



**Alabama Department of Environmental Management**  
**adem.alabama.gov**

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APRIL 8, 2021

MS SUSAN B. COMENSKY  
VP ENVIRONMENTAL AFFAIRS  
APCO THEODORE COGEN FACILITY  
P O BOX 2641  
BIN 12N-0830  
BIRMINGHAM AL 35291

**RE: REVISED DRAFT PERMIT**  
**NPDES PERMIT NUMBER AL0072290**

Dear Ms. Comensky:

Transmitted herein is a revised draft of the referenced permit.

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

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

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

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

If you have questions regarding this permit or monitoring requirements, please contact Scott Jackson by e-mail at [scott.jackson@adem.alabama.gov](mailto:scott.jackson@adem.alabama.gov) or by phone at (334) 394-4366.

Sincerely,

A handwritten signature in black ink, appearing to be "SR", written over a white circular stamp.

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

Enclosure: Draft Permit

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





# NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE: ALABAMA POWER COMPANY

FACILITY LOCATION: ALABAMA POWER COMPANY – THEODORE COGENERATION FACILITY  
7910 RANGELINE ROAD  
THEODORE, AL 36582

PERMIT NUMBER: AL0072290

RECEIVING WATERS: 001: MIDDLE FORK DEER 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**

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Alabama Department of Environmental Management



**INDUSTRIAL SECTION  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT**

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**PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS**

**A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS**

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

DSN0011: Cooling tower blowdown, boiler blowdown, low volume wastewater (001A) and storm water runoff associated with the production of steam and electricity.

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

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>			<u>MONITORING REQUIREMENTS 1/</u>				
	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Daily Minimum</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Measurement Frequency 2/</u>	<u>Sample Type</u>	<u>Seasonal</u>
Temperature, Water Deg. Fahrenheit	-	-	-	-	90 F	Monthly due Quarterly	Grab	-
pH	-	-	6.0 S.U.	-	8.5 S.U.	Monthly due Quarterly	Grab	-
Flow, In Conduit or Thru Treatment Plant	-	REPORT MGD	-	-	-	Monthly due Quarterly	Measured	-
Chlorine, Total Residual 3/	-	-	-	0.2 mg/l	0.5 mg/l 4/	Monthly due Quarterly	Grab 5/	-
Chlorination Duration	-	-	-	-	120 min/day	Daily due Quarterly	Recorder	-

**THERE SHALL BE NO DISCHARGE OF POLYCHLORINATED BIPHENYL COMPOUNDS SUCH AS THOSE COMMONLY USED FOR TRANSFORMER FLUID. THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS. THERE SHALL BE NO DISCHARGE OF CHEMICAL METAL CLEANING WASTES.**

- 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/ TRC limitations apply at the outlet to the individual unit being chlorinated, prior to combining with any other waste stream. Simultaneous multi-unit chlorination is permitted. Neither FAC nor TRC may be discharged from any one unit for more than two hours in any one day and not more than one unit in any plant may discharge TRC at any one time unless the utility can demonstrate that the units in a particular location cannot operate at or below this level of chlorination.
- 4/ "Daily maximum" as it applies to TRC means instantaneous maximum at any one time. "Monthly average" as it applies to TRC means the average of values taken over any individual chlorine release period.
- 5/ Multiple grabs are to be collected on 30-minute intervals during periods TRC discharged attributable to cooling tower/condenser chlorination.

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

DSN001Q: Cooling tower blowdown, boiler blowdown, low volume wastewater (001A) and storm water runoff associated with the production of steam and electricity.

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

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>			<u>MONITORING REQUIREMENTS 1/</u>				
	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Daily Minimum</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Measurement Frequency 2/</u>	<u>Sample Type</u>	<u>Seasonal</u>
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Quarterly	Grab	-
Zinc Total Recoverable 3/	-	-	-	1.0 mg/l	1.0 mg/l	Quarterly	Grab	-
Chromium Total Recoverable 3/	-	-	-	0.2 mg/l	0.2 mg/l	Quarterly	Grab	-
Oil and Grease	-	-	-	-	15 mg/l	Quarterly	Grab	-

**THERE SHALL BE NO DISCHARGE OF POLYCHLORINATED BIPHENYL COMPOUNDS SUCH AS THOSE COMMONLY USED FOR TRANSFORMER FLUID. THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS. THERE SHALL BE NO DISCHARGE OF CHEMICAL METAL CLEANING WASTES.**

- 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/ Monitoring and limitations are not applicable unless maintenance chemicals containing chromium or zinc are added to the tower or boiler. Electronic annual certification of no process addition of chromium or zinc shall be submitted by January 28th on non-use of maintenance chemicals containing chromium or zinc. If the Permittee chooses to submit the electronic annual certification of non-use the non-numeric code \*9, should be used on the Discharge Monitoring Report.

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

DSN001Y: Cooling tower blowdown, boiler blowdown, low volume wastewater (001A) and storm water runoff associated with the production of steam and electricity.

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

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS 1/</u>			
	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Daily Minimum</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Measurement Frequency 2/</u>	<u>Sample Type</u>	<u>Seasonal</u>
Priority Pollutants Total Effluent 3/	-	-	-	-	0 ug/l 4/	See Permit Requirements	Grab	-

**THERE SHALL BE NO DISCHARGE OF POLYCHLORINATED BIPHENYL COMPOUNDS SUCH AS THOSE COMMONLY USED FOR TRANSFORMER FLUID. THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS. THERE SHALL BE NO DISCHARGE OF CHEMICAL METAL CLEANING WASTES.**

- 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/ Priority Pollutants, except Zinc and Chromium, as defined by Appendix A of 40 CFR Part 423 and as listed in Part IV.C of this permit. Monitoring and limitations are not applicable unless chemicals containing any priority pollutants are added to the tower or boiler. Electronic annual certification of no process addition of maintenance chemicals containing chromium or zinc shall be submitted by January 28<sup>th</sup> by use of the non-numeric code \*9 on the Discharge Monitoring Report.. Any priority pollutants used in the tower maintenance must be sampled and reported.
- 4/ Sample values below the Minimum Level (laboratory reporting limit) will be indicated with a "0". Cooling tower blowdown shall not contain detectable amounts of the 129 priority pollutants listed in 40 CFR 423 except for chromium and zinc as described above.

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

DSN01AQ: Low volume wastewater.

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

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>			<u>MONITORING REQUIREMENTS 1/</u>				
	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Daily Minimum</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Measurement Frequency 2/</u>	<u>Sample Type</u>	<u>Seasonal</u>
Solids, Total Suspended	-	-	-	30.0 mg/l	100.0 mg/l	Twice/Quarter 3/	Grab	-
Oil and Grease	-	-	-	15.0 mg/l	20.0 mg/l	Twice/Quarter 3/	Grab	-
Flow, In Conduit or Thru Treatment Plant	-	REPORT MGD	-	-	-	Twice/Quarter 3/	Estimate	-

**THERE SHALL BE NO DISCHARGE OF POLYCHLORINATED BIPHENYL COMPOUNDS SUCH AS THOSE COMMONLY USED FOR TRANSFORMER FLUID. THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS. THERE SHALL BE NO DISCHARGE OF CHECMIAL METAL CLEANING WASTES.**

- 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/ To be monitored twice a quarter during the same month. Sampling events shall be at least 10 days apart.

## 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

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

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

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

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

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

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

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

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

- (3) If a permittee is allowed to submit a hard copy DMR, the DMR must be legible and bear an original signature. Photo and electronic copies of the signature are not acceptable and shall not satisfy the reporting requirements of this permit.
- (4) If the permittee, using approved analytical methods as specified in Provision I.B.2, monitors any discharge from a point source for a limited substance identified in Provision I.A. of this permit more frequently than required by this permit, the results of such monitoring shall be included in the calculation and reporting of values on the DMR and the increased frequency shall be indicated on the DMR.
- (5) In the event no discharge from a point source identified in Provision I.A. of this permit and described more fully in the permittee's application occurs during a monitoring period, the permittee shall report "No Discharge" for such period on the appropriate DMR.

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

*"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*

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

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

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

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

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

**Alabama Department of Environmental Management**

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

Certified and Registered Mail shall be addressed to:

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

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

2. Noncompliance Notification

a. 24-Hour Noncompliance Reporting

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

- (1) does not comply with any daily minimum or maximum discharge limitation for an effluent characteristic specified in Provision I. A. of this permit which is denoted by an "(X)";
- (2) threatens human health or welfare, fish or aquatic life, or water quality standards;
- (3) does not comply with an applicable toxic pollutant effluent standard or prohibition established under Section 307(a) of the FWPCA, 33 U.S.C. Section 1317(a);
- (4) contains a quantity of a hazardous substance which has been determined may be harmful to public health or welfare under Section 311(b)(4) of the FWPCA, 33 U.S.C. Section 1321(b)(4);
- (5) exceeds any discharge limitation for an effluent characteristic as a result of an unanticipated bypass or upset; and
- (6) is an unpermitted direct or indirect discharge of a pollutant to a water of the state (unpermitted discharges properly reported to the Department under any other requirement are not required to be reported under this provision).

