

## DIVISION OF LABORATORY SERVICES

Jackson Regional Laboratory  
295 Summar Drive  
Jackson, TN 38301  
731-426-0686

Knoxville Regional Laboratory  
2101 Medical Center Way  
Knoxville, TN 37920  
865-549-5201

Shelby County Laboratory  
814 Jefferson Avenue  
Memphis, TN 38105  
901-544-7555

Nashville Central Laboratory  
630 Hart Lane  
Nashville, TN 37243  
615-262-6300

**Sent To:** Judy Manners  
TDOH  
Andrew Johnson Tower, 4th  
floor  
710 James Robertson  
Parkway  
Nashville, TN 37243

**Lab ID:** N00017296  
Nashville Central Laboratory

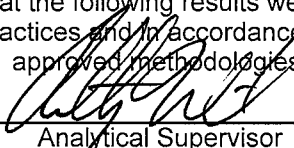
**Sampling Agency:** TN Dept of Health

J - Estimated value between MDL and MQL  
MDL - Method Detection Limit  
MQL - Method Quantitation Limit  
U - Undetected



TDOH.N00017296.M

This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.

  
Analytical Supervisor

**Lab-Sample Number:** N00017296001  
**Project Name:** 16UDWI  
**Sample Description:** Johnson Spring

**Field Determinations**  
**pH:**  
**Chlorine, residual:**  
**Conductivity:**  
**Temperature:**  
**Dissolved Oxygen:**  
**Other:**  
**Flow:** CFS

**Sampler Project Name:** UDWI  
**Project Site No.:**  
**Station No.:** UDWI 81  
**Date/Time Collected:** 06/19/2017 10:00  
**Sampler's Name:** Judy Manners  
**County:** MACON - 56  
**Sample Matrix:** Water  
**EFO:** Nashville CO  
**Sampling Agency:** TDOH  
**Billing Code:** HL00017233  
**Send Report To:** TDOH  
**Priority Date:**  
**Date/Time Received:** 06/19/2017 14:27

**Agency Invoiced:** TDOH

**Received By:** L Maderal

TEST: Calcium Hardness By Calculation		METHOD: SM 2340B				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MLQ	ANALYZED BY:	DATE
Calcium Hardness By Calculation	74.0	mg/L	0.15	0.25	M Pattanayek	6/19/2017

TEST: Digestion Metals		METHOD: EPA 200.2				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MLQ	ANALYZED BY:	DATE
Digestion Metals	06/26/2017				M Pattanayek	6/26/2017

TEST: ICP		METHOD: EPA 200.7				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MLQ	ANALYZED BY:	DATE
Calcium	30	mg/L	0.061	0.1	M Pattanayek	6/27/2017
Iron	12	µg/L	5.3	10	M Pattanayek	6/27/2017
Magnesium	4.0	mg/L	0.028	0.1	M Pattanayek	6/27/2017
Potassium	1.1	mg/L	0.041	0.1	M Pattanayek	6/27/2017
Sodium	1.8	mg/L	0.047	0.1	M Pattanayek	6/27/2017

TEST: ICP-MS		METHOD: EPA 200.8				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MLQ	ANALYZED BY:	DATE
Aluminum	20	µg/L	2.5	10	S Miller	6/27/2017
Antimony	U	µg/L	0.31	1	S Miller	6/27/2017
Arsenic	U	µg/L	0.77	5	S Miller	6/27/2017
Barium	29	µg/L	0.33	5	S Miller	6/27/2017
Beryllium	U	µg/L	0.25	1	S Miller	6/27/2017
Boron	7.0J	µg/L	3.2	10	S Miller	7/5/2017
Cadmium	U	µg/L	0.26	1	S Miller	6/27/2017
Chromium	U	µg/L	0.81	5	S Miller	6/27/2017
Cobalt	U	µg/L	0.34	1	S Miller	6/27/2017
Copper	U	µg/L	0.50	1	S Miller	6/27/2017
Lead	U	µg/L	0.29	1	S Miller	6/27/2017
Lithium	0.64J	µg/L	0.36	1	S Miller	6/27/2017

**Lab-Sample Number:** N00017296001  
**Project Name:** 16UDWI  
**Sample Description:** Johnson Spring

**Field Determinations**

**pH:**  
**Chlorine, residual:**  
**Conductivity:**  
**Temperature:**  
**Dissolved Oxygen:**  
**Other:**  
**Flow:** CFS

**Sampler Project Name:** UDWI  
**Project Site No.:**  
**Station No.:** UDWI 81  
**Date/Time Collected:** 06/19/2017 10:00  
**Sampler's Name:** Judy Manners  
**County:** MACON - 56  
**Sample Matrix:** Water  
**EFO:** Nashville CO  
**Sampling Agency:** TDOH  
**Billing Code:** HL00017233  
**Send Report To:** TDOH  
**Priority Date:**  
**Date/Time Received:** 06/19/2017 14:27

**Agency Invoiced:** TDOH

**Received By:** L Maderal

TEST: ICP-MS		METHOD: EPA 200.8				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	ML	ANALYZED BY:	DATE
Manganese	1.9	µg/L	0.40	1	S Miller	6/27/2017
Nickel	1.4	µg/L	0.46	1	S Miller	6/27/2017
Selenium	U	µg/L	0.92	5	S Miller	6/27/2017
Silver	U	µg/L	0.076	0.25	S Miller	6/27/2017
Strontium	42	µg/L	0.52	1	S Miller	6/27/2017
Thallium	U	µg/L	0.44	1	S Miller	6/27/2017
Vanadium	U	µg/L	2.6	5	S Miller	6/27/2017
Zinc	U	µg/L	1.7	5	S Miller	6/27/2017

