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MAR 30 2026

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MR. STEVEN BROWN
SITE MANAGER
TENNESSEE VALLEY AUTHORITY
2744 BELLEFONTE RD
HOLLYWOOD, AL 35752

RE: DRAFT PERMIT
NPDES PERMIT NUMBER AL0024635

Dear Mr. Boerschig:
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 have utilized the Department's web-based electronic environmental (E2) reporting system for submittal of discharge monitoring reports (DMRs). The Department transitioned from the E2 Reporting System to the Alabama Environmental Permitting and Compliance System (AEPACS) for the submittal of DMRs on November 15, 2021. AEPACS is an electronic system that allows facilities to apply for and maintain permits as well as submit other required applications, registrations, and certifications. In addition, the system allows facilities to submit required compliance reports or other information to the Department. The Department has used the E2 User account information to set up a similar User Profile in AEPACS based on the following criteria:

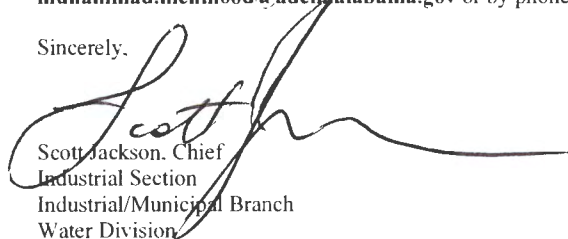
1. The user has logged in to E2 since October 1, 2019; and
2. The E2 user account is set up using a unique email address.

E2 users that met the above criteria will only need to establish an ADEM Web Portal account (<https://prd.adem.alabama.gov/awp>) under the same email address as their E2 account to have the same permissions in AEPACS as they did in E2. They will also automatically be linked to the same facilities they were in E2.

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 Muhammad Mehmood by e-mail at muhammad.mehmood@adem.alabama.gov or by phone at (334) 279-3065.

Sincerely,



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

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

Coastal Office
1615 South Broad Street
Mobile, AL 36605
(251) 450-3400
(251) 479-2593 (FAX)



NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE: TENNESSEE VALLEY AUTHORITY

FACILITY LOCATION: BELLEFONTE NUCLEAR PLANT
JACKSON COUNTY HIGHWAY 33
HOLLYWOOD, ALABAMA 35752
JACKSON COUNTY

PERMIT NUMBER: AL0024635

RECEIVING WATERS: 002, 004, 008 – 011, 015 - TOWN CREEK
003, 005, 012 – 014 - 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
Water Division Chief**

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PART I: DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS**A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS**

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/ 4/ 5/

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 outfall(s) listed above and described more fully in the Permittee's application. Such discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration		Units	Sample Frequency ²	Sample Type ¹	Seasonal	
pH (00400) Effluent Gross Value	*****	*****	*****	6.0 Minimum Daily	*****	8.5 Maximum Daily	S.U.	Quarterly	Grab	All Months
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	*****	100 Maximum Daily	mg/l	Quarterly	Grab	All Months
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	*****	15 Maximum Daily	mg/l	Quarterly	Grab	All Months
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Quarterly	Instantaneous	All Months

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/ See Part IV.B for Stormwater Measurement and Sampling Requirements.
- 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.

DSN0031: Diffuser discharge consisting of cooling tower blowdown and other wastewater resulting from electric power generation 3/ 4/

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 outfall(s) listed above and described more fully in the Permittee's application. Such discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency ²	Sample Type ¹	Seasonal
pH (00400) Effluent Gross Value	*****	*****	*****	6.0 Minimum Daily	*****	9.0 Maximum Daily	S.U.	Weekly	Grab	All Months
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	*****	100 Maximum Daily	mg/l	Daily	Grab	All Months
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	*****	15 Maximum Daily	mg/l	Daily	Grab	All Months
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Daily	Instantaneous	All Months
Chlorine, Total Residual (50060) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	0.2 Maximum Daily	mg/l	Daily	Grab	All Months

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

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

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 outfall(s) listed above and described more fully in the Permittee's application. Such discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency ²	Sample Type ¹	Seasonal
pH (00400) Effluent Gross Value	*****	*****	*****	6.0 Minimum Daily	*****	9.0 Maximum Daily	S.U.	Monthly	Grab	All Months
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	30 Monthly Average	100 Maximum Daily	mg/l	Monthly	Grab	All Months
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	15 Monthly Average	20 Maximum Daily	mg/l	Monthly	Grab	All Months
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Monthly	Instantaneous 4/	All Months

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/ Pump logs are acceptable for flow measurements.

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

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 outfall(s) listed above and described more fully in the Permittee's application. Such discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency ²	Sample Type ¹	Seasonal
pH (00400) Effluent Gross Value	*****	*****	*****	6.0 Minimum Daily	*****	9.0 Maximum Daily	S.U.	Weekly	Grab	All Months
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	30 Monthly Average	100 Maximum Daily	mg/l	Weekly	Grab	All Months
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	15 Monthly Average	20 Maximum Daily	mg/l	Weekly	Grab	All Months
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Weekly	Instantaneous	All Months

**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.

DSN004Y: East culvert impoundment discharge consisting of storm water runoff 3/ 4/

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 outfall(s) listed above and described more fully in the Permittee's application. Such discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency ²	Sample Type ¹	Seasonal
pH (00400) Effluent Gross Value	*****	*****	*****	6.0 Minimum Daily	*****	9.0 Maximum Daily	S.U.	Annually	Grab	All Months
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	60 Monthly Average	100 Maximum Daily	mg/l	Annually	Grab	All Months
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	15 Monthly Average	20 Maximum Daily	mg/l	Annually	Grab	All Months
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	MGD	Annually	Instantaneous	All Months

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/ See Part IV.B for Stormwater Measurement and Sampling Requirements.

DSN0051: Plant intake trash including sluicing consisting of intake screen and strainer backwash and intake pumping stations sumps/drains 3/ 4 /

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 outfall(s) listed above and described more fully in the Permittee's application. Such discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency ²	Sample Type ¹	Seasonal
pH (00400) Effluent Gross Value	*****	*****	*****	6.0 Minimum Daily	*****	9.0 Maximum Daily	S.U.	Daily	Grab	All Months
Flow. In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Daily	Pump Log	All Months

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

DSN008: Simulator Training Facility fire protection system flush water 1/ 2/

DSN009: Uncontaminated Stormwater Runoff 1/

DSN010: Uncontaminated Stormwater Runoff 1/

DSN011: Uncontaminated Stormwater Runoff 1/

DSN012: Uncontaminated Stormwater Runoff 1/

DSN013: Uncontaminated Stormwater Runoff 1/

DSN014: Uncontaminated Stormwater Runoff 1/

DSN015: Uncontaminated Stormwater Runoff 1/

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 outfall(s) listed above and described more fully in the Permittee's application. Such discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	Sample Frequency	Sample Type	Seasonal
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NO DISCHARGE MONITORING REQUIREMENTS APPLY

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/ See Part IV.A. for Best Management Practices (BMP) Plan Requirements.
- 2/ See Part IV.C. for Allowable Non-Storm Water Discharge Requirements.

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.

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 electronically.

- (1) If the permittee is unable to complete the electronic submittal of DMR data due to technical problems originating with the Department's electronic 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 Department's electronic 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 Department's electronic system resuming operation, the permittee shall enter the data into the Department's electronic system, unless an alternate timeframe is approved by the Department. A comment should be included on the electronic 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
Water Division
Office of Water Services
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
Water Division
Office of Water Services
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;
 - (3) quantities to be used;
 - (4) frequencies of use;
 - (5) 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:
 - (i) one hundred micrograms per liter;
 - (ii) 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;
 - (iii) 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:

- (i) five hundred micrograms per liter;
- (ii) one milligram per liter for antimony;
- (iii) 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 301(c), 301(g), 301(h), 301(k), or 316(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. Routine inspections should be done at a frequency to ensure that the BMP is continually implemented and effective and in no case less frequent than once per year;
- 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, firefighting foams, 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. STORMWATER FLOW MEASUREMENT AND SAMPLING REQUIREMENTS

1. Stormwater Flow Measurement

- a. All stormwater samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches.
- b. The total volume of stormwater discharged for the event must be monitored, including the date and duration (in hours) and rainfall (in inches) for storm event(s) sampled. The duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event must be a minimum of 72 hours. This information must be recorded as part of the sampling procedure and records retained according to Part I.B. of this permit.
- c. The volume may be measured using flow measuring devices, or estimated based on a modification of the Rational Method using total depth of rainfall, the size of the drainage area serving a stormwater outfall, and an estimate of the runoff coefficient of the drainage area. This information must be recorded as part of the sampling procedure and records retained according to Part I.B. of this permit.

2. Stormwater Sampling

- a. A grab sample, if required by this permit, shall be taken during the first thirty minutes of the discharge (or as soon thereafter as practicable); and a flow-weighted composite sample, if required by this permit, shall be taken for the entire event or for the first three hours of the event.
- b. All test procedures will be in accordance with part I.B. of this permit.

C. ALLOWABLE NON-STORM WATER DISCHARGES

This permit authorizes non-stormwater discharges provided the non-stormwater component of the discharge is in compliance with Part III.D of ADEM's construction storm water permit.

The Permittee must design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented and maintained to:

1. Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, concrete washout, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
 - (a) Liquid waste shall not be directly discharged into storm sewers.
 - (b) Washout and cleanout activities should be located as far away as possible from surface waters, natural buffer areas, stormwater inlets, and conveyances.
2. Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to stormwater;
3. Minimize the discharge of pollutants from any spills and leaks from, including but not limited to vehicles; mechanical equipment; chemical storage; and refueling activities; and
4. Use of polymers, flocculants, or other treatment chemicals at the site may only be applied where treated stormwater is directed to a sediment control prior to discharge.

D. COOLING WATER INTAKE REQUIREMENTS

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

ADEM PERMIT RATIONALE

PREPARED DATE: March 12, 2026
PREPARED BY: Muhammad Mehmood

Permittee Name: Tennessee Valley Authority
Facility Name: Bellefonte Nuclear Plant
Permit Number: AL0024635

PERMIT IS REISSUANCE DUE TO EXPIRATION

DISCHARGE SERIAL NUMBERS (DSN) & DESCRIPTIONS:

DSN	Description
002	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
003	Diffuser discharge consisting of cooling tower blowdown and other wastewater resulting from electric power generation
004	East culvert impoundment discharge consisting of storm water runoff
005	Plant intake trash including sluicing consisting of intake screen and strainer backwash and intake pumping station sumps/drains
008	Simulator Training Facility fire protection system flush water
009	Uncontaminated Stormwater Runoff
010	Uncontaminated Stormwater Runoff
011	Uncontaminated Stormwater Runoff
012	Uncontaminated Stormwater Runoff
013	Uncontaminated Stormwater Runoff
014	Uncontaminated Stormwater Runoff
015	Uncontaminated Stormwater Runoff
03C	Cooling tower desilting pond effluent, sump collection ponds consisting of boiler blowdown, building sumps and floor drains, and other miscellaneous low volume wastewaters
03G	Sump collection ponds discharge consisting of boiler blowdown, building sumps and floor drains, and other miscellaneous low volume wastewaters

INDUSTRIAL CATEGORY: NON-CATEGORICAL

MAJOR: No

STREAM INFORMATION:

Receiving Stream:	Tennessee River (Guntersville Lake)(DSN003, DSN005, and DSN012– DSN014)
Classification:	Public Water Supply, Swimming, Fish & Wildlife
River Basin:	Tennessee River (Guntersville Lake)
7Q10:	6813.7 cfs
7Q2:	9852.3 cfs
1Q10:	2938.8 cfs
Annual Average Flow:	38658.2 cfs
303(d) List:	NO
Impairment:	N/A
TMDL:	NO

Receiving Stream:	Unnamed Tributary to Town Creek (DSN002, DSN004, DSN008– DSN011, and DSN015)
Classification:	Fish & Wildlife
River Basin:	Tennessee River
7Q10:	0 cfs
7Q2:	0 cfs
1Q10:	0 cfs
Annual Average Flow:	0.8 cfs
303(d) List:	NO
Impairment:	N/A
TMDL:	NO

DISCUSSION:

Bellefonte Nuclear Plant is an inactive partially constructed nuclear power plant. There are no plans to increase the construction activity or operate the plant for power production in the next permit term. Operations of the water intake structure only occur as needed 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. Since the facility will not commence power generation, the Department has reclassified the facility from a major to a minor.

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.

Since the facility is not expected to operate during the next permit term, the permit has been written to reflect operations at a non-operating facility. The previous permit was written to allow for the plant to commence electricity generation; therefore, requirements under the 40 CFR Part 423 Steam Electric Generating Guidelines were included. Since the Permittee has indicated that generation will not commence, it has been determined that the facility is non-categorical. If the Permittee seeks to generate nuclear power at the site in the future, the permit will need to be modified to reflect an operating facility. EPA has not promulgated specific guidelines for the discharges covered under the proposed permit. Proposed permit limits are based on Best Professional Judgment. The proposed frequencies are based on a review of site specific conditions and an evaluation of similar facilities.

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

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq	Sample Type	Seasonal	Basis
pH (00400) Effluent Gross Value	****	****	****	6.0 Minimum Daily	****	8.5 Maximum Daily	S.U.	Quarterly	Grab	All Months	WQBEL
Solids, Total Suspended (00530) Effluent Gross Value	****	****	****	****	****	100 Maximum Daily	mg/l	Quarterly	Grab	All Months	BPJ
Oil & Grease (00556) Effluent Gross Value	****	****	****	****	****	15 Maximum Daily	mg/l	Quarterly	Grab	All Months	BPJ
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	MGD	****	****	****	****	Quarterly	Instantaneous	All Months	BPJ

DSN0031: Diffuser discharge consisting of cooling tower blowdown and other wastewater resulting from electric power generation

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq	Sample Type	Seasonal	Basis
pH (00400) Effluent Gross Value	****	****	****	6.0 Minimum Daily	****	9.0 Maximum Daily	S.U.	Weekly	Grab	All Months	BPJ
Solids, Total Suspended (00530) Effluent Gross Value	****	****	****	****	****	100 Maximum Daily	mg/l	Daily	Grab	All Months	BPJ
Oil & Grease (00556) Effluent Gross Value	****	****	****	****	****	15 Maximum Daily	mg/l	Daily	Grab	All Months	BPJ
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	MGD	****	****	****	****	Daily	Instantaneous	All Months	BPJ
Chlorine, Total Residual (50060) Effluent Gross Value	****	****	****	****	(Report) Monthly Average	0.2 Maximum Daily	mg/l	Daily	Grab	All Months	WQBEL

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

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq	Sample Type	Seasonal	Basis
pH (00400) Effluent Gross Value	****	****	****	6.0 Minimum Daily	****	9.0 Maximum Daily	S.U.	Monthly	Grab	All Months	BPJ
Solids, Total Suspended (00530) Effluent Gross Value	****	****	****	****	30 Monthly Average	100 Maximum Daily	mg/l	Monthly	Grab	All Months	BPJ
Oil & Grease (00556) Effluent Gross Value	****	****	****	****	15 Monthly Average	20 Maximum Daily	mg/l	Monthly	Grab	All Months	BPJ
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	MGD	****	****	****	****	Monthly	Instantaneous	All Months	BPJ

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

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq	Sample Type	Seasonal	Basis
pH (00400) Effluent Gross Value	****	****	****	6.0 Minimum Daily	****	9.0 Maximum Daily	S.U.	Weekly	Grab	All Months	BPJ
Solids, Total Suspended (00530) Effluent Gross Value	****	****	****	****	30 Monthly Average	100 Maximum Daily	mg/l	Weekly	Grab	All Months	BPJ
Oil & Grease (00556) Effluent Gross Value	****	****	****	****	15 Monthly Average	20 Maximum Daily	mg/l	Weekly	Grab	All Months	BPJ
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	MGD	****	****	****	****	Weekly	Instantaneo us	All Months	BPJ

DSN004Y: East culvert impoundment discharge consisting of storm water runoff

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq	Sample Type	Seasonal	Basis
pH (00400) Effluent Gross Value	****	****	****	6.0 Minimum Daily	****	9.0 Maximum Daily	S.U.	Annually	Grab	All Months	BPJ
Solids, Total Suspended (00530) Effluent Gross Value	****	****	****	****	60 Monthly Average	100 Maximum Daily	mg/l	Annually	Grab	All Months	BPJ
Oil & Grease (00556) Effluent Gross Value	****	****	****	****	15 Monthly Average	20 Maximum Daily	mg/l	Annually	Grab	All Months	BPJ
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	****	****	****	****	(Report) Monthly Average	(Report) Maximum Daily	MGD	Annually	Instantaneo us	All Months	BPJ

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

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq	Sample Type	Seasonal	Basis
pH (00400) Effluent Gross Value	****	****	****	6.0 Minimum Daily	****	9.0 Maximum Daily	S.U.	Daily	Grab	All Months	BPJ
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	MGD	****	****	****	****	Daily	Pump Log	All Months	BPJ

*Basis for Permit Limitation

- BPJ – Best Professional Judgment
- WQBEL – Water Quality Based Effluent Limits
- EGL – Federal Effluent Guideline Limitations

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 monitoring frequency for all parameters have been updated to "Quarterly" from "Once per discharge not to exceed once per quarter" from the previous permit.

Flow

The flow will continue to be in the permit on a monitor only basis.

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 Code 335-6-10-.09(5)(e)2.

Total Suspended Solids (TSS)

TSS will have a daily maximum limitation of 100 mg/l based on Best Professional Judgment (BPJ).

Oil and Grease

Oil and Grease will have a daily maximum limitation of 15 mg/l based on Best Professional Judgment (BPJ).

DSN0031: Diffuser discharge consisting of cooling tower blowdown and other wastewater resulting from electric power generation

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

ADEM Administrative Code, Division 6 Regulations, specifically, 335-6-10-.09(2)(e)2. PWS, 335-6-10-.09(3)(c)2. Swimming, and 335-6-10-.09(5)(e)2. – Specific Water Quality for Fish and Wildlife classified streams states: "Sewage, industrial waste or other wastes shall not cause the pH to deviate more than one unit from the normal or natural pH, nor be less than 6.0, nor greater than 8.5 standard units." Based on the volume of the receiving stream compared to the volume of the discharge, a pH limitation of 6.0 - 9.0 S.U. is not expected to impact the receiving stream.

Total Suspended Solids (TSS)

A daily maximum limitation of 100 mg/l has been proposed to be continued from the previous permit based on Best Professional Judgment (BPJ).

Temperature

The facility is in non-operational status and there is no heat source at the site. Hence the temperature limit from the previous permit is proposed to be removed.

Total Residual Chlorine (TRC)

ADEM Administrative Code, Division 6 Regulations, specifically 335-6-10-.07 states, "Concentrations of these toxic pollutants in State waters shall not exceed the criteria indicated in Table 1 of this rule to the extent commensurate with the designated usage of such waters." The TRC limitations are based on the freshwater criteria found in Table 1 and consider the available dilution in the receiving stream not to exceed 1 mg/l.

$$\text{Instream Waste Concentration (IWC)} = \frac{\text{Facility Flow}}{7Q_{10} + \text{Facility Flow}}$$

$$IWC = 0.000139 = \frac{0.6115 \text{ MGD}}{4403.81 \text{ MGD} + 0.6115 \text{ MGD}}$$

TRC Maximum = 0.019/IWC
TRC Average = 0.011/IWC

0.019/0.000139 = 136.85 mg/l;
0.011/0.000139 = 79.23 mg/l;

The existing maximum daily permit limitation is more stringent; therefore, it has been proposed to be continued from the current permit.

Oil and Grease

The daily maximum limitation for Oil and Grease should prevent the occurrence of a visible sheen in the stream and has been shown to be achievable through the use of proper BMPs. The daily maximum limitation is proposed based on Best Professional Judgment (BPJ).

DSN0032 and DSN003Y

The DSN0032 and DSN003Y requirements were included in the previous permit as a tiered limit set to become applicable when the facility commenced power generation. The facility has no plans in the foreseeable future to commence nuclear power production; therefore, these limitations have been proposed to be removed from 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

In the previous permit, the discharges from DSN03C1 were treated as low volume wastewater sources based on the definitions from 40 CFR 423.11(b). Due to the non-operational status of the facility, the EGLs no longer apply and all limits in this section are based on Best Professional Judgment (BPJ). The monitoring frequency for all parameters have been updated to "Monthly" from "Once per discharge not to exceed once per month" from the previous permit.

Flow

Monitoring frequency for the flow will be monthly, and it will be monitor only.

pH

ADEM Administrative Code, Division 6 Regulations, specifically, 335-6-10-.09(2)(e)2. PWS, 335-6-10-.09(3)(c)2. Swimming, and 335-6-10-.09(5)(e)2. – Specific Water Quality for Fish and Wildlife classified streams states: "Sewage, industrial waste or other wastes shall not cause the pH to deviate more than one unit from the normal or natural pH, nor be less than 6.0, nor greater than 8.5 standard units." Based on the volume of the receiving stream compared to the volume of the discharge, a pH limitation of 6.0 - 9.0 S.U. is not expected to impact the receiving stream.

TSS

TSS will continue to have a daily maximum limitation of 100 mg/l and a monthly average limitation of 30 mg/l based on Best Professional Judgment (BPJ).

Oil and Grease

Oil and grease will continue to have a daily maximum limitation of 20 mg/l and a monthly average limitation of 15 mg/l based on Best Professional Judgment (BPJ).

DSN03D, DSN03E and DSN03F

The internal outfalls DSN03D, DSN03E and DSN03F are being removed by request of the Permittee due to Bellefonte's inactive status.

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

In the previous permit, the discharges from DSN03C1 were treated as low volume wastewater sources based on the definitions from 40 CFR 423.11(b). Due to the non-operational status of the facility, the EGLs no longer apply and all

limits in this section are based on Best Professional Judgement (BPJ). The monitoring frequency for all parameters have been updated to "Weekly" from "Once per discharge not to exceed once per week" from the previous permit.

Flow

Monitoring frequency for the flow will be weekly, and it will be monitor only.

pH

ADEM Administrative Code, Division 6 Regulations, specifically, 335-6-10-.09(2)(e)2. PWS, 335-6-10-.09(3)(c)2. Swimming, and 335-6-10-.09(5)(e)2. – Specific Water Quality for Fish and Wildlife classified streams states: "Sewage, industrial waste or other wastes shall not cause the pH to deviate more than one unit from the normal or natural pH, nor be less than 6.0, nor greater than 8.5 standard units." Based on the volume of the receiving stream compared to the volume of the discharge, a pH limitation of 6.0 - 9.0 S.U. is not expected to impact the receiving stream.

TSS

TSS will continue to have a daily maximum limitation of 100 mg/l and a monthly average limitation of 30 mg/l based on Best Professional Judgment (BPJ).

Oil and Grease

Oil and grease will continue to have a daily maximum limitation of 20 mg/l and a monthly average limitation of 15 mg/l based on Best Professional Judgment (BPJ).

DSN004Y: East culvert impoundment discharge consisting of storm water runoff

The monitoring frequency for all parameters have been updated to "Annually" from "Once per discharge not to exceed once per year" from the previous permit.

Flow

The flow will continue to be in the permit on a monitor only basis.

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 Code 335.6-10-.09(5)(e)2.

Total Suspended Solids (TSS)

TSS will continue to have a daily maximum limitation of 100 mg/l and a monthly average limitation of 60 mg/l based on Best Professional Judgment (BPJ).

Oil and Grease

Oil and grease will continue to have a daily maximum limitation of 20 mg/l and a monthly average limitation of 15 mg/l based on Best Professional Judgment (BPJ).

DSN0081: Simulator Training Facility fire protection system flush water

The facility performs a once per year fire protection system flush of approximately 420 gallons of potable water which is directed overland. The facility indicated Best Management Practices (BMPs) are utilized to reduce the potential of discharge to Town Creek via Outfall DSN008. Specific sampling requirements have not been proposed. The facility BMP Plan should include specific BMPs for this activity in accordance with Part IV.A of the permit.

Allowable Non-Storm Water Discharges

In addition to utilizing BMPs to reduce the potential of discharge to the receiving stream through DSN008, an allowable non-storm water discharge permit condition has been added in Part IV.C. of the permit. This permit condition can be found in other TVA facility permits with similar discharges.

DSN0091-DSN0151: Uncontaminated Stormwater Runoff

Specific discharge sampling requirements have not been proposed for these outfalls. 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.

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 to 40 CFR 112.
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 (BMP) Plan

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. In addition, the BMP plan requires objectives for controls of pollutants and that all components and/or systems at the facility be examined for their potential to cause a release of significant amounts of pollutants due to equipment failures and improper operation. The effectiveness of the BMPs will be measured through the monitoring of the pollutants of concern.

The Department has updated the BMP language located in Part IV.A.2.g of the Permit. The Permit Condition now states, "Provide for routine inspections, or 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. Routine inspections should be done at a frequency to ensure that the BMP is continually implemented and effective and in no case less frequent than once per year." This clarification was added to be consistent with 40 CFR Part 122.43(c).

Cooling Water Intake Requirements

Pursuant to 40 CFR 125.90, this permit does not authorize the use of a cooling water intake structure for the purpose of providing cooling water. The facility indicated that the intake structure is utilized to provide make-up water to the fire protection system and for other miscellaneous non-cooling purposes.

$Q_d * C_d + Q_{d2} * C_{d2} + Q_s * C_s = Q_r * C_r$							Enter Max Daily Discharge as reported by Applicant (C _d) Max	Enter Avg Daily Discharge as reported by Applicant (C _d) Ave	Partition Coefficient (Stream / Lake)
ID	Pollutant	Carbonogen Yes*	Type	Background from upstream source (C _{d2}) Daily Max	Background from upstream source (C _{d2}) Monthly Ave	Background Instream (C _s) Daily Max			
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
1	Antimony		Metals	0	0	0	0	0	0
2	Arsenic**	YES	Metals	0	0	0	0	0	0.574
3	Beryllium		Metals	0	0	0	0	0	0
4	Cadmium**		Metals	0	0	0	0	0	0.238
5	Chromium / Chromium III**		Metals	0	0	0	0	0	0.210
6	Chromium / Chromium VI**		Metals	0	0	0	0	0	0.388
7	Copper**		Metals	0	0	0	0	0	0.208
8	Lead**		Metals	0	0	0	0	0	0.302
9	Mercury**		Metals	0	0	0	0	0.0032	0.0032
10	Nickel**		Metals	0	0	0	0	0	0.505
11	Selenium		Metals	0	0	0	0	0	0
12	Silver		Metals	0	0	0	0	0	0
13	Thallium		Metals	0	0	0	0	0	0
14	Zinc**		Metals	0	0	0	0	0	0.330
15	Cyanide		Metals	0	0	0	0	0	0
16	Total Phenolic Compounds		Metals	0	0	0	0	0	0
17	Hardness (As CaCO3)		Metals	0	0	0	0	0	0
18	Acrolein		VOC	0	0	0	0	0	0
19	Acrylonitrile*	YES	VOC	0	0	0	0	0	0
20	Aldrin*	YES	VOC	0	0	0	0	0	0
21	Benzene*	YES	VOC	0	0	0	0	0	0
22	Bromoform*	YES	VOC	0	0	0	0	0	0
23	Carbon Tetrachloride*	YES	VOC	0	0	0	0	0	0
24	Chlordane	YES	VOC	0	0	0	0	0	0
25	Chlorobenzene		VOC	0	0	0	0	0	0
26	Chlorobromo-Methane*	YES	VOC	0	0	0	0	0	0
27	Chloroethane		VOC	0	0	0	0	0	0
28	2-Chloro-Ethyl Vinyl Ether		VOC	0	0	0	0	0	0
29	Chloroform*	YES	VOC	0	0	0	0	0	0
30	4,4'-DDD	YES	VOC	0	0	0	0	0	0
31	4,4'-DDE	YES	VOC	0	0	0	0	0	0
32	4,4'-DDT	YES	VOC	0	0	0	0	0	0
33	Dichlorobromo-Methane*	YES	VOC	0	0	0	0	0	0
34	1,1-Dichloroethane		VOC	0	0	0	0	0	0
35	1,2-Dichloroethane*	YES	VOC	0	0	0	0	0	0
36	Trans-1,2-Dichloro-Ethylene		VOC	0	0	0	0	0	0
37	1,1-Dichloroethylene*	YES	VOC	0	0	0	0	0	0
38	1,2-Dichloropropane		VOC	0	0	0	0	0	0
39	1,3-Dichloro-Propylene		VOC	0	0	0	0	0	0
40	Dieldrin	YES	VOC	0	0	0	0	0	0
41	Ethylbenzene		VOC	0	0	0	0	0	0
42	Methyl Bromide		VOC	0	0	0	0	0	0
43	Methyl Chloride		VOC	0	0	0	0	0	0
44	Methylene Chloride*	YES	VOC	0	0	0	0	0	0
45	1,1,2,2-Tetrachloro-Ethane*	YES	VOC	0	0	0	0	0	0
46	Tetrachloro-Ethylene*	YES	VOC	0	0	0	0	0	0
47	Toluene		VOC	0	0	0	0	0	0
48	Trioxylene	YES	VOC	0	0	0	0	0	0
49	Tributylene (TBT)	YES	VOC	0	0	0	0	0	0
50	1,1,1-Trichloroethane		VOC	0	0	0	0	0	0
51	1,1,2-Trichloroethane*	YES	VOC	0	0	0	0	0	0
52	Trichloroethylene*	YES	VOC	0	0	0	0	0	0
53	Vinyl Chloride*	YES	VOC	0	0	0	0	0	0
54	p-Chloro-m-Cresol		Acids	0	0	0	0	0	0
55	2-Chlorophenol		Acids	0	0	0	0	0	0
56	2,4-Dichlorophenol		Acids	0	0	0	0	0	0
57	2,4-Dimethylphenol		Acids	0	0	0	0	0	0
58	4,6-Dinitro-O-Cresol		Acids	0	0	0	0	0	0
59	2,4-Dinitrophenol		Acids	0	0	0	0	0	0
60	4,6-Dinitro-3-methylphenol	YES	Acids	0	0	0	0	0	0
61	Dioxin (2,3,7,8-TCDD)	YES	Acids	0	0	0	0	0	0
62	2-Nitrophenol		Acids	0	0	0	0	0	0
63	4-Nitrophenol		Acids	0	0	0	0	0	0
64	Pentachlorophenol*	YES	Acids	0	0	0	0	0	0
65	Phenol		Acids	0	0	0	0	0	0
66	2,4,6-Trichlorophenol*	YES	Acids	0	0	0	0	0	0
67	Acenaphthene		Bases	0	0	0	0	0	0
68	Acenaphthylene		Bases	0	0	0	0	0	0
69	Anthracene		Bases	0	0	0	0	0	0
70	Benzidine		Bases	0	0	0	0	0	0
71	Benzo(A)Anthracene*	YES	Bases	0	0	0	0	0	0
72	Benzo(A)Pyrene*	YES	Bases	0	0	0	0	0	0
73	3,4-Benzo-Fluoranthene		Bases	0	0	0	0	0	0
74	Benzo(G)Fluoranthene		Bases	0	0	0	0	0	0
75	Benzo(K)Fluoranthene		Bases	0	0	0	0	0	0
76	Bis (2-Chloroethoxy) Methane		Bases	0	0	0	0	0	0
77	Bis (2-Chloroethyl)-Ether*	YES	Bases	0	0	0	0	0	0
78	Bis (2-Chloroiso-Propyl) Ether		Bases	0	0	0	0	0	0
79	Bis (2-Ethylhexyl) Phthalate*	YES	Bases	0	0	0	0	0	0
80	4-Bromophenyl Phenyl Ether		Bases	0	0	0	0	0	0
81	Butyl Benzyl Phthalate		Bases	0	0	0	0	0	0
82	Chloronaphthalene		Bases	0	0	0	0	0	0
83	4-Chlorophenyl Phenyl Ether		Bases	0	0	0	0	0	0
84	Chrysene*	YES	Bases	0	0	0	0	0	0
85	d,N-Butyl Phthalate		Bases	0	0	0	0	0	0
86	d,N-Octyl Phthalate		Bases	0	0	0	0	0	0
87	DiBenzo(A,H)Anthracene*	YES	Bases	0	0	0	0	0	0
88	1,2-Dichlorobenzene		Bases	0	0	0	0	0	0
89	1,3-Dichlorobenzene		Bases	0	0	0	0	0	0
90	1,4-Dichlorobenzene		Bases	0	0	0	0	0	0
91	3,3-Dichlorobenzidine*	YES	Bases	0	0	0	0	0	0
92	Dialkyl Phthalate		Bases	0	0	0	0	0	0
93	Dimethyl Phthalate		Bases	0	0	0	0	0	0
94	2,4-Dinitrotoluene*	YES	Bases	0	0	0	0	0	0
95	2,6-Dinitrotoluene		Bases	0	0	0	0	0	0
96	1,2-Diphenylhydrazine		Bases	0	0	0	0	0	0
97	Endosulfan (alpha)	YES	Bases	0	0	0	0	0	0
98	Endosulfan (beta)	YES	Bases	0	0	0	0	0	0
99	Endosulfan sulfate		Bases	0	0	0	0	0	0
100	Eudrin	YES	Bases	0	0	0	0	0	0
101	Eudrin Aldehyde	YES	Bases	0	0	0	0	0	0
102	Fluoranthene		Bases	0	0	0	0	0	0
103	Fluorene		Bases	0	0	0	0	0	0
104	Heptachlor	YES	Bases	0	0	0	0	0	0
105	Heptachlor Epoxide	YES	Bases	0	0	0	0	0	0
106	Hexachlorobenzene*	YES	Bases	0	0	0	0	0	0
107	Hexachlorobutadiene*	YES	Bases	0	0	0	0	0	0
108	Hexachlorocyclohexan (alpha)	YES	Bases	0	0	0	0	0	0
109	Hexachlorocyclohexan (beta)	YES	Bases	0	0	0	0	0	0
110	Hexachlorocyclohexan (gamma)	YES	Bases	0	0	0	0	0	0
111	Hexachlorocyclopentadiene		Bases	0	0	0	0	0	0
112	Hexachloroethane		Bases	0	0	0	0	0	0
113	Indene(1,2,3-CH)Pyrene*	YES	Bases	0	0	0	0	0	0
114	Isochorone		Bases	0	0	0	0	0	0
115	Naphthalene		Bases	0	0	0	0	0	0
116	Nitrobenzene		Bases	0	0	0	0	0	0
117	N-Nitrosodimethylamine*	YES	Bases	0	0	0	0	0	0
118	N-Nitrosodiphenylamine*	YES	Bases	0	0	0	0	0	0
119	N-Nitrosodimethylphenylamine*	YES	Bases	0	0	0	0	0	0
120	PCB-1016	YES	Bases	0	0	0	0	0	0
121	PCB-1221	YES	Bases	0	0	0	0	0	0
122	PCB-1232	YES	Bases	0	0	0	0	0	0
123	PCB-1242	YES	Bases	0	0	0	0	0	0
124	PCB-1248	YES	Bases	0	0	0	0	0	0
125	PCB-1254	YES	Bases	0	0	0	0	0	0
126	PCB-1260	YES	Bases	0	0	0	0	0	0
127	Phenanthrene		Bases	0	0	0	0	0	0
128	Pyrene		Bases	0	0	0	0	0	0
129	1,2,4-Trichlorobenzene		Bases	0	0	0	0	0	0

