



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

January 12, 2023

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

Subject: **Sequoyah Nuclear Plant, Discharge Monitoring Report (DMR), September 2022**

Attached is the September 2022 DMR for Sequoyah Nuclear Plant.

Respectfully,

A handwritten signature in black ink, appearing to read "T.R. Markum", is positioned above the typed name.

Travis R. Markum
Environmental Scientist

DMR Copy of Record

Permit

Permit #:

TN0026450

Major:

Yes

Permittee:

Tennessee Valley Authority (TVA)

Permittee Address:

Sequoyah Access Road, PO Box 2000
Soddy Daisy, TN 37379

Facility:

TVA SEQUOYAH NUCLEAR PLANT (SQN)

Facility Location:

SEQUOYAH ACCESS ROAD
SODDY DAISY
SODDY DAISY, TN 37379

Permitted Feature:

101
External Outfall

Discharge:

101-G
(no description)

Report Dates & Status

Monitoring Period:

From 09/01/22 to 09/30/22

DMR Due Date:

10/15/22

Status:

NetDMR Validated

Considerations for Form Completion

Primary discharge from Diffuser Pond.

Principal Executive Officer

First Name:

Thomas

Last Name:

Marshall

Title:

Vice President

Telephone:

423-843-7001

No Data Indicator (NODI)

Form NODI: --

Parameter		Monitoring Location	Season #	Param. NODI		Quantity or Loading					Quality or Concentration							# of Ex.	Frequency of Analysis	Sample Type
Code	Name					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3	Value 3	Units			
00010	Temperature, water deg. centigrade	1 - Effluent Gross	0	--	Sample										=	41.9	04 - deg C		99/99 - Continuous	RC - Recorder (auto)
					Permit Req.											Req Mon DAILY MX	04 - deg C		99/99 - Continuous	RC - Recorder (auto)
					Value NODI															
00010	Temperature, water deg. centigrade	Z - Instream Monitoring	0	--	Sample										=	28.3	04 - deg C		99/99 - Continuous	CA - CALCTD
					Permit Req.										<=	30.5 DAILY MX	04 - deg C		99/99 - Continuous	CA - CALCTD
					Value NODI															
00016	Temp. diff. between samp. & upstrm deg. C	1 - Effluent Gross	1	--	Sample										=	2.2	04 - deg C		99/99 - Continuous	CA - CALCTD
					Permit Req.										<=	3.0 DAILY MX	04 - deg C		99/99 - Continuous	CA - CALCTD
					Value NODI															
50050	Flow, in conduit or thru treatment plant	1 - Effluent Gross	0	--	Sample	=	1781.4	=	1787.4	03 - MGD									99/99 - Continuous	RC - Recorder (auto)
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	03 - MGD									99/99 - Continuous	RC - Recorder (auto)
					Value NODI															
50060	Chlorine, total residual	1 - Effluent Gross	0	--	Sample														01/07 - Weekly	GR - GRAB
					Permit Req.						<=	0.027 MO AVG			<=	0.047 DAILY MX	19 - mg/L			
					Value NODI							B - Below Detection Limit/No Detection				B - Below Detection Limit/No Detection				
82234	Temperature rate of change deg. C/hr	Z - Instream Monitoring	0	--	Sample			=	1.8	62 - deg C/hr									99/99 - Continuous	CA - CALCTD
					Permit Req.			<=	2.0 DAILY MX	62 - deg C/hr									99/99 - Continuous	CA - CALCTD
					Value NODI															
TRP3B	IC25 Static Renewal 7 Day Chronic Chrceriodaphnia	1 - Effluent Gross	0	--	Sample						>	100.0					23 - %		01/30 - Monthly	CP - COMPOS
					Permit Req.						>	69.0 MINIMUM					23 - %		01/30 - Monthly	CP - COMPOS
					Value NODI															
TRP6C	IC25 Static Renewal 7 Day Chronic Chrpimephales	1 - Effluent Gross	0	--	Sample						>	100.0					23 - %		01/30 - Monthly	CP - COMPOS
					Permit Req.						>	69.0 MINIMUM					23 - %		01/30 - Monthly	CP - COMPOS
					Value NODI															

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

No errors.

Comments

Method Detection Limit for Total Residual Chlorine is 0.05 mg/L.

