

**STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER RESOURCES**

PERMIT

TO DISCHARGE WASTEWATER UNDER THE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Federal Water Pollution Control Act, as amended,

Duke Energy Carolinas, LLC

is hereby authorized to discharge wastewater from a facility located at

Marshall Steam Station

At the intersection of NC Highway 150 and NCSR 1841
Terrell
Catawba County

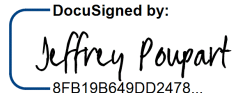
to receiving waters designated as the Catawba River (Lake Norman) in the Catawba River Basin in accordance with effluent limitations, monitoring requirements, and other applicable conditions set forth in Parts I, II, and III hereof.

This permit shall become effective May 1, 2022.

This permit and authorization to discharge shall expire at midnight on April 30, 2027.

Signed this day April 11, 2022.

DocuSigned by:


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for Richard E. Rogers, Director
Division of Water Resources
By Authority of the Environmental Management Commission

SUPPLEMENT TO PERMIT COVER SHEET

All previous NPDES Permits issued to this facility, whether for operation or discharge are hereby revoked, and as of this issuance, any previously issued permit bearing this number is no longer effective. Therefore, the exclusive authority to operate and discharge from this facility arises under the permit conditions, requirements, terms, and provisions included herein.

Duke Energy Carolinas, LLC is hereby authorized to:

1. Continue to discharge:
 - Outfall 001: once-through cooling water and intake screen backwash.
 - Outfall 002: treated wastewater [consisting of metal cleaning wastes, coal pile runoff, ash transport water, storm water, low volume wastes, landfill leachate, extracted groundwater from remediation activities, and Flue-Gas Desulfurization (FGD) wet scrubber wastewater] from the ash settling basin.
 - Outfall 005: The new lined retention basin. Basin will accept wastes from holding basin (coal pile runoff), ash transport water, various sumps, storm water runoff, FGD wastewater, bottom ash purge from the submerged flight conveyers (purge volume not to exceed 10% of the water systems volume), and various low volume wastes such as boiler blowdown, oily waste treatment, wastes/backwash from the water treatment processes, plant area wash down water, equipment heat exchanger water, landfill leachate, and ash transport water.
 - Outfalls 002A and 002B: yard sump overflows.
 - Outfall 007: the emergency spillway of the Ash Pond. The spillway is designed for a flood greater than 100-year event. Sampling of this spillway is waived due to unsafe conditions associated with sampling during an overflow event.
 - Internal outfall 001/001A. Yard sump (wastewater from the yard sump 2, the yard sump 3, the fly ash silo yard sump, and storm water) discharging to the retention basin.
 - Outfall 003: non-contact cooling water from the induced draft fan control house to the intake for cooling water pumps.
 - Internal Outfall 006: treated FGD wet scrubber wastewater to the new lined retention basin.
 - Internal Outfall 010 Holding Basin: coal pile runoff, and storm water to the retention basin.

From a facility located at Duke Energy's Marshall Steam Station at the intersection of NC Highway 150 and NCSR 1841 in Terrell, Catawba County;

2. Discharge from said treatment works at the locations specified on the attached map into the Catawba River (Lake Norman) which is classified WS-IV and B CA waters in the Catawba River Basin.

PART I

A. (1.) Effluent Limitations and Monitoring Requirements (Outfall 001)
 [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of this permit and lasting until expiration, the Permittee is authorized to discharge from **Outfall 001 (once-through cooling water)**. Such discharges shall be limited and monitored² by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow, MGD	Monitor & Report		Daily	Pump logs or similar readings	Effluent
Temperature (November 1 - June 30)	33.3 °C		Daily	Grab	Effluent
Temperature (July 1 - October 31)	34.4 °C		Daily	Grab	Effluent
Free Available Chlorine ¹	0.2 mg/L	0.5 mg/L	Daily	Grab	Effluent

NOTES:

- 1 Once-through cooling water shall not be chlorinated. Should the facility wish to chlorinate once-through cooling water, Division permission shall be obtained prior to commencement of chlorination. The monitoring requirement and effluent limitations only apply if chlorination is commenced.
- 2 The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (27.).

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Based upon studies conducted by the permittee and submitted to the Division, it has been determined pursuant to Section 316(a) of the Clean Water Act that the thermal component of the discharge assures the protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife in the receiving water.

