



Tennessee Valley Authority, Post Office Box 2000, Soddy Daisy, Tennessee 37384-2000

August 24, 2018

Ms. Barbara Loudermilk
State of Tennessee
Department of Environment and Conservation
Division of Water Resources
Compliance & Enforcement Unit
William R. Snodgrass TN Tower
312 Rosa Parks Blvd. 11th Floor
Nashville, Tennessee 37243

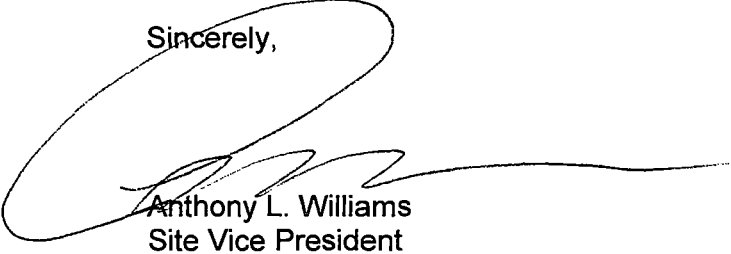
Ms. Loudermilk:

TENNESSEE VALLEY AUTHORITY (TVA) - SEQUOYAH NUCLEAR PLANT (SQN) -
NPDES PERMIT NO. TN0026450 - DISCHARGE MONITORING REPORT QUALITY
ASSURANCE (DMR-QA) STUDY 38 -- PROVIDER-GRADED TEST RESULTS

Please find enclosed the provider-graded test results and checklists for the 2018 DMR-QA Study 38 Laboratory Performance Evaluation. These results were obtained by TVA Sequoyah Nuclear Plant and supporting laboratories as required by NPDES Permit TN0026450.

If you have any questions or need additional information, please contact Millicent Garland at (423) 843-6714 of Sequoyah's Environmental staff.

Sincerely,



Anthony L. Williams
Site Vice President
Sequoyah Nuclear Plant

Enclosure
cc (Enclosure)
Chattanooga Environmental Field Office
Division of Water Pollution Control
1301 Riverfront Parkway, #206
Chattanooga, Tennessee 37402-2013

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

IE25
D030
NRR



United States Environmental Protection Agency

Office of Enforcement and Compliance Assurance

1200 Pennsylvania Ave NW, Mail Code 2227A

Washington, DC 20460

DMR-QA Study 38

(This data is collected under the authority of Section 308 of the Clean Water Act.)

NPDES Permittee Data Report Form

Attention: Follow the instructions on the previous page to complete this form and submit data for evaluation.

Due August 31, 2018

State

NPDES Permit Number

Permit Extension

TN

0026450

Permittee Name

TVA - Sequoyah Nuclear Plant

Current Permittee Mailing Address

P.O. Box 2000, Mailstop - OPS 4A-SQN

City

Soddy-Daisy

State

TN

Zip Code

37384

Phone Number

+1 (423) 843-7001

Fax Number

E-mail

alwilliams12@tva.gov

Optional: If WP Study was used, list PT Provider name(s):

Optional: WP Study Number(s)

For DMR-QA Study 38, conducted in 2018, the Permittee ensured that their laboratory(ies) performing the required analyses:

Received PT Samples

Yes ☒ No ☐

Submitted Complete and Accurate Data by July 6, 2018

Yes ☒ No ☐

Received a Graded Report by August 3, 2018

Yes ☒ No ☐

Certification by Permit Holder or Authorized Representative

(as per 40 CFR Section 122.22)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. Each reported value was produced from a single analytical run using the analytical system that routinely performs these analyses to produce compliance monitoring data required under our National Pollutant Discharge Elimination System (NPDES) permit. Neither I nor any of my subordinates compared our results with results from independent analyses conducted by us or any other laboratory before we reported our results to the U.S.EPA. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name of Certifying Official

Anthony L. Williams

Signature

Title

Site Vice President

Date

8/23/18

Address, phone number and e-mail of certifying official are required if different from above.

Address

Phone Number

City

State

Zip Code

E-mail



United States Environmental Protection Agency
Office of Enforcement and Compliance Assurance
 1200 Pennsylvania Ave NW, Mail Code 2227A
 Washington, DC 20460

DMR-QA Study 38

(This data is collected under the authority of Section 308 of the Clean Water Act.)

Permittee Name

TVA-SQN

State

NPDES Permit No.

TN0026450

Permit Extension

Identification of all CHEM, MICRO and WET laboratories who performed analyses for this permit

Name of Laboratory	Address of Laboratory	U.S. EPA Lab Code	Lab Analysis Check box(es) that apply			Lab Type*	State-certified Lab**
			Chem	Micro	WET		
Pace Analytical	2225 Riverside Drive Asheville, NC 28804	NC00030	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	C	<input checked="" type="checkbox"/>
TVA - Sequoyah Nuclear Plant	P.O. Box 2000 Mailstop: OPS - 5N Soddy-Daisy, TN 37384 - 2000	TN00999	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	F	<input checked="" type="checkbox"/>
Environmental Testing Solutions	351 Depot Street Asheville, NC 28801	NC01230	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	C	<input checked="" type="checkbox"/>
Pace Analytical	9800 Kincey Avenue Suite 100 Huntersville, NC 28078	NC00014	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	C	<input checked="" type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>

* Lab Types: C = Commercial F = Federal G = Local Government I = Industrial O = Other S = State

** See Footnote on page 2 (Frequently Asked Questions) for the current list of states with lab accreditation programs

If you need additional space, please make a copy of this page for additional laboratories.

Chemistry/Microbiology Analyte Checklist

DMR-QA Study 38

Analyte Test	Test Required	Method Number Used (optional)	Laboratory's Graded Result		Analyte determined by state-certified lab*
			Acceptable	Not Acceptable (Corrective Action Required)	
Microbiology					
<i>E. coli</i> , MF or MPN	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fecal Coliform, MF or MPN	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Coliform, MF or MPN	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trace Metals					
Aluminum	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Antimony	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Arsenic	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Barium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Beryllium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cadmium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chromium, total	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chromium, hexavalent	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cobalt	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Copper	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Iron	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lead	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manganese	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mercury	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mercury (Low Level)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Molybdenum	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nickel	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Selenium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Silver	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thallium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vanadium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zinc	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demands					
5-day BOD	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5-day Carbonaceous BOD	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COD	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TOC	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Minerals					
Alkalinity, total (CaCO ₃)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chloride	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fluoride	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hardness, total (CaCO ₃)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Specific conductance (25°C)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sulfate	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Dissolved Solids (180°C)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients					
Ammonia as N	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nitrate as N	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nitrite as N	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Orthophosphate as P	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Kjeldahl-Nitrogen as N	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Phosphorus as P	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Misc. Analytes					
Non-Filterable Residue (TSS)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oil and Grease	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
pH	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Cyanide	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Phenolics (4-AAP)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Residual Chlorine	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Residual Chlorine (Low Level)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Settleable Solids	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Name

Signature

Date

8/23/18

* See Footnote on page 2.

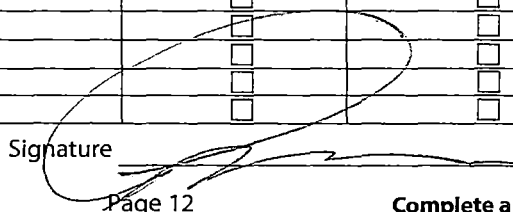
Page 12

Complete a separate checklist for EACH lab.

Chemistry/Microbiology Analyte Checklist

DMR-QA Study 38

Analyte Test	Test Required	Method Number Used (optional)	Laboratory's Graded Result		Analyte determined by state-certified lab*
			Acceptable	Not Acceptable (Corrective Action Required)	
Microbiology					
<i>E. coli</i> , MF or MPN	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fecal Coliform, MF or MPN	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Coliform, MF or MPN	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trace Metals					
Aluminum	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Antimony	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Arsenic	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Barium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Beryllium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cadmium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chromium, total	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chromium, hexavalent	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cobalt	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Copper	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Iron	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Lead	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manganese	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mercury	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mercury (Low Level)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Molybdenum	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nickel	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Selenium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Silver	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thallium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vanadium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zinc	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demands					
5-day BOD	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5-day Carbonaceous BOD	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COD	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TOC	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Minerals					
Alkalinity, total (CaCO ₃)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chloride	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fluoride	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hardness, total (CaCO ₃)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Specific conductance (25°C)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sulfate	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Dissolved Solids (180°C)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients					
Ammonia as N	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nitrate as N	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nitrite as N	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Orthophosphate as P	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Kjeldahl-Nitrogen as N	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Phosphorus as P	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Misc. Analytes					
Non-Filterable Residue (TSS)	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Oil and Grease	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pH	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Cyanide	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Phenolics (4-AAP)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Residual Chlorine	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Residual Chlorine (Low Level)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Settleable Solids	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Name Anthony WilliamsSignature 

Date

8/23/18

* See Footnote on page 2.

Page 12

Complete a separate checklist for EACH lab.

