mailing Address
Administrative Contact Mailing List

ENERGY AND ENVIRONMENT CABINET

Steven L. Beshear
Governor

Department for Environmental Protection
Division of Water
200 Fair Oaks Lane, 4th Floor
Frankfort, Kentucky 40601
Phone: (502) 564-3410
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www.water.ky.gov

Leonard K. Peters
Secretary

R. Bruce Scott
Commissioner

December 11, 2008

Mr. Thomas Howard, Superintendent
Salyersville Municipal Water
401 College Street
Salyersville, Kentucky 41465

RE: PWSID# KY0770566
Water System Inspection

Dear Mr. Howard:

Due to the drought and water-quality related concerns in Salyersville during the late summer and fall of 2008, an inspection was conducted by the Division of Water of the water treatment plant on November 21, 2008. Present were Julie Roney and Robert Back (Compliance and Technical Assistance Branch), Chris Yeary (Watershed Management Branch), Ben Hale (Department for Environmental Protection Commissioner's Office) and Nora Bauer (Salyersville Municipal Water). Attached is a copy of that inspection. It should be noted that not all components of the inspection were completed due to unavailable Salyersville staff or lack of relevance to this inspection.

Salyersville will be receiving the following Safe Drinking Water Act (SDWA) violations:

October 2008:
1. Treatment Technique for exceeding 1 NTU
2. Treatment Technique for exceeding 0.3 NTU in 97% of readings

November 2008:
1. Treatment Technique for exceeding 1 NTU
2. Treatment Technique for exceeding 0.3 NTU in 97% of readings
3. No chlorine detected in distribution system in more than 5% of the readings in 2 consecutive months (resulting in a 12-day Boil Water Advisory in November)

4th Quarter 2008:
1. Potential THM and/or HAA MCL violations

Salyersville will be responsible for providing timely Public Notification for these violations.

The following are items of concern found during the inspection:

1. There are only 2 certified water treatment operators. One other employee can test in late winter 2009 but is not expected to stay with the system.
2. Operators do not attend pertinent training events.
3. Operators and management need basic water treatment operation and compliance training.
4. No O&M manual was available nor are there SOPs.
5. There is an emergency interconnection available with Paintsville but it is not utilized when needed.
6. The raw water supplies from the Licking River and the Gardner Well field are brought in separately to the water plant. Switching back and forth between 2 supplies of such different water quality makes treatment a challenge.
7. The rapid mix is enclosed and cannot be visually inspected.
8. Fluoride is fed into the rapid mix and not the clearwell. Fluoride can adversely react with alum-based coagulant to bind filters.
9. The roof drains empty into the sedimentation basins.
10. Several of the valves associated with the filter backwash process must be operated by hand (in the basement).
11. Filters are washed based on the amount of water used from the clearwell and not on water quality parameters.
12. The filter boxes are very deep and may prevent inspection/evaluation due to confined space issues.
13. Spent filter backwash tank cannot hold 2 backwashes; the inlet to the basin is on the same side and next to the discharge bell. The supernatant is discharged back to the Licking River below the intake through the raw water line to the plant (therefore the raw water pumps must be off in order to discharge the supernatant and the raw water line run to waste once the discharge is complete and the raw water pumps turned back on).
14. SCADA system is not "operator friendly"—it's difficult to access historical trends from as little as 24 hours previous. The system is not maintained and was an in-house project.
15. Chemical feeders are not calibrated and chemical feeds are set based on an old document developed by an operator who is no longer with the system.
16. There is no ability to feed permanganate.
17. There is no backflow prevention device on the water supply line to the plant.
18. The chlorine feed system is set up to feed from only 1 cylinder to both the rapid mix and clearwell—this limits the amount of chlorine that can be fed to either point.
19. The buddy system is not practiced when changing chlorine cylinders.
20. The exhaust fan in the chlorine room only comes on when the alarm is activated and not when the door is opened.

21. C-Ts were not being calculated daily—these are needed should there be a request to change disinfection practices.
22. The on-line chlorine analyzer has not been operational for over 2 years; however, as Salyersville has a population of less than 3300, grab monitoring can be substituted for the use of an on-line instrument (this is being done).
23. The drought and need to conserve water has made it difficult to flush the distribution system to remove the discolored water from the mains and tanks. As flow increases and water quality improves in the Licking River, the certified distribution operator will begin flushing the system.

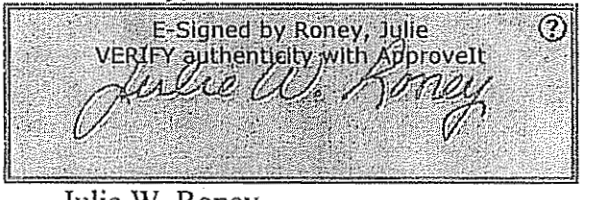
The Division of Water makes the following recommendations:

1. Operators and management need basic water treatment, operations, maintenance, regulatory and management training—there is a knowledge deficit of overall water system operation and the application of those concepts to process control and system management.
2. Schedule the uncertified operator for the Class IIIA test as soon as eligible.
3. Evaluate additional plant and distribution staffing needs.
4. Review and revise (if necessary) the water shortage response plan to reduce the potential for future drought-related impacts on the county.
5. Develop a plan for purchasing water from Paintsville in order to exercise the valves and piping associated with that connection.
6. SOPs (especially for filter washing) and the O&M manual need to be developed.
7. Begin calculating daily C-T values.
8. Chemical feed pumps and feeders should be calibrated.
9. Restore the ability of the malfunctioning filter wash valves to be operated automatically from the SCADA system.
10. Evaluate the ability to measure manganese and then purchase those reagents.
11. Investigate the infrastructure needed to blend the Licking River and the Gardner wells before the water enters the treatment plant.
12. Move the fluoride feed point to the clearwell.
13. Reroute the roof drains away from the sedimentation basins.
14. Evaluate the current chlorine feed system for the potential to upgrade to feeding from 2 cylinders to 2 separate feed points.
15. Contract with a company capable of improving the existing SCADA system.
16. Visually inspect the interior of the clearwell for any plating out of manganese on the interior walls.
17. Proceed with the Hach Company maintenance on all related instrumentation.
18. Discuss Salyersville's involvement in a Comprehensive Performance Evaluation or Performance Based-Training with the Division of Water.

Salyersville has 45 days (January 25, 2009) to respond to the recommendations and present the Division of Water a plan of action for addressing them (January 23, 2009) Correspondence and any questions should be directed to Julie Roney with the Compliance and Technical Assistance Branch, 200 Fair Oaks Lane, 4th Floor, Frankfort KY 40601 or at 502/564-8158, extension 4958.

In addition, to assure resolution of these issues, they will be formally addressed through the Agreed Order process with the Division of Enforcement. Any response submitted by Salyersville will be taken into consideration when developing the Order.

Sincerely,



Julie W. Roney
Drinking Water Coordinator
Compliance & Technical Assistance Branch
Division of Water