A. (2.) Effluent Limitations and Monitoring Requirements (Outfall 002 – dewatering phase). Facility Physical-Chemical Grade II/WW-III

[15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the commencement date of the dewatering operation and lasting until expiration, the Permittee is authorized to discharge from **Outfall 002 Ash Settling Basin Discharge (Dewatering – removing the interstitial water, and groundwater)**. Such discharges shall be limited and monitored³ by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location ¹
Flow		3.0 MGD	Weekly	Pump logs or similar readings	Effluent
Oil and Grease	9.0 mg/L	12.0 mg/L	Monthly	Grab	Effluent
Total Suspended Solids ²	20.0 mg/L	50.0 mg/L	Monthly	Grab	Effluent
Total Arsenic	58.4 µg/L	1,687.7 µg/L	Monthly	Grab	Effluent
Total Copper, mg/L			Monthly	Grab	Effluent
Total Iron, mg/L			Monthly	Grab	Effluent
Total Mercury ⁵ , ng/L			Monthly	Grab	Effluent
Total Selenium, µg/L			Monthly	Grab	Effluent
Turbidity ⁴ , NTU			Monthly	Grab	Effluent
Nitrate/nitrite as N, mg/L			Quarterly	Grab	Effluent
Bromide, mg/L			Monthly	Grab	Effluent
Total Hardness, mg/L			Monthly	Grab	Effluent
Total Nitrogen (NO ₂ +NO ₃ +TKN), mg/L	Monitor & Report		Quarterly	Grab	Effluent
Total Phosphorus, mg/L	Monitor & Report		Quarterly	Grab	Effluent
Chronic Toxicity ⁷	See Part I, Section A. (17.)		Monthly	Grab	Effluent
pH ⁶	Between 6.0 and 9.0 Standard Units		Monthly	Grab	Effluent

NOTES:

- 1 Effluent sampling shall be conducted at the discharge from the ash settling basin prior to mixing with any other waste stream(s).
- 2 The facility shall continuously monitor Total Suspended Solids (TSS) concentration and the dewatering pump shall be shut off automatically when one half of the Daily Maximum limit (15 minutes average) is exceeded. Pumping will be allowed to continue if interruption might result in a dam failure or damage. The continuous TSS monitoring only required when the pumps are employed for dewatering.
- 3 The permittee shall submit Discharge Monitoring Reports electronically using NC DWR’s eDMR application system. Please See Special Condition A. (30.).
- 4 The discharge from this facility shall not cause turbidity in the receiving stream to exceed 50 Nephelometric Turbidity Unit (NTU). If the instream turbidity exceeds 25 NTU due to natural background conditions, the discharge cannot cause turbidity to increase in the receiving stream. Therefore, if the effluent measurement exceeds 25 NTU, the Permittee

shall sample upstream and downstream turbidity in the receiving waterbody, within 24 hours, to demonstrate the existing turbidity level in the receiving waterbody was not increased. All data shall be reported on the DMRs. (See 15A NCAC 2B .0211 (21)).

NTU - Nephelometric Turbidity Unit.

- 5 The facility shall use EPA method 1631E.
- 6 The facility shall continuously monitor pH and the dewatering pump shall be shut off automatically when 15 minutes running average pH falls below 6.1 standard units or rises above 8.9 standard units. Pumping will be allowed to continue if interruption might result in a dam failure or damage. The continuous pH monitoring only required when the pumps are employed for dewatering.
- 7 Chronic Toxicity (*Ceriodaphnia*) P/F @ 7.2%; quarterly during February, May, August, November; see condition A. (17.) of this permit.

The facility shall treat the wastewater discharged from the ash pond/ponds using physical-chemical treatment, if necessary, to assure state Water Quality Standards are not contravened in the receiving stream. Duke Energy shall notify DWR NPDES Permitting and DWR Mooresville Regional Office, in writing, within seven calendar days of installing additional physical-chemical treatment at this Outfall.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

The rate for lowering the liquid level in a coal ash pond shall not exceed one (1) foot per day unless a higher rate is supported to the satisfaction of DEMLR and in accordance with NCAC, Title 15A, Subchapter 2K.

A. (3.) Effluent Limitations and Monitoring Requirements (Outfall 002A)

Facility Physical-Chemical Grade II/WW-III
 [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of this permit and lasting until expiration, the Permittee is authorized to discharge from **Outfall 002A (yard sump #1 overflows)**. Such discharges shall be limited and monitored² by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location ¹
Flow, MGD			Per discharge event	Estimate	Effluent
pH	Between 6.0 and 9.0 Standard Units		Per discharge event	Grab	Effluent
Total Suspended Solids	30.0 mg/L	100.0 mg/L	Per discharge event	Grab	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	Per discharge event	Grab	Effluent
Total Iron, mg/L			Per discharge event	Grab	Effluent

NOTES:

- 1 Effluent samples shall be collected at a point upstream of the discharge to the Catawba River.
- 2 The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (27.).

