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Tennessee Valley Authority, Sequoyah Nuclear Plant, P.O. Box 2000, Soddy Daisy, TN 37384

June 14, 2023

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

Subject: **Sequoyah Nuclear Plant, Tennessee Multi-Sector Permit (TMSP), 2023  
Annual Discharge Monitoring Report for Outfalls SW-1, SW-16, SW-17, SW-  
18, SW-19, and SW-21**

Attached is the 2023 Annual Discharge Monitoring Report for outfalls SW-1, SW-16, SW-17, SW-18, SW-19, and SW-21 for Sequoyah Nuclear Plant.

Respectfully,

A handwritten signature in black ink, appearing to read 'T.R. Markum', is written above the typed name.

Travis R. Markum  
Environmental Scientist

## Markum, Travis R

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**From:** Markum, Travis R  
**Sent:** Wednesday, June 14, 2023 4:13 PM  
**To:** 'Michael Bascom'  
**Cc:** water.permits@tn.gov  
**Subject:** TNR050015 - SQN TMSP 2023 SW-1,16,17,18,19,21 Reports  
**Attachments:** SQN TMSP 2023 SW-1,16,17,18,19,21 signed 06.12.23.pdf

Mr. Bascom,

Attached are the annual monitoring results for outfalls SW 1,16,17,18,19, and 21 for CY23. All results were less than benchmark threshold concentrations for Sector O of the TMSP.

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**Travis R. Markum**  
Env. Scientist (Compliance)  
Environmental Operations

TVA Sequoyah Nuclear Plant  
PO Box 2000, OPS 5N  
Soddy Daisy, TN 37384

☎: 423-843-6714

✉: [trmarkum@tva.gov](mailto:trmarkum@tva.gov)

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**ANNUAL STORMWATER MONITORING REPORT**  
 for Stormwater Discharges Associated with Industrial Activity under the  
**TENNESSEE MULTI-SECTOR GENERAL PERMIT (TMSP)**

Facility Name: TVA - Sequoyah Nuclear Plant	TMSP Number: TNR050015
Contact Person: Travis Markum	Phone Number: 423-843-6714
This report is submitted for the following calendar year (e.g. 2015): 2023	Outfall Number: SW 1
List all TMSP sectors which apply to discharge from this outfall: O	Sample Date: 5/20/2023
Low Concentration Waiver (Note 3): list all parameters for which the facility is certifying that there has not been a significant change in industrial activity or the pollution prevention measures in the area of the facility that drains to the outfall for which sampling was waived:	

**DIRECTIONS:** In the spaces below, provide the results of stormwater monitoring for the designated outfall. For each outfall, one Annual Stormwater Monitoring Report must be submitted. The parameters for which monitoring must be conducted depend on which industry sector(s) of the TMSP applies to the discharge. Look up your sector(s) in the TMSP and analyze for the parameters that apply. If parameter is not listed below, submit additional sheets. All samples should be grab.

Parameter	Cut-off Conc. (mg/L)	Annual Sample Result (mg/L)	Parameter (continued)	Cut-off Conc. (mg/L)	Annual Sample Result (mg/L)
Aluminum, Total	0.75		Magnesium, Total	0.0636	
Ammonia	4.0		Mercury, Total	0.0024	
Arsenic, Total	0.16854		Nickel, Total	0.875	
BOD, 5-Day	30		Nitrate + Nitrite Nitrogen	0.68	
Cadmium, Total	0.0159		Oil and Grease	15	
COD	120		pH	5.0-9.0	
Copper, Total	0.018		Phosphorus, Total (as P)	2.0	
Cyanide, Total	0.064		Selenium, Total	0.2385	
Fluoride	1.8		Silver, Total	0.032	
Iron, Total	5.0	0.616	Total Suspended Solids	150	
Lead, Total	0.15		Zinc, Total	0.395	

**CERTIFICATION AND SIGNATURE:** (Make all entries in ink, not with a pencil. This report must be signed by a responsible corporate officer for a corporation, a general partner for a partnership, the proprietor for a sole proprietorship, or a principal executive officer or ranking elected official for a public agency.)

I certify under penalty of law that this document and all of its attachments were prepared under my direction or my supervision in accordance with a system designed to assure qualified personnel properly gathered and evaluated 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. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Tony McMutuary	Sr Manager, Chem/ENV		06/12/23
Printed Name	Official Title	Signature	Date





**ANNUAL STORMWATER MONITORING REPORT**  
 for Stormwater Discharges Associated with Industrial Activity under the  
**TENNESSEE MULTI-SECTOR GENERAL PERMIT (TMSP)**

Facility Name: TVA - Sequoyah Nuclear Plant	TMSP Number: TNR050015
Contact Person: Travis Markum	Phone Number: 423-843-6714
This report is submitted for the following calendar year (e.g. 2015): 2023	Outfall Number: SW 16
List all TMSP sectors which apply to discharge from this outfall: O	Sample Date: 5/20/2023
Low Concentration Waiver (Note 3): list all parameters for which the facility is certifying that there has not been a significant change in industrial activity or the pollution prevention measures in the area of the facility that drains to the outfall for which sampling was waived:	

**DIRECTIONS:** In the spaces below, provide the results of stormwater monitoring for the designated outfall. For each outfall, one Annual Stormwater Monitoring Report must be submitted. The parameters for which monitoring must be conducted depend on which industry sector(s) of the TMSP applies to the discharge. Look up your sector(s) in the TMSP and analyze for the parameters that apply. If parameter is not listed below, submit additional sheets. All samples should be grab.