0.8113	Enter Q _d = wastewater discharge flow from facility (MGD)
0.94613053	Q _d = wastewater discharge flow (cfs) (this value is calculated from the MGD)
0	Enter flow from upstream discharge Q _{d2} = background stream flow in MGD above point of discharge
0	Q _{d2} = background stream flow from upstream source (cfs)
6813.7	Enter TQ10, Q _s = background stream flow in cfs above point of discharge
2936.8	Enter or estimated, 1Q10, Q _s = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of TQ10)
38868.2	Enter Mean Annual Flow, Q _s = background stream flow in cfs above point of discharge
9882.3	Enter TQ2, Q _s = background stream flow in cfs above point of discharge (For LWF class streams)
Water to Lake	Enter C _s = background in-stream pollutant concentration in µg/l (assuming this is zero "0" unless there is data)
Q _d + Q _{d2} + Q _s	Q _r = resultant in-stream flow, after discharge
Calculated on other	C _r = resultant in-stream pollutant concentration in µg/l in the stream (after complete mixing occurs)
100	Enter, Background Hardness above point of discharge (assumed 50 South of Birmingham and 100 North of Birmingham)
7.89 s.u.	Enter, Background pH above point of discharge
YES	Enter, Is discharge to a stream? "YES" Other option would be to a Lake. (This changes the partition coefficients for the metals)

** Using Partition Coefficients

November 10, 2025

NPDES Individual Permit Mod/Reissue (Form 187) - Supplementary Information for Industrial Facilities

version 2.10

(Submission #: HQA-TCP8-CJX9V, version 1)

Digitally signed by:
AEPACS
Date: 2025.03.31 07:44:59 -05:00
Reason: Submission Data
Location: State of Alabama

Details

Submission ID HQA-TCP8-CJX9V

Form Input

General Instructions

This form should be used to submit the following permit requests for permitted Industrial Individual NPDES facilities

- Permit Transfers
- Permittee/Facility Name Changes
- Minor Modifications, for example:
 - > Frequency of monitoring or reporting modifications
 - > Changes to interim compliance dates in a schedule of compliance, not including the final compliance date.
 - > Removal of a point source outfall, provided the discharge is terminated and does not result in discharge of pollutants from other outfalls, except in accordance with permit limits.
- Major Modifications, (Any modifications not covered by minor mod's, whether Effluent Limit changes occur or not)
- Reissuances
- Reissuance of a permit due to approaching expiration
- Revocation and Reissuance of permit prior to its scheduled expiration

Applicable Base Fees:

- Permit Transfers and/or Permittee/Facility Name Changes
 - > \$800
- Minor Modifications (see examples above)
 - > \$3,940 (Major Sources)
 - > \$3,120 (Minor Sources)
- Major Modifications
 - > \$17,990 (Major Sources)
 - > \$5,615 (Minor Sources)
- Reissuances
 - > \$17,990 (Major Sources)
 - > \$5,615 (Minor Sources)

[For assistance, please click here to determine the permit staff responsible for the site or call \(334\) 271-7799](#)

Processing Information

Purpose of Application

Reissuance of Permit Due to Approaching Expiration

Please indicate if the Permittee is applying for a permit transfer and/or name change in addition to permit modification or reissuance:

None

Action Type

Reissuance

If applicable, briefly describe any planned changes at the facility that are included in this reissuance application:

Bellefonte no longer has plans to construct at nuclear power plant at this location. Some outfalls have been removed and the flow schematic has been updated to reflect the current state of the property.

General Information

SID Permit Number (if your facility currently holds an SID permit, please provide that number below):

NONE PROVIDED

NPDES or General Permit Numbers (if applicable, please list all permit numbers):

AL0024635

Is this facility/site only applying for permit coverage for discharges from stormwater?

No

Is a new stormwater outfall being added?

No

Permit Information

Permit Number

AL0024635

Current Permittee Name

Tennessee Valley Authority

Permittee

Permittee Name

Tennessee Valley Authority

Mailing Address

Jackson County Highway 33

Hollywood, AL 35752

Per ADEM Admin. Code r. 335-6-6-.09 (1), a Responsible Official is defined as CEO, President, any position at a level of Vice President or higher, Owner, Partner, Managing Member (LLC), or ranking elected official. Please provide the contact information for the person meeting this definition.

Do NOT enter information for a person that is/will be a Duly Authorized Representative (DAR) (i.e. a person that has been delegated signatory permissions by a Responsible Official). A person that is a Duly Authorized Representative is NOT considered a RESPONSIBLE OFFICIAL.

Responsible Official

Prefix

Mr.

First Name Last Name

Greg Boerschig

Title

VP, Clinch River Project

Organization Name

Tennessee Valley Authority

Phone Type Number Extension

Business 423-751-4066

Email

gaboerschig@tva.gov

Mailing Address

Jackson County Highway 33

Hollywood, AL 35752

Does the Responsible Official intend to delegate signatory authority for DMRs or other compliance reports to an individual as a duly authorized representative (DAR) for this site?

Yes

Pursuant to ADEM Admin. Code r. 335-6-6-.09(2), a person may ONLY be delegated signatory authority for reports if that person has responsibility for the overall operation of the regulated facility or regulated activity. Once such delegation is made, that person is considered a duly authorized representative (DAR).

Existing Permit Contacts

Affiliation Type	Contact Information	Remove?
Environmental Contact	James S. Chardos, Tennessee Valley Authority	Remove
Consultant	Lyndell Williams, Tennessee Valley Authority	Remove
Responsible Official, Notification Recipient	Steven Douglas, Tennessee Valley Authority	Remove
Permittee	Tennessee Valley Authority	Keep

Duly Authorized Representative (DAR)

Duly Authorized Representative - Delegation of Signatory Authority by Responsible Official

If the permittee has not already prepared a signed and dated delegation form/letter, an optional form can be downloaded from the link below. All information should be completed along with the responsible official's signature and date signed. That signed form can be uploaded in the attachment section below titled "DAR Documentation".
[Optional Delegation of Signatory Authority Form](#)

Delegation Document for Duly Authorized Representation (DAR)

[Alabama Signature Authorization Bellefonte BFN 2025.pdf - 03/17/2025 01:58 PM](#)

Comment

NONE PROVIDED

Pursuant to ADEM Admin. Code r. 335-6-6-.09(2), a person may ONLY be delegated signatory authority for reports if that person has responsibility for the overall operation of the regulated facility or activity. Once such delegation is made, that person is considered a duly authorized representative (DAR).

Authorized Rep

Prefix

Mr.

First Name Last Name

James S. Chardos

Title

Bellefonte Site Manager

Organization Name

Tennessee Valley Authority

Phone Type Number Extension

Business 2565748228

Email

jschardos@tva.gov

Mailing Address

Jackson County Highway 33
 Hollywood, AL 35752
 United States

Facility/Site Information

Facility/Site Name

Bellefonte Nuclear Plant

Organization/Ownership Type

Federal

Facility/Site Address or Location Description

Jackson County Highway 33

Hollywood, AL 35752

Facility/Site County

Jackson

Detailed Directions to the Facility/Site

Town Creek Hwy 72 to Hollywood, rt on Hwy 33 to Bellefonte, left on Bellefonete Rd, go 2 milesite on rt.

Facility Map

[03_Bellefonte Site Map March 2025.pdf - 03/27/2025 03:09 PM](#)

Comment

NONE PROVIDED

Please refer to the link below for Lat/Long map instruction help:

[Map Instruction Help](#)

Facility/Site Front Gate Latitude and Longitude

34.7087999999999,-85.93590000000000

Jackson County Highway 33, Hollywood, AL

SIC Code(s) [Please enter Primary SIC Code first followed by any additional applicable SIC Codes]

4911-Electric Services

NAICS Code(s) [Please enter Primary NAICS Code first followed by any additional applicable NAICS Codes]

221113-Nuclear Electric Power Generation

Facility/Site Contact

Prefix

Mr.

First Name Last Name

James S. Chardos

Title

Bellefonte Site Manager

Organization Name

Tennessee Valley Authority

Phone Type Number Extension

Business 2565748228

Email

jschardos@tva.gov

Address

Jackson County Highway 33

Hollywood, AL 35752

DMR Contact(s) (1 of 1)

DMR Contact

Prefix

Mr.

First Name Last Name

Ethan Widener

Title

Environmental Scientist

Phone Type Number Extension

Business 2562215198

Email

emwidener@tva.gov

Address

PO Box 2000 NAB 1G-BFN

Decatur, AL 35609

Enforcement History

Has the applicant been issued any Notices of Violation, Orders (Consent or Administrative/Unilateral), or Judicial Actions (Complaint, Settlement Agreement, Consent Decree, or Court Order) concerning water pollution or other permit violations within the State of Alabama in the past five years?

No

Business Activity

A facility with processes inclusive in the business areas shown below may be covered by Environmental Protection Agency's (EPA) categorical effluent guideline standards. These facilities are termed categorical users. If unsure, please call the Industrial Section at (334) 271-7943 to discuss or use the link below to contact the Permit Engineer for the county the facility is/will be located in.

[Industrial Section Assignment Map](#)

If your facility conducts or will be conducting any of the processes listed below (regardless of whether they generate wastewater, waste sludge, or hazardous wastes), please check the category of business activity:

Steam and Electric

Give a brief description of all operations at this facility including primary products or services:

Historically built for nuclear power production but was never completed. The facility currently has no plans to complete the power plant. Future use of the site will continue to be evaluated.

Water Supply

Water Sources (check all that apply):

Surface Water

Operator of Surface Intake	Million Gallons per Day (MGD)
Tennessee Valley Authority	0.1
	Sum: 0.1

Cooling Water Intake Structure Information

Does the provider of your source water operate a surface water intake?

Yes

Name of Provider	Location of Provider	Latitude	Longitude
Tennessee Valley Authority	Bellefonte Site	34.711667	-85.913556

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)?

No

Is any water withdrawn from the source water used for cooling?

Yes

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

0

Does the cooling water consist of treated effluent that would otherwise be discharged?

No

Is the cooling water used in a once-through cooling system?

No

Is the cooling water used in a closed cycle cooling system?

No

When was the intake installed?

CWIS Not in Service - See Cover letter for description.

What is the maximum intake volume (maximum pumping capacity in gallons per day)?

0

What is the average intake volume (average intake pump rate in gallons per day average in any 30-day period)?

0

What is the actual intake flow (AIF) as defined in 40 CFR [125.92\(a\)](#) (MGD)?

0

How is the intake operated?

Continuously

What is the mesh size of the screen on your intake (in inches)?

0

What is the intake screen flow-through area (in square feet)?

0

What is the through-screen design intake flow velocity (in ft/sec)?

0

What is the through-screen actual velocity (in ft/sec)?

0

What is the mechanism for cleaning the screen (e.g., does it rotate for cleaning)?

CWIS Not in Service - See cover letter for description.

Do you have any additional fish detraction technology on your intake?

No

Have there been any studies to determine the impact of the intake on aquatic organisms?

No

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

[03_BLN Site Map March 2025.pdf - 03/05/2025 08:22 AM](#)

Comment

CWIS Not in Service

Outfalls (1 of 18)

002

Please click below if this discharge no longer exists or is no longer required:

NONE PROVIDED

Outfall Identifier

002

Receiving Water

Town Creek

Does the discharge enter the named receiving water via an unnamed tributary?

NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:

Intermittent Discharge

Estimated Average Daily Flow (MGD)

0.19547

Monitoring/Sampling Point Location

34.70880000000000, -85.93590000000000

Outfalls (2 of 18)

003

Please click below if this discharge no longer exists or is no longer required:

NONE PROVIDED

Outfall Identifier

003

Receiving Water

Tennessee River

Does the discharge enter the named receiving water via an unnamed tributary?

NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:

Process Water commingled with Stormwater

Estimated Average Daily Flow (MGD)

0.6115

Monitoring/Sampling Point Location

34.70880000000000, -85.93590000000000

Outfalls (3 of 18)

004

Please click below if this discharge no longer exists or is no longer required:

NONE PROVIDED

Outfall Identifier

004

Receiving Water

Town Creek

Does the discharge enter the named receiving water via an unnamed tributary?

NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:

Intermittent Discharge

Estimated Average Daily Flow (MGD)

0.19547

Monitoring/Sampling Point Location

34.70833300000000, -85.93750000000000

Outfalls (4 of 18)

005

Please click below if this discharge no longer exists or is no longer required:

NONE PROVIDED

Outfall Identifier

005

Receiving Water

Town Creek

Does the discharge enter the named receiving water via an unnamed tributary?

NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:

Process Water commingled with Stormwater

Estimated Average Daily Flow (MGD)

0.026

Monitoring/Sampling Point Location

34.70880000000000, -85.93590000000000

Outfalls (5 of 18)

008

Please click below if this discharge no longer exists or is no longer required:

NONE PROVIDED

Outfall Identifier

008

Receiving Water

Town Creek

Does the discharge enter the named receiving water via an unnamed tributary?

NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:

Process Water commingled with Stormwater

Estimated Average Daily Flow (MGD)

0.00042

Monitoring/Sampling Point Location

34.70880000000000, -85.93590000000000

Outfalls (6 of 18)

009

Please click below if this discharge no longer exists or is no longer required:

NONE PROVIDED

Outfall Identifier

009

Receiving Water

Town Creek

Does the discharge enter the named receiving water via an unnamed tributary?

NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:

Intermittent Discharge

Estimated Average Daily Flow (MGD)

0

Monitoring/Sampling Point Location

34.70880000000000, -85.93590000000000

Outfalls (7 of 18)

010

Please click below if this discharge no longer exists or is no longer required:

NONE PROVIDED

Outfall Identifier

010

Receiving Water

Town Creek

Does the discharge enter the named receiving water via an unnamed tributary?

NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:

Intermittent Discharge

Estimated Average Daily Flow (MGD)

0

Monitoring/Sampling Point Location

34.70880000000000, -85.93590000000000

Outfalls (8 of 18)

011

Please click below if this discharge no longer exists or is no longer required:

NONE PROVIDED

Outfall Identifier

011

Receiving Water

Town Creek

Does the discharge enter the named receiving water via an unnamed tributary?

NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:

Intermittent Discharge

Estimated Average Daily Flow (MGD)

0

Monitoring/Sampling Point Location

34.70880000000000, -85.93590000000000

Outfalls (9 of 18)

012

Please click below if this discharge no longer exists or is no longer required:

NONE PROVIDED

Outfall Identifier

012

Receiving Water

Town Creek

Does the discharge enter the named receiving water via an unnamed tributary?

NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:

Intermittent Discharge

Estimated Average Daily Flow (MGD)

0

Monitoring/Sampling Point Location

34.70880000000000, -85.93590000000000

Outfalls (10 of 18)

013

Please click below if this discharge no longer exists or is no longer required:

NONE PROVIDED

Outfall Identifier

013

Receiving Water

Town Creek

Does the discharge enter the named receiving water via an unnamed tributary?

NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:

Intermittent Discharge

Estimated Average Daily Flow (MGD)

0

Monitoring/Sampling Point Location

34.70880000000000, -85.93590000000000

Outfalls (11 of 18)

014

Please click below if this discharge no longer exists or is no longer required:

NONE PROVIDED

Outfall Identifier

014

Receiving Water

Town Creek

Does the discharge enter the named receiving water via an unnamed tributary?

NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:

Intermittent Discharge

Estimated Average Daily Flow (MGD)

0

Monitoring/Sampling Point Location

34.70880000000000, -85.93590000000000

Outfalls (12 of 18)

015

Please click below if this discharge no longer exists or is no longer required:

NONE PROVIDED

Outfall Identifier

015

Receiving Water

Town Creek

Does the discharge enter the named receiving water via an unnamed tributary?

NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:

Intermittent Discharge

Estimated Average Daily Flow (MGD)

0

Monitoring/Sampling Point Location

34.70880000000000, -85.93590000000000

Outfalls (13 of 18)

03C

Please click below if this discharge no longer exists or is no longer required:

NONE PROVIDED

Outfall Identifier

03C

Receiving Water

Tennessee River

Does the discharge enter the named receiving water via an unnamed tributary?

NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:

Process Water commingled with Stormwater

Estimated Average Daily Flow (MGD)

0.11704

Monitoring/Sampling Point Location

34.70000000000000, -85.92083300000000

Outfalls (14 of 18)

03D

Please click below if this discharge no longer exists or is no longer required:

Delete this Outfall

Provide the reason this outfall is being deleted.

Outfall Location No Longer Exists

Outfall Identifier

03D

Indicate if either of the following characteristics apply to this discharge:

None apply

Estimated Average Daily Flow (MGD)

0

Outfalls (15 of 18)

03E

Please click below if this discharge no longer exists or is no longer required:

Delete this Outfall

Provide the reason this outfall is being deleted.

Outfall Location No Longer Exists

Outfall Identifier

03E

Indicate if either of the following characteristics apply to this discharge:

None apply

Estimated Average Daily Flow (MGD)

0

Outfalls (16 of 18)

03F

Please click below if this discharge no longer exists or is no longer required:

Delete this Outfall

Provide the reason this outfall is being deleted.

Outfall Location No Longer Exists

Outfall Identifier

03F

Indicate if either of the following characteristics apply to this discharge:

None apply

Estimated Average Daily Flow (MGD)

0

Outfalls (17 of 18)

03G

Please click below if this discharge no longer exists or is no longer required:

NONE PROVIDED

Outfall Identifier

03G

Receiving Water

Tennessee River

Does the discharge enter the named receiving water via an unnamed tributary?

NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:

Process Water commingled with Stormwater

Estimated Average Daily Flow (MGD)

0.08304

Monitoring/Sampling Point Location

34.70000000000000, -85.92083300000000

Outfalls (18 of 18)

WEL

Please click below if this discharge no longer exists or is no longer required:

Delete this Outfall

Provide the reason this outfall is being deleted.

Entered in Error

Outfall Identifier

WEL

Indicate if either of the following characteristics apply to this discharge:

None apply

Estimated Average Daily Flow (MGD)

0

Process Flow Schematic with Wastewater Treatment(s), If Applicable

For an example of a process flow diagram, please use the link below.

[Figure 1: Example of Process Flow Schematic](#)

Process Flow Schematic

[BLN Flow Schematic.pdf - 03/05/2025 09:04 AM](#)

Comment

NONE PROVIDED

Anti-Degradation Evaluation

Is this a new or increased discharge that began after April 3, 1991?

No

Additional Information

Do you share an outfall with another facility?

No

Indicate if automatic sampling equipment or continuous wastewater flow metering equipment is being operated at this facility:

Current	Yes/No
Continuous Wastewater Flow Metering Equipment	No
Automatic Sampling Equipment	No

Indicate if installation automatic sampling equipment or continuous wastewater flow metering equipment planned at this facility:

Planned	Yes/No
Continuous Wastewater Flow Metering Equipment	No
Automatic Sampling Equipment	No

Please attach the process schematic with sampling equipment locations.

[BLN Flow Schematic.pdf - 03/05/2025 09:07 AM](#)

Comment

NA

Are any process changes or expansions planned during the next three years that could alter wastewater volumes or characteristics (Consider production processes as well as air or water pollution treatment processes that may affect the discharge.)?

No

Do you use biocides, corrosion inhibitors, or chemical additives in your cooling or blowdown water?

Yes

The applicant must provide a list of the following information for each biocide or chemical:

- (1) Name and general composition of biocide or chemical (if composition is not provided on MSDS sheet)
- (2) 48-hour or 96-hour LC50 data for organisms representative of the biota of the waterway into which the discharge will ultimately reach. For freshwater, the fathead minnow (*Pimephales promelas*) and cladoceran (*Ceriodaphnia dubia*) are the test organisms. For salt water, the mysid shrimp and the sheepshead minnow or inland silverside are the test organisms. Other acceptable aquatic organisms may be allowed by the Department if sufficient information is provided. If the MSDS sheet does not provide data for the organisms specified above, the facility must provide the data unless the Department grants approval for an alternate organism.
- (3) Quantities to be used
- (4) Frequencies of use
- (5) Maximum proposed discharge concentrations
- (6) EPA registration of number, if applicable and is not provided on the MSDS sheet.

List of Biocides

Please list biocides below:
NALCO TOWERBROM 960

Please list biocides below:

NALCO H-640

Biocide/Corrosion Inhibitor Summary Sheet

[Attachment 3 Biocides.docx - 03/05/2025 09:09 AM](#)

Comment

NONE PROVIDED

Safety Data Sheets (SDS)

[SDS.pdf - 03/05/2025 09:19 AM](#)

Comment

NONE PROVIDED

Treatment

Is any form of wastewater treatment (see list below) practiced at this facility?

Yes

Treatment devices or processes used or proposed for treating wastewater or sludge (check as many as appropriate).

Sedimentation

Sump

Other: Scottsboro Sewer System

Is any form of wastewater treatment (or changes to an existing wastewater treatment) planned for this facility within the next three years?

No

Facility Operational Characteristics

Indicate whether the facility discharge is:

Continuous through the year

Comments:

Bellefonte is an inactive, partially constructed nuclear power plant. Future use of the site will continue to be evaluated.

Non-Discharged Wastes

Are any waste liquids or sludges generated and not disposed of in the sanitary sewer system?

Yes

Waste Generated	Quantity (lbs/day)	Disposal Method	On-Site or Off-Site?	If Off-Site, Identify the Facility:
Used Oil	9	Offsite Holston Environmental	Off-Site	Holston Environmental
Waste Products/ Chemicals	9	Offsite through Waste Mangement	Off-Site	Waste Mangement
Sludges	9	Offsite through Waste Mangement	Off-Site	Waste Management

Does any outside firm remove any of the above checked wastes?

Yes

Hauler Information

Name	Address	City	State	Zip
Holston Environmental	1000 Business Park DR	Chattanooga	TN	37419
Waste Management	800 Capitol, Suite 3000	Houston	TX	77002

EPA Application Forms

All Applicants must submit certain EPA permit application forms. More than one application form may be required.

Form 1 - General Information Form required for all applications

Form 2C - Should be submitted for facilities with existing discharge(s) of process wastewater.

Form 2D - Should be submitted for facilities that have not yet commenced discharge(s) of process wastewater.

Form 2E - Should be submitted for facilities who discharge non-process wastewater, such as non-contact cooling water or boiler blowdown.

Form 2F - Should be submitted for all discharges of storm water associated with an industrial activity.
The EPA application forms are found on the Department's website here.

EPA Form 1

[02_BLN NPDES Form 1.pdf - 03/27/2025 02:52 PM](#)

Comment

NONE PROVIDED

Additional EPA Forms (EPA Form 2C, 2D, 2E and/or 2F)

[04_BLN Form 2C_003.pdf - 03/27/2025 02:53 PM](#)

[EPA_2F_Combined.pdf - 03/27/2025 03:01 PM](#)

Comment

NONE PROVIDED

Other attachments (as needed)

[11_BLN FORM 2F_Revised_Narrative.pdf - 03/27/2025 03:01 PM](#)

[06_Section 3 - Outfall 002 Attachment.pdf - 03/27/2025 03:05 PM](#)

[07_Section 3 - Outfall 003 Attachment.pdf - 03/27/2025 03:05 PM](#)

[08_Section 3 - Outfall 005 Attachment.pdf - 03/27/2025 03:05 PM](#)

[09_Section 3 - Outfall 008 Attachment.pdf - 03/27/2025 03:05 PM](#)

[01_BLN NPDES Permit Renewal Cover Letter 3 25 25 - external.pdf - 03/27/2025 03:05 PM](#)

Comment

NONE PROVIDED

Additional Attachments

Please attach any additional information as needed.

NONE PROVIDED

Comment

NONE PROVIDED

Application Preparer

Application Preparer

Prefix

Mr.

First Name Last Name

Craig Phillips

Title

Water Permitting Specialist

Organization Name

Tennessee Valley Authority

Phone Type Number Extension

Mobile 865-599-6183

Email

clphillips@tva.gov

Address

400 West Summit Hill DR

Knoxville, TN 37902

Agreements and Signature(s)

SUBMISSION AGREEMENTS

- I am the owner of the account used to perform the electronic submission and signature.
- I have the authority to submit the data on behalf of the facility I am representing.
- I agree that providing the account credentials to sign the submission document constitutes an electronic signature equivalent to my written signature.
- I have reviewed the electronic form being submitted in its entirety, and agree to the validity and accuracy of the information contained within it to the best of my knowledge.

"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."

"I further certify under penalty of law that all analyses reported as less than detectable in this application or attachments thereto were performed using the EPA approved test method having the lowest detection limit for the substance tested."

NOTE: 335-6-5-.14 SIGNATORIES TO PERMIT APPLICATIONS AND REPORTS.

The application shall be signed by a responsible official, a request for variance from categorical pretreatment standards, and a category determination request shall be signed by a responsible official, as indicated below:

- In the case of a corporation, by a principal executive officer of at least the level of vice president;*
- In the case of a partnership, by a general partner;*
- In the case of a sole proprietorship, by the proprietor; or*
- In the case of a municipal, state, federal, or other public entity, by either a principal executive officer, or ranking elected official*

Signed James Chardos on 03/31/2025 at 7:40 AM
By



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

Sent Via Electronic Submittal

March 27, 2025

Mr. Scott Jackson, Chief (scott.jackson@adem.alabama.gov)
Alabama Department of
Environmental Management (ADEM)
Industrial Section
Water Division
Permits and Services Division
P.O. Box 301463
Montgomery, Alabama 36130-1463

Dear Mr. Jackson:

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

TVA has submitted the renewal permit application to the AEPACS online portal. TVA would appreciate consideration of the following in the renewal 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 for power production within the next permit term. Operations of the water intake structure only occur as needed 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. TVA also request that Bellefonte be categorized as a Minor Facility due to its non-operational status.
3. Because DSN 03C may be used in lieu of DSN 03G during deferment, Form 2C informational requirements are combined for these outfalls.

Mr. Scott Jackson
Page 2
March 27, 2025

DSN 008

4. 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. TVA believes discharges can continue to 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 in the renewed permit under Part IV similar to the language in Part IV.C. of AL0003867 and AL0003875 for TVA's Colbert and Widows Creek facilities.

DSN 010


5. TVA has been unable to collect a storm water sample from a storm water event that meets Form F requirements at DSN 010. Per guidance from ADEM, a grab sample was collected in the vicinity of the discharge and analyzed for the tables in Form 2F. A stormwater discharge will be collected as soon as possible and sent to ADEM for comparison to the submitted grab sample.

If you have questions or need any additional information concerning this request, please contact Craig Phillips at (865) 599-6183 or by e-mail at clphillips@tva.gov.

Sincerely,



Paul Pearman
Senior Manager
Water Permits, Compliance, and Monitoring

Form 1 NPDES		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 <i>Not</i> 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.	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.	
	1.2	Applicants <i>Required</i> to Submit Form 1		
	1.2.1	Is the facility a concentrated animal feeding operation or a concentrated aquatic animal production facility ? <input type="checkbox"/> Yes → Complete Form 1 and Form 2B.	1.2.2	Is the facility an existing manufacturing, commercial, mining, or silvicultural facility that is currently discharging process wastewater ? <input checked="" type="checkbox"/> Yes → Complete Form 1 and Form 2C.
	1.2.3	Is the facility a new manufacturing, commercial, mining, or silvicultural facility that has not yet commenced to discharge ? <input type="checkbox"/> Yes → Complete Form 1 and Form 2D.	1.2.4	Is the facility a new or existing manufacturing, commercial, mining, or silvicultural facility that discharges only nonprocess wastewater ? <input type="checkbox"/> Yes → Complete Form 1 and Form 2E.
	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 ? <input checked="" type="checkbox"/> Yes → Complete Form 1 and Form 2F unless exempted by 40 CFR 122.26(b)(14)(x) or (b)(15).		