There shall be no discharge of floating solids or visible foam in other than trace amounts.

All flows shall be reported on monthly DMRs. Should no flow occur during a given month, the words "No Flow" shall be clearly written on the front of the DMR. All samples shall be of a representative discharge.

A. (4.) Effluent Limitations and Monitoring Requirements (Outfall 002B)

Facility Physical-Chemical Grade II/WW-III
 [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of this permit and lasting until expiration, the Permittee is authorized to discharge from **Outfall 002B (yard sump #2 overflows)**. Such discharges shall be limited and monitored² by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location ¹
Flow, MGD			Per discharge event	Estimate	Effluent
pH	Between 6.0 and 9.0 Standard Units		Per discharge event	Grab	Effluent
Total Suspended Solids	30.0 mg/L	100.0 mg/L	Per discharge event	Grab	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	Per discharge event	Grab	Effluent
Total Iron, mg/L			Per discharge event	Grab	Effluent

NOTES:

- 1 Effluent samples shall be collected at a point upstream of the discharge to the Catawba River.
- 2 The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (27.).

There shall be no discharge of floating solids or visible foam in other than trace amounts.

All flows shall be reported on monthly DMRs. Should no flow occur during a given month, the words "No Flow" shall be clearly written on the front of the DMR. All samples shall be of a representative discharge.

A. (5.) Effluent Limitations and Monitoring Requirements (Outfall 003)

Facility Physical-Chemical Grade II/WW-III
 [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of this permit and lasting until expiration, the Permittee is authorized to discharge from **Outfall 003 (non-contact cooling water from the induced draft fan control house)**. Such discharges shall be limited and monitored² by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow, MGD			Semi-annually	Estimate	Effluent
Temperature, °C			Semi-annually	Grab	Effluent
Total Residual Chlorine ¹ , µg/L			Semi-annually	Grab	Effluent
Free Available Chlorine ¹	0.2 mg/L	0.5 mg/L	Semi-annually	Grab	Effluent
pH	Between 6.0 and 9.0 Standard Units		Semi-annually	Grab	Effluent

NOTES:

- 1 Monitoring requirements apply only if chlorine is added to the cooling water. Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available chlorine or total residual chlorine at any one time.
- 2 The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (27.).

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Limitations shall be met at the discharge point.

A. (6.) Effluent Limitations and Monitoring Requirements (Internal Outfall 006)
 Facility Physical-Chemical Grade II/WW-III
 [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of this permit and lasting until expiration, the Permittee is authorized to discharge from **Internal Outfall 006 (treated FGD wet scrubber wastewater to retention basin)**. Such discharges shall be limited and monitored² by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location ¹
Flow, MGD	Monitor & Report		Monthly	Pump logs or similar readings	Effluent
Total Arsenic	8.0 µg/L	18.0 µg/L	Quarterly	Grab	Effluent
Total Mercury ³	34.0 ng/L	103.0 ng/L	Quarterly	Grab	Effluent
Total Selenium	29.0 µg/L	70.0 µg/L	Quarterly	Grab	Effluent
Nitrate/nitrite as N	3.0 mg/L	4.0 mg/L	Quarterly	Grab	Effluent
pH			Quarterly	Grab	Effluent

NOTES:

- 1 Sample Location: E - Effluent samples shall be collected prior to the commingling with other waste streams.
- 2 The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (27.).
- 3 The facility shall use EPA method 1631E.

All flows shall be reported on monthly DMRs. Should no flow occur during a given month, the words "No Flow" shall be clearly written on the front of the DMR. All samples shall be of a representative discharge.

This permit may be reopened and modified if changes are made to 40 C.F.R. 423.

The permittee will operate the FGD wastewater system until all coal-fired generation units at the site are retired. Performance of the FGD wastewater treatment system shall be optimized to maximize pollutant reduction and minimize variability.

