Tennessee Valley Authority, 714 Swan Pond Road, Harriman, Tennessee 37748

June 1, 2020

Joshua Frazier
TDEC – KEFO, Mining Section
3711 Middlebrook Pike
Knoxville, TN 37921

Dear Mr. Frazier:

TENNESSEE VALLEY AUTHORITY (TVA) – KINGSTON FOSSIL PLANT - TENNESSEE MULTI-SECTOR GENERAL PERMIT FOR INDUSTRIAL ACTIVITY – TNR051787 – ANNUAL STORMWATER MONITORING REPORT - 2020

Enclosed is the final analytical and Annual Storm Water Monitoring Report for Kingston and a table summarizing the samples collected in 2020.

Outfall Number	Total Iron (mg/l)	TSS (mg/l)
Cut-off Concentration	**5.0 mg/L**	**150 mg/L**
F6A	3.45	
F7	0.149	
F13B	0.120	
F15B	<0.100	
F16	<0.100	
F17A	<0.100	
F17C	0.118	
F18	0.366	
F19A	<0.100	0.833
F20	0.323	90.4
F21	<0.100	0.900
F22	0.228	2.20
F23	0.136	9.80
F24	1.95	16.0

If you have any questions about this report, please contact Adele Dennison at (865) 717-2157.

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 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 that there are significant penalties for submitting false information including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Sincerely,

Todd Butler
Plant Manager
TVA - Kingston Fossil Plant

TPB:amd

Enclosures

cc: Natalie Harris
DWRWater.Compliance@tn.gov
Brad Love, BR 4A-C.
ECM
Plant file

Tennessee Department of Environment and Conservation
Division of Water Resources
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243

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

Facility Name: TVA-Kingston Fossil Plant	TMSP Number: TNR051787
Contact Person: Adele Dennison	Phone Number: 865-717-2157
This report is submitted for the following calendar year (e.g. 2015): 2020	Outfall Number: F22
List all TMSP sectors which apply to discharge from this outfall: L	Sample Date: 5/19/20
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)
Aluminum, Total	0.75	
Ammonia	4.0	
Arsenic, Total	0.16854	
BOD, 5-Day	30	
Cadmium, Total	0.0159	
COD	120	
Copper, Total	0.018	
Cyanide, Total	0.064	
Fluoride	1.8	
Iron, Total	5.0	0.228
Lead, Total	0.15	

Parameter (continued)	Cut-off Conc. (mg/L)	Annual Sample Result (mg/L)
Magnesium, Total	0.0636	
Mercury, Total	0.0024	
Nickel, Total	0.875	
Nitrate + Nitrite Nitrogen	0.68	
Oil and Grease	15	
pH	5.0-9.0	
Phosphorus, Total (as P)	2.0	
Selenium, Total	0.2385	
Silver, Total	0.032	
Total Suspended Solids	150	2.20
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.

Todd Butler	Plant Manager	Todd P Butler	6/1/2020
Printed Name	Official Title	Signature	Date

Tennessee Multi-Sector General Permit (TMSP)
Annual Stormwater Monitoring Report – Instructions