Attachments

Name	Type	Size
SQN_Biomonitoring_Report_for_September_2022.pdf	pdf	5628640.0

Report Last Saved By

Tennessee Valley Authority (TVA)

User:

TRMARKUM

Name:

Travis Markum

E-Mail:

trmarkum@tva.gov

Date/Time:

2022-10-11 14:23 (Time Zone: -05:00)

Report Last Signed By

User:

TMCMUTUA

Name:

Tony McMutuary

E-Mail:

tmcmutuary@tva.gov

Date/Time:

2022-10-13 15:40 (Time Zone: -05:00)

**TENNESSEE VALLEY AUTHORITY
TOXICITY TEST REPORT**

INTRODUCTION / EXECUTIVE SUMMARY

Report Date: October 02, 2022

1. Facility / Discharger: Sequoyah Nuclear Plant / TVA
2. County / State: Hamilton / Tennessee
3. NPDES Permit #: TN0026450
4. Type of Facility: Nuclear-Fueled Electric Generating Plant
5. Design Flow (MGD): 1.579
6. Receiving Stream: Tennessee River (TRM 483.6)
7. 1Q10: 2.456
8. Outfall Tested: 101
9. Dates Sampled: September 11 – 16, 2022
10. Average Flow on Days Sampled (MGD): 1780.161, 1774.086, 1776.022
11. Pertinent Site Conditions: Production / operation data will be provided upon request.
12. Test Dates: September 13 – 20, 2022
13. Test Type: Short-term Chronic Definitive
14. Test Species: Fathead Minnows (*Pimephales promelas*)
Daphnids (*Ceriodaphnia dubia*)
15. Concentrations Tested (%):
Pimephales promelas: UV treated Outfall 101: 17.25, 34.5, 69, 84.5, 100
UV treated Intake: 100

Ceriodaphnia dubia: Non-treated Outfall 101: 17.25, 34.5, 69, 84.5, 100
Non-treated Intake: 100
16. Permit Limit Endpoint (%): Outfall 101: IC₂₅ = 69%
17. Test Results: Outfall 101: *Pimephales promelas*: IC₂₅ > 100%
Ceriodaphnia dubia: IC₂₅ > 100%



18. Facility Contact: Travis Markum Phone #: (865) 748-3294
19. Consulting / Testing Lab: Environmental Testing Solutions, Inc.
20. Lab Contact: Jim Sumner Phone #: (828) 350-9364
21. TVA Contact: Rick Sherrard Phone #: (423) 987-2250
22. Notes: Exposures to samples collected September 11 – 16, 2022 from Outfall 101 resulted in no toxic effects to fathead minnows or daphnids. The resulting IC₂₅ values, for both species, were >100 percent. Exposure of minnows and daphnids to intake samples resulted in no significant differences from the controls during this study period.



METHODS SUMMARY

Samples:

1. Sampling Point: Outfall 101, Intake
2. Sample Type: Composite
3. Sample Information:

Sample ID	Date (MM-DD-YY) Time (ET) Collected	Date (MM-DD-YY) Time (ET) Received	Arrival Temp. (°C)	Initial TRC* (mg/L)	Date (MM-DD-YY) Time (ET) Last Used By
101	09-11-22 / 0700 to 09-12-22 / 0600	09-12-22 / 1310	3.3	<0.10	09-13-22 / 0823 09-14-22 / 0809
Intake	09-11-22 / 0700 to 09-12-22 / 0600	09-12-22 / 1310	1.4	<0.10	09-13-22 / 0823 09-14-22 / 0809
101	09-13-22 / 0700 to 09-14-22 / 0600	09-14-22 / 1253	1.1	<0.10	09-15-22 / 0810 09-16-22 / 0807
Intake	09-13-22 / 0700 to 09-14-22 / 0600	09-14-22 / 1253	1.8	<0.10	09-15-22 / 0810 09-16-22 / 0807
101	09-15-22 / 0700 to 09-16-22 / 0600	09-16-22 / 1132	2.7, 2.8'	<0.10	09-17-22 / 0907 09-18-22 / 0904 09-19-22 / 0806
Intake	09-15-22 / 0700 to 09-16-22 / 0600	09-16-22 / 1132	3.6	<0.10	09-17-22 / 0907 09-18-22 / 0904 09-19-22 / 0806

*TRC = Total Residual Chlorine

†Samples were collected in two 2.5 gallon cubitainers. Temperature was measured in each cubitainer upon arrival.