**A. (7.) Effluent Limitations and Monitoring Requirements (Outfall 005)
 Facility Physical-Chemical Grade II/WW-III
 [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]**

During the period beginning upon commencement of operations and lasting until expiration, the Permittee is authorized to discharge from **Outfall 005** – Retention Basin discharge. Such discharges shall be limited and monitored¹ by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency ²	Sample Type	Sample Location
Flow, MGD			Weekly	Instantaneous or Estimate	Effluent
pH	Between 6.0 and 9.0 standard units		Monthly	Grab	Effluent
TSS	30.0 mg/L	50.0 mg/L	Monthly	Grab	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	Monthly	Grab	Effluent
Total Mercury ² , ng/L			Monthly	Grab	Effluent
Total Iron ³	1.0 mg/L	1.0 mg/L	Monthly	Grab	Effluent
Total Arsenic, µg/L			Monthly	Grab	Effluent
Total Copper ³	1.0 mg/L	1.0 mg/L	Monthly	Grab	Effluent
Total Selenium, µg/L			Monthly	Grab	Effluent
Total Nitrogen (NO ₂ + NO ₃ + TKN), mg/L			Quarterly	Grab	Effluent
Total Phosphorus, mg/L			Quarterly	Grab	Effluent
Sulfates, mg/L			Quarterly	Grab	Effluent
Chlorides, mg/L			Quarterly	Grab	Effluent
Bromide, mg/L			Quarterly	Grab	Effluent
TDS, mg/L			Quarterly	Grab	Effluent
Total Hardness, mg/L			Quarterly	Grab	Effluent
Temperature, °C			Monthly	Grab	Effluent
Conductivity, µmho/cm			Monthly	Grab	Effluent
Chronic Toxicity ⁴			Quarterly	Grab	Effluent

Notes:

1. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR’s eDMR application system. Please See Special Condition A. (27.).
2. The facility shall use EPA method 1631E.
3. The limits for total copper and total iron only apply when chemical metal cleaning wastewaters are being discharged.
4. Chronic Toxicity (*Ceriodaphnia*) P/F @ 11.6%; quarterly during February, May, August, November; see condition A. (17.) of this permit.

Except for those discharges authorized below, or when the bottom ash transport water is used in the FGD scrubber, there shall be no discharge of pollutants in bottom ash transport water. Bottom ash transport water shall be discharged to the FGD scrubber during normal operations.

If the FGD Scrubber is unavailable to receive bottom ash transport water, the discharge of pollutants in bottom ash transport water (bottom ash purge water) from a properly installed, operated, and maintained bottom ash system to the Lined Retention Basin is authorized under the following conditions:

- A. To maintain system water balance when precipitation-related inflows are generated from a 10-year storm event of 24-hour or longer duration (e.g., 30-day storm event) and cannot be managed by installed spares, redundancies, maintenance tanks, and other secondary bottom ash system equipment; or
- B. To maintain system water balance when regular inflows from waste streams other than bottom ash transport water exceed the ability of the bottom ash system to accept recycled water and segregating these other waste streams is feasible; or
- C. To maintain system water chemistry where current operations at the facility are unable to currently manage pH, corrosive substances, substances or conditions causing scaling, or fine particulates to below levels which impact system operation or maintenance; or
- D. To conduct maintenance not otherwise described above and not exempted from the definition of transport water in 40 C.F.R. § 423.11(p), and when water volumes cannot be managed by installed spares, redundancies, maintenance tanks, and other secondary bottom ash system equipment.

In no event shall the total volume of the discharge to the Lined Retention Basin exceed a 30-day rolling average of ten percent of the primary active wetted bottom ash system volume. The volume of daily discharges used to calculate the 30-day rolling average shall be calculated using measurements from flow monitors or pump logs. Based on a calculated bottom ash transport system volume of 0.983 million gallons, the 30-day rolling average discharge shall not exceed 0.098 MGD.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

A. (8.) Effluent Limitations and Monitoring Requirements (Outfall 007)

Facility Physical-Chemical Grade II/WW-III
 [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of this permit and lasting until expiration, the Permittee is authorized to discharge from **Outfall 007** – Emergency spillway of the ash basin. Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow, MGD			Waived	Estimate	Effluent
pH			Waived	Grab	Effluent
TSS			Waived	Grab	Effluent
Oil and Grease			Waived	Grab	Effluent

The emergency spillway is designed for a flood greater than 100-year event in Catawba County. Sampling of this spillway is waived due to unsafe conditions associated with sampling during an overflow event.

Monitoring is required for any other rain event that might trigger a discharge.