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		
	2.2	EPA Identification Number		
		AL5640090002		
	2.3	Facility Contact		
		Name (first and last) James Chardos	Title Site Manager	Phone number (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 Hollywood	State Alabama	ZIP code 35752	

EPA Identification Number AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Form Approved 03/05/19 OMB No. 2040-0004
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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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	4.3	Operator Status <input checked="" type="checkbox"/> Public—federal <input type="checkbox"/> Public—state <input type="checkbox"/> Other public (specify) _____ <input type="checkbox"/> Private <input type="checkbox"/> 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 gaboerschig@tva.gov		

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

Indian Land	5.1	Is the facility located on Indian Land? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
-------------	-----	--

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

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)		
	<input checked="" type="checkbox"/>	NPDES (discharges to surface water) AL0024635	<input checked="" type="checkbox"/>	RCRA (hazardous wastes) AL5640090002
	<input type="checkbox"/>	PSD (air emissions)	<input type="checkbox"/>	Nonattainment program (CAA)
	<input type="checkbox"/>	Ocean dumping (MPRSA)	<input type="checkbox"/>	Dredge or fill (CWA Section 404)
			<input type="checkbox"/>	UIC (underground injection of fluids)
				NESHAPs (CAA)
			<input checked="" type="checkbox"/>	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.) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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 will continue to be evaluated.
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SECTION 9. COOLING WATER INTAKE STRUCTURES (40 CFR 122.21(f)(9))

Cooling Water Intake Structures	9.1	Does your facility use cooling water? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.)
		<input type="checkbox"/> Fundamentally different factors (CWA Section 301(n)) <input type="checkbox"/> Water quality related effluent limitations (CWA Section 302(b)(2)) <input type="checkbox"/> Non-conventional pollutants (CWA Section 301(c) and (g)) <input type="checkbox"/> Thermal discharges (CWA Section 316(a)) <input checked="" type="checkbox"/> Not applicable


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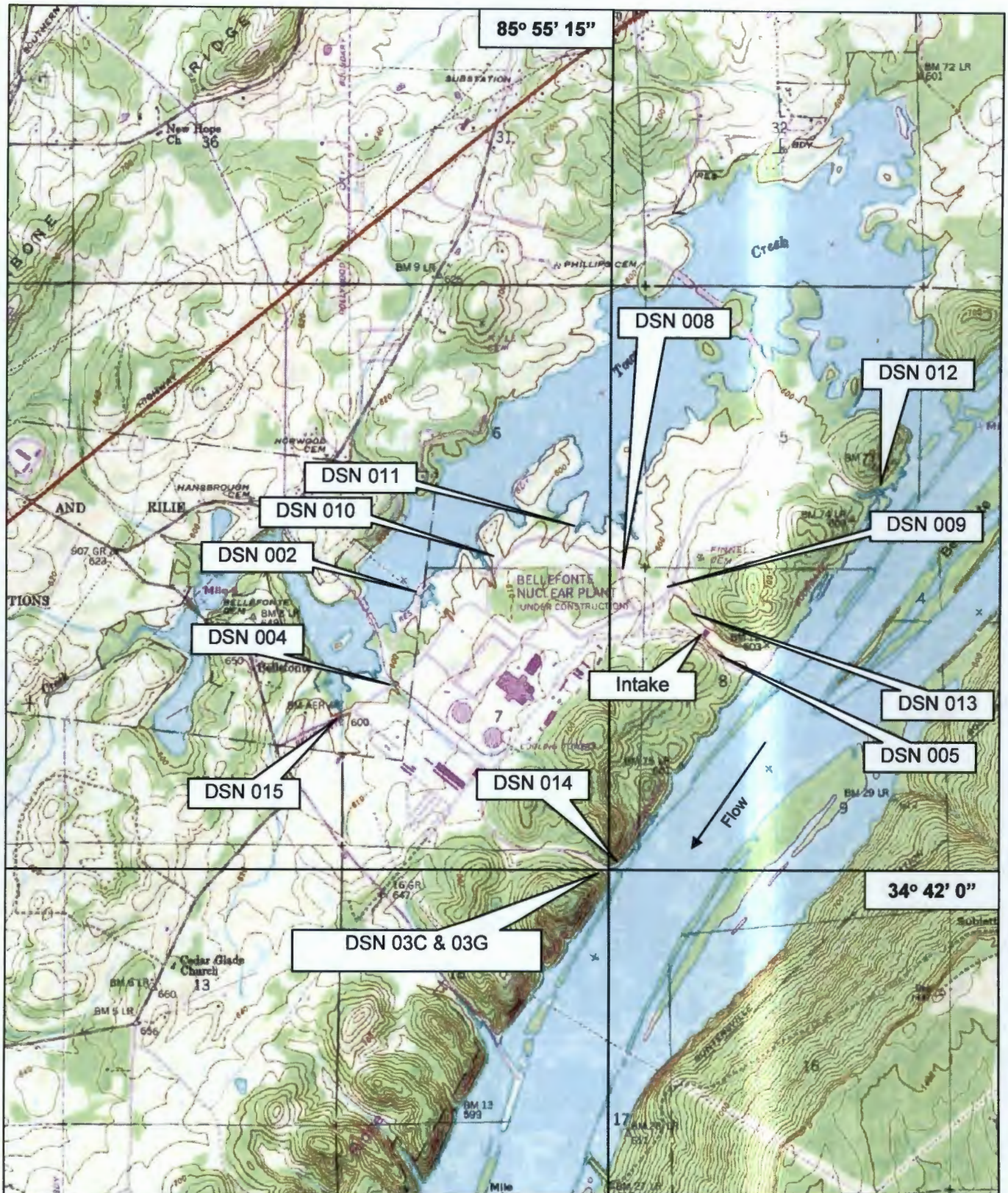
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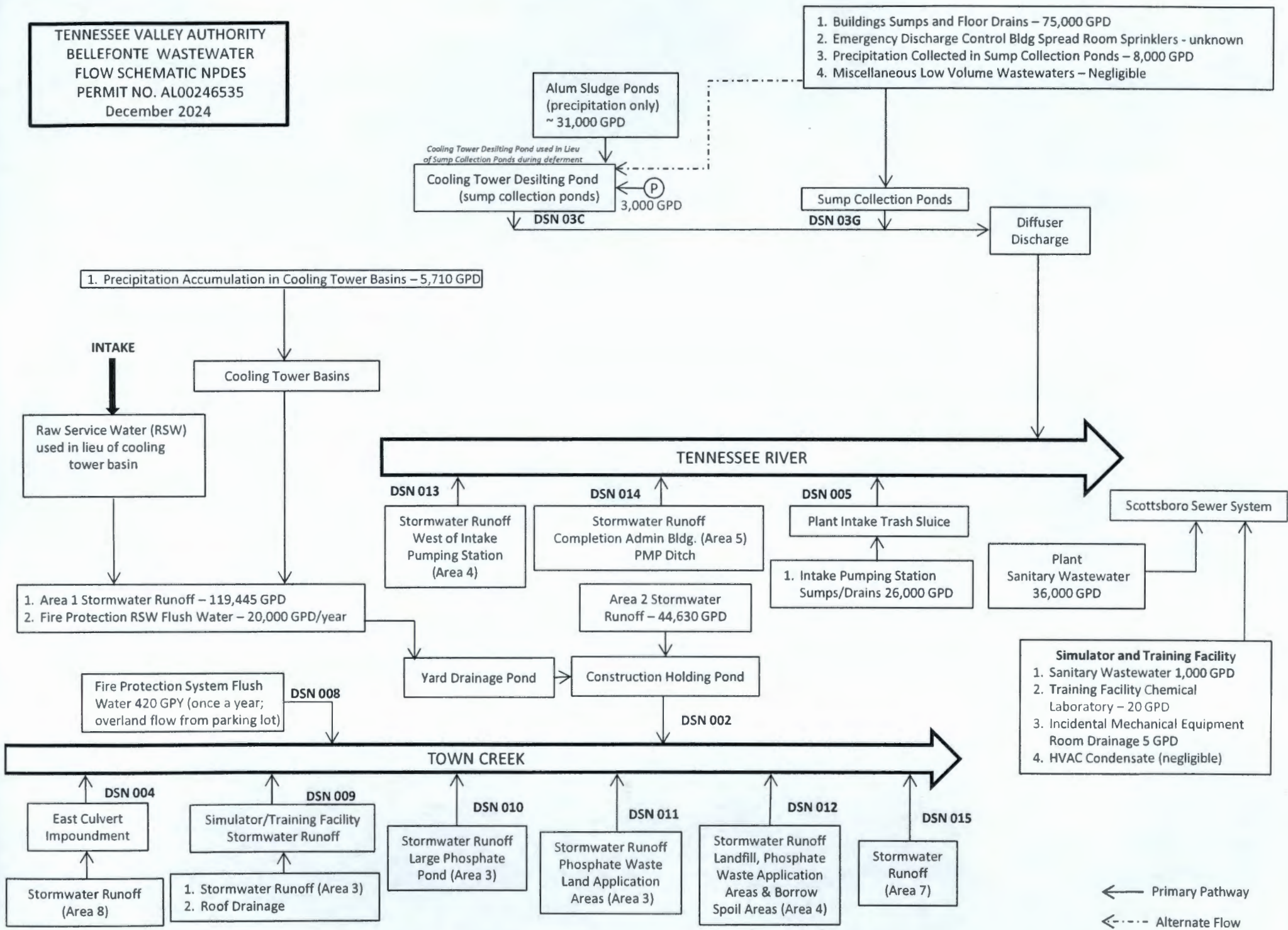
SECTION 11. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))

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
	<input checked="" type="checkbox"/>	Section 1: Activities Requiring an NPDES Permit	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 2: Name, Mailing Address, and Location	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 3: SIC Codes	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 4: Operator Information	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 5: Indian Land	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 6: Existing Environmental Permits	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 7: Map	<input checked="" type="checkbox"/> w/ topographic map <input type="checkbox"/> w/ additional attachments
	<input checked="" type="checkbox"/>	Section 8: Nature of Business	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 9: Cooling Water Intake Structures	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 10: Variance Requests	<input type="checkbox"/> w/ attachments
<input checked="" type="checkbox"/>	Section 11: Checklist and Certification Statement	<input type="checkbox"/> w/ attachments	
11.2	Certification Statement		
	<i>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.</i>		
	Name (print or type first and last name) James S. Chardos	Official title Bellefonte Site Manager	
	Signature 	Date signed 3/27/2025	




TVA Bellefonte
 Hollywood, Jackson Co., Alabama
 NPDES Permit No. AL0024635
 Doran Cove, Stevenson, Flat Rock, and Bridgeport Quadrangles
 March 2025

**TENNESSEE VALLEY AUTHORITY
BELLEFONTE WASTEWATER
FLOW SCHEMATIC NPDES
PERMIT NO. AL00246535
December 2024**



← Primary Pathway
 ←--- Alternate Flow

Form 2C NPDES		U.S. Environmental Protection Agency Application for NPDES Permit to Discharge Wastewater EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURE OPERATIONS
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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			
	003	TN River (Mile 391.4)	34°	43'	0" N	85°	55'	15" W
	005	TN River (Mile 392.3)	34°	42'	30" N	85°	55'	0" W
	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.) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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				

Form 2C NPDES		U.S. Environmental Protection Agency Application for NPDES Permit to Discharge Wastewater EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURE OPERATIONS
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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
			° ' "		° ' "
			° ' "		° ' "
			° ' "		° ' "

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.) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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				

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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

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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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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

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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	<input checked="" type="checkbox"/> Volatile	<input checked="" type="checkbox"/> Acid	<input type="checkbox"/> Base/Neutral	<input type="checkbox"/> Pesticide
	<input type="checkbox"/> Volatile	<input type="checkbox"/> Acid	<input type="checkbox"/> Base/Neutral	<input type="checkbox"/> Pesticide
	<input type="checkbox"/> Volatile	<input type="checkbox"/> Acid	<input type="checkbox"/> Base/Neutral	<input type="checkbox"/> Pesticide

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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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
7.10	Does the applicant qualify for a small business exemption under the criteria specified in the instructions? <input type="checkbox"/> Yes → Note that you qualify at the top of Table B, then SKIP to Item 7.12. <input checked="" type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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"? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes → Complete Table E. <input checked="" type="checkbox"/> No → SKIP to Section 8.
7.17	Have you completed Table E by reporting <i>qualitative</i> data for TCDD? <input type="checkbox"/> Yes <input type="checkbox"/> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 9.	
8.2	List the pollutants below.	
1.	4.	7.
2.	5.	8.
3.	6.	9.

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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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?
				<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No	
			<input type="checkbox"/> Yes <input type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Section 11.		
	10.2	Provide information for each contract laboratory or consulting firm below.		
			Laboratory Number 1	Laboratory Number 2
		Name of laboratory/firm	Eurofins Environmental Testing	Southern Environmental Testing
		Laboratory address	3355 McLemore Drive Pensacola, FL 32514	PO Box 2084 Decatur, AL 35602
		Phone number	(850) 471-6222	(256) 280-2567
	Pollutant(s) analyzed	Low Level Mercury Only	All remaining parameters with the exception of field parameters (pH, temp, flow).	

SECTION 11. ADDITIONAL INFORMATION (40 CFR 122.21(g)(13))

Additional Information	11.1	Has the NPDES permitting authority requested additional information? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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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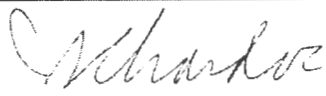
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SECTION 12. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))

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
	<input checked="" type="checkbox"/> Section 1: Outfall Location	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/> Section 2: Line Drawing	<input checked="" type="checkbox"/> w/ line drawing <input type="checkbox"/> w/ additional attachments
	<input checked="" type="checkbox"/> Section 3: Average Flows and Treatment	<input checked="" type="checkbox"/> w/ attachments <input type="checkbox"/> w/ list of each user of privately owned treatment works
	<input checked="" type="checkbox"/> Section 4: Intermittent Flows	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/> Section 5: Production	<input type="checkbox"/> w/ attachments
	<input type="checkbox"/> Section 6: Improvements	<input type="checkbox"/> w/ attachments <input type="checkbox"/> w/ optional additional sheets describing any additional pollution control plans
	<input checked="" type="checkbox"/> Section 7: Effluent and Intake Characteristics	<input type="checkbox"/> w/ request for a waiver and supporting information <input type="checkbox"/> w/ explanation for identical outfalls <input type="checkbox"/> w/ small business exemption request <input type="checkbox"/> w/ other attachments <input checked="" type="checkbox"/> w/ Table A <input checked="" type="checkbox"/> w/ Table B <input checked="" type="checkbox"/> w/ Table C <input checked="" type="checkbox"/> w/ Table D <input type="checkbox"/> w/ Table E <input type="checkbox"/> w/ analytical results as an attachment
	<input type="checkbox"/> Section 8: Used or Manufactured Toxics	<input type="checkbox"/> w/ attachments
	<input type="checkbox"/> Section 9: Biological Toxicity Tests	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/> Section 10: Contract Analyses	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/> Section 11: Additional Information	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/> Section 12: Checklist and Certification Statement	<input type="checkbox"/> w/ attachments

12.2	Certification Statement	
	<p><i>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.</i></p>	
	Name (print or type first and last name)	Official title
	James Chardos	Bellefonte Site Manager
	Signature	Date signed
		3/27/2025

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EPA Identification Number AL5640090002	NPDES Permit Number AL0024635	Facility Name Belleville	Outfall Number 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				Intake (Optional)		
			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	
<input type="checkbox"/> Check here if you have applied to your NPDES permitting authority for a waiver for <i>all</i> of the pollutants listed on this table for the noted outfall.									
1. Biochemical oxygen demand (BOD ₅)	<input type="checkbox"/>	Concentration	mg/l	6.77			1	1	
		Mass							
2. Chemical oxygen demand (COD)	<input type="checkbox"/>	Concentration	mg/l	27.0			1	1	
		Mass							
3. Total organic carbon (TOC)	<input type="checkbox"/>	Concentration	mg/l	8.64			1	1	
		Mass							
4. Total suspended solids (TSS)	<input type="checkbox"/>	Concentration	mg/l	<2.50		3.73	8	1	
		Mass							
5. Ammonia (as N)	<input type="checkbox"/>	Concentration	mg/l	<0.100			1	1	
		Mass							
6. Flow	<input type="checkbox"/>	Rate	MGD	0.15		0.4886	7		
7. Temperature	<input type="checkbox"/>	winter	°C	°C	11.6		1	1	
		summer	°C	°C					
8. pH	<input type="checkbox"/>	minimum	Standard units	s.u.	8.35		8.25	7	1
		maximum	Standard units	s.u.	8.36		8.25	7	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 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
<input type="checkbox"/> 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)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	< 0.0200			1	1
				Mass						
1.2 Arsenic, total (7440-38-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	< 0.0200			1	1
				Mass						
1.3 Beryllium, total (7440-41-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	< 0.0200			1	1
				Mass						
1.4 Cadmium, total (7440-43-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	< 0.0200			1	1
				Mass						
1.5 Chromium, total (7440-47-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	< 0.0200			1	1
				Mass						
1.6 Copper, total (7440-50-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	< 0.0200			1	1
				Mass						
1.7 Lead, total (7439-92-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	< 0.0200			1	1
				Mass						
1.8 Mercury, total (7439-97-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ng/l	3.2			1	1
				Mass						
1.9 Nickel, total (7440-02-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	< 0.0200			1	1
				Mass						
1.10 Selenium, total (7782-49-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	< 0.0200			1	1
				Mass						
1.11 Silver, total (7440-22-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	< 0.00125			1	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	
1.12	Thallium, total (7440-28-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	< 0.0200				1		1
					Mass								
1.13	Zinc, total (7440-66-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	< 0.0200				1		1
					Mass								
1.14	Cyanide, total (57-12-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	<0.005				1	<0.005	1
					Mass								
1.15	Phenols, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 50.0				1	< 50.0	1
					Mass								
2.2	Acrylonitrile (107-13-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 10.0				1	< 10.0	1
					Mass								
2.3	Benzene (71-43-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 1.00				1	< 1.00	1
					Mass								
2.4	Bromoform (75-25-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 1.00				1	< 1.00	1
					Mass								
2.5	Carbon tetrachloride (56-23-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 1.00				1	< 1.00	1
					Mass								
2.6	Chlorobenzene (108-90-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 1.00				1	< 1.00	1
					Mass								
2.7	Chlorodibromomethane (124-48-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 2.00				1	< 2.00	1
					Mass								
2.8	Chloroethane (75-00-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 5.00				1	< 5.00	1
					Mass								
2.10	Chloroform (67-66-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 1.00				1	< 1.00	1
					Mass								
2.11	Dichlorobromomethane (75-27-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 1.00				1	< 1.00	1
					Mass								
2.12	1,1-dichloroethane (75-34-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 1.00				1	< 1.00	1
					Mass								
2.13	1,2-dichloroethane (107-06-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 1.00				1	< 1.00	1
					Mass								
2.14	1,1-dichloroethylene (75-35-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 1.00				1	< 1.00	1
					Mass								
2.15	1,2-dichloropropane (78-87-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 1.00				1	< 1.00	1
					Mass								
2.16	1,3-dichloropropylene (542-75-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 1.00				1	< 1.00	1
					Mass								
2.17	Ethylbenzene (100-41-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 1.00				1	< 1.00	1
					Mass								
2.18	Methyl bromide (74-83-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 1.00				1	< 1.00	1
					Mass								
2.19	Methyl chloride (74-87-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 2.00				1	< 2.00	1
					Mass								
2.20	Methylene chloride (75-09-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 5.00				1	< 5.00	1
					Mass								
2.21	1,1,2,2- tetrachloroethane (79-34-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.23	Toluene (108-88-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.24	1,2-trans-dichloroethylene (156-60-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.25	1,1,1-trichloroethane (71-55-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.26	1,1,2-trichloroethane (79-00-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.27	Trichloroethylene (79-01-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 1.00			1	< 1.00	1
					Mass							
2.28	Vinyl chloride (75-01-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 9.62			1	< 9.26	1
					Mass							
3.2	2,4-dichlorophenol (120-83-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 1.83			1	< 1.76	1
					Mass							
3.3	2,4-dimethylphenol (105-67-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 9.62			1	< 9.26	1
					Mass							
3.4	4,6-dinitro-o-cresol (534-52-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 48.1			1	< 46.3	1
					Mass							
3.5	2,4-dinitrophenol (51-28-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 9.62			1	< 9.26	1
					Mass							
3.7	4-nitrophenol (100-02-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 48.1			1	< 46.3	1
					Mass							
3.8	p-chloro-m-cresol (59-50-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 9.62			1	< 9.26	1
					Mass							
3.9	Pentachlorophenol (87-86-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 48.1			1	< 46.3	1
					Mass							
3.10	Phenol (108-95-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	ug/l	< 9.62			1	< 9.26	1
					Mass							
3.11	2,4,6-trichlorophenol (88-05-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.2	Acenaphthylene (208-96-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.3	Anthracene (120-12-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.4	Benzidine (92-87-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.5	Benzo (a) anthracene (56-55-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.6	Benzo (a) pyrene (50-32-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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	
4.7	3,4-benzofluoranthene (205-99-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.8	Benzo (ghi) perylene (191-24-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.9	Benzo (k) fluoranthene (207-08-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.10	Bis (2-chloroethoxy) methane (111-91-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.11	Bis (2-chloroethyl) ether (111-44-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.12	Bis (2-chloroisopropyl) ether (102-80-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.13	Bis (2-ethylhexyl) phthalate (117-81-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.14	4-bromophenyl phenyl ether (101-55-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.15	Butyl benzyl phthalate (85-68-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.16	2-chloronaphthalene (91-58-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.17	4-chlorophenyl phenyl ether (7005-72-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.18	Chrysene (218-01-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.19	Dibenzo (a,h) anthracene (53-70-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))'

	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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.21	1,3-dichlorobenzene (541-73-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.22	1,4-dichlorobenzene (106-46-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.23	3,3-dichlorobenzidine (91-94-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.24	Diethyl phthalate (84-66-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.25	Dimethyl phthalate (131-11-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.26	Di-n-butyl phthalate (84-74-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.27	2,4-dinitrotoluene (121-14-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.28	2,6-dinitrotoluene (606-20-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.29	Di-n-octyl phthalate (117-84-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.30	1,2-Diphenylhydrazine (as azobenzene) (122-66-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.31	Fluoranthene (206-44-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.32	Fluorene (86-73-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))'

	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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.34	Hexachlorobutadiene (87-68-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.35	Hexachlorocyclopentadiene (77-47-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.36	Hexachloroethane (67-72-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.37	Indeno (1,2,3-cd) pyrene (193-39-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.38	Isophorone (78-59-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.39	Naphthalene (91-20-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.40	Nitrobenzene (98-95-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.41	N-nitrosodimethylamine (62-75-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.42	N-nitrosodi-n-propylamine (621-64-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.43	N-nitrosodiphenylamine (86-30-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.44	Phenanthrene (85-01-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
4.45	Pyrene (129-00-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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	
4.46	1,2,4-trichlorobenzene (120-82-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
Section 5. Organic Toxic Pollutants (GC/MS Fraction—Pesticides)												
5.1	Aldrin (309-00-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
5.2	α-BHC (319-84-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
5.3	β-BHC (319-85-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
5.4	γ-BHC (58-89-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
5.5	δ-BHC (319-86-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
5.6	Chlordane (57-74-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
5.7	4,4'-DDT (50-29-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
5.8	4,4'-DDE (72-55-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
5.9	4,4'-DDD (72-54-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
5.10	Dieldrin (60-57-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
5.11	α-endosulfan (115-29-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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	
5.12	β-endosulfan (115-29-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.13	Endosulfan sulfate (1031-07-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.14	Endrin (72-20-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.15	Endrin aldehyde (7421-93-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.16	Heptachlor (76-44-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.17	Heptachlor epoxide (1024-57-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.18	PCB-1242 (53469-21-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.19	PCB-1254 (11097-69-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.20	PCB-1221 (11104-28-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.21	PCB-1232 (11141-16-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.22	PCB-1248 (12672-29-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.23	PCB-1260 (11096-82-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
					Mass							
5.24	PCB-1016 (12674-11-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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	
5.25	Toxaphene (8001-35-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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	
1. Bromide (24959-67-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	< 1.00			1	< 1.00	1
			Mass							
2. Chlorine, total residual	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	< 0.05			1	< 0.05	1
			Mass							
3. Color	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	PCU	< 5.00			1	5.00	1
			Mass							
4. Fecal coliform	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
			Mass							
5. Fluoride (16984-48-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	0.154			1	< 0.100	1
			Mass							
6 Nitrate-nitrite	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	0.189			1	0.277	1
			Mass							
7. Nitrogen, total organic (as N)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	0.194			1	0.396	1
			Mass							
8. Oil and grease	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	< 4.1		< 4.0	8	< 4.0	1
			Mass							
9. Phosphorus (as P), total (7723-14-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	< 0.100			1	< 0.100	1
			Mass							
10. Sulfate (as SO ₄) (14808-79-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	10.1			1	3.20	1
			Mass							
11. Sulfide (as S)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration							
			Mass							

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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
12.	Sulfite (as SO ₃) (14265-45-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	3.84			1		
				Mass							
13.	Surfactants	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	< 0.05			1	< 0.05	1
				Mass							
14.	Aluminum, total (7429-90-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	0.193			1	0.431	1
				Mass							
15.	Barium, total (7440-39-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	0.00939			1	0.0143	1
				Mass							
16.	Boron, total (7440-42-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	< 0.100			1	< 0.100	1
				Mass							
17.	Cobalt, total (7440-48-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	< 0.002			1	< 0.002	1
				Mass							
18.	Iron, total (7439-89-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	0.303			1	0.454	1
				Mass							
19.	Magnesium, total (7439-95-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	3.73			1	2.18	1
				Mass							
20.	Molybdenum, total (7439-98-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	< 0.002			1	< 0.002	1
				Mass							
21.	Manganese, total (7439-96-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	0.0181			1	0.0309	1
				Mass							
22.	Tin, total (7440-31-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	< 0.002			1	< 0.002	1
				Mass							
23.	Titanium, total (7440-32-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration	mg/l	0.00283			1	0.00463	1
				Mass							

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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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration						
			Mass						
Beta, total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration						
			Mass						
Radium, total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration						
			Mass						
Radium 226, total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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 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	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
2.	Acetaldehyde	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
3.	Allyl alcohol	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
4.	Allyl chloride	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
5.	Amyl acetate	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
6.	Aniline	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
7.	Benzonitrile	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
8.	Benzyl chloride	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
9.	Butyl acetate	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
10.	Butylamine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
11.	Captan	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
12.	Carbaryl	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
13.	Carbofuran	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
14.	Carbon disulfide	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
15.	Chlorpyrifos	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
16.	Coumaphos	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
17.	Cresol	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
18.	Crotonaldehyde	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
19.	Cyclohexane	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

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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)	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
21.	Diazinon	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
22.	Dicamba	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
23.	Dichlobenil	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
24.	Dichlone	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
25.	2,2-dichloropropionic acid	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
26.	Dichlorvos	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
27.	Diethyl amine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
28.	Dimethyl amine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
29.	Dinitrobenzene	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
30.	Diquat	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
31.	Disulfoton	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
32.	Diuron	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
33.	Epichlorohydrin	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
34.	Ethion	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
35.	Ethylene diamine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
36.	Ethylene dibromide	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
37.	Formaldehyde	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
38.	Furfural	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

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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	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
40.	Isoprene	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
41.	Isopropanolamine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
42.	Kelthane	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
43.	Kepone	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
44.	Malathion	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
45.	Mercaptodimethur	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
46.	Methoxychlor	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
47.	Methyl mercaptan	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
48.	Methyl methacrylate	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
49.	Methyl parathion	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
50.	Mevinphos	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
51.	Mexacarbate	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
52.	Monoethyl amine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
53.	Monomethyl amine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
54.	Naled	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
55.	Naphthenic acid	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
56.	Nitrotoluene	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
57.	Parathion	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

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TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))'					
	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
58.	Phenolsulfonate	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
59.	Phosgene	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
60.	Propargite	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
61.	Propylene oxide	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
62.	Pyrethrins	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
63.	Quinoline	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
64.	Resorcinol	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
65.	Strontium	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
66.	Strychnine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
67.	Styrene	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
68.	2,4,5-T (2,4,5-trichlorophenoxyacetic acid)	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
69.	TDE (tetrachlorodiphenyl ethane)	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
70.	2,4,5-TP [2-(2,4,5-trichlorophenoxy) propanoic acid]	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
71.	Trichlorofon	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
72.	Triethanolamine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
73.	Triethylamine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
74.	Trimethylamine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
75.	Uranium	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
76.	Vanadium	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

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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		
77.	Vinyl acetate	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
78.	Xylene	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
79.	Xylenol	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
80.	Zirconium	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

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 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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

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:	0.19547
1. Area 1 stormwater runoff including roof and yard drainage	0.119
2. Surveillance/testing of diesel fire pumps at condenser circulating water pump station – once per year	0.011
3. Fire protection system (raw water) flush – once per year	0.020
4. Area 2 Stormwater runoff	0.04463
5. 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
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 03G – Sump Collection Ponds receive flow from:	0.08304
A. Building sumps and floor drains	0.075
B. Oil contaminated groundwater from beneath diesel fuel secondary containment basin	0.00003
C. Paint shop spray booth water curtain wastes (not in operation)	0.00001
D. Fire Sprinklers	negligible
E. Accumulated precipitation (based on avg. annual precipitation)	0.008
F. 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-K	
	4-A	
2. 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 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

EPA Identification Number
AL5640090002

NPDES Permit Number
AL0024635

Facility Name
Bellefonte

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Form
2F
NPDES



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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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) <input type="checkbox"/> Yes <input type="checkbox"/> No				

EPA Identification Number AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Form Approved 03/05/19 OMB No. 2040-0004		
Form 2F NPDES		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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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) <input type="checkbox"/> Yes <input type="checkbox"/> No			

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.)
		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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.																								
		<table border="1"> <thead> <tr> <th>Outfall Number</th> <th>Impervious Surface Area (within a mile radius of the facility)</th> <th>Total Surface Area Drained (within a mile radius of the facility)</th> </tr> </thead> <tbody> <tr> <td></td> <td>See Attached</td> <td>specify units</td> </tr> <tr> <td></td> <td></td> <td>specify units</td> </tr> <tr> <td></td> <td></td> <td>specify units</td> </tr> <tr> <td></td> <td></td> <td>specify units</td> </tr> <tr> <td></td> <td></td> <td>specify units</td> </tr> <tr> <td></td> <td></td> <td>specify units</td> </tr> <tr> <td></td> <td></td> <td>specify units</td> </tr> </tbody> </table>	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			specify units			specify units			specify units			specify units			specify units			specify units
	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																							
			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.)																								
		<table border="1"> <thead> <tr> <th colspan="3">Stormwater Treatment</th> </tr> <tr> <th>Outfall Number</th> <th>Control Measures and Treatment</th> <th>Codes from Exhibit 2F-1 (list)</th> </tr> </thead> <tbody> <tr> <td></td> <td>See Attached</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Stormwater Treatment			Outfall Number	Control Measures and Treatment	Codes from Exhibit 2F-1 (list)		See Attached																
Stormwater Treatment																										
Outfall Number	Control Measures and Treatment	Codes from Exhibit 2F-1 (list)																								
	See Attached																									

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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		
		James Chardos	Bellefonte Site Manager		
		Signature	Date signed		
	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.	03/01/2025	002, 004
		009 - 015	Visual observations and flow schematic / drainage area	03/01/2025	009 - 015
		map review during NPDES application preparation.	03/01/2025		

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.
		None

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?
		<input type="checkbox"/> Yes → See instructions regarding submission of <i>estimated</i> data. <input checked="" type="checkbox"/> No → See instructions regarding submission of <i>actual</i> data.
	Tables A, B, C, and D	
7.2	Have you completed Table A for each outfall?	
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

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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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
7.5	Do you know or have reason to believe any pollutants in Exhibit 2F-2 are present in the discharge? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
7.7	Do you qualify for a small business exemption under the criteria specified in the Instructions? <input type="checkbox"/> Yes → SKIP to Item 7.18. <input checked="" type="checkbox"/> No
7.8	Do you know or have reason to believe any pollutants in Exhibit 2F-3 are present in the discharge? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
7.10	Do you expect any of the pollutants in Exhibit 2F-3 to be discharged in concentrations of 10 ppb or greater? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes <input type="checkbox"/> 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)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
7.15	Do you know or have reason to believe any pollutants in Exhibit 2F-4 are present in the discharge? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes <input type="checkbox"/> No
7.17	Have you provided information for the storm event(s) sampled in Table D? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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?	
		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?		
		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?
			<input type="checkbox"/> Yes <input type="checkbox"/> No	
			<input type="checkbox"/> Yes <input type="checkbox"/> No	
			<input type="checkbox"/> Yes <input type="checkbox"/> 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?		
		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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	Southern Environmental Testing	
		Laboratory address	PO Box 2084 Decatur, AL 35602	
	Phone number	(256) 280-2567		
	Pollutant(s) analyzed	All parameters except those analyzed in the field (pH, temp, flow).		