4. Sample Manipulation: Samples from Outfall 101 and intake were warmed to test temperature (25.0 ± 1.0°C) in a warm water bath.

Aliquots of Outfall 101 and Intake samples were UV-treated through a 40-watt Smart® UV Sterilizer (manufactured by Emperor Aquatics, Inc.) for 2 minutes.



	<i>Pimephales promelas</i>	<i>Ceriodaphnia dubia</i>
<u>Test Organisms:</u>		
1. Source:	<u>In-house Cultures</u>	<u>In-house Cultures</u>
2. Age:	<u>< 24-hours old</u>	<u>< 24-hours old</u>
<u>Test Method Summary:</u>		
1. Test Conditions:	<u>Static, Renewal</u>	<u>Static, Renewal</u>
2. Test Duration:	<u>7 days</u>	<u>Until at least 60% of control females have 3 broods</u>
3. Control / Dilution Water:	<u>Moderately Hard Synthetic</u>	<u>Moderately Hard Synthetic</u>
4. Number of Replicates:	<u>4</u>	<u>10</u>
5. Organisms per Replicate:	<u>10</u>	<u>1</u>
6. Test Initiation: (Date/Time):	<u>09-13-22 0740 ET</u>	<u>09-13-22 0823 ET</u>
7. Test Termination: (Date/Time):	<u>09-20-22 0646 ET</u>	<u>09-20-22 0730 ET</u>
8. Test Temperature: Outfall 101:	<u>Mean = 24.8°C</u> <u>(24.4 – 25.1°C)</u>	<u>Mean = 25.0°C</u> <u>(24.8 – 25.2°C)</u>
9. Physical / Chemical Measurements:	<u>Alkalinity, hardness, total residual chlorine, and conductivity were measured at the laboratory in each 100% sample. Daily temperatures were measured in one replicate for each test concentration. Pre- and post-exposure test solutions were analyzed daily for pH and dissolved oxygen.</u>	
10. Statistics:	<u>Statistics were performed according to methods prescribed by EPA using ToxCalc version 5.0 statistical software (Tidepool Scientific Software, McKinneyville, CA).</u>	

TOXICITY TEST RESULTS (see Appendix C for Bench Sheets)

- Results of a *Pimephales promelas* Chronic/ 7-day Toxicity Test.
(Genus species) (Type / Duration)

Conducted September 13 – 20, 2022 using effluent from Outfall 101.

Test Solutions (% Effluent)	Percent Surviving (time interval used – days)						
	1	2	3	4	5	6	7
Control, UV-treated	100	100	100	100	100	100	100
17.25%	100	100	100	100	100	100	100
34.5%	100	100	100	100	100	100	100
69%	100	100	100	100	100	100	100
84.5%	100	100	100	100	100	100	100
100.0%	100	100	100	100	100	100	100
Intake	100	100	100	100	100	100	100
Control, Non-treated	100	100	100	100	100	100	100

Test Solutions (% Effluent)	Mean Dry Weight (mg) (replicate number)				
	1	2	3	4	Mean
Control, UV-treated	0.731	0.647	0.737	0.762	0.719
17.25%	0.790	0.723	0.847	0.846	0.802
34.5%	0.780	0.685	0.771	0.762	0.750
69%	0.697	0.764	0.752	0.817	0.758
84.5%	0.728	0.768	0.830	0.776	0.776
100.0%	0.758	0.775	0.843	0.746	0.781
Intake	0.780	0.676	0.747	0.762	0.741
Control, Non-treated	0.756	0.809	0.806	0.805	0.794
IC ₂₅ Value: <u>> 100%</u> Permit Limit: <u>69%</u> 95% Confidence Limits: Upper Limit: <u>NA</u> Lower Limit: <u>NA</u>			Calculated TU Estimates: <u>< 1.0 TUc*</u> Permit Limit: <u>1.4 TUc</u>		

*TUa = 100/LC₅₀; TUc = 100/ IC₂₅



TOXICITY TEST RESULTS (see Appendix C for Bench Sheets)

2. Results of a *Ceriodaphnia dubia* Chronic/ 7-day Toxicity Test.
(Genus species) (Type / Duration)

Conducted September 13 – 20, 2022 using effluent from Outfall 101.

Test Solutions (% Effluent)	Percent Surviving (time interval used – days)						
	1	2	3	4	5	6	7
Control	100	100	100	100	100	100	100
17.25%	100	100	100	100	100	100	100
34.5%	100	100	100	100	100	100	100
69%	100	100	100	100	100	100	100
84.5%	100	100	100	100	100	100	100
100.0%	100	100	100	100	100	100	100

Test Solutions (% Effluent)	Reproduction (#young/female/7 days) Data (replicate number)										
	1	2	3	4	5	6	7	8	9	10	Mean
Control	33	30	30	32	30	28	31	30	32	32	30.8
17.25%	28	30	32	32	28	33	31	30	32	30	30.6
34.5%	33	35	31	34	30	33	33	35	32	30	32.6
69%	33	32	31	33	36	31	34	33	32	33	32.8
84.5%	32	38	37	34	35	36	37	32	31	37	34.9
100.0%	34	40	36	34	36	33	35	36	38	39	36.1
IC ₂₅ Value: <u>> 100%</u> Permit Limit: <u>69%</u> 95% Confidence Limits: Upper Limit: <u>NA</u> Lower Limit: <u>NA</u>						Calculated TU Estimates: <u>< 1.0 TUc*</u> Permit Limit: <u>1.4 TUc</u>					

*TUa = 100/LC₅₀; TUc = 100/ IC₂₅



TOXICITY TEST RESULTS (see Appendix C for Bench Sheets)

2. Results of a *Ceriodaphnia dubia* Chronic/ 7-day Toxicity Test.
(Genus species) (Type / Duration)

Conducted September 13 – 20, 2022 using water from Intake

Test Solutions (% Effluent)	Percent Surviving (time interval used – days)						
	1	2	3	4	5	6	7
Control	100	100	100	100	100	100	100
Intake	100	100	100	100	100	100	100

Test Solutions (% Effluent)	Reproduction (#young/female/7 days) Data (replicate number)										
	1	2	3	4	5	6	7	8	9	10	Mean
Control	29	30	32	31	31	30	33	32	33	30	31.1
Intake	38	34	33	32	36	37	37	37	40	31	35.5
IC ₂₅ Value: <u>> 100%</u> Permit Limit: <u>N/A</u> 95% Confidence Limits: Upper Limit: <u>NA</u> Lower Limit: <u>NA</u>				Calculated TU Estimates: <u>< 1.0 TUc*</u> Permit Limit: <u>N/A</u>							

*TUa = 100/LC₅₀; TUc = 100/ IC₂₅

REFERENCE TOXICANT TEST RESULTS (see Appendix A and D)

Species	Date	Time	Duration	Toxicant	Results (IC ₂₅)
<i>Pimephales promelas</i>	September 13 – 20, 2022	0708	7 days	KCl	0.67 g/L
<i>Ceriodaphnia dubia</i>	September 13 – 20, 2022	0800	7 days	NaCl	1.09 g/L



PHYSICAL/CHEMICAL SUMMARY

Water Chemistry Mean Values and Ranges for UV-treated *Pimephales promelas* and Non-treated *Ceriodaphnia dubia*, Sequoyah Nuclear Plant (SQN), Effluent Outfall 101 and Intake performed September 13-20, 2022.

Test	Sample ID	Temperature (°C)		Dissolved Oxygen (mg/L)		pH (S.U.)		Conductance (µmhos/cm)	Alkalinity (mg/L CaCO ₃)	Hardness (mg/L CaCO ₃)	*Total Residual Chlorine (mg/L)
		Initial	Final	Initial	Final	Initial	Final				
<i>Pimephales promelas</i>	Control, Non-treated	24.8 24.7 - 24.9	24.6 24.4 - 24.7	7.8 7.7 - 7.9	7.6 7.4 - 7.9	7.34 7.15 - 7.62	7.33 7.24 - 7.39	310 296 - 323	61 60 - 63	87 85 - 87	- -
	Control, UV-treated	24.8 24.7 - 24.8	24.6 24.4 - 24.8	7.9 7.8 - 8.1	7.7 7.5 - 8.0	7.45 7.34 - 7.63	7.33 7.24 - 7.44	310 299 - 318	60 60 - 61	86 85 - 87	- -
	17.25%	24.9 24.8 - 24.9	24.6 24.4 - 24.7	8.0 7.9 - 8.1	7.7 7.4 - 7.9	7.46 7.34 - 7.63	7.32 7.24 - 7.43	290 283 - 304	- -	- -	- -
	34.5%	24.9 24.8 - 24.9	24.6 24.4 - 24.9	8.0 7.9 - 8.1	7.6 7.4 - 7.9	7.46 7.33 - 7.63	7.32 7.26 - 7.41	268 260 - 278	- -	- -	- -
	69%	24.9 24.9 - 25.0	24.6 24.6 - 24.8	8.0 7.9 - 8.1	7.7 7.5 - 8.0	7.45 7.30 - 7.63	7.31 7.25 - 7.41	224 217 - 232	- -	- -	- -
	84.5%	25.0 24.9 - 25.0	24.6 24.5 - 24.9	8.0 7.9 - 8.2	7.7 7.5 - 8.0	7.44 7.28 - 7.63	7.30 7.23 - 7.41	204 197 - 212	- -	- -	- -
	100%	25.0 25.0 - 25.0	24.6 24.4 - 24.9	8.0 7.9 - 8.2	7.6 7.3 - 8.0	7.44 7.27 - 7.64	7.29 7.20 - 7.38	183 178 - 191	66 65 - 67	74 73 - 75	< 0.10 < 0.10 - < 0.10
	Intake	25.0 24.8 - 25.1	24.6 24.5 - 24.7	8.0 7.8 - 8.3	7.7 7.4 - 8.1	7.44 7.28 - 7.62	7.30 7.20 - 7.43	179 173 - 184	66 65 - 69	73 71 - 75	< 0.10 < 0.10 - < 0.10
<i>Ceriodaphnia dubia</i>	Control, Non-treated	24.8 24.8 - 24.9	25.1 25.0 - 25.2	7.8 7.7 - 7.9	7.9 7.8 - 8.0	7.26 7.15 - 7.43	7.44 7.34 - 7.63	310 296 - 323	61 60 - 63	87 85 - 87	- -
	17.25%	24.9 24.9 - 25.0	24.9 24.8 - 25.0	7.8 7.7 - 7.9	7.9 7.8 - 8.0	7.41 7.26 - 7.66	7.43 7.32 - 7.63	289 282 - 295	- -	- -	- -
	34.5%	24.9 24.9 - 25.0	25.0 24.9 - 25.2	7.8 7.7 - 7.9	7.9 7.8 - 8.0	7.42 7.25 - 7.66	7.43 7.32 - 7.64	270 261 - 277	- -	- -	- -
	69%	25.0 24.9 - 25.0	25.0 24.9 - 25.2	7.8 7.7 - 7.9	7.9 7.8 - 8.0	7.41 7.21 - 7.66	7.43 7.33 - 7.63	224 219 - 233	- -	- -	- -
	84.5%	25.0 25.0 - 25.0	25.0 24.8 - 25.2	7.9 7.8 - 8.0	7.9 7.7 - 8.1	7.41 7.18 - 7.66	7.42 7.32 - 7.62	203 197 - 208	- -	- -	- -
	100%	25.0 25.0 - 25.1	24.9 24.8 - 25.1	7.9 7.8 - 8.0	7.9 7.7 - 8.1	7.40 7.15 - 7.64	7.44 7.32 - 7.63	183 178 - 188	68 67 - 69	75 73 - 77	< 0.10 < 0.10 - < 0.10
	Intake	25.0 24.9 - 25.1	25.0 24.8 - 25.2	7.9 7.8 - 8.0	7.9 7.7 - 8.2	7.41 7.17 - 7.62	7.44 7.33 - 7.63	178 175 - 181	66 65 - 67	74 73 - 75	< 0.10 < 0.10 - < 0.10

*Note: Total residual chlorine was performed on non-treated Outfall 101 and Intake samples.

Overall temperature (°C)	Average	Minimum	Maximum
<i>Pimephales promelas</i>	24.8	24.4	25.1
<i>Ceriodaphnia dubia</i>	25.0	24.8	25.2

SUMMARY / CONCLUSIONS

Exposures to samples collected September 11 – 16, 2022 from Outfall 101 resulted in no toxic effects to fathead minnows or daphnids. The resulting IC_{25} values, for both species, were >100 percent. Exposure of minnows and daphnids to intake samples resulted in no significant differences from the controls during this study period.