A. (9.) Effluent Limitations and Monitoring Requirements (Internal Outfall 010)

Facility Physical-Chemical Grade II/WW-III
 [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning upon commencement of operation of the yard sump and lasting until expiration, the Permittee is authorized to discharge from **Internal outfall 010** – Coal yard runoff and storm water. Such discharges shall be limited and monitored¹ by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow, MGD			Quarterly	Estimate	Effluent
pH			Quarterly	Grab	Effluent
TSS			Quarterly	Grab	Effluent
Oil and Grease			Quarterly	Grab	Effluent

Notes:

1. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR’s eDMR application system. Please See Special Condition A. (27.).

A. (10.) ADDITIONAL CONDITIONS AND DEFINITIONS

[NCGS 143-215.3 (a) (2) and NCGS 143-215.66]

1. EPA methods 200.7 or 200.8 (or the most current versions) shall be used for analyses of all metals except for total mercury (EPA Method 1631E).
2. All effluent samples for all external outfalls shall be taken at the most accessible location after the final treatment but prior to discharge to waters of the U.S. (40 CFR 122.41(j)).
3. The term *low volume waste sources* means wastewater from all sources except those for which specific limitations are otherwise established in this part (40 CFR 423.11 (b)).
4. The term *chemical metal cleaning waste* means any wastewater resulting from cleaning any metal process equipment with chemical compounds, including, but not limited to, boiler tube cleaning (40 CFR 423.11 (c)).
5. The term *metal cleaning waste* means any wastewater resulting from cleaning [with or without chemical cleaning compounds] any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning (40 CFR 423.11 (d)).
6. For all outfalls where the flow measurement is to be "estimated" the estimate can be done by using calibrated V-notch weir, stop-watch and graduated cylinder, or other method approved by the Division.
7. The term "FGD wet scrubber wastewater" means wastewater resulting from the use of the flue-gas desulfurization wet scrubber.

A. (11.) TOXICITY RE-OPENER CONDITION

[NCGS 143-215.3 (a) (2) and NCGS 143-215.66]

This permit shall be modified, or revoked and reissued to incorporate toxicity limitations and monitoring requirements in the event toxicity testing or other studies conducted on the effluent or receiving stream indicate that detrimental effects may be expected in the receiving stream as a result of this discharge.

A. (12.) APPLICABLE STATE LAW (STATE ENFORCEABLE ONLY)

[NCGS 143-215.1(b)]

This facility shall meet the General Statute requirements under NCGS § 130A-309.200 *et seq.* This permit may be reopened to include new requirements imposed under these Statutes.

A. (13.) POLYCHLORINATED BIPHENYL COMPOUNDS

[40 CFR 423]

There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

A. (14.) BIOCIDES CONDITION

[NCGS 143-215.1]

The permittee shall not use any biocides except those approved in conjunction with the permit application. The permittee shall notify the Director in writing not later than ninety (90) days prior to instituting use of any additional biocide used in cooling systems which may be toxic to aquatic life other than those previously reported to the Division of Water Resources. Such notification shall include completion of Biocide Worksheet Form 101 and a map locating the discharge point and receiving stream. Completion of Biocide Worksheet Form 101 is not

necessary for those outfalls containing toxicity testing. Division approval is not necessary for the introduction of new biocides into outfalls currently tested for whole effluent toxicity.

A. (15.) INTAKE SCREEN BACKWASH

[NCGS 143-215.1 (b)]

Continued intake screen backwash discharge and overflow from the settling basin are permitted without limitations or monitoring requirements.

A. (16.) BEST MANAGEMENT PRACTICES

[NCGS 143-215.1 (b)]

It has been determined from information submitted that the plans and procedures in place at Marshall Steam Station are equivalent to that of a Best Management Practice (BMP).

A. (17.) CHRONIC TOXICITY PASS/FAIL PERMIT LIMIT – OUTFALL 002 AND OUTFALL 005

[15A NCAC 02B .0200 et seq.]

The effluent discharge shall at no time exhibit observable inhibition of reproduction or significant mortality to *Ceriodaphnia dubia* at an effluent concentration of 7.2% for Ash Pond dewatering (Outfall 002), and 11.6% for Retention Basin (Outfall 005).

The permit holder shall perform at a minimum, *monthly* monitoring for Outfall 002 and *quarterly* monitoring (February, May, August, November) for Outfall 005 using test procedures outlined in the “North Carolina *Ceriodaphnia* Chronic Effluent Bioassay Procedure,” Revised December 2010, or subsequent versions or “North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure” (Revised- December 2010) or subsequent versions. Effluent sampling for this testing must be obtained during representative effluent discharge and shall be performed at the NPDES permitted final effluent discharge below all treatment processes.