TEST: Mercury		METHOD: EPA 245.1				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	ML	ANALYZED BY:	DATE
Mercury	U	µg/L	0.058	0.2	A Wilson	6/26/2017

TEST: Total Hardness By Calculation		METHOD: SM 2340B				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	ML	ANALYZED BY:	DATE
Total Hardness By Calculation	90	mg/L	0.27	0.66	M Pattanayek	6/27/2017



**N000017296-001**

PROJECT NAME:	UDWI	STATION NUMBER:	91	WATERBODY NAME:	N/A	* Metals
STREAM MILE:	N/A	COUNTY:	Hiwassee	WATERBODY NAME:	N/A	aluminum, Al
DESCRIPTION:	Shannon Springs	COUNTY:	Hiwassee	WATERBODY NAME:	N/A	antimony, Sb
LATITUDE:	N/A	LONGITUDE:	N/A	WATERBODY NAME:	N/A	arsenic, As
Matrix:	N/A	Depth:	N/A	WATERBODY NAME:	N/A	barium, Ba
COLLECTED:	DATE	TIME	10:30	WATERBODY NAME:	N/A	beryllium, Be
SAMPLER'S FULL NAME (printed)	Judy Manners	TIME	10:30	WATERBODY NAME:	N/A	boron, B
SAMPLING AGENCY: TDOH		TIME	10:30	WATERBODY NAME:	N/A	cadmium, Cd
IF PRIORITY, DATE NEEDED:		TIME	10:30	WATERBODY NAME:	N/A	calcium, Ca
SEND REPORT TO:	Judy.Manners@tn.gov	TIME	10:30	WATERBODY NAME:	N/A	chromium, Cr
		TIME	10:30	WATERBODY NAME:	N/A	cobalt, Co
* Env. Microbiology		TIME	10:30	WATERBODY NAME:	N/A	copper, Cu
coliform, fecal*		TIME	10:30	WATERBODY NAME:	N/A	iron, Fe
coliform, total*		TIME	10:30	WATERBODY NAME:	N/A	lithium, Li
strep. fecal*		TIME	10:30	WATERBODY NAME:	N/A	lead, Pb
E. Coli*		TIME	10:30	WATERBODY NAME:	N/A	magnesium, Mg
Enterococcus*		TIME	10:30	WATERBODY NAME:	N/A	manganese, Mn
		TIME	10:30	WATERBODY NAME:	N/A	mercury, Hg
		TIME	10:30	WATERBODY NAME:	N/A	nickel, Ni
* General Inorganics		TIME	10:30	WATERBODY NAME:	N/A	potassium, K
Not Preserved		TIME	10:30	WATERBODY NAME:	N/A	silver, Ag
acidity as CaCO <sub>3</sub> *		TIME	10:30	WATERBODY NAME:	N/A	sodium, Na
alkalinity as CaCO <sub>3</sub> *		TIME	10:30	WATERBODY NAME:	N/A	strontium, Sr
BOD, 5-day*		TIME	10:30	WATERBODY NAME:	N/A	tantalum, Ta
CBOD, 5-day*		TIME	10:30	WATERBODY NAME:	N/A	vanadium, V
chromium, hexavalent		TIME	10:30	WATERBODY NAME:	N/A	zinc, Zn
color		TIME	10:30	WATERBODY NAME:	N/A	zinc, Zn
conductivity*		TIME	10:30	WATERBODY NAME:	N/A	hardness, Ca as CaCO <sub>3</sub> *
fluoride*		TIME	10:30	WATERBODY NAME:	N/A	hardness, total as CaCO <sub>3</sub> *
MBA*		TIME	10:30	WATERBODY NAME:	N/A	Additional Information
nitrogen, nitrate*		TIME	10:30	WATERBODY NAME:	N/A	
nitrogen, nitrite*		TIME	10:30	WATERBODY NAME:	N/A	
pH		TIME	10:30	WATERBODY NAME:	N/A	
residue, dissolved*		TIME	10:30	WATERBODY NAME:	N/A	
residue, settleable*		TIME	10:30	WATERBODY NAME:	N/A	
residue, suspended*		TIME	10:30	WATERBODY NAME:	N/A	
residue, total*		TIME	10:30	WATERBODY NAME:	N/A	

\* denotes analyses performed only on water

**FIELD DETERMINATIONS**

Conductivity (uMhos)	Chlorine, residual	Other Field Parameters:
Dissolved Oxygen (mg/L)	Turbidity (NTU)	
Temperature (°C)	ORP (mv)	
pH	Flow Rate	

IDENTIFICATION  
Only one chain of custody form is required per sample or point if all collected at the same time

1. Collected By: *Judy Manners*  
Date: *6/19/17* Time: *10:30*  
Delivered to: *Judy Manners*  
Date: *6/19/17* Time: *2:27p*

2. Received by:  
Date:  
Time:

3. Received by:  
Date:  
Time:

4. Received in Lab by:  
Date:  
Time:

5. Received in Lab by:  
Date:  
Time:

6. Received in Lab by:  
Date:  
Time:

7. Received in Lab by:  
Date:  
Time:

8. Received in Lab by:  
Date:  
Time:

9. Remarks:

