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DIRECTOR

KAY IVEY
GOVERNOR

Alabama Department of Environmental Management
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1400 Coliseum Blvd. 36110-2400 ▪ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ▪ FAX (334) 271-7950

MAY 1, 2020

MR STEVEN DOUGLAS
VICE PRESIDENT NUCLEAR ENGINEERING
TVA BELLEFONTE NUCLEAR PLANT
1101 MARKET ST, LP 3R-C
CHATTANOOGA TN 37402

RE: DRAFT PERMIT
NPDES PERMIT NUMBER AL0024635

Dear Mr. Douglas:

Transmitted herein is a draft of the referenced permit.

We would appreciate your comments on the permit within **30 days** of the date of this letter. Please direct any comments of a technical or administrative nature to the undersigned.

By copy of this letter and the draft permit, we are also requesting comments within the same time frame from EPA.

Our records indicate that you are currently utilizing the Department's web-based electronic environmental (E2) reporting system for submittal of discharge monitoring reports (DMRs). Your E2 DMRs will automatically update on the effective date of this permit, if issued.

The Alabama Department of Environmental Management encourages you to voluntarily consider pollution prevention practices and alternatives at your facility. Pollution Prevention may assist you in complying with effluent limitations, and possibly reduce or eliminate monitoring requirements.

If you have questions regarding this permit or monitoring requirements, please contact Brian Marshall by e-mail at **bmarshall@adem.alabama.gov** or by phone at **(334) 271-7895.**

Sincerely,

Scott Ramsey, Chief
Industrial Section
Industrial/Municipal Branch
Water Division

Enclosure: Draft Permit

pc via website: Montgomery Field Office
EPA Region IV
U.S. Fish & Wildlife Service
AL Historical Commission
Advisory Council on Historic Preservation
Department of Conservation and Natural Resources

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road, S.W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (FAX)

Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
3664 Dauphin Street, Suite B
Mobile, AL 36608
(251) 304-1176
(251) 304-1189 (FAX)

ADEM
Alabama Department of Environmental Management

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE:	TENNESSEE VALLEY AUTHORITY BELLEFONTE NUCLEAR PLANT
FACILITY LOCATION:	JACKSON COUNTY HIGHWAY 33 HOLLYWOOD, AL 35752
PERMIT NUMBER:	AL0024635
RECEIVING WATERS:	DSN002, DSN004, DSN008 – DSN012, DSN015: TOWN CREEK DSN003, DSN005, DSN013-DSN014: TENNESSEE RIVER

In accordance with and subject to the provisions of the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§1251-1388 (the "FWPCA"), the Alabama Water Pollution Control Act, as amended, Code of Alabama 1975, §§ 22-22-1 to 22-22-14 (the "AWPCA"), the Alabama Environmental Management Act, as amended, Code of Alabama 1975, §§22-22A-1 to 22-22A-17, and rules and regulations adopted thereunder, and subject further to the terms and conditions set forth in this permit, the Permittee is hereby authorized to discharge into the above-named receiving waters.

ISSUANCE DATE:

EFFECTIVE DATE:

EXPIRATION DATE:

Draft

Alabama Department of Environmental Management

INDUSTRIAL SECTION
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

TABLE OF CONTENTS

PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN002Q: Impoundment pond discharge consisting of main plant area SW runoff, non-chlorinated river water, and fire and supply test water associated with electric power generation. 3/ 5/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
pH	-	-	6.0 S.U.	-	8.5 S.U.	Once/Discharge 4/	Grab	-
Solids, Total Suspended	-	-	-	-	100 mg/l	Once/Discharge 4/	Grab	-
Oil & Grease	-	-	-	-	15 mg/l	Once/Discharge 4/	Grab	-
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Once/Discharge 4/	Instantaneous	-

THERE SHALL BE NO DISCHARGE OF POLYCHLORINATED BIPHENYL COMPOUNDS SUCH AS THOSE COMMONLY USED IN TRANSFORMER FLUID.

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.

4/ Once per discharge, not required to be monitored more than once per quarter.

5/ Wastewater from the diluted and concentrated chemical treatment ponds are not authorized for discharge from this outfall. Storm water from the chemical treatment ponds which has not come in contact with process wastewaters may be discharged in accordance with the requirements of this outfall.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN0031: Diffuser discharge consisting of cooling tower blowdown and other wastewater resulting from electric power generation (Non-Operating Facility) 3/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS 1/				
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Temperature, Water Deg. Fahrenheit	-	-	-	92 F	95 F	Daily	Grab	-
pH	-	-	6.0 S.U.	-	9.0 S.U.	Weekly	Grab	-
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Instantaneous	-
Chlorine, Total Residual	-	-	-	REPORT mg/l	0.2 mg/l	Daily	Grab	-

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ Due to accessibility restrictions, monitoring for compliance may be conducted at outfall DSN03D1 or DSN03C1.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN0032: Diffuser discharge consisting of cooling tower blowdown and other wastewater resulting from electric power generation (Operating Facility)

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS 1/				
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Temperature, Water Deg. Fahrenheit	-	-	-	92 F	95 F	Continuous	Recorder 3/	-
pH	-	-	6.0 S.U.	-	9.0 S.U.	Weekly	Grab	-
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Continuous	Totalizer	-
Chlorine, Total Residual	-	-	-	REPORT mg/l	0.2 mg/l	Continuous	Recorder 4/	-

THERE SHALL BE NO DISCHARGE OF POLYCHLORINATED BIPHENYL COMPOUNDS SUCH AS THOSE COMMONLY USED IN TRANSFORMER FLUID.

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ The permittee may use multiple grab samples instead of recorder and is defined as a grab sample taken every 15 minutes.

4/ The permittee may use multiple grab samples instead of recorder and is defined as a grab sample taken every 15 minutes beginning with the start-up of chlorination and ending when TRC is no longer detectable over a 24-hour period..

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN003Y:Diffuser discharge consisting of cooling tower blowdown and other wastewater resulting from electric power generation. 3/ 4/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Toxicity, Ceriodaphnia Chronic	-	0 pass(0)/fail(1)	-	-	-	Annually	Composite	-
Toxicity, Pimephales Chronic	-	0 pass(0)/fail(1)	-	-	-	Annually	Composite	-

THERE SHALL BE NO DISCHARGE OF POLYCHLORINATED BIPHENYL COMPOUNDS SUCH AS THOSE COMMONLY USED IN TRANSFORMER FLUID.

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.E for Effluent Toxicity Monitoring Requirements.

4/ Toxicity monitoring is not required until the facility begins electric power generating activities.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN004Y: East culvert impoundment discharge consisting of storm water runoff. 3/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
pH	-	-	6.0 S.U.	-	8.5 S.U.	Once/Discharge 4/	Grab	-
Solids, Total Suspended	-	-	-	60 mg/l	100 mg/l	Once/Discharge 4/	Grab	-
Oil & Grease	-	-	-	15 mg/l	20 mg/l	Once/Discharge 4/	Grab	-
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Once/Discharge 4/	Instantaneous	-

THERE SHALL BE NO DISCHARGE OF POLYCHLORINATED BIPHENYL COMPOUNDS SUCH AS THOSE COMMONLY USED IN TRANSFORMER FLUID.

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.

4/ Once per discharge not required to be monitored more than once per year.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN0051: Plant intake trash including sluicing consisting of intake screen and strainer backwash and intake pumping station sumps/drains.

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
pH	-	-	6.0 S.U.	-	9.0 S.U.	Daily 3/	Grab	-
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily 3/	Pump Log	-

THERE SHALL BE NO DISCHARGE OF POLYCHLORINATED BIPHENYL COMPOUNDS SUCH AS THOSE COMMONLY USED IN TRANSFORMER FLUID.

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ Effluent limitations and monitoring requirements apply during periods of biocide addition to the intake pump pit. See Part 1.D.5 for additional requirements.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN03C1: Cooling tower desilting pond effluent, sump collection ponds consisting of boiler blowdown, building sumps and floor drains, and other miscellaneous low volume wastewaters. 4/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
pH	-	-	6.0 S.U.	-	9.0 S.U.	Once/Discharge 3/	Grab	-
Solids, Total Suspended	-	-	-	30 mg/l	100 mg/l	Once/Discharge 3/	Grab	-
Oil & Grease	-	-	-	15 mg/l	20 mg/l	Once/Discharge 3/	Grab	-
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Once/Discharge 3/	Instantaneous 5/	-

THERE SHALL BE NO DISCHARGE OF POLYCHLORINATED BIPHENYL COMPOUNDS SUCH AS THOSE COMMONLY USED IN TRANSFORMER FLUID.

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ Once per discharge not required to be monitored more than once per month.

4/ Low volume wastewaters as defined by 40 CFR Part 423.

5/ Pump logs are acceptable for flow measurements.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN03D1: Cooling Tower Blowdown

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	-
Chlorine, Total Residual 3/ 5/ 6/	-	-	-	REPORT mg/l	REPORT mg/l	Weekly	Grab	-
Chlorine, Free Available 4/ 5/	-	-	-	0.2 mg/l	0.5 mg/l	Weekly	Grab	-
Chlorination Duration	-	-	-	-	120 min/day	Weekly	Measured	-

THERE SHALL BE NO DISCHARGE OF POLYCHLORINATED BIPHENYL COMPOUNDS SUCH AS THOSE COMMONLY USED IN TRANSFORMER FLUID.

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ Total residual chlorine may not be added from any single generating unit for more than two hours per day unless the discharger demonstrates to ADEM that the discharge for more than two hours is required for macro invertebrate control. Total residual chlorine limitations apply at the outlet of the individual unit being chlorinated, prior to combining with any other waste stream or entering the receiving water. When chlorination is occurring, grab samples shall be taken at least every 30 minutes to verify compliance with total residual chlorine limitations. Simultaneous multi-unit chlorination is permitted. Sampling is only required during chlorination.

4/ Free available chlorine limitations apply at the outlet to the individual unit being chlorinated, if applicable, prior to combing with any other waste stream. Simultaneous multi-unit chlorination is permitted.

5/ "Daily Maximum" as it applies to FAC and TRC means instantaneous maximum at any one time. "Monthly Average" as it applies to FAC and TRC means the average of values taken over any individual chlorine release period.

6/ A measurement of Total Residual Chlorine below 0.05 mg/L shall be considered in compliance with the permit limitations above and should be reported as NODI=B or *B on the discharge monitoring reports

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN03DS: Cooling Tower Blowdown. 3/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Chromium, Total (As Cr)	-	-	-	0.2 mg/l	0.2 mg/l	Twice per Year	Grab	-
Zinc, Total (As Zn)	-	-	-	1.0 mg/l	1.0 mg/l	Twice per Year	Grab	-

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ The facility shall report NODI=9 on the appropriate discharge monitoring report when zinc or chromium additives are not being used during the monitoring period per 40 CFR 122.44(a)(2)(i).

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN03DY: Cooling Tower Blowdown.

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Priority Pollutants Total Effluent 4/	-	-	-	BMDL ug/l 3/	BMDL ug/l 3/	Annually	Grab	-

THERE SHALL BE NO DISCHARGE OF POLYCHLORINATED BIPHENYL COMPOUNDS SUCH AS THOSE COMMONLY USED IN TRANSFORMER FLUID.

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ BMDL as defined, "below minimum detection level".

4/ Priority Pollutants as defined by 40 CFR 423 and listed in Appendix A in Part IV.C.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN03E1: Liquid Rad Waste 6/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
pH	-	-	6.0 S.U.	-	9.0 S.U.	2X Weekly	Grab	-
Solids, Total Suspended	-	-	-	30 mg/l	100 mg/l	2X Weekly	Grab 4/	-
Oil & Grease	-	-	-	15 mg/l	20 mg/l	2X Weekly	Grab 4/	-
Copper, Total (As Cu) 5/	-	-	-	1.0 mg/l	1.0 mg/l	2X Weekly	Grab 4/	-
Iron, Total (As Fe) 5/	-	-	-	1.0 mg/l	1.0 mg/l	2X Weekly	Grab 4/	-
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	2X Weekly	Calculated 3/	-

THERE SHALL BE NO DISCHARGE OF POLYCHLORINATED BIPHENYL COMPOUNDS SUCH AS THOSE COMMONLY USED IN TRANSFORMER FLUID.

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ Flow may be obtained by summing batch volumes released during a 24-hour period.

4/ A grab sample shall be taken during the discharge of each batch during a 24-hour period. These grab samples shall be of equal volume and shall be composited and analyzed as one sample.

5/ Monitoring requirements only apply during the discharge of metal cleaning wastewaters.

6/ The radioactive component of this discharge is regulated by the U.S. Nuclear Regulatory Commission.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN03F1: Condensate demineralizer regneration wastes. 6/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS 1/				
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
pH	-	-	6.0 S.U.	-	9.0 S.U.	2X Weekly	Grab	-
Solids, Total Suspended	-	-	-	30 mg/l	100 mg/l	2X Weekly	Grab 4/	-
Oil & Grease	-	-	-	15 mg/l	20 mg/l	2X Weekly	Grab 4/	-
Copper, Total (As Cu) 5/	-	-	-	1.0 mg/l	1.0 mg/l	2X Weekly	Grab 4/	-
Iron, Total (As Fe) 5/	-	-	-	1.0 mg/l	1.0 mg/l	2X Weekly	Grab 4/	-
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	2X Weekly	Calculated 3/	-

THERE SHALL BE NO DISCHARGE OF POLYCHLORINATED BIPHENYL COMPOUNDS SUCH AS THOSE COMMONLY USED IN TRANSFORMER FLUID.

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ Flow may be obtained by summing batch volumes released during a 24-hour period.

4/ A grab sample shall be taken during the discharge of each batch during a 24-hour period. These grab samples shall be of equal volume and shall be composited and analyzed as one sample.

5/ Monitoring requirements only apply during the discharge of metal cleaning wastewaters.

6/ Monitoring requirements and limitations for DSN03F1 are not applicable when this discharge is directed to DSN03E1

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN03G1: Sump collection ponds discharge consisting of boiler blowdown, building sumps and floor drains, and other miscellaneous low volume wastewaters. 4/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
pH	-	-	6.0 S.U.	-	9.0 S.U.	Once/Discharge 3/	Grab	-
Solids, Total Suspended	-	-	-	30 mg/l	100 mg/l	Once/Discharge 3/	Grab	-
Oil & Grease	-	-	-	15 mg/l	20 mg/l	Once/Discharge 3/	Grab	-
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Once/Discharge 3/	Instantaneous	-

THERE SHALL BE NO DISCHARGE OF POLYCHLORINATED BIPHENYL COMPOUNDS SUCH AS THOSE COMMONLY USED IN TRANSFORMER FLUID.

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ Once per discharge, not required to be monitored more than once per week.

4/ Low volume wastewaters as defined by 40 CFR 423.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN0081: Simulator Training Facility fire protection system flush water

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal

NO MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

Such discharge shall be limited and monitored by the permittee as specified below:

DSN0091-DSN0151: Uncontaminated storm water runoff

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS 1/			
	Daily Maximum	Monthly Average	Daily Minimum	Daily Maximum	Monthly Average	Measurement Frequency 2/	Sample Type	Seasonal

NO DISCHARGE MONITORING REQUIREMENTS APPLY

THERE SHALL BE NO DISCHARGE OF POLYCHLORINATED BIPHENYL COMPOUNDS SUCH AS THOSE COMMONLY USED IN TRANSFORMER FLUID

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS

Discharge limitations and monitoring requirements for non-contaminated storm water from bulk petroleum secondary containment areas

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge only uncontaminated storm water from diked storage areas

Such discharge shall be limited and monitored by the permittee as specified below:

1. The facility will have a valid SPCC plan pursuant to 40 CFR 112.

2. Best Management Practices (BMP) are used in draining the diked area. BMP is defined as use of a portable oil skimmer or similar device or the use of absorbent material to remove oil and grease (as indicated by the presence of a sheen) immediately prior to draining.

3. Monitoring records shall be maintained in the form of a log and shall contain the following information, as a minimum:

    a. Date and time of discharge
    b. Estimated volume of discharge
    c. Initials of person making visual inspection and authorizing discharge

The discharge shall have no sheen, and there shall be no discharge of visible oil, floating solids or visible foam in other than trace amounts. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used in transformer fluid.

B. DISCHARGE MONITORING AND RECORD KEEPING REQUIREMENTS

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge and shall be in accordance with the provisions of this permit.

2. Test Procedures

For the purpose of reporting and compliance, permittees shall use one of the following procedures:

a. For parameters with an EPA established Minimum Level (ML), report the measured value if the analytical result is at or above the ML and report "0" for values below the ML. Test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 and guidelines published pursuant to Section 304(h) of the FWPCA, 33 U.S.C. Section 1314(h). If more than one method for analysis of a substance is approved for use, a method having a minimum level lower than the permit limit shall be used. If the minimum level of all methods is higher than the permit limit, the method having the lowest minimum level shall be used and a report of less than the minimum level shall be reported as zero and will constitute compliance; however, should EPA approve a method with a lower minimum level during the term of this permit the permittee shall use the newly approved method.

b. For pollutants parameters without an established ML, an interim ML may be utilized. The interim ML shall be calculated as 3.18 times the Method Detection Level (MDL) calculated pursuant to 40 CFR Part 136, Appendix B.

Permittees may develop an effluent matrix-specific ML, where an effluent matrix prevents attainment of the established ML. However, a matrix specific ML shall be based upon proper laboratory method and technique. Matrix-specific MLs must be approved by the Department, and may be developed by the permittee during permit issuance, reissuance, modification, or during compliance schedule.

In either case the measured value should be reported if the analytical result is at or above the ML and "0" reported for values below the ML.

c. For parameters without an EPA established ML, interim ML, or matrix-specific ML, a report of less than the detection limit shall constitute compliance if the detection limit of all analytical methods is higher than the permit limit using the most sensitive EPA approved method. For the purpose of calculating a monthly average, "0" shall be used for values reported less than the detection limit.

The Minimum Level utilized for procedures A and B above shall be reported on the permittee's DMR. When an EPA approved test procedure for analysis of a pollutant does not exist, the Director shall approve the procedure to be used.

3. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

a. The facility name and location, point source number, date, time and exact place of sampling;

b. The name(s) of person(s) who obtained the samples or measurements;

c. The dates and times the analyses were performed;

d. The name(s) of the person(s) who performed the analyses;

e. The analytical techniques or methods used, including source of method and method number; and

f. The results of all required analyses.

4. Records Retention and Production

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the above reports or the application for this permit, for a period of at least three years from the date of the sample measurement, report or application. This period may be extended by request of the Director at any time. If litigation or other enforcement action, under the AWPCA and/or the FWPCA, is ongoing which involves any of the above records, the records shall be kept until the litigation is resolved. Upon the written request of the Director or his designee, the permittee shall provide the Director with a copy of any record required to be retained by this paragraph. Copies of these records shall not be submitted unless requested.

All records required to be kept for a period of three years shall be kept at the permitted facility or an alternate location approved by the Department in writing and shall be available for inspection.

5. Monitoring Equipment and Instrumentation

All equipment and instrumentation used to determine compliance with the requirements of this permit shall be installed, maintained, and calibrated in accordance with the manufacturer's instructions or, in the absence of manufacturer's instructions, in accordance with accepted practices. The permittee shall develop and maintain quality assurance procedures to ensure proper operation and maintenance of all equipment and instrumentation. The quality assurance procedures shall include the proper use, maintenance, and installation, when appropriate, of monitoring equipment at the plant site.

C. DISCHARGE REPORTING REQUIREMENTS

1. Reporting of Monitoring Requirements

a. The permittee shall conduct the required monitoring in accordance with the following schedule:

MONITORING REQUIRED MORE FREQUENTLY THAN MONTHLY AND MONTHLY shall be conducted during the first full month following the effective date of coverage under this permit and every month thereafter.

QUARTERLY MONITORING shall be conducted at least once during each calendar quarter. Calendar quarters are the periods of January through March, April through June, July through September, and October through December. The permittee shall conduct the quarterly monitoring during the first complete calendar quarter following the effective date of this permit and is then required to monitor once during each quarter thereafter. Quarterly monitoring may be done anytime during the quarter, unless restricted elsewhere in this permit, but it should be submitted with the last DMR due for the quarter, i.e., (March, June, September and December DMR's).

SEMIANNUAL MONITORING shall be conducted at least once during the period of January through June and at least once during the period of July through December. The permittee shall conduct the semiannual monitoring during the first complete calendar semiannual period following the effective date of this permit and is then required to monitor once during each semiannual period thereafter. Semiannual monitoring may be done anytime during the semiannual period, unless restricted elsewhere in this permit, but it should be submitted with the last DMR for the month of the semiannual period, i.e. (June and December DMR's).

ANNUAL MONITORING shall be conducted at least once during the period of January through December. The permittee shall conduct the annual monitoring during the first complete calendar annual period following the effective date of this permit and is then required to monitor once during each annual period thereafter. Annual monitoring may be done anytime during the year, unless restricted elsewhere in this permit, but it should be submitted with the December DMR.

b. The permittee shall submit discharge monitoring reports (DMRs) on the forms provided by the Department and in accordance with the following schedule:

REPORTS OF MORE FREQUENTLY THAN MONTHLY AND MONTHLY TESTING shall be submitted on a **monthly** basis. The first report is due on the **28th day of (MONTH, YEAR).** The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

REPORTS OF QUARTERLY TESTING shall be submitted on a **quarterly** basis. The first report is due on the **28th day of [Month, Year].** The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

REPORTS OF SEMIANNUAL TESTING shall be submitted on a semiannual basis. The reports are due on the 28th day of JANUARY and the 28th day of JULY. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

REPORTS OF ANNUAL TESTING shall be submitted on an annual basis. The first report is due on the 28th day of JANUARY. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

c. Except as allowed by Provision I.C.1.c.(1) or (2), the permittee shall submit all Discharge Monitoring Reports (DMRs) required by Provision I.C.1.b by utilizing the Department's web-based Electronic Environmental (E2) Reporting System.

(1) If the permittee is unable to complete the electronic submittal of DMR data due to technical problems originating with the Department's E2 Reporting system (this could include entry/submittal issues with an entire set of DMRs or individual parameters), the permittee is not relieved of their obligation to submit DMR data to the Department by the date specified in Provision I.C.1.b, unless otherwise directed by the Department.

If the E2 Reporting System is down on the 28th day of the month in which the DMR is due or is down for an extended period of time, as determined by the Department, when a DMR is required to be submitted, the permittee may submit the data in an alternate manner and format acceptable to the Department. Preapproved alternate acceptable methods include faxing, e-mailing, mailing, or hand-delivery of data such that they are received by the required reporting date. Within 5 calendar days of the E2 Reporting System resuming operation, the permittee shall enter the data into the E2 Reporting System, unless an alternate timeframe is approved by the Department. An attachment should be included with the E2 DMR submittal verifying the original submittal date (date of the fax, copy of the dated e-mail, or hand-delivery stamped date), if applicable.

(2) The permittee may submit a request to the Department for a temporary electronic reporting waiver for DMR submittals. The waiver request should include the permit number; permittee name; facility/site name; facility address; name, address, and contact information for the responsible official or duly authorized representative; a detailed statement regarding the basis for requesting such a waiver; and the duration for which the waiver is requested. Approved electronic reporting waivers are not transferrable.

Permittees with an approved electronic reporting waiver for DMRs may submit hard copy DMRs for the period that the approved electronic reporting waiver request is effective. The permittee shall submit the Department-approved DMR forms to the address listed in Provision I.C.1.e.

(3) If a permittee is allowed to submit a hard copy DMR, the DMR must be legible and bear an original signature. Photo and electronic copies of the signature are not acceptable and shall not satisfy the reporting requirements of this permit.

(4) If the permittee, using approved analytical methods as specified in Provision I.B.2, monitors any discharge from a point source for a limited substance identified in Provision I.A. of this permit more frequently than required by this permit, the results of such monitoring shall be included in the calculation and reporting of values on the DMR and the increased frequency shall be indicated on the DMR.

(5) In the event no discharge from a point source identified in Provision I.A. of this permit and described more fully in the permittee's application occurs during a monitoring period, the permittee shall report "No Discharge" for such period on the appropriate DMR.

d. All reports and forms required to be submitted by this permit, the AWPCA and the Department's Rules, shall be electronically signed (or, if allowed by the Department, traditionally signed) by a "responsible official" of the permittee as defined in ADEM Administrative Code Rule 335-6-6-.09 or a "duly authorized representative" of such official as defined in ADEM Administrative Code Rule 335-6-6-.09 and shall bear the following certification:

"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 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 for knowing violations."

e. Discharge Monitoring Reports required by this permit, the AWPCA, and the Department's Rules that are being submitted in hard copy shall be addressed to:

Alabama Department of Environmental Management
Permits and Services Division
Environmental Data Section
Post Office Box 301463
Montgomery, Alabama 36130-1463

Certified and Registered Mail containing Discharge Monitoring Reports shall be addressed to:

Alabama Department of Environmental Management
Permits and Services Division
Environmental Data Section
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2400

f. All other correspondence and reports required to be submitted by this permit, the AWPCA, and the Department's Rules shall be addressed to:

Alabama Department of Environmental Management

Water Division
Post Office Box 301463
Montgomery, Alabama 36130-1463

Certified and Registered Mail shall be addressed to:

Alabama Department of Environmental Management
Water Division
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2400

g. If this permit is a re-issuance, then the permittee shall continue to submit DMRs in accordance with the requirements of their previous permit until such time as DMRs are due as discussed in Part I.C.1.b above.

2. Noncompliance Notification

a. 24-Hour Noncompliance Reporting

The permittee shall report to the Director, within 24-hours of becoming aware of the noncompliance, any noncompliance which may endanger health or the environment. This shall include but is not limited to the following circumstances:

(1) does not comply with any daily minimum or maximum discharge limitation for an effluent characteristic specified in Provision I. A. of this permit which is denoted by an "(X)";

(2) threatens human health or welfare, fish or aquatic life, or water quality standards;

(3) does not comply with an applicable toxic pollutant effluent standard or prohibition established under Section 307(a) of the FWPCA, 33 U.S.C. Section 1317(a);

(4) contains a quantity of a hazardous substance which has been determined may be harmful to public health or welfare under Section 311(b)(4) of the FWPCA, 33 U.S.C. Section 1321(b)(4);

(5) exceeds any discharge limitation for an effluent characteristic as a result of an unanticipated bypass or upset; and

(6) is an unpermitted direct or indirect discharge of a pollutant to a water of the state (unpermitted discharges properly reported to the Department under any other requirement are not required to be reported under this provision).

The permittee shall orally report the occurrence and circumstances of such discharge to the Director within 24-hours after the permittee becomes aware of the occurrence of such discharge. In addition to the oral report, the permittee shall submit to the Director or Designee a written report as provided in Part I.C.2.c no later than five (5) days after becoming aware of the occurrence of such discharge.

b. If for any reason, the permittee's discharge does not comply with any limitation of this permit, the permittee shall submit to the Director or Designee a written report as provided in Part I.C.2.c below, such report shall be submitted with the next Discharge Monitoring Report required to be submitted by Part I.C.1 of this permit after becoming aware of the occurrence of such noncompliance.

c. Any written report required to be submitted to the Director or Designee by Part I.C.2 a. or b. shall be submitted using a Noncompliance Notification Form (ADEM Form 421) available on the Department's website (http://adem.alabama.gov/DeptForms/Form421.pdf) and include the following information:

(1) A description of the discharge and cause of noncompliance;

(2) The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and

(3) A description of the steps taken and/or being taken to reduce or eliminate the noncomplying discharge and to prevent its recurrence.

D. OTHER REPORTING AND NOTIFICATION REQUIREMENTS

1. Anticipated Noncompliance

The permittee shall give the Director written advance notice of any planned changes or other circumstances regarding a facility which may result in noncompliance with permit requirements.

2. Termination of Discharge

The permittee shall notify the Director, in writing, when all discharges from any point source(s) identified in Provision I. A. of this permit have permanently ceased. This notification shall serve as sufficient cause for instituting procedures for modification or termination of the permit.

3. Updating Information

a. The permittee shall inform the Director of any change in the permittee's mailing address, telephone number or in the permittee's designation of a facility contact or office having the authority and responsibility to prevent and abate violations of the AWPCA, the Department's Rules, and the terms and conditions of this permit, in writing, no later than ten (10) days after such change. Upon request of the Director or his designee, the permittee shall furnish the Director with an update of any information provided in the permit application.

b. If the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information with a written explanation for the mistake and/or omission.

4. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director or his designee may request to determine whether cause exists for modifying, revoking and re-issuing, suspending, or terminating this permit, in whole or in part, or to determine compliance with this permit.

5. Cooling Water and Boiler Water Additives

a. The permittee shall notify the Director in writing not later than thirty (30) days prior to instituting the use of any biocide corrosion inhibitor or chemical additive in a cooling or boiler system, not identified in the application for this permit, from which discharge is allowed by this permit. Notification is not required for additives that do not contain a heavy metal(s) as an active ingredient and that pass through a wastewater treatment system prior to discharge nor is notification required for additives that should not reasonably be expected to cause the cooling water or boiler water to exhibit toxicity as determined by analysis of manufacturer's data or testing by the permittee. Such notification shall include:

(1) name and general composition of biocide or chemical;

(2) 96-hour median tolerance limit data for organisms representative of the biota of the waterway into which the discharge will ultimately reach;

(2) quantities to be used;

(3) frequencies of use;

(4) proposed discharge concentrations; and

(6) EPA registration number, if applicable.

b. The use of a biocide or additive containing tributyl tin, tributyl tin oxide, zinc, chromium or related compounds in cooling or boiler system(s), from which a discharge regulated by this permit occurs, is prohibited except as exempted below. The use of a biocide or additive containing zinc, chromium or related compounds may be used in special circumstances if (1) the permit contains limits for these substances, or (2) the applicant demonstrates during the application process that the use of zinc, chromium or related compounds as a biocide or additive will not pose a reasonable potential to violate the applicable State water quality standards for these substances. The use of any additive, not identified in this permit or in the application for this permit or not exempted from notification under this permit is prohibited, prior to a determination by the Department that permit modification to control discharge of the additive is not required or prior to issuance of a permit modification controlling discharge of the additive.