If the monthly/quarterly test procedure results in a failure or ChV below the permit limit, then multiple-concentration testing shall be performed at a minimum, in each of the two following months as described in “North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure” (Revised-December 2010) or subsequent versions.

All toxicity testing results required as part of this permit condition will be entered on the Effluent Discharge Monitoring Form (MR-1) for the months in which tests were performed, using the parameter code **TGP3B** for the pass/fail results and **THP3B** for the Chronic Value. Additionally, DWR Form AT-3 (original) is to be sent to the following address:

Attention: North Carolina Division of Water Resources
Water Sciences Section/Aquatic Toxicology Branch
1621 Mail Service Center
Raleigh, North Carolina 27699-1621

Or, results can be sent to the email, ATForms.ATB@ncdenr.gov

Completed Aquatic Toxicity Test Forms shall be filed with the Water Sciences Section no later than 30 days after the end of the reporting period for which the report is made.

Test data shall be complete, accurate, include all supporting chemical/physical measurements and all concentration/response data, and be certified by laboratory supervisor and ORC or approved designate signature. Total residual chlorine of the effluent toxicity sample must be measured and reported if chlorine is employed for disinfection of the waste stream.

Should there be no discharge of flow from the facility during a month in which toxicity monitoring is required, the permittee will complete the information located at the top of the aquatic toxicity (AT) test form indicating the facility name, permit number, pipe number, county, and the month/year of the report with the notation of “No Flow” in the comment area of the form. The report shall be submitted to the Water Sciences Section at the address cited above.

Should the permittee fail to monitor during a month in which toxicity monitoring is required, monitoring will be required during the following month. Assessment of toxicity compliance is based on the toxicity testing month.

Should any test data from this monitoring requirement or tests performed by the North Carolina Division of Water Resources indicate potential impacts to the receiving stream, this permit may be re-opened and modified to include alternate monitoring requirements or limits.

NOTE: Failure to achieve test conditions as specified in the cited document, such as minimum control organism survival, minimum control organism reproduction, and appropriate environmental controls, shall constitute an **invalid test** and will require immediate follow-up testing to be completed no later than the last day of the month following the month of the initial monitoring.

A. (18.) FLOATING MATERIALS

[NCGS 143-215.1 (b)]

The Permittee shall report all visible discharges of floating materials, such as an oil sheen, to the Director when submitting DMRs.

A. (19.) CHEMICAL DISCHARGES

[NCGS 143-215.1 (b)]

Discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream which may ultimately be released to lakes, rivers, streams or other waters of the United States is prohibited unless specifically authorized elsewhere in this permit. Discharge of chlorine from the use of chlorine gas, sodium hypochlorite, or other similar chlorination compounds for disinfection in plant potable and service water systems and in sewage treatment is authorized. Use of restricted use pesticides for lake management purposes by applicators licensed by the N.C. Pesticide Board is allowed.

A. (20.) PRIORITY POLLUTANT ANALYSIS – OUTFALL 002

[NCGS 143-215.1 (b)]

The Permittee shall conduct a priority pollutant analysis (in accordance with 40 CFR Part 136) once per permit cycle at outfall 002 and submit the results with the application for permit renewal.

A. (21.) WAIVERS

[NCGS 143-215.1 (b)]

Nothing contained in this permit shall be construed as a waiver by permittee or any right to a hearing it may have pursuant to State or Federal laws or regulations.

A. (22.) STRUCTURAL INTEGRITY INSPECTIONS OF ASH POND DAM
[15A NCAC 02K.0208]

The facility shall meet the dam design and dam safety requirements per 15A NCAC 2K.

A. (23.) CLEAN WATER ACT SECTION 316(a) THERMAL VARIANCE
[40 CFR 125, Subpart H]

Unless this permit administratively continued, the thermal variance granted under Section 316(a) terminates on expiration of this NPDES permit. Should the permittee wish a continuation of its 316(a) thermal variance beyond the term of this permit, reapplication for such continuation shall be submitted in accordance with 40 CFR Part 125, Subpart H and Section 122.21(m)(6) not later than 180 days prior to permit expiration. Reapplication shall include a basis for continuation such as a) plant operating conditions and load factors are unchanged and are expected to remain so for the term of the reissued permit; b) there are no changes to plant discharges or other discharges in the plant site area which could interact with the thermal discharges; and c) there are no changes to the biotic community of the receiving water body which would impact the previous variance determination.