WET Organisms/Test Conditions/End Points Checklist

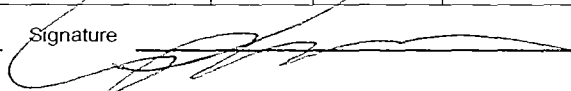
DMRQA38

Analyte Number	Organism / Conditions	End Points	Test Required	Laboratory's Graded Result		Analyte determined by state-certified Lab*
				Acceptable	Not Acceptable (Corrective Action Required)	
Test Code 13 (refer to EPA Method 2000.0)						
754	Fathead minnow (<i>Pimephales promelas</i>) - MHSF 25°C	LC50	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test Code 14 (refer to EPA Method 2000.0)						
755	Fathead minnow (<i>Pimephales promelas</i>) - 20% DMW	LC50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test Code 15 (refer to EPA Method 1000.0)						
756	Fathead minnow (<i>Pimephales promelas</i>) - MHSF	NOEC SURVIVAL	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
808	Fathead minnow (<i>Pimephales promelas</i>) - MHSF	IC25 (ON) GROWTH	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
810	Fathead minnow (<i>Pimephales promelas</i>) - MHSF	NOEC (ON) GROWTH	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test Code 16 (refer to EPA Method 1000.0)						
759	Fathead minnow (<i>Pimephales promelas</i>) - 20% DMW	NOEC SURVIVAL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
812	Fathead minnow (<i>Pimephales promelas</i>) - 20% DMW	IC25 (ON) GROWTH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
814	Fathead minnow (<i>Pimephales promelas</i>) - 20% DMW	NOEC (ON) GROWTH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test Code 19 (refer to EPA Method 2002.0)						
764	Ceriodaphnia dubia - MHSF 25°C	LC50	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test Code 20 (refer to EPA Method 2002.0)						
765	Ceriodaphnia dubia - 20% DMW 25°C	LC50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test Code 21 (refer to EPA Method 1002.0)						
766	Ceriodaphnia dubia - MHSF	NOEC SURVIVAL	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
767	Ceriodaphnia dubia - MHSF	IC25 REPRODUCTION	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
768	Ceriodaphnia dubia - MHSF	NOEC REPRODUCTION	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test Code 22 (refer to EPA Method 1002.0)						
769	Ceriodaphnia dubia - 20% DMW	NOEC SURVIVAL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
770	Ceriodaphnia dubia - 20% DMW	IC25 REPRODUCTION	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
771	Ceriodaphnia dubia - 20% DMW	NOEC REPRODUCTION	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test Code 32 (refer to EPA Method 2021.0)						
788	Daphnia magna - MHSF 25°C	LC50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test Code 38 (refer to EPA Method 2021.0)						
794	Daphnia pulex - MHSF 25°C	LC50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test Code 42 (refer to EPA Method 2007.0)						
798	Mysid (<i>Americamysis bahia</i> , <i>Mysidopsis bahia</i>) 25°C	LC50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test Code 43 (refer to EPA Method 1007.0)						
799	Mysid (<i>Americamysis bahia</i> , <i>Mysidopsis bahia</i>)	NOEC SURVIVAL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
816	Mysid (<i>Americamysis bahia</i> , <i>Mysidopsis bahia</i>)	IC25 (ON) GROWTH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
818	Mysid (<i>Americamysis bahia</i> , <i>Mysidopsis bahia</i>)	NOEC (ON) GROWTH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test Code 44 (refer to EPA Method 2006.0)						
803	Inland silverside (<i>Menidia beryllina</i>) 25°C	LC50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test Code 45 (refer to EPA Method 1006.0)						
824	Inland silverside (<i>Menidia beryllina</i>)	NOEC SURVIVAL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
825	Inland silverside (<i>Menidia beryllina</i>)	IC25 (ON) GROWTH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
826	Inland silverside (<i>Menidia beryllina</i>)	NOEC (ON) GROWTH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test Code 46 (refer to EPA Method 2004.0)						
804	Sheepshead minnow (<i>Cyprinodon variegatus</i>) 25°C	LC50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test Code 47 (refer to EPA Method 1004.0)						
805	Sheepshead minnow (<i>Cyprinodon variegatus</i>)	NOEC SURVIVAL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
820	Sheepshead minnow (<i>Cyprinodon variegatus</i>)	IC25 (ON) GROWTH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
822	Sheepshead minnow (<i>Cyprinodon variegatus</i>)	NOEC (ON) GROWTH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Name

Anthony Williams

Signature



Date

8/23/18

Chemistry/Microbiology Analyte Checklist

DMR-QA Study 38

Analyte Test	Test Required	Method Number Used (optional)	Laboratory's Graded Result		Analyte determined by state-certified lab*
			Acceptable	Not Acceptable (Corrective Action Required)	
Microbiology					
E. coli, MF or MPN	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fecal Coliform, MF or MPN	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Coliform, MF or MPN	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trace Metals					
Aluminum	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Antimony	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Arsenic	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Barium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Beryllium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cadmium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chromium, total	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chromium, hexavalent	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cobalt	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Copper	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Iron	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lead	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manganese	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mercury	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mercury (Low Level)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Molybdenum	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nickel	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Selenium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Silver	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thallium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vanadium	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zinc	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demands					
5-day BOD	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5-day Carbonaceous BOD	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COD	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TOC	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Minerals					
Alkalinity, total (CaCO ₃)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chloride	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fluoride	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hardness, total (CaCO ₃)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Specific conductance (25°C)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sulfate	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Dissolved Solids (180°C)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients					
Ammonia as N	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nitrate as N	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nitrite as N	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Orthophosphate as P	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Kjeldahl-Nitrogen as N	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Phosphorus as P	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Misc. Analytes					
Non-Filterable Residue (TSS)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oil and Grease	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pH	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Total Cyanide	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Phenolics (4-AAP)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Residual Chlorine	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Total Residual Chlorine (Low Level)	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Settleable Solids	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

 Name Anthony Williams

 Signature [Signature]

 Date 8/23/18

* See Footnote on page 2.