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

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

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

- (1) A description of the discharge and cause of noncompliance;
- (2) The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and
- (3) A description of the steps taken and/or being taken to reduce or eliminate the noncomplying discharge and to prevent its recurrence.

**D. OTHER REPORTING AND NOTIFICATION REQUIREMENTS**

1. Anticipated Noncompliance

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

2. Termination of Discharge

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

3. Updating Information

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

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

4. Duty to Provide Information

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

5. Cooling Water and Boiler Water Additives

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

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

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

6. Permit Issued Based On Estimated Characteristics

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

**E. SCHEDULE OF COMPLIANCE**

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

**COMPLIANCE SHALL BE ATTAINED ON THE EFFECTIVE DATE OF THIS PERMIT**

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

## PART II OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES

### A. OPERATIONAL AND MANAGEMENT REQUIREMENTS

#### 1. Facilities Operation and Maintenance

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

#### 2. Best Management Practices

- a. Dilution water shall not be added to achieve compliance with discharge limitations except when the Director or his designee has granted prior written authorization for dilution to meet water quality requirements.
- b. The permittee shall prepare, implement, and maintain a Spill Prevention, Control and Countermeasures (SPCC) Plan in accordance with 40 C.F.R. Section 112 if required thereby.
- c. The permittee shall prepare, submit for approval and implement a Best Management Practices (BMP) Plan for containment of any or all process liquids or solids, in a manner such that these materials do not present a significant potential for discharge, if so required by the Director or his designee. When submitted and approved, the BMP Plan shall become a part of this permit and all requirements of the BMP Plan shall become requirements of this permit.

#### 3. Spill Prevention, Control, and Management

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

### B. OTHER RESPONSIBILITIES

#### 1. Duty to Mitigate Adverse Impacts

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

#### 2. Right of Entry and Inspection

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

- a. enter upon the permittee's premises where a regulated facility or activity or point source is located or conducted, or where records must be kept under the conditions of the permit;
- b. have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
- c. inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the permit; and
- d. sample or monitor, for the purposes of assuring permit compliance or as otherwise authorized by the AWPCA, any substances or parameters at any location.

### C. BYPASS AND UPSET

#### 1. Bypass

- a. Any bypass is prohibited except as provided in b. and c. below:
- b. A bypass is not prohibited if:
  - (1) It does not cause any discharge limitation specified in Provision I. A. of this permit to be exceeded;



- (2) It enters the same receiving stream as the permitted outfall; and
  - (3) It is necessary for essential maintenance of a treatment or control facility or system to assure efficient operation of such facility or system.
- c. A bypass is not prohibited and need not meet the discharge limitations specified in Provision I. A. of this permit if:
- (1) It is unavoidable to prevent loss of life, personal injury, or severe property damage;
  - (2) There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and
  - (3) The permittee submits a written request for authorization to bypass to the Director at least ten (10) days prior to the anticipated bypass (if possible), the permittee is granted such authorization, and the permittee complies with any conditions imposed by the Director to minimize any adverse impact on human health or the environment resulting from the bypass.
- d. The permittee has the burden of establishing that each of the conditions of Provision II.C.1.b. or c. have been met to qualify for an exception to the general prohibition against bypassing contained in a. and an exemption, where applicable, from the discharge limitations specified in Provision I. A. of this permit.

2. Upset

- a. A discharge which results from an upset need not meet the discharge limitations specified in Provision I. A. of this permit if:
- (1) No later than 24-hours after becoming aware of the occurrence of the upset, the permittee orally reports the occurrence and circumstances of the upset to the Director or his designee; and
  - (2) No later than five (5) days after becoming aware of the occurrence of the upset, the permittee furnishes the Director with evidence, including properly signed, contemporaneous operating logs, or other relevant evidence, demonstrating that (i) an upset occurred; (ii) the permittee can identify the specific cause(s) of the upset; (iii) the permittee's facility was being properly operated at the time of the upset; and (iv) the permittee promptly took all reasonable steps to minimize any adverse impact on human health or the environment resulting from the upset.
- b. The permittee has the burden of establishing that each of the conditions of Provision II. C.2.a. of this permit have been met to qualify for an exemption from the discharge limitations specified in Provision I.A. of this permit.