The next 316(a) studies shall be performed in accordance with the Division of Water Resources approved plan. The temperature analysis and the balanced and indigenous study plan shall conform to the specifications outlined in 40 CFR 125 Subpart H, the EPA's Draft 316(a) Guidance Manual, dated 1977, and the Region 4 letter to NCDENR, dated June 3, 2010. EPA shall be provided an opportunity to review the plan prior to the commencement of the study.

Copies of all the study plans, study results, and any other applicable materials should be submitted to:

- 1) Electronic Version Only (pdf and thumb drive)
Division of Water Resources
WQ Permitting Section - NPDES
1617 Mail Service Center
Raleigh, NC 27699-1617
- 2) Electronic Version (pdf and thumb drive) and Hard Copy
Division of Water Resources
Water Sciences Section
1621 Mail Service Center
Raleigh, NC 27699-1621

A. (24.) CLEAN WATER ACT SECTION 316 (B)
[40 CFR 125.95]

Based on evaluation of the 316(b) study reports, the Department concludes that the existing configuration at Marshall represents BTA for meeting the impingement and entrainment requirements of the Rule. The permittee shall submit the appropriate study reports with the renewal application for this permit. The permittee shall comply with the Cooling Water Intake Structure Rule per 40 CFR 125.95.

Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act.

A. (25.) FISH TISSUE MONITORING NEAR ASH POND DISCHARGE – OUTFALL 002

[NCGS 143-215.3 (a) (2)]

The facility shall conduct fish tissue monitoring annually and submit the results with the NPDES permit renewal application. The objective of the monitoring is to evaluate potential uptake of pollutants by fish tissue near the Ash Pond discharge. The parameters analyzed in fish tissue shall be arsenic, selenium, and mercury. The monitoring shall be conducted in accordance with the Sampling Plan approved by the Division. The plan should be submitted to the Division within 180 days from the effective date of the permit. Upon approval, the plan becomes an enforceable part of the permit.

Copies of all the study plans, study results, and any other applicable materials should be submitted to:

- 1) Electronic Version Only (pdf and CD)
 Division of Water Resources
 WQ Permitting Section - NPDES
 1617 Mail Service Center
 Raleigh, NC 27699-1617
- 2) Electronic Version (pdf and CD) and Hard Copy
 Division of Water Resources
 Water Sciences Section
 1621 Mail Service Center
 Raleigh, NC 27699-1621

A. (26.) INSTREAM MONITORING

[15A NCAC 02B.0500 ET SEQ.]

The facility shall conduct quarterly instream monitoring (approximately one mile upstream and approximately one mile downstream of the ash pond discharge) for total arsenic, total selenium, total mercury, total chromium, dissolved lead, dissolved cadmium, dissolved copper, dissolved zinc, total bromide, total hardness (as CaCO₃), turbidity, and total dissolved solids (TDS). The monitoring results shall be reported on the facility's Discharge Monitoring Reports and included with the NPDES permit renewal application.

A. (27.) ELECTRONIC REPORTING OF DISCHARGE MONITORING REPORTS

[G.S. 143-215.1(b)]

Federal regulations require electronic submittal of all discharge monitoring reports (DMRs) and program reports. The final NPDES Electronic Reporting Rule was adopted and became effective on December 21, 2015.

NOTE: This special condition supplements or supersedes the following sections within Part II of this permit (*Standard Conditions for NPDES Permits*):

- Section B. (11.) Signatory Requirements
- Section D. (2.) Reporting
- Section D. (6.) Records Retention
- Section E. (5.) Monitoring Reports

1. Reporting Requirements [Supersedes Section D. (2.) and Section E. (5.) (a)]

The permittee shall report discharge monitoring data electronically using the NC DWR's Electronic Discharge Monitoring Report (eDMR) internet application.

Monitoring results obtained during the previous month(s) shall be summarized for each month and submitted electronically using eDMR. The eDMR system allows permitted facilities to enter monitoring data and submit DMRs electronically using the internet. Until such time that the state's eDMR application is compliant with EPA's Cross-Media Electronic Reporting Regulation (CROMERR), permittees will be required to submit all discharge monitoring data to the state electronically using eDMR and will be required to complete the eDMR submission by printing, signing, and submitting one signed original and a copy of the computer printed eDMR to the following address:

NC DEQ / Division of Water Resources / Water Quality Permitting Section
ATTENTION: Central Files
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

If a permittee is unable to use the eDMR system due to a demonstrated hardship or due to the facility being physically located in an area where less than 10 percent of the households have broadband access, then a temporary waiver from the NPDES electronic reporting requirements may be granted and discharge monitoring data may be submitted on paper DMR forms (MR 1, 1.1, 2, 3) or alternative forms approved by the Director. Duplicate signed copies shall be submitted to the mailing address above. See "How to Request a Waiver from Electronic Reporting" section below.