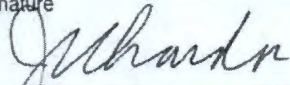
EPA Identification Number
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NPDES Permit Number
AL0024635

Facility Name
Bellefonte

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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
		<input checked="" type="checkbox"/> Section 1	<input type="checkbox"/> w/ attachments (e.g., responses for additional outfalls)
		<input type="checkbox"/> Section 2	<input type="checkbox"/> w/ attachments
		<input checked="" type="checkbox"/> Section 3	<input checked="" type="checkbox"/> w/ site drainage map
		<input checked="" type="checkbox"/> Section 4	<input checked="" type="checkbox"/> w/ attachments
		<input checked="" type="checkbox"/> Section 5	<input type="checkbox"/> w/ attachments
		<input checked="" type="checkbox"/> Section 6	<input type="checkbox"/> w/ attachments
		<input checked="" type="checkbox"/> Section 7	<input checked="" type="checkbox"/> Table A <input type="checkbox"/> w/ small business exemption request <input checked="" type="checkbox"/> Table B <input type="checkbox"/> w/ analytical results as an attachment <input checked="" type="checkbox"/> Table C <input checked="" type="checkbox"/> Table D
		<input type="checkbox"/> Section 8	<input type="checkbox"/> w/attachments
		<input checked="" type="checkbox"/> Section 9	<input type="checkbox"/> w/attachments (e.g., responses for additional contact laboratories or firms)
		<input checked="" type="checkbox"/> Section 10	<input type="checkbox"/>
10.2	Certification Statement		
	<i>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.</i>		
	Name (print or type first and last name)	Official title	
	James Chardos	Bellefonte Site Manager	
	Signature	Date signed	
		3/27/2025	

EPA Identification Number AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Outfall Number DSN 002
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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 <i>(new source/new dischargers only; use codes in instructions)</i>
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
1. Oil and grease	<5.00mg/l				1	
2. Biochemical oxygen demand (BOD ₅)	<2.00 mg/l	<2.00 mg/l			1	
3. Chemical oxygen demand (COD)	17.0 mg/l	21.0 mg/l			1	
4. Total suspended solids (TSS)	<2.50 mg/l	4.00 mg/l			1	
5. Total phosphorus	0.0231 mg/l	0.0295 mg/l			1	
6. Total Kjeldahl nitrogen (TKN)	1.81 mg/l	2.31 mg/l			1	
7. Total nitrogen (as N)	2.51 mg/l	2.98 mg/l			1	
8. pH (minimum)	8.21 s.u.				1	
	8.23 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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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 <i>(new source/new dischargers only; use codes in instructions)</i>
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Temperature	17.75	N/A			1	
Chromium, Total	<0.0200 mg/L	<0.0200 mg/L			1	
Zinc, Total	<0.0200 mg/L	<0.0200 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 AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Outfall Number 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 <small>(new source/new dischargers only; use codes in instructions)</small>
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Color	15.0 PCU	16.0 PCU			1	
Nitrite	<0.100 mg/l	<0.100 mg/L			1	
Nitrate	0.698 mg/L	0.674			1	
Aluminum, total	0.0703 mg/L	0.931 mg/L			1	
Barium, total	<0.0200 mg/L	<0.0200 mg/L			1	
Iron, total	0.111 mg/L	0.136 mg/L			1	
Magnesium, total	8.41 mg/L	0.0346 mg/L			1	
Manganese, total	0.0305 mg/L	0.0346 mg/L			1	
Mercury, total	<0.0002 mg/L	<0.0002 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 AL5640090002	NPDES Permit Number AL0024635	Facility name Bellefonte	Outfall Number DSN 002
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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)
11/19/2023	28.5	1.33	118.5	46.35	58,631.68 gpd

Provide a description of the method of flow measurement or estimate.
Flow rates were calculated using pipe slope and cross-sectional area of flow.

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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	<5.00 mg/l				1	
2. Biochemical oxygen demand (BOD ₅)	<2.00 mg/L	<2.00 mg/L			1	
3. Chemical oxygen demand (COD)	27.0 mg/L	21.0 mg/L			1	
4. Total suspended solids (TSS)	<2.50 mg/l	<2.50 mg/L			1	
5. Total phosphorus	0.0433 mg/L	0.0341 mg/L			1	
6. Total Kjeldahl nitrogen (TKN)	2.16 mg/L	1.71 mg/L			1	
7. Total nitrogen (as N)	2.16 mg/L	1.71 mg/L			1	
8. pH (minimum)	8.00 s.u.				1	
	8.01 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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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 <i>(new source/new dischargers only; use codes in instructions)</i>
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Temperature	12.3	N/A			1	
Chromium, Total	<0.0200 mg/L	<0.0200 mg/L			1	
Zinc, Total	<0.0200 mg/L	<0.0200 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 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	40 PCU	40 PCU			1	
Nitrite	<0.100 mg/L	<0.100 mg/L			1	
Nitrate	<0.500 mg/L	<0.500 mg/L			1	
Aluminum, total	0.0321 mg/L	0.0234 mg/L			1	
Barium, total	0.0248 mg/L	0.0255 mg/L			1	
Iron, total	0.0469 mg/L	0.0484 mg/L			1	
Magnesium, total	8.64 mg/L	8.99 mg/L			1	
Manganese, total	0.145 mg/L	0.121 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)
12/14/2024	92.5	1.37	115	35.90	239,043.07 gpd

Provide a description of the method of flow measurement or estimate.

Flow measured at v-notch weir.

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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	<5.00 mg/L				1	
2.	Biochemical oxygen demand (BOD ₅)	7.32 mg/L	2.94 mg/L			1	
3.	Chemical oxygen demand (COD)	33.0 mg/L	29.0 mg/L			1	
4.	Total suspended solids (TSS)	57.0 mg/L	44.0 mg/L			1	
5.	Total phosphorus	0.0992 mg/L	0.158 mg/L			1	
6.	Total Kjeldahl nitrogen (TKN)	3.76 mg/L	3.62 mg/L			1	
7.	Total nitrogen (as N)	4.79 mg/L	4.12 mg/L			1	
8.	pH (minimum)	7.30 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 AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Outfall Number DSN 009
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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 <i>(new source/new dischargers only; use codes in instructions)</i>
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Temperature	11.1	N/A			1	
Chromium, Total	<0.0200 mg/L	<0.0200 mg/L			1	
Zinc, Total	<0.0200 mg/L	<0.0200 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 AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Outfall Number DSN 009
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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	12.0 PCU	31.0 mg/L			1	
Nitrate	1.03	0.500 mg/L			1	
Nitrite	<0.100 mg/L	<0.100 mg/L			1	
Aluminum, total	2.27 mg/L	2.31 mg/L			1	
Barium, total	0.0242 mg/L	<0.0200 mg/L			1	
Iron, total	1.63 mg/L	1.93 mg/L			1	
Magnesium, total	15.3 mg/L	3.98 mg/L			1	
Manganese, total	0.0533 mg/L	0.0498 mg/L			1	
Mercury, total	<0.0002 mg/L	<0.0002 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 AL5640090002	NPDES Permit Number AL0024635	Facility name Bellefonte	Outfall Number DSN 009
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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)
12/27/2024	7	1.04	210	31.44	4,189.08

Provide a description of the method of flow measurement or estimate.

Flow was measured at a v-notch weir.

EPA Identification Number AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Outfall Number DSN 010
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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	<5.00 mg/L				1	
2. Biochemical oxygen demand (BOD ₅)	3.06 mg/L	<2.00 mg/L			1	
3. Chemical oxygen demand (COD)	16.0 mg/L	16.0 mg/L			1	
4. Total suspended solids (TSS)	3.00 mg/L	4.00 mg/L			1	
5. Total phosphorus	0.0685 mg/L	0.0731 mg/L			1	
6. Total Kjeldahl nitrogen (TKN)	1.09 mg/L	1.77 mg/L			1	
7. Total nitrogen (as N)	1.09 mg/L	1.77 mg/L			1	
8. pH (minimum)	7.36 s.u.				1	
	pH (maximum)	7.38 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 AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Outfall Number DSN 010
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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 <small>(new source/new dischargers only; use codes in instructions)</small>
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Temperature	12.55	N/A			1	
Chromium, Total	<0.0200 mg/L	<0.0200 mg/L			1	
Zinc, Total	<0.0200 mg/L	<0.0200 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 AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Outfall Number DSN 010
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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 <small>(new source/new dischargers only; use codes in instructions)</small>
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Color	58.0 PCU	51.0 PCU			1	
Nitrate	<0.500 mg/L	<0.500 mg/L			1	
Nitrite	<0.100 mg/L	<0.100 mg/L			1	
Aluminum, total	<0.0200 mg/L	<0.0200 mg/L			1	
Barium, total	<0.0200 mg/L	<0.0200 mg/L			1	
Iron, total	0.132 mg/L	0.127 mg/L			1	
Magnesium, total	2.80 mg/L	2.88 mg/L			1	
Manganese, total	<0.0200 mg/L	<0.0200 mg/L			1	
Mercury, total	<0.0002 mg/L	<0.002 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 AL5640090002	NPDES Permit Number AL0024635	Facility name Bellefonte	Outfall Number DSN 010
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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)
02/25/2025	2.5	0.18	144	-	-

Provide a description of the method of flow measurement or estimate.

Flow is measured at a v-notch weir.

Since DSN 010 has not discharged during this permit renewal cycle, and has only sporadically discharged over the last few permit cycles, ADEM approved a one-time grab sample be collected in the vicinity of the point of discharge. The one-time grab sample was collected on 2/25/2025. The previous rain event occurred on 2/19/2025 for a total rainfall of 0.18 inches. This event ended approximately 144 hours before the one-time grab sample was collected. There is a requirement from ADEM that a storm water discharge derived sample be collected from DSN 010, as soon as practical, for comparison with the one-time grab sample results.

EPA Identification Number AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Outfall Number 011
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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	<5.00 mg/L				1	
2. Biochemical oxygen demand (BOD ₅)	3.44 mg/L	3.46 mg/L			1	
3. Chemical oxygen demand (COD)	26.0 mg/L	26 mg/L			1	
4. Total suspended solids (TSS)	6.00 mg/L	8.00 mg/L			1	
5. Total phosphorus	0.0680 mg/L	0.0729 mg/L			1	
6. Total Kjeldahl nitrogen (TKN)	1.75 mg/L	1.74 mg/L			1	
7. Total nitrogen (as N)	3.15 mg/L	3.14 mg/L			1	
8. pH (minimum)	6.70 s.u.				1	
	6.78 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 AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Outfall Number 011
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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 <small>(new source/new dischargers only; use codes in instructions)</small>
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Temperature	20.95				1	
Total Residual Chlorine					1	
Chromium, Total	<0.0200 mg/L	<0.0200 mg/L			1	
Zinc, Total	<0.0200 mg/L	<0.0200 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 AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Outfall Number 011
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Form Approved 03/05/19
OMB No. 2040-0004

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	46.0 PCU	52.0 PCU			1	
Nitrate	1.40 mg/L	1.40 mg/L			1	
Nitrite	<0.100 mg/L	<0.100 mg/L			1	
Aluminum, total	1.25 mg/L	1.30 mg/L			1	
Barium, total	<0.0200 mg/L	<0.0200 mg/L			1	
Iron, total	1.00 mg/L	0.964 mg/L			1	
Magnesium, total	1.67 mg/L	1.85 mg/L			1	
Manganese, total	0.0222 mg/L	0.0203 mg/L			1	
Mercury, total	<0.0002 mg/L	<0.0002 mg/L			1	
Phosphorus, total	0.0680 mg/L	0.0729 mg/L			1	
Sulfate					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 AL5640090002	NPDES Permit Number AL0024635	Facility name Bellefonte	Outfall Number 011
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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)
09/24/2024	112	3.58	234	137.17	784,574.48 gpd

Provide a description of the method of flow measurement or estimate.

Flow is measured at a rectangular weir.

EPA Identification Number AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Outfall Number 012
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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	<5.00 mg/L				1	
2. Biochemical oxygen demand (BOD ₅)	<2.00 mg/L	3.27 mg/L			1	
3. Chemical oxygen demand (COD)	29.0 mg/L	32.0 mg/L			1	
4. Total suspended solids (TSS)	21.0 mg/L	22.0 mg/L			1	
5. Total phosphorus	0.213 mg/L	0.193 mg/L			1	
6. Total Kjeldahl nitrogen (TKN)	2.12 mg/L	1.37 mg/L			1	
7. Total nitrogen (as N)	2.12 mg/L	1.37 mg/L			1	
8. pH (minimum)	7.26 s.u.				1	
	pH (maximum)	7.68 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 AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Outfall Number 012
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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	10.47	N/A			1	
Chromium, Total	<0.0200 mg/L	<0.0200 mg/L			1	
Zinc, Total	<0.0200 mg/L	<0.0200 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 AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Outfall Number 012
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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	29.0 PCU	40 PCU			1	
Nitrate	<0.500 mg/L	<0.500 mg/L			1	
Nitrite	<0.100 mg/L	<0.100 mg/L			1	
Aluminum, total	3.23 mg/L	3.07 mg/L			1	
Barium, total	0.0290 mg/L	0.0209 mg/L			1	
Iron, total	3.29 mg/L	2.33 mg/L			1	
Magnesium, total	6.73 mg/L	5.74 mg/L			1	
Manganese, total	0.110 mg/L	0.0398 mg/L			1	
Mercury, total	<0.0002 mg/L	<0.0002 mg/L			1	
Phosphorus, total	0.213 mg/L	0.193 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 AL5640090002	NPDES Permit Number AL0024635	Facility name Bellefonte	Outfall Number 012
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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)
01/05/2025	20.5	1.36	147	5,010.98	4,684,683.78

Provide a description of the method of flow measurement or estimate.

Flow measured through v-notch weir.

EPA Identification Number AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Outfall Number DSN 013
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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	<5.00 mg/L				1	
2. Biochemical oxygen demand (BOD ₅)	<2.00 mg/L	<2.00 mg/L			1	
3. Chemical oxygen demand (COD)	13.0 mg/L	15.0 mg/L			1	
4. Total suspended solids (TSS)	12.5 mg/L	9.50 mg/L			1	
5. Total phosphorus	0.0877 mg/L	0.0764 mg/L			1	
6. Total Kjeldahl nitrogen (TKN)	1.18 mg/L	1.01 mg/L			1	
7. Total nitrogen (as N)	1.18 mg/L	1.01 mg/L			1	
8. pH	minimum	6.58 s.u.			1	
	maximum	5.62 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 AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Outfall Number DSN 013
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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	11.0	N/A			1	
Chromium, Total	<0.0200 mg/L	<0.0200 mg/L			1	
Zinc, Total	<0.0200 mg/L	<0.0200 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 AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Outfall Number DSN 013
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Form Approved 03/05/19
OMB No. 2040-0004

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 <small>(new source/new dischargers only; use codes in instructions)</small>
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Color	12.0 PCU	13.0 PCU			1	
Nitrate	<0.500 mg/L	<0.500 mg/L			1	
Nitrite	<0.100 mg/L	<0.100 mg/L			1	
Aluminum, total	0.977 mg/L	0.541 mg/L			1	
Barium, total	0.0371 mg/L	0.0318 mg/L			1	
Iron, total	0.827 mg/L	0.440 mg/L			1	
Magnesium, total	14.7 mg/L	13.3 mg/L			1	
Manganese, total	0.0250 mg/L	<0.0200 mg/L			1	
Mercury, total	<0.0002 mg/L	<0.0002 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 AL5640090002	NPDES Permit Number AL0024635	Facility name Bellefonte	Outfall Number DSN 013
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Form Approved 03/05/19
OMB No. 2040-0004

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)
01/05/2025	20.5	1.36	147	565.51	237,730.51

Provide a description of the method of flow measurement or estimate.
Flow was measured at a 4-foot rectangular weir.

EPA Identification Number AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Outfall Number DSN 014
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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	<5.00 mg/L				1	
2. Biochemical oxygen demand (BOD ₅)	<2.00 mg/L	3.00 mg/L			1	
3. Chemical oxygen demand (COD)	58.0 mg/L	98.0 mg/L			1	
4. Total suspended solids (TSS)	30.0 mg/L	23.0 mg/L			1	
5. Total phosphorus	0.145 mg/L	0.120 mg/L			1	
6. Total Kjeldahl nitrogen (TKN)	<0.100 mg/L	<0.100 mg/L			1	
7. Total nitrogen (as N)	<0.700 mg/L	<0.700 mg/L			1	
8. pH (minimum)	8.39 s.u.				1	
	8.41 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 AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Outfall Number DSN 014
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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	10.1	N/A			1	
Chromium, Total	<0.0200 mg/L	<0.0200 mg/L			1	
Zinc, Total	0.0426 mg/L	<0.0200 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 AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Outfall Number DSN 014
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Form Approved 03/05/19
OMB No. 2040-0004

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	106 PCU	104 PCU			1	
Nitrate	<0.500 mg/L	<0.500 mg/L			1	
Nitrite	<0.100 mg/L	<0.100 mg/L			1	
Aluminum, total	1.17 mg/L	1.12 mg/L			1	
Barium, total	<0.0200 mg/L	<0.0200 mg/L			1	
Iron, total	1.10 mg/L	1.04 mg/L			1	
Magnesium, total	3.42 mg/L	2.99 mg/L			1	
Manganese, total	0.0560 mg/L	0.0464 mg/L			1	
Mercury, total	<0.0002 mg/L	<0.0002 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 AL5640090002	NPDES Permit Number AL0024635	Facility name Bellefonte	Outfall Number DSN 014
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Form Approved 03/05/19
OMB No. 2040-0004

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)
02/08/2025	87.5	3.43	193	533.15	1,880,983.7

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 AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Outfall Number 015
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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	<5.00 mg/L				1	
2. Biochemical oxygen demand (BOD ₅)	<2.00 mg/L	3.16 mg/L			1	
3. Chemical oxygen demand (COD)	15.0 mg/L	36.0 mg/L			1	
4. Total suspended solids (TSS)	21.5 mg/L	11.0 mg/L			1	
5. Total phosphorus	0.0692 mg/L	0.0603 mg/L			1	
6. Total Kjeldahl nitrogen (TKN)	4.68 mg/L	1.69 mg/L			1	
7. Total nitrogen (as N)	8.60 mg/L	4.51 mg/L			1	
8. pH (minimum)	7.60 s.u.				1	
	pH (maximum)	7.64 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 AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Outfall Number 015
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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 <i>(new source/new dischargers only; use codes in instructions)</i>
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Temperature	21.5	N/A			1	
Chromium, Total	<0.0200 mg/L	<0.0200 mg/L			1	
Zinc, Total	<0.0200 mg/L	<0.0200 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 AL5640090002	NPDES Permit Number AL0024635	Facility Name Bellefonte	Outfall Number 015
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Form Approved 03/05/19
OMB No. 2040-0004

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	19.0 PCU	41.0 PCU			1	
Nitrate	3.92 mg/L	2.82 mg/L			1	
Nitrite	<0.100 mg/L	<0.100 mg/L			1	
Aluminum, total	1.92 mg/L	1.14 mg/L			1	
Barium, total	<0.0200 mg/L	<0.0200 mg/L			1	
Iron, total	1.48 mg/L	0.711 mg/L			1	
Magnesium, total	2.67 mg/L	3.18 mg/L			1	
Manganese, total	0.0403 mg/L	0.0241 mg/L			1	
Mercury, total	<0.0002 mg/L	<0.0002 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 ALS640090002	NPDES Permit Number AL0024635	Facility name Bellefonte	Outfall Number 015
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Form Approved 03/05/19
OMB No. 2040-0004

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)
09/24/2024	112	3.58	234	421.11	1,241,006.69

Provide a description of the method of flow measurement or estimate.

Flow measured at weir #4.

Bellefonte
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 Auxiliary, 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 includes bulk diesel fuel tanks which have been permanently closed, sulphuric acid in the control building, and CCW pumping station, and small quantities of various chemicals stored in the Office and Service building. There are non-PCB transformers located in this area.

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 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.

Herbicides are applied 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.

All site activities are conducted in accordance with the IPP Plan to minimize erosion and resulting loss of silt to the waters of the United States.

All storm water drainage flows through the 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 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.

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 trisodium 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).

Construction and permanent non-PCB transformers and non-PCE pieces of equipment used for training purposes are in this area. No chemicals or materials are stored in this area in a manner which exposes them to storm water. Herbicides are applied at various times per year during the growing season to control vegetative growth. 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.

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 areas, Substation, and the Sump Collection Pond (DSN 003G), which provides treatment for low volume wastes for onsite building sumps, is also located in this area.

Non-PCB transformers and 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 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 for unloading 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 trisodium 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.

There are non-PCB transformers located in this area. Herbicides may be applied 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. It contains the alum sludge ponds, de-silting pond (DSN 003C); and non-PCB transformers. All hazardous wastes, oils, greases, and chemicals are stored in containers which completely enclose their contents. Herbicides are applied during the 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.



1101 Market Street, Chattanooga, Tennessee 37402

Sent Via Electronic Submittal

March 3, 2025

Mr. Scott Jackson, Chief (scott.jackson@adem.alabama.gov)
Industrial Section
Water Division
Alabama Department of Environmental Management
Permits and Services Division
P.O. Box 301463
Montgomery, Alabama 36130-1463

Dear Mr. Jackson:

TENNESSEE VALLEY AUTHORITY (TVA) - CLEAN WATER ACT SIGNATURE AUTHORIZATION

As a responsible corporate officer and in accordance with 40 CFR Part 122.22, I hereby delegate authority to the following positions to sign all applications, reports, and other information required for Clean Water Act compliance. These authorized representatives are responsible for the overall operations of the facilities.

Facilities	Positions With Delegated Authority
Bellefonte Nuclear Plant	Site Manager, Manager – Bellefonte Station

If you have questions regarding this matter, please contact Paul Pearman at (423) 280-7048 in Chattanooga, or by email at pjpearman@tva.gov.

Sincerely,



Gregory A. Boerschig
Vice President, Clinch River Project

CP:SMF

cc: J.S. Chardos
P. J. Pearman
E.M. Widener
ECM, ENVrecords

Attachment 3
Tennessee Valley Authority
Bellefonte
NPDES Permit Number AL 0024635
Biocides and Corrosion Inhibitors

Product Name	NALCO H-640	NALCO TOWERBROM 960
Product Class	Microbiocide	Biocide
Chemical Ingredients	1. Terbutylazine: 2-(tert-butylamino)-4-(chloro-6-ethylamino)-5-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 Concentration (PPM)	59 lbs. / MG	83 lbs. / MG
	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 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.

Lynch MSDS Listing

Product	Manufacturer
Conquor 3475	Nalco
H-130 Microbiocide	Nalco
H-640	Nalco
Nalco BT-3000	Nalco
PCL-401	Nalco
pHreeGUARD 2200	Nalco
Pre-Tect 2000	Ondeo - Nalco
Sodium Sulfite	Harcross Chemicals
Sulfuric Acid	Rhodia
Towerbrom 960	Ondeo - Nalco
Trisodium Phosphate	Albright & Wilson



MATERIAL SAFETY DATA SHEET

PRODUCT

CONQUOR® CNQR3475

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : CONQUOR® CNQR3475

APPLICATION : BOILER WATER TREATMENT

COMPANY IDENTIFICATION : Nalco Company
1601 W. Diehl Road
Naperville, Illinois
60563-1198

EMERGENCY TELEPHONE NUMBER(S) : (800) 424-9300 (24 Hours) CHEMTREC

NFPA 704M/HMIS RATING
HEALTH : 2 / 2 FLAMMABILITY : 1 / 1 INSTABILITY : 0 / 0 OTHER :
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

2. COMPOSITION/INFORMATION ON INGREDIENTS

Our hazard evaluation has identified the following chemical substance(s) as hazardous. Consult Section 15 for the nature of the hazard(s).

Hazardous Substance(s)	CAS NO	% (w/w)
Diethyl-Hydroxyl-Amine	3710-84-7	5.0 - 10.0
Hydroquinone	123-31-9	1.0 - 5.0

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING

Irritating to eyes. May cause sensitization by skin contact.
Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water.
Wear suitable protective clothing.
May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions. May evolve ammonia (NH4) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :
Eye, Skin

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :
Can cause moderate irritation.



MATERIAL SAFETY DATA SHEET

PRODUCT

CONQUOR® CNQR3475

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

SKIN CONTACT :

Can cause moderate irritation. Repeated or prolonged contact may cause skin sensitization.

INGESTION :

Not a likely route of exposure. No adverse effects expected.

INHALATION :

Not a likely route of exposure. Aerosols or product mist may irritate the upper respiratory tract.

SYMPTOMS OF EXPOSURE :

Acute :

A review of available data does not identify any symptoms from exposure not previously mentioned.

Chronic :

A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS :

A review of available data does not identify any worsening of existing conditions.

HUMAN HEALTH HAZARDS - CHRONIC :

Carcinogenic cat. 3

Contains a suspected mutagen.

4. FIRST AID MEASURES

EYE CONTACT :

Immediately flush eye with water for at least 15 minutes while holding eyelids open. If irritation persists, repeat flushing. Get immediate medical attention.

SKIN CONTACT :

Immediately flush with plenty of water for at least 15 minutes. If symptoms persist, call a physician.

INGESTION :

Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink. Get medical attention.

INHALATION :

Remove to fresh air, treat symptomatically. Get medical attention.

NOTE TO PHYSICIAN :

Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

5. FIRE FIGHTING MEASURES

FLASH POINT :

Will not burn: inorganic or water-based product

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EXTINGUISHING MEDIA :

This product would not be expected to burn unless all the water is boiled away. The remaining organics may be ignitable. Keep containers cool by spraying with water. Use extinguishing media appropriate for surrounding fire.

FIRE AND EXPLOSION HAZARD :

May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions. May evolve ammonia (NH4) under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :

In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES**PERSONAL PRECAUTIONS :**

Restrict access to area as appropriate until clean-up operations are complete. Ensure clean-up is conducted by trained personnel only. Ventilate spill area if possible. Do not touch spilled material. Stop or reduce any leaks if it is safe to do so. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Notify appropriate government, occupational health and safety and environmental authorities.

METHODS FOR CLEANING UP :

SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. **LARGE SPILLS:** Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Wash site of spillage thoroughly with water. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :

This product is toxic to fish. It should not be directly discharged into lakes, ponds, streams, waterways or public water supplies.

7. HANDLING AND STORAGE**HANDLING :**

Avoid eye and skin contact. Do not take internally. Do not get in eyes, on skin, on clothing. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labelled. Keep the containers closed when not in use. Use with adequate ventilation.

STORAGE CONDITIONS :

Protect product from freezing. Store the containers tightly closed. Store in suitable labelled containers.

SUITABLE CONSTRUCTION MATERIAL :

HDPE (high density polyethylene), Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.

UNSUITABLE CONSTRUCTION MATERIAL :

Copper, Carbon steel

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION**OCCUPATIONAL EXPOSURE LIMITS :**

Exposure guidelines have not been established for this product. Available exposure limits for the substance(s) are shown below.

ACGIH/TLV :

Substance(s)

Hydroquinone TWA: 2.mg/m3

OSHA/PEL :

Substance(s)

Hydroquinone TWA: 2 mg/m3

ENGINEERING MEASURES :

General ventilation is recommended.

RESPIRATORY PROTECTION :

Respiratory protection is not normally needed.

HAND PROTECTION :

Neoprene gloves, Nitrile gloves, Butyl gloves, PVC gloves

SKIN PROTECTION :

Wear standard protective clothing.

EYE PROTECTION :

Wear chemical splash goggles.

HYGIENE RECOMMENDATIONS :

If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse. Keep an eye wash fountain available. Keep a safety shower available.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid
APPEARANCE	Tan Brown
ODOR	Amine
SPECIFIC GRAVITY	0.955 - 1.005 @ 77 °F / 25 °C
DENSITY	7.96 - 8.37 lb/gal
SOLUBILITY IN WATER	Complete
pH (100 %)	8.0 - 8.7
FREEZING POINT	25 °F / -3.9 °C
VAPOR PRESSURE	Same as water



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VOC CONTENT 8.5 % EPA Method 24

Note: These physical properties are typical values for this product and are subject to change.

10. STABILITY AND REACTIVITY

STABILITY :

Stable under normal conditions.

HAZARDOUS POLYMERIZATION :

Hazardous polymerization will not occur.

CONDITIONS TO AVOID :

Freezing temperatures. Prolonged exposure to air Direct sunlight

MATERIALS TO AVOID :

Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors. Contact with strong acids (e.g. sulfuric, phosphoric, nitric, hydrochloric, chromic, sulfonic) may generate heat, splattering or boiling and toxic vapors.

HAZARDOUS DECOMPOSITION PRODUCTS :

Under fire conditions: Oxides of carbon, Oxides of nitrogen, May evolve ammonia (NH₄) under fire conditions.

11. TOXICOLOGICAL INFORMATION

No toxicity studies have been conducted on this product.

SENSITIZATION :

Repeated or prolonged contact may cause sensitization in some individuals.

CARCINOGENICITY :

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS :

The following results are for the product.

ACUTE FISH RESULTS :

Species	Exposure	LC50	Test Descriptor
Fathead Minnow	96 hrs	4.6 mg/l	Product

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ACUTE INVERTEBRATE RESULTS :

Species	Exposure	LC50	EC50	Test Descriptor
Daphnia magna	48 hrs	15.4 mg/l		Product

CHRONIC FISH RESULTS :

Species	Exposure	NOEC / LOEC	End Point	Test Descriptor
Fathead Minnow	7 Days	0.63 mg/l / 1.25 mg/l	Growth	Product

CHRONIC INVERTEBRATE RESULTS :

Species	Test Type	NOEC / LOEC	End Point	Test Descriptor
Ceriodaphnia dubia	3 Brood	10.0 mg/l / 20.0 mg/l	Reproduction	Product

PERSISTENCY AND DEGRADATION :

Chemical Oxygen Demand (COD) : 300,000 mg/l

Biological Oxygen Demand (BOD) :

Incubation Period	Value	Test Descriptor
5 d	59,800 mg/l	Product

The organic portion of this preparation is expected to be readily biodegradable.

MOBILITY :

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models. If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	Water	Soil/Sediment
<5%	30 - 50%	50 - 70%

The portion in water is expected to be soluble or dispersible.

BIOACCUMULATION POTENTIAL

This preparation or material is not expected to bioaccumulate.

If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

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As a non-hazardous waste, it is not subject to federal regulation. Consult state or local regulation for any additional handling, treatment or disposal requirements. For disposal, contact a properly licensed waste treatment, storage, disposal or recycling facility.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

The presence of an RQ component (Reportable Quantity for U.S. EPA and DOT) in this product causes it to be regulated with an additional description of RQ for road, or as a class 9 for road and air, ONLY when the net weight in the package exceeds the calculated RQ for the product.

LAND TRANSPORT :

Proper Shipping Name :	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Technical Name(s) :	HYDROQUINONE
UN/ID No :	UN 3082
Hazard Class - Primary :	9
Packing Group :	III
Flash Point :	Will not burn: inorganic or water-based product
DOT Reportable Quantity (per package) :	2,800 lbs
DOT RQ Component :	HYDROQUINONE

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name :	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Technical Name(s) :	HYDROQUINONE
UN/ID No :	UN 3082
Hazard Class - Primary :	9
Packing Group :	III
IATA Cargo Packing Instructions :	
IATA Cargo Aircraft Limit :	(Max net quantity per package)

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name :	PRODUCT IS NOT REGULATED DURING TRANSPORTATION
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15. REGULATORY INFORMATION

NATIONAL REGULATIONS, USA :



MATERIAL SAFETY DATA SHEET

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OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :

Based on our hazard evaluation, the following substance(s) in this product is/are hazardous and the reason(s) is/are shown below.

Diethyl-Hydroxyl-Amine : Irritant, Combustible.
Hydroquinone : Dermal Sensitizer, Corrosive to eyes

CERCLA/SUPERFUND, 40 CFR 117, 302 :

This product contains the following Reportable Quantity (RQ) Substance. Also listed is the RQ for the product. If a reportable quantity of product is released, it requires notification to the NATIONAL RESPONSE CENTER, WASHINGTON, D.C. (1-800-424-8802).

<u>RQ Substance</u>	<u>RQ</u>
Hydroquinone	2,820 lbs

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :

This product contains the following substance(s) which is listed in Appendix A and B as an Extremely Hazardous Substance. Listed below are the statutory Threshold Planning Quantity (TPQ) for the substance(s) and the Reportable Quantity (RQ) of the product.

<u>Extremely Hazardous Substance</u>	<u>TPQ</u>	<u>RQ</u>
Hydroquinone	10,000 lbs	100 lbs

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :

Our hazard evaluation has found this product to be hazardous. The product should be reported under the following indicated EPA hazard categories:

X	Immediate (Acute) Health Hazard
X	Delayed (Chronic) Health Hazard
-	Fire Hazard
-	Sudden Release of Pressure Hazard
-	Reactive Hazard

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :

This product contains the following substance(s), (with CAS # and % range) which appear(s) on the List of Toxic Chemicals

<u>Hazardous Substance(s)</u>	<u>CAS NO</u>	<u>% (w/w)</u>
Hydroquinone	123-31-9	1.0 - 5.0

TOXIC SUBSTANCES CONTROL ACT (TSCA) :

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)



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FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311 :

None of the substances are specifically listed in the regulation.

CLEAN AIR ACT, Sec. 111 (40 CFR 60, Volatile Organic Compounds), Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :

This product contains the following substances listed in the regulation:

Substance(s)	Citations
• Hydroquinone	Sec. 111, Sec. 112

CALIFORNIA PROPOSITION 65 :

This product does not contain substances which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS :

This product contains the following substances listed in the regulation:

Hydroquinone

STATE RIGHT TO KNOW LAWS :

The following substances are disclosed for compliance with State Right to Know Laws:

Hydroquinone

123-31-9

NATIONAL REGULATIONS, CANADA :

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION :

D2B - Materials Causing Other Toxic Effects - Toxic Material

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :

The substances in this preparation are listed on the Domestic Substances List (DSL), are exempt, or have been reported in accordance with the New Substances Notification Regulations.

INTERNATIONAL CHEMICAL CONTROL LAWS

AUSTRALIA

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

CHINA

All substances in this product comply with the Chemical Control Law and are listed on the Inventory of Existing Chemical Substances China (IECSC).



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EUROPE

The substances in this preparation have been reviewed for compliance with the EINECS or ELINCS inventories.

JAPAN

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Ministry of International Trade & Industry List (MITI).

KOREA

All substances in this product comply with the Toxic Chemical Control Law (TCCL) and are listed on the Existing Chemicals List (ECL)

THE PHILIPPINES

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippine Inventory of Chemicals & Chemical Substances (PICCS).

16. OTHER INFORMATION

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

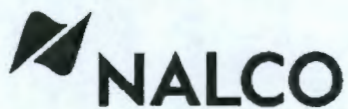
IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.



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Ariel Insight# (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Prepared By : Product Safety Department
Date issued : 03/29/2005
Version Number : 1.9



MATERIAL SAFETY DATA SHEET

PRODUCT

H-130 MICROBIOCIDE

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : H-130 MICROBIOCIDE

APPLICATION : BIOCIDETWIN-CHAIN QUATERNARY AMMONIUM COMPOUND CONCENTRATE

COMPANY IDENTIFICATION : Nalco Company
1601 W. Diehl Road
Naperville, Illinois
60563-1198

EMERGENCY TELEPHONE NUMBER(S) : (800) 424-9300 (24 Hours) CHEMTREC

NFPA 704M/HMIS RATING

HEALTH : 3/3 FLAMMABILITY : 2/2 INSTABILITY : 0/0 OTHER :
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

2. COMPOSITION/INFORMATION ON INGREDIENTS

Our hazard evaluation has identified the following chemical substance(s) as hazardous. Consult Section 15 for the nature of the hazard(s).

Hazardous Substance(s)	CAS NO	% (w/w)
Didecyl-Dimethyl-Ammonium chloride	7173-51-5	30 - 60
Ethanol	64-17-5	10 - 30

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER

Combustible. May cause tissue damage. Toxic to aquatic organisms. Corrosive. Causes severe eye and skin damage. Do not get in eyes, on skin or on clothing. Wear goggles or face shield and rubber gloves when handling. Harmful or fatal if swallowed. Avoid contamination of food. KEEP OUT OF REACH OF CHILDREN. Corrosive to eyes and skin. Do not get in eyes, on skin or clothing. May be fatal if swallowed or inhaled. Do not swallow. Do not breathe vapour or mist.

Do not get in eyes, on skin, on clothing. Do not take internally. Keep away from heat. Keep away from sources of ignition - No smoking. Use with adequate ventilation. Keep container tightly closed and in a well-ventilated place. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water. Do not get in eyes, on skin or on clothing. Wear goggles or face shield and rubber gloves when handling. Harmful if inhaled. Avoid breathing vapor. Remove contaminated clothing and wash before reuse. Harmful or fatal if swallowed. Avoid contamination of food.

Wear chemical resistant apron, chemical splash goggles, impervious gloves and boots.

Combustible Liquid; may form combustible mixtures at or above the flash point. Empty product containers may contain product residue. Do not pressurize, cut, heat, weld, or expose containers to flame or other sources of ignition. May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions. May evolve HCl under fire conditions. May evolve ammonia (NH4) under fire conditions.

Nalco Company 1601 W. Diehl Road • Naperville, Illinois 60563-1198
(630)305-1000

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MATERIAL SAFETY DATA SHEET

PRODUCT

H-130 MICROBIOCIDE

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

PRIMARY ROUTES OF EXPOSURE :

Eye, Skin

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :

May cause severe irritation or tissue damage depending on the length of exposure and the type of first aid administered.

SKIN CONTACT :

May cause severe irritation or tissue damage depending on the length of exposure and the type of first aid administered.

INGESTION :

May cause burns to mouth and gastro-intestinal tract.

INHALATION :

Repeated or prolonged exposure may irritate the respiratory tract. Can cause central nervous system depression.

SYMPTOMS OF EXPOSURE :

Acute :

A review of available data does not identify any symptoms from exposure not previously mentioned.

Chronic :

A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS :

A review of available data does not identify any worsening of existing conditions.

4. FIRST AID MEASURES

First Aid: In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. Remove and wash contaminated clothing before reuse.

If swallowed, drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol. Call a physician immediately.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsions may be needed.

NOTE TO PHYSICIAN :

Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

5. FIRE FIGHTING MEASURES

FLASH POINT : 109 °F / 43 °C (SETAFLASH)



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EXTINGUISHING MEDIA :

Foam, Carbon dioxide, Dry powder, Other extinguishing agent suitable for Class B fires. For large fires, use water spray or fog, thoroughly drenching the burning material.

Water mist may be used to cool closed containers.

FIRE AND EXPLOSION HAZARD :

Combustible Liquid; may form combustible mixtures at or above the flash point. Empty product containers may contain product residue. Do not pressurize, cut, heat, weld, or expose containers to flame or other sources of ignition. May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions. May evolve HCl under fire conditions. May evolve ammonia (NH₄) under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :

In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :

Notify appropriate government, occupational health and safety and environmental authorities. Restrict access to area as appropriate until clean-up operations are complete. Ensure clean-up is conducted by trained personnel only. Ventilate spill area if possible. Do not touch spilled material. Eliminate ignition sources. Stop or reduce any leaks if it is safe to do so. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection).

METHODS FOR CLEANING UP :

SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. **LARGE SPILLS:** Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Wash site of spillage thoroughly with water. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :

This product is toxic to fish and other water organisms. Do not discharge directly into lakes, ponds, streams, waterways or public water supplies.

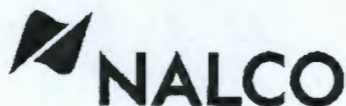
7. HANDLING AND STORAGE

HANDLING :

Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Avoid release of vapors or mists into workplace air. Keep the containers closed when not in use. Do not use in locations where vapor is likely to travel to welding flames or arcs or to other hot surfaces. Vapors are much heavier than air, this can result in uneven distribution. Have emergency equipment (for fires, spills, leaks, etc.) readily available.

STORAGE CONDITIONS :

Store away from heat and sources of ignition. Connections must be grounded to avoid electrical charges. Store the containers tightly closed. Store separately from oxidizers. Store in suitable labelled containers.



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H-130 MICROBIOCIDE

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :

Exposure guidelines have not been established for this product. Available exposure limits for the substance(s) are shown below.

ACGIH/TLV :

Substance(s)

Ethanol

TWA: 1,000 ppm , 1,880 mg/m3

OSHA/PEL :

Substance(s)

Ethanol

TWA: 1,000 ppm , 1,900 mg/m3

ENGINEERING MEASURES :

Use general ventilation with local exhaust ventilation.

RESPIRATORY PROTECTION :

If significant mists, vapors or aerosols are generated an approved respirator is recommended. An organic vapor cartridge with dust/mist prefilter may be used. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

HAND PROTECTION :

Neoprene gloves, Viton# gloves

SKIN PROTECTION :

Wear impervious apron and boots. A full slicker suit is recommended if gross exposure is possible.

EYE PROTECTION :

Wear chemical splash goggles.

HYGIENE RECOMMENDATIONS :

Eye wash station and safety shower are necessary. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse. Use good work and personal hygiene practices to avoid exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE Liquid

APPEARANCE Light yellow

ODOR Alcoholic

SPECIFIC GRAVITY 0.93 @ 77 °F / 25 °C

DENSITY 7.7 lb/gal



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SOLUBILITY IN WATER	Complete
pH (1 %)	7.0 - 8.0
VISCOSITY	< 100 cps @ 77 °F / 25 °C
FREEZING POINT	12 °F /
VAPOR PRESSURE	30 mm Hg @ 77 °F / 25 °C
VOC CONTENT	10 % EPA Method 24

Note: These physical properties are typical values for this product and are subject to change.

10. STABILITY AND REACTIVITY

STABILITY :

Stable under normal conditions.

HAZARDOUS POLYMERIZATION :

Hazardous polymerization will not occur.

CONDITIONS TO AVOID :

Heat and sources of ignition including static discharges.

MATERIALS TO AVOID :

Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors. Contact with reducing agents (e.g. hydrazine, sulfites, sulfide, aluminum or magnesium dust) may generate heat, fires, explosions and toxic vapors.

HAZARDOUS DECOMPOSITION PRODUCTS :

Under fire conditions: Oxides of carbon, Oxides of nitrogen, HCl

11. TOXICOLOGICAL INFORMATION

The following results are for the product.

ACUTE ORAL TOXICITY :

Species	LD50	Test Descriptor
Rat	645 mg/kg	Product

ACUTE DERMAL TOXICITY :

Species	LD50	Test Descriptor
Rabbit	> 4 g/kg	Product

SENSITIZATION :

This product is not expected to be a sensitizer.

CARCINOGENICITY :

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

**MATERIAL SAFETY DATA SHEET**

PRODUCT

H-130 MICROBIOCIDE

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS :

The following results are for the product.

ACUTE FISH RESULTS :

Species	Exposure	LC50	Test Descriptor
Rainbow Trout	96 hrs	2.2 mg/l	
Bluegill Sunfish	96 hrs	0.92 mg/l	

Rating : Very toxic

ACUTE INVERTEBRATE RESULTS :

Species	Exposure	LC50	EC50	Test Descriptor
Daphnia magna	48 hrs	0.19 mg/l		
Mysid Shrimp (Mysidopsis bahia)	96 hrs	0.14 mg/l		

Rating : Very toxic

If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Before disposal, it should be determined if the waste meets the criteria of a hazardous waste.

Hazardous Waste: D001

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

LAND TRANSPORT :

Proper Shipping Name :	DISINFECTANTS, LIQUID, CORROSIVE, N.O.S.
Technical Name(s) :	DIDECYLDIMETHYLAMMONIUM CHLORIDE
UN/ID No :	UN 1903
Hazard Class - Primary :	8
Packing Group :	II

**MATERIAL SAFETY DATA SHEET****PRODUCT****H-130 MICROBIOCIDE****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC**

Flash Point : 43 °C / 109 °F

DOT Reportable Quantity (per package) : 1,000 lbs
DOT RQ Component : ETHANOL**AIR TRANSPORT (ICAO/IATA) :**Proper Shipping Name : CORROSIVE LIQUID, FLAMMABLE, N.O.S.
Technical Name(s) : DIDECYLDIMETHYLAMMONIUM CHLORIDE, ETHANOL
UN/ID No : UN 2920
Hazard Class - Primary : 8
Hazard Class - Secondary : 3
Packing Group : II
IATA Cargo Packing Instructions :
IATA Cargo Aircraft Limit : (Max net quantity per package)**MARINE TRANSPORT (IMDG/IMO) :**Proper Shipping Name : CORROSIVE LIQUID, FLAMMABLE, N.O.S.
Technical Name(s) : DIDECYLDIMETHYLAMMONIUM CHLORIDE, ETHANOL
UN/ID No : UN 2920
Hazard Class - Primary : 8
Hazard Class - Secondary : 3
Packing Group : II**15. REGULATORY INFORMATION****NATIONAL REGULATIONS, USA :****OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :**

Based on our hazard evaluation, the following substance(s) in this product is/are hazardous and the reason(s) is/are shown below.

Didecyl-Dimethyl-Ammonium chloride : Corrosive
Ethanol : Flammable**CERCLA/SUPERFUND, 40 CFR 117, 302 :**

This product contains the following Reportable Quantity (RQ) Substance. Also listed is the RQ for the product. If a reportable quantity of product is released, it requires notification to the NATIONAL RESPONSE CENTER, WASHINGTON, D.C. (1-800-424-8802).

<u>RQ Substance</u>	<u>RQ</u>
Ethanol	1,000 lbs
	10,000 lbs

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :**Nalco Company 1601 W. Diehl Road - Naperville, Illinois 60563-1198****(630)305-1000****7 / 10**



MATERIAL SAFETY DATA SHEET

PRODUCT

H-130 MICROBIOCIDE

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :

This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :

Our hazard evaluation has found this product to be hazardous. The product should be reported under the following indicated EPA hazard categories:

- X Immediate (Acute) Health Hazard
- Delayed (Chronic) Health Hazard
- X Fire Hazard
- Sudden Release of Pressure Hazard
- Reactive Hazard

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :

This product does not contain substances on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA) :

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

FEDERAL INSECTICIDE, FUNGICIDE AND RODENTICIDE ACT (FIFRA) :

EPA Reg. No. 1706-186

In all cases follow instructions on the product label.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311 :

None of the substances are specifically listed in the regulation.

CLEAN AIR ACT, Sec. 111 (40 CFR 60, Volatile Organic Compounds), Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :

This product contains the following substances listed in the regulation:

Substance(s)	Citations
• Ethanol	Sec. 111

CALIFORNIA PROPOSITION 65 :

This product does not contain substances which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS :

None of the substances are specifically listed in the regulation.

STATE RIGHT TO KNOW LAWS :

This product is a registered biocide and is exempt from State Right to Know Labelling Laws.



MATERIAL SAFETY DATA SHEET

PRODUCT

H-130 MICROBIOCIDE

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

NATIONAL REGULATIONS, CANADA :

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION :

Pesticide controlled products are not regulated under WHMIS.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :

The substances in this preparation are listed on the Domestic Substances List (DSL), are exempt, or have been reported in accordance with the New Substances Notification Regulations.

16. OTHER INFORMATION

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight# (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.



MATERIAL SAFETY DATA SHEET

PRODUCT

H-130 MICROBIOCIDE

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS# CD-ROM Version),
Micromedex, Inc., Englewood, CO.

Prepared By : Product Safety Department
Date issued : 02/28/2004
Version Number : 1.6



MATERIAL SAFETY DATA SHEET

PRODUCT

H-640

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : H-640

APPLICATION : BIOCIDES

COMPANY IDENTIFICATION :
Nalco Company
1601 W. Diehl Road
Naperville, Illinois
60563-1198

EMERGENCY TELEPHONE NUMBER(S) : (800) 424-9300 (24 Hours) CHEMTREC

NFPA 704M/HMIS RATING

HEALTH : 0/1 FLAMMABILITY : 1/1 INSTABILITY : 0/0 OTHER :

0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

2. COMPOSITION/INFORMATION ON INGREDIENTS

Our hazard evaluation has identified the following chemical substance(s) as hazardous.

Hazardous Substance(s)	CAS NO	% (w/w)
Ethylene Glycol	107-21-1	1.0 - 5.0

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING

Contains ethylene glycol. Toxic to aquatic organisms. Large quantities may cause kidney damage. May cause irritation with prolonged contact.

Do not get in eyes, on skin, on clothing. Do not take internally. Wear suitable protective clothing. Keep container tightly closed. Flush affected area with water.

May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) and sulfur (SOx) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :

Eye, Skin

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :

May cause irritation with prolonged contact.

SKIN CONTACT :

May cause irritation with prolonged contact.



MATERIAL SAFETY DATA SHEET

PRODUCT

H-640

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

INGESTION :

Not a likely route of exposure. Excessive exposure may cause central nervous system effects, nausea, vomiting, anesthetic or narcotic effects. Large quantities may cause kidney damage.

INHALATION :

Not a likely route of exposure. Repeated or prolonged exposure may irritate the respiratory tract.

SYMPTOMS OF EXPOSURE :

Acute :

A review of available data does not identify any symptoms from exposure not previously mentioned.

Chronic :

A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS :

A review of available data does not identify any worsening of existing conditions.

4. FIRST AID MEASURES

EYE CONTACT :

Flush affected area with water. If symptoms develop, seek medical advice.

SKIN CONTACT :

Flush affected area with water. For a large splash, flood body under a shower. If symptoms develop, seek medical advice.

INGESTION :

Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink. If symptoms develop, seek medical advice.

INHALATION :

Remove to fresh air, treat symptomatically. If symptoms develop, seek medical advice.

NOTE TO PHYSICIAN :

Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA :

This product would not be expected to burn unless all the water is boiled away. The remaining organics may be ignitable. Use extinguishing media appropriate for surrounding fire.

FIRE AND EXPLOSION HAZARD :

May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) and sulfur (SOx) under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :

In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.



MATERIAL SAFETY DATA SHEET

PRODUCT

H-640

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :

Restrict access to area as appropriate until clean-up operations are complete. Notify appropriate government, occupational health and safety and environmental authorities. Stop or reduce any leaks if it is safe to do so. Do not touch spilled material. Ventilate spill area if possible. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection).

METHODS FOR CLEANING UP :

SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. **LARGE SPILLS:** Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :

This product is toxic to fish. It should not be directly discharged into lakes, ponds, streams, waterways or public water supplies.

7. HANDLING AND STORAGE

HANDLING :

Avoid eye and skin contact. Do not take internally. Ensure all containers are labelled. Keep the containers closed when not in use.

STORAGE CONDITIONS :

Store the containers tightly closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :

Exposure guidelines have not been established for this product. Available exposure limits for the substance(s) are shown below.

ACGIH/TLV :

Substance(s)

Ethylene Glycol

CEILING: 100 mg/m³

OSHA/PEL :

Substance(s)

Ethylene Glycol

CEILING: 50 ppm , 125 mg/m³

ENGINEERING MEASURES :

General ventilation is recommended. Local exhaust ventilation may be necessary when dusts or mists are generated.

**MATERIAL SAFETY DATA SHEET****PRODUCT****H-640****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC****RESPIRATORY PROTECTION :**

Respiratory protection is not normally needed. If significant mists, vapors or aerosols are generated an approved respirator is recommended. An organic vapor cartridge with dust/mist prefilter may be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

HAND PROTECTION :

Neoprene gloves, Nitrile gloves, Butyl gloves, PVC gloves

SKIN PROTECTION :

Wear standard protective clothing.

EYE PROTECTION :

Wear chemical splash goggles.

HYGIENE RECOMMENDATIONS :

Keep an eye wash fountain available. Keep a safety shower available. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Paste
APPEARANCE	Light brown
ODOR	Slight
SPECIFIC GRAVITY	1.05 - 1.15
DENSITY	8.7 - 9.5 lb/gal
SOLUBILITY IN WATER	Miscible
pH (1 %)	8.0
FREEZING POINT	28 °F / -2 °C

Note: These physical properties are typical values for this product and are subject to change.

10. STABILITY AND REACTIVITY**STABILITY :**

Stable under normal conditions.

HAZARDOUS POLYMERIZATION :

Hazardous polymerization will not occur.

CONDITIONS TO AVOID :

High temperatures



MATERIAL SAFETY DATA SHEET

PRODUCT

H-640

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(800) 424-9300 (24 Hours) CHEMTREC

MATERIALS TO AVOID :

Contact with strong acids (e.g. sulfuric, phosphoric, nitric, hydrochloric, chromic, sulfonic) may generate heat, splattering or boiling and toxic vapors. Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.

HAZARDOUS DECOMPOSITION PRODUCTS :

Under fire conditions: Oxides of carbon, Oxides of nitrogen, Oxides of sulfur

11. TOXICOLOGICAL INFORMATION

The following results are for the product.

ACUTE ORAL TOXICITY :

Species	LD50	Test Descriptor
Rat	1,350 mg/kg	Product

ACUTE DERMAL TOXICITY :

Species	LD50	Test Descriptor
Rabbit	> 4,400 mg/kg	Product

CARCINOGENICITY :

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS :

No toxicity studies have been conducted on this product.

If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Before disposal, it should be determined if the waste meets the criteria of a hazardous waste.

Hazardous wastes must be transported by a licensed hazardous waste transporter and disposed of or treated in a properly licensed hazardous waste treatment, storage, disposal or recycling facility. Consult local, state, and federal regulations for specific requirements.



MATERIAL SAFETY DATA SHEET

PRODUCT

H-640

EMERGENCY TELEPHONE NUMBER(S)
(800) 424-9300 (24 Hours) CHEMTREC

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

LAND TRANSPORT :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

15. REGULATORY INFORMATION

NATIONAL REGULATIONS, USA :

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :
Based on our hazard evaluation, none of the substances in this product are hazardous.

Ethylene Glycol : Target Organ Effect - Kidney

CERCLA/SUPERFUND, 40 CFR 117, 302 :
This product contains the following Reportable Quantity (RQ) Substance. Also listed is the RQ for the product. If a reportable quantity of product is released, it requires notification to the NATIONAL RESPONSE CENTER, WASHINGTON, D.C. (1-800-424-8802).

<u>RQ Substance</u>	<u>RQ</u>
Ethylene Glycol	100,000 lbs

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :
This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :
Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

- Immediate (Acute) Health Hazard



MATERIAL SAFETY DATA SHEET

PRODUCT
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EMERGENCY TELEPHONE NUMBER(S)
(800) 424-9300 (24 Hours) CHEMTREC

- X Delayed (Chronic) Health Hazard
- Fire Hazard
- Sudden Release of Pressure Hazard
- Reactive Hazard

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :

This product contains the following substance(s), (with CAS # and % range) which appear(s) on the List of Toxic Chemicals

<u>Hazardous Substance(s)</u>	<u>CAS NO</u>	<u>% (w/w)</u>
Ethylene Glycol	107-21-1	1.0 - 5.0

TOXIC SUBSTANCES CONTROL ACT (TSCA) :

This product is exempted under TSCA and regulated under FIFRA. The inerts are on the Inventory List.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311 :

None of the substances are specifically listed in the regulation.

CLEAN AIR ACT, Sec. 111 (40 CFR 60, Volatile Organic Compounds), Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :

This product contains the following substances listed in the regulation:

<u>Substance(s)</u>	<u>Citations</u>
• Ethylene Glycol	Sec. 111

CALIFORNIA PROPOSITION 65 :

This product does not contain substances which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS :

None of the substances are specifically listed in the regulation.

STATE RIGHT TO KNOW LAWS :

The following substances are disclosed for compliance with State Right to Know Laws:

Ethylene Glycol	107-21-1
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NATIONAL REGULATIONS, CANADA :

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.



MATERIAL SAFETY DATA SHEET

PRODUCT

H-640

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

WHMIS CLASSIFICATION :

D2B - Materials Causing Other Toxic Effects - Toxic Material

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :

The substances in this preparation are listed on the Domestic Substances List (DSL), are exempt, or have been reported in accordance with the New Substances Notification Regulations.

16. OTHER INFORMATION

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight# (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.



MATERIAL SAFETY DATA SHEET

PRODUCT

H-640

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

Prepared By : Product Safety Department

Date issued : 02/28/2004

Version Number : 1.2



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO BT-3000

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : **NALCO BT-3000**

APPLICATION : **BOILER WATER TREATMENT**

COMPANY IDENTIFICATION : **Nalco Company
1601 W. Diehl Road
Naperville, Illinois
60563-1198**

EMERGENCY TELEPHONE NUMBER(S) : **(800) 424-9300 (24 Hours) CHEMTREC**

NFPA 704M/HMIS RATING

HEALTH: 3/3 FLAMMABILITY: 0/0 INSTABILITY: 0/0 OTHER:

0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

2. COMPOSITION/INFORMATION ON INGREDIENTS

Our hazard evaluation has identified the following chemical substance(s) as hazardous. Consult Section 15 for the nature of the hazard(s).

Hazardous Substance(s)	CAS NO	% (w/w)
Sodium Hydroxide	1310-73-2	1.0 - 5.0
Sodium Tripolyphosphate	7758-29-4	1.0 - 5.0

3. HAZARDS IDENTIFICATION

****EMERGENCY OVERVIEW****

DANGER

Corrosive. May cause tissue damage.

Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Keep container tightly closed and in a well-ventilated place. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water. Protect product from freezing.

Wear a face shield. Wear chemical resistant apron, chemical splash goggles, impervious gloves and boots.

Not flammable or combustible. May evolve oxides of phosphorus (POx) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :

Eye, Skin

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :

Corrosive. Will cause eye burns and permanent tissue damage.



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO BT-3000

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

SKIN CONTACT :

May cause severe irritation or tissue damage depending on the length of exposure and the type of first aid administered.

INGESTION :

Not a likely route of exposure. Corrosive; causes chemical burns to the mouth, throat and stomach.

INHALATION :

Not a likely route of exposure. Irritating, in high concentrations, to the eyes, nose, throat and lungs.

SYMPTOMS OF EXPOSURE :

Acute :

A review of available data does not identify any symptoms from exposure not previously mentioned.

Chronic :

A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS :

A review of available data does not identify any worsening of existing conditions.

4. FIRST AID MEASURES

EYE CONTACT :

PROMPT ACTION IS ESSENTIAL IN CASE OF CONTACT. Immediately flush eye with water for at least 15 minutes while holding eyelids open. Get immediate medical attention.

SKIN CONTACT :

Immediately flush with plenty of water for at least 15 minutes. For a large splash, flood body under a shower. Remove contaminated clothing. Wash off affected area immediately with plenty of water. Get immediate medical attention. Contaminated clothing, shoes, and leather goods must be discarded or cleaned before re-use.

INGESTION :

DO NOT INDUCE VOMITING. If conscious, washout mouth and give water to drink. Get immediate medical attention.

INHALATION :

Remove to fresh air, treat symptomatically. Get medical attention.

NOTE TO PHYSICIAN :

Probable mucosal damage may contraindicate the use of gastric lavage. Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

5. FIRE FIGHTING MEASURES

FLASH POINT : > 200 °F / > 93 °C (PMCC)

EXTINGUISHING MEDIA :

Not expected to burn. Use extinguishing media appropriate for surrounding fire.



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO BT-3000

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

FIRE AND EXPLOSION HAZARD :

Not flammable or combustible. May evolve oxides of phosphorus (POx) under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :

In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :

Restrict access to area as appropriate until clean-up operations are complete. Ensure clean-up is conducted by trained personnel only. Ventilate spill area if possible. Do not touch spilled material. Stop or reduce any leaks if it is safe to do so. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Notify appropriate government, occupational health and safety and environmental authorities.

METHODS FOR CLEANING UP :

SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. **LARGE SPILLS:** Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Wash site of spillage thoroughly with water. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :

Do not contaminate surface water.

7. HANDLING AND STORAGE

HANDLING :

Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Avoid generating aerosols and mists. Do not mix with acids. Keep the containers closed when not in use. Have emergency equipment (for fires, spills, leaks, etc.) readily available.

STORAGE CONDITIONS :

Store the containers tightly closed. Store separately from acids. Store in suitable labelled containers.

UNSUITABLE CONSTRUCTION MATERIAL :

Do not use aluminum or mild steel.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :

Exposure guidelines have not been established for this product. Available exposure limits for the substance(s) are shown below.

ACGIH/TLV :

Substance(s)

Sodium Hydroxide

CEILING: 2 mg/m³

Tetrasodium

TWA: 5 mg/m³



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Pyrophosphate

OSHA/PEL :

Substance(s)

Sodium Hydroxide

CEILING: 2 mg/m³

Tetrasodium

TWA: 5 mg/m³

Pyrophosphate

ENGINEERING MEASURES :

General ventilation is recommended. Use local exhaust ventilation if necessary to control airborne mist and vapor.

RESPIRATORY PROTECTION :

If significant mists, vapors or aerosols are generated an approved respirator is recommended. A dust, mist, fume cartridge may be used. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

HAND PROTECTION :

Neoprene gloves, Nitrile gloves, PVC gloves, Butyl gloves, Rubber gloves

SKIN PROTECTION :

Wear chemical resistant apron, chemical splash goggles, impervious gloves and boots. A full slicker suit is recommended if gross exposure is possible.

EYE PROTECTION :

Wear a face shield with chemical splash goggles.

HYGIENE RECOMMENDATIONS :

Eye wash station and safety shower are necessary. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

HUMAN EXPOSURE CHARACTERIZATION :

Based on our recommended product application and personal protective equipment, the potential human exposure is: Low

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid
APPEARANCE	Light yellow
ODOR	None
SPECIFIC GRAVITY	1.05 - 1.09 @ 77 °F / 25 °C
DENSITY	8.7 - 9.1 lb/gal
SOLUBILITY IN WATER	Complete
pH (1 %)	11.8
pH (100 %)	13.3
VISCOSITY	< 4 cps @ 72 °F / 22 °C



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FREEZING POINT < 33 °F / < 1 °C

Note: These physical properties are typical values for this product and are subject to change.

10. STABILITY AND REACTIVITY

STABILITY :

Stable under normal conditions.

HAZARDOUS POLYMERIZATION :

Hazardous polymerization will not occur.

CONDITIONS TO AVOID :

Freezing temperatures.

MATERIALS TO AVOID :

Contact with strong acids (e.g. sulfuric, phosphoric, nitric, hydrochloric, chromic, sulfonic) may generate heat, splattering or boiling and toxic vapors.

HAZARDOUS DECOMPOSITION PRODUCTS :

Under fire conditions: Oxides of phosphorus

11. TOXICOLOGICAL INFORMATION

No toxicity studies have been conducted on this product.

SENSITIZATION :

This product is not expected to be a sensitizer.

CARCINOGENICITY :

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

HUMAN HAZARD CHARACTERIZATION :

Based on our hazard characterization, the potential human hazard is: High

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS :

The following results are for the product.

ACUTE FISH RESULTS :

Species	Exposure	LC50	Test Descriptor
Rainbow Trout	96 hrs	> 5,000 mg/l	Product

Rating : Essentially non-toxic

**MATERIAL SAFETY DATA SHEET**

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ACUTE INVERTEBRATE RESULTS :

Species	Exposure	LC50	EC50	Test Descriptor
Daphnia magna	48 hrs	3,125 mg/l		Product

Rating : Essentially non-toxic

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION

Based on our hazard characterization, the potential environmental hazard is: Low

Based on our recommended product application and the product's characteristics, the potential environmental exposure is: Low

If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Before disposal, it should be determined if the waste meets the criteria of a hazardous waste.

Hazardous Waste: D002

Hazardous wastes must be transported by a licensed hazardous waste transporter and disposed of or treated in a properly licensed hazardous waste treatment, storage, disposal or recycling facility. Consult local, state, and federal regulations for specific requirements.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

LAND TRANSPORT :

Proper Shipping Name : CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Technical Name(s) : SODIUM HYDROXIDE
UN/ID No : UN 3266
Hazard Class - Primary : 8
Packing Group : III

Flash Point : > 93 °C / > 200 °F

DOT Reportable Quantity (per package) : 45,900 lbs
DOT RQ Component : SODIUM HYDROXIDE

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name : CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Technical Name(s) : SODIUM HYDROXIDE
UN/ID No : UN 3266

**MATERIAL SAFETY DATA SHEET****PRODUCT****NALCO BT-3000****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC**

Hazard Class - Primary : 8
Packing Group : III
IATA Cargo Packing Instructions : 820
IATA Cargo Aircraft Limit : 60 L (Max net quantity per package)

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name : CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Technical Name(s) : SODIUM HYDROXIDE
UN/ID No : UN 3266
Hazard Class - Primary : 8
Packing Group : III

15. REGULATORY INFORMATION**NATIONAL REGULATIONS, USA :****OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :**

Based on our hazard evaluation, the following substance(s) in this product is/are hazardous and the reason(s) is/are shown below.

Sodium Hydroxide : Corrosive
Sodium Tripolyphosphate : Exposure Limit

CERCLA/SUPERFUND, 40 CFR 117, 302 :

This product contains the following Reportable Quantity (RQ) Substance. Also listed is the RQ for the product. If a reportable quantity of product is released, it requires notification to the NATIONAL RESPONSE CENTER, WASHINGTON, D.C. (1-800-424-8802).

<u>RQ Substance</u>	<u>RQ</u>
Sodium Hydroxide	45,900 lbs

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :**SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :**

This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :

Our hazard evaluation has found this product to be hazardous. The product should be reported under the following indicated EPA hazard categories:

X Immediate (Acute) Health Hazard
- Delayed (Chronic) Health Hazard
- Fire Hazard
- Sudden Release of Pressure Hazard
- Reactive Hazard



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Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :

This product does not contain substances on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA) :

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

FOOD AND DRUG ADMINISTRATION (FDA) Federal Food, Drug and Cosmetic Act :

When use situations necessitate compliance with FDA regulations, this product is acceptable under : 21 CFR 173.310 Boiler Water Additives

Limitations: no more than required to produce intended technical effect.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311 :

This product contains the following substances listed in the regulation:

Substance(s)	Citations
<ul style="list-style-type: none">Sodium HydroxideSodium Tripolyphosphate	Sec. 311

CLEAN AIR ACT, Sec. 111 (40 CFR 60, Volatile Organic Compounds), Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :

None of the substances are specifically listed in the regulation.

CALIFORNIA PROPOSITION 65 :

This product does not contain substances which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS :

None of the substances are specifically listed in the regulation.

STATE RIGHT TO KNOW LAWS :

The following substances are disclosed for compliance with State Right to Know Laws:

Sodium Hydroxide	1310-73-2
Sodium Tripolyphosphate	7758-29-4

NATIONAL REGULATIONS, CANADA :

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.



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WHMIS CLASSIFICATION :
E - Corrosive Material

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :
The substances in this preparation are listed on the Domestic Substances List (DSL), are exempt, or have been reported in accordance with the New Substances Notification Regulations.

16. OTHER INFORMATION

Nalco Internal No. F103915

Due to our commitment to Product Stewardship, we have evaluated the human and environmental hazards and exposures of this product. Based on our recommended use of this product, we have characterized the product's general risk. This information should provide assistance for your own risk management practices. We have evaluated our product's risk as follows:

* The human risk is: Low

* The environmental risk is: Low

Any use inconsistent with our recommendations may affect the risk characterization. Our sales representative will assist you to determine if your product application is consistent with our recommendations. Together we can implement an appropriate risk management process.

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.



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Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight# (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Prepared By : Product Safety Department
Date issued : 02/18/2004
Version Number : 1.11



MATERIAL SAFETY DATA SHEET

PRODUCT

PCL-401

EMERGENCY TELEPHONE NUMBER(S)
(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : PCL-401
APPLICATION : WATER TREATMENT
COMPANY IDENTIFICATION : Nalco Company
1601 W. Diehl Road
Naperville, Illinois
60563-1198
EMERGENCY TELEPHONE NUMBER(S) : (800) 424-9300 (24 Hours) CHEMTREC
NFPA 704M/HMIS RATING
HEALTH : 0 / 1 FLAMMABILITY : 1 / 1 INSTABILITY : 0 / 0 OTHER :
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

2. COMPOSITION/INFORMATION ON INGREDIENTS

Based on our hazard evaluation, none of the substances in this product are hazardous.

3. HAZARDS IDENTIFICATION

****EMERGENCY OVERVIEW****

CAUTION
May cause irritation with prolonged contact.
Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water.
Wear suitable protective clothing.
May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) and sulfur (SOx) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :
Eye, Skin
HUMAN HEALTH HAZARDS - ACUTE :
EYE CONTACT :
May cause irritation with prolonged contact.
SKIN CONTACT :
May cause irritation with prolonged contact.
INGESTION :
Not a likely route of exposure. No adverse effects expected.



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INHALATION :

Not a likely route of exposure. No adverse effects expected.

SYMPTOMS OF EXPOSURE :

Acute :

A review of available data does not identify any symptoms from exposure not previously mentioned.

Chronic :

A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS :

A review of available data does not identify any worsening of existing conditions.

4. FIRST AID MEASURES

EYE CONTACT :

Flush affected area with water. If symptoms develop, seek medical advice.

SKIN CONTACT :

Flush affected area with water. If symptoms develop, seek medical advice.

INGESTION :

Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink. If symptoms develop, seek medical advice.

INHALATION :

Remove to fresh air, treat symptomatically. If symptoms develop, seek medical advice.

NOTE TO PHYSICIAN :

Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

5. FIRE FIGHTING MEASURES

FLASH POINT : None

EXTINGUISHING MEDIA :

This product would not be expected to burn unless all the water is boiled away. The remaining organics may be ignitable. Use extinguishing media appropriate for surrounding fire.

FIRE AND EXPLOSION HAZARD :

May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) and sulfur (SOx) under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :

In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.



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EMERGENCY TELEPHONE NUMBER(S)

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6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :

Do not touch spilled material. Restrict access to area as appropriate until clean-up operations are complete. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Stop or reduce any leaks if it is safe to do so. Ventilate spill area if possible.

METHODS FOR CLEANING UP :

SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. **LARGE SPILLS:** Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :

Do not contaminate surface water.

7. HANDLING AND STORAGE

HANDLING :

Avoid eye and skin contact. Do not take internally. Ensure all containers are labelled. Keep the containers closed when not in use.

STORAGE CONDITIONS :

Store the containers tightly closed.

SUITABLE CONSTRUCTION MATERIAL :

PVC, Buna-N, HDPE (high density polyethylene), Polyurethane, Polypropylene, Polyethylene, Stainless Steel 304, Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.

UNSUITABLE CONSTRUCTION MATERIAL :

Brass, Hypalon, Viton, Neoprene, EPDM

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :

This product does not contain any substance that has an established exposure limit.

ENGINEERING MEASURES :

General ventilation is recommended.

RESPIRATORY PROTECTION :

Respiratory protection is not normally needed.

HAND PROTECTION :

Neoprene gloves, Nitrile gloves, Butyl gloves, PVC gloves

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SKIN PROTECTION :

Wear standard protective clothing.

EYE PROTECTION :

Wear chemical splash goggles. Wear chemical splash goggles.

HYGIENE RECOMMENDATIONS :

Keep an eye wash fountain available. Keep a safety shower available. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid
APPEARANCE	Light yellow
ODOR	None
SPECIFIC GRAVITY	1.16 - 1.20
SOLUBILITY IN WATER	Complete
pH ()	4.2 - 5.0
VISCOSITY	20 - 160 cps
FREEZING POINT	25 °F /
VAPOR PRESSURE	Same as water
VOC CONTENT	0.00 % EPA Method 24

Note: These physical properties are typical values for this product and are subject to change.

10. STABILITY AND REACTIVITY**STABILITY :**

Stable under normal conditions.

HAZARDOUS POLYMERIZATION :

Hazardous polymerization will not occur.

CONDITIONS TO AVOID :

Freezing temperatures.

MATERIALS TO AVOID :

Strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS :

Under fire conditions: Oxides of carbon, Oxides of nitrogen, Oxides of sulfur

11. TOXICOLOGICAL INFORMATION

The following results are for the product.

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ACUTE ORAL TOXICITY :

Species	LD50	Test Descriptor
Rat	5 g/kg	Product
Rating :	Non-Hazardous	

ACUTE DERMAL TOXICITY :

Species	LD50	Test Descriptor
Rabbit	2 g/kg	Product
Rating :	Non-Hazardous	

SENSITIZATION :

This product is not expected to be a sensitizer.

CARCINOGENICITY :

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

12. ECOLOGICAL INFORMATION**ECOTOXICOLOGICAL EFFECTS :**

The following results are for the product.

ACUTE FISH RESULTS :

Species	Exposure	LC50	Test Descriptor
Rainbow Trout	96 hrs	4,900 mg/l	Product
Bluegill Sunfish	96 hrs	> 5,000 mg/l	Product

Rating : Essentially non-toxic

ACUTE INVERTEBRATE RESULTS :

Species	Exposure	LC50	EC50	Test Descriptor
Daphnia magna	48 hrs	2,800 mg/l		Product

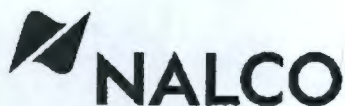
Rating : Essentially non-toxic

MOBILITY :

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models. If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	Water	Soil/Sediment
<5%	30 - 50%	50 - 70%

The portion in water is expected to be soluble or dispersible.



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BIOACCUMULATION POTENTIAL

This preparation or material is not expected to bioaccumulate.

If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous waste, it is not subject to federal regulation. Consult state or local regulation for any additional handling, treatment or disposal requirements. For disposal, contact a properly licensed waste treatment, storage, disposal or recycling facility.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

LAND TRANSPORT :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

15. REGULATORY INFORMATION

NATIONAL REGULATIONS, USA :

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :

Based on our hazard evaluation, none of the substances in this product are hazardous.

CERCLA/SUPERFUND, 40 CFR 117, 302 :

Notification of spills of this product is not required.



MATERIAL SAFETY DATA SHEET

PRODUCT

PCL-401

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :

This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :

Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :

This product does not contain substances on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA) :

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311 :

None of the substances are specifically listed in the regulation.

CLEAN AIR ACT, Sec. 111 (40 CFR 60, Volatile Organic Compounds), Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :

None of the substances are specifically listed in the regulation.

CALIFORNIA PROPOSITION 65 :

This product does not contain substances which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS :

None of the substances are specifically listed in the regulation.

STATE RIGHT TO KNOW LAWS :

None of the substances are specifically listed in the regulation.

NATIONAL REGULATIONS, CANADA :

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION :

Not considered a WHMIS controlled product.



MATERIAL SAFETY DATA SHEET

PRODUCT

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EMERGENCY TELEPHONE NUMBER(S)

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CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :

The substances in this preparation are listed on the Domestic Substances List (DSL), are exempt, or have been reported in accordance with the New Substances Notification Regulations.

INTERNATIONAL CHEMICAL CONTROL LAWS

AUSTRALIA

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS) and are listed on the Australian Inventory of Chemical Substances (AICS).

EUROPE

The substances in this preparation have been reviewed for compliance with the EINECS or ELINCS inventories.

THE PHILIPPINES

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippine Inventory of Chemicals & Chemical Substances (PICCS).

16. OTHER INFORMATION

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

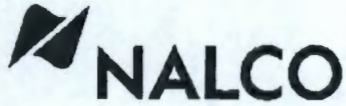
IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.



MATERIAL SAFETY DATA SHEET

PRODUCT

PCL-401

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

Ariel Insight# (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Prepared By : Product Safety Department

Date issued : 02/26/2004

Version Number : 1.4



MATERIAL SAFETY DATA SHEET

PRODUCT

pHreeGUARD® 2200

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : pHreeGUARD® 2200

APPLICATION : WATER TREATMENT

COMPANY IDENTIFICATION :
Nalco Company
1601 W. Diehl Road
Naperville, Illinois
60563-1198

EMERGENCY TELEPHONE NUMBER(S) : (800) 424-9300 (24 Hours) CHEMTREC

NFPA 704M/HMIS RATING

HEALTH : 0/0 FLAMMABILITY : 0/0 INSTABILITY : 0/0 OTHER :
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

2. COMPOSITION/INFORMATION ON INGREDIENTS

Based on our hazard evaluation, none of the substances in this product are hazardous.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION

May cause irritation with prolonged contact.

Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water.

Wear suitable protective clothing.

May evolve oxides of carbon (COx) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :

Eye, Skin

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :

No hazard in normal industrial use.

SKIN CONTACT :

No hazard in normal industrial use.

INGESTION :

Not a likely route of exposure. No adverse effects expected.



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INHALATION :

Not a likely route of exposure. No adverse effects expected.

SYMPTOMS OF EXPOSURE :

Acute :

A review of available data does not identify any symptoms from exposure not previously mentioned.

Chronic :

A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS :

A review of available data does not identify any worsening of existing conditions.

4. FIRST AID MEASURES

EYE CONTACT :

Flush affected area with water. If symptoms develop, seek medical advice.

SKIN CONTACT :

Flush affected area with water. If symptoms develop, seek medical advice.

INGESTION :

Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink. If symptoms develop, seek medical advice.

INHALATION :

Remove to fresh air, treat symptomatically. If symptoms develop, seek medical advice.

NOTE TO PHYSICIAN :

Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

5. FIRE FIGHTING MEASURES

FLASH POINT : > 200 F / > 93.3 C

EXTINGUISHING MEDIA :

This product would not be expected to burn unless all the water is boiled away. The remaining organics may be ignitable. Use extinguishing media appropriate for surrounding fire.

FIRE AND EXPLOSION HAZARD :

May evolve oxides of carbon (COx) under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :

In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.



MATERIAL SAFETY DATA SHEET

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pHreeGUARD® 2200

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6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :

Do not touch spilled material. Restrict access to area as appropriate until clean-up operations are complete. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Stop or reduce any leaks if it is safe to do so. Ventilate spill area if possible.

METHODS FOR CLEANING UP :

SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. **LARGE SPILLS:** Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :

Do not contaminate surface water.

7. HANDLING AND STORAGE

HANDLING :

Avoid eye and skin contact. Do not take internally. Ensure all containers are labelled. Keep the containers closed when not in use.

STORAGE CONDITIONS :

Store the containers tightly closed.

SUITABLE CONSTRUCTION MATERIAL :

PVC, Buna-N, HDPE (high density polyethylene), Polypropylene, Polyethylene, Stainless Steel 304, EPDM, Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.

UNSUITABLE CONSTRUCTION MATERIAL :

Brass, Hypalon, Viton, Neoprene, Steel, Copper

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :

This product does not contain any substance that has an established exposure limit.

ENGINEERING MEASURES :

General ventilation is recommended. The use of local exhaust ventilation is recommended to control emissions near the source. Laboratory samples should be handled in a fumehood. Provide mechanical ventilation of confined spaces.

RESPIRATORY PROTECTION :

Respiratory protection is not normally needed.

HAND PROTECTION :

Neoprene gloves, Nitrile gloves, Butyl gloves, PVC gloves

**MATERIAL SAFETY DATA SHEET**

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SKIN PROTECTION :

Wear standard protective clothing.

EYE PROTECTION :

Wear chemical splash goggles.

HYGIENE RECOMMENDATIONS :

Keep an eye wash fountain available. Keep a safety shower available. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid
APPEARANCE	Clear Light yellow
ODOR	None
SPECIFIC GRAVITY	1.14 - 1.18
DENSITY	9.64 lb/gal
SOLUBILITY IN WATER	Complete
pH (100 %)	5.8 - 6.2
VISCOSITY	44.5 cps @ 40 °F /
VAPOR PRESSURE	Same as water
EVAPORATION RATE	Same as water
VOC CONTENT	0.00 %

Note: These physical properties are typical values for this product and are subject to change.

10. STABILITY AND REACTIVITY**STABILITY :**

Stable under normal conditions.

HAZARDOUS POLYMERIZATION :

Hazardous polymerization will not occur.

CONDITIONS TO AVOID :

Freezing temperatures.

MATERIALS TO AVOID :

None known

HAZARDOUS DECOMPOSITION PRODUCTS :

Under fire conditions: Oxides of carbon



MATERIAL SAFETY DATA SHEET

PRODUCT

pHreeGUARD® 2200

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

11. TOXICOLOGICAL INFORMATION

No toxicity studies have been conducted on this product.

SENSITIZATION :

This product is not expected to be a sensitizer.

CARCINOGENICITY :

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS :

The following results are for the product.

ACUTE FISH RESULTS :

Species	Exposure	LC50	Test Descriptor
Bluegill Sunfish	96 hrs	9,999 mg/l	Product

Rating : Essentially non-toxic

ACUTE INVERTEBRATE RESULTS :

Species	Exposure	LC50	EC50	Test Descriptor
Daphnia magna	48 hrs	2,800 mg/l		Product

Rating : Essentially non-toxic

MOBILITY :

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models. If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	Water	Soil/Sediment
<5%	30 - 50%	50 - 70%

The portion in water is expected to be soluble or dispersible.

BIOACCUMULATION POTENTIAL

This preparation or material is not expected to bioaccumulate.

If released into the environment, see CERCLA/SUPERFUND in Section 15.



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PRODUCT

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13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous waste, it is not subject to federal regulation. Consult state or local regulation for any additional handling, treatment or disposal requirements. For disposal, contact a properly licensed waste treatment, storage, disposal or recycling facility.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

The presence of an RQ component (Reportable Quantity for U.S. EPA and DOT) in this product causes it to be regulated with an additional description of RQ for road, or as a class 9 for road and air, ONLY when the net weight in the package exceeds the calculated RQ for the product.

LAND TRANSPORT :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

15. REGULATORY INFORMATION

NATIONAL REGULATIONS, USA :

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :
Based on our hazard evaluation, none of the substances in this product are hazardous.

CERCLA/SUPERFUND, 40 CFR 117, 302 :
Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :



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SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :

This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :

Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :

This product does not contain substances on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA) :

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311 :

None of the substances are specifically listed in the regulation.

CLEAN AIR ACT, Sec. 111 (40 CFR 60, Volatile Organic Compounds), Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :

None of the substances are specifically listed in the regulation.

CALIFORNIA PROPOSITION 65 :

This product does not contain substances which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS :

None of the substances are specifically listed in the regulation.

STATE RIGHT TO KNOW LAWS :

None of the substances are specifically listed in the regulation.

NATIONAL REGULATIONS, CANADA :

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION :

Not considered a WHMIS controlled product.

INTERNATIONAL CHEMICAL CONTROL LAWS

EUROPE

The substances in this preparation have been reviewed for compliance with the EINECS or ELINCS inventories.



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16. OTHER INFORMATION

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight# (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Prepared By : Product Safety Department

Date issued : 02/21/2004

Version Number : 1.6



MATERIAL SAFETY DATA SHEET

PRODUCT

PRE-TECT® PT2000

EMERGENCY TELEPHONE NUMBER

(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : PRE-TECT® PT2000
APPLICATION : CORROSION INHIBITOR
COMPANY IDENTIFICATION : ONDEO Nalco Company
ONDEO Nalco Center
Naperville, Illinois
60563-1198
EMERGENCY TELEPHONE NUMBER : (800) 424-9300 (24 Hours) CHEMTREC
NFPA 704M/HMIS RATING
HEALTH : 3 / 3 FLAMMABILITY : 2 / 2 REACTIVITY : 0 / 0 OTHER :
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

2. COMPOSITION/INFORMATION ON INGREDIENTS

Our hazard evaluation has identified the following chemical substance(s) as hazardous. Consult Section 15 for the nature of the hazard(s).

Hazardous Substance(s)	CAS NO	% (w/w)
Methoxypropylamine	5332-73-0	30.0 - 60.0

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER

Corrosive. Combustible. May cause tissue damage. Harmful if absorbed through skin. Vapors may have a strong offensive odor which may cause sensory response including headache, nausea and vomiting. Do not get in eyes, on skin, on clothing. Do not take internally. Avoid breathing vapor. Use with adequate ventilation. Keep container tightly closed. Keep away from heat. Keep away from sources of ignition - No smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water. Wear a face shield. Wear suitable protective clothing, gloves and eye/face protection. Combustible Liquid; may form combustible mixtures at or above the flash point. Empty product containers may contain product residue. Do not pressurize, cut, heat, weld, or expose containers to flame or other sources of ignition. May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :
Eye, Skin



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HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :

Corrosive. Will cause eye burns and permanent tissue damage.

SKIN CONTACT :

May cause severe irritation or tissue damage depending on the length of exposure and the type of first aid administered. Harmful if absorbed through skin.

INGESTION :

Not a likely route of exposure. Corrosive, causes burns to gastro-intestinal tract. Nausea, vomiting and stomach pain may occur. In severe cases blood may be vomited.

INHALATION :

Irritating to the eyes, nose, throat and lungs. Vapors may have a strong offensive odor which may cause sensory response including headache, nausea and vomiting.

SYMPTOMS OF EXPOSURE :

Acute :

A review of available data does not identify any symptoms from exposure not previously mentioned.

Chronic :

A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS :

A review of available data does not identify any worsening of existing conditions.

4. FIRST AID MEASURES

EYE CONTACT :

PROMPT ACTION IS ESSENTIAL IN CASE OF CONTACT. Immediately flush eye with water for at least 15 minutes while holding eyelids open. Get immediate medical attention.

SKIN CONTACT :

Immediately flush with plenty of water for at least 15 minutes. For a large splash, flood body under a shower. Remove contaminated clothing. Wash off affected area immediately with plenty of water. Get immediate medical attention. Contaminated clothing, shoes, and leather goods must be discarded or cleaned before re-use.

INGESTION :

DO NOT INDUCE VOMITING. If conscious, washout mouth and give water to drink. Get medical attention.

INHALATION :

Remove to fresh air, treat symptomatically. Get medical attention.

NOTE TO PHYSICIAN :

Probable mucosal damage may contraindicate the use of gastric lavage. Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.



MATERIAL SAFETY DATA SHEET

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5. FIRE FIGHTING MEASURES

FLASH POINT : 130 °F / 54 °C ()

EXTINGUISHING MEDIA :

Alcohol foam, Dry powder, Other extinguishing agent suitable for Class B fires, For large fires, use water spray or fog, thoroughly drenching the burning material.
Keep containers cool by spraying with water.

FIRE AND EXPLOSION HAZARD :

Combustible Liquid; may form combustible mixtures at or above the flash point. Empty product containers may contain product residue. Do not pressurize, cut, heat, weld, or expose containers to flame or other sources of ignition. May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :

In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :

Restrict access to area as appropriate until clean-up operations are complete. Ensure clean-up is conducted by trained personnel only. Ventilate spill area if possible. Do not touch spilled material. Remove sources of ignition. Stop or reduce any leaks if it is safe to do so. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Notify appropriate government, occupational health and safety and environmental authorities.

METHODS FOR CLEANING UP :

SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. **LARGE SPILLS:** Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Wash site of spillage thoroughly with water. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :

Prevent material from entering sewers or waterways.

7. HANDLING AND STORAGE

HANDLING :

Avoid eye and skin contact. Do not take internally. Do not breathe vapors/gases/dust. Do not get in eyes, on skin, on clothing. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labelled. Keep the containers closed when not in use. Use with adequate ventilation. Do not use in locations where vapor is likely to travel to welding flames or arcs or to other hot surfaces. Vapors are much heavier than air, this can result in uneven distribution.



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STORAGE CONDITIONS :

Store the containers tightly closed. Store in suitable labelled containers. Store away from heat and sources of ignition. Store separately from oxidizers. Amine and sulfite products should not be stored within close proximity or resulting vapors may form visible airborne particles. Have appropriate fire extinguishers available in and near the storage area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :

Exposure guidelines have not been established for this product. Available exposure limits for the substance(s) are shown below.

AIHAWHEEL :

Substance(s)

Methoxypropylamine

TWA: 5 ppm

STEL: 15 ppm

ENGINEERING MEASURES :

Use general ventilation with local exhaust ventilation.

RESPIRATORY PROTECTION :

If significant mists, vapors or aerosols are generated an approved respirator is recommended. Wear an organic vapor/mist respirator when spraying. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

HAND PROTECTION :

Most glove materials are of low chemical resistance. Replace gloves regularly., Impervious gloves, Teflon#

SKIN PROTECTION :

Wear chemical resistant apron, chemical splash goggles, impervious gloves and boots. A full slicker suit is recommended if gross exposure is possible.

EYE PROTECTION :

Wear a face shield with chemical splash goggles.

HYGIENE RECOMMENDATIONS :

Eye wash station and safety shower are necessary. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE Liquid

APPEARANCE Clear Colorless



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PRODUCT

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EMERGENCY TELEPHONE NUMBER

(800) 424-9300 (24 Hours) CHEMTREC

ODOR Amine

SPECIFIC GRAVITY 0.95 - 0.97 @ 77 °F / 25 °C
SOLUBILITY IN WATER Complete
pH (1.0 %) 10.2 - 11.8
BOILING POINT 241 °F / 116 °C
VAPOR PRESSURE 20 mm Hg @ 86 °F / 30 °C
VOC CONTENT 60 %

10. STABILITY AND REACTIVITY

STABILITY :
Stable under normal conditions.

HAZARDOUS POLYMERIZATION :
Hazardous polymerization will not occur.

CONDITIONS TO AVOID :
Heat and sources of ignition including static discharges.

MATERIALS TO AVOID :
Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors. Strong acids

HAZARDOUS DECOMPOSITION PRODUCTS :
Under fire conditions: Oxides of carbon, Oxides of nitrogen

11. TOXICOLOGICAL INFORMATION

The following results are for the hazardous components.

ACUTE ORAL TOXICITY :
Species LD50 Tested Substance
Rat 750 mg/kg Methoxypropylamine
Rating : Non-Hazardous

ACUTE DERMAL TOXICITY :
Species LD50 Tested Substance
Rabbit 2,600 mg/kg Methoxypropylamine
Rating : Non-Hazardous

ACUTE INHALATION TOXICITY :
Species LC50 Tested Substance
Rat 9.8 mg/l (4 hrs) Methoxypropylamine
Rating : Toxic



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(800) 424-9300 (24 Hours) CHEMTREC

CARCINOGENICITY :

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

MUTAGENICITY :

A bacterial mutagenicity (Ames) bioassay was negative for methoxypropylamine.

HUMAN HAZARD CHARACTERIZATION :

Based on our hazard characterization, the potential human hazard is: High

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS :

The following results are for the product.

ACUTE FISH RESULTS :

Species	Exposure	LC50	Tested Substance
Fathead Minnow	96 hrs	> 1,000 mg/l	Product
Bluegill Sunfish	96 hrs	> 1,000 mg/l	Product

Rating : Essentially non-toxic

ACUTE INVERTEBRATE RESULTS :

Species	Exposure	LC50	EC50	Tested Substance
Daphnia magna	48 hrs	694 mg/l		Product

Rating : Essentially non-toxic

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION

Based on our hazard characterization, the potential environmental hazard is: Low

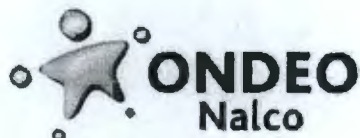
If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Before disposal, it should be determined if the waste meets the criteria of a hazardous waste.

Hazardous Waste: D001

Hazardous wastes must be transported by a licensed hazardous waste transporter and disposed of or treated in a properly licensed hazardous waste treatment, storage, disposal or recycling facility. Consult local, state, and federal regulations for specific requirements.

**MATERIAL SAFETY DATA SHEET****PRODUCT****PRE-TECT® PT2000****EMERGENCY TELEPHONE NUMBER****(800) 424-9300 (24 Hours) CHEMTREC****14. TRANSPORT INFORMATION**

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are:

LAND TRANSPORT :

Proper Shipping Name :	AMINES, FLAMMABLE, CORROSIVE, N.O.S.
Technical Name(s) :	METHOXYPROPYLAMINE
UN/ID No :	UN 2733
Hazard Class - Primary :	3
Hazard Class - Secondary :	8
Packing Group :	III
Flash Point :	54 °C / 130 °F

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name :	AMINES, FLAMMABLE, CORROSIVE, N.O.S.
Technical Name(s) :	METHOXYPROPYLAMINE
UN/ID No :	UN 2733
Hazard Class - Primary :	3
Hazard Class - Secondary :	8
Packing Group :	III
IATA Cargo Packing Instructions :	310
IATA Cargo Aircraft Limit :	60 L (Max net quantity per package)

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name :	AMINES, FLAMMABLE, CORROSIVE, N.O.S.
Technical Name(s) :	METHOXYPROPYLAMINE
UN/ID No :	UN 2733
Hazard Class - Primary :	3.3
Hazard Class - Secondary :	8
Packing Group :	III

15. REGULATORY INFORMATION**NATIONAL REGULATIONS, USA :****OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :**

Based on our hazard evaluation, the following substance(s) in this product is/are hazardous and the reason(s) is/are shown below.

Methoxypropylamine : Corrosive, Flammable



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CERCLA/SUPERFUND, 40 CFR 117, 302 :
Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :
This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :
Our hazard evaluation has found this product to be hazardous. The product should be reported under the following EPA hazard categories:

- X Immediate (Acute) Health Hazard
- Delayed (Chronic) Health Hazard
- X Fire Hazard
- Sudden Release of Pressure Hazard
- Reactive Hazard

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :
This product does not contain substances on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA) :
The chemical substances in this product are on the TSCA 8(b) Inventory (40 CFR 710).

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR / formerly Sec. 311 :
None of the substances are specifically listed in the regulation.

CLEAN AIR ACT, Sec. 111 (40 CFR 60, Volatile Organic Compounds), Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :
None of the substances are specifically listed in the regulation.