6. Permit Issued Based On Estimated Characteristics

a. If this permit was issued based on estimates of the characteristics of a process discharge reported on an EPA NPDES Application Form 2D (EPA Form 3510-2D), the permittee shall complete and submit an EPA NPDES Application Form 2C (EPA Form 3510-2C) no later than two years after the date that discharge begins. Sampling required for completion of the Form 2C shall occur when a discharge(s) from the process(s) causing the new or increased discharge is occurring. If this permit was issued based on estimates concerning the composition of a stormwater discharge(s), the permittee shall perform the sampling required by EPA NPDES Application Form 2F (EPA Form 3510-2F) no later than one year after the industrial activity generating the stormwater discharge has been fully initiated.

b. This permit shall be reopened if required to address any new information resulting from the completion and submittal of the Form 2C and or 2F.

E. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the discharge limitations specified in Provision I. A. in accordance with the following schedule:

COMPLIANCE SHALL BE ATTAINED ON THE EFFECTIVE DATE OF THIS PERMIT

2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

PART II OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES

A. OPERATIONAL AND MANAGEMENT REQUIREMENTS

1. Facilities Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities only when necessary to achieve compliance with the conditions of the permit.

2. Best Management Practices

a. Dilution water shall not be added to achieve compliance with discharge limitations except when the Director or his designee has granted prior written authorization for dilution to meet water quality requirements.

b. The permittee shall prepare, implement, and maintain a Spill Prevention, Control and Countermeasures (SPCC) Plan in accordance with 40 C.F.R. Section 112 if required thereby.

c. The permittee shall prepare, submit for approval and implement a Best Management Practices (BMP) Plan for containment of any or all process liquids or solids, in a manner such that these materials do not present a significant potential for discharge, if so required by the Director or his designee. When submitted and approved, the BMP Plan shall become a part of this permit and all requirements of the BMP Plan shall become requirements of this permit.

3. Spill Prevention, Control, and Management

The permittee shall provide spill prevention, control, and/or management sufficient to prevent any spills of pollutants from entering a water of the state or a publicly or privately owned treatment works. Any containment system used to implement this requirement shall be constructed of materials compatible with the substance(s) contained and which shall prevent the contamination of groundwater and such containment system shall be capable of retaining a volume equal to 110 percent of the capacity of the largest tank for which containment is provided.

B. OTHER RESPONSIBILITIES

1. Duty to Mitigate Adverse Impacts

The permittee shall promptly take all reasonable steps to mitigate and minimize or prevent any adverse impact on human health or the environment resulting from noncompliance with any discharge limitation specified in Provision I. A. of this permit, including such accelerated or additional monitoring of the discharge and/or the receiving waterbody as necessary to determine the nature and impact of the noncomplying discharge.

2. Right of Entry and Inspection

The permittee shall allow the Director, or an authorized representative, upon the presentation of proper credentials and other documents as may be required by law to:

a. enter upon the permittee's premises where a regulated facility or activity or point source is located or conducted, or where records must be kept under the conditions of the permit;

b. have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

c. inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the permit; and

d. sample or monitor, for the purposes of assuring permit compliance or as otherwise authorized by the AWPCA, any substances or parameters at any location.

C. BYPASS AND UPSET

1. Bypass

a. Any bypass is prohibited except as provided in b. and c. below:

b. A bypass is not prohibited if:

(1) It does not cause any discharge limitation specified in Provision I. A. of this permit to be exceeded;

(2) It enters the same receiving stream as the permitted outfall; and

(3) It is necessary for essential maintenance of a treatment or control facility or system to assure efficient operation of such facility or system.

c. A bypass is not prohibited and need not meet the discharge limitations specified in Provision I. A. of this permit if:

(1) It is unavoidable to prevent loss of life, personal injury, or severe property damage;

(2) There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and

(3) The permittee submits a written request for authorization to bypass to the Director at least ten (10) days prior to the anticipated bypass (if possible), the permittee is granted such authorization, and the permittee complies with any conditions imposed by the Director to minimize any adverse impact on human health or the environment resulting from the bypass.

d. The permittee has the burden of establishing that each of the conditions of Provision II.C.1.b. or c. have been met to qualify for an exception to the general prohibition against bypassing contained in a. and an exemption, where applicable, from the discharge limitations specified in Provision I. A. of this permit.

2. Upset

a. A discharge which results from an upset need not meet the discharge limitations specified in Provision I. A. of this permit if:

(1) No later than 24-hours after becoming aware of the occurrence of the upset, the permittee orally reports the occurrence and circumstances of the upset to the Director or his designee; and

(2) No later than five (5) days after becoming aware of the occurrence of the upset, the permittee furnishes the Director with evidence, including properly signed, contemporaneous operating logs, or other relevant evidence, demonstrating that (i) an upset occurred; (ii) the permittee can identify the specific cause(s) of the upset; (iii) the permittee's facility was being properly operated at the time of the upset; and (iv) the permittee promptly took all reasonable steps to minimize any adverse impact on human health or the environment resulting from the upset.

b. The permittee has the burden of establishing that each of the conditions of Provision II. C.2.a. of this permit have been met to qualify for an exemption from the discharge limitations specified in Provision I.A. of this permit.

D. DUTY TO COMPLY WITH PERMIT, RULES, AND STATUTES

1. Duty to Comply

a. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the AWPCA and the FWPCA and is grounds for enforcement action, for permit termination, revocation and reissuance, suspension, modification; or denial of a permit renewal application.

b. The necessity to halt or reduce production or other activities in order to maintain compliance with the conditions of the permit shall not be a defense for a permittee in an enforcement action.

c. The discharge of a pollutant from a source not specifically identified in the permit application for this permit and not specifically included in the description of an outfall in this permit is not authorized and shall constitute noncompliance with this permit.

d. The permittee shall take all reasonable steps, including cessation of production or other activities, to minimize or prevent any violation of this permit or to minimize or prevent any adverse impact of any permit violation.

e. Nothing in this permit shall be construed to preclude and negate the permittee's responsibility or liability to apply for, obtain, or comply with other ADEM, Federal, State, or Local Government permits, certifications, licenses, or other approvals.

2. Removed Substances

Solids, sludges, filter backwash, or any other pollutant or other waste removed in the course of treatment or control of wastewaters shall be disposed of in a manner that complies with all applicable Department Rules.

3. Loss or Failure of Treatment Facilities

Upon the loss or failure of any treatment facilities, including but not limited to the loss or failure of the primary source of power of the treatment facility, the permittee shall, where necessary to maintain compliance with the discharge limitations specified in Provision I. A. of this permit, or any other terms or conditions of this permit, cease, reduce, or otherwise control production and/or all discharges until treatment is restored. If control of discharge during loss or failure of the primary source of power is to be accomplished by means of alternate power sources, standby generators, or retention of inadequately treated effluent, the permittee must furnish to the Director within six months a certification that such control mechanisms have been installed.

4. Compliance with Statutes and Rules

a. This permit has been issued under ADEM Administrative Code, Chapter 335-6-6. All provisions of this chapter, that are applicable to this permit, are hereby made a part of this permit. A copy of this chapter may be obtained for a small charge from the Office of General Counsel, Alabama Department of Environmental Management, 1400 Coliseum Blvd., Montgomery, AL 36130.

b. This permit does not authorize the noncompliance with or violation of any Laws of the State of Alabama or the United States of America or any regulations or rules implementing such laws. FWPCA, 33 U.S.C. Section 1319, and Code of Alabama 1975, Section 22-22-14.

E. PERMIT TRANSFER, MODIFICATION, SUSPENSION, REVOCATION, AND REISSUANCE

1. Duty to Reapply or Notify of Intent to Cease Discharge

a. If the permittee intends to continue to discharge beyond the expiration date of this permit, the permittee shall file a complete permit application for reissuance of this permit at least 180 days prior to its expiration. If the permittee does not intend to continue discharge beyond the expiration of this permit, the permittee shall submit written notification of this intent which shall be signed by an individual meeting the signatory requirements for a permit application as set forth in ADEM Administrative Code Rule 335-6-6-.09.

b. Failure of the permittee to apply for reissuance at least 180 days prior to permit expiration will void the automatic continuation of the expiring permit provided by ADEM Administrative Code Rule 335-6-6-.06 and should the permit not be reissued for any reason any discharge after expiration of this permit will be an unpermitted discharge.

2. Change in Discharge

a. The permittee shall apply for a permit modification at least 180 days in advance of any facility expansion, production increase, process change, or other action that could result in the discharge of additional pollutants or increase the quantity of a discharged pollutant such that existing permit limitations would be exceeded or that could result in an additional discharge point. This requirement applies to pollutants that are or that are not subject to discharge limitations in this permit. No new or increased discharge may begin until the Director has authorized it by issuance of a permit modification or a reissued permit.

b. The permittee shall notify the Director as soon as it is known or there is reason to believe:

(1) That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:

(a) one hundred micrograms per liter;

(b) two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dini-trophenol; and one milligram per liter for antimony;

(c) five times the maximum concentration value reported for that pollutant in the permit application; or

(2) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:

(a) five hundred micrograms per liter;

(b) one milligram per liter for antimony;

(c) ten times the maximum concentration value reported for that pollutant in the permit application.

3. Transfer of Permit

This permit may not be transferred or the name of the permittee changed without notice to the Director and subsequent modification or revocation and reissuance of the permit to identify the new permittee and to incorporate any other changes as may be required under the FWPCA or AWPCA. In the case of a change in name, ownership or control of the permittee's premises only, a request for permit modification in a format acceptable to the Director is required at least 30 days prior to the change. In the case of a change in name, ownership or control of the permittee's premises accompanied by a change or proposed change in effluent characteristics, a complete permit application is required to be submitted to the Director at least 180 days prior to the change. Whenever the Director is notified of a change in name, ownership or control, he may decide not to modify the existing permit and require the submission of a new permit application.

4. Permit Modification and Revocation

a. This permit may be modified or revoked and reissued, in whole or in part, during its term for cause, including but not limited to, the following:

(1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to revoke and reissue this permit instead of terminating the permit;

(2) If a request to transfer this permit has been received, the Director may decide to revoke and reissue or to modify the permit; or

(3) If modification or revocation and reissuance is requested by the permittee and cause exists, the Director may grant the request.

b. This permit may be modified during its term for cause, including but not limited to, the following:

(1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to modify this permit instead of terminating this permit;

(2) There are material and substantial alterations or additions to the facility or activity generating wastewater which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit;

(3) The Director has received new information that was not available at the time of permit issuance and that would have justified the application of different permit conditions at the time of issuance;

(4) A new or revised requirement(s) of any applicable standard or limitation is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA;

(5) Errors in calculation of discharge limitations or typographical or clerical errors were made;

(6) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, when the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued;

(7) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, permits may be modified to change compliance schedules;

(8) To agree with a granted variance under 30l(c), 30l(g), 30l(h), 30l(k), or 3l6(a) of the FWPCA or for fundamentally different factors;

(9) To incorporate an applicable 307(a) FWPCA toxic effluent standard or prohibition;

(10) When required by the reopener conditions in this permit;

(11) When required under 40 CFR 403.8(e) (compliance schedule for development of pretreatment program);

(12) Upon failure of the state to notify, as required by Section 402(b)(3) of the FWPCA, another state whose waters may be affected by a discharge permitted by this permit;

(13) When required to correct technical mistakes, such as errors in calculation, or mistaken interpretations of law made in determining permit conditions; or

(14) When requested by the permittee and the Director determines that the modification has cause and will not result in a violation of federal or state law, regulations or rules.

5. Permit Termination

This permit may be terminated during its term for cause, including but not limited to, the following:

a. Violation of any term or condition of this permit;

b. The permittee's misrepresentation or failure to disclose fully all relevant facts in the permit application or during the permit issuance process or the permittee's misrepresentation of any relevant facts at any time;

c. Materially false or inaccurate statements or information in the permit application or the permit;

d. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;

e. The permittee's discharge threatens human life or welfare or the maintenance of water quality standards;

f. Permanent closure of the facility generating the wastewater permitted to be discharged by this permit or permanent cessation of wastewater discharge;

g. New or revised requirements of any applicable standard or limitation that is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA that the Director determines cannot be complied with by the permittee; or

h. Any other cause allowed by the ADEM Administrative Code, Chapter 335-6-6.

6. Permit Suspension

This permit may be suspended during its term for noncompliance until the permittee has taken action(s) necessary to achieve compliance.

7. Request for Permit Action Does Not Stay Any Permit Requirement

The filing of a request by the permittee for modification, suspension or revocation of this permit, in whole or in part, does not stay any permit term or condition.

F. COMPLIANCE WITH TOXIC POLLUTANT STANDARD OR PROHIBITION

If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the FWPCA, 33 U.S.C. Section 1317(a), for a toxic pollutant discharged by the permittee and such standard or prohibition is more stringent than any discharge limitation on the pollutant specified in Provision I. A. of this permit, or controls a pollutant not limited in Provision I. A. of this permit, this permit shall be modified to conform to the toxic pollutant effluent standard or prohibition and the permittee shall be notified of such modification. If this permit has not been modified to conform to the toxic pollutant effluent standard or prohibition before the effective date of such standard or prohibition, the permittee shall attain compliance with the requirements of the standard or prohibition within the time period required by the standard or prohibition and shall continue to comply with the standard or prohibition until this permit is modified or reissued.

G. DISCHARGE OF WASTEWATER GENERATED BY OTHERS

The discharge of wastewater, generated by any process, facility, or by any other means not under the operational control of the permittee or not identified in the application for this permit or not identified specifically in the description of an outfall in this permit is not authorized by this permit.

PART III OTHER PERMIT CONDITIONS

A. CIVIL AND CRIMINAL LIABILITY

1. Tampering

Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained or performed under the permit shall, upon conviction, be subject to penalties as provided by the AWPCA.

2. False Statements

Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be subject to penalties as provided by the AWPCA.

3. Permit Enforcement

a. Any NPDES permit issued or reissued by the Department is a permit for the purpose of the AWPCA and the FWPCA and as such any terms, conditions, or limitations of the permit are enforceable under state and federal law.

b. Any person required to have a NPDES permit pursuant to ADEM Administrative Code Chapter 335-6-6 and who discharges pollutants without said permit, who violates the conditions of said permit, who discharges pollutants in a manner not authorized by the permit, or who violates applicable orders of the Department or any applicable rule or standard of the Department, is subject to any one or combination of the following enforcement actions under applicable state statutes.

(1) An administrative order requiring abatement, compliance, mitigation, cessation, clean-up, and/or penalties;

(2) An action for damages;

(3) An action for injunctive relief; or

(4) An action for penalties.

c. If the permittee is not in compliance with the conditions of an expiring or expired permit the Director may choose to do any or all of the following provided the permittee has made a timely and complete application for reissuance of the permit:

(1) initiate enforcement action based upon the permit which has been continued;

(2) issue a notice of intent to deny the permit reissuance. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit;

(3) reissue the new permit with appropriate conditions; or

(4) take other actions authorized by these rules and AWPCA.

4. Relief from Liability

Except as provided in Provision II.C.1 (Bypass) and Provision II.C.2 (Upset), nothing in this permit shall be construed to relieve the permittee of civil or criminal liability under the AWPCA or FWPCA for noncompliance with any term or condition of this permit.

B. OIL AND HAZARDOUS SUBSTANCE LIABILITY

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under Section 311 of the FWPCA, 33 U.S.C. Section 1321.

C. PROPERTY AND OTHER RIGHTS

This permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, trespass, or any infringement of federal, state, or local laws or regulations, nor does it authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any waters of the state or of the United States.

D. AVAILABILITY OF REPORTS

Except for data determined to be confidential under Code of Alabama 1975, Section 22-22-9(c), all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. Effluent data shall not be considered confidential.

E. EXPIRATION OF PERMITS FOR NEW OR INCREASED DISCHARGES

1. If this permit was issued for a new discharger or new source, this permit shall expire eighteen months after the issuance date if construction of the facility has not begun during the eighteen-month period.

2. If this permit was issued or modified to allow the discharge of increased quantities of pollutants to accommodate the modification of an existing facility and if construction of this modification has not begun during the eighteen month period after issuance of this permit or permit modification, this permit shall be modified to reduce the quantities of pollutants allowed to be discharged to those levels that would have been allowed if the modification of the facility had not been planned.

3. Construction has begun when the owner or operator has:

   a. begun, or caused to begin as part of a continuous on-site construction program:

      (1) any placement, assembly, or installation of facilities or equipment; or

      (2) significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment; or

   b. entered into a binding contractual obligation for the purpose of placement, assembly, or installation of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under the paragraph. The entering into a lease with the State of Alabama for exploration and production of hydrocarbons shall also be considered beginning construction.

F. COMPLIANCE WITH WATER QUALITY STANDARDS

1. On the basis of the permittee's application, plans, or other available information, the Department has determined that compliance with the terms and conditions of this permit should assure compliance with the applicable water quality standards.

2. Compliance with permit terms and conditions notwithstanding, if the permittee's discharge(s) from point sources identified in Provision I. A. of this permit cause or contribute to a condition in contravention of state water quality standards, the Department may require abatement action to be taken by the permittee in emergency situations or modify the permit pursuant to the Department's Rules, or both.

3. If the Department determines, on the basis of a notice provided pursuant to this permit or any investigation, inspection or sampling, that a modification of this permit is necessary to assure maintenance of water quality standards or compliance with other provisions of the AWPCA or FWPCA, the Department may require such modification and, in cases of emergency, the Director may prohibit the discharge until the permit has been modified.

G. GROUNDWATER

Unless specifically authorized under this permit, this permit does not authorize the discharge of pollutants to groundwater. Should a threat of groundwater contamination occur, the Director may require groundwater monitoring to properly assess the degree of the problem and the Director may require that the Permittee undertake measures to abate any such discharge and/or contamination.

H. DEFINITIONS

1. Average monthly discharge limitation - means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).

2. Average weekly discharge limitation - means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).

3. Arithmetic Mean – means the summation of the individual values of any set of values divided by the number of individual values.

4. AWPCA - means the Alabama Water Pollution Control Act.

5. BOD – means the five-day measure of the pollutant parameter biochemical oxygen demand.

6. Bypass - means the intentional diversion of waste streams from any portion of a treatment facility.

7. CBOD – means the five-day measure of the pollutant parameter carbonaceous biochemical oxygen demand.

8. Daily discharge - means the discharge of a pollutant measured during any consecutive 24-hour period in accordance with the sample type and analytical methodology specified by the discharge permit.

9. Daily maximum - means the highest value of any individual sample result obtained during a day.

10. Daily minimum - means the lowest value of any individual sample result obtained during a day.

11. Day - means any consecutive 24-hour period.

12. Department - means the Alabama Department of Environmental Management.

13. Director - means the Director of the Department.

14. Discharge - means "[t]he addition, introduction, leaking, spilling or emitting of any sewage, industrial waste, pollutant or other wastes into waters of the state". Code of Alabama 1975, Section 22-22-1(b)(8).

15. Discharge Monitoring Report (DMR) - means the form approved by the Director to accomplish reporting requirements of an NPDES permit.

16. DO – means dissolved oxygen.

17. 8HC – means 8-hour composite sample, including any of the following:

    a. The mixing of at least 5 equal volume samples collected at constant time intervals of not more than 2 hours over a period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.

    b. A sample continuously collected at a constant rate over period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.

18. EPA - means the United States Environmental Protection Agency.

19. FC – means the pollutant parameter fecal coliform.

20. Flow – means the total volume of discharge in a 24-hour period.

21. FWPCA - means the Federal Water Pollution Control Act.

22. Geometric Mean – means the Nth root of the product of the individual values of any set of values where N is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For purposes of calculating the geometric mean, values of zero (0) shall be considered one (1).

23. Grab Sample – means a single influent or effluent portion which is not a composite sample. The sample(s) shall be collected at the period(s) most representative of the discharge.

24. Indirect Discharger – means a nondomestic discharger who discharges pollutants to a publicly owned treatment works or a privately owned treatment facility operated by another person.

25. Industrial User – means those industries identified in the Standard Industrial Classification manual, Bureau of the Budget 1967, as amended and supplemented, under the category "Division D – Manufacturing" and such other classes of significant waste producers as, by regulation, the Director deems appropriate.

26. MGD – means million gallons per day.

27. Monthly Average – means, other than for fecal coliform bacteria, the arithmetic mean of the entire composite or grab samples taken for the daily discharges collected in one month period. The monthly average for fecal coliform bacteria is the geometric mean of daily discharge samples collected in a one month period. The monthly average for flow is the arithmetic mean of all flow measurements taken in a one month period.

28. New Discharger – means a person, owning or operating any building, structure, facility or installation:

    a. from which there is or may be a discharge of pollutants;

    b. that did not commence the discharge of pollutants prior to August 13, 1979, and which is not a new source; and

    c. which has never received a final effective NPDES permit for dischargers at that site.

29. NH3-N – means the pollutant parameter ammonia, measured as nitrogen.

30. Permit application - means forms and additional information that is required by ADEM Administrative Code Rule 335-6-6-.08 and applicable permit fees.

31. Point source - means "any discernible, confined and discrete conveyance, including but not limited to any pipe, channel, ditch, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, . . . from which pollutants are or may be discharged." Section 502(14) of the FWPCA, 33 U.S.C. Section 1362(14).

32. Pollutant - includes for purposes of this permit, but is not limited to, those pollutants specified in Code of Alabama 1975, Section 22-22-1(b)(3) and those effluent characteristics specified in Provision I. A. of this permit.

33. Privately Owned Treatment Works – means any devices or system which is used to treat wastes from any facility whose operator is not the operator of the treatment works, and which is not a "POTW".

34. Publicly Owned Treatment Works – means a wastewater collection and treatment facility owned by the State, municipality, regional entity composed of two or more municipalities, or another entity created by the State or local authority for the purpose of collecting and treating municipal wastewater.

35. Receiving Stream – means the "waters" receiving a "discharge" from a "point source".

36. Severe property damage - means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

37. Significant Source – means a source which discharges 0.025 MGD or more to a POTW or greater than five percent of the treatment work's capacity, or a source which is a primary industry as defined by the U.S. EPA or which discharges a priority or toxic pollutant.

38. Solvent – means any virgin, used or spent organic solvent(s) identified in the F-Listed wastes (F001 through F005) specified in 40 CFR 261.31 that is used for the purpose of solubilizing other materials.

39. TKN – means the pollutant parameter Total Kjeldahl Nitrogen.

40. TON – means the pollutant parameter Total Organic Nitrogen.

41. TRC – means Total Residual Chlorine.

42. TSS – means the pollutant parameter Total Suspended Solids.

43. 24HC – means 24-hour composite sample, including any of the following:

    a. the mixing of at least 12 equal volume samples collected at constant time intervals of not more than 2 hours over a period of 24 hours;

    b. a sample collected over a consecutive 24-hour period using an automatic sampler composite to one sample. As a minimum, samples shall be collected hourly and each shall be no more than one twenty-fourth (1/24) of the total sample volume collected; or

    c. a sample collected over a consecutive 24-hour period using an automatic composite sampler composited proportional to flow.

44. Upset - means an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based permit discharge limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

45. Waters - means "[a]ll waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the state, natural or artificial. This does not include waters which are entirely confined and retained completely upon the property of a single individual, partnership or corporation unless such waters are used in interstate commerce." Code of Alabama 1975, Section 22-22-1(b)(2). Waters "include all navigable waters" as defined in Section 502(7) of the FWPCA, 22 U.S.C. Section 1362(7), which are within the State of Alabama.

46. Week - means the period beginning at twelve midnight Saturday and ending at twelve midnight the following Saturday.

47. Weekly (7-day and calendar week) Average – is the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The calendar week is defined as beginning on Sunday and ending on Saturday. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for the calendar week shall be included in the data for the month that contains the Saturday.

I. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

PART IV ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS

A. BEST MANAGEMENT PRACTICES (BMP) PLAN REQUIREMENTS

1. BMP Plan

The permittee shall develop and implement a Best Management Practices (BMP) Plan which prevents, or minimizes the potential for, the release of pollutants from ancillary activities, including material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations, and sludge and waste disposal areas, to the waters of the State through plant site runoff; spillage or leaks; sludge or waste disposal; or drainage from raw material storage.

2. Plan Content

The permittee shall prepare and implement a best management practices (BMP) plan, which shall:

a. Establish specific objectives for the control of pollutants:

(1) Each facility component or system shall be examined for its potential for causing a release of significant amounts of pollutants to waters of the State due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.

(2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g. precipitation), or circumstances to result in significant amounts of pollutants reaching surface waters, the plan should include a prediction of the direction, rate of flow, and total quantity of pollutants which could be discharged from the facility as a result of each condition or circumstance.

b. Establish specific best management practices to meet the objectives identified under paragraph a. of this section, addressing each component or system capable of causing a release of significant amounts of pollutants to the waters of the State, and identifying specific preventative or remedial measures to be implemented;

c. Establish a program to identify and repair leaking equipment items and damaged containment structures, which may contribute to contaminated stormwater runoff. This program must include regular visual inspections of equipment, containment structures and of the facility in general to ensure that the BMP is continually implemented and effective;

d. Prevent the spillage or loss of fluids, oil, grease, gasoline, etc. from vehicle and equipment maintenance activities and thereby prevent the contamination of stormwater from these substances;

e. Prevent or minimize stormwater contact with material stored on site;

f. Designate by position or name the person or persons responsible for the day to day implementation of the BMP;

g. Provide for routine inspections, on days during which the facility is manned, of any structures that function to prevent stormwater pollution or to remove pollutants from stormwater and of the facility in general to ensure that the BMP is continually implemented and effective;

h. Provide for the use and disposal of any material used to absorb spilled fluids that could contaminate stormwater;

i. Develop a solvent management plan, if solvents are used on site. The solvent management plan shall include as a minimum lists of the solvents on site; the disposal method of solvents used instead of dumping, such as reclamation, contract hauling; and the procedures for assuring that solvents do not routinely spill or leak into the stormwater;

j. Provide for the disposal of all used oils, hydraulic fluids, solvent degreasing material, etc. in accordance with good management practices and any applicable state or federal regulations;

k. Include a diagram of the facility showing the locations where stormwater exits the facility, the locations of any structure or other mechanisms intended to prevent pollution of stormwater or to remove pollutants from stormwater, the locations of any collection and handling systems;

l. Provide control sufficient to prevent or control pollution of stormwater by soil particles to the degree required to maintain compliance with the water quality standard for turbidity applicable to the waterbody(s) receiving discharge(s) under this permit;

m. Provide spill prevention, control, and/or management sufficient to prevent or minimize contaminated stormwater runoff. Any containment system used to implement this requirement shall be constructed of materials compatible with the substance(s) contained and shall prevent the contamination of groundwater. The containment system shall also be

capable of retaining a volume equal to 110 percent of the capacity of the largest tank for which containment is provided;

n. Provide and maintain curbing, diking or other means of isolating process areas to the extent necessary to allow segregation and collection for treatment of contaminated stormwater from process areas;

o. Be reviewed by plant engineering staff and the plant manager; and

p. Bear the signature of the plant manager.

3. Compliance Schedule

The permittee shall have reviewed (and revised if necessary) and fully implemented the BMP plan as soon as practicable but no later than six months after the effective date of this permit.

4. Department Review

a. When requested by the Director or his designee, the permittee shall make the BMP available for Department review.

b. The Director or his designee may notify the permittee at any time that the BMP is deficient and require correction of the deficiency.

c. The permittee shall correct any BMP deficiency identified by the Director or his designee within 30 days of receipt of notification and shall certify to the Department that the correction has been made and implemented.

5. Administrative Procedures

a. A copy of the BMP shall be maintained at the facility and shall be available for inspection by representatives of the Department.

b. A log of the routine inspection required above shall be maintained at the facility and shall be available for inspection by representatives of the Department. The log shall contain records of all inspections performed for the last three years and each entry shall be signed by the person performing the inspection.

c. The permittee shall provide training for any personnel required to implement the BMP and shall retain documentation of such training at the facility. This documentation shall be available for inspection by representatives of the Department. Training shall be performed prior to the date that implementation of the BMP is required.

d. BMP Plan Modification. The permittee shall amend the BMP plan whenever there is a change in the facility or change in operation of the facility which materially increases the potential for the ancillary activities to result in a discharge of significant amounts of pollutants.

e. BMP Plan Review. The permittee shall complete a review and evaluation of the BMP plan at least once every three years from the date of preparation of the BMP plan. Documentation of the BMP Plan review and evaluation shall be signed and dated by the Plant Manager.

B. EFFLUENT TOXICITY LIMITATIONS AND BIOMONITORING REQUIREMENTS

1. The permittee shall perform short-term chronic toxicity tests on the wastewater discharges required to be tested for chronic toxicity by Part I of this permit.

(1) The effluent shall be tested with appropriate replicates of, a control and a minimum of five effluent dilutions, one of which is the In-stream Waste Concentration (IWC) which is 100% effluent.

(2) Noncompliance with the toxicity limit will be demonstrated if the IC_{25} (Inhibition Concentration) for reproduction or growth is less than the IWC. The average reproduction for Ceriodaphnia shall be calculated by dividing the total number of live Ceriodaphnia young in each concentration by the total number of organisms used to initiate that concentration; the average growth for the fathead minnows shall be calculated by dividing the total weight of the surviving minnow larvae in each replicate by the total number of organisms used to initiate that replicate.

a. General Test Requirements

(1) A minimum of three (3) 24-hour composite samples shall be obtained for use in the above biomonitoring tests and collected every other day so that the laboratory receives water samples on the first, third, and fifth day of the seven-day test period. The holding time for each grab sample shall not exceed 36 hours. The control water shall be a water prepared in the laboratory in accordance with the EPA procedure described in EPA 821-R-02-013 or the most current edition or another control water selected by the permittee and approved by the Department.