Parameter	Cut-off Conc. (mg/L)	Annual Sample Result (mg/L)	Parameter (continued)	Cut-off Conc. (mg/L)	Annual Sample Result (mg/L)
Aluminum, Total	0.75		Magnesium, Total	0.0636	
Ammonia	4.0		Mercury, Total	0.0024	
Arsenic, Total	0.16854		Nickel, Total	0.875	
BOD, 5-Day	30		Nitrate + Nitrite Nitrogen	0.68	
Cadmium, Total	0.0159		Oil and Grease	15	
COD	120		pH	5.0-9.0	
Copper, Total	0.018		Phosphorus, Total (as P)	2.0	
Cyanide, Total	0.064		Selenium, Total	0.2385	
Fluoride	1.8		Silver, Total	0.032	
Iron, Total	5.0	0.0702	Total Suspended Solids	150	
Lead, Total	0.15		Zinc, Total	0.395	

**CERTIFICATION AND SIGNATURE:** (Make all entries in ink, not with a pencil. This report must be signed by a responsible corporate officer for a corporation, a general partner for a partnership, the proprietor for a sole proprietorship, or a principal executive officer or ranking elected official for a public agency.)

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Tony McMutuary	Sr Manager, Chem/ENV	<i>Tony McMutuary</i>	06/12/23
Printed Name	Official Title	Signature	Date



**ANNUAL STORMWATER MONITORING REPORT**  
 for Stormwater Discharges Associated with Industrial Activity under the  
**TENNESSEE MULTI-SECTOR GENERAL PERMIT (TMSP)**

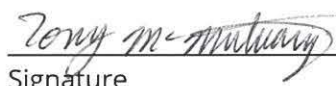
Facility Name: TVA - Sequoyah Nuclear Plant	TMSP Number: TNR050015
Contact Person: Travis Markum	Phone Number: 423-843-6714
This report is submitted for the following calendar year (e.g. 2015): 2023	Outfall Number: SW 17
List all TMSP sectors which apply to discharge from this outfall: O	Sample Date: 5/20/2023
Low Concentration Waiver (Note 3): list all parameters for which the facility is certifying that there has not been a significant change in industrial activity or the pollution prevention measures in the area of the facility that drains to the outfall for which sampling was waived:	

**DIRECTIONS:** In the spaces below, provide the results of stormwater monitoring for the designated outfall. For each outfall, one Annual Stormwater Monitoring Report must be submitted. The parameters for which monitoring must be conducted depend on which industry sector(s) of the TMSP applies to the discharge. Look up your sector(s) in the TMSP and analyze for the parameters that apply. If parameter is not listed below, submit additional sheets. All samples should be grab.

Parameter	Cut-off Conc. (mg/L)	Annual Sample Result (mg/L)	Parameter (continued)	Cut-off Conc. (mg/L)	Annual Sample Result (mg/L)
Aluminum, Total	0.75		Magnesium, Total	0.0636	
Ammonia	4.0		Mercury, Total	0.0024	
Arsenic, Total	0.16854		Nickel, Total	0.875	
BOD, 5-Day	30		Nitrate + Nitrite Nitrogen	0.68	
Cadmium, Total	0.0159		Oil and Grease	15	
COD	120		pH	5.0-9.0	
Copper, Total	0.018		Phosphorus, Total (as P)	2.0	
Cyanide, Total	0.064		Selenium, Total	0.2385	
Fluoride	1.8		Silver, Total	0.032	
Iron, Total	5.0	1.93	Total Suspended Solids	150	
Lead, Total	0.15		Zinc, Total	0.395	

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Tony McMutuary	Sr Manager, Chem/ENV		06/12/23
Printed Name	Official Title	Signature	Date





**ANNUAL STORMWATER MONITORING REPORT**  
 for Stormwater Discharges Associated with Industrial Activity under the  
**TENNESSEE MULTI-SECTOR GENERAL PERMIT (TMSP)**

Facility Name: TVA - Sequoyah Nuclear Plant	TMSP Number: TNR050015
Contact Person: Travis Markum	Phone Number: 423-843-6714
This report is submitted for the following calendar year (e.g. 2015): 2023	Outfall Number: SW 18
List all TMSP sectors which apply to discharge from this outfall: O	Sample Date: 5/20/2023
Low Concentration Waiver (Note 3): list all parameters for which the facility is certifying that there has not been a significant change in industrial activity or the pollution prevention measures in the area of the facility that drains to the outfall for which sampling was waived:	

**DIRECTIONS:** In the spaces below, provide the results of stormwater monitoring for the designated outfall. For each outfall, one Annual Stormwater Monitoring Report must be submitted. The parameters for which monitoring must be conducted depend on which industry sector(s) of the TMSP applies to the discharge. Look up your sector(s) in the TMSP and analyze for the parameters that apply. If parameter is not listed below, submit additional sheets. All samples should be grab.

Parameter	Cut-off Conc. (mg/L)	Annual Sample Result (mg/L)	Parameter (continued)	Cut-off Conc. (mg/L)	Annual Sample Result (mg/L)
Aluminum, Total	0.75		Magnesium, Total	0.0636	
Ammonia	4.0		Mercury, Total	0.0024	
Arsenic, Total	0.16854		Nickel, Total	0.875	
BOD, 5-Day	30		Nitrate + Nitrite Nitrogen	0.68	
Cadmium, Total	0.0159		Oil and Grease	15	
COD	120		pH	5.0-9.0	
Copper, Total	0.018		Phosphorus, Total (as P)	2.0	
Cyanide, Total	0.064		Selenium, Total	0.2385	
Fluoride	1.8		Silver, Total	0.032	
Iron, Total	5.0	0.357	Total Suspended Solids	150	
Lead, Total	0.15		Zinc, Total	0.395	

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Tony McMutuary	Sr Manager, Chem/ENV		06/12/23
Printed Name	Official Title	Signature	Date



**ANNUAL STORMWATER MONITORING REPORT**  
 for Stormwater Discharges Associated with Industrial Activity under the  
**TENNESSEE MULTI-SECTOR GENERAL PERMIT (TMSP)**

Facility Name: TVA - Sequoyah Nuclear Plant	TMSP Number: TNR050015
Contact Person: Travis Markum	Phone Number: 423-843-6714
This report is submitted for the following calendar year (e.g. 2015): 2023	Outfall Number: SW 19
List all TMSP sectors which apply to discharge from this outfall: O	Sample Date: 5/20/2023
Low Concentration Waiver (Note 3): list all parameters for which the facility is certifying that there has not been a significant change in industrial activity or the pollution prevention measures in the area of the facility that drains to the outfall for which sampling was waived:	

**DIRECTIONS:** In the spaces below, provide the results of stormwater monitoring for the designated outfall. For each outfall, one Annual Stormwater Monitoring Report must be submitted. The parameters for which monitoring must be conducted depend on which industry sector(s) of the TMSP applies to the discharge. Look up your sector(s) in the TMSP and analyze for the parameters that apply. If parameter is not listed below, submit additional sheets. All samples should be grab.

Parameter	Cut-off Conc. (mg/L)	Annual Sample Result (mg/L)	Parameter (continued)	Cut-off Conc. (mg/L)	Annual Sample Result (mg/L)
Aluminum, Total	0.75		Magnesium, Total	0.0636	
Ammonia	4.0		Mercury, Total	0.0024	
Arsenic, Total	0.16854		Nickel, Total	0.875	
BOD, 5-Day	30		Nitrate + Nitrite Nitrogen	0.68	
Cadmium, Total	0.0159		Oil and Grease	15	
COD	120		pH	5.0-9.0	
Copper, Total	0.018		Phosphorus, Total (as P)	2.0	
Cyanide, Total	0.064		Selenium, Total	0.2385	
Fluoride	1.8		Silver, Total	0.032	
Iron, Total	5.0	0.425	Total Suspended Solids	150	
Lead, Total	0.15		Zinc, Total	0.395	

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Tony McMutuary	Sr Manager, Chem/ENV	<i>Tony McMutuary</i>	06/12/23
Printed Name	Official Title	Signature	Date





**ANNUAL STORMWATER MONITORING REPORT**  
 for Stormwater Discharges Associated with Industrial Activity under the  
**TENNESSEE MULTI-SECTOR GENERAL PERMIT (TMSP)**

Facility Name: TVA - Sequoyah Nuclear Plant	TMSP Number: TNR050015
Contact Person: Travis Markum	Phone Number: 423-843-6714
This report is submitted for the following calendar year (e.g. 2015): 2023	Outfall Number: SW 21
List all TMSP sectors which apply to discharge from this outfall: O	Sample Date: 5/20/2023
Low Concentration Waiver (Note 3): list all parameters for which the facility is certifying that there has not been a significant change in industrial activity or the pollution prevention measures in the area of the facility that drains to the outfall for which sampling was waived:	

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Aluminum, Total	0.75		Magnesium, Total	0.0636	
Ammonia	4.0		Mercury, Total	0.0024	
Arsenic, Total	0.16854		Nickel, Total	0.875	
BOD, 5-Day	30		Nitrate + Nitrite Nitrogen	0.68	
Cadmium, Total	0.0159		Oil and Grease	15	
COD	120		pH	5.0-9.0	
Copper, Total	0.018		Phosphorus, Total (as P)	2.0	
Cyanide, Total	0.064		Selenium, Total	0.2385	
Fluoride	1.8		Silver, Total	0.032	
Iron, Total	5.0	1.72	Total Suspended Solids	150	
Lead, Total	0.15		Zinc, Total	0.395	

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Tony McMutuary	Sr Manager, Chem/ENV	<i>Tony McMutuary</i>	06/12/23
Printed Name	Official Title	Signature	Date