CALIFORNIA PROPOSITION 65 :
This product does not contain substances which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS :
None of the substances are specifically listed in the regulation.

STATE RIGHT TO KNOW LAWS :
The following substances are disclosed for compliance with State Right to Know Laws:

Methoxypropylamine 5332-73-0

NATIONAL REGULATIONS, CANADA :



MATERIAL SAFETY DATA SHEET

PRODUCT

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EMERGENCY TELEPHONE NUMBER

(800) 424-9300 (24 Hours) CHEMTREC

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION :

B3 - Combustible Liquids, E - Corrosive Material

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :

All substances in this product are listed on the Domestic Substances List (DSL), are exempt, or have been reported in accordance with the New Substances Notification Regulations.

16. OTHER INFORMATION

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, Co.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight# (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.



MATERIAL SAFETY DATA SHEET

PRODUCT

PRE-TECT® PT2000

EMERGENCY TELEPHONE NUMBER

(800) 424-9300 (24 Hours) CHEMTREC

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS# CD-ROM Version),
Micromedex, Inc., Englewood, CO

Prepared By : Product Safety Department
Date issued : 01/17/2000
Replaces : 09/24/1996

Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 1

PRODUCT NAME : SODIUM SULFITE ANHYDROUS

DATE: 10-Nov-2005
TIME: 13:15

CAS #: 007757837

MSDS No. 001350 Revision No./Date 03 20-OCT-2005
Detail Number 00747/03

FORMULA: Na₂SO₃

CHEM. FAMILY: inorganic salts

CHEMICAL NAME AND SYNONYMS:

Sodium Sulfite Anhy FCC; Sodium Sulfite Anhydrous;

Sodium Sulfite Anhydrous;

MSDS 001350 DETAIL 00747

SUPPLIERS NAME : Marcros Chemicals Inc.

5200 Speaker Road
Kansas City KS 66106-1095

SUPPLIERS PHONE NUMBER : 913-321-3131

TRANSPORTATION EMERGENCY PHONE NUMBER : 1-800-424-9300

S.A.R.A. INFORMATION

HAZARDS : Acute

PHYSICAL DATA : Pure Solid

SECTION I HAZARDOUS INGREDIENTS

Ingredient Cas Number	MAX % W/W	EPCRA APPLIES		AIR CONTAMINANT LEVELS			
		312	313	TWA/TLV (ppm)	STEL (ppm)	CRIL (ppm)	SKIN AGENT
Sodium Sulfite (CAS # 7757-83-7)	100.0	Y	N	As Sulfur Dioxide			
				TWA/TLV	2 ppm	OSHA/ACGIH	
				STEL	5 ppm	OSHA/ACGIH	

SECTION II HEALTH HAZARDS

POTENTIAL EFFECTS OF EXPOSURE

EYES

Eye contact with product may cause irritation burns

SKIN

Skin contact may cause irritation

INHALATION

Inhalation may cause irritation sensitization (allergic reaction) blood disorders swelling
decreased blood pressure lowered calcium level in the blood (hypocalcemia)

Continued On Page 2

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 2

PRODUCT NAME : SODIUM SULFITE ANHYDROUS

DATE: 10-Nov-2005
TIME: 13:15

SECTION II HEALTH HAZARDS

(CONTINUED)

asthma shock symptoms (rapid pulse, sweating, collapse) even death suffocation especially in confined spaces If used improperly under acidic conditions, can release sulfur dioxide gas, which is toxic and can even cause death in extreme cases, for example, if the gas is released in a poorly ventilated area.

INGESTION

Ingestion may cause irritation diarrhea lowered calcium level in the blood (hypocalcemia) convulsions central nervous system (CNS) depression even death

Symptoms of early to moderate central nervous system (CNS) depression include giddiness, dizziness, confusion, drunken behavior, headache, nausea, diarrhea, vomiting, tiredness and drowsiness. In extreme cases, symptoms of central nervous system (CNS) depression include stupor, convulsions, unconsciousness, coma, and even death.

TARGET ORGANS

OVEREXPOSURE MAY CAUSE DAMAGE TO,
DISORDERS OF, OR ADVERSELY AFFECT THE FOLLOWING SYSTEMS, FUNCTIONS, ORGANS: respiratory system
nervous system

FIRST AID

FIRST AID EYES

Immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids apart to ensure flushing of entire surface. Call a physician.

FIRST AID SKIN

Immediately flush skin with plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Thoroughly clean clothing and shoes before reuse. Call a physician.

FIRST AID INHALATION

Remove to fresh air. If not breathing give artificial respiration, preferably mouth to mouth. If breathing is difficult give oxygen. Call a physician.

FIRST AID INGESTION

If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. Call a physician.

OTHER INFORMATION

ROUTES OF ENTRY

skin contact inhalation

OVEREXPOSURE MAY AGGRAVATE DISORDERS OF THE
respiratory system skin

SECTION III SPECIAL PROTECTION

PROTECTIVE EQUIPMENT

PROTECTIVE EQUIPMENT EYES

chemical goggles Always wear eye protection when working with chemicals.

PROTECTIVE EQUIPMENT SKIN

impervious gloves clean body covering clothing rubber boots

Continued On Page 3

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 3

PRODUCT NAME : SODIUM SULFITE ANHYDROUS

DATE: 10-Nov-2005
TIME: 13:15

SECTION III SPECIAL PROTECTION

(CONTINUED)

PROTECTIVE EQUIPMENT INHALATION

If exposure limits are exceeded, or if exposure may occur, use a NIOSH/MSHA respirator approved for your conditions of exposure. Refer to the most recent NIOSH publications concerning chemical hazards, or consult your safety equipment supplier. Respiratory protection programs must be in compliance with OSHA requirements in 29 CFR 1910.134. For emergencies, a NIOSH/MSHA approved positive pressure breathing apparatus should be readily available.

VENTILATION REQUIRED:

Adequate ventilation is required to minimize exposure or to maintain exposure levels below OSHA/ACGIH requirements. Local mechanical ventilation may be required.

ADDITIONAL PROTECTIVE MEASURES

Safety shower, eye wash fountain, and washing facilities should be readily available.

SECTION IV FIRE & EXPLOSION HAZARD DATA

Flash Point (METHOD): > OR = N/A

Flammable Limits (% Volume in Air) UPPER: N/D Lower: N/D

HMIS Info Health : 2
Fire : 0
React : 2
Special : X

EXTINGUISHING MEDIA

media appropriate for surrounding fire

FIRE FIGHTING PROCEDURES

Prevent human exposure to fire, fumes, smoke, and products of combustion. Evacuate non essential personnel. Firefighters should wear full face, self contained breathing apparatus and impervious protective clothing. Use water to cool containers exposed to fire.

UNUSUAL FIRE & EXPLOSION HAZARDS

Toxic fumes may be released.

SECTION V PHYSICAL DATA

Boiling Point: N/D
Freezing Point: N/D
Specific Gravity (H₂O=1): > OR = 2.6300 @ 68 deg. F
Vapor Pressure (MM HG.): N/D
Vapor Density (AIR=1): N/D
Evaporation Rate (NA =1): N/D
Solubility in Water: 17%

Continued On Page 4

PRODUCT NAME : SODIUM SULFITE ANHYDROUS

DATE: 10-Nov-2005
TIME: 13:15

SECTION V PHYSICAL DATA

(CONTINUED)

Percent Volatile by Volume: N/D
pH: aqueous approx. 8.000 to 10.000
Appearance:
SOLID - POWDER, CRYSTAL, FLAKE, GRANULE
TABLET, PRILL, BRIQUETTE, ETC.
Odor :
NIL

SECTION VI REACTIVITY DATA

STABILITY

Stable

INCOMPATIBILITY

inorganic acids bleaching agents (oxidizers) Avoid contact with bleaching agents and oxidizers which include chlorine, oxygen, permanganates, perchlorates, percarbonates, peroxides, chromates, hypochlorites, nitric acid, and sulfuric acid.

HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition or combustion (burning) can produce oxides of sulfur

HAZARDOUS POLYMERIZATION

Will not occur

SECTION VII SPILL AND LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Evacuate non essential personnel, eliminate ignition sources, and wear protective equipment (See Section III). Shut off source of leak only if safe to do so. Contain spill. Recover free product. To clean up residue, flush sparingly with water or use an absorbent. Avoid runoff to ground water, surface waters, and sewers. It may be necessary to remove contaminated soil. If product is flammable or combustible, use non sparking tools. If acidity (low pH) is a problem, neutralize with hydrated lime, soda ash, or sodium bicarbonate. If alkalinity (high pH) is a problem neutralize with dilute acetic acid or dilute hydrochloric (muriatic) acid. If required, notify state and local authorities.

DISPOSAL METHOD

Solids must be disposed of in a permitted waste management facility. Recovered liquids may be reprocessed or incinerated. Incineration must be handled in a permitted facility. Dispose of material in accordance with all Federal, State and local regulations. Local regulations may be more stringent than Federal or State.

SECTION VIII

Harcros Chemicals Inc
Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 5

PRODUCT NAME : SODIUM SULFITE ANHYDROUS

DATE: 10-Nov-2005
TIME: 13:15

SECTION VIII

(CONTINUED)

Proper Shipping Name: UNCLASSIFIED

Label Requirements: NONE

Reportable Quantity: None

SECTION IX ADDITIONAL INFORMATION

PRECAUTIONS

Wear protective equipment when handling. Use only with adequate ventilation. Wash thoroughly after handling. Do Not breathe dust. Do Not get in eyes, on skin, or clothing. Do not swallow.

HANDLING

For industrial use only. ATTENTION: This container hazardous when emptied. Since emptied container contains product residues (vapor or liquid), all labeled hazard precautions must be observed.

STORAGE

Keep container closed when not in use. Store in a cool dry place. Store away from oxidizers. Keep out of reach of children.

SECTION X COMPLIANCE INFORMATION

TSCA INVENTORY STATUS :

Listed

INTERNATIONAL INVENTORY STATUS:

Australia (AICS) Listed China (CIS) Listed Canada (DSL) Listed

DATE ISSUED: 931012

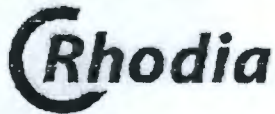
DATE REVISED: 051020

UNK = UNKNOWN

< = LESS THAN
> = MORE THAN

N/A = NOT APPLICABLE
N/D = NOT DETERMINED
N/E = NOT ESTABLISHED

The information provided in this Material Safety data sheet has been obtained from sources believed to be reliable. Harcros Chemicals Inc provides no warranties, either expressed or implied and assumes no responsibility for the accuracy or completeness of the data contained herein. This information is offered for your information, consideration, and investigation. You should satisfy yourself that you have all current data relevant to your particular use. Harcros Chemicals Inc knows of no medical condition, other than those noted on this material safety data sheet, which are generally recognized as being aggravated by exposure to this product.

**SULFURIC ACID**

Material Safety Data Sheet

Date Prepared:

2/23/01 Supersedes Date: 5/07/97

4. FIRST AID MEASURES (Continued)

available. If victim is not breathing, administer CPR (cardio-pulmonary resuscitation). Seek medical attention.

Ingestion:

If victim is conscious and alert, give 2-3 glasses of water to drink and do not induce vomiting. Seek immediate medical attention. Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. Vomiting may occur spontaneously. If vomiting occurs and the victim is conscious, give water to further dilute the chemical.

MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:

Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

NOTES TO PHYSICIAN:

All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

This material is an acid. The primary toxicity of this product is due to its irritant effects on mucous membranes.

INHALATION: If cough or shortness of breath occurs, evaluate the possibility of bronchitis or pneumonitis. Chest x-ray and arterial blood gases can be used to determine the presence of pulmonary edema. In severe cases, use of humidified oxygen and assisted ventilation including positive end expiratory pressure (PEEP) may be needed. Parenteral steroids may be useful in limiting the extent of pulmonary damage.

SKIN: Wash exposed area thoroughly with soap and water. Chemical burns from strong acids are generally treated the same as thermal burns.

EYES: Irrigate eyes for 15 minutes with sterile saline. If irritation, pain, swelling, photophobia or lacrimation persist, examination by an ophthalmologist is recommended.

INGESTION: If not already performed by first aid personnel, irrigate mouth with large amounts of water and dilute the acid by having victim drink 4 to 8 ounces of water or milk. DO NOT induce vomiting. Use of gastric lavage is controversial. The advantage of removal of acid must

Harcros Chemicals Inc

Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 5

PRODUCT NAME : SODIUM SULFITE ANHYDROUS
PRODUCT CODE : 05104

50# BAG

Date: 26-JUL-1999 10:40:46.73

SECTION IX ADDITIONAL INFORMATION

(CONTINUED)

container contains product residues (vapor or liquid), all labeled hazard precautions must be observed.

STORAGE

Keep container closed when not in use. Store in a cool dry place. Store away from oxidizers. Keep out of reach of children.

NAME: GENE TURNER

DATE ISSUED: 931012

DATE REVISED: 970520

UNK = UNKNOWN

< = LESS THAN
> = MORE THAN

N/A = NOT APPLICABLE
N/D = NOT DETERMINED
N/E = NOT ESTABLISHED

The information provided in this Material Safety data sheet has been obtained from sources believed to be reliable. Harcros Chemicals inc provides no warranties, either expressed or implied and assumes no responsibility for the accuracy or completeness of the data contained herein. This information is offered for your information, consideration, and investigation. You should satisfy yourself that you have all current data relevant to your particular use. Harcros Chemicals Inc knows of no medical condition, other than those noted on this material safety data sheet, which are generally recognized as being aggravated by exposure to this product.

Nov 03 05 10:05a

ENERGY CORPORATION

396-4746

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Harcros Chemicals Inc

Kansas City, Kansas

MATERIAL SAFETY DATA SHEET Page 3

PRODUCT NAME : SODIUM SULFITE ANHYDROUS
PRODUCT CODE : 05104

50# BAG

Date: 26-JUL-1999 10:40:44.10

SECTION III SPECIAL PROTECTION

(CONTINUED)

VENTILATION REQUIRED:

Adequate ventilation is required to minimize exposure or to maintain exposure levels below OSHA/ACGIH requirements. Local mechanical ventilation may be required.

ADDITIONAL PROTECTIVE MEASURES

Safety shower, eye wash fountain, and washing facilities should be readily available.

SECTION IV FIRE & EXPLOSION HAZARD DATA

Flash Point (METHOD): > OR = N/A

Flammable Limits (% Volume in Air)

UPPER: N/D

Lower: N/D

HMIS Info

Health : 2

Fire : 0

React : 2

Special : X

EXTINGUISHING MEDIA

media appropriate for surrounding fire

FIRE FIGHTING PROCEDURES

Prevent human exposure to fire, fumes, smoke, and products of combustion. Evacuate non essential personnel. Firefighters should wear full face, self contained breathing apparatus and impervious protective clothing. Use water to cool containers exposed to fire.

UNUSUAL FIRE & EXPLOSION HAZARDS

Toxic fumes may be released.

SECTION V PHYSICAL DATA

Boiling Point: N/D

Freezing Point: N/D

Specific Gravity (H₂O=1): > OR = 2.6300 @ 68 deg. F

Vapor Pressure (MM HG.): N/D

Vapor Density (AIR=1): N/D

Evaporation Rate (NA =1): N/D

Solubility in Water: 17%

Percent Volatile by Volume: N/D

pH: aqueous approx. 6.000 to 10.000

Appearance:

SOLID - POWDER, CRYSTAL, FLAKE, GRANULE

TABLET, PRILL, BRIQUETTE, ETC.

Odor :

NIL

SECTION VI REACTIVITY DATA

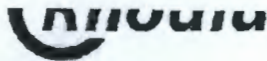
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Nov 03 05 10:05a

ENERGY CORPORATION

396-4746

P.3

**SULFURIC ACID**

Material Safety Data Sheet

Date Prepared:

2/23/01 Supersedes Date: 5/07/97

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Introductory Remarks:**

These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with Section 13: Disposal Considerations.

Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

Exposure Guidelines:

Exposure limits represent regulated or recommended worker breathing zone concentrations measured by validated sampling and analytical methods, meeting the regulatory requirements. The following limits apply to this material, where, if indicated, S=skin and C=ceiling limit:

SULFURIC ACID

	Notes	TWA	STEL
ACGIH		1 mg/cu m	3 mg/cu m
OSHA		1 mg/cu m	

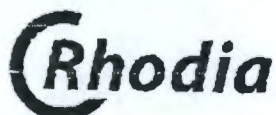
Engineering Controls:

Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures: local exhaust ventilation at the point of generation.

Respiratory Protection:

When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.

Under normal conditions, in the absence of other airborne contaminants, the following devices should provide protection from this material up to the conditions specified by the appropriate OSHA, WHMIS or ANSI standard(s): Air-purifying (half-mask/full-face) respirator with cartridges/canister approved for use against acid gases.

**SULFURIC ACID**

Material Safety Data Sheet

Date Prepared:

2/23/01 Supersedes Date: 5/07/97

8. EXPOSURE CONTROLS/PERSONAL PROTECTION (Continued)

Eye/Face Protection:

Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

Eye contact should be prevented through use of chemical safety glasses with side shields or splash proof goggles. An emergency eye wash must be readily accessible to the work area.

Skin Protection:

Skin contact must be prevented through the use of permeation resistant clothing, gloves and footwear, selected with regard for use conditions and exposure potential. An emergency shower must be readily accessible to the work area. Consideration must be given both to durability as well as permeation resistance.

Work Practice Controls:

Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material:

- (1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
- (2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
- (3) Wash exposed skin promptly to remove accidental splashes or contact with this material.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product Information phone number in Section 1 for its exact specifications.

Physical Appearance:
colorless oily liquid.

Odor:
odorless.

**SULFURIC ACID**

Material Safety Data Sheet

Date Prepared:

2/23/01 Supersedes Date:

5/07/97

9. PHYSICAL AND CHEMICAL PROPERTIES (Continued)

pH:

1 at 1 wt/wt%.

Specific Gravity:

Not Available

Density:

1.6 to 1.8 g/ml at 25 C (77 F).

Water Solubility:

miscible

Melting Point Range:

Not Available

Freezing Point Range:

-36 to -28 C (-33 to -18 F)

Boiling Point Range:

151 to 276 C (304 to 529 F) at 760 mmHg

Vapor Pressure:

1. to 0 mmHg at 40 C (104 F)

Vapor Density:

3.4

Molecular Weight:

98.08

10. STABILITY AND REACTIVITY

Chemical Stability:

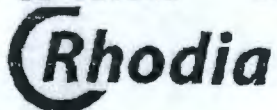
This material is stable under normal handling and storage conditions described in Section 7.

Conditions To Be Avoided:

none known

Materials/Chemicals To Be Avoided:

water

**SULFURIC ACID****Material Safety Data Sheet****Date Prepared:****2/23/01 Supersedes Date: 5/07/97**

10. STABILITY AND REACTIVITY (Continued)

strong reducing agents
halogens
bases
metals
nitrogen compounds

Decomposition Temperature Range:
340 C (644 F)

The Following Hazardous Decomposition Products Might Be Expected:

Decomposition Type: thermal
oxides of sulfur

Hazardous Polymerization Will Not Occur.

Avoid The Following To Inhibit Hazardous Polymerization:
not applicable

11. TOXICOLOGICAL INFORMATION

Acute Eye Irritation:

Toxicological Information and Interpretation

eye - eye irritation, 250 ug/24 hr, rabbit.
Severely irritating.

Acute Skin Irritation:

No test data found for product. This product was not tested because strong acids are known to be corrosive and to cause severe tissue destruction.

Acute Dermal Toxicity:

No test data found for product. This product was not tested because strong acids are known to be corrosive and to cause severe tissue destruction.

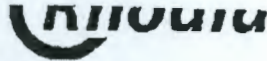
Acute Respiratory Irritation:

Toxicological Information and Interpretation

lung - lung irritation, < 5 mg/cu m, human.
Mildly irritating.

Acute Inhalation Toxicity:

Toxicological Information and Interpretation



SULFURIC ACID

Material Safety Data Sheet

Date Prepared:

2/23/01 Supersedes Date: 5/07/97

11. TOXICOLOGICAL INFORMATION (Continued)

LC50 - lethal concentration 50% of test species, 510 mg/cu m/2 hr, rat.
 LC50 - lethal concentration 50% of test species, 347 ppm/1 hr, rat.

Acute Oral Toxicity:**Toxicological Information and Interpretation**

LD50 - lethal dose 50% of test species, 2140 mg/kg, rat.

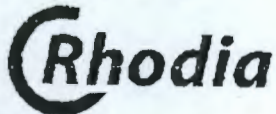
Chronic Toxicity:

This product contains the substances that are considered to be "probable" or "suspected" human carcinogens as follows:

The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP) have classified "occupational exposure to strong inorganic acid mists containing sulfuric acid" as a known human carcinogen (IARC Category 1). This classification applies only to sulfuric acid when generated as a mist. There is still debate in the scientific community whether the studies reviewed by IARC and NTP adequately controlled for confounding occupational exposures and personal habits such as cigarette smoking and alcohol consumption. A few epidemiology studies have suggested a possible association between sulfuric acid exposure and laryngeal or lung cancer; however, in all these studies, workers were exposed to many other chemicals, some of which are recognized carcinogens, such as diethylsulfate and nickel. Considering the multiple chemical exposures and other limitations of the studies, we disagree with IARC's conclusion that a cause and effect relationship between cancer and "occupational exposure to strong inorganic acid mist containing sulfuric acid" has been demonstrated. Also more recent epidemiological studies have failed to find any association between "occupational exposure to strong inorganic acid mist containing sulfuric acid" and laryngeal or lung cancer. ACGIH has classified "sulfuric acid as contained in strong inorganic acid mists" as a suspect human carcinogen. This classification does not apply to sulfuric acid per se.

Lifetime animal studies in hamsters, rats and guinea pigs were conducted in the 1970's under sponsorship of the Environmental Protection Agency (EPA) or the National Institutes of Environmental Health Sciences (NIEHS). All three lifetime studies were negative for carcinogenic effects. These studies were not formally published by the government agencies because they were satisfied that sulfuric acid mist was not a carcinogenic problem. Because these studies were not published, IARC or NTP did not consider them in their deliberations.

Ingredient Name	Regulatory Agency Listing Carcinogen			
	OSHA	IARC	NTP	ACGIH
SULFURIC ACID	No	No	No	A2

**SULFURIC ACID**

Material Safety Data Sheet

Date Prepared:

2/23/01 Supersedes Date: 5/07/97

11. TOXICOLOGICAL INFORMATION (Continued)

OCCUPATIONAL EXPOSURES TO STRONG-INORGANIC-AC ID MISTS CONTAINING	No	1	Yes	A2
--	----	---	-----	----

12. ECOLOGICAL INFORMATION**Ecotoxicological Information:****Ecotoxicological Information and Interpretation:**

The toxicity of sulfuric acid to fish is dependent on the resulting pH of the water. lethality at a pH of 5.0 or below. required to cause lethality varies depending on the hardness of the water (hard water has some buffering capacity) and the species of fish (some fish are more resistant to the effects of acidity). McKee, JE, and Wolf, HA (Editors), Water Quality Criteria, 2nd ed., Publication No. 3-A, p. 279, California State Water Resources Control Board, Sacramento, CA (rev. 1963).

Chemical Fate Information:

No data found for product.

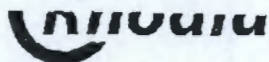
13. DISPOSAL CONSIDERATIONS**Waste Disposal Method:**

Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.

EPA Hazardous Waste - YES

EPA RCRA HAZARDOUS WASTE CODES:

"C" Corrosive; "R" Reactive.



SULFURIC ACID

Material Safety Data Sheet

Date Prepared:

2/23/01 Supersedes Date: 5/07/97

14. TRANSPORTATION INFORMATION

Transportation Status: **IMPORTANT!** Statements below provide additional data on listed DOT classification.

The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

US Department of Transportation
Hazard Class..... 8

Shipping Name:
SULFURIC ACID
ID Number..... UN1830
Packing Group.... II
Labels..... CORROSIVE
Emergency Guide #.... 137

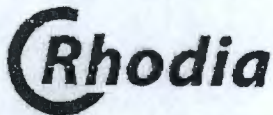
15. REGULATORY INFORMATION

Inventory Status	Status
Inventory	
UNITED STATES (TSCA)	Y
CANADA (DSL)	Y
EUROPE (EINECS/ELINCS)	Y
AUSTRALIA (AICS)	Y
JAPAN (MITI)	Y
SOUTH KOREA (KECL)	Y

Y = All ingredients are on the inventory.
E = All ingredients are on the inventory or exempt from listing.
P = One or more ingredients fall under the polymer exemption or are on the no longer polymer list. All other ingredients are on the inventory or exempt from listing.
N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing.

FEDERAL REGULATIONS

Inventory Issues:
All functional components of this product are listed on the TSCA Inventory.

**SULFURIC ACID**

Material Safety Data Sheet

Date Prepared:

2/23/01 Supersedes Date: 5/07/97

15. REGULATORY INFORMATION (Continued)**SARA Title III Hazard Classes:**

Fire Hazard - NO
 Reactive Hazard - YES
 Release of Pressure - NO
 Acute Health Hazard - YES
 Chronic Health Hazard - NO

SARA 313 Chemicals

SULFURIC ACID (65 - 100%)

SARA Extremely Hazardous Substances (EHS)/CERCLA Hazardous Substances

Ingredient	CERCLA/SARA RQ	SARA EHS TPQ
SULFURIC ACID	1000 lbs	1000 lbs
UNLISTED HAZARDOUS WASTES - CHARACTERISTIC OF CORR OSIVITY	100 lbs	
UNLISTED HAZARDOUS WASTES - CHARACTERISTIC OF REAC TIVITY	100 lbs	

STATE REGULATIONS:

This product does not contain any components that are regulated under California Proposition 65.

16. OTHER INFORMATION**National Fire Protection Association Hazard Ratings--NFPA(R):**

3 Health Hazard Rating - Serious
 0 Flammability Rating--Minimal
 2 Instability Rating--Moderate
 0 * NO WATER

National Paint & Coating Hazardous Materials Identification System--HMIS(R):

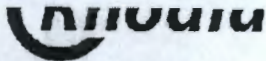
3 Health Hazard Rating--Serious
 0 Flammability Rating--Minimal
 2 Reactivity Rating--Moderate

Reason for Revisions:

Change and/or addition made to Section 3, Section 11, Regulatory Review and Update.

Key Legend Information:

ACGIH - American Conference of Governmental Industrial Hygienists



SULFURIC ACID

Material Safety Data Sheet

Date Prepared:

2/23/01 Supersedes Date: 5/07/97

16. OTHER INFORMATION (Continued)

- OSHA - Occupational Safety and Health Administration
- TLV - Threshold Limit Value
- PEL - Permissible Exposure Limit
- TWA - Time Weighted Average
- STEL - Short Term Exposure Limit
- NTP - National Toxicology Program
- IARC - International Agency for Research on Cancer
- ND - Not determined
- RPI - Rhodia Established Exposure Limits

Disclaimer:

The information herein is given in good faith but no warranty, expressed or implied, is made.



MATERIAL SAFETY DATA SHEET

PRODUCT

TOWERBROM® 960

EMERGENCY TELEPHONE NUMBER

(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : TOWERBROM® 960
APPLICATION : BIOCIDES
COMPANY IDENTIFICATION : ONDEO Nalco Company
ONDEO Nalco Center
Naperville, Illinois
60563-1198
EMERGENCY TELEPHONE NUMBER : (800) 424-9300 (24 Hours) CHEMTREC

NFPA 704M/HMIS RATING

HEALTH : 3/3 FLAMMABILITY : 1/1 REACTIVITY : 2/2 OTHER : OXIDIZER
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

2. COMPOSITION/INFORMATION ON INGREDIENTS

Our hazard evaluation has identified the following chemical substance(s) as hazardous. Consult Section 15 for the nature of the hazard(s).

Hazardous Substance(s)	CAS NO	% (w/w)
Sodium Dichloroisocyanurate	2893-78-9	89.0
Sodium Bromide	7647-15-6	5.0 - 10.0

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER

CORROSIVE. CAUSES EYE AND SKIN DAMAGE. IRRITATING TO NOSE AND THROAT. HARMFUL OR FATAL IF SWALLOWED. Prolonged ingestion of large amounts may cause adverse central nervous system effects. Strong Oxidizer.

Do not get in eyes, on skin, on clothing. Remove contaminated clothing and wash before reuse.

Wear goggles and face shield and rubber gloves when handling.

Not flammable but can act as an oxidizing agent, enhancing the burning rate of other materials. Water Reactive; material will react with water and may release a flammable or toxic gas. In addition, nitrogen trichloride, which can present an explosion hazard, can be generated slowly by the reaction of small quantities of water with a high concentration of this product. Decomposes; flammable and/or toxic gases will form at elevated temperatures (thermal decomposition).

PRIMARY ROUTES OF EXPOSURE :
Eye, Skin



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HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :

Corrosive. Will cause eye burns and permanent tissue damage.

SKIN CONTACT :

May cause severe irritation or tissue damage depending on the length of exposure and the type of first aid administered.

INGESTION :

Not a likely route of exposure. Corrosive; causes chemical burns to the mouth, throat and stomach. Can cause central nervous system depression, nausea, dizziness, vomiting, or unconsciousness.

INHALATION :

Not a likely route of exposure. Irritating, in high concentrations, to the eyes, nose, throat and lungs.

SYMPTOMS OF EXPOSURE :

Acute :

A review of available data does not identify any symptoms from exposure not previously mentioned.

Chronic :

Excessive exposure may cause central nervous system effects, nausea, vomiting, anesthetic or narcotic effects.

AGGRAVATION OF EXISTING CONDITIONS :

A review of available data does not identify any worsening of existing conditions.

4. FIRST AID MEASURES

EYE CONTACT :

PROMPT ACTION IS ESSENTIAL IN CASE OF CONTACT. Immediately flush eye with water for at least 15 minutes while holding eyelids open. Get immediate medical attention.

SKIN CONTACT :

Remove contaminated clothing. Wash off affected area immediately with plenty of water. Get immediate medical attention.

INGESTION :

DO NOT INDUCE VOMITING. If conscious, washout mouth and give water to drink. Get immediate medical attention.

INHALATION :

Remove to fresh air, treat symptomatically. Get medical attention.

NOTE TO PHYSICIAN :

Probable mucosal damage may contraindicate the use of gastric lavage. Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.



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5. FIRE FIGHTING MEASURES

FLASH POINT : None

EXTINGUISHING MEDIA :

Use water spray to cool containers exposed to fire and massive quantities of water to dilute material involved in a fire or spilled from containers. Do not use ABC or other dry chemical fire extinguishers since there is the potential for a violent reaction.

FIRE AND EXPLOSION HAZARD :

Not flammable but can act as an oxidizing agent, enhancing the burning rate of other materials. Water Reactive; material will react with water and may release a flammable or toxic gas. In addition, nitrogen trichloride, which can present an explosion hazard, can be generated slowly by the reaction of small quantities of water with a high concentration of this product. Decomposes; flammable and/or toxic gases will form at elevated temperatures (thermal decomposition).

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :

In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :

Restrict access to area as appropriate until clean-up operations are complete. Ensure clean-up is conducted by trained personnel only. Ensure adequate ventilation. Do not touch spilled material. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Notify appropriate government, occupational health and safety and environmental authorities.

METHODS FOR CLEANING UP :

Sweep up and shovel. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations). DO NOT allow water to come into contact with this material.

ENVIRONMENTAL PRECAUTIONS :

This product is toxic to fish. Do not discharge effluent containing this active ingredient into lakes, streams, ponds, estuaries, oceans or other waters, unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

7. HANDLING AND STORAGE

HANDLING :

Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Avoid generating dusts. Keep the containers closed when not in use.