DMR Copy of Record

Permit

Permit #:
Major:

TN0026450
Yes

Permittee:
Permittee Address:

Tennessee Valley Authority (TVA)
Sequoyah Access Road, PO Box 2000
Soddy Daisy, TN 37379

Facility:
Facility Location:

TVA SEQUOYAH NUCLEAR PLANT (SQN)
SEQUOYAH ACCESS ROAD
SODDY DAISY
SODDY DAISY, TN 37379

Permitted Feature:

103
Internal Outfall

Discharge:

103-G
(no description)

Report Dates & Status

Monitoring Period:

From 09/01/22 to 09/30/22

DMR Due Date:

10/15/22

Status:

NetDMR Validated

Considerations for Form Completion

Internal Monitoring Point for various flows from Low Volume Waste Treatment Pond to Diffuser Pond, which eventually discharges through Outfall 101.

Principal Executive Officer

First Name:
Last Name:

Thomas
Marshall

Title:

Vice President

Telephone:

423-843-7001

No Data Indicator (NODI)

Form NODI:

--

Parameter		Monitoring Location	Season #	Param. NODI		Quantity or Loading					Quality or Concentration							# of Ex.	Frequency of Analysis	Sample Type
Code	Name					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3	Value 3	Units			
00400	pH	IM - Internal Monitoring Point	0	--	Sample						=	8.6			=	8.6	12 - SU		01/30 - Monthly	GR - GRAB
					Permit Req.						>=	6.0 MINIMUM			<=	9.0 MAXIMUM	12 - SU		01/30 - Monthly	GR - GRAB
					Value NODI															
00530	Solids, total suspended	IM - Internal Monitoring Point	0	--	Sample								=	5.8	=	5.8	19 - mg/L		01/30 - Monthly	GR - GRAB
					Permit Req.								<=	30.0 MO AVG	<=	100.0 DAILY MX	19 - mg/L		01/30 - Monthly	GR - GRAB
					Value NODI															
00556	Oil & Grease	IM - Internal Monitoring Point	0	--	Sample								<	4.9	<	4.9	19 - mg/L		01/30 - Monthly	GR - GRAB
					Permit Req.								<=	15.0 MO AVG	<=	20.0 DAILY MX	19 - mg/L		01/30 - Monthly	GR - GRAB
					Value NODI															
50050	Flow, in conduit or thru treatment plant	IM - Internal Monitoring Point	0	--	Sample	=	1.141	=	1.141	03 - MGD									01/30 - Monthly	IN - INSTAN
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	03 - MGD									01/30 - Monthly	IN - INSTAN
					Value NODI															

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

No errors.

Comments

Attachments

No attachments.

Report Last Saved By

Tennessee Valley Authority (TVA)

User:

TRMARKUM

Name:

Travis Markum

E-Mail:

trmarkum@tva.gov

Date/Time:

2022-10-11 14:24 (Time Zone: -05:00)

Report Last Signed By

User:

TMCMUTUA

Name:

Tony McMutuary

E-Mail:

tmcmutuary@tva.gov

Date/Time:

2022-10-13 15:40 (Time Zone: -05:00)

DMR Copy of Record

Permit

Permit #:
Major:

TN0026450
Yes

Permittee:
Permittee Address:

Tennessee Valley Authority (TVA)
Sequoyah Access Road, PO Box 2000
Soddy Daisy, TN 37379

Facility:
Facility Location:

TVA SEQUOYAH NUCLEAR PLANT (SQN)
SEQUOYAH ACCESS ROAD
SODDY DAISY
SODDY DAISY, TN 37379

Permitted Feature:

107
Internal Outfall

Discharge:

107-G
(no description)

Report Dates & Status

Monitoring Period:

From 09/01/22 to 09/30/22

DMR Due Date:

10/15/22

Status:

NetDMR Validated

Considerations for Form Completion

Metal Cleaning Waste Pond discharge. No monitoring required for stormwater decanting. Daily monitoring required only during dewatering events.