1. The purpose of this form is to report stormwater (SW) monitoring results under the TMSP. **Only 1 sample per calendar year is required** (except Sectors J and H). **For each outfall, one Annual Stormwater Monitoring Report form must be submitted**. Grab samples should be collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed one hour) of when the runoff or snowmelt begins discharging. A separate form must be submitted for each outfall. If more than one pH sample is collected for any outfall, report all individual pH monitoring results for a given outfall on the corresponding form or in a separate, referenced attachment if necessary. If more than 1 sample for other parameters is collected at any outfall, submit the average results of all monitoring data (for calculating average, use the numerical method detection limit (MDL) if a parameter was not detected). If all monitoring results for a given parameter were non-detect, report the parameter as below detection limit (BDL) and provide the applicable numerical MDL value in parentheses (e.g., BDL (<0.001 mg/L)). New facilities must conduct sampling in the year during which permit coverage was obtained and during each following year. The form(s) shall be submitted 30 days after the sampling results are obtained, but no later than the March 31st of the following calendar year, whichever comes first.
2. If the results of annual SW runoff monitoring demonstrates that the facility has exceeded the cut-off concentration(s), the permittee must inform the division's local Environmental Field Office (EFO) in writing within 30 days from the time SW monitoring results were received, describing the likely cause of the exceedance(s). Furthermore, within 60 days from the time SW monitoring results were received, the facility must review its stormwater pollution prevention plan (SWPPP), make any modifications or additions to the plan which would assist in reducing runoff concentrations to less than the monitoring cut-off concentrations for that parameter, and submit to the local EFO a summary of the proposed SWPPP modifications (including a timetable for implementation).
3. Low Concentration Waiver – When the average concentration for a pollutant calculated from monitoring data collected from 4 consecutive calendar years of monitoring is less than the cut-off concentration, a facility may waive monitoring requirements in the following annual monitoring period. This form should be used for certification of low concentration waiver provision.

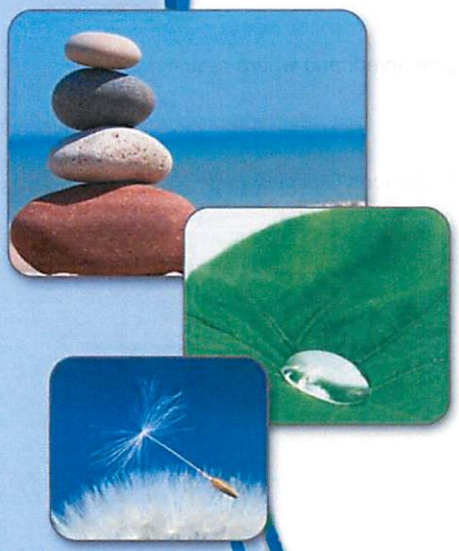
Complete, sign and date this form before it is submitted. Keep a copy of the completed form for your records. The division supports and encourages submission of electronic documents (e.g., scanned reports submitted as PDF files) by using the following dedicated email address: Water.Permits@tn.gov. You may also submit the original completed and signed form to the appropriate Environmental Field Office using the addresses below.

EFO	Street Address	City	Zip	Telephone
Chattanooga	1301 Riverfront Parkway, Suite #206	Chattanooga	37402	(423) 634-5745
Columbia	1421 Hampshire Pike	Columbia	38401	(931) 380-3371
Cookeville	1221 South Willow Ave.	Cookeville	38506	(931) 432-4015
Jackson	1625 Hollywood Drive	Jackson	38305	(731) 512-1300
Johnson City	2305 Silverdale Road	Johnson City	37601	(423) 854-5400
Knoxville	3711 Middlebrook Pike	Knoxville	37921	(865) 594-6035
Memphis	8383 Wolf Lake Drive	Bartlett	38133	(901) 371-3000
Nashville	711 RS Gass Boulevard	Nashville	37216	(615) 687-7000

Mining and quarrying facilities only (Sectors J and H) should submit one signed copy of Annual Stormwater Monitoring Report to the division's Mining Section at the following address:

Tennessee Division of Water Resources
Mining Section
3711 Middlebrook Pike
Knoxville, TN 37921

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-106037-1
Laboratory Sample Delivery Group: Kingston Fossil Plant
Client Project/Site: 2020 Stormwater Final

For:
Tennessee Valley Authority
714 Swan Pond Road
Harriman, Tennessee 37748

Attn: Adele Dennison

Authorized for release by:
5/28/2020 3:33:57 PM

Chad Upchurch, Project Manager I
(615)301-5733
chad.upchurch@testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

Job ID: 180-106037-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-106037-1

Receipt
The sample was received on 5/21/2020 8:30 AM; the sample arrived in good condition, properly preserved, and where required, on ice. The temperature of the cooler at receipt time was 1.4°C