(2) Effluent toxicity tests in which the control survival is less than 80%, P. promelas dry weight per surviving control organism is less than 0.25 mg, Ceriodaphnia number of young per surviving control organism is less than 15, Ceriodaphnia reproduction where less than 60% of surviving control females produce three broods or in which the other requirements of the EPA Test Procedure are not met shall be unacceptable and the permittee shall rerun the tests as soon as practical within the monitoring period.

(3) In the event of an invalid test, upon subsequent completion of a valid test, the results of all tests, valid and invalid, are reported with an explanation of the tests performed and results.

b. Reporting Requirements

(1) The permittee shall notify the Department in writing within 48 hours after toxicity has been demonstrated by the scheduled test(s) and the results have been reported to the permittee.

(2) Biomonitoring test results obtained during each monitoring period shall be summarized and reported using the appropriate Discharge Monitoring Report (DMR) form approved by the Department. In accordance with Section 2 of this part, an effluent toxicity report containing the information in Section 2 shall be included with the DMR. Two copies of the test results must be submitted to the Department no later than 28 days after the month in which the tests were performed.

c. Additional Testing Requirements

(1) If chronic toxicity is indicated (noncompliance with permit limit), the permittee shall perform two additional valid chronic toxicity tests in accordance with these procedures to determine the extent and duration of the toxic condition. The toxicity tests shall run consecutively beginning on the first calendar week following the date on which the permittee became aware of the permit noncompliance and the results of these tests shall be submitted no later than 28 days following the month in which the tests were performed.

(2) After evaluation of the results of the follow-up tests, the Department will determine if additional action is appropriate and may require additional testing and/or toxicity reduction measures. The permittee may be required to perform a Toxicity Identification Evaluation (TIE) and/or a Toxicity Reduction Evaluation (TRE). The TIE/TRE shall be performed in accordance with the most recent protocols/guidance outlined by EPA (e.g., EPA/600/2-88/062, EPA/600/R-92/080, EPA/600/R-91-003, EPA/600/R-92/081, EPA/833/B-99/022 and/or EPA/600/6-91/005F, etc.)

d. Test Methods

(1) The tests shall be performed in accordance with the latest edition of the "EPA Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms". The Larval Survival and Growth Test, Methods 1000.0, shall be used for the fathead minnow (*Pimephales promelas*) test and the Survival and Reproduction Test, Method 1002.0, shall be used for the cladoceran (*Ceriodaphnia dubia*) test.

2. Effluent Toxicity Testing Reports

The following information shall be submitted with each discharge monitoring report unless otherwise directed by the Department. The Department may at any times suspend or reinstate this requirements or may decrease or increase the frequency of submittals.

a. Introduction

(1) Facility name, location, and country

(2) Permit number

(3) Toxicity testing requirements of permit

(4) Name of receiving water body

(5) Contract laboratory information (if tests are performed under contract)

(a) Name of firm
(b) Telephone number
(c) Address

(6) Objective of test

b. Plant Operations

(1) Discharge Operating schedule (if other than continuous)

(2) Volume of discharge during sample collection to include mean daily discharge on sample collection dates (MGD, CFS, GPM)

(3) Design flow of treatment facility at the time of sampling

c. Source of Effluent and Dilution Water

(1) Effluent samples

(a) Sampling point
(b) Sample collection dates and times (to include composite sample start and finish times)

d. Plant Operatiou

(1) Discharge Operating schedule (if other than continuous)

(2) Volume of discharge during sample collection to include Mean daily discharge on sample collection dates (MGD, CFS, GPM)

(3) Design flow of treatment facility at time of sampling

e. Source of Effluent and Dilution Water

(a) Effluent samples
(b) Sampling point
(c) Sample collection dates and times (to include composite sample start and finish times)
(d) Sample collection method
(e) Physical and chemical data of undiluted effluent samples (water temperature, pH, alkalinity, hardness, specific conductance, total residual chlorine (if applicable), etc.)
(f) Lapsed time from sample collection to delivery
(g) Lapsed time from sample collection to test initiation
(h) Sample temperature when received at the laborator

f. Dilution Water

(1) Source
(2) Collection/preparation date(s) and time(s)
(3) Pretreatment (if applicable)
(4) Physical and chemical characteristics (water temperature, pH, alkalinity, hardness, specific conductance, etc.)

g. Test Conditions

(1) Toxicity test method utilized

(2) End point(s) of test

(3) Deviations from referenced method, if any, and reason(s)

(4) Date and time test started

(5) Date and time test terminated

(6) Type and volume of test chambers

(7) Volume of solution per chamber

(8) Number of organisms per test chamber

(9) Number of replicate test chambers per treatment

(10) Test temperature, pH, and dissolved oxygen as recommended by the method (to include ranges)

(11) Specify if aeration was needed

(12) Feeding frequency, amount, and type of food

(13) Specify if (and how) pH control measures were implemented

(14) Light intensity (mean)

h. Test Organisms

(1) Scientific name

(2) Life stage and age

(3) Source

(4) Disease(s) treatment (if applicable)

i. Quality Assurance

(1) Reference toxicant utilized and source

(2) Date and time of most recent chronic reference toxicant test(s), raw data and current control chart(s). The most recent chronic reference toxicant test shall be conducted within 30 days of the routine.

(3) Dilution water utilized in reference toxicant test

(4) Results of reference toxicant test(s) (NOEC, IC25, PASS/FAIL, etc.), report concentration response relationship and evaluate test sensitivity

(5) Physical and chemical methods utilized

j. Results

(1) Provide raw toxicity data in tabular form, including daily records of affected organisms in each concentration (including controls) and replicate

(2) Provide table of endpoints: NOECs, IC25s, PASS/FAIL, etc. (as required in the applicable NPDES permit)

(3) Indicate statistical methods used to calculate endpoints

(4) Provide all physical and chemical data required by method

(5) Results of test(s) (NOEC, IC25, PASS/FAIL, etc.), report concentration-response relationship (definitive test only), report percent minimum significant difference (PMSD) calculated for sub-lethal endpoints determined by hypothesis testing.

k. Conclusions and Recommendations

(1) Relationship between test endpoints and permit limits

(2) Actions to be taken

l. Conclusions and Recommendations

(1) Relationship between test endpoints and permit limits

(2) Actions to be taken

1/ Adapted from "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", Fourth Edition, October 2002 (EPA 821-R-02-013), Section 10, Report Preparation

C. COOLING WATER INTAKE REQUIREMENTS

Pursuant to 40 CFR 125.90, this permit does not authorize the use of a surface water intake for the purpose of providing cooling water.

LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

Alabama Department of Environmental Management
adem.alabama.gov

1400 Coliseum Blvd. 36110-2400 ▪ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ▪ FAX (334) 271-7950

FACT SHEET

APPLICATION FOR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT TO DISCHARGE POLLUTANTS TO WATERS OF THE STATE OF ALABAMA

Date: April 23, 2020 **Prepared By:** Brian Marshall

NPDES Permit No. AL0024635

1. **Name and Address of Applicant:**

   Tennessee Valley Authority
   Jackson County Highway 33
   Hollywood, AL 35752

2. **Name and Address of Facility:**

   Bellefonte Nuclear Plant
   Jackson County Highway 33
   Hollywood, Alabama 35752

3. **Description of Applicant's Type of Facility and/or Activity Generating the Discharge:**

   Individual Permit - Standard

4. **Applicant's Receiving Waters**

Receiving Waters	Classification
Tennessee River	OAW, PWS, S, F&W
Town Creek	F&W

   For the Outfall latitude and longitude see the permit application.

5. **Permit Conditions:**

   See attached Rationale and Draft Permit.

6. **PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS**

   a. **Comment Period**

   The Alabama Department of Environmental Management proposes to issue this NPDES permit subject to the limitations and special conditions outlined above. This determination is tentative.

   Interested persons are invited to submit written comments on the draft permit to the following address:

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road, S.W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (FAX)

Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
3664 Dauphin Street, Suite B
Mobile, AL 36608
(251) 304-1176
(251) 304-1189 (FAX)

Russell A. Kelly, Chief
Permits and Services Division
Alabama Department of Environmental Management
1400 Coliseum Blvd
(Mailing Address: Post Office Box 301463; Zip 36130-1463)
Montgomery, Alabama 36110-2059
(334) 271-7714

All comments received prior to the closure of the public notice period (see public notice for date) will be considered in the formulation of the final determination with regard to this permit.

b. Public Hearing

A written request for a public hearing may be filed within the public notice period and must state the nature of the issues proposed to be raised in the hearing. A request for a hearing should be filed with the Department at the following address:

Russell A. Kelly, Chief
Permits and Services Division
Alabama Department of Environmental Management
1400 Coliseum Blvd
(Mailing Address: Post Office Box 301463; Zip 36130-1463)
Montgomery, Alabama 36110-2059
(334) 271-7714

The Director shall hold a public hearing whenever it is found, on the basis of hearing requests, that there exists a significant degree of public interest in a permit application or draft permit. The Director may hold a public hearing whenever such a hearing might clarify one or more issues involved in the permit decision. Public notice of such a hearing will be made in accordance with ADEM Admin. Code r. 335-6-6-.21.

c. Issuance of the Permit

All comments received during the public comment period shall be considered in making the final permit decision. At the time that any final permit decision is issued, the Department shall prepare a response to comments in accordance with ADEM Admin. Code r. 335-6-6-.21. **The permit record, including the response to comments, will be available to the public via the eFile System (http://app.adem.alabama.gov/eFile/) or an appointment to review the record may be made by writing the Permits and Services Division at the above address.**

Unless a request for a stay of a permit or permit provision is granted by the Environmental Management Commission, the proposed permit contained in the Director's determination shall be issued and effective, and such issuance will be the final administrative action of the Alabama Department of Environmental Management.

d. Appeal Procedures

As allowed under ADEM Admin. Code chap. 335-2-1, any person aggrieved by the Department's final administrative action may file a request for hearing to contest such action. Such requests should be received by the Environmental Management Commission within thirty days of issuance of the permit. Requests should be filed with the Commission at the following address:

Alabama Environmental Management Commission
1400 Coliseum Blvd
(Mailing Address: Post Office Box 301463; Zip 36130-1463)
Montgomery, Alabama 36110-2059

All requests must be in writing and shall contain the information provided in ADEM Admin. Code r. 335-2-1-.04.

ADEM PERMIT RATIONALE

PREPARED DATE: April 23, 2020
PREPARED BY: Brian Marshall

Permittee Name: Tennessee Valley Authority

Facility Name: TVA Bellefonte Nuclear Plant

Permit Number: AL0024635

PERMIT IS REISSUANCE DUE TO EXPIRATION

DISCHARGE SERIAL NUMBERS & DESCRIPTIONS:

DSN002: Impoundment pond discharge consisting of main plant area SW runoff, non-chlorinated river water, and fire and supply test water associated with electric power generation.

DSN003: Diffuser discharge consisting of cooling tower blowdown and other wastewater resulting from electric power generation.

DSN004: East culvert impoundment discharge consisting of storm water runoff.

DSN005: Plant intake trash including sluicing consisting of intake screen and strainer backwash and intake pumping station sumps/drains.

DSN007: Simulator Training Facility STP

DSN008 - Simulator Training Facility fire protection system flush water

DSN009 – DSN015: Uncontaminated Storm Water Runoff

DSN03C: Cooling tower desilting pond effluent, sump collection ponds consisting of boiler blowdown, building sumps and floor drains, and other miscellaneous low volume wastewaters.

DSN03D: Cooling Tower Blowdown.

DSN03E: Liquid Rad Waste

DSN03F: Condensate demineralizer regneration wastes.

DSN03G: Sump collection ponds discharge consisting of boiler blowdown, building sumps and floor drains, and other miscellaneous low volume wastewaters.

INDUSTRIAL CATEGORY: 40 CFR Part 423

MAJOR: Y

STREAM INFORMATION:

Receiving Stream: Tennessee River (DSN003, DSN005, and DSN013– DSN014)

Classification: Public Water Supply/Swimming/Fish & Wildlife

River Basin: Tennessee

7Q10: 12,500 cfs

1Q10: 7850 cfs

303(d) List: NO

Impairment: Yes - Nutrients

TMDL: NO

Receiving Stream: Town Creek (DSN002, DSN004, DSN009– DSN012, and DSN015)

Classification: Fish & Wildlife

River Basin: Tennessee

7Q10: 0.0 cfs

1Q10: 0.0 cfs

303(d) List: NO

Impairment: N/A

TMDL: NO

DISCUSSION:

Future activity will be the production of electrical power via thermonuclear fission and associated operations.

ADEM Administrative Rule 335-6-10-.12 requires applicants to new or expanded discharges to Tier II waters demonstrate that the proposed discharge is necessary for important economic or social development in the area in which the waters are located. The application submitted by the facility is not for a new or expanded discharge. Therefore, the applicant is not required to demonstrate that the discharge is necessary for economic and social development.

002Q: Impoundment pond discharge consisting of main plant area SW runoff, non-chlorinated stormwater, and fire and supply test water associated with electric power generation

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
pH	-	-	6.0 S.U.	-	8.5 S.U.	Once/Discharge	Grab	EGL
Solids, Total Suspended	-	-	-	-	100 mg/l	Once/Discharge	Grab	EGL
Oil & Grease	-	-	-	-	15 mg/l	Once/Discharge	Grab	EGL
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Once/Discharge	Instantaneous	BPJ

0031: Diffuser discharge consisting of cooling tower blowdown and other wastewater resulting from electric power generation (Non-Operating Facility)

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
Temperature, Water Deg. Fahrenheit	-	-	-	92 F	95 F	Daily	Grab	WQBEL
pH	-	-	6.0 S.U.	-	9.0 S.U.	Weekly	Grab	EGL
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Instantaneous	BPJ
Chlorine, Total Residual	-	-	-	REPORT mg/l	0.2 mg/l	Daily	Grab	EGL

0032: Diffuser discharge consisting of cooling tower blowdown and other wastewater resulting from electric power generation (Operating Facility)

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
Temperature, Water Deg. Fahrenheit	-	-	-	92 F	95 F	Continuous	Recorder	WQBEL
pH	-	-	6.0 S.U.	-	9.0 S.U.	Weekly	Grab	EGL
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Continuous	Totalizer	BPJ
Chlorine, Total Residual	-	-	-	REPORT mg/l	0.2 mg/l	Continuous	Recorder	EGL

003Y: Diffuser discharge consisting of cooling tower blowdown and other wastewater resulting from electric power generation

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
Toxicity, Ceriodaphnia Chronic	-	0 pass(0)/fail(1)	-	-	-	Annually	Composite	WQBEL
Toxicity, Pimephales Chronic	-	0 pass(0)/fail(1)	-	-	-	Annually	Composite	WQBEL

004Y: East culvert impoundment discharge consisting of storm water runoff.

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
pH	-	-	6.0 S.U.	-	8.5 S.U.	Once/Discharge	Grab	EGL
Solids, Total Suspended	-	-	-	60 mg/l	100 mg/l	Once/Discharge	Grab	EGL
Oil & Grease	-	-	-	15 mg/l	20 mg/l	Once/Discharge	Grab	EGL
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Once/Discharge	Instantaneous	BPJ

0051: Plant intake trash including sluicing consisting of intake screen and strainer backwash and intake pumping station sumps/drains

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
pH	-	-	6.0 S.U.	-	9.0 S.U.	Daily	Grab	BPJ
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Pump Log	BPJ

03C1: Cooling tower desilting pond effluent, sump collection ponds consisting of boiler blowdown, building sumps and floor drains, and other miscellaneous low volume wastewaters

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
pH	-	-	6.0 S.U.	-	9.0 S.U.	Once/Discharge	Grab	EGL
Solids, Total Suspended	-	-	-	30 mg/l	100 mg/l	Once/Discharge	Grab	EGL
Oil & Grease	-	-	-	15 mg/l	20 mg/l	Once/Discharge	Grab	EGL
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Once/Discharge	Instantaneous	BPJ

03D1: Cooling Tower Blowdown

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	BPJ
Chlorine, Total Residual	-	-	-	REPORT mg/l	REPORT mg/l	Weekly	Grab	BPJ
Chlorine, Free Available	-	-	-	0.2 mg/l	0.5 mg/l	Weekly	Grab	EGL
Chlorination Duration	-	-	-	-	120 min/day	Weekly	Measured	EGL

03DS: Cooling Tower Blowdown

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
Chromium, Total (As Cr)	-	-	-	0.2 mg/l	0.2 mg/l	Twice per Year	Grab	EGL
Zinc, Total (As Zn)	-	-	-	1.0 mg/l	1.0 mg/l	Twice per Year	Grab	EGL

03DY: Cooling Tower Blowdown

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
Priority Pollutants Total Effluent	-	-	-	BMDL ug/l	BMDL ug/l	Annually	Grab	EGL

03E1: Liquid Rad Waste

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
pH	-	-	6.0 S.U.	-	9.0 S.U.	2X Weekly	Grab	EGL
Solids, Total Suspended	-	-	-	30 mg/l	100 mg/l	2X Weekly	Grab	EGL
Oil & Grease	-	-	-	15 mg/l	20 mg/l	2X Weekly	Grab	EGL
Copper, Total (As Cu)	-	-	-	1.0 mg/l	1.0 mg/l	2X Weekly	Grab	EGL
Iron, Total (As Fe)	-	-	-	1.0 mg/l	1.0 mg/l	2X Weekly	Grab	EGL
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	2X Weekly	Calculated	BPJ

03F1: Condensate demineralizer regneration wastes

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
pH	-	-	6.0 S.U.	-	9.0 S.U.	2X Weekly	Grab	EGL
Solids, Total Suspended	-	-	-	30 mg/l	100 mg/l	2X Weekly	Grab	EGL
Oil & Grease	-	-	-	15 mg/l	20 mg/l	2X Weekly	Grab	EGL
Copper, Total (As Cu)	-	-	-	1.0 mg/l	1.0 mg/l	2X Weekly	Grab	EGL
Iron, Total (As Fe)	-	-	-	1.0 mg/l	1.0 mg/l	2X Weekly	Grab	EGL
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	2X Weekly	Calculated	BPJ

03G1: Sump collection ponds discharge consisting of boiler blowdown, building sumps and floor drains, and other miscellaneous low volume wastewaters

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
pH	-	-	6.0 S.U.	-	9.0 S.U.	Once/Discharge	Grab	EGL
Solids, Total Suspended	-	-	-	30 mg/l	100 mg/l	Once/Discharge	Grab	EGL
Oil & Grease	-	-	-	15 mg/l	20 mg/l	Once/Discharge	Grab	EGL
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Once/Discharge	Instantaneous	BPJ

*Basis for Permit Limitation

- BPJ – Best Professional Judgment
- WQBEL – Water Quality Based Effluent Limits
- EGL – Federal Effluent Guideline Limitations
- 303(d) – 303(d) List of Impaired Waters
- TMDL – Total Maximum Daily Load Requirements

Discussion

DSN002Q: Impoundment pond discharge consisting of main plant area SW runoff, non-chlorinated river water, and fire and supply test water associated with electric power generation.

The wastewater sources contributing to this outfall are not regulated under 40 CFR 423.

Flow
The flow will continue to be in the permit on a monitor only basis. The monitoring frequency will be once per discharge not to exceed once per quarter as in previous permit.

pH
The pH limitations in the permit will be a daily minimum of 6.0 s.u. and a daily maximum of 8.5 s.u. This is in accordance with water quality standards for Fish and Wildlife streams, which is 6.0 to 8.5 s.u. pH per ADEM Administrative Rule 335.6-10-.09(5)(e)(2). The monitoring frequency will be once per discharge not to exceed once per quarter as in the previous permit.

Total Suspended Solids (TSS)
TSS will have a daily maximum limitation of 100 mg/l based on Best Professional Judgment (BPJ). The monitoring frequency will be once per discharge not to exceed once per quarter as in previous permit.

Oil and Grease
Oil and Grease will have a daily maximum limitation of 15 mg/l based on Best Professional Judgment (BPJ). The monitoring frequency will be once per discharge not to exceed once per quarter as in previous permit.

DSN0031: Diffuser discharge consisting of cooling tower blowdown and other wastewater resulting from electric power generation (Non-Operating Facility).

DSN0032: Diffuser discharge consisting of cooling tower blowdown and other wastewater resulting from electric power generation(Operating Facility).

The wastewater sources contributing to this outfall are regulated under 40 CFR 423. The permit limits for DSN003 are tiered so that if/when the plant does commence with full nuclear power production, toxicity testing will be required. In addition, the second tier (DSN0032) has specific sampling requirements for Chlorine and Temperature that are associated with an operating facility.

Flow
The flow will continue to be in the permit on a monitor only basis. The monitoring frequency will be daily as in previous permit.

pH
The pH will be in the permit with a daily minimum of 6.0 s.u. and a daily maximum of 9.0 s.u. This is in accordance with EPA effluent guidelines 40 CFR Part 423.12(b)(1) for the Steam Electric Power Generating Point Source Category. Water quality standards for Fish and Wildlife streams is 6.0 to 8.5 s.u. pH per ADEM Administrative Rule 335.6-10-.09(5)(e)(2), however, the effluent guideline standard of 6.0 to 9.0 s.u. should be protective of the receiving stream. The monitoring frequency will be weekly as in previous permit.

Temperature
The daily maximum temperature will be 95°F in accordance with the CORMIX model (see attached) run by ADEM's Water Quality Section. The monthly average will be 92°F as in the previous permit. The monitoring frequency will be daily as in previous permit.

Total Residual Chlorine (TRC)
In accordance with EPA Effluent Guidelines 40 CFR 423.13(b)(1), the daily maximum limit for TRC is 0.2 mg/l. This limit is continued from the previous permit and the monitoring frequency will be daily as in previous permit.

DSN003Y: Diffuser discharge consisting of cooling tower blowdown and other wastewater resulting from electric power generation.

Chronic Toxicity Biomonitoring
The facility will be required to complete chronic toxicity testing on undiluted effluent annually once the facility is fully operational.

DSN004Y: East culvert impoundment discharge consisting of storm water runoff

The discharges contributing to this outfall are not regulated by 40 CFR 423. Therefore, the limits that were issued in the previous permit (based on BPJ) will be continued. Based on a request from the facility, monitoring requirements are being changed from once per discharge (quarterly) to once per discharge (annually). This is also supported by historic sampling information.

Flow
The flow will continue to be in the permit on a monitor only basis. The monitoring frequency will be once per discharge not to exceed once per year.

pH
The pH limitations in the permit will be a daily minimum of 6.0 s.u. and a daily maximum of 8.5 s.u. This is in accordance with water quality standards for Fish and Wildlife streams, which is 6.0 to 8.5 s.u. pH per ADEM Administrative Rule 335.6-10-.09(5)(e)(2). The monitoring frequency will be once per discharge not to exceed once per year.

Total Suspended Solids (TSS)
TSS will have a daily maximum limitation of 100 mg/l and a monthly average of 60 mg/l. The monitoring frequency will be once per discharge not to exceed once per year.

Oil and Grease
Oil and Grease will have a daily maximum limitation of 20 mg/l and a monthly average of 15 mg/l. The monitoring frequency will be once per discharge not to exceed once per year.

DSN0051: Plant intake trash including sluicing consisting of intake screen and strainer backwash and intake pumping station sumps/drains.

No monitoring requirements apply unless biocides are added to the intake pump pit. The discharges contributing to this outfall are not regulated by 40 CFR 423. Therefore, the limits that were issued in the previous permit (based on BPJ) will be continued.

Flow
The flow will continue to be in the permit on a monitor only basis. The monitoring frequency will be daily.

pH
The pH will be in the permit with a daily minimum of 6.0 s.u. and a daily maximum of 9.0 s.u. The monitoring frequency will be daily.

Total Residual Chlorine (TRC)
Based on BPJ, TRC monitoring will be removed from this outfall as there is no chlorination and the discharge is raw river water.

DSN0071: Simulator training facility treated sanitary, equipment room floor drains, and laboratory wastewaters.

This outfall is being removed from the permit because as of September 19, 2014, TVA has completed connection of the simulator training facility sanitary waste discharge to the Scottsboro Sewer System and discharges from DSN0071 have ended. TVA requested the removal in an October 2, 2014 letter to the Department.

DSN0081: Simulator Training Facility fire protection system flush water.

The wastewater source contributing to this outfall is not regulated under 40 CFR 423.

TVA performs a once per year fire protection system flush of approximately 420 gallons of potable water which is directed overland. BMPs are utilized to reduce the potential of discharge to Town Creek via DSN008, and there have been no discharges during the current permit term.

Per the facility's request, Outfall DSN0081 monitoring requirements have been removed in this draft permit. TVA believes that discharges can be managed through the implementation of BMPs in accordance with Part IV.A of the permit.

DSN03C1: Cooling tower desilting pond effluent, sump collection ponds consisting of boiler blowdown, building sumps and floor drains, and other miscellaneous low volume wastewaters.

This outfall is used in lieu of sump collection ponds, DSN003G, during deferment. These waste streams are regulated by 40 CFR 423.12(b)(3) as low volume waste. Low volume wastewater sources are defined by 40 CFR 423.11(b) and include, but are not limited

to, wastewater from wet scrubber air pollution control systems, ion exchange water treatment system, water treatment evaporator blowdown, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, and re-circulating house service water systems. The pollutants of concern based on the guidelines are pH, TSS, Oil and Grease and Flow.

Flow
Monitoring for flow will continue from the previous permit at once per discharge not to exceed once per month. Flow will be monitor only.

pH
Based on 40 CFR 423.12(b)(1) the allowable pH range for direct discharge is 6.0 to 9.0 s.u. Although the in-stream water quality standard for pH is 6.0 to 8.5, it is the opinion of the permit writer that the discharge at a pH range of 6.0 to 9.0 s.u. will not adversely affect the in-stream pH based on the low effluent/stream flow ratio. pH will be monitored at once per discharge not to exceed once per month.

TSS
40 CFR 423.12(b)(3) limits TSS to 100 mg/l as a daily max and 30 mg/l as a monthly average. Monitoring is continued at once per discharge not to exceed once per month.

Oil and Grease
40 CFR 423.12(b)(3) limits Oil and Grease to 20 mg/l as a daily max and 15 mg/l as a monthly average. Monitoring is continued at once per discharge not to exceed once per month.

DSN03D1: Cooling Tower Blowdown.

This discharge is regulated by 40 CFR 423. 12(b) BPT and 423.13(d)(1) BAT.

Flow
Monitoring for flow will be continued from the previous permit at once per day as monitor only.

Total Residual Chlorine
Monitoring for total residual chlorine on a once per week basis is being continued from the previous permit.

Free Available Chlorine
Discharges generated from cooling tower blowdown are subject to 40 CFR 423.15(j)(1). The guideline limits Free Available Chlorine (FAC) to 0.5 mg/l as a daily max and 0.2 mg/l as a monthly average. FAC will be monitored once per week.

Time of Chlorine Discharge
Per 40 CFR 423.15(j)(1), the permittee is not allowed to discharge FAC or Total Residual Chlorine (TRC) from any unit more than two hours in any one day.

DSN03DS: Cooling Tower Blowdown.

Total Zinc & Total Chromium
Per 40 CFR 423.13(d)(1) total zinc is limited to 1.0 mg/l as a daily maximum and 1.0 mg/l as a monthly average. Total Chromium is limited to 0.2 mg/l as a daily maximum and 0.2 mg/l as a monthly average. Monitoring for these two parameters is continued at once per six months.

DSN03DY: Cooling Tower Blowdown.

Priority Pollutants
In accordance with 40 CFR 423.15(j)(1), the discharge shall not contain detectable amounts of the 129 priority pollutants, except chromium and zinc. The priority pollutants are listed by the guidelines. Monitoring for the priority pollutants is required once per year unless approval for alternate methods of demonstrating compliance is acquired by the permittee.

DSN03E1: Liquid Rad Waste.

DSN03F1: Condensate demineralizer regeneration wastes.

These internal discharges are comprised of metal cleaning wastes and are regulated under 40 CFR 423.12(b)(5)

Flow
Monitoring for flow will be continued from the previous permit at twice per week as monitor only.

pH
Based on 40 CFR 423.12(b)(1) the allowable pH range for direct discharge is 6.0 to 9.0 s.u. Although the in-stream water quality standard for pH is 6.0 to 8.5, it is the opinion of the permit writer that the discharge at a pH range of 6.0 to 9.0 s.u. will not adversely affect the in-stream pH based on the low effluent/stream flow ratio. Monitoring for pH will continue at twice per week.

TSS
40 CFR 423.12(b)(3) limits TSS to 100 mg/l as a daily max and 30 mg/l as a monthly average. Monitoring is continued at twice per week.

Oil and Grease
40 CFR 423.12(b)(3) limits Oil and Grease to 20 mg/l as a daily max and 15 mg/l as a monthly average. Monitoring is continued at twice per week.

Total Copper & Total Iron

Per 40 CFR 423.13(d)(1) total copper is limited to 1.0 mg/l as a daily maximum and 1.0 mg/l as a monthly average. Total Iron is limited to 1.0 mg/l as a daily maximum and 1.0 mg/l as a monthly average. Monitoring for these two parameters is continued at twice per week. Monitoring requirements and limitations only apply during the discharge of metal cleaning wastewaters

DSN03G1: Sump collection ponds discharge consisting of boiler blowdown, building sumps and floor drains, and other miscellaneous low volume wastewaters.

This discharge is comprised of low volume wastewater and is regulated under 40 CFR 423.12(b)(3)

Flow
Monitoring for flow will continue from the previous permit at once per discharge not to exceed once per week. Flow will not be limited but will be monitor only.

pH
Based on 40 CFR 423.12(b)(1) the allowable pH range for direct discharge is 6.0 to 9.0 s.u. Although the in-stream water quality standard for pH is 6.0 to 8.5, it is the opinion of the permit writer that the discharge at a pH range of 6.0 to 9.0 s.u. will not adversely affect the in-stream pH based on the low effluent/stream flow ratio. Monitoring for pH will continued at once per discharge not to exceed once per week.

TSS
40 CFR 423.12(b)(3) limits TSS to 100 mg/l as a daily max and 30 mg/l as a monthly average. Monitoring is continued at once per discharge not to exceed once per week.

Oil and Grease
40 CFR 423.12(b)(3) limits Oil and Grease to 20 mg/l as a daily max and 15 mg/l as a monthly average. Monitoring is continued at once per discharge not to exceed once per week.

DSN0091-DSN0151: Uncontaminated storm water runoff.

The current permit does not include discharge monitoring requirements for these outfalls. However, the permittee is required to develop and implement a Best Management Practices (BMP) Plan to control/limit pollutants in the storm water runoff.

Petroleum storage area requirements.

The permittee is authorized to discharge only uncontaminated storm water from diked storage areas.

1. The facility will have a valid SPCC Plan pursuant as specified below:

2. Best Management Practices (BMP) are used in draining the diked area. BMP is defined as use of a portable skimmer or similar device or use of absorbent material to remove oil and grease (as indicated by the presence of sheen) immediately prior to draining.

3. Monitoring records shall be maintained in the form of a log and shall contain the following information, as a minimum:

    a. Date and time of discharge.
    b. Estimated volume of discharge.

c. Initials of person making visual inspection and authorizing discharge.
d. Observed conditions of stormwater discharged.

Best Management Practices (BMPs) are believed to be the most effective way to control the contamination of stormwater from areas of industrial activities. This facility is required to maintain a BMP plan. The requirements of the BMP plan call for minimization of stormwater contact with waste materials, products and by-products, and for prevention of spills or loss of fluids from equipment maintenance activities.

Cooling Water Intake Requirements

Pursuant to 40 CFR 125.90, this permit does not authorize the use of a surface water intake for the purpose of providing cooling water.

General Information

Comments Included: ☑ Yes ☐ No

Information Verified By: JEH

Year File Was Started: 1997

Date of MZ Response: 4/7/1999

Name of Receiving Stream: Tennessee River

Previous file name: Or-AKA (if applicable)

Facility Name: Bellefonte Nuclear Plant

Previous Name of Discharger: Or-AKA (if applicable)

11 Digit HUC Code USGS: 06030001170

Other Point Sources? ☐ Yes ☑ No

12 Digit HUC Code: 06030010407

Sources Included in the Model:

River Basin: Tennessee

County: Jackson

Use Classification: PWS / S / F&W

Permit Information

Discharge Latitude: 34.6975

Discharge Longitude: -85.9192

Print Record

Close Form

Type of Discharge:
- ☐ Municipal
- ☑ Industrial
- ☐ Semipublic/Private

Site Visit Completed? ☐ Yes ☑ No

Date of Site Visit:

Permit Number: AL0024635

Permit Status: Active

Hydrology

Drainage Area:

Stream 7Q10: 12500

Stream 1Q10: 7850

Stream 7Q2:

Methods Used to Calculate:

ADEM Estimate w/USGS Gage Data

ADEM Estimate w/USGS Gage Data

Date of MZ Analysis: 4/7/1999

Model Completed by: Charles Reynolds

Discharge Design Flow: 97.9 MGD

Seasonal? ☐ Yes ☑ No

If not seasonal, only the summer sections will be used

Pollutant Category?

Whole Effluent Toxicity (WET) ☐ Thermal ☑ Pathogens ☐

WET Parameters

Summer

Acute

Ambient Streamflow		cfs
ZID Length		Meters
ZID IWC		%

Chronic

Ambient Streamflow		cfs
Mixing Zone Length		Meters
Mixing Zone IWC		%

Winter

Acute

Ambient Streamflow		cfs
ZID Length		Meters
ZID IWC		%

Chronic

Ambient Streamflow		cfs
Mixing Zone Length		Meters
Mixing Zone IWC		%

Thermal Parameters

Summer

Ambient Streamflow	12500	cfs
Mixing Zone Length	229	Meters
Max. Effluent Temp	35	°C

Winter

Ambient Streamflow		cfs
Mixing Zone Length		Meters
Max. Effluent Temp		°C

Pathogen Parameters

Summer

Ambient Streamflow		cfs
ZID Length		Meters
Max. Effluent Fecal Conc		Cols/100 mls
Max. Effluent Enterococci Conc (for coastal waters)		Cols/100 mls

Winter

Ambient Streamflow		cfs
ZID Length		Meters
Max. Effluent Fecal Conc		Cols/100 mls
Max. Effluent Enterococci Conc (for coastal waters)		Cols/100 mls

Comments and/or Notations

River Mile 391.2 // 2.5 F // sec 17, t4s,r7e, 219 NW HOLLYWOOD // See file for additional scenarios.

If comments are made, check the "yes" box at the top of page one.

Last Revision: 4/30/06

Tennessee Valley Authority, 1101 Market Street, BR 2C, Chattanooga, Tennessee 37402

October 17, 2019

Mr. Brian Marshall
Water Division
Alabama Department of Environmental
Management (ADEM)
Permits and Services Division
1400 Coliseum Boulevard
Montgomery, Alabama 36110

Dear Mr. Marshall:

TENNESSEE VALLEY AUTHORITY (TVA) – BELLEFONTE NUCLEAR PLANT (BLN) – NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT NUMBER AL0024635 – APPLICATION FOR RENEWAL

Enclosed is the BLN NPDES permit renewal application which includes ADEM Form 187, U.S. Environmental Protection Agency Forms 1, 2C, 2F, ADEM Form 450, and a check in the amount of $19,005 to cover NPDES permit renewal processing. TVA would appreciate consideration of the following in the renewed permit:

General

1. TVA requests the renewal permit have an effective date at least 30-days post-issuance in order to allow adequate time for internal distribution and implementation of any permit changes.

2. BLN remains in deferred status and there are no plans to increase construction activity or operate the plant within the next permit term. Operations of the water intake structure only occur as needed in order to provide make-up water to the facility's fire protection system and other miscellaneous uses. The facility does not withdraw water for cooling purposes. The water intake structure would need to undergo modification prior to being placed in service for plant operation. Therefore, TVA has not completed Section D of ADEM Form 187 because the information would not be representative of future operations of the water intake structure.

3. Because DSN 03C may be used in lieu of DSN 03G during deferment, Form 2C informational requirements are combined for these outfalls.

DSN 004

4. TVA has continued to sample storm water discharging from DSN 004 on a quarterly basis throughout the current permit term. This drainage area is predominantly comprised of impervious gravel surfaces meant to serve as construction lay down areas and enclosed storage warehouses. Effluent quality from storm water samples collected at DSN 004 have consistently met permit limitations under the existing plant conditions, and there are no plans to pursue finishing construction of the plant. As a result, TVA does not expect runoff water quality to change from current conditions based on planned operations at the site, and TVA requests effluent monitoring at outfall DSN 004 be reduced from quarterly to annual in the reissued permit.

DSN 008

5. TVA performs a once per year fire protection system flush of approximately 420 gallons of potable water which is directed overland. Best management practices (BMPs) are utilized to reduce the potential of discharge to Town Creek via DSN 008, and there have been no discharges during the current permit term. TVA requests monitoring requirements associated with DSN 008 discharges be removed in the reissued permit. Rather, TVA believes discharges can be managed through the implementation of BMPs in accordance with Part IV.A. of the permit or through the inclusion of an Allowable Non-Storm Water Discharges section under Part IV of the permit similar to that included in Part IV.C. of AL0003867 and AL0003875 for TVA's Colbert and Widows Creek facilities.

Representative Storm Water Outfall Certifications

6. TVA has been unable to collect storm water samples from an event that meets Form F requirements at DSN 004. As a result, only historical data for those constituents collected during routine monitoring as required by the permit have been provided in Table A of Form F. Based on historical data submitted with previous permit applications, ongoing quarterly monitoring performed for routine compliance, and the nature of the drainage area and potential pollutant sources further described in the narrative description of the drainage area for this outfall, TVA has submitted ADEM Form 450 identifying permit renewal samples collected at DSN 002 as being representative of DSN 004.

7. TVA has been unable to collect storm water samples from a storm water event that meets Form F requirements at DSN 011, 012, and 015. Based on historical data submitted with previous permit applications and the nature of the drainage area and potential pollutant sources further described in the narrative description of the drainage area for these outfalls, TVA has submitted ADEM Form 450 identifying permit renewal samples collected at DSN 010 as being representative of DSN 011, 012, and 015.

If you have questions or need any additional information concerning this NPDES permit application, please contact Brad Love at (423) 751-8518 or by e-mail at bmlove@tva.gov.

Sincerely,

Terry E. Cheek

Terry E. Cheek
Senior Manager
Water Permits, Compliance, and Monitoring

Enclosures

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (ADEM)
NPDES INDIVIDUAL PERMIT APPLICATION
SUPPLEMENTARY INFORMATION FOR INDUSTRIAL FACILITIES

Instructions: This form should be used to submit the required supplementary information for an application for an NPDES individual permit for industrial facilities. The completed application should be submitted to ADEM in duplicate. If insufficient space is available to address any item, please continue on an attached sheet of paper. Please mark "N/A" in the appropriate box when an item is not applicable to the applicant. Please type or print legibly in blue or black ink. Mail the completed application to:

ADEM-Water Division
Industrial Section
P O Box 301463
Montgomery, AL 36130-1463

RECEIVED
OCT 18 2019
IND. MUN BRANCH

PURPOSE OF THIS APPLICATION

- ☐ Initial Permit Application for New Facility*
- ☐ Initial Permit Application for Existing Facility*
- ☐ Modification of Existing Permit
- ☒ Reissuance of Existing Permit
- ☐ Revocation & Reissuance of Existing Permit

* *An application for participation in the ADEM's Electronic Environmental (E2) Reporting must be submitted to allow permittee to electronically submit reports as required.*

SECTION A – GENERAL INFORMATION

1. Facility Name: Bellefonte Nuclear Plant
   a. Operator Name: Tennessee Valley Authority
   b. Is the operator identified in A.1.a, the owner of the facility? ☒ Yes ☐ No
   If no, provide name and address of the operator and submit information indicating the operator's scope of responsibility for the facility.
2. NPDES Permit Number: AL 0 0 2 4 6 3 5 (not applicable if initial permit application)
3. SID Permit Number (if applicable): IU ___ ___ - ___ ___ - ___ ___ ___ ___ ___
4. NPDES General Permit Number (if applicable): ALG ___ ___ ___ ___ ___ ___
5. Facility Physical Location: **(Attach a map with location marked; street, route no. or other specific identifier)**
   Street: Jackson County Highway 33
   City: Hollywood County: Jackson State: Alabama Zip: 35752
   Facility Location (Front Gate): Latitude: 34.711381 Longitude: -85.925881
6. Facility Mailing Address: PO Box 200
   City: Hollywood County: Jackson State: Alabama Zip: 35752
7. Responsible Official (as described on the last page of this application):
   Name and Title: Steven Douglas, Vice President Nuclear Engineering
   Address: 1101 Market Street, LP 3R-C
   City: Chattanooga State: Tennessee Zip: 37402
   Phone Number: 423-751-6207 Email Address: smdouglas@tva.gov
8. Designated Facility Contact:
   Name and Title: James Chardos, Bellefonte Site Manager
   Phone Number: 256-574-8228 Email Address: jschardos@tva.gov

9. Designated Discharge Monitoring Report (DMR) Contact:

Name and Title: Lyndell Williams, Environmental Scientist

Phone Number: 423-825-3008 Email Address: lpwilliams@tva.gov

10. Type of Business Entity:

☐ Corporation ☐ General Partnership ☐ Limited Partnership ☐ Limited Liability Company ☐ Sole Proprietorship

■ Other (Please Specify) Federal

11. Complete this section if the Applicant's business entity is a Corporation

a) Location of Incorporation:

Address: N/A

City: County: State: Zip:

b) Parent Corporation of Applicant:

Name: N/A

Address:

City: State: Zip:

c) Subsidiary Corporation(s) of Applicant:

Name: N/A

Address:

City: State: Zip:

d) Corporate Officers:

Name: N/A

Address:

City: State: Zip:

Name:

Address:

City: State: Zip:

e) Agent designated by the corporation for purposes of service:

Name: N/A

Address:

City: State: Zip:

12. If the Applicant's business entity is a Partnership, please list the general partners.

Name: N/A Name:

Address: Address:

City: State: Zip: City: State: Zip:

13. If the Applicant's business entity is a Proprietorship, please enter the proprietor's information.

Name: N/A

Address: _____

City: _____ State: _____ Zip: _____

14. Permit numbers for Applicant's previously issued NPDES Permits and identification of any other State of Alabama Environmental Permits presently held by the Applicant, its parent corporation, or subsidiary corporations within the State of Alabama:

Permit Name	Permit Number	Held By
See Attachment 1		

15. Identify all Administrative Complaints, Notices of Violation, Directives, Administrative Orders, or Litigation concerning water pollution, if any, against the Applicant, its parent corporation or subsidiary corporations within the State of Alabama within the past five years (attach additional sheets if necessary):

Facility Name	Permit Number	Type of Action	Date of Action
N/A			

SECTION B – BUSINESS ACTIVITY

1. Indicate applicable Standard Industrial Classification (SIC) Codes for all processes. If more than one applies, list in order of importance:

a. 4911

b. _____

c. _____

d. _____

e. _____

f. _____

2. If your facility conducts or will be conducting any of the processes listed below (regardless of whether they generate wastewater, waste sludge, or hazardous waste), place a check beside the category of business activity (check all that apply):

Industrial Categories

- ☐ Aluminum Forming
- ☐ Asbestos Manufacturing
- ☐ Battery Manufacturing
- ☐ Can Making
- ☐ Canned and Preserved Fruit and Vegetables
- ☐ Canned and Preserved Seafood
- ☐ Cement Manufacturing
- ☐ Centralized Waste Treatment
- ☐ Carbon Black
- ☐ Coal Mining
- ☐ Coil Coating
- ☐ Copper Forming
- ☐ Electric and Electronic Components Manufacturing
- ☐ Electroplating
- ☐ Explosives Manufacturing
- ☐ Feedlots
- ☐ Ferroalloy Manufacturing
- ☐ Fertilizer Manufacturing
- ☐ Foundries (Metal Molding and Casting)
- ☐ Glass Manufacturing
- ☐ Grain Mills
- ☐ Gum and Wood Chemicals Manufacturing
- ☐ Inorganic Chemicals
- ☐ Iron and Steel
- ☐ Leather Tanning and Finishing
- ☐ Metal Finishing
- ☐ Meat Products
- ☐ Metal Molding and Casting
- ☐ Metal Products
- ☐ Nonferrous Metals Forming
- ☐ Nonferrous Metals Manufacturing
- ☐ Oil and Gas Extraction
- ☐ Organic Chemicals Manufacturing
- ☐ Paint and Ink Formulating
- ☐ Paving and Roofing Manufacturing
- ☐ Pesticides Manufacturing
- ☐ Petroleum Refining
- ☐ Phosphate Manufacturing
- ☐ Photographic
- ☐ Pharmaceutical
- ☐ Plastic & Synthetic Materials
- ☐ Plastics Processing Manufacturing
- ☐ Porcelain Enamel
- ☐ Pulp, Paper, and Fiberboard Manufacturing
- ☐ Rubber
- ☐ Soap and Detergent Manufacturing
- ☒ Steam and Electric
- ☐ Sugar Processing
- ☐ Textile Mills
- ☐ Timber Products
- ☐ Transportation Equipment Cleaning
- ☐ Waste Combustion
- ☐ Other (specify)_____

A facility with processes inclusive in these business areas may be covered by Environmental Protection (EPA) categorical standards. These facilities are termed "categorical users" and should skip to question 2 of Section C.

3. Give a brief description of all operations at this facility including primary products or services (attach additional sheets if necessary):

Bellefonte Nuclear Plant is an inactive, partially constructed nuclear power plant. Potential future activity may consist of finishing construction of the facility and production of electrical power via thermonuclear fission.

SECTION C – WASTEWATER DISCHARGE INFORMATION

Facilities that checked activities in B.2 and are considered Categorical Industrial Users should skip to C.2 of this section.

1. **For Non-Categorical Users Only:** Provide wastewater flows for each of the processes or proposed processes. Using the process flow schematic (Figure 1), enter the description that corresponds to each process. **(The flow schematic should include all treatment units as well as monitoring and discharge points).** [New facilities should provide estimates for each discharge.]

Process Description	Last 12 Months (gals/day) Highest Month Avg. Flow	Highest Flow Year of Last 5 (gals/day) Monthly Avg. Flow	Discharge Type (batch, continuous, intermittent)
N/A			

If batch discharge occurs or will occur, indicate: [new facilities may estimate.]

a. Number of batch discharges: N/A per day

b. Average discharge per batch: N/A (GPD)

c. Time of batch discharges N/A (days of week) at N/A (hours of day)

d. Flow rate: N/A gallons/minute

e. Percent of total discharge: N/A

Non-Process Discharges (e.g. non-contact cooling water)	Last 12 Months (gals/day) Highest Month Avg. Flow	Highest Flow Year of Last 5 (gals/day) Monthly Avg. Flow
N/A		

2. **Complete this Section only if you are subject to Categorical Standards and plan to directly discharge the associated wastewater to a water of the State.** If Categorical wastewater is discharged exclusively via an indirect discharge to a public or privately-owned treatment works, check "Yes" in the appropriate space below and proceed directly to part 2.c .

☐ Yes

For Categorical Users: Provide the wastewater discharge flows or production (whichever is applicable by the effluent guidelines) for each of your processes or proposed processes. Using the process flow schematic (Figure 1, pg 14), enter the description that corresponds to each process. [New facilities should provide estimates for each discharge.]

2a.

Regulated Process	Applicable Category	Applicable Subpart	Type of Discharge Flow (batch, continuous, intermittent)
See Attachment 2			

2b.

Process Description	Last 12 Months (gals/day), (lbs/day), etc. Highest Month Average*	Highest Flow Year of Last 5 (gals/day), (lbs/day), etc. Monthly Average*	Discharge Type (batch, continuous, intermittent)
See Attachment 2			

*** Reported values should be expressed in units of the applicable Federal production-based standard. For example, flow (MGD), production (pounds per day), etc.**

If batch discharge occurs or will occur, indicate: [new facilities may estimate.]

a. Number of batch discharges: < 1 per day

b. Average discharge per batch: 482,500 (GPD)

c. Time of batch discharges < 1 (days of week) at ~5-7 hrs per discharge (hours of day)

d. Flow rate: ~800 - 1,600 gallons/minute

e. Percent of total discharge: 99%

2c.

Non categorical Process Description	Last 12 Months (gals/day) Highest Month Avg. Flow	Highest Flow Year of Last 5 (gals/day) Monthly Avg. Flow	Discharge Type (batch, continuous, intermittent)
N/A			

If batch discharge occurs or will occur, indicate: [new facilities may estimate.]

a. Number of batch discharges: N/A per day

b. Average discharge per batch: N/A (GPD)

c. Time of batch discharges N/A (days of week) at (hours of day)

d. Flow rate: N/A gallons/minute

e. Percent of total discharge: N/A

2d.

Non-Process Discharges (e.g. non-contact cooling water)	Last 12 Months (gals/day) Highest Month Avg. Flow	Highest Flow Year of Last 5 (gals/day) Monthly Avg. Flow
See Attachment 2		

All Applicants must complete C.3 – C.6.

3. Do you share an outfall with another facility? ☐ Yes ■ No (If no, continue to C.4)

For each shared outfall, provide the following:

Applicant's Outfall No.	Name of Other Permittee/Facility	NPDES Permit No.	Where is sample collected by Applicant?
N/A			
N/A			
N/A			

4. Do you have, or plan to have, automatic sampling equipment or continuous wastewater flow metering equipment at this facility?

Current:	Flow Metering	☐ Yes	■ No	☐ N/A
	Sampling Equipment	☐ Yes	■ No	☐ N/A
Planned:	Flow Metering	☐ Yes	■ No	☐ N/A
	Sampling Equipment	☐ Yes	■ No	☐ N/A

If so, please attach a schematic diagram of the sewer system indicating the present or future location of this equipment and describe the equipment below:

N/A

5. Are any process changes or expansions planned during the next three years that could alter wastewater volumes or characteristics?
☐ Yes ■ No (If no, continue to C.6)

Briefly describe these changes and their anticipated effects on the wastewater volume and characteristics:

N/A

6. List the trade name and chemical composition of all biocides and corrosion inhibitors used:

Trade Name	Chemical Composition
See Attachment 3	

For each biocide and/or corrosion inhibitor used, please include the following information:

(1) 96-hour median tolerance limit data for organisms representative of the biota of the waterway into which the discharge will ultimately reach,
(2) quantities to be used,
(3) frequencies of use,
(4) proposed discharge concentrations, and
(5) EPA registration number, if applicable

SECTION D – WATER SUPPLY

Water Sources (check as many as are applicable):

☐ Private Well ☒ Surface Water

☐ Municipal Water Utility (Specify City): ☐ Other (Specify): _____

IF MORE THAN ONE WELL OR SURFACE INTAKE, PROVIDE DATA FOR EACH ON AN ATTACHMENT

City: N/A MGD* Well: N/A MGD* Well Depth: N/A Ft. Latitude: N/A Longitude: N/A

Surface Intake Volume: 0.1 MGD* Intake Elevation in Relation to Bottom: 38 Ft.

Intake Elevation: 595 Ft. Latitude: 34.711667 Longitude: -85.915556

Name of Surface Water Source: Tennessee River (Guntersville Reservoir)

*** MGD – Million Gallons per Day**

Cooling Water Intake Structure Information

Complete D.1 and D.2 if your water supply is provided by an outside source and not by an onsite water intake structure? (e.g., another industry, municipality, etc...)

1. Does the provider of your source water operate a surface water intake? Yes ☐ No ☐
   (If yes, continue, if no, go to Section E.)

   a) Name of Provider: N/A b) Location of Provider: N/A

   c) Latitude: N/A Longitude: N/A

2. Is the provider a public water system (defined as a system which provides water to the public for human consumption or which provides only treated water, not raw water)? ☐ Yes ☒ No (If yes, go to Section E, if no, continue.)

Only to be completed if you have a cooling water intake structure or the provider of your water supply uses an intake structure and does not treat the raw water.

3. Is any water withdrawn from the source water used for cooling? ☐ Yes ☒ No

4. Using the average monthly measurements over any 12-month period, approximately what percentage of water withdrawn is used exclusively for cooling purposes? 0 %

5. Does the cooling water consist of treated effluent that would otherwise be discharged? ☐ Yes ☒ No
   (If yes, go to Section E, if no, complete D.6 – D.17)

6. a. Is the cooling water used in a once-through cooling system? ☐ Yes ☐ No

   b. Is the cooling water used in a closed cycle cooling system? ☐ Yes ☐ No

CWIS Not in Service - See cover letter

7. When was the intake installed? CWIS Not in Service - See cover letter for description
(Please provide dates for all major construction/installation of intake components including screens)

8. What is the maximum intake volume? N/A
(maximum pumping capacity in gallons per day)

9. What is the average intake volume? N/A
(average intake pump rate in gallons per day average in any 30-day period)

10. What is the actual intake flow (AIF) as defined in 40 CFR §125.92(a)? N/A MGD

11. How is the intake operated? (e.g., continuously, intermittently, batch) CWIS Not in Service - See cover letter for description

12. What is the mesh size of the screen on your intake? CWIS Not in Service - See cover letter for description

13. What is the intake screen flow-through area? CWIS Not in Service - See cover letter for description

14. What is the through-screen design intake flow velocity? N/A ft/sec

15. What is the through-screen actual velocity (in ft/sec)? N/A ft/sec

16. What is the mechanism for cleaning the screen? (e.g., does it rotate for cleaning) CWIS Not in Service - See cover letter for description

17. Do you have any additional fish detraction technology on your intake? ☐ Yes ■ No

18. Have there been any studies to determine the impact of the intake on aquatic organisms? ☐ Yes ■ No (If yes, please provide.)

19. Attach a site map showing the location of the water intake in relation to the facility, shoreline, water depth, etc.

SECTION E – WASTE STORAGE AND DISPOSAL INFORMATION

Provide a description of the location of all sites involved in the storage of solids or liquids that could be accidentally discharged to a water of the state, either directly or indirectly via such avenues as storm water drainage, municipal wastewater systems, etc., which are located at the facility for which the NPDES application is being made. Where possible, the location should be noted on a map and included with this application:

Description of Waste	Description of Storage Location
Used Oil	Oil Storage Room
Waste Products / Chemicals	Hazardous Waste Storage Building

Provide a description of the location of the ultimate disposal sites of solid or liquid waste by-products (such as sludges) from any wastewater treatment system located at the facility.

Description of Waste	Quantity (lbs/day)	Disposal Method*
Used Oil	< 10	Offsite through Holston Environmental
Waste Products / Chemicals	< 10	Offsite through Waste Management
Sludges	< 10	Offsite through Waste Management

***Indicate which wastes identified above are disposed of at an off-site treatment facility and which are disposed of on-site. If any wastes are sent to an off-site centralized waste treatment facility, identify the waste and the facility.**

SECTION F – COASTAL ZONE INFORMATION

Is the discharge(s) located within the 10-foot elevation contour and within the limits of Mobile or Baldwin County? ☐ Yes ■ No
If yes, complete items F.1 – F.12:

	Yes	No
1. Does the project require new construction?	☐	☐
2. Will the project be a source of new air emissions?	☐	☐

		Yes	No
3.	Does the project involve dredging and/or filling of a wetland area or water way?	☐	☐
	If Yes, has the Corps of Engineers (COE) permit been received?	☐	☐
	COE Project No. _____		
4.	Does the project involve wetlands and/or submersed grassbeds?	☐	☐
5.	Are oyster reefs located near the project site?	☐	☐
	If Yes, include a map showing project and discharge location with respect to oyster reefs		
6.	Does the project involve the site development, construction and operation of an energy facility as defined in ADEM Admin. Code r. 335-8-1-.02(bb)?	☐	☐
7.	Does the project involve mitigation of shoreline or coastal area erosion?	☐	☐
8.	Does the project involve construction on beaches or dune areas?	☐	☐
9.	Will the project interfere with public access to coastal waters?	☐	☐
10.	Does the project lie within the 100-year floodplain?	☐	☐
11.	Does the project involve the registration, sale, use, or application of pesticides?	☐	☐
12.	Does the project propose or require construction of a new well or to alter an existing groundwater well to pump more than 50 gallons per day (GPD)?	☐	☐
	If yes, has the applicable permit for groundwater recovery or for groundwater well installation been obtained?	☐	☐

SECTION G – ANTI-DEGRADATION EVALUATION

In accordance with 40 CFR §131.12 and the ADEM Admin. Code r. 335-6-10-.04 for anti-degradation, the following information must be provided, if applicable. It is the applicant's responsibility to demonstrate the social and economic importance of the proposed activity. If further information is required to make this demonstration, attach additional sheets to the application.

1. Is this a new or increased discharge that began after April 3, 1991? ☐ Yes ■ No
   If yes, complete G.2 below. If no, go to Section H.

2. Has an Anti-Degradation Analysis been previously conducted and submitted to the Department for the new or increased discharge referenced in G.1? ☐ Yes ☐ No

   If yes, do not complete this section. If no, and the discharge is to a Tier II waterbody as defined in ADEM Admin. Code r. 335-6-10-.12(4), complete G.2.A – G.2.F below and ADEM Forms 311 and 313 (attached). ADEM Form 313 must be provided for each alternative considered technically viable.

   Information required for new or increased discharges to high quality waters:

   A. What environmental or public health problem will the discharger be correcting?

   _____

   B. How much will the discharger be increasing employment (at its existing facility or as the result of locating a new facility)?

   _____

   C. How much reduction in employment will the discharger be avoiding?

   _____

   D. How much additional state or local taxes will the discharger be paying?

   _____

   E. What public service to the community will the discharger be providing?

   _____

   F. What economic or social benefit will the discharger be providing to the community?

   _____

SECTION H – EPA Application Forms

All Applicants must submit EPA permit application forms. More than one application form may be required from a facility depending on the number and types of discharges or outfalls found. The EPA application forms are found on the Department's website at http://www.adem.alabama.gov/programs/water/waterforms.cnt . The EPA application forms must be submitted in duplicate as follows:

1. All applicants must submit Form 1.
2. Applicants for existing industrial facilities (including manufacturing facilities, commercial facilities, mining activities, and silvicultural activities) which discharge process wastewater must submit Form 2C.
3. Applicants for new industrial facilities which propose to discharge process wastewater must submit Form 2D.
4. Applicants for new and existing industrial facilities which discharge only non-process wastewater (i.e., non-contact cooling water and/or sanitary wastewater) must submit Form 2E.
5. Applicants for new and existing facilities whose discharge is composed entirely of storm water associated with industrial activity must submit Form 2F, unless exempted by § 122.26(c)(1)(ii). If the discharge is composed of storm water and non-storm water, the applicant must also submit Forms 2C, 2D, and/or 2E, as appropriate (in addition to Form 2F).

SECTION I – ENGINEERING REPORT/BMP PLAN REQUIREMENTS

See ADEM 335-6-6-.08(i) & (j)

SECTION J– RECEIVING WATERS

Outfall No.	Receiving Water(s)	303(d) Segment?		Included in TMDL?*	
002, 004, 008 - 012, 015	Town Creek	☐ Yes	■ No	☐ Yes	■ No
003, 005, 013, 014	Tennessee River (Guntersville Reservoir)	☐ Yes	■ No	☐ Yes	■ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No

*If a TMDL Compliance Schedule is requested, the following should be attached as supporting documentation:

(1) Justification for the requested Compliance Schedule (e.g. time for design and installation of control equipment, etc.);

(2) Monitoring results for the pollutant(s) of concern which have not previously been submitted to the Department (sample collection dates, analytical results (mass and concentration), methods utilized, MDL/ML, etc. should be submitted as available);

(3) Requested interim limitations, if applicable;

(4) Date of final compliance with the TMDL limitations; and,

(5) Any other additional information available to support requested compliance schedule.

SECTION K – APPLICATION CERTIFICATION

The information contained in this form must be certified by a responsible official as defined in ADEM Administrative Code r. 335-6-6-.09 "signatories to permit applications and reports" (see below).

"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 fine and imprisonment for knowing violations."

Signature of Responsible Official: _____ Date Signed: 10/11/19

Name and Title: Michael J. Durr, Acting Vice President Nuclear Engineering

If the Responsible Official signing this application is <u>not</u> identified in Section A.7, provide the following information:

Mailing Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____ Email Address: _____

335-6-6-.09 SIGNATORIES TO PERMIT APPLICATIONS AND REPORTS.

(1) The application for an NPDES permit shall be signed by a responsible official, as indicated below:

(a) In the case of a corporation, by a principal executive officer of at least the level of vice president, or a manager assigned or delegated in accordance with corporate procedures, with such delegation submitted in writing if required by the Department, who is responsible for manufacturing, production, or operating facilities and is authorized to make management decisions which govern the operation of the regulated facility;

(b) In the case of a partnership, by a general partner;

(c) In the case of a sole proprietorship, by the proprietor; or

(d) In the case of a municipal, state, federal, or other public entity, by either a principal executive officer, or ranking elected official.

Attachment 1
Tennessee Valley Authority
Bellefonte Nuclear Plant
NPDES Permit Number AL 0024635
Form 187 Section A.14 Supplemental Information

Permit Name	Permit Number	Held by
NPDES Permit	AL0024635	Bellefonte Nuclear Plant
RCRA ID	AL5640090002 (ID#)	Bellefonte Nuclear Plant
Synthetic Minor Operating Permit	705-0021-X004	Bellefonte Nuclear Plant
NPDES Permit	AL0022080	Browns Ferry Nuclear Plant
Construction Storm Water	ALR107638	Browns Ferry Nuclear Plant
	ALR10BCHQ	
	ALR10AZ87	
RCRA ID	AL8640015410 (ID#)	Browns Ferry Nuclear Plant
PSD Permit	708-0003-Z003	Browns Ferry Nuclear Plant
Synthetic Minor Operating Permit	708-0003-X005	Browns Ferry Nuclear Plant
Inert Landfill Permit	42-02	Browns Ferry Nuclear Plant
Title V Air Permit	701-0010	Colbert Fossil Plant
Construction Storm Water	ALR109175	Colbert Fossil Plant
NPDES Permit	AL0003867	Colbert Fossil Plant
RCRA ID	AL7640006675 (ID#)	Colbert Fossil Plant
NPDES Permit	AL0003891	Environmental Research Center
General NPDES Permit	ALG360011	Guntersville Hydro Plant
RCRA ID	ALD982083461 (ID#)	M. S. Heavy Equipment Department
General NPDES Permit	ALG140643	M. S. Power Service Center
Construction Storm Water	ALR10AD13	M.S. Power Service Center
	ALR10BEF2	
RCRA (Operating Permit)	AL2640090005	M. S. Power Service Center
General NPDES Permit	ALG360009	Wheeler Hydro Plant
Construction Storm Water	ALR108345	Widows Creek Fossil Plant
	ALR10AJ87	
NPDES Permit	AL0003875	Widows Creek Fossil Plant
RCRA ID	AL8640006690 (ID#)	Widows Creek Fossil Plant
Solid Waste Disposal Permit	36-07	Widows Creek Fossil Plant
General NPDES Permit	ALG360012	Wilson Hydro Plant
General NPDES Permit	ALG610000	Various TVA Transmission Line & Substation Construction Projects

Attachment 2
Tennessee Valley Authority
Bellefonte Nuclear Plant
NPDES Permit Number AL 0024635
Form 187 Section C.2.a Supplemental Information

No.	Regulated Process (40 CFR 423)	Last 12 Months - Highest Month Average (GPD)	Highest Flow of Last 5 Years - Monthly Average (GPD)	Type of Discharge (batch, continuous, none)
003	Diffuser Discharge	N/A	N/A	Continuous (Future)
03C	Cooling Tower Desilting Pond	340,000	340,000	Batch Discharge[1]
03D	Cooling Tower Blowdown	N/A	N/A	Continuous (Future)
03E	Liquid Rad Waste	N/A	N/A	Continuous (Future)
03F	Condensate Demineralizer Regeneration Wastes	N/A	N/A	Batch (Future)
03G	Sump Collection Ponds	760,000	760,000	Batch Discharge[1]
No.	**Non-Process Discharges**	**Last 12 Months - Highest Month Average (GPD)**	**Highest Flow of Last 5 Years - Monthly Average (GPD)**	**Type of Discharge (batch, continuous, none)**
0081	Simulator Training Facility Fire Protection System Flush Water	0	0	None[2]

[1]Batch discharge flow information is provided in Section C.2b. of ADEM Form 187. Because DSN 03C may be used in lieu of DSN 03G batch discharge flow rates have been reported together. Batch discharges occur from DSN 03C or DSN 03G less than once per month on average. These discharges primarily consist of accumulated rainwater and ground water in leakage to the plant.

[2]Discharges from DSN 008 resulting from simulator training facility fire protection system flush has not occurred during the permit term. System flushes are approximately 420 gallons and directed overland. Best management practices are utilized to minimize the potential for discharge from the outfall.

Attachment 3
Tennessee Valley Authority
Bellefonte Nuclear Plant
NPDES Permit Number AL 0024635
Form 187 Section C.5 Supplemental Information

Biocides and Corrosion Inhibitors

Product Name	NALCO H-640	NALCO TOWERBROM 960
Product Class	Microbiocide	Biocide
Chemical Ingredients	1. Terbuthylazine: 2-(tert-butylamino)-4-(chloro-6-ethylamino)-S-triazine 2. Ethylene Glycol	Sodium dichloro-s-triazinetrione and sodium bromide
Aquatic Toxicity: 96-Hour Tolerance Data for Ingredients (PPM)	1. LC50 (rainbow trout): 3.6 2. LC50 (bluegill sunfish): 7.6 3. LC50 (rainbow trout): 100-500 4. LC50 (fathead minnow): 100-500	1. LC50 (rainbow trout): 0.37 2. LC50 (bluegill sunfish): 0.43
Quantities To Be Used Pounds per Million Gallons	59 lbs. / MG	83 lbs. / MG
Concentration (PPM)	7 PPM	10 PPM
Frequency of Use	Periodic use to inhibit the growth of microbes and algae within the cooling tower basins	Periodic use to inhibit the growth of microbes and algae within the cooling tower basins
Proposed Discharge Concentration (PPM)	< 2 PPM	< 0.5 PPM Total Residual Oxidant by Total Residual Chlorine Analysis
EPA Registration Number	40810-6-10445	935-71-10445

Description of Use: Bellefonte Nuclear Plant maintains approximately 1 foot of raw service water within the cooling tower basins for fire protection supply. Manual applications of biocide and microbiocide take place on an as needed basis to prevent biological growth within the cooling tower basins.

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
AL5640090002	AL0024635	Bellefonte Nuclear Plant	

Form 1 NPDES | EPA

U.S. Environmental Protection Agency
Application for NPDES Permit to Discharge Wastewater

GENERAL INFORMATION

SECTION 1. ACTIVITIES REQUIRING AN NPDES PERMIT (40 CFR 122.21(f) and (f)(1))

Activities Requiring an NPDES Permit

1.1 Applicants *Not Required* to Submit Form 1

1.1.1	Is the facility a new or existing **publicly owned treatment works**? If yes, STOP. Do NOT complete Form 1. Complete Form 2A. ☑ No	1.1.2	Is the facility a new or existing **treatment works treating domestic sewage**? If yes, STOP. Do NOT complete Form 1. Complete Form 2S. ☑ No

1.2 Applicants *Required* to Submit Form 1

1.2.1	Is the facility a **concentrated animal feeding operation** or a **concentrated aquatic animal production facility?** ☐ Yes ➔ Complete Form 1 ***and*** Form 2B. ☑ No	1.2.2	Is the facility an **existing** manufacturing, commercial, mining, or silvicultural **facility** that **is currently discharging process wastewater**? ☑ Yes ➔ Complete Form 1 ***and*** Form 2C. ☐ No
1.2.3	Is the facility a **new** manufacturing, commercial, mining, or silvicultural **facility** that has **not yet commenced to discharge**? ☐ Yes ➔ Complete Form 1 ***and*** Form 2D. ☑ No	1.2.4	Is the facility a **new or existing** manufacturing, commercial, mining, or silvicultural **facility** that **discharges only nonprocess wastewater**? ☐ Yes ➔ Complete Form 1 ***and*** Form 2E. ☑ No
1.2.5	Is the facility a **new or existing facility** whose discharge is composed entirely of **stormwater associated with industrial activity** or whose discharge is composed of **both stormwater and non-stormwater**? ☑ Yes ➔ Complete Form 1 ***and*** Form 2F unless exempted by 40 CFR 122.26(b)(14)(x) or (b)(15). ☐ No		

SECTION 2. NAME, MAILING ADDRESS, AND LOCATION (40 CFR 122.21(f)(2))

Name, Mailing Address, and Location

2.1 Facility Name

U.S. TVA Bellefonte Nuclear Plant

2.2 EPA Identification Number

AL5640090002

2.3 Facility Contact

Name (first and last)	Title	Phone number
James Chardos	Site Manager	(256) 574-8228

Email address
jschardos@tva.gov

2.4 Facility Mailing Address

Street or P.O. box
Jackson County Highway 33

City or town	State	ZIP code
Hollywood	Alabama	35752

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
AL5640090002	AL0024635	Bellefonte Nuclear Plant	

Name, Mailing Address, and Location Continued

2.5	**Facility Location**		
	Street, route number, or other specific identifier Jackson County Highway 33		
	County name Jackson	County code (if known)	
	City or town Hollywood	State Alabama	ZIP code 35752

SECTION 3. SIC AND NAICS CODES (40 CFR 122.21(f)(3))

SIC and NAICS Codes

3.1	**SIC Code(s)**	**Description** (optional)
	4911	Electric Services

3.2	**NAICS Code(s)**	**Description** (optional)
	221113	Nuclear Electric Power Generation

SECTION 4. OPERATOR INFORMATION (40 CFR 122.21(f)(4))

Operator Information

4.1	**Name of Operator**
	U.S. Tennessee Valley Authority

4.2	Is the name you listed in Item 4.1 also the owner?
	☑ Yes ☐ No

4.3	**Operator Status**
	☑ Public—federal ☐ Public—state ☐ Other public (specify)_____ ☐ Private ☐ Other (specify) _____

4.4	**Phone Number of Operator**
	(423) 751-6207

Operator Information Continued

4.5	**Operator Address**		
	Street or P.O. Box 1101 Market Street, LP 3R-C		
	City or town Chattanooga	State Tennessee	ZIP code 37402
	Email address of operator smdouglas@tva.gov		

SECTION 5. INDIAN LAND (40 CFR 122.21(f)(5))

Indian Land

5.1	Is the facility located on Indian Land?
	☐ Yes ☑ No

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
AL5640090002	AL0024635	Bellefonte Nuclear Plant	

SECTION 6. EXISTING ENVIRONMENTAL PERMITS (40 CFR 122.21(f)(6))

Existing Environmental Permits

6.1 **Existing Environmental Permits** (check all that apply and print or type the corresponding permit number for each)

☑ NPDES (discharges to surface water) AL0024635	☑ RCRA (hazardous wastes) AL5640090002	☐ UIC (underground injection of fluids)
☐ PSD (air emissions)	☐ Nonattainment program (CAA)	☐ NESHAPs (CAA)
☐ Ocean dumping (MPRSA)	☐ Dredge or fill (CWA Section 404)	☑ Other (specify) 705-0021-X004

SECTION 7. MAP (40 CFR 122.21(f)(7))

Map

7.1 Have you attached a topographic map containing all required information to this application? (See instructions for specific requirements.)

☑ Yes ☐ No ☐ CAFO—Not Applicable (See requirements in Form 2B.)

SECTION 8. NATURE OF BUSINESS (40 CFR 122.21(f)(8))

Nature of Business

8.1 Describe the nature of your business.

Bellefonte Nuclear Plant is an inactive, partially constructed nuclear power plant. Potential future activity may consist of finishing construction of the facility and production of electrical power via thermonuclear fission.

SECTION 9. COOLING WATER INTAKE STRUCTURES (40 CFR 122.21(f)(9))

Cooling Water Intake Structures

9.1 Does your facility use cooling water?

☐ Yes ☑ No ➔ SKIP to Item 10.1.

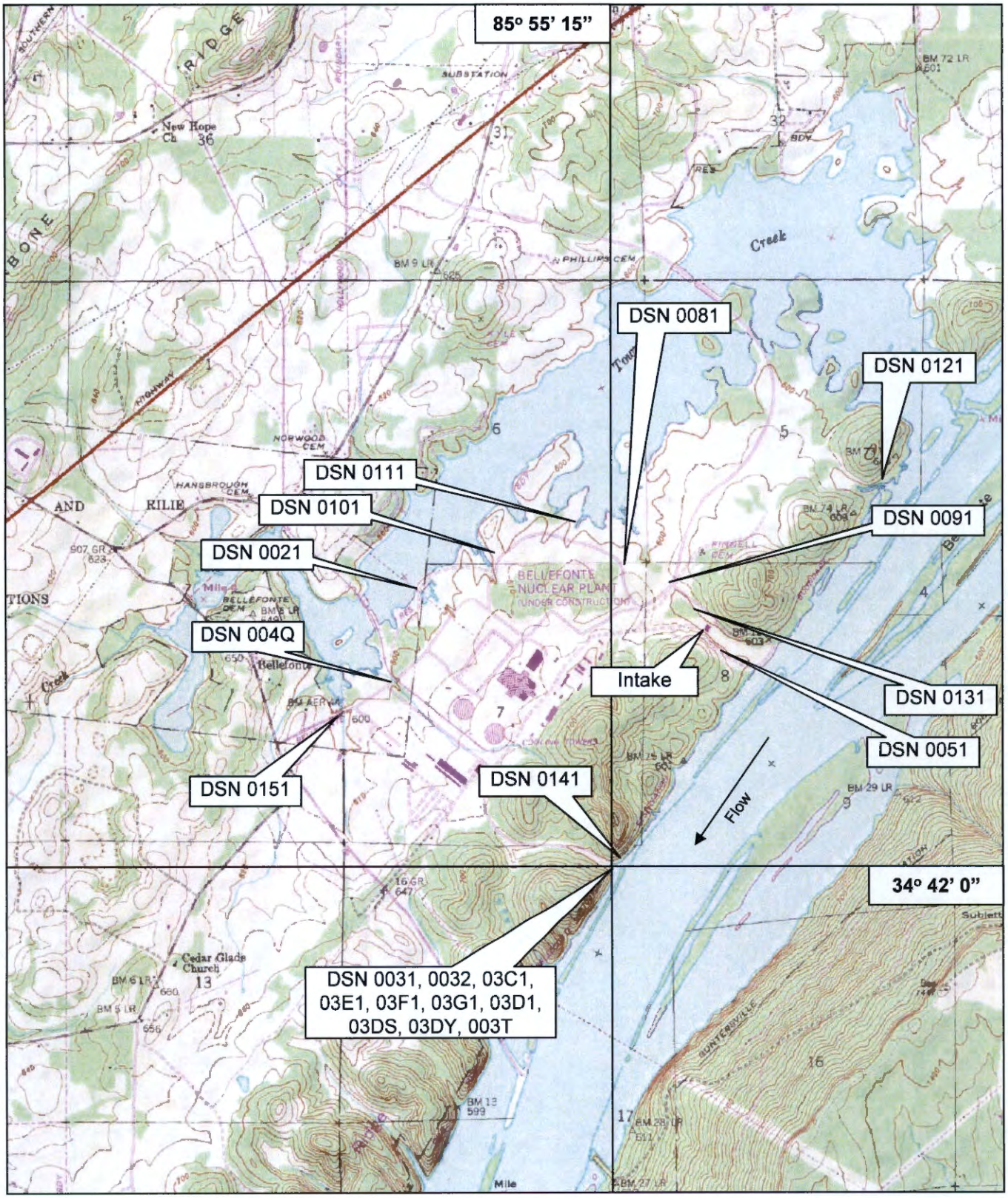
9.2 Identify the source of cooling water. (Note that facilities that use a cooling water intake structure as described at 40 CFR 125, Subparts I and J may have additional application requirements at 40 CFR 122.21(r). Consult with your NPDES permitting authority to determine what specific information needs to be submitted and when.)

SECTION 10. VARIANCE REQUESTS (40 CFR 122.21(f)(10))

Variance Requests

10.1 Do you intend to request or renew one or more of the variances authorized at 40 CFR 122.21(m)? (Check all that apply. Consult with your NPDES permitting authority to determine what information needs to be submitted and when.)

☐ Fundamentally different factors (CWA Section 301(n))	☐ Water quality related effluent limitations (CWA Section 302(b)(2))
☐ Non-conventional pollutants (CWA Section 301(c) and (g))	☐ Thermal discharges (CWA Section 316(a))
☑ Not applicable	



TVA Bellefonte Nuclear Plant
Hollywood, Jackson Co., Alabama
NPDES Permit No. AL0024635
Doran Cove, Stevenson, Flat Rock, and Bridgeport Quadrangles
September 2019

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
AL5640090002	AL0024635	Bellefonte Nuclear Plant	

SECTION 11. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))

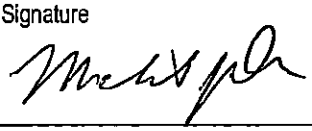
Checklist and Certification Statement

11.1 In Column 1 below, mark the sections of Form 1 that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to provide attachments.

Column 1	Column 2
☑ Section 1: Activities Requiring an NPDES Permit	☐ w/ attachments
☑ Section 2: Name, Mailing Address, and Location	☐ w/ attachments
☑ Section 3: SIC Codes	☐ w/ attachments
☑ Section 4: Operator Information	☐ w/ attachments
☐ Section 5: Indian Land	☐ w/ attachments
☑ Section 6: Existing Environmental Permits	☐ w/ attachments
☑ Section 7: Map	☑ w/ topographic map ☐ w/ additional attachments
☑ Section 8: Nature of Business	☐ w/ attachments
☐ Section 9: Cooling Water Intake Structures	☐ w/ attachments
☐ Section 10: Variance Requests	☐ w/ attachments
☑ Section 11: Checklist and Certification Statement	☐ w/ attachments

11.2 **Certification Statement**

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 fine and imprisonment for knowing violations.

Name (print or type first and last name)	Official title
Michael J. Durr	Acting Vice President, Nuclear Engineering
Signature 	Date signed 10/11/19

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
AL5640090002	AL0024635	Bellefonte Nuclear Plant	

Form 2C NPDES | **EPA**

U.S. Environmental Protection Agency
Application for NPDES Permit to Discharge Wastewater
EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURE OPERATIONS

SECTION 1. OUTFALL LOCATION (40 CFR 122.21(g)(1))

Outfall Location

1.1 Provide information on each of the facility's outfalls in the table below.

Outfall Number	Receiving Water Name	Latitude	Longitude
002	Town Creek (Mile 3.0)	34° 43′ 0″ N	85° 56′ 0″ W
003	TN River (Mile 391.4)	34° 42′ 0″ N	85° 55′ 15″ W
005	TN River (Mile 392.3)	34° 42′ 30″ N	85° 55′ 0″ W

SECTION 2. LINE DRAWING (40 CFR 122.21(g)(2))

Line Drawing

2.1 Have you attached a line drawing to this application that shows the water flow through your facility with a water balance? (See instructions for drawing requirements. See Exhibit 2C–1 at end of instructions for example.)

☑ Yes ☐ No

SECTION 3. AVERAGE FLOWS AND TREATMENT (40 CFR 122.21(g)(3))

Average Flows and Treatment

3.1 For each outfall identified under Item 1.1, provide average flow and treatment information. Add additional sheets if necessary.

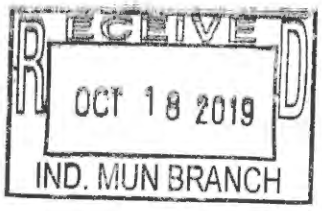
****Outfall Number**** _____

Operations Contributing to Flow

Operation	Average Flow
See Attached	mgd
	mgd
	mgd
	mgd

Treatment Units

Description (include size, flow rate through each treatment unit, retention time, etc.)	Code from Table 2C-1	Final Disposal of Solid or Liquid Wastes Other Than by Discharge
See Attached		



EPA Identification Number	NPDES Permit Number	Facility Name
AL5640090002	AL0024635	Bellefonte Nuclear Plant

Form Approved 03/05/19
OMB No. 2040-0004

Form 2C NPDES

U.S. Environmental Protection Agency
Application for NPDES Permit to Discharge Wastewater
EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURE OPERATIONS

SECTION 1. OUTFALL LOCATION (40 CFR 122.21(g)(1))

Outfall Location

1.1 Provide information on each of the facility's outfalls in the table below.

Outfall Number	Receiving Water Name	Latitude	Longitude
008	Town Creek (Mile 2.3)	34° 42′ 30″ N	85° 55′ 15″ W
		° ′ ″	° ′ ″
		° ′ ″	° ′ ″

SECTION 2. LINE DRAWING (40 CFR 122.21(g)(2))

Line Drawing

2.1 Have you attached a line drawing to this application that shows the water flow through your facility with a water balance? (See instructions for drawing requirements. See Exhibit 2C–1 at end of instructions for example.)

☑ Yes ☐ No

SECTION 3. AVERAGE FLOWS AND TREATMENT (40 CFR 122.21(g)(3))

Average Flows and Treatment

3.1 For each outfall identified under Item 1.1, provide average flow and treatment information. Add additional sheets if necessary.

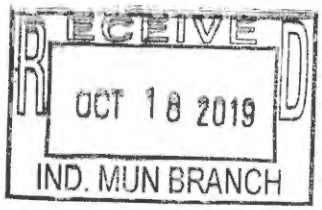
****Outfall Number**** _____

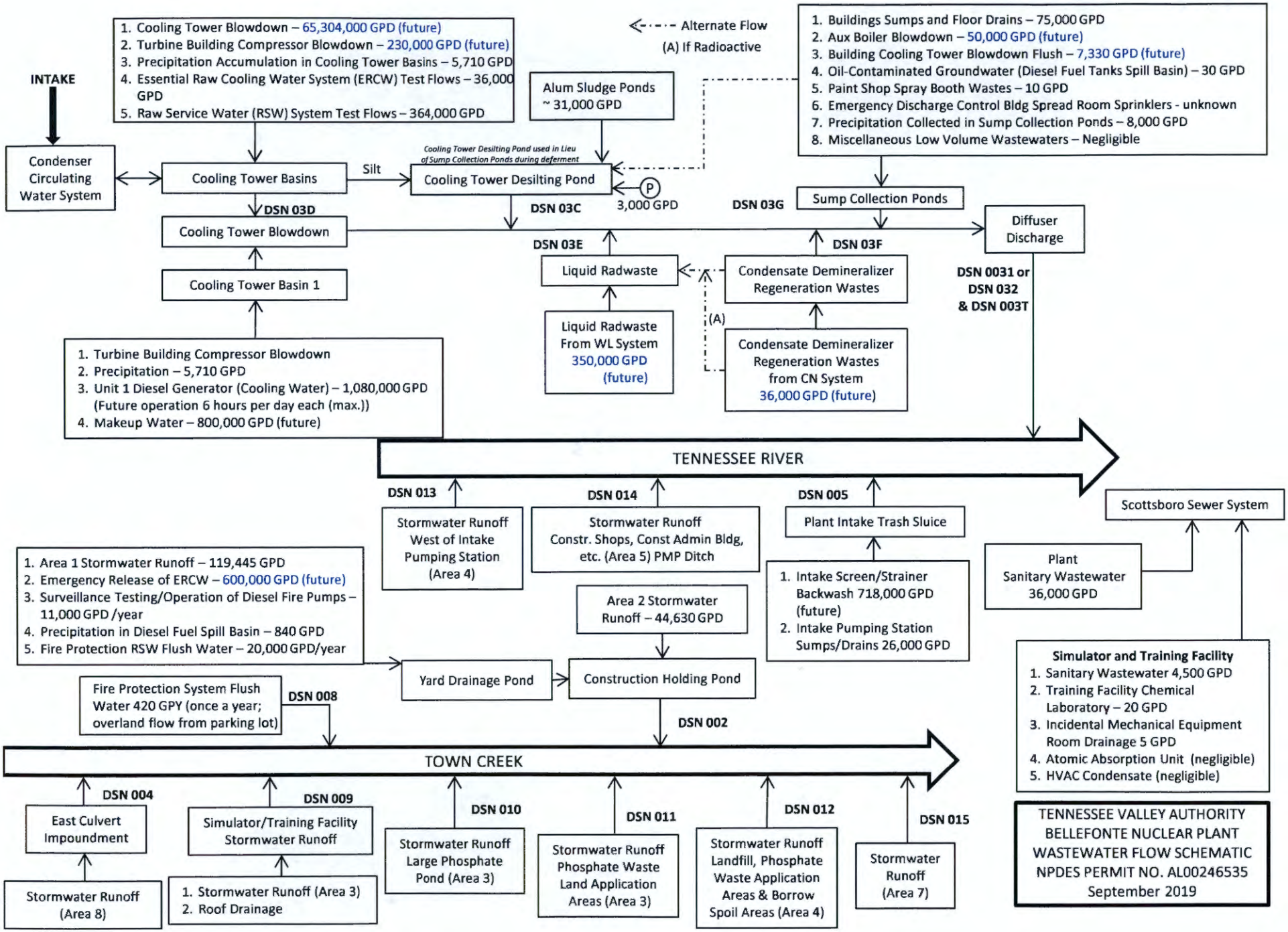
Operations Contributing to Flow

Operation	Average Flow
See Attached	mgd
	mgd
	mgd
	mgd

Treatment Units

Description (include size, flow rate through each treatment unit, retention time, etc.)	Code from Table 2C-1	Final Disposal of Solid or Liquid Wastes Other Than by Discharge
See Attached		




1. Cooling Tower Blowdown – 65,304,000 GPD (future)
2. Turbine Building Compressor Blowdown – 230,000 GPD (future)
3. Precipitation Accumulation in Cooling Tower Basins – 5,710 GPD
4. Essential Raw Cooling Water System (ERCW) Test Flows – 36,000 GPD
5. Raw Service Water (RSW) System Test Flows – 364,000 GPD
Alternate Flow
(A) If Radioactive
1. Buildings Sumps and Floor Drains – 75,000 GPD
2. Aux Boiler Blowdown – 50,000 GPD (future)
3. Building Cooling Tower Blowdown Flush – 7,330 GPD (future)
4. Oil-Contaminated Groundwater (Diesel Fuel Tanks Spill Basin) – 30 GPD
5. Paint Shop Spray Booth Wastes – 10 GPD
6. Emergency Discharge Control Bldg Spread Room Sprinklers - unknown
7. Precipitation Collected in Sump Collection Ponds – 8,000 GPD
8. Miscellaneous Low Volume Wastewaters – Negligible
INTAKE
Alum Sludge Ponds ~ 31,000 GPD
Condenser Circulating Water System
Cooling Tower Basins
Silt
Cooling Tower Desilting Pond used in Lieu of Sump Collection Ponds during deferment
Cooling Tower Desilting Pond
P
3,000 GPD
DSN 03D
DSN 03C
DSN 03G
Sump Collection Ponds
Cooling Tower Blowdown
Diffuser Discharge
DSN 03E
DSN 03F
Liquid Radwaste
Condensate Demineralizer Regeneration Wastes
DSN 0031 or DSN 032 & DSN 003T
Cooling Tower Basin 1
Liquid Radwaste From WL System 350,000 GPD (future)
(A)
Condensate Demineralizer Regeneration Wastes from CN System 36,000 GPD (future)
1. Turbine Building Compressor Blowdown
2. Precipitation – 5,710 GPD
3. Unit 1 Diesel Generator (Cooling Water) – 1,080,000 GPD (Future operation 6 hours per day each (max.))
4. Makeup Water – 800,000 GPD (future)
TENNESSEE RIVER
DSN 013
DSN 014
DSN 005
Scottsboro Sewer System
Stormwater Runoff West of Intake Pumping Station (Area 4)
Stormwater Runoff Constr. Shops, Const Admin Bldg, etc. (Area 5) PMP Ditch
Plant Intake Trash Sluice
1. Area 1 Stormwater Runoff – 119,445 GPD
2. Emergency Release of ERCW – 600,000 GPD (future)
3. Surveillance Testing/Operation of Diesel Fire Pumps – 11,000 GPD /year
4. Precipitation in Diesel Fuel Spill Basin – 840 GPD
5. Fire Protection RSW Flush Water – 20,000 GPD/year
Area 2 Stormwater Runoff – 44,630 GPD
1. Intake Screen/Strainer Backwash 718,000 GPD (future)
2. Intake Pumping Station Sumps/Drains 26,000 GPD
Plant Sanitary Wastewater 36,000 GPD
Yard Drainage Pond
Construction Holding Pond
Fire Protection System Flush Water 420 GPY (once a year; overland flow from parking lot)
DSN 008
DSN 002
Simulator and Training Facility
1. Sanitary Wastewater 4,500 GPD
2. Training Facility Chemical Laboratory – 20 GPD
3. Incidental Mechanical Equipment Room Drainage 5 GPD
4. Atomic Absorption Unit (negligible)
5. HVAC Condensate (negligible)
TOWN CREEK
DSN 004
DSN 009
DSN 010
DSN 011
DSN 012
DSN 015
East Culvert Impoundment
Simulator/Training Facility Stormwater Runoff
Stormwater Runoff Large Phosphate Pond (Area 3)
Stormwater Runoff Phosphate Waste Land Application Areas (Area 3)
Stormwater Runoff Landfill, Phosphate Waste Application Areas & Borrow Spoil Areas (Area 4)
Stormwater Runoff (Area 7)
Stormwater Runoff (Area 8)
1. Stormwater Runoff (Area 3)
2. Roof Drainage
TENNESSEE VALLEY AUTHORITY
BELLEFONTE NUCLEAR PLANT
WASTEWATER FLOW SCHEMATIC
NPDES PERMIT NO. AL00246535
September 2019

Average Flows and Treatment Continued

3.1 cont.

****Outfall Number**** _____

Operations Contributing to Flow

Operation	Average Flow
See Attached	mgd
	mgd
	mgd
	mgd

Treatment Units

Description (include size, flow rate through each treatment unit, retention time, etc.)	Code from Table 2C-1	Final Disposal of Solid or Liquid Wastes Other Than by Discharge
See Attached		

****Outfall Number**** _____

Operations Contributing to Flow

Operation	Average Flow
See Attached	mgd
	mgd
	mgd
	mgd

Treatment Units

Description (include size, flow rate through each treatment unit, retention time, etc.)	Code from Table 2C-1	Final Disposal of Solid or Liquid Wastes Other Than by Discharge
See Attached		

System Users

3.2 Are you applying for an NPDES permit to operate a privately owned treatment works?

☐ Yes ☑ No ➔ SKIP to Section 4.

3.3 Have you attached a list that identifies each user of the treatment works?

☐ Yes ☐ No

SECTION 4. INTERMITTENT FLOWS (40 CFR 122.21(g)(4))

Intermittent Flows

4.1 Except for storm runoff, leaks, or spills, are any discharges described in Sections 1 and 3 intermittent or seasonal?

☑ Yes ☐ No ➔ SKIP to Section 5.

4.2 Provide information on intermittent or seasonal flows for each applicable outfall. Attach additional pages, if necessary.

Outfall Number	Operation (list)	Frequency		Flow Rate		Duration
		Average Days/Week	Average Months/Year	Long-Term Average	Maximum Daily	
003C/G	See Attached	1 days/week	4 months/year	0.4825 mgd	0.76 mgd	1 days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
008	Fire Protection Flush	1 days/week	1 months/year	.00042 mgd	.00042 mgd	1 days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days

SECTION 5. PRODUCTION (40 CFR 122.21(g)(5))

Applicable ELGs

5.1 Do any effluent limitation guidelines (ELGs) promulgated by EPA under Section 304 of the CWA apply to your facility?

☑ Yes ☐ No ➔ SKIP to Section 6.

5.2 Provide the following information on applicable ELGs.

ELG Category	ELG Subcategory	Regulatory Citation
Steam Electric Power Generating		40 CFR 423

Production-Based Limitations

5.3 Are any of the applicable ELGs expressed in terms of production (or other measure of operation)?

☐ Yes ☑ No ➔ SKIP to Section 6.

5.4 Provide an actual measure of daily production expressed in terms and units of applicable ELGs.

Outfall Number	Operation, Product, or Material	Quantity per Day	Unit of Measure

Section 3. Average Flows and Treatment (40 CFR 122.21(g)(3)) – Attachment

Outfall Number 002	
Operations Contributing to Flow	
Operation	**Average Flow (MGD)**
Yard Drainage Pond receives flow from the following:	**0.195470**
1. Area 1 stormwater runoff including roof and yard drainage	0.119
2. Cooling Water (Emergency Raw Cooling Water) – Future flow	0.600 - Future
3. Surveilance/testing of diesel fire pumps at condenser circulating water pump station – once per year	0.011
4. Fire protection system (raw water) flush – once per year	0.020
5. Area 2 Stormwater runoff	0.04463
6. Accumulated precipitation from secondary containments	0.00084

Treatment Units		
Description	**Code from Table 2C-1**	**Final Disposal of Solid or Liquid Wastes Other Than by Discharge**
Permanent yard drainage pond with a capacity of 4-acre feet equipped with an oil skimmer. Accumulated precipitation in secondary containments is inspected in accordance with BLN BMP plan prior to discharge.	**1-U** **4-A**	Any solids removed from the yard drainage pond would be managed as a solid waste and properly disposed.

Section 3. Average Flows and Treatment (40 CFR 122.21(g)(3)) – Attachment

Outfall Number 003	
Operations Contributing to Flow	
Operation	**Average Flow (MGD)**
Diffuser Discharge receives flow from the following:	**0.6115**
1. DSN 03C – Cooling Tower Desilting Pond:	**0.11704**
A. Accumulated precipitation (based on avg. annual precipitation)	0.003
B. Alum sludge settling ponds (future)	0.031
C. DSN03G flows (during deferment)	0.08304
Note: DSN 03C1 may be used in lieu of of DSN 0031 or DSN 03G1	
during deferment.	
2. DSN 03D, 03DS, and 03DY – Cooling Tower Blowdown during	**0.41142**
plant testing and operations	
A. Cooling tower blowdown (future)	65.304 - Future
B. Turbine building air compressor blowdown	0.203 - Future
C. Essential Raw Cooling Water (ERCW) System Test Flows	0.036
D. Raw Service Water (RSW) System Test Flows and construction	0.364
phase makeup demineralizer spent reagent discharge	
E. Unit 1 diesel generator cooling water (future)	1.08 - Future
F. Accumulated precipitation (based on avg. annual precipitation)	0.01142
3. DSN 03E – Liquid Radwaste (future)	0.350 - Future
4. DSN 03F – Condensate Demineralizer Regeneration Wastes (future)	0.036 - Future
5. DSN 03G – Sump Collection Ponds receive flow from:	**0.08304**
A. Building sumps and floor drains	0.075
B. Auxiliary boiler blowdown including office building and service	0.050 - Future
building HVAC (future)	
C. HVAC cooling tower blowdown and flush (future)	0.00733 - Future
D. Oil contaminated groundwater from beneath diesel fuel	0.00003
secondary containment basin	
E. Paint shop spray booth water curtain wastes (not in operation)	0.00001
F. Fire Sprinklers	negligible
G. Accumulated precipitation (based on avg. annual precipitation)	0.008
H. Miscellaneous Low Volume Wastewaters	negligible

Outfall Number 003		
Treatment Units		
Description	**Code from Table 2C-1**	**Final Disposal of Solid or Liquid Wastes Other Than by Discharge**
1. DSN 03C – Cooling tower desilting pond	**1-U**	Removed solids are analyzed and disposed of as solid waste.
	4-A	
2. DSN 03D, 03DS, 03DY – Two 7 million gallon concrete cooling tower basins	**1-U**	Removed solids are analyzed and disposed of as solid waste.
	2-E	
	4-A	
3. DSN 03E – Future – Evaporation and Ion Exchange	**4-A**	Removed solids will be disposed of as low level radioactive waste.
4. DSN 03F – Future – Neutralization and filtration through diatomaceous earth	**1-C**	Removed solids are analyzed and disposed of as solid waste.
	2-K	
	4-A	
5. DSN 03G – Sump collection ponds equipped with oil skimmer on a portion of the discharge	**4-A**	Removed solids are analyzed and disposed of as solid waste.

Section 3. Average Flows and Treatment (40 CFR 122.21(g)(3)) – Attachment

Outfall Number 005	
Operations Contributing to Flow	
Operation	**Average Flow (MGD)**
Plant intake trash sluice which receives flow from:	**0.026**
1. Intake screen and strainer backwash (raw water), Future Flow	Future – 0.718
2. Intake pumping station sumps/drains	0.026

Treatment Units		
Description	**Code from Table 2C-1**	**Final Disposal of Solid or Liquid Wastes Other Than by Discharge**
Plant intake trash sluice discharges directly to surface water. A portion of the floor drain piping within the intake pumping station is equipped with oil interceptors	**4-A**	N/A

Section 3. Average Flows and Treatment (40 CFR 122.21(g)(3)) – Attachment

Outfall Number 008	
Operations Contributing to Flow	
Operation	**Average Flow (MGD)**
Fire protection system flush water (potable water) from the Simulator Building / Training Facility	**0.00042**

Treatment Units		
Description	**Code from Table 2C-1**	**Final Disposal of Solid or Liquid Wastes Other Than by Discharge**
Discharge by overland flow on ground to surface water.	**4-A**	N/A

SECTION 6. IMPROVEMENTS (40 CFR 122.21(g)(6))

Upgrades and Improvements

6.1 Are you presently required by any federal, state, or local authority to meet an implementation schedule for constructing, upgrading, or operating wastewater treatment equipment or practices or any other environmental programs that could affect the discharges described in this application?

☐ Yes ☑ No ➔ SKIP to Item 6.3.

6.2 Briefly identify each applicable project in the table below.

Brief Identification and Description of Project	Affected Outfalls (list outfall number)	Source(s) of Discharge	Final Compliance Dates	
			Required	Projected

6.3 Have you attached sheets describing any additional water pollution control programs (or other environmental projects that may affect your discharges) that you now have underway or planned? *(optional item)*

☐ Yes ☐ No ☑ Not applicable

SECTION 7. EFFLUENT AND INTAKE CHARACTERISTICS (40 CFR 122.21(g)(7))

Effluent and Intake Characteristics

See the instructions to determine the pollutants and parameters you are required to monitor and, in turn, the tables you must complete. Not all applicants need to complete each table.

Table A. Conventional and Non-Conventional Pollutants

7.1 Are you requesting a waiver from your NPDES permitting authority for one or more of the Table A pollutants for any of your outfalls?

☐ Yes ☑ No ➔ SKIP to Item 7.3.

7.2 If yes, indicate the applicable outfalls below. Attach waiver request and other required information to the application.

Outfall Number _____ Outfall Number _____ Outfall Number _____

7.3 Have you completed monitoring for all Table A pollutants at each of your outfalls for which a waiver has not been requested and attached the results to this application package?

☑ Yes ☐ No; a waiver has been requested from my NPDES permitting authority for all pollutants at all outfalls.

Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants

7.4 Do any of the facility's processes that contribute wastewater fall into one or more of the primary industry categories listed in Exhibit 2C-3? (See end of instructions for exhibit.)

☑ Yes ☐ No ➔ SKIP to Item 7.8.

7.5 Have you checked "Testing Required" for all toxic metals, cyanide, and total phenols in Section 1 of Table B?

☑ Yes ☐ No

7.6 List the applicable primary industry categories and check the boxes indicating the required GC/MS fraction(s) identified in Exhibit 2C-3.

Primary Industry Category	Required GC/MS Fraction(s) (Check applicable boxes.)			
Steam Electric Power Generating	☑ Volatile	☑ Acid	☐ Base/Neutral	☐ Pesticide
	☐ Volatile	☐ Acid	☐ Base/Neutral	☐ Pesticide
	☐ Volatile	☐ Acid	☐ Base/Neutral	☐ Pesticide

Effluent and Intake Characteristics Continued

7.7	Have you checked "Testing Required" for all required pollutants in Sections 2 through 5 of Table B for each of the GC/MS fractions checked in Item 7.6? ☑ Yes ☐ No
7.8	Have you checked "Believed Present" or "Believed Absent" for all pollutants listed in Sections 1 through 5 of Table B where testing is not required? ☑ Yes ☐ No
7.9	Have you provided (1) quantitative data for those Section 1, Table B, pollutants for which you have indicated testing is required or (2) quantitative data or other required information for those Section 1, Table B, pollutants that you have indicated are "Believed Present" in your discharge? ☑ Yes ☐ No
7.10	Does the applicant qualify for a small business exemption under the criteria specified in the instructions? ☐ Yes ➔ Note that you qualify at the top of Table B, then SKIP to Item 7.12. ☑ No
7.11	Have you provided (1) quantitative data for those Sections 2 through 5, Table B, pollutants for which you have determined testing is required or (2) quantitative data or an explanation for those Sections 2 through 5, Table B, pollutants you have indicated are "Believed Present" in your discharge? ☑ Yes ☐ No
Table C. Certain Conventional and Non-Conventional Pollutants	
7.12	Have you indicated whether pollutants are "Believed Present" or "Believed Absent" for all pollutants listed on Table C for all outfalls? ☑ Yes ☐ No
7.13	Have you completed Table C by providing (1) quantitative data for those pollutants that are limited either directly or indirectly in an ELG and/or (2) quantitative data or an explanation for those pollutants for which you have indicated "Believed Present"? ☑ Yes ☐ No
Table D. Certain Hazardous Substances and Asbestos	
7.14	Have you indicated whether pollutants are "Believed Present" or "Believed Absent" for all pollutants listed in Table D for all outfalls? ☑ Yes ☐ No
7.15	Have you completed Table D by (1) describing the reasons the applicable pollutants are expected to be discharged and (2) by providing quantitative data, if available? ☐ Yes ☑ No
Table E. 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (2,3,7,8-TCDD)	
7.16	Does the facility use or manufacture one or more of the 2,3,7,8-TCDD congeners listed in the instructions, or do you know or have reason to believe that TCDD is or may be present in the effluent? ☐ Yes ➔ Complete Table E. ☑ No ➔ SKIP to Section 8.
7.17	Have you completed Table E by reporting *qualitative* data for TCDD? ☐ Yes ☐ No

SECTION 8. USED OR MANUFACTURED TOXICS (40 CFR 122.21(g)(9))

Used or Manufactured Toxics

8.1	Is any pollutant listed in Table B a substance or a component of a substance used or manufactured at your facility as an intermediate or final product or byproduct? ☐ Yes ☑ No ➔ SKIP to Section 9.
8.2	List the pollutants below.

1.	4.	7.
2.	5.	8.
3.	6.	9.

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AL5640090002	AL0024635	Bellefonte Nuclear Plant	

SECTION 9. BIOLOGICAL TOXICITY TESTS (40 CFR 122.21(g)(11))

Biological Toxicity Tests

9.1 Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made within the last three years on (1) any of your discharges or (2) on a receiving water in relation to your discharge?

☐ Yes ☑ No ➔ SKIP to Section 10.

9.2 Identify the tests and their purposes below.

Test(s)	Purpose of Test(s)	Submitted to NPDES Permitting Authority?	Date Submitted
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	

SECTION 10. CONTRACT ANALYSES (40 CFR 122.21(g)(12))

Contract Analyses

10.1 Were any of the analyses reported in Section 7 performed by a contract laboratory or consulting firm?

☑ Yes ☐ No ➔ SKIP to Section 11.

10.2 Provide information for each contract laboratory or consulting firm below.

	Laboratory Number 1	Laboratory Number 2	Laboratory Number 3
Name of laboratory/firm	TestAmerica Laboratories, Inc.	TestAmerica Laboratories, Inc.	
Laboratory address	4101 Shuffel Street NW North Canton, OH 44720	2960 Foster Creighton Drive Nashville, TN 37204	
Phone number	(330) 497-9396	(615) 726-0177	
Pollutant(s) analyzed	Low Level Mercury Only	All remaining parameters with the exception of field parameters (pH, temp, TRC, flow).	

SECTION 11. ADDITIONAL INFORMATION (40 CFR 122.21(g)(13))

Additional Information

11.1 Has the NPDES permitting authority requested additional information?

☐ Yes ☑ No ➔ SKIP to Section 12.

11.2 List the information requested and attach it to this application.

1.	4.
2.	5.
3.	6.

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SECTION 12. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))

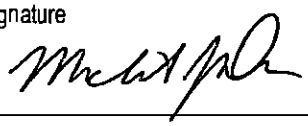
Checklist and Certification Statement

12.1 In Column 1 below, mark the sections of Form 2C that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to complete all sections or provide attachments.

Column 1	Column 2	
☑ Section 1: Outfall Location	☐ w/ attachments	
☑ Section 2: Line Drawing	☑ w/ line drawing	☐ w/ additional attachments
☑ Section 3: Average Flows and Treatment	☑ w/ attachments	☐ w/ list of each user of privately owned treatment works
☑ Section 4: Intermittent Flows	☐ w/ attachments	
☑ Section 5: Production	☐ w/ attachments	
☐ Section 6: Improvements	☐ w/ attachments	☐ w/ optional additional sheets describing any additional pollution control plans
☑ Section 7: Effluent and Intake Characteristics	☐ w/ request for a waiver and supporting information ☐ w/ small business exemption request ☑ w/ Table A ☑ w/ Table C ☐ w/ Table E	☐ w/ explanation for identical outfalls ☐ w/ other attachments ☑ w/ Table B ☑ w/ Table D ☐ w/ analytical results as an attachment
☐ Section 8: Used or Manufactured Toxics	☐ w/ attachments	
☐ Section 9: Biological Toxicity Tests	☐ w/ attachments	
☑ Section 10: Contract Analyses	☐ w/ attachments	
☐ Section 11: Additional Information	☐ w/ attachments	
☑ Section 12: Checklist and Certification Statement	☐ w/ attachments	

12.2 **Certification Statement**

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 fine and imprisonment for knowing violations.

Name (print or type first and last name)	Official title
Michael J. Durr	Acting Vice President,Nuclear Engineering
Signature 	Date signed 10/11/19

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 03C/G

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TABLE A. CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(iii))[1]

	Pollutant	Waiver Requested (if applicable)	Units (specify)		Effluent: Maximum Daily Discharge (required)	Effluent: Maximum Monthly Discharge (if available)	Effluent: Long-Term Average Daily Discharge (if available)	Effluent: Number of Analyses	Intake (Optional): Long-Term Average Value	Intake (Optional): Number of Analyses
☐	Check here if you have applied to your NPDES permitting authority for a waiver for *all* of the pollutants listed on this table for the noted outfall.									
1.	Biochemical oxygen demand (BOD_5)	☐	Concentration	mg/l	2.50			1	290	1
			Mass							
2.	Chemical oxygen demand (COD)	☐	Concentration	mg/l	25.2			1	25.8	1
			Mass							
3.	Total organic carbon (TOC)	☐	Concentration	mg/l	2.45			1	2.90	1
			Mass							
4.	Total suspended solids (TSS)	☐	Concentration	mg/l	24.0		7.8	8	8.00	1
			Mass							
5.	Ammonia (as N)	☐	Concentration	mg/l	0.183			1	< 0.100	1
			Mass							
6.	Flow	☐	Rate	MGD	0.760		0.4825	8		
7.	Temperature (winter)	☐	°C	°C	13.9			1	14.9	1
	Temperature (summer)	☐	°C	°C						
8.	pH (minimum)	☐	Standard units	s.u.	6.9			8	6.9	1
	pH (maximum)	☐	Standard units	s.u.	8.8			8	6.9	1

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
☐	Check here if you qualify as a small business per the instructions to Form 2C and, therefore, do not need to submit quantitative data for any of the organic toxic pollutants in Sections 2 through 5 of this table. Note, however, that you must still indicate in the appropriate column of this table if you believe any of the pollutants listed are present in your discharge.										
Section 1. Toxic Metals, Cyanide, and Total Phenols											
1.1	Antimony, total (7440-36-0)	☑	☐	☐	Concentration	mg/l	< 0.002			1	< 0.002	1
					Mass							
1.2	Arsenic, total (7440-38-2)	☑	☐	☐	Concentration	mg/l	< 0.002			1	< 0.002	1
					Mass							
1.3	Beryllium, total (7440-41-7)	☑	☐	☐	Concentration	mg/l	< 0.002			1	< 0.002	1
					Mass							
1.4	Cadmium, total (7440-43-9)	☑	☐	☐	Concentration	mg/l	< 0.001			1	< 0.001	1
					Mass							
1.5	Chromium, total (7440-47-3)	☑	☐	☐	Concentration	mg/l	< 0.002			1	< 0.002	1
					Mass							
1.6	Copper, total (7440-50-8)	☑	☐	☐	Concentration	mg/l	0.00823			1	< 0.002	1
					Mass							
1.7	Lead, total (7439-92-1)	☑	☐	☐	Concentration	mg/l	< 0.002			1	< 0.002	1
					Mass							
1.8	Mercury, total (7439-97-6)	☑	☐	☐	Concentration	ng/l	1.89			1	2.85	1
					Mass							
1.9	Nickel, total (7440-02-0)	☑	☐	☐	Concentration	mg/l	< 0.002			1	< 0.002	1
					Mass							
1.10	Selenium, total (7782-49-2)	☑	☐	☐	Concentration	mg/l	< 0.002			1	< 0.002	1
					Mass							
1.11	Silver, total (7440-22-4)	☑	☐	☐	Concentration	mg/l	< 0.002			1	< 0.002	1
					Mass							

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 03C/G

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
1.12	Thallium, total (7440-28-0)	☑	☐	☐	Concentration	mg/l	< 0.002			1	< 0.002	1
					Mass							
1.13	Zinc, total (7440-66-6)	☑	☐	☐	Concentration	mg/l	< 0.025			1	< 0.025	1
					Mass							
1.14	Cyanide, total (57-12-5)	☑	☐	☐	Concentration	mg/l	< 0.01			1	< 0.01	1
					Mass							
1.15	Phenols, total	☑	☐	☐	Concentration	mg/l	< 0.05			1	< 0.05	1
					Mass							
Section 2. Organic Toxic Pollutants (GC/MS Fraction—Volatile Compounds)												
2.1	Acrolein (107-02-8)	☑	☐	☐	Concentration	ug/l	< 50.0			1	< 50.0	1
					Mass							
2.2	Acrylonitrile (107-13-1)	☑	☐	☐	Concentration	ug/l	< 10.0			1	< 10.0	1
					Mass							
2.3	Benzene (71-43-2)	☑	☐	☐	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.4	Bromoform (75-25-2)	☑	☐	☐	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.5	Carbon tetrachloride (56-23-5)	☑	☐	☐	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.6	Chlorobenzene (108-90-7)	☑	☐	☐	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.7	Chlorodibromomethane (124-48-1)	☑	☐	☐	Concentration	ug/l	< 2.00			1	< 2.00	1
					Mass							
2.8	Chloroethane (75-00-3)	☑	☐	☐	Concentration	ug/l	< 2.00			1	< 2.00	1
					Mass							

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
2.9	2-chloroethylvinyl ether (110-75-8)	☑	☐	☐	Concentration	ug/l	< 5.00			1	< 5.00	1
					Mass							
2.10	Chloroform (67-66-3)	☑	☐	☐	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.11	Dichlorobromomethane (75-27-4)	☑	☐	☐	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.12	1,1-dichloroethane (75-34-3)	☑	☐	☐	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.13	1,2-dichloroethane (107-06-2)	☑	☐	☐	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.14	1,1-dichloroethylene (75-35-4)	☑	☐	☐	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.15	1,2-dichloropropane (78-87-5)	☑	☐	☐	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.16	1,3-dichloropropylene (542-75-6)	☑	☐	☐	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.17	Ethylbenzene (100-41-4)	☑	☐	☐	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.18	Methyl bromide (74-83-9)	☑	☐	☐	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.19	Methyl chloride (74-87-3)	☑	☐	☐	Concentration	ug/l	< 2.00			1	< 2.00	1
					Mass							
2.20	Methylene chloride (75-09-2)	☑	☐	☐	Concentration	ug/l	< 5.00			1	< 5.00	1
					Mass							
2.21	1,1,2,2- tetrachloroethane (79-34-5)	☑	☐	☐	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
2.22	Tetrachloroethylene (127-18-4)	☑	☐	☐	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.23	Toluene (108-88-3)	☑	☐	☐	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.24	1,2-trans-dichloroethylene (156-60-5)	☑	☐	☐	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.25	1,1,1-trichloroethane (71-55-6)	☑	☐	☐	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.26	1,1,2-trichloroethane (79-00-5)	☑	☐	☐	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.27	Trichloroethylene (79-01-6)	☑	☐	☐	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.28	Vinyl chloride (75-01-4)	☑	☐	☐	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
Section 3. Organic Toxic Pollutants (GC/MS Fraction—Acid Compounds)												
3.1	2-chlorophenol (95-57-8)	☑	☐	☐	Concentration	ug/l	< 9.62			1	< 9.26	1
					Mass							
3.2	2,4-dichlorophenol (120-83-2)	☑	☐	☐	Concentration	ug/l	< 1.83			1	< 1.76	1
					Mass							
3.3	2,4-dimethylphenol (105-67-9)	☑	☐	☐	Concentration	ug/l	< 9.62			1	< 9.26	1
					Mass							
3.4	4,6-dinitro-o-cresol (534-52-1)	☑	☐	☐	Concentration	ug/l	< 48.1			1	< 46.3	1
					Mass							
3.5	2,4-dinitrophenol (51-28-5)	☑	☐	☐	Concentration	ug/l	< 96.2			1	< 92.6	1
					Mass							

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
3.6	2-nitrophenol (88-75-5)	☑	☐	☐	Concentration	ug/l	< 9.62			1	< 9.26	1
					Mass							
3.7	4-nitrophenol (100-02-7)	☑	☐	☐	Concentration	ug/l	< 48.1			1	< 46.3	1
					Mass							
3.8	p-chloro-m-cresol (59-50-7)	☑	☐	☐	Concentration	ug/l	< 9.62			1	< 9.26	1
					Mass							
3.9	Pentachlorophenol (87-86-5)	☑	☐	☐	Concentration	ug/l	< 48.1			1	< 46.3	1
					Mass							
3.10	Phenol (108-95-2)	☑	☐	☐	Concentration	ug/l	< 9.62			1	< 9.26	1
					Mass							
3.11	2,4,6-trichlorophenol (88-05-2)	☑	☐	☐	Concentration	ug/l	< 9.62			1	< 9.26	1
					Mass							
Section 4. Organic Toxic Pollutants (GC/MS Fraction—Base /Neutral Compounds)												
4.1	Acenaphthene (83-32-9)	☐	☐	☑	Concentration							
					Mass							
4.2	Acenaphthylene (208-96-8)	☐	☐	☑	Concentration							
					Mass							
4.3	Anthracene (120-12-7)	☐	☐	☑	Concentration							
					Mass							
4.4	Benzidine (92-87-5)	☐	☐	☑	Concentration							
					Mass							
4.5	Benzo (a) anthracene (56-55-3)	☐	☐	☑	Concentration							
					Mass							
4.6	Benzo (a) pyrene (50-32-8)	☐	☐	☑	Concentration							
					Mass							

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	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
4.7	3,4-benzofluoranthene (205-99-2)	☐	☐	☑	Concentration							
					Mass							
4.8	Benzo (ghi) perylene (191-24-2)	☐	☐	☑	Concentration							
					Mass							
4.9	Benzo (k) fluoranthene (207-08-9)	☐	☐	☑	Concentration							
					Mass							
4.10	Bis (2-chloroethoxy) methane (111-91-1)	☐	☐	☑	Concentration							
					Mass							
4.11	Bis (2-chloroethyl) ether (111-44-4)	☐	☐	☑	Concentration							
					Mass							
4.12	Bis (2-chloroisopropyl) ether (102-80-1)	☐	☐	☑	Concentration							
					Mass							
4.13	Bis (2-ethylhexyl) phthalate (117-81-7)	☐	☐	☑	Concentration							
					Mass							
4.14	4-bromophenyl phenyl ether (101-55-3)	☐	☐	☑	Concentration							
					Mass							
4.15	Butyl benzyl phthalate (85-68-7)	☐	☐	☑	Concentration							
					Mass							
4.16	2-chloronaphthalene (91-58-7)	☐	☐	☑	Concentration							
					Mass							
4.17	4-chlorophenyl phenyl ether (7005-72-3)	☐	☐	☑	Concentration							
					Mass							
4.18	Chrysene (218-01-9)	☐	☐	☑	Concentration							
					Mass							
4.19	Dibenzo (a,h) anthracene (53-70-3)	☐	☐	☑	Concentration							
					Mass							

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
4.20	1,2-dichlorobenzene (95-50-1)	☐	☐	☑	Concentration							
					Mass							
4.21	1,3-dichlorobenzene (541-73-1)	☐	☐	☑	Concentration							
					Mass							
4.22	1,4-dichlorobenzene (106-46-7)	☐	☐	☑	Concentration							
					Mass							
4.23	3,3-dichlorobenzidine (91-94-1)	☐	☐	☑	Concentration							
					Mass							
4.24	Diethyl phthalate (84-66-2)	☐	☐	☑	Concentration							
					Mass							
4.25	Dimethyl phthalate (131-11-3)	☐	☐	☑	Concentration							
					Mass							
4.26	Di-n-butyl phthalate (84-74-2)	☐	☐	☑	Concentration							
					Mass							
4.27	2,4-dinitrotoluene (121-14-2)	☐	☐	☑	Concentration							
					Mass							
4.28	2,6-dinitrotoluene (606-20-2)	☐	☐	☑	Concentration							
					Mass							
4.29	Di-n-octyl phthalate (117-84-0)	☐	☐	☑	Concentration							
					Mass							
4.30	1,2-Diphenylhydrazine (as azobenzene) (122-66-7)	☐	☐	☑	Concentration							
					Mass							
4.31	Fluoranthene (206-44-0)	☐	☐	☑	Concentration							
					Mass							
4.32	Fluorene (86-73-7)	☐	☐	☑	Concentration							
					Mass							

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
4.33	Hexachlorobenzene (118-74-1)	☐	☐	☑	Concentration							
					Mass							
4.34	Hexachlorobutadiene (87-68-3)	☐	☐	☑	Concentration							
					Mass							
4.35	Hexachlorocyclopentadiene (77-47-4)	☐	☐	☑	Concentration							
					Mass							
4.36	Hexachloroethane (67-72-1)	☐	☐	☑	Concentration							
					Mass							
4.37	Indeno (1,2,3-cd) pyrene (193-39-5)	☐	☐	☑	Concentration							
					Mass							
4.38	Isophorone (78-59-1)	☐	☐	☑	Concentration							
					Mass							
4.39	Naphthalene (91-20-3)	☐	☐	☑	Concentration							
					Mass							
4.40	Nitrobenzene (98-95-3)	☐	☐	☑	Concentration							
					Mass							
4.41	N-nitrosodimethylamine (62-75-9)	☐	☐	☑	Concentration							
					Mass							
4.42	N-nitrosodi-n-propylamine (621-64-7)	☐	☐	☑	Concentration							
					Mass							
4.43	N-nitrosodiphenylamine (86-30-6)	☐	☐	☑	Concentration							
					Mass							
4.44	Phenanthrene (85-01-8)	☐	☐	☑	Concentration							
					Mass							
4.45	Pyrene (129-00-0)	☐	☐	☑	Concentration							
					Mass							

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
4.46	1,2,4-trichlorobenzene (120-82-1)	☐	☐	☑	Concentration							
					Mass							
Section 5. Organic Toxic Pollutants (GC/MS Fraction—Pesticides)												
5.1	Aldrin (309-00-2)	☐	☐	☑	Concentration							
					Mass							
5.2	α-BHC (319-84-6)	☐	☐	☑	Concentration							
					Mass							
5.3	β-BHC (319-85-7)	☐	☐	☑	Concentration							
					Mass							
5.4	γ-BHC (58-89-9)	☐	☐	☑	Concentration							
					Mass							
5.5	δ-BHC (319-86-8)	☐	☐	☑	Concentration							
					Mass							
5.6	Chlordane (57-74-9)	☐	☐	☑	Concentration							
					Mass							
5.7	4,4'-DDT (50-29-3)	☐	☐	☑	Concentration							
					Mass							
5.8	4,4'-DDE (72-55-9)	☐	☐	☑	Concentration							
					Mass							
5.9	4,4'-DDD (72-54-8)	☐	☐	☑	Concentration							
					Mass							
5.10	Dieldrin (60-57-1)	☐	☐	☑	Concentration							
					Mass							
5.11	α-endosulfan (115-29-7)	☐	☐	☑	Concentration							
					Mass							

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	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
5.12	β-endosulfan (115-29-7)	☐	☐	☑	Concentration							
					Mass							
5.13	Endosulfan sulfate (1031-07-8)	☐	☐	☑	Concentration							
					Mass							
5.14	Endrin (72-20-8)	☐	☐	☑	Concentration							
					Mass							
5.15	Endrin aldehyde (7421-93-4)	☐	☐	☑	Concentration							
					Mass							
5.16	Heptachlor (76-44-8)	☐	☐	☑	Concentration							
					Mass							
5.17	Heptachlor epoxide (1024-57-3)	☐	☐	☑	Concentration							
					Mass							
5.18	PCB-1242 (53469-21-9)	☐	☐	☑	Concentration							
					Mass							
5.19	PCB-1254 (11097-69-1)	☐	☐	☑	Concentration							
					Mass							
5.20	PCB-1221 (11104-28-2)	☐	☐	☑	Concentration							
					Mass							
5.21	PCB-1232 (11141-16-5)	☐	☐	☑	Concentration							
					Mass							
5.22	PCB-1248 (12672-29-6)	☐	☐	☑	Concentration							
					Mass							
5.23	PCB-1260 (11096-82-5)	☐	☐	☑	Concentration							
					Mass							
5.24	PCB-1016 (12674-11-2)	☐	☐	☑	Concentration							
					Mass							

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	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
5.25	Toxaphene (8001-35-2)	☐	☐	☑	Concentration							
					Mass							

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi))[1]

	Pollutant	Presence or Absence (check one)		Units (specify)		Effluent				Intake (Optional)	
		Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
☐	Check here if you believe all pollutants on Table C to be ***present*** in your discharge from the noted outfall. You need *not* complete the "Presence or Absence" column of Table C for *each* pollutant.										
☐	Check here if you believe all pollutants on Table C to be ***absent*** in your discharge from the noted outfall. You need *not* complete the "Presence or Absence" column of Table C for *each* pollutant.										
1.	Bromide (24959-67-9)	☑	☐	Concentration	mg/l	< 1.00			1	< 1.00	1
				Mass							
2.	Chlorine, total residual	☑	☐	Concentration	mg/l	< 0.05			1	< 0.05	1
				Mass							
3.	Color	☑	☐	Concentration	PCU	< 5.00			1	5.00	1
				Mass							
4.	Fecal coliform	☐	☑	Concentration							
				Mass							
5.	Fluoride (16984-48-8)	☑	☐	Concentration	mg/l	0.154			1	< 0.100	1
				Mass							
6	Nitrate-nitrite	☑	☐	Concentration	mg/l	0.189			1	0.277	1
				Mass							
7.	Nitrogen, total organic (as N)	☑	☐	Concentration	mg/l	0.194			1	0.396	1
				Mass							
8.	Oil and grease	☑	☐	Concentration	mg/l	< 4.1		< 4.0	8	< 4.0	1
				Mass							
9.	Phosphorus (as P), total (7723-14-0)	☑	☐	Concentration	mg/l	< 0.100			1	< 0.100	1
				Mass							
10.	Sulfate (as SO_4) (14808-79-8)	☑	☐	Concentration	mg/l	10.1			1	3.20	1
				Mass							
11.	Sulfide (as S)	☐	☑	Concentration							
				Mass							

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 03C/G

Form Approved 03/05/19
OMB No. 2040-0004

TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi))[1]

	Pollutant	Presence or Absence (check one)		Units (specify)		Effluent				Intake (Optional)	
		Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
12.	Sulfite (as SO_3) (14265-45-3)	☐	☑	Concentration							
				Mass							
13.	Surfactants	☑	☐	Concentration	mg/l	< 0.05			1	< 0.05	1
				Mass							
14.	Aluminum, total (7429-90-5)	☑	☐	Concentration	mg/l	0.193			1	0.431	1
				Mass							
15.	Barium, total (7440-39-3)	☑	☐	Concentration	mg/l	0.00939			1	0.0143	1
				Mass							
16.	Boron, total (7440-42-8)	☑	☐	Concentration	mg/l	< 0.100			1	< 0.100	1
				Mass							
17.	Cobalt, total (7440-48-4)	☑	☐	Concentration	mg/l	< 0.002			1	< 0.002	1
				Mass							
18.	Iron, total (7439-89-6)	☑	☐	Concentration	mg/l	0.303			1	0.454	1
				Mass							
19.	Magnesium, total (7439-95-4)	☑	☐	Concentration	mg/l	3.73			1	2.18	1
				Mass							
20.	Molybdenum, total (7439-98-7)	☑	☐	Concentration	mg/l	< 0.002			1	< 0.002	1
				Mass							
21.	Manganese, total (7439-96-5)	☑	☐	Concentration	mg/l	0.0181			1	0.0309	1
				Mass							
22.	Tin, total (7440-31-5)	☑	☐	Concentration	mg/l	< 0.002			1	< 0.002	1
				Mass							
23.	Titanium, total (7440-32-6)	☑	☐	Concentration	mg/l	0.00283			1	0.00463	1
				Mass							

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 03C/G

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TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi))[1]

	Pollutant	Presence or Absence (check one)		Units (specify)		Effluent				Intake (Optional)	
		Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
24.	**Radioactivity**										
	Alpha, total	☐	☑	Concentration							
				Mass							
	Beta, total	☐	☑	Concentration							
				Mass							
	Radium, total	☐	☑	Concentration							
				Mass							
	Radium 226, total	☐	☑	Concentration							
				Mass							

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 03C/G

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TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))[1]

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
1.	Asbestos	☐	☑		
2.	Acetaldehyde	☐	☑		
3.	Allyl alcohol	☐	☑		
4.	Allyl chloride	☐	☑		
5.	Amyl acetate	☐	☑		
6.	Aniline	☐	☑		
7.	Benzonitrile	☐	☑		
8.	Benzyl chloride	☐	☑		
9.	Butyl acetate	☐	☑		
10.	Butylamine	☐	☑		
11.	Captan	☐	☑		
12.	Carbaryl	☐	☑		
13.	Carbofuran	☐	☑		
14.	Carbon disulfide	☐	☑		
15.	Chlorpyrifos	☐	☑		
16.	Coumaphos	☐	☑		
17.	Cresol	☐	☑		
18.	Crotonaldehyde	☐	☑		
19.	Cyclohexane	☐	☑		

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 03C/G

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TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))[1]

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
20.	2,4-D (2,4-dichlorophenoxyacetic acid)	☐	☑		
21.	Diazinon	☐	☑		
22.	Dicamba	☐	☑		
23.	Dichlobenil	☐	☑		
24.	Dichlone	☐	☑		
25.	2,2-dichloropropionic acid	☐	☑		
26.	Dichlorvos	☐	☑		
27.	Diethyl amine	☐	☑		
28.	Dimethyl amine	☐	☑		
29.	Dintrobenzene	☐	☑		
30.	Diquat	☐	☑		
31.	Disulfoton	☐	☑		
32.	Diuron	☐	☑		
33.	Epichlorohydrin	☐	☑		
34.	Ethion	☐	☑		
35.	Ethylene diamine	☐	☑		
36.	Ethylene dibromide	☐	☑		
37.	Formaldehyde	☐	☑		
38.	Furfural	☐	☑		

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 03C/G

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TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))[1]

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
39.	Guthion	☐	☑		
40.	Isoprene	☐	☑		
41.	Isopropanolamine	☐	☑		
42.	Kelthane	☐	☑		
43.	Kepone	☐	☑		
44.	Malathion	☐	☑		
45.	Mercaptodimethur	☐	☑		
46.	Methoxychlor	☐	☑		
47.	Methyl mercaptan	☐	☑		
48.	Methyl methacrylate	☐	☑		
49.	Methyl parathion	☐	☑		
50.	Mevinphos	☐	☑		
51.	Mexacarbate	☐	☑		
52.	Monoethyl amine	☐	☑		
53.	Monomethyl amine	☐	☑		
54.	Naled	☐	☑		
55.	Naphthenic acid	☐	☑		
56.	Nitrotoluene	☐	☑		
57.	Parathion	☐	☑		

TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))[1]

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
58.	Phenolsulfonate	☐	☑		
59.	Phosgene	☐	☑		
60.	Propargite	☐	☑		
61.	Propylene oxide	☐	☑		
62.	Pyrethrins	☐	☑		
63.	Quinoline	☐	☑		
64.	Resorcinol	☐	☑		
65.	Strontium	☐	☑		
66.	Strychnine	☐	☑		
67.	Styrene	☐	☑		
68.	2,4,5-T (2,4,5-trichlorophenoxyacetic acid)	☐	☑		
69.	TDE (tetrachlorodiphenyl ethane)	☐	☑		
70.	2,4,5-TP [2-(2,4,5-trichlorophenoxy) propanoic acid]	☐	☑		
71.	Trichlorofon	☐	☑		
72.	Triethanolamine	☐	☑		
73.	Triethylamine	☐	☑		
74.	Trimethylamine	☐	☑		
75.	Uranium	☐	☑		
76.	Vanadium	☐	☑		

TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))[1]

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
77.	Vinyl acetate	☐	☑		
78.	Xylene	☐	☑		
79.	Xylenol	☐	☑		
80.	Zirconium	☐	☑		

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 03C/G

TABLE E. 2,3,7,8 TETRACHLORODIBENZO P DIOXIN (2,3,7,8 TCDD) (40 CFR 122.21(g)(7)(viii))

Pollutant	TCDD Congeners Used or Manufactured	Presence or Absence (check one)		Results of Screening Procedure
		Believed Present	Believed Absent	
2,3,7,8-TCDD	☐	☐	☑	

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Form 2F NPDES

EPA

U.S Environmental Protection Agency
Application for NPDES Permit to Discharge Wastewater

STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY

SECTION 1. OUTFALL LOCATION (40 CFR 122.21(g)(1))

Outfall Location

1.1 Provide information on each of the facility's outfalls in the table below

Outfall Number	Receiving Water Name	Latitude	Longitude
002	Town Creek (Mile 3.0)	34° 43′ 00″ N	85° 56′ 00″ W
004	Town Creek (Mile 3.3)	34° 42′ 30″ N	85° 56′ 15″ W
009	Town Creek (Mile 2.3)	34° 42′ 30″ N	85° 55′ 15″ W
010	Town Creek (Mile 2.2)	34° 42′ 30″ N	85° 56′ 15″ W
011	Town Creek (Mile 2.2)	34° 43′ 00″ N	85° 55′ 15″ W
012	TN River (Mile 393.3)	34° 43′ 00″ N	85° 54′ 15″ W

SECTION 2. IMPROVEMENTS (40 CFR 122.21(g)(6))

Improvements

2.1 Are you presently required by any federal, state, or local authority to meet an implementation schedule for constructing, upgrading, or operating wastewater treatment equipment or practices or any other environmental programs that could affect the discharges described in this application?

☐ Yes ☑ No → SKIP to Section 3.

2.2 Briefly identify each applicable project in the table below.

Brief Identification and Description of Project	Affected Outfalls (list outfall numbers)	Source(s) of Discharge	Final Compliance Dates	
			Required	Projected

2.3 Have you attached sheets describing any additional water pollution control programs (or other environmental projects that may affect your discharges) that you now have underway or planned? (Optional Item)

☐ Yes ☐ No

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EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
AL5640090002	AL0024635	Bellefonte Nuclear Plant	

Form 2F NPDES

EPA

U.S Environmental Protection Agency
Application for NPDES Permit to Discharge Wastewater

STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY

SECTION 1. OUTFALL LOCATION (40 CFR 122.21(g)(1))

Outfall Location

1.1 Provide information on each of the facility's outfalls in the table below

Outfall Number	Receiving Water Name	Latitude	Longitude
013	TN River (Mile 392.3)	34° 42′ 30″ N	85° 55′ 00″ W
014	TN River (Mile 391.3)	34° 41′ 45″ N	85° 55′ 15″ W
015	Town Creek	34° 42′ 15″ N	85° 56′ 30″ W
		° ′ ″	° ′ ″
		° ′ ″	° ′ ″
		° ′ ″	° ′ ″

SECTION 2. IMPROVEMENTS (40 CFR 122.21(g)(6))

Improvements

2.1 Are you presently required by any federal, state, or local authority to meet an implementation schedule for constructing, upgrading, or operating wastewater treatment equipment or practices or any other environmental programs that could affect the discharges described in this application?

☐ Yes ☑ No → SKIP to Section 3.

2.2 Briefly identify each applicable project in the table below.

Brief Identification and Description of Project	Affected Outfalls (list outfall numbers)	Source(s) of Discharge	Final Compliance Dates	
			Required	Projected

2.3 Have you attached sheets describing any additional water pollution control programs (or other environmental projects that may affect your discharges) that you now have underway or planned? (Optional Item)

☐ Yes ☐ No

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EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
AL5640090002	AL0024635	Bellefonte Nuclear Plant	

SECTION 3. SITE DRAINAGE MAP (40 CFR 122.26(c)(1)(i)(A))

Site Drainage Map

3.1 Have you attached a site drainage map containing all required information to this application? (See instructions for specific guidance.)

☑ Yes ☐ No

SECTION 4. POLLUTANT SOURCES (40 CFR 122.26(c)(1)(i)(B))

Pollutant Sources

4.1 Provide information on the facility's pollutant sources in the table below.

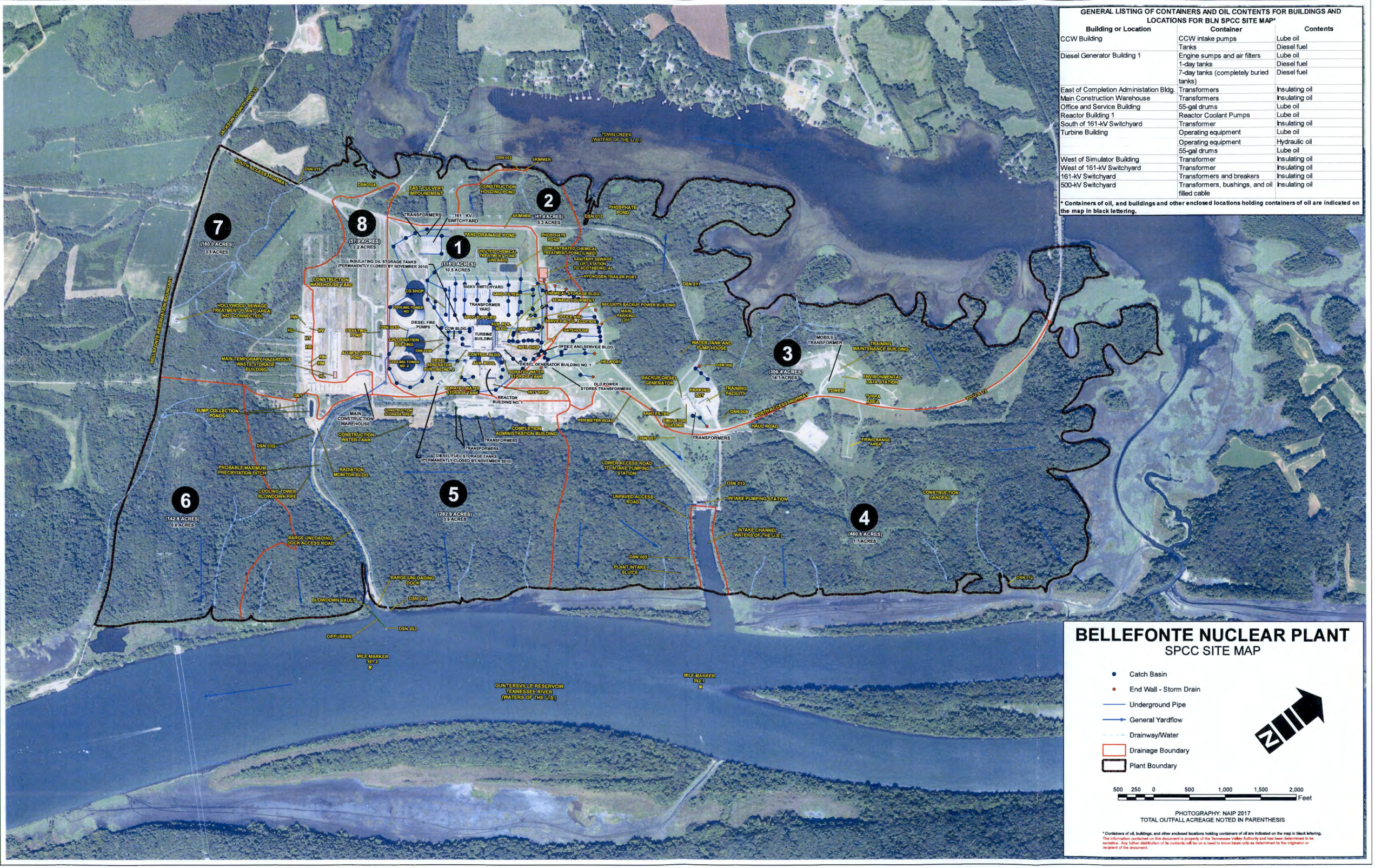
Outfall Number	Impervious Surface Area (within a mile radius of the facility)		Total Surface Area Drained (within a mile radius of the facility)	
	See Attached	*specify units*	See Attached	*specify units*
		specify units		*specify units*
		specify units		*specify units*
		specify units		*specify units*
		specify units		*specify units*
		specify units		*specify units*

4.2 Provide a narrative description of the facility's significant material in the space below. (See instructions for content requirements.)

See Attached

4.3 Provide the location and a description of existing structural and non-structural control measures to reduce pollutants in stormwater runoff. (See instructions for specific guidance.)

Stormwater Treatment		
Outfall Number	**Control Measures and Treatment**	**Codes from Exhibit 2F–1 (list)**
	See Attached	



GENERAL LISTING OF CONTAINERS AND OIL CONTENTS FOR BUILDINGS AND LOCATIONS FOR BLN SPCC SITE MAP*

Building or Location	Container	Contents
CCW Building	CCW intake pumps	Lube oil
	Tanks	Diesel fuel
Diesel Generator Building 1	Engine sumps and air filters	Lube oil
	1-day tanks	Diesel fuel
	7-day tanks (completely buried tanks)	Diesel fuel
East of Completion Administation Bldg.	Transformers	Insulating oil
Main Construction Warehouse	Transformers	Insulating oil
Office and Service Building	55-gal drums	Lube oil
Reactor Building 1	Reactor Coolant Pumps	Lube oil
South of 161-kV Switchyard	Transformer	Insulating oil
Turbine Building	Operating equipment	Lube oil
	Operating equipment	Hydraulic oil
	55-gal drums	Lube oil
West of Simulator Building	Transformer	Insulating oil
West of 161-kV Switchyard	Transformer	Insulating oil
161-kV Switchyard	Transformers and breakers	Insulating oil
500-kV Switchyard	Transformers, bushings, and oil filled cable	Insulating oil

*** Containers of oil, and buildings and other enclosed locations holding containers of oil are indicated on the map in black lettering.**

BELLEFONTE NUCLEAR PLANT
SPCC SITE MAP

- Catch Basin
- End Wall - Storm Drain
- Underground Pipe
- General Yardflow
- Drainway/Water
- Drainage Boundary
- Plant Boundary

N

500 250 0 500 1,000 1,500 2,000 Feet

PHOTOGRAPHY: NAIP 2017
TOTAL OUTFALL ACREAGE NOTED IN PARENTHESIS

* Containers of oil, buildings, and other enclosed locations holding containers of oil are indicated on the map in black lettering.

Bellefonte Nuclear Plant
NPDES Permit Number AL0024635
NPDES Form 2F, Section 4
Narrative Description
Stormwater Drainage Areas

Area 1:

Area 1 consists of the main plant area containing a total of 120 acres with approximately 68 acres of impervious surfaces. This area includes roof drainage from the Auxillary, Control, Diesel Generator, Reactor, Turbine, Office and Service Buildings and other small buildings. The transformer yard, 161KV, and 500KV switchyards are also located in this area. Ground cover includes crushed stone, asphalt, and grass. This area is served by an extensive storm water drainage system which discharges to the yard drainage pond.

Area materials storage include bulk diesel fuel with concrete secondary containment; ammonium hydroxide with secondary containment in the Turbine Building; sulphuric acid in battery rooms in Auxiliary Building, control Building, and CCW pumping station; and various chemicals stored in the Office and Service building. A brominator is installed in the Turbine Building basement for injection of Nalco products into the Raw Cooling Water when used for diesel generator cooling water. Diesel fuel offloading occurs in this area as well as various oils and chemicals at the Office and Service Building loading dock. There are 108 non-PCB transformers located in Area 1.

Buildings in this area have secondary containments for chemical and oil storage as well as internal sumps for collection and containment of spills. Spills occurring outside of the buildings are minimized and controlled by site procedure BLN-13, 1 – 10, and the Integrated Pollution Prevention (IPP) Plan. The IPP plan is also applicable to the remaining drainage areas. There have been diesel fuel and sulfuric acid spills in the area which were cleaned up and thus minimized exposure of residual material to storm water. There was PCB (small capacitor) spill in the 500KV switchyard on June 21, 1995, which was cleaned up. The complete BLN spill history is listed in the IPP plan. Storm water which accumulates within secondary containment structures is observed and analyzed, if necessary, prior to release in accordance with the IPP plan.

Herbicides are applied two or three times per year during the growing season to control vegetative growth in parking areas, switchyards, substations, and around ponds. Pesticides in solid and spray form are used inside the buildings. Fertilizers are utilized two or three times per year to enhance grass growth in lawn areas.

All activities in Area 1, as well as in the other drainage areas, are subject to the requirement of the site procedure BLN-13, 1–2, Erosion and Sedimentation Control Plan.

All site activities are conducted in accordance with this procedure to minimize erosion and resulting loss of silt to the waters of the United States.

All storm water drainage, storm water accumulation in the concentrated chemical treatment pond (formerly DSN 001B), and demineralized water piping flushes/storm water accumulation in the diluted chemical treatment pond flow through yard drainage pond to the construction holding pond (DSN 002). The construction holding pond provides treatment via sedimentation and oil skimming.

Area 2:

Drainage from Area 2 includes storm water and process water from Area 1 plus storm water from an additional 42 acres, including approximately 8 acres of impervious surfaces. Area 2 storm water drainage enters Town Creek through the construction holding pond (DSN002). The construction holding pond provides treatment via sedimentation and oil skimming.

This area includes approximately half of the paved plant parking lot (which has a storm drainage system), and a 2.6 acre tri-sodium phosphate metal cleaning waste holding pond which is inactive. The phosphate holding pond was removed from service and the dike breached in July 1986. The former pond area is vegetated and storm water drains to the construction holding pond via a drainage ditch.

Two non-PCB transformers are located in the area. No chemicals or other materials are stored in this area in a manner which exposes them to storm water. There have been no spills in the area resulting in exposure of residual materials to storm water.

Area 3:

Area 3 totals 315 acres of which 32 are impervious surfaces. This area includes an inactive 7.5 acre trisoduim phosphate metal cleaning waste holding pond, TPS and TVPPA Training Facilities and training area (at the Environmental Data Station), and approximately half of the paved plant parking lot and the facility grounds which drain to Town Creek via DSN 009.

The phosphate waste holding pond was removed from service and the dike breached in October 1996. The former pond area is vegetated and storm water drains into Town Creek via DSN 010.

Trisodium phosphate wastewater was land applied to 126 acres in this area from 1984 through 1986 in accordance with an ADEM approved treatment plan. The application areas were vegetated at the time of application and are heavily vegetated today. Storm water drains into Town Creek via ditches (DSN 011).

Ten construction and permanent non-PCB transformers and approximately thirteen non-PCB pieces of equipment used for training purposes are located in this area. No chemicals or materials are stored in this area in a manner which exposes them to storm water. Herbicides and fertilizers are applied two or three times per year during the growing season to control vegetative growth and enhance grass growth on the lawns and areas adjacent to the parking lots, respectively. There have been no spills in the area which would expose residual material to storm water.

Several storm water drainage paths exist from Area 3 to Town Creek including outfalls DSN 009, 010, and 011. These three outfalls are representative of the remaining storm water drainage from this area

Area 4:

Area 4 consists of 463 acres with approximately 14 acres of impervious surface. This area includes the site inert landfill, firing range, borrow/spoil areas, and the intake pumping station.

Trisodium phosphate wastewater was land applied to 91 acres in this area from 1984 through 1986 in accordance with an ADEM approved treatment plan. The area was vegetated at the time of application and is heavily vegetated today.

There is a biocide (Nalco products) raw water treatment skid located inside the Intake Pumping Station. Seventeen non-PCB transformers are located in this area. No other chemicals or materials are stored in this area in a manner that exposes them to storm water. There have been no oil or chemical spills in the area which would expose residual materials to storm water.

Several storm water drainage paths exist from Area 4 to the Tennessee River including discharges from DSN 012 (trisodium phosphate waste application area, site landfill, and borrow/spoil area drainage area) and DSN 013 (drainage area immediately west of intake pumping station). The remaining portions of Area 4 are not associated with industrial activity.

Area 5:

Area 5 consists of 283 acres with approximately 16 acres of impervious surface. This area includes the Completion Administration Building, Training Building, Training Annex, Construction Shops, Facilities Shop, Construction Substation, and Construction Used Oil Storage. The Sump Collection Pond (DSN 003G), which provides treatment for low volume wastes for onsite building sumps, is also located in this area.

Chemicals and materials storage includes aboveground used oil storage tanks surrounded by concrete secondary containment, oil/herbicides in the Facilities Shop, oils/chemicals in the Construction Pipe Shop, and 47 non-PCB transformers. A satellite hazardous waste area (paints/solvents) with appropriate secondary containment may be utilized in this area. Construction materials and equipment such as piping, pumps, steel, etc., may also be stored in this area. The ground cover in the building/shop areas is gravel. Herbicides may be applied two to three times per year during the growing season to control vegetative growth. There have been no spills of oils or chemicals in this area which would expose residual materials to storm water.

Various drainage paths exist from Area 5 to the Tennessee River but most carry storm water from the wooded areas not associated with industrial activity. The portion of this area associated with industrial activity drains to a site precipitation ditch, which flows to the Tennessee River along the north side of the barge unloading dock access road, entering adjacent to the dock (DSN 014). This dock was used primarily for unloading permanent equipment and loading/unloading construction equipment. Dock drainage also enters the river at this point.

Area 6:

Area 6 is mostly undisturbed area consisting of 130 acres with no impervious surfaces. This area is heavily vegetated and is not associated with industrial activity.

Area 7:

Area 7 includes 179 acres with approximately 41 acres of impervious surface. The impervious surfaces include an equipment lay-down area and several construction warehouses. The remaining area is vegetated and includes 90 acres where trisoduim phosphate wastewater was land applied in 1984 through 1986 in accordance with an ADEM approved treatment plan. The land was heavily vegetated at the time of application and is heavily vegetated today.

Chemicals and materials storage includes small quantities of oil, sulfuric acid and concrete sealer in Warehouse SH; laboratory chemicals in individual containers of five gallons or less in Warehouse OB1; paints and solvents in individual containers of five gallons or less in Warehouse WC; and possibly at other sheds and warehouses. These are all unused products stored under roof in their original containers which are not exposed to precipitation. There are 17 non-PCB transformers located in this area. Herbicides may be applied two to three times per year during the growing season to the crushed stone in the storage areas and around the warehouses to control vegetative growth. Pesticide is used inside the warehouses typically as solid rodent bait. There have been no spills of oils or chemicals in this area which would expose residual materials to storm water.

Area 7 storm water drains to Town Creek generally through one drainage ditch which discharges at DSN 015.

Area 8:

Area 8 consists of 60 acres with approximately 57 acres of impervious surface. This area contains the main hazardous waste storage building which has appropriate self-contained secondary containment; equipment lay-down areas; equipment warehouses; construction storage sheds/warehouses for various unused oils, greases, herbicides, and refrigerants, alum sludge ponds, de-silting pond (DSN 003C); and 19 non-PCB transformers. All hazardous wastes, oils, greases, and chemicals are stored in containers which completely enclose their contents. Herbicides are applied two to three times per growing season to the crushed stone storage areas and around the warehouses to control vegetative growth. Pesticide is used inside the warehouses typically in the form of solid rodent bait. There have been no spills of oils or chemicals in this area which would expose residual materials to storm water. Storm water from this area drains to the East Culvert Impoundment (DSN 004) and discharges to Town Creek.