Principal Executive Officer

First Name:
Last Name:

Thomas
Marshall

Title:

Vice President

Telephone:

423-843-7001

No Data Indicator (NODI)

Form NODI: --

Parameter		Monitoring Location	Season #	Param. NODI		Quantity or Loading					Quality or Concentration						# of Ex.	Frequency of Analysis	Sample Type
Code	Name					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3	Value 3	Units		
00400	pH	IM - Internal Monitoring Point	0	--	Sample													01/01 - Daily	GR - GRAB
					Permit Req.					>=	6.0 MINIMUM			<=	9.0 MAXIMUM	12 - SU			
					Value NODI						C - No Discharge				C - No Discharge				
00530	Solids, total suspended	IM - Internal Monitoring Point	0	--	Sample													01/01 - Daily	CP - COMPOS
					Permit Req.					<=	30.0 MO AVG			<=	100.0 DAILY MX	19 - mg/L			
					Value NODI						C - No Discharge				C - No Discharge				
00556	Oil & Grease	IM - Internal Monitoring Point	0	--	Sample													01/01 - Daily	GR - GRAB
					Permit Req.					<=	15.0 MO AVG			<=	20.0 DAILY MX	19 - mg/L			
					Value NODI						C - No Discharge				C - No Discharge				
01042	Copper, total [as Cu]	IM - Internal Monitoring Point	0	--	Sample													01/01 - Daily	CP - COMPOS
					Permit Req.					<=	1.0 MO AVG			<=	1.0 DAILY MX	19 - mg/L			
					Value NODI						C - No Discharge				C - No Discharge				
01045	Iron, total [as Fe]	IM - Internal Monitoring Point	0	--	Sample													01/01 - Daily	CP - COMPOS
					Permit Req.					<=	1.0 MO AVG			<=	1.0 DAILY MX	19 - mg/L			
					Value NODI						C - No Discharge				C - No Discharge				

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

No errors.

Comments

Attachments

No attachments.

Report Last Saved By

Tennessee Valley Authority (TVA)

User:

TRMARKUM

Name:

Travis Markum

E-Mail:

tmarkum@tva.gov

Date/Time:

2022-10-11 14:26 (Time Zone: -05:00)

Report Last Signed By

User:

TMCMUTUA

Name:

Tony McMutuary

E-Mail:

tmcmutuary@tva.gov

Date/Time:

2022-10-13 15:40 (Time Zone: -05:00)

DMR Copy of Record

Permit

Permit #:
Major:

TN0026450
Yes

Permittee:
Permittee Address:

Tennessee Valley Authority (TVA)
Sequoyah Access Road, PO Box 2000
Soddy Daisy, TN 37379

Facility:
Facility Location:

TVA SEQUOYAH NUCLEAR PLANT (SQN)
SEQUOYAH ACCESS ROAD
SODDY DAISY
SODDY DAISY, TN 37379

Permitted Feature:

110
External Outfall

Discharge:

110-G
(no description)

Report Dates & Status

Monitoring Period:

From 09/01/22 to 09/30/22

DMR Due Date:

10/15/22

Status:

NetDMR Validated

Considerations for Form Completion

Outfall 110 is closed. Only active in the event the plant goes into closed mode.

Principal Executive Officer

First Name:
Last Name:

Thomas
Marshall

Title:

Vice President

Telephone:

423-843-7001

No Data Indicator (NODI)

Form NODI: --

Parameter		Monitoring Location	Season #	Param. NODI		Quantity or Loading					Quality or Concentration							# of Ex.	Frequency of Analysis	Sample Type
Code	Name					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3	Value 3	Units			
00010	Temperature, water deg. centigrade	1 - Effluent Gross	0	--	Sample													99/99 - Continuous	CA - CALCTD	
					Permit Req.				Req Mon DAILY MX	04 - deg C										
					Value NODI				C - No Discharge											
00010	Temperature, water deg. centigrade	Z - Instream Monitoring	0	--	Sample													99/99 - Continuous	CA - CALCTD	
					Permit Req.									<=	30.5 DAILY MX	04 - deg C				
					Value NODI											C - No Discharge				
00016	Temp. diff. between samp. & upstrm deg. C	1 - Effluent Gross	1	--	Sample													99/99 - Continuous	CA - CALCTD	
					Permit Req.										<=	3.0 DAILY MX	04 - deg C			
					Value NODI												C - No Discharge			
50050	Flow, in conduit or thru treatment plant	1 - Effluent Gross	0	--	Sample													99/99 - Continuous	RC - Recorder (auto)	
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	03 - MGD										
					Value NODI		C - No Discharge		C - No Discharge											
50060	Chlorine, total residual	1 - Effluent Gross	0	--	Sample						<=	0.027 MO AVG		<=	0.047 DAILY MX	19 - mg/L		05/WK - Five Per Week	GR - GRAB	
					Permit Req.															
					Value NODI							C - No Discharge				C - No Discharge				
82234	Temperature rate of change deg. C/hr	Z - Instream Monitoring	0	--	Sample													99/99 - Continuous	CA - CALCTD	
					Permit Req.										<=	30.5 DAILY MX	62 - deg C/hr			
					Value NODI												C - No Discharge			
TRP3B	IC25 Static Renewal 7 Day Chronic Chrceriodaphnia	1 - Effluent Gross	0	--	Sample													01/30 - Monthly	GR - GRAB	
					Permit Req.						>=	69.0 MINIMUM					23 - %			
					Value NODI							C - No Discharge								
TRP6C	IC25 Static Renewal 7 Day Chronic Chrpimephales	1 - Effluent Gross	0	--	Sample													01/30 - Monthly	GR - GRAB	
					Permit Req.						>=	69.0 MINIMUM					23 - %			
					Value NODI							C - No Discharge								