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

I. Duty to Comply

- a. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the AWPCA and the FWPCA and is grounds for enforcement action, for permit termination, revocation and reissuance, suspension, modification; or denial of a permit renewal application.
- b. The necessity to halt or reduce production or other activities in order to maintain compliance with the conditions of the permit shall not be a defense for a permittee in an enforcement action.
- c. The discharge of a pollutant from a source not specifically identified in the permit application for this permit and not specifically included in the description of an outfall in this permit is not authorized and shall constitute noncompliance with this permit.
- d. The permittee shall take all reasonable steps, including cessation of production or other activities, to minimize or prevent any violation of this permit or to minimize or prevent any adverse impact of any permit violation.
- e. Nothing in this permit shall be construed to preclude and negate the permittee's responsibility or liability to apply for, obtain, or comply with other ADEM, Federal, State, or Local Government permits, certifications, licenses, or other approvals.

2. Removed Substances

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

3. Loss or Failure of Treatment Facilities

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

4. Compliance with Statutes and Rules

- a. This permit has been issued under ADEM Administrative Code, Chapter 335-6-6. All provisions of this chapter, that are applicable to this permit, are hereby made a part of this permit. A copy of this chapter may be obtained for a small charge from the Office of General Counsel, Alabama Department of Environmental Management, 1400 Coliseum Blvd., Montgomery, AL 36130.
- b. This permit does not authorize the noncompliance with or violation of any Laws of the State of Alabama or the United States of America or any regulations or rules implementing such laws. FWPCA, 33 U.S.C. Section 1319, and Code of Alabama 1975, Section 22-22-14.

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

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

- a. If the permittee intends to continue to discharge beyond the expiration date of this permit, the permittee shall file a complete permit application for reissuance of this permit at least 180 days prior to its expiration. If the permittee does not intend to continue discharge beyond the expiration of this permit, the permittee shall submit written notification of this intent which shall be signed by an individual meeting the signatory requirements for a permit application as set forth in ADEM Administrative Code Rule 335-6-6-.09.
- b. Failure of the permittee to apply for reissuance at least 180 days prior to permit expiration will void the automatic continuation of the expiring permit provided by ADEM Administrative Code Rule 335-6-6-.06 and should the permit not be reissued for any reason any discharge after expiration of this permit will be an unpermitted discharge.

2. Change in Discharge

- a. The permittee shall apply for a permit modification at least 180 days in advance of any facility expansion, production increase, process change, or other action that could result in the discharge of additional pollutants or increase the quantity of a discharged pollutant such that existing permit limitations would be exceeded or that could result in an additional discharge point. This requirement applies to pollutants that are or that are not subject to discharge limitations in this permit. No new or increased discharge may begin until the Director has authorized it by issuance of a permit modification or a reissued permit.
- b. The permittee shall notify the Director as soon as it is known or there is reason to believe:
  - (1) That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
    - (a) one hundred micrograms per liter;
    - (b) two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dini-trophenol; and one milligram per liter for antimony;
    - (c) five times the maximum concentration value reported for that pollutant in the permit application; or
  - (2) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
    - (a) five hundred micrograms per liter;
    - (b) one milligram per liter for antimony;
    - (c) ten times the maximum concentration value reported for that pollutant in the permit application.

3. Transfer of Permit

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

4. Permit Modification and Revocation

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

- (1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to revoke and reissue this permit instead of terminating the permit;
- (2) If a request to transfer this permit has been received, the Director may decide to revoke and reissue or to modify the permit; or
- (3) If modification or revocation and reissuance is requested by the permittee and cause exists, the Director may grant the request.