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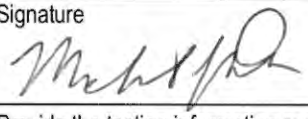
SECTION 5. NON STORMWATER DISCHARGES (40 CFR 122.26(c)(1)(i)(C))

Non-Stormwater Discharges

5.1 *I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of non-stormwater discharges. Moreover, I certify that the outfalls identified as having non-stormwater discharges are described in either an accompanying NPDES Form 2C, 2D, or 2E application.*

Name (print or type first and last name)	Official title
Michael J. Durr	Acting Vice President, Nuclear Engineering
Signature	**Date signed**
	10/11/19

5.2 Provide the testing information requested in the table below.

Outfall Number	Description of Testing Method Used	Date(s) of Testing	Onsite Drainage Points Directly Observed During Test
002, 004	Visual observations during weekly site inspections.	09/05/2019	002, 004
009 - 015	Visual observations and flow schematic / drainage area	Sept. 2019	009 - 015
	map review during NPDES application preparation.		

SECTION 6. SIGNIFICANT LEAKS OR SPILLS (40 CFR 122.26(c)(1)(i)(D))

Significant Leaks or Spills

6.1 Describe any significant leaks or spills of toxic or hazardous pollutants in the last three years.

On August 7, 2019, a current transformer in the switch yard was struck by lightning resulting in the spill of approximately 425 gallons of non-PCB oil to the ground. The spill was contained within the switch yard and did not reach any drains or discharge off site. The oily gravel and soil was removed and disposed of as solid waste.

SECTION 7. DISCHARGE INFORMATION (40 CFR 122.26(c)(1)(i)(E))

Discharge Information

See the instructions to determine the pollutants and parameters you are required to monitor and, in turn, the tables you must complete. Not all applicants need to complete each table.

7.1 Is this a new source or new discharge?

☐ Yes ➔ See instructions regarding submission of *estimated* data. ☑ No ➔ See instructions regarding submission of *actual* data.

Tables A, B, C, and D

7.2 Have you completed Table A for each outfall?

☐ Yes ☑ No

Discharge Information Continued

7.3	Is the facility subject to an effluent limitation guideline (ELG) or effluent limitations in an NPDES permit for its process wastewater?	☑ Yes ☐ No ➔ SKIP to Item 7.5.
7.4	Have you completed Table B by providing quantitative data for those pollutants that are (1) limited either directly or indirectly in an ELG and/or (2) subject to effluent limitations in an NPDES permit for the facility's process wastewater?	☑ Yes ☐ No
7.5	Do you know or have reason to believe any pollutants in Exhibit 2F–2 are present in the discharge?	☑ Yes ☐ No ➔ SKIP to Item 7.7.
7.6	Have you listed all pollutants in Exhibit 2F–2 that you know or have reason to believe are present in the discharge and provided quantitative data or an explanation for those pollutants in Table C?	☑ Yes ☐ No
7.7	Do you qualify for a small business exemption under the criteria specified in the Instructions?	☐ Yes ➔SKIP to Item 7.18. ☑ No
7.8	Do you know or have reason to believe any pollutants in Exhibit 2F–3 are present in the discharge?	☑ Yes ☐ No ➔ SKIP to Item 7.10.
7.9	Have you listed all pollutants in Exhibit 2F–3 that you know or have reason to believe are present in the discharge in Table C?	☑ Yes ☐ No
7.10	Do you expect any of the pollutants in Exhibit 2F–3 to be discharged in concentrations of 10 ppb or greater?	☑ Yes ☐ No ➔ SKIP to Item 7.12.
7.11	Have you provided quantitative data in Table C for those pollutants in Exhibit 2F–3 that you expect to be discharged in concentrations of 10 ppb or greater?	☑ Yes ☐ No
7.12	Do you expect acrolein, acrylonitrile, 2,4-dinitrophenol, or 2-methyl-4,6-dinitrophenol to be discharged in concentrations of 100 ppb or greater?	☐ Yes ☑ No ➔ SKIP to Item 7.14.
7.13	Have you provided quantitative data in Table C for the pollutants identified in Item 7.12 that you expect to be discharged in concentrations of 100 ppb or greater?	☐ Yes ☐ No
7.14	Have you provided quantitative data or an explanation in Table C for pollutants you expect to be present in the discharge at concentrations less than 10 ppb (or less than 100 ppb for the pollutants identified in Item 7.12)?	☑ Yes ☐ No
7.15	Do you know or have reason to believe any pollutants in Exhibit 2F–4 are present in the discharge?	☐ Yes ☑ No ➔ SKIP to Item 7.17.
7.16	Have you listed pollutants in Exhibit 2F–4 that you know or believe to be present in the discharge and provided an explanation in Table C?	☐ Yes ☐ No
7.17	Have you provided information for the storm event(s) sampled in Table D?	☑ Yes ☐ No

Discharge Information Continued

Used or Manufactured Toxics

7.18 Is any pollutant listed on Exhibits 2F–2 through 2F–4 a substance or a component of a substance used or manufactured as an intermediate or final product or byproduct?

☐ Yes ☑ No ➔ SKIP to Section 8.

7.19 List the pollutants below, including TCDD if applicable.

1.	4.	7.
2.	5.	8.
3.	6.	9.

SECTION 8. BIOLOGICAL TOXICITY TESTING DATA (40 CFR 122.21(g)(11))

Biological Toxicity Testing Data

8.1 Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last three years?

☐ Yes ☑ No ➔ SKIP to Section 9.

8.2 Identify the tests and their purposes below.

Test(s)	Purpose of Test(s)	Submitted to NPDES Permitting Authority?	Date Submitted
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	

SECTION 9. CONTRACT ANALYSIS INFORMATION (40 CFR 122.21(g)(12))

Contract Analysis Information

9.1 Were any of the analyses reported in Section 7 (on Tables A through C) performed by a contract laboratory or consulting firm?

☑ Yes ☐ No ➔ SKIP to Section 10.

9.2 Provide information for each contract laboratory or consulting firm below.

	Laboratory Number 1	Laboratory Number 2	Laboratory Number 3
Name of laboratory/firm	Eurofins TestAmerica, Nashville		
Laboratory address	2960 Foster Creighton Drive Nashville, TN 37204		
Phone number	(615) 726-0177		
Pollutant(s) analyzed	All parameters except those analyzed in the field (pH, temp, TRC, flow).		

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AL5640090002	AL0024635	Bellefonte Nuclear Plant	

SECTION 10. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))

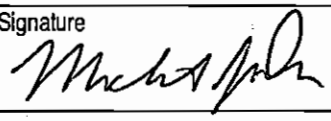
Checklist and Certification Statement

10.1 In Column 1 below, mark the sections of Form 2F that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to complete all sections or provide attachments.

Column 1	Column 2
☑ Section 1	☐ w/ attachments (e.g., responses for additional outfalls)
☐ Section 2	☐ w/ attachments
☑ Section 3	☑ w/ site drainage map
☑ Section 4	☑ w/ attachments
☑ Section 5	☐ w/ attachments
☑ Section 6	☐ w/ attachments
☑ Section 7	☑ Table A ☐ w/ small business exemption request ☑ Table B ☐ w/ analytical results as an attachment ☑ Table C ☑ Table D
☐ Section 8	☐ w/attachments
☑ Section 9	☐ w/attachments (e.g., responses for additional contact laboratories or firms)
☑ Section 10	☐

10.2 **Certification Statement**

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 fine and imprisonment for knowing violations.

Name (print or type first and last name)	Official title
Michael J. Durr	Acting Vice President, Nuclear Engineering
Signature 	Date signed 10/11/19

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 002

Form Approved 03/05/19
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TABLE A. CONVENTIONAL AND NON CONVENTIONAL PARAMETERS (40 CFR 122.26(c)(1)(i)(E)(3))[1]

You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details and requirements.

	Pollutant or Parameter	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
		Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
1.	Oil and grease	< 4.0 mg/l				1	
2.	Biochemical oxygen demand (BOD_5)	< 2.00 mg/l	< 2.00 mg/l			1	
3.	Chemical oxygen demand (COD)	< 20.0 mg/l	< 20.0 mg/l			1	
4.	Total suspended solids (TSS)	2.67 mg/l	2.13 mg/l			1	
5.	Total phosphorus	< 0.100 mg/l	< 0.100 mg/l			1	
6.	Total Kjeldahl nitrogen (TKN)	0.537 mg/l	0.573 mg/l			1	
7.	Total nitrogen (as N)	< 0.637 mg/l	< 0.673 mg/l			1	
8.	pH (minimum)	7.16 s.u.				1	
	pH (maximum)	7.16 s.u.				1	

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 002

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TABLE B. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(A))[1]

List each pollutant that is limited in an effluent limitation guideline (ELG) that the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Temperature	17.7 C	N/A			1	
Total Residual Chlorine	< 0.05 mg/l	N/A			1	
Total Chromium	< 0.00200 mg/l	0.00216 mg/l			1	
Total Zinc	0.0465 mg/l	0.0450 mg/l			1	

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 002

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TABLE C. TOXIC POLLUTANTS, CERTAIN HAZARDOUS SUBSTANCES, AND ASBESTOS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(B) and (vii))[1]

List each pollutant shown in Exhibits 2F–2, 2F–3, and 2F–4 that you know or have reason to believe is present. Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Color	5.00 PCU	5.00 PCU			1	
Nitrate-nitrite	< 0.100 mg/l	< 0.100 mg/l			1	
Sulfate	11.5 mg/l	11.5 mg/l			1	
Aluminum, total	0.0496 mg/l	0.0489 mg/l			1	
Barium, total	0.0173 mg/l	0.0158 mg/l			1	
Iron, total	0.167 mg/l	0.144 mg/l			1	
Magnesium, total	6.510 mg/l	6.210 mg/l			1	
Manganese, total	0.110 mg/l	0.0836 mg/l			1	
Mercury, total	< 0.000200 mg/l	< 0.000200 mg/l			1	

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE D. STORM EVENT INFORMATION (40 CFR 122.26(c)(1)(i)(E)(6))

Provide data for the storm event(s) that resulted in the maximum daily discharges for the flow-weighted composite sample.

Date of Storm Event	Duration of Storm Event (in hours)	Total Rainfall During Storm Event (in inches)	Number of Hours Between Beginning of Storm Measured and End of Previous Measurable Rain Event	Maximum Flow Rate During Rain Event (in gpm or specify units)	Total Flow from Rain Event (in gallons or specify units)
04/04/2019	14	0.56	111	42 gpm	28,543 gallons

Provide a description of the method of flow measurement or estimate.

Flow rates were calculated using pipe slope and cross-sectional area of flow.

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	004

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TABLE A. CONVENTIONAL AND NON CONVENTIONAL PARAMETERS (40 CFR 122.26(c)(1)(i)(E)(3))[1]

You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details and requirements.

	Pollutant or Parameter	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
		Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
1.	Oil and grease	< 4.1 mg/l		< 3.99 mg/l		7	
2.	Biochemical oxygen demand (BOD_5)						
3.	Chemical oxygen demand (COD)						
4.	Total suspended solids (TSS)	5.30 mg/l		< 2.89 mg/l		7	
5.	Total phosphorus						
6.	Total Kjeldahl nitrogen (TKN)						
7.	Total nitrogen (as N)						
8.	pH (minimum)	7.4 s.u.				7	
	pH (maximum)	7.9 s.u.				7	

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	004

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TABLE B. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(A))[1]

List each pollutant that is limited in an effluent limitation guideline (ELG) that the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
N/A						

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	004

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TABLE C. TOXIC POLLUTANTS, CERTAIN HAZARDOUS SUBSTANCES, AND ASBESTOS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(B) and (vii))[1]

List each pollutant shown in Exhibits 2F–2, 2F–3, and 2F–4 that you know or have reason to believe is present. Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
N/A						

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	004

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TABLE D. STORM EVENT INFORMATION (40 CFR 122.26(c)(1)(i)(E)(6))

Provide data for the storm event(s) that resulted in the maximum daily discharges for the flow-weighted composite sample.

Date of Storm Event	Duration of Storm Event (in hours)	Total Rainfall During Storm Event (in inches)	Number of Hours Between Beginning of Storm Measured and End of Previous Measurable Rain Event	Maximum Flow Rate During Rain Event (in gpm or specify units)	Total Flow from Rain Event (in gallons or specify units)
	N/A	N/A	N/A	N/A	N/A

Provide a description of the method of flow measurement or estimate.

N/A

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 009

Form Approved 03/05/19
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TABLE A. CONVENTIONAL AND NON CONVENTIONAL PARAMETERS (40 CFR 122.26(c)(1)(i)(E)(3))[1]

You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details and requirements.

	Pollutant or Parameter	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
		Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
1.	Oil and grease	< 4.0 mg/l				1	
2.	Biochemical oxygen demand (BOD_5)	5.27 mg/l	4.65 mg/l			1	
3.	Chemical oxygen demand (COD)	30.9 mg/l	24.9 mg/l			1	
4.	Total suspended solids (TSS)	124 mg/l	34.0 mg/l			1	
5.	Total phosphorus	< 0.100 mg/l	< 0.100 mg/l			1	
6.	Total Kjeldahl nitrogen (TKN)	1.87 mg/l	0.890 mg/l			1	
7.	Total nitrogen (as N)	2.284 mg/l	1.146 mg/l			1	
8.	pH (minimum)	7.31 s.u.				1	
	pH (maximum)	7.31 s.u.				1	

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 009

Form Approved 03/05/19
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TABLE B. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(A))[1]

List each pollutant that is limited in an effluent limitation guideline (ELG) that the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Temperature	18.9 C	N/A			1	
Total Residual Chlorine	< 0.05 mg/l	N/A			1	
Chromium, Total	0.00243 mg/l	< 0.00200 mg/l			1	
Zinc, Total	0.0356 mg/l	0.0259 mg/l			1	

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 009

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TABLE C. TOXIC POLLUTANTS, CERTAIN HAZARDOUS SUBSTANCES, AND ASBESTOS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(B) and (vii))[1]

List each pollutant shown in Exhibits 2F–2, 2F–3, and 2F–4 that you know or have reason to believe is present. Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Color	10.0 PCU	15.0 PCU			1	
Nitrate-nitrite	0.414 mg/l	0.256 mg/l			1	
Sulfate	48.6 mg/l	15.2 mg/l			1	
Aluminum, total	1.680 mg/l	0.660 mg/l			1	
Barium, total	0.0272 mg/l	0.0141 mg/l			1	
Iron, total	2.030 mg/l	0.684 mg/l			1	
Magnesium, total	8.230 mg/l	4.590 mg/l			1	
Manganese, total	0.199 mg/l	0.0817 mg/l			1	
Mercury, total	< 0.00200 mg/l	< 0.00200 mg/l			1	

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 009

Form Approved 03/05/19
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TABLE D. STORM EVENT INFORMATION (40 CFR 122.26(c)(1)(i)(E)(6))

Provide data for the storm event(s) that resulted in the maximum daily discharges for the flow-weighted composite sample.

Date of Storm Event	Duration of Storm Event (in hours)	Total Rainfall During Storm Event (in inches)	Number of Hours Between Beginning of Storm Measured and End of Previous Measurable Rain Event	Maximum Flow Rate During Rain Event (in gpm or specify units)	Total Flow from Rain Event (in gallons or specify units)
04/18/2019	44	1.47	108.5	278 gpm	574,562 gallons

Provide a description of the method of flow measurement or estimate.

Flow was measured at a v-notch weir.

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 010

Form Approved 03/05/19
OMB No. 2040-0004

TABLE A. CONVENTIONAL AND NON CONVENTIONAL PARAMETERS (40 CFR 122.26(c)(1)(i)(E)(3))[1]

You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details and requirements.

	Pollutant or Parameter	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
		Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
1.	Oil and grease	< 4.0 mg/l				1	
2.	Biochemical oxygen demand (BOD_5)	< 2.00 mg/l	2.20 mg/l			1	
3.	Chemical oxygen demand (COD)	34.7 mg/l	34.9 mg/l			1	
4.	Total suspended solids (TSS)	6.00 mg/l	3.20 mg/l			1	
5.	Total phosphorus	< 0.100 mg/l	< 0.100 mg/l			1	
6.	Total Kjeldahl nitrogen (TKN)	1.02 mg/l	0.454 mg/l			1	
7.	Total nitrogen (as N)	< 1.12 mg/l	< 0.554 mg/l			1	
8.	pH (minimum)	7.36 s.u.				1	
	pH (maximum)	7.36 s.u.				1	

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 010

Form Approved 03/05/19
OMB No. 2040-0004

TABLE B. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(A))[1]

List each pollutant that is limited in an effluent limitation guideline (ELG) that the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Temperature	9.6 C	N/A			1	
Total Residual Chlorine	< 0.05 mg/l	N/A			1	
Chromium, Total	< 0.00200 mg/l	0.000527 mg/l			1	
Zinc, Total	< 0.0250 mg/l	< 0.0250 mg/l			1	

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 010

Form Approved 03/05/19
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TABLE C. TOXIC POLLUTANTS, CERTAIN HAZARDOUS SUBSTANCES, AND ASBESTOS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(B) and (vii))[1]

List each pollutant shown in Exhibits 2F–2, 2F–3, and 2F–4 that you know or have reason to believe is present. Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Color	15.0 PCU	10.0 PCU			1	
Nitrate-nitrite	< 0.100 mg/l	< 0.100 mg/l			1	
Sulfate	< 1.00 mg/l	< 1.00 mg/l			1	
Aluminum, total	0.0359 mg/l	0.0805 mg/l			1	
Barium, total	0.00784 mg/l	0.00753 mg/l			1	
Iron, total	0.235 mg/l	0.268 mg/l			1	
Magnesium, total	3.77 mg/l	3.37 mg/l			1	
Manganese, total	0.0284 mg/l	0.0313 mg/l			1	
Mercury, total	< 0.000200 mg/l	< 0.00200 mg/l			1	

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	D5N 010

Form Approved 03/05/19
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TABLE D. STORM EVENT INFORMATION (40 CFR 122.26(c)(1)(i)(E)(6))

Provide data for the storm event(s) that resulted in the maximum daily discharges for the flow-weighted composite sample.

Date of Storm Event	Duration of Storm Event (in hours)	Total Rainfall During Storm Event (in inches)	Number of Hours Between Beginning of Storm Measured and End of Previous Measurable Rain Event	Maximum Flow Rate During Rain Event (in gpm or specify units)	Total Flow from Rain Event (in gallons or specify units)
01/23/2019	21.5	2.05	85.5	1,938 gpm	917,602 gallons

Provide a description of the method of flow measurement or estimate.

Flow is measured at a v-notch weir.

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 013

Form Approved 03/05/19
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TABLE A. CONVENTIONAL AND NON CONVENTIONAL PARAMETERS (40 CFR 122.26(c)(1)(i)(E)(3))[1]

You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details and requirements.

	Pollutant or Parameter	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
		Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
1.	Oil and grease	< 3.9 mg/l				1	
2.	Biochemical oxygen demand (BODs)	3.28 mg/l	3.43 mg/l			1	
3.	Chemical oxygen demand (COD)	20.2 mg/l	30.6 mg/l			1	
4.	Total suspended solids (TSS)	67.2 mg/l	67.6 mg/l			1	
5.	Total phosphorus	< 0.100 mg/l	< 0.100 mg/l			1	
6.	Total Kjeldahl nitrogen (TKN)	0.550 mg/l	0.749 mg/l			1	
7.	Total nitrogen (as N)	0.759 mg/l	0.891 mg/l			1	
8.	pH (minimum)	7.42 s.u.				1	
	pH (maximum)	7.42 s.u.				1	

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	D5N 013

Form Approved 03/05/19
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TABLE B. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(A))[1]

List each pollutant that is limited in an effluent limitation guideline (ELG) that the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Temperature	17.9 C	N/A			1	
Total Residual Chlorine	< 0.05 mg/l	N/A			1	
Chromium, Total	0.00215 mg/l	< 0.00200 mg/l			1	
Zinc, Total	0.0153 ug/l	0.0225 mg/l			1	

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 013

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TABLE C. TOXIC POLLUTANTS, CERTAIN HAZARDOUS SUBSTANCES, AND ASBESTOS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(B) and (vii))[1]

List each pollutant shown in Exhibits 2F–2, 2F–3, and 2F–4 that you know or have reason to believe is present. Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Color	5.00 PCU	20.0 PCU			1	
Nitrate-nitrite	0.209 mg/l	0.142 mg/l			1	
Sulfate	20.2 mg/l	15.8 mg/l			1	
Aluminum, total	1.690 mg/l	1.230 mg/l			1	
Barium, total	0.0572 mg/l	0.0456 mg/l			1	
Iron, total	2.350 mg/l	1.760 mg/l			1	
Magnesium, total	13.800 mg/l	10.800 mg/l			1	
Manganese, total	0.327 mg/l	0.281 mg/l			1	
Mercury, total	< 0.00200 mg/l	< 0.00200 mg/l			1	

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 013

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TABLE D. STORM EVENT INFORMATION (40 CFR 122.26(c)(1)(i)(E)(6))

Provide data for the storm event(s) that resulted in the maximum daily discharges for the flow-weighted composite sample.

Date of Storm Event	Duration of Storm Event (in hours)	Total Rainfall During Storm Event (in inches)	Number of Hours Between Beginning of Storm Measured and End of Previous Measurable Rain Event	Maximum Flow Rate During Rain Event (in gpm or specify units)	Total Flow from Rain Event (in gallons or specify units)
04/18/2019	44	1.47	108.5	563 gpm	727,953 gallons

Provide a description of the method of flow measurement or estimate.

Flow was measured at a 4-foot rectangular weir.

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 014

Form Approved 03/05/19
OMB No. 2040-0004

TABLE A. CONVENTIONAL AND NON CONVENTIONAL PARAMETERS (40 CFR 122.26(c)(1)(i)(E)(3))[1]

You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details and requirements.

	Pollutant or Parameter	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
		Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
1.	Oil and grease	< 4.1 mg/l				1	
2.	Biochemical oxygen demand (BOD_5)	< 2.00 mg/l	< 2.00 mg/l			1	
3.	Chemical oxygen demand (COD)	51.9 mg/l	37.5 mg/l			1	
4.	Total suspended solids (TSS)	596 mg/l	33.3 mg/l			1	
5.	Total phosphorus	0.699 mg/l	< 0.100 mg/l			1	
6.	Total Kjeldahl nitrogen (TKN)	1.74 mg/l	0.602 mg/l			1	
7.	Total nitrogen (as N)	2.473 mg/l	< 0.702 mg/l			1	
8.	pH (minimum)	7.42 s.u.				1	
	pH (maximum)	7.42 s.u.				1	

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	D5N 014

Form Approved 03/05/19
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TABLE B. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(A))[1]

List each pollutant that is limited in an effluent limitation guideline (ELG) that the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Temperature	11.1 C	N/A			1	
Total Residual Chlorine	< 0.05 mg/l	N/A			1	
Chromium, Total	0.00589 mg/l	< 0.00200 mg/l			1	
Zinc, Total	0.0832 mg/l	< 0.0250 mg/l			1	

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 014

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TABLE C. TOXIC POLLUTANTS, CERTAIN HAZARDOUS SUBSTANCES, AND ASBESTOS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(B) and (vii))[1]

List each pollutant shown in Exhibits 2F–2, 2F–3, and 2F–4 that you know or have reason to believe is present. Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Color	100 PCU	50.0 PCU			1	
Nitrate-nitrite	0.733 mg/l	< 0.100 mg/l			1	
Sulfate	< 1.00 mg/l	4.52 mg/l			1	
Aluminum, total	8.07 mg/l	1.50 mg/l			1	
Barium, total	0.0747 mg/l	0.0179 mg/l			1	
Iron, total	13.7 mg/l	2.19 mg/l			1	
Magnesium, total	3.25 mg/l	3.31 mg/l			1	
Manganese, total	0.651 mg/l	0.0588 mg/l			1	
Mercury, total	< 0.00200 mg/l	< 0.00200 mg/l			1	

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility name	Outfall Number
AL5640090002	AL0024635	Bellefonte Nuclear Plant	DSN 014

TABLE D. STORM EVENT INFORMATION (40 CFR 122.26(c)(1)(i)(E)(6))

Provide data for the storm event(s) that resulted in the maximum daily discharges for the flow-weighted composite sample.

Date of Storm Event	Duration of Storm Event (in hours)	Total Rainfall During Storm Event (in inches)	Number of Hours Between Beginning of Storm Measured and End of Previous Measurable Rain Event	Maximum Flow Rate During Rain Event (in gpm or specify units)	Total Flow from Rain Event (in gallons or specify units)
01/23/2019	21.5	2.05	85.5	45 gpm	39,863 gallons

Provide a description of the method of flow measurement or estimate.

Flow rates were calculated using pipe slope and cross-sectional area of flow.

REPRESENTATIVE STORM WATER OUTFALL CERTIFICATION
ADEM Form 450

This is to certify that the **storm water** outfalls located at:

DSN 004 Latitude (34) ° (42) ' (30) " N and Longitude (85) ° (56) ' (15) " W

DSN _____ Latitude (_____) ° (_____) ' (_____) " N and Longitude (_____) ° (_____) ' (_____) " W

DSN _____ Latitude (_____) ° (_____) ' (_____) " N and Longitude (_____) ° (_____) ' (_____) " W

DSN _____ Latitude (_____) ° (_____) ' (_____) " N and Longitude (_____) ° (_____) ' (_____) " W

are associated with similar industrial activities such that the characteristics of storm water runoff are essentially the same. Therefore, Bellefonte Nuclear Plant (Facility Name) requests that it be allowed to sample the outfall(s) located at:

DSN 002 Latitude (34) ° (43) ' (00) " N and Longitude (85) ° (56) ' (00) " W

DSN _____ Latitude (_____) ° (_____) ' (_____) " N and Longitude (_____) ° (_____) ' (_____) " W

DSN _____ Latitude (_____) ° (_____) ' (_____) " N and Longitude (_____) ° (_____) ' (_____) " W

as the representative outfall(s).

This form must be signed by the official representative of the facility who is: the owner, the sole proprietor of a sole proprietorship, a general partner for a partnership, or by a ranking elected official or other duly authorized representative for a unit of government or an executive officer of **at least the level of vice president** for a corporation, having overall responsibility for the operation of the facility.

CERTIFICATION: I certify that I have chosen the point(s) that is/are most likely or as likely to contain potential pollutants from the area. 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 fine or imprisonment for knowing violations.

Permit Number (*if already a permitted facility): AL0024635

Name and Official title (type or print): Michael J. Durr, Acting Vice President Nuclear Engineering

Address: 1101 Market Street, LP 3R-C

Phone Number: (423) 751-6893

Signature: [signature]

Please print name: Michael J. Durr

Date signed: 10/11/19

Email address: mjdurr@tva.gov

***If this is a modification to an existing permit, then a modification fee must also be included.**

INSTRUCTIONS

One certification should be submitted for each set of points from the same drainage area for which you want to designate a representative sampling point or points.

If you have more than one drainage area, you must submit a site drawing designating the drainage areas and all points of discharge with the chosen representative sampling points designated in each area.

If you have more than one drainage area, you may request that only one area be sampled if the areas are very similar to one another in terms of potential pollutants. You must choose as the representative sampling point the point that has the highest potential to contain pollutants in the storm water.

REPRESENTATIVE STORM WATER OUTFALL CERTIFICATION
ADEM Form 450

This is to certify that the **storm water** outfalls located at:

DSN 011 Latitude (34) ° (43) ' (00) " N and Longitude (85) ° (55) ' (15) " W

DSN 012 Latitude (34) ° (43) ' (00) " N and Longitude (85) ° (54) ' (15) " W

DSN 015 Latitude (34) ° (42) ' (15) " N and Longitude (85) ° (56) ' (30) " W

DSN _____ Latitude (_____) ° (_____) ' (_____) " N and Longitude (_____) ° (_____) ' (_____) " W

are associated with similar industrial activities such that the characteristics of storm water runoff are essentially the same. Therefore, Bellefonte Nuclear Plant (Facility Name) requests that it be allowed to sample the outfall(s) located at:

DSN 010 Latitude (34) ° (42) ' (30) " N and Longitude (85) ° (56) ' (15) " W

DSN _____ Latitude (_____) ° (_____) ' (_____) " N and Longitude (_____) ° (_____) ' (_____) " W

DSN _____ Latitude (_____) ° (_____) ' (_____) " N and Longitude (_____) ° (_____) ' (_____) " W

as the representative outfall(s).

This form must be signed by the official representative of the facility who is: the owner, the sole proprietor of a sole proprietorship, a general partner for a partnership, or by a ranking elected official or other duly authorized representative for a unit of government or an executive officer of **at least the level of vice president** for a corporation, having overall responsibility for the operation of the facility.

CERTIFICATION: I certify that I have chosen the point(s) that is/are most likely or as likely to contain potential pollutants from the area. 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 fine or imprisonment for knowing violations.

Permit Number (*if already a permitted facility): AL0024635

Name and Official title (type or print): Michael J. Durr, Acting Vice President Nuclear Engineering

Address: 1101 Market Street, LP 3R-C

Phone Number: (423) 751-6893

Signature: _____

Please print name: Michael J. Durr

Date signed: 10/11/19

Email address: mjdurr@tva.gov

***If this is a modification to an existing permit, then a modification fee must also be included.**

INSTRUCTIONS

One certification should be submitted for each set of points from the same drainage area for which you want to designate a representative sampling point or points.

If you have more than one drainage area, you must submit a site drawing designating the drainage areas and all points of discharge with the chosen representative sampling points designated in each area.

If you have more than one drainage area, you may request that only one area be sampled if the areas are very similar to one another in terms of potential pollutants. You must choose as the representative sampling point the point that has the highest potential to contain pollutants in the storm water.