STORAGE CONDITIONS :

Store the containers tightly closed. Store in suitable labelled containers. Store separately from bases. Keep in dry place. Store away from organic chemicals and other oxidizable materials, reducing agents, acids and alkalis. DO NOT allow water to come into contact with this material.



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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :

Exposure guidelines have not been established for this product. Available exposure limits for the substance(s) are shown below.

Manufacturer's

Recommendation :

Substance(s)

Sodium	TWA: 0.5 mg/m ³
Dichloroisocyanurate	STEL: 1.5 mg/m ³

ENGINEERING MEASURES :

General ventilation is recommended. Local exhaust ventilation may be necessary when dusts or mists are generated.

RESPIRATORY PROTECTION :

If dusts are generated, use an approved air-purifying respirator. An organic vapor/acid gas cartridge with dust/mist prefilter may be used. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

HAND PROTECTION :

Neoprene gloves, PVC gloves, Butyl gloves

SKIN PROTECTION :

Wear chemical resistant apron, chemical splash goggles, impervious gloves and boots. A full slicker suit is recommended if gross exposure is possible.

EYE PROTECTION :

Wear a face shield with chemical splash goggles.

HYGIENE RECOMMENDATIONS :

Eye wash station and safety shower are necessary. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Crystalline, Granular
APPEARANCE	White
ODOR	Slight, Pungent



MATERIAL SAFETY DATA SHEET

PRODUCT

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SOLUBILITY IN WATER Moderate
pH (1 %) 6 - 7
MELTING POINT Decomposes 460 - 480 °F / 240 - 250 °C
VOC CONTENT 0.0 %

10. STABILITY AND REACTIVITY

STABILITY :

Stable under normal conditions.

HAZARDOUS POLYMERIZATION :

Hazardous polymerization will not occur.

CONDITIONS TO AVOID :

Moisture

Avoid temperatures greater than 400 °F

MATERIALS TO AVOID :

Do not bring in contact with organic materials and reducing agents. DO NOT allow water to come into contact with this material.

HAZARDOUS DECOMPOSITION PRODUCTS :

Oxides of nitrogen (NO_x), disodium oxide, bromine, and traces of phosgene (under fire conditions); chlorine (released in presence of moisture) and other chlorine containing compounds; hypobromous acid, hypochlorous acid, and cyanuric acid (released when dissolved in water); nitrogen trichloride, an explosion hazard (generated slowly by the reaction of small quantities of water with high concentration of this product).

11. TOXICOLOGICAL INFORMATION

The following results are for a similar product.

ACUTE ORAL TOXICITY :

Species	LD50	Tested Substance
Rat	1,350 mg/kg	

Rating : Non-Hazardous

ACUTE DERMAL TOXICITY :

Species	LD50	Tested Substance
Rabbit	> 5g/kg	

Rating : Non-Hazardous

SENSITIZATION :

This product is not expected to be a sensitizer.



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CARCINOGENICITY :

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS :

The following results are for the product.

ACUTE FISH RESULTS :

Species	Exposure	LC50	Tested Substance
Fathead Minnow	96 hrs	0.7 mg/l	
Sheepshead Minnow	96 hrs	3.42 mg/l	

Rating : Very toxic

ACUTE INVERTEBRATE RESULTS :

Species	Exposure	LC50	EC50	Tested Substance
Daphnia magna	48 hrs	2.5 mg/l		
Mysid Shrimp (A. bahia)	48 hrs	3.54 mg/l		

Rating : Toxic

If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Before disposal, it should be determined if the waste meets the criteria of a hazardous waste.

Hazardous Waste: D001, D003

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are:

LAND TRANSPORT :

Proper Shipping Name :

DICHLOROISOCYANURIC ACID, SALTS, MIXTURE

**MATERIAL SAFETY DATA SHEET****PRODUCT****TOWERBROM® 960****EMERGENCY TELEPHONE NUMBER****(800) 424-9300 (24 Hours) CHEMTREC**

Technical Name(s) :
UN/ID No : UN 2465
Hazard Class - Primary : 5.1
Packing Group : II
Flash Point : None

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name : DICHLOROISOCYANURIC ACID, SALTS, MIXTURE
Technical Name(s) :
UN/ID No : UN 2465
Hazard Class - Primary : 5
Packing Group : II
IATA Cargo Packing Instructions : 511
IATA Cargo Aircraft Limit : 25 KG (Max net quantity per package)

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name : DICHLOROISOCYANURIC ACID, SALTS, MIXTURE
Technical Name(s) :
UN/ID No : UN 2465
Hazard Class - Primary : 5.1
Packing Group : II

15. REGULATORY INFORMATION**NATIONAL REGULATIONS, USA :****OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :**

Based on our hazard evaluation, the following substance(s) in this product is/are hazardous and the reason(s) is/are shown below.

Sodium Dichloroisocyanurate : Corrosive, Oxidizer
Sodium Bromide : Eye irritant

CERCLA/SUPERFUND, 40 CFR 117, 302 :

Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :**SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :**

This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :

Our hazard evaluation has found this product to be hazardous. The product should be reported under the following EPA hazard categories:



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PRODUCT

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- X Immediate (Acute) Health Hazard
- Delayed (Chronic) Health Hazard
- X Fire Hazard
- Sudden Release of Pressure Hazard
- X Reactive Hazard

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :
This product does not contain substances on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA) :
The chemical substances in this product are on the TSCA 8(b) Inventory (40 CFR 710).

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR / formerly Sec. 311 :
None of the substances are specifically listed in the regulation.

CLEAN AIR ACT, Sec. 111 (40 CFR 60, Volatile Organic Compounds), Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :
None of the substances are specifically listed in the regulation.

CALIFORNIA PROPOSITION 65 :
This product does not contain substances which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS :
None of the substances are specifically listed in the regulation.

STATE RIGHT TO KNOW LAWS :
This product is a registered biocide and is exempt from State Right to Know Labelling Laws.

NATIONAL REGULATIONS, CANADA :

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION :
E - Corrosive Material, C - Oxidizing Material

16. OTHER INFORMATION

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should



MATERIAL SAFETY DATA SHEET

PRODUCT

TOWERBROM® 960

EMERGENCY TELEPHONE NUMBER

(800) 424-9300 (24 Hours) CHEMTREC

be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, Co.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight# (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO

Prepared By : Product Safety Department
Date issued : 09/18/2000
Replaces : 01/31/1996

MSDS Trisodium Phosphate, Dodecahydrate, Tech...

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1583

MATERIAL SAFETY DATA SHEET

**ALBRIGHT
& WILSON**
Americas

Date Issued: 10/24/1996

MSDS Ref. No: PSMDS-212

Date Revised: 12/2/1997

Revision No: 2

Trisodium Phosphate, Dodecahydrate, Technical Grade Fine Crystal

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Trisodium Phosphate, Dodecahydrate, Technical Grade Fine Crystal
GENERAL USE: Cleaning Compounds, Degreasing
PRODUCT CODE: 212
PRODUCT FORMULATION NAME: Phosphoric Acid Trisodium Salt
CHEMICAL FAMILY: Sodium Phosphates
GENERIC NAME: TSP-12

MANUFACTURER

Albright & Wilson Americas Inc.
Industrial Chemicals Division
P.O. Box 4439
Rich Allen, VA 23058-4439

Contact: Product Stewardship Department

Product Stewardship: (804) 968-6384

Transportation: (804) 968-6388

Customer Service: (804) 968-6300

Albright & Wilson Americas Limited - Canada
Industrial Chemicals Division
2070 Huron Road
Mississauga Ontario L5K 2C9

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC (800) 424-9300

Canutec (613) 996-6666

Emergency Phone (843) 534-1229

COMMENTS: To the best of our knowledge, this Material Safety Data Sheet conforms to the requirements of US OSHA 29 CFR 1910.1200, 91/155/EBC and Canadian Hazardous Products Act.

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name
Phosphoric acid, trisodium salt
Sodium hydroxide

WT-% CAS# EINECS #
-93 - 99 7601-34-9 231-509-8
-1 - 5 1310-73-2 215-183-3

EC LABEL SYMBOL AND CLASSIFICATION



R 34: Causes burns.

EC Corrosive - "C"

COMMENTS:

Product composition ranges shown are typical values for health, safety and environmental use and are not intended as specifications.

MSDS Trisodium Phosphate, Dodecahydrate, Tech...

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: White crystals or powder without an odor.

IMMEDIATE CONCERNS; DANGERS: Causes eye burns and skin irritation.

POTENTIAL HEALTH EFFECTS

EYES: Will cause corrosive effects (burns or irreversible damage) to the eyes.

SKIN: Expected to cause significant irritation to the skin. (In an aqueous solution this material is corrosive.)

INGESTION: Will cause corrosive effects (burns or irreversible damage) to the mouth, throat and digestive tract.

INHALATION: Will cause corrosive effects (burns or irreversible damage) to the lungs, upper respiratory tract and nose.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Severe burning of the eyes.

SKIN: Redness and possible burning of the skin.

INGESTION: Possible nausea and/or vomiting.

INHALATION: Coughing, burning, tightness of chest and/or shortness of breath.

ACUTE TOXICITY:

No test data is available for acute dermal toxicity.
Not expected to cause significant adverse effects if ingested.
No test data is available for acute inhalation toxicity.

CARCINOGENICITY:

Not Listed by NTP
Not listed by IARC
Not listed by OSHA

MUTAGENICITY:

Not Available

REPRODUCTIVE TOXICITY

REPRODUCTIVE EFFECTS: Not Available

TERATOGENIC EFFECTS: Not Available

MEDICAL CONDITIONS AGGRAVATED: Such diseases or respiratory diseases may be aggravated after exposure.

TARGET ORGAN STATEMENT: Contains material which may cause gastrointestinal tract and respiratory tract effects based on animal data.

SENSITIZATION: Not Available

COMMENTS: For detailed toxicological information see Section 11.

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for two to three minutes. Remove any contact lenses and continue flushing for 15 minutes. Get immediate medical attention.

SKIN: Remove contaminated clothing including shoes and immediately wash affected area with plenty of soap and water.

MSDS Trisodium Phosphate, Dodecahydrate, Tech...

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Seek immediate medical attention. Wash contaminated clothing and shoes before reuse.

INGESTION: Wash out mouth with water, keep at rest. Seek immediate medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

INHALATION: Remove from further exposure. Keep warm and at rest. If not breathing, give artificial respiration. If breathing is difficult, trained personnel should administer oxygen. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: Not Available

FLAMMABLE LIMITS: Not Available

AUTOIGNITION TEMPERATURE: Not Available

FLAMMABLE CLASS: Nonflammable

FLAME PROPAGATION OR BURNING RATE OF SOLIDS: Not Available

GENERAL HAZARD: Evacuate personnel downwind of fire to avoid inhalation of irritating and/or harmful fumes and smoke.

EXTINGUISHING MEDIA: Chemical type foam, CO₂ (Carbon Dioxide), Dry Chemical, Water Fog

HAZARDOUS COMBUSTION PRODUCTS: Oxides of both phosphorus and sodium

FIRE FIGHTING PROCEDURES: This product is a nonflammable substance. However, hazardous decomposition and combustion products may be formed in a fire situation. Cool exposed containers with water spray to prevent overheating.

FIRE FIGHTING EQUIPMENT: Respiratory and eye protection are required for fire fighting personnel. Full protective equipment (Bunker Gear) and self contained breathing apparatus (SCBA) should be used for all indoor fires and any significant outdoor fires. For small outdoor fires, which may easily be extinguished with a portable fire extinguisher, use of a SCBA may not be required.

SENSITIVE TO STATIC DISCHARGE: Not Available

SENSITIVITY TO IMPACT: Not Available

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL:

Construct temporary dikes of dirt, sand, or any appropriate readily available material to prevent spreading of the material.

Wearing the appropriate personal protective equipment designated in Section 8, close or cap valves and/or block or plug hole in leaking container and transfer to another container.

Sweep up spilled material and dispose of at appropriate waste disposal facility according to current applicable laws and regulations. Flush area with water and ensure that the contaminated water is handled according to applicable laws.

LARGE SPILL:

Construct temporary dikes of dirt, sand, or any appropriate readily available material to prevent spreading of the material.

Wearing the appropriate personal protective equipment designated in Section 8, close or cap valves and/or block or plug hole in leaking container and transfer to another container.

Contain material as described above and call the local fire or police department for immediate emergency assistance.

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: Use appropriate containment to avoid runoff or release to sewer or waterways.

LAND SPILL: Use appropriate containment to avoid runoff or release to ground.

MSDS Trisodium Phosphate, Dodecahydrate, Tech...

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GENERAL PROCEDURES: Not Available

RELEASE NOTES: If spill could potentially enter any waterway, including intermittent dry creeks, contact the local authorities. If in the U.S., contact the US COAST GUARD NATIONAL RESPONSE CENTER toll free number 800-424-8802.

In case of accident or road spill notify:
 CHEMTREC in USA at 800-424-9300
 CHEMTREC in Canada at 613-996-6666
 CHEMTREC, other countries, at (International code)+1 703 527 3887

COMMENTS:

See Section 13 for disposal information and Section 15 for regulatory requirements.
 Large and small spills may have a broad definition depending on the user's handling system. Therefore, the spill category must be defined at the point of release by technically qualified personnel.

7. HANDLING AND STORAGE

HANDLING:

Use appropriate personal protective equipment as specified in Section 8. Handle in a well ventilated area.

Handle and use in a manner consistent with good industrial/manufacturing techniques and practices.

STORAGE:

Store in unopened containers under cool and dry conditions.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1300)

	EXPOSURE LIMITS					
	OSHA PEL		ACGIH TLV		Smaller OEL	
	REL	MA	REL	MA	REL	MA
Phosphoric acid, trisodium salt	NL	NL	NL	NL	NL	NL
Sodium hydroxide	NL	NL	NL	NL	NL	NL

OSHA TABLE COMMENTS:

1. NL - Not Listed

2. C - Ceiling

ENGINEERING CONTROLS: If dust is generated, provide local exhaust ventilation to control airborne levels below the ACGIH TLV-TWA exposure limit for Particulates Not Otherwise Classified of 10 mg/m³ for inhalable particles and 3 mg/m³ for respirable.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Wear chemical splash goggles and face shield when eye and face contact is possible due to splashing or spraying of material.

SKIN: To prevent any contact, wear impervious protective clothing such as neoprene or butyl rubber gloves, apron, boots or whole bodysuit, as appropriate.

RESPIRATORY: If airborne dust is present, use a NIOSH approved particulate respirator.

WORK HYGIENIC PRACTICES: Facilities storing or using this material should be equipped with an eyewash facility and a safety shower.

Good personal hygiene practices should always be followed.

MSDS Tricofium Phosphate, Dodecahydrate, Tech...

COMMENTS: OSHA-PEL's are taken from the 1989 exposure listing.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Solid

ODOR: Odorless

APPEARANCE: Clear

COLOR: White

pH: 11.7 to 12.7 of a 1% solution

VAPOR PRESSURE: Not Applicable

VAPOR DENSITY: Not Applicable

BOILING POINT: Not Applicable

FREEZING POINT: Not Available

MELTING POINT: -74°C (166°F)

SOLUBILITY IN WATER: ~30 at 25°C (77°F)

EVAPORATION RATE: Not Available

DENSITY: 0.9 g/cm³ at 20°C (68°F)

SPECIFIC GRAVITY: 0.9 @ 20°C/4°C

VISCOSITY: Not Applicable

MOLECULAR FORMULA: Na₃O₇P

MOLECULAR WEIGHT: 164 g/mol

COEFF. OIL/WATER: Not Applicable

COMMENTS:

WATER SOLUBILITY: g/100 g water

10. STABILITY AND REACTIVITY

STABLE: YES

HAZARDOUS POLYMERIZATION: NO

CONDITIONS TO AVOID: Heat

STABILITY: The product is stable under normal ambient conditions of temperature and pressure.

POLYMERIZATION: Will not occur

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides and acids of Phosphorus

INCOMPATIBLE MATERIALS: Not Available

11. TOXICOLOGICAL INFORMATION

ACUTE

MSDS Trisodium Phosphate, Dodecahydrate, Tech...

DERMAL LD₅₀: Not Available

ORAL LD₅₀: 4380 mg/kg (rat)

INHALATION LC₅₀: Not Available

EYE EFFECTS: This material is corrosive to the eyes.

SKIN EFFECTS: This material is expected to cause significant irritation to the skin.
(In an aqueous solution this material is corrosive.)

SENSITIZATION: Not Available

TARGET ORGANS: Eyes

Skin
Gastrointestinal tract
Respiratory system

CARCINOGENICITY:

Listed by IARC - No

Listed by NTP - No

Listed by OSHA - No

MUTAGENICITY: Not Available

REPRODUCTIVE EFFECTS: Not Available

TERATOGENIC EFFECTS: Not Available

COMMENTS: The acute toxicity data is based on calculations from analogous compound acute toxicity.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: May cause adverse environmental impact if material reaches waterways, due to the nutrient property of inorganic phosphates.

ECOTOXICOLOGICAL INFORMATION: Not Available

DISTRIBUTION: Not Available

CHEMICAL FATE INFORMATION: Not Available

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of waste at an appropriate waste disposal facility according to current applicable laws and regulations.

FOR LARGE SPILLS: Contain material and call local authorities for emergency assistance. In consultation with the appropriate authorities, determine the disposal method or contact Aldrich & Wilson Americas.

PRODUCT DISPOSAL: Dispose of at a supervised incineration facility or an appropriate waste disposal facility according to current applicable laws and regulations and product characteristics at time of disposal.

EMPTY CONTAINER: Contaminated bags should be cleaned and disposed of in the same manner as the product in accordance with applicable regulations.

GENERAL COMMENTS: Refer to Section 6, Accidental Release Measures for additional information.

14. TRANSPORT INFORMATION

MSDS Trisodium Phosphate, Dodecahydrate, Tech...

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DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not restricted by DOT

TECHNICAL NAME: Phosphoric acid, Trisodium salt

LABEL: Use Product Identifier, "Trade Name", with technical name below.

OTHER SHIPPING INFORMATION: When shipped in quantities over 5,000lbs in one package, becomes Environmentally Hazardous Substance, Solid, NOS, (contains sodium phosphate, tribasic), Class 9, UN 3877, PG III.

CANADA TRANSPORT OF DANGEROUS GOODS

PROPER SHIPPING NAME: Sodium phosphate, tribasic

PRIMARY HAZARD CLASS/DIVISION: 9.2

UN/NA NUMBER: NA 9148

PACKING GROUP: III

LABEL: Class 9.2

TDG NOTE: Sodium phosphate, tribasic becomes a class 9.2 only when shipped in quantities greater than 230 kg per container.

AIR (ICAO/IATA)

PROPER SHIPPING NAME: Not restricted

LABEL: Use Product Identifier, "Trade Name", with technical name below.

VESSEL (IMO/IMDG)

PROPER SHIPPING NAME: Not restricted

LABEL: Use Product Identifier, "Trade Name", with technical name below.

EUROPEAN TRANSPORTATION:

ADR/RID HAZARD CLASSIFICATION: Not Regulated

U.S. CUSTOMS HARMONIZATION NUMBER: 2835.25.00.00

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES:

FIRE: NO PRESSURE GENERATING: NO REACTIVITY: NO ACUTE: YES CHRONIC: NO

313 REPORTABLE INGREDIENTS: Not Applicable

TITLE III NOTES: Not Applicable

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA RQ:

CAS #: 7631-34-9

Chemical: Trisodium phosphate

CERCLA RQ: 1,000 lbs.

MSDS Trisodium Phosphate, Dodecahydrate, Tech.

CAS #: 1310-73-2
 Chemical: Sodium hydroxide
 CERCLA RQ: 1,000 lbs.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA REGULATORY: All intentional ingredients are listed on the TSCA Inventory.

NATIONAL RESPONSE CENTER: U.S. Coast Guard National Center telephone # 1-800-424-8802

CANADA

WHMIS HAZARD SYMBOL AND CLASSIFICATION



Corrosive, Class B

WHMIS Corrosive

WHMIS (WORKER HAZARDOUS MATERIALS INFORMATION SYSTEM): This product is WHMIS controlled.

CANADA INGREDIENT DISCLOSURE LIST: This product does contain ingredient(s) on the "Ingredient Disclosure List".

CANADIAN ENVIRONMENTAL PROTECTION ACT: All intentional ingredients are listed on the DSL (Domestic Substance List).

EUROPEAN COMMUNITY

EC LABEL SYMBOL AND CLASSIFICATION



R 34: Causes burns.

S 36, S 39: Wear suitable protective clothing and eye/face protection.

S 24, S 25: Avoid contact with skin or eyes.

S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 28: After contact with skin, wash immediately with plenty of soap and water.

EC Corrosive - C

EUROPEAN COMMUNITY REGULATORY: All intentional ingredients are listed on the European's EINECS Inventory.

MEXICO

This product is considered to be corrosive according to Mexican Standard, Instruction No. 9, ANNEX I.

STATES WITH SPECIAL REQUIREMENTS

Phosphoric acid,
 trisodium salt
 Sodium hydroxide

Pennsylvania: Contains material present on Pennsylvania Hazardous Substance List present at $\geq 1\%$.

New Jersey: Contains material present on New Jersey Right to Know Hazardous Substance List at $\geq 1\%$ and 0.1% for carcinogens.

Pennsylvania: Contains material present on Pennsylvania Hazardous Substance List present at $\geq 1\%$.

Massachusetts: Contains material that is present on Massachusetts Substance List at $\geq 1\%$ or 0.1% for carcinogens.

Rhode Island: Contains material present on Rhode Island Hazardous Substance List at $\geq 1\%$ and 0.01% for carcinogens, mutagens and teratogens.

REGULATIONS

LOCAL REGULATIONS: Not Available

16. OTHER INFORMATION

MBDS Trisodium Phosphate, Dodecahydrate, Tech...

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REASON FOR ISSUE: New format with additional information.

APPROVED BY: William T. Stewart **TITLE:** Product Stewardship Manager

INFORMATION CONTACT: Product Stewardship Analyst

REVISION SUMMARY

Revision #: 2

This MSDS replaces the August 22, 1997 MSDS. Any changes in information are as follows:

NFPA CODES

FLAMM: 0 **HEALTH:** 3 **REACTIVITY:** 0

HMS CODES

FLAMM: 0 **HEALTH:** 3 **REACTIVITY:** 0 **PROTECTION:** C

MANUFACTURER SUPPLEMENTAL NOTES:

HAZARD WARNING: If this product is used in combination with Trimethylolpropane, Trimethylolpropane derived products or their corresponding Trimethylol alkane homologs, THERE IS A POSSIBILITY that bicyclic phosphates and/or phosphites may be produced as a result of thermal decomposition. Bicyclic phosphates and phosphites have acute neurotoxic properties and may cause convulsive seizures in laboratory test animals. Therefore, this product should not be used in conjunction with Trimethylolpropane or Trimethylolpropane derived products unless tested to determine their decomposition toxicity. Follow all precautionary measures outlined in this Material Safety Data Sheet and/or contact Albright & Wilson America.

DATA SOURCES:

Product Health Hazard Review by Consultant Toxicologist, Dr. R. V. Blunk
Environmental data based on A&W UK (unpublished) internal study report.

MANUFACTURER DISCLAIMER: Information given herein is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of the product for particular uses are beyond our control; all risks of use of the product are therefore assumed by the user. Nothing is intended as a recommendation for uses which infringe valid patents or in extending license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Towerbrom® 960

Other means of identification : Not applicable.

Recommended use : BIOCIDE

Restrictions on use : Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.

Company : Nalco Company
1601 W. Diehl Road
Naperville, Illinois 60563-1198
USA
TEL: (630)305-1000

Emergency telephone number : (800) 424-9300 (24 Hours) CHEMTREC

Issuing date : 11/21/2014

Section: 2. HAZARDS IDENTIFICATION

GHS Classification

Oxidizing solids : Category 2
 Acute toxicity (Oral) : Category 4
 Acute toxicity (Inhalation) : Category 4
 Acute toxicity (Dermal) : Category 4
 Skin irritation : Category 2
 Serious eye damage/eye irritation : Category 1

GHS Label element

Hazard pictograms :



Signal Word :

Danger

Hazard Statements :

May intensify fire; oxidiser.
 Harmful if swallowed, in contact with skin or if inhaled
 Causes skin irritation.
 Causes serious eye damage.

Precautionary Statements :

Prevention:
 Keep away from heat. Keep/Store away from clothing/ combustible materials. Take any precaution to avoid mixing with combustibles. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/ eye protection/ face protection.
Response:

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IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. Rinse mouth. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Other hazards : None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration: (%)
Sodium Dichloroisocyanurate	2893-78-9	90
Sodium Bromide	7647-15-6	7

Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Get medical attention if irritation develops and persists.

If swallowed : Rinse mouth. Get medical attention if symptoms occur.

If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.

Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.

Notes to physician : Treat symptomatically.

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : None known.

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- Specific hazards during firefighting : Oxidizer. Contact with other material may cause fire.
- Hazardous combustion products : nitrogen oxides (NOx) May evolve chlorine under fire conditions. Carbon oxides
- Special protective equipment for firefighters : Use personal protective equipment.
- Specific extinguishing methods : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Do not allow contact with soil, surface or ground water.

Section: 7. HANDLING AND STORAGE

- Advice on safe handling : Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation.
- Conditions for safe storage : Keep in a cool, well-ventilated place. Keep away from reducing agents. Keep away from combustible material. Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.
- Suitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.
- Unsuitable material : not determined

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

- Engineering measures : Effective exhaust ventilation system Maintain air concentrations below occupational exposure standards.

Personal protective equipment

- Eye protection : Safety goggles
Face-shield

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Hand protection	: Wear the following personal protective equipment: Standard glove type. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	: Wear suitable protective clothing.
Respiratory protection	: No personal respiratory protective equipment normally required.
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Granular
Colour	: white
Odour	: Slight Pungent
Flash point	: Not applicable.
pH	: 6.0 - 7.0, 1 % (25 °C)
Odour Threshold	: no data available
Melting point/freezing point	: MELTING POINT: 240 - 250 °C, Decomposes
Initial boiling point and boiling range	: Not applicable.
Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: no data available
Relative density	: no data available
Density	: no data available
Water solubility	: no data available
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Thermal decomposition temperature	: no data available
Viscosity, dynamic	: no data available
Viscosity, kinematic	: no data available
VOC	: 0 %

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Section: 10. STABILITY AND REACTIVITY

- Chemical stability : Stable under normal conditions.
- Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use.
- Conditions to avoid : Do not allow water to enter container.
- Incompatible materials : Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.
Combustible materials
Acids
Reducing agents
- Hazardous decomposition products : Oxides of nitrogen (NO_x), disodium oxide, bromine, and traces of phosgene (under fire conditions); chlorine (released in presence of moisture) and other chlorine containing compounds; hypobromous acid, hypochlorous acid, and cyanuric acid (released when dissolved in water); nitrogen trichloride, an explosion hazard (generated slowly by the reaction of small quantities of water with high concentration of this product).

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Eye contact, Skin contact

Potential Health Effects

- Eyes : Causes serious eye damage.
- Skin : Harmful in contact with skin. Causes skin irritation.
- Ingestion : Harmful if swallowed.
- Inhalation : Harmful if inhaled.
- Chronic Exposure : Health injuries are not known or expected under normal use.

Experience with human exposure

- Eye contact : Redness, Pain, Corrosion
- Skin contact : slight irritation
Redness, Irritation
- Ingestion : No symptoms known or expected.
- Inhalation : No symptoms known or expected.

Toxicity

Product

Acute oral toxicity : Acute toxicity estimate : 1,626 mg/kg

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Acute inhalation toxicity	: LC50 rat: 15 mg/l Exposure time: 4 hrs Test substance: Product
Acute dermal toxicity	: LD50 rabbit: 1,500 mg/kg
Skin corrosion/irritation	: Result: Skin irritation
Serious eye damage/eye irritation	: no data available
Respiratory or skin sensitization	: no data available
Carcinogenicity	: no data available
Reproductive effects	: no data available
Germ cell mutagenicity	: no data available
Teratogenicity	: no data available
STOT - single exposure	: no data available
STOT - repeated exposure	: no data available
Aspiration toxicity	: no data available

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects : Very toxic to aquatic life with long lasting effects.

Product

Toxicity to fish : LC50 Pimephales promelas (fathead minnow): 0.7 mg/l
Exposure time: 96 hrs
Test substance: 50% Active Ingredient

LC50 Cyprinodon variegatus (sheepshead minnow): 3.42 mg/l
Exposure time: 96 hrs

LC50 Pimephales promelas (fathead minnow): 0.4 mg/l
Exposure time: 96 h
Test substance: Product

LC50 Inland Silverside: 1.5 mg/l
Exposure time: 96 h
Test substance: Product

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LC50 Oncorhynchus mykiss (rainbow trout): 0.250 mg/l
Exposure time: 96 h
Test substance: Active Substance

LC50 Lepomis macrochirus (Bluegill sunfish): 0.460 mg/l
Exposure time: 96 h
Test substance: Active Substance

Product

Toxicity to daphnia and other aquatic invertebrates : LC50 Daphnia magna (Water flea): 1.35 mg/l
Exposure time: 48 hrs
Test substance: Product

LC50 Mysid Shrimp (Mysidopsis bahia): 2.4 mg/l
Exposure time: 96 hrs
Test substance: Product

LC50 Ceriodaphnia dubia: 1.02 mg/l
Exposure time: 48 hrs
Test substance: Product

Product

Toxicity to algae : EC50 Green Algae (Pseudokirchneriella subcapitata, previously Selenastrum capricornutum): 0.3 mg/l
Exposure time: 96 h
Test substance: Product

Persistence and degradability

The organic portion of this preparation is expected to be inherently biodegradable.

Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.

If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air : <5%
Water : 30 - 50%
Soil : 30 - 50%

The portion in water is expected to float on the surface.

Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

Other information

no data available

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Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Before disposal, it should be determined if the waste meets the criteria of a hazardous waste.

- Hazardous Waste: : D001, D003
- Disposal methods : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
- Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

- Proper shipping name : DICHLOROISOCYANURIC ACID, SALTS, MIXTURE
Technical name(s) : Sodium Dichloroisocyanurate
UN/ID No. : UN 2465
Transport hazard class(es) : 5.1
Packing group : II

Air transport (IATA)

- Proper shipping name : DICHLOROISOCYANURIC ACID, SALTS, MIXTURE
Technical name(s) : Sodium Dichloroisocyanurate
UN/ID No. : UN 2465
Transport hazard class(es) : 5.1
Packing group : II

Sea transport (IMDG/IMO)

- Proper shipping name : DICHLOROISOCYANURIC ACID, SALTS, MIXTURE
Technical name(s) : Sodium Dichloroisocyanurate
UN/ID No. : UN 2465
Transport hazard class(es) : 5.1
Packing group : II

- *Marine pollutant : Sodium Dichloroisocyanurate

*Note: This product is regulated as a Marine Pollutant when shipped by Rail, Highway (in bulk quantities), or Air (if no other hazard class applies), and when shipped by water in all quantities.

Section: 15. REGULATORY INFORMATION

- EPA Reg. No. : 935-71-1706

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EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard
Fire Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

INTERNATIONAL CHEMICAL CONTROL LAWS :

TOXIC SUBSTANCES CONTROL ACT (TSCA)

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA)

Substances regulated under the Pest Control Products Act are exempt from CEPA New Substance Notification requirements.

EUROPE

The substances in this preparation have been reviewed for compliance with the EINECS or ELINCS inventories.

Section: 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	2

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date : 11/21/2014
Version Number : 1.1
Prepared By : Regulatory Affairs

SAFETY DATA SHEET

Towerbrom® 960

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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