Regardless of the submission method, the first DMR is due on the last day of the month following the issuance of the permit or in the case of a new facility, on the last day of the month following the commencement of discharge.

Starting on **December 21, 2025**, the permittee must electronically report the following compliance monitoring data and reports, when applicable:

- Sewer Overflow/Bypass Event Reports;
- Pretreatment Program Annual Reports; and
- Clean Water Act (CWA) Section 316(b) Annual Reports.

The permittee may seek an electronic reporting waiver from the Division (see "How to Request a Waiver from Electronic Reporting" section below).

2. Electronic Submissions

In accordance with 40 CFR 122.41(l)(9), the permittee must identify the initial recipient at the time of each electronic submission. The permittee should use the EPA's website resources to identify the initial recipient for the electronic submission.

Initial recipient of electronic NPDES information from NPDES-regulated facilities means the entity (EPA or the state authorized by EPA to implement the NPDES program) that is the designated entity for receiving electronic NPDES data [see 40 CFR 127.2(b)].

EPA plans to establish a website that will also link to the appropriate electronic reporting tool for each type of electronic submission and for each state. Instructions on how to access and use the appropriate electronic reporting tool will be available as well. Information on EPA's NPDES Electronic Reporting Rule is found at: <https://www.federalregister.gov/documents/2015/10/22/2015-24954/national-pollutant-discharge-elimination-system-npdes-electronic-reporting-rule>

Electronic submissions must start by the dates listed in the "Reporting Requirements" section above.

3. How to Request a Waiver from Electronic Reporting

The permittee may seek a temporary electronic reporting waiver from the Division. To obtain an electronic reporting waiver, a permittee must first submit an electronic reporting waiver request to the Division. Requests for temporary electronic reporting waivers must be submitted in writing to the Division for written approval at least sixty (60) days prior to the date the facility would be required under this permit to begin submitting monitoring data and reports. The duration of a temporary waiver shall not exceed 5 years and shall thereupon expire. At such time, monitoring data and reports shall be submitted electronically to the Division unless the permittee re-applies for and is granted a new temporary electronic reporting waiver by the Division. Approved electronic reporting waivers are not transferrable. Only permittees with an approved reporting waiver request may submit monitoring data and reports on paper to the Division for the period that the approved reporting waiver request is effective.

Information on eDMR and the application for a temporary electronic reporting waiver are found on the following web page:

<http://deq.nc.gov/about/divisions/water-resources/edmr>

4. Signatory Requirements [Supplements Section B. (11.) (b) and Supersedes Section B. (11.) (d)]

All eDMRs submitted to the permit issuing authority shall be signed by a person described in Part II, Section B. (11.) (a) or by a duly authorized representative of that person as described in Part II, Section B. (11.) (b). A person, and not a position, must be delegated signatory authority for eDMR reporting purposes.

For eDMR submissions, the person signing and submitting the DMR must obtain an eDMR user account and login credentials to access the eDMR system. For more information on North Carolina's eDMR system, registering for eDMR and obtaining an eDMR user account, please visit the following web page:

<http://deq.nc.gov/about/divisions/water-resources/edmr>

Certification. Any person submitting an electronic DMR using the state's eDMR system shall make the following certification [40 CFR 122.22]. NO OTHER STATEMENTS OF CERTIFICATION WILL BE ACCEPTED:

"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. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

5. Records Retention [Supplements Section D. (6.)]

The permittee shall retain records of all Discharge Monitoring Reports, including eDMR submissions. These records or copies shall be maintained for a period of at least 3 years from the date of the report. This period may be extended by request of the Director at any time [40 CFR 122.41].

A. (28.) COMPLIANCE BOUNDARY

[15A NCAC 02L.0107]

The compliance boundary for the disposal system (Figure 1) shall be specified in accordance with 15A NCAC 02L .0107(a) or (b) dependent upon the date permitted. An exceedance of groundwater standards at or beyond the compliance boundary is subject to remediation action according to 15A NCAC 02L .0106(c), (d), or (e) as well as enforcement actions in accordance with North Carolina General Statute 143-215.6A through 143-215.6C.