Submission Note

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Edit Check Errors

No errors.

Comments

Attachments

No attachments.

Report Last Saved By

Tennessee Valley Authority (TVA)

User:

TRMARKUM

Name:

Travis Markum

E-Mail:

trmarkum@tva.gov

Date/Time:	2022-10-11 14:27 (Time Zone: -05:00)
<i>Report Last Signed By</i>	
User:	TMCMUTUA
Name:	Tony McMutuary
E-Mail:	tmcmutuary@tva.gov
Date/Time:	2022-10-13 15:40 (Time Zone: -05:00)

DMR Copy of Record

Permit

Permit #:
Major:

TN0026450
Yes

Permittee:
Permittee Address:

Tennessee Valley Authority (TVA)
Sequoyah Access Road, PO Box 2000
Soddy Daisy, TN 37379

Facility:
Facility Location:

TVA SEQUOYAH NUCLEAR PLANT (SQN)
SEQUOYAH ACCESS ROAD
SODDY DAISY
SODDY DAISY, TN 37379

Permitted Feature:

118
External Outfall

Discharge:

118-G
(no description)

Report Dates & Status

Monitoring Period:

From 09/01/22 to 09/30/22

DMR Due Date:

10/15/22

Status:

NetDMR Validated

Considerations for Form Completion

Principal Executive Officer

First Name:
Last Name:

Thomas
Marshall

Title:

Vice President

Telephone:

423-843-7001

No Data Indicator (NODI)

Form NODI: --

Parameter		Monitoring Location	Season #	Param. NODI		Quantity or Loading					Quality or Concentration							# of Ex.	Frequency of Analysis	Sample Type
Code	Name					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3	Value 3	Units			
00300	Oxygen, dissolved [DO]	1 - Effluent Gross	0	--	Sample														02/07 - Twice Every Week	GR - GRAB
					Permit Req.						>=	2.0 MINIMUM					19 - mg/L			
					Value NODI							C - No Discharge								
00530	Solids, total suspended	1 - Effluent Gross	0	--	Sample														02/07 - Twice Every Week	GR - GRAB
					Permit Req.									<=	100.0 DAILY MX		19 - mg/L			
					Value NODI										C - No Discharge					
00545	Solids, settleable	1 - Effluent Gross	0	--	Sample														01/30 - Monthly	GR - GRAB
					Permit Req.										<=	1.0 DAILY MX		25 - mL/L		
					Value NODI											C - No Discharge				
50050	Flow, in conduit or thru treatment plant	1 - Effluent Gross	0	--	Sample														01/BA - Once Per Batch	ES - ESTIMA
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	03 - MGD										
					Value NODI		C - No Discharge		C - No Discharge											

Submission Note

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Edit Check Errors

No errors.

Comments

Attachments

No attachments.

Report Last Saved By

Tennessee Valley Authority (TVA)

User:

TRMARKUM

Name:

Travis Markum

E-Mail:

trmarkum@tva.gov

Date/Time:

2022-10-11 14:27 (Time Zone: -05:00)

Report Last Signed By

User:

TMCMUTUA

Name:

Tony McMutuary

E-Mail:

tmcmutuary@tva.gov

Date/Time:

2022-10-13 15:40 (Time Zone: -05:00)