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Sample Summary

Client: Tennessee Valley Authority
Project/Site: 2020 Stormwater Final

Job ID: 180-106037-1
SDG: Kingston Fossil Plant

3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-106037-1	F22	Water	05/19/20 07:03	05/21/20 08:30	

Client: Tennessee Valley Authority
Project/Site: 2020 Stormwater Final

Job ID: 180-106037-1
SDG: Kingston Fossil Plant

Client Sample ID: F22
Date Collected: 05/19/20 07:03
Date Received: 05/21/20 08:30

Lab Sample ID: 180-106037-1
Matrix: Water

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
Iron	0.228		0.0500		mg/L		05/23/20 20:42	1	RSK

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
Total Suspended Solids	2.20		1.00		mg/L		05/22/20 14:22	1	AGP

Accreditation/Certification and Definitions Summary

Client: Tennessee Valley Authority
Project/Site: 2020 Stormwater Final

Job ID: 180-106037-1
SDG: Kingston Fossil Plant

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-20
California	State	2891	04-30-21
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-20
Georgia	State	PA 02-00416	04-30-21
Illinois	NELAP	004375	06-30-20
Kansas	NELAP	E-10350	01-31-21
Kentucky (UST)	State	162013	04-30-21
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-20
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-20
New Hampshire	NELAP	2030	04-05-21
New Jersey	NELAP	PA005	06-30-20
New York	NELAP	11182	04-01-21
North Carolina (WW/SW)	State	434	01-01-21
North Dakota	State	R-227	04-30-21
Oregon	NELAP	PA-2151	02-06-21
Pennsylvania	NELAP	02-00416	04-30-21
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-20 *
Texas	NELAP	T104704528	03-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-20
Virginia	NELAP	10043	09-15-20
West Virginia DEP	State	142	02-01-21
Wisconsin	State	998027800	08-31-20

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Client: Tennessee Valley Authority
Project/Site: 2020 Stormwater Final

Job ID: 180-106037-1
SDG: Kingston Fossil Plant

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
ML	Minimum Level (Dioxin)
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Tennessee Valley Authority
Project/Site: 2020 Stormwater Final

Job ID: 180-106037-1
SDG: Kingston Fossil Plant

Method	Method Description	Protocol	Laboratory
EPA 200.8 Rev 5	Metals (ICP/MS)	EPA	TAL PIT
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL PIT
200.8	Preparation, Total Recoverable Metals	EPA	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Phone (615) 726-0177 Fax (615) 726-0954

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Adele Dennison	Lab PM: Lage, Gail	Carrier Tracking No(s):	COC No:
Client Contact: Adele Dennison	Phone: 865-717-2157	E-Mail: gail.lage@testamericainc.com		Page:
Company: TVA - Kingston Fossil Plant				Job #:

Analysis Requested

Address: 714 Swan Pond Road	Due Date Requested:
City: Harriman	TAT Requested (days):
State, Zip: TN 37748	
Phone: 865-717-2157	PO #:4785770
Email: amdennison@tva.gov	WO #:
Project Name: 2020 Stormwater final	Project #:
Site: KINGSTON FOSSIL PLANT	SSOW#:

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Ac, I - Ice, J - DI Water, K - EDTA, L - EDA, Other:
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Iron mg/L	TSS	Total Number of containers	Special
			Preservation Code:							
F22	5/19/20	7:03	G	W	N	N	X	X	2	

Dep: Wgt: 10.00 LBS
DV: 0.00
SPECIAL: 0.00
HANDLING: 0.00
TOTAL: 0.00

Svcs: PRIORITY OVERNIGHT Master 1155 5319 7524
TRCK: 1155 5319 7616

180-106037 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☒ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: Adele Dennison	Date/Time: Adele Dennison 5-20-20 1315	Company: TVA-KINGSTON	Date/Time: 5-21-20	Company: ~~EST~~ APTT
Relinquished by:	Date/Time:	Company	Date/Time: 8:30	Company
Relinquished by:	Date/Time:	Company	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:

Page 8 of 8

5/28/2020