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

- (1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to modify this permit instead of terminating this permit;
- (2) There are material and substantial alterations or additions to the facility or activity generating wastewater which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit;
- (3) The Director has received new information that was not available at the time of permit issuance and that would have justified the application of different permit conditions at the time of issuance;
- (4) A new or revised requirement(s) of any applicable standard or limitation is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA;
- (5) Errors in calculation of discharge limitations or typographical or clerical errors were made;
- (6) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, when the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued;
- (7) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, permits may be modified to change compliance schedules;
- (8) To agree with a granted variance under 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 to ensure that the BMP is continually implemented and effective;
- h. Provide for the use and disposal of any material used to absorb spilled fluids that could contaminate stormwater;
- i. Develop a solvent management plan, if solvents are used on site. The solvent management plan shall include as a minimum lists of the solvents on site; the disposal method of solvents used instead of dumping, such as reclamation, contract hauling; and the procedures for assuring that solvents do not routinely spill or leak into the stormwater;
- j. Provide for the disposal of all used oils, hydraulic fluids, solvent degreasing material, etc. in accordance with good management practices and any applicable state or federal regulations;
- k. Include a diagram of the facility showing the locations where stormwater exits the facility, the locations of any structure or other mechanisms intended to prevent pollution of stormwater or to remove pollutants from stormwater, the locations of any collection and handling systems;
- l. Provide control sufficient to prevent or control pollution of stormwater by soil particles to the degree required to maintain compliance with the water quality standard for turbidity applicable to the waterbody(s) receiving discharge(s) under this permit;
- m. Provide spill prevention, control, and/or management sufficient to prevent or minimize contaminated stormwater runoff. Any containment system used to implement this requirement shall be constructed of materials compatible with the substance(s) contained and shall prevent the contamination of groundwater. The containment system shall also be



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

- n. Provide and maintain curbing, diking or other means of isolating process areas to the extent necessary to allow segregation and collection for treatment of contaminated stormwater from process areas;
  - o. Be reviewed by plant engineering staff and the plant manager; and
  - p. Bear the signature of the plant manager.
3. Compliance Schedule
- The permittee shall have reviewed (and revised if necessary) and fully implemented the BMP plan as soon as practicable but no later than six months after the effective date of this permit.
4. Department Review
- a. When requested by the Director or his designee, the permittee shall make the BMP available for Department review.
  - b. The Director or his designee may notify the permittee at any time that the BMP is deficient and require correction of the deficiency.
  - c. The permittee shall correct any BMP deficiency identified by the Director or his designee within 30 days of receipt of notification and shall certify to the Department that the correction has been made and implemented.
5. Administrative Procedures
- a. A copy of the BMP shall be maintained at the facility and shall be available for inspection by representatives of the Department.
  - b. A log of the routine inspection required above shall be maintained at the facility and shall be available for inspection by representatives of the Department. The log shall contain records of all inspections performed for the last three years and each entry shall be signed by the person performing the inspection.
  - c. The permittee shall provide training for any personnel required to implement the BMP and shall retain documentation of such training at the facility. This documentation shall be available for inspection by representatives of the Department. Training shall be performed prior to the date that implementation of the BMP is required.
  - d. BMP Plan Modification. The permittee shall amend the BMP plan whenever there is a change in the facility or change in operation of the facility which materially increases the potential for the ancillary activities to result in a discharge of significant amounts of pollutants.
  - e. BMP Plan Review. The permittee shall complete a review and evaluation of the BMP plan at least once every three years from the date of preparation of the BMP plan. Documentation of the BMP Plan review and evaluation shall be signed and dated by the Plant Manager.

## **B. 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. PRIORITY POLLUTANTS

Notice of any proposed use of compounds containing priority pollutants shall be made to the Director no later than 120 days prior to proposed use. Discharge of any product registered under the Federal Insecticide, Fungicide and Rodenticide Act is prohibited unless specifically authorized elsewhere in the Permit

Acenaphthene	1,2-diphenylhydrazine
Acrolein	Bis(2-chloroethyl) ether
Acrylonitrile	2-chloroethyl vinyl ether (mixed)
Benzene	2-chloronaphthalene
Benzidine	2,4, 6-trichlorophenol
Carbon tetrachloride (tetrachloromethane)	Chlorobenzene Parachlorometa cresol
1,2,4-trichlorobenzene	Chloroform (trichloromethane)
Hexachlorobenzene	2-chlorophenol
1,2-dichloroethane	1,2-dichlorobenzene
1,1,1-trichloroethane	1,3-dichlorobenzene
Hexachloroethane	1,4-dichlorobenzene
1,1-dichloroethane	3,3-dichlorobenzidine
1,1,2-trichloroethane	1,1-dichloroethylene
1,1,2,2-tetrachloroethane	1,2-trans-dichloroethylene
Chloroethane	2,4-dichlorophenol
1,2-dichloropropane	1,2-dichloropropylene (1,3-dichloropropene)
2,4-dimethylphenol	2,4-dinitrotoluene
2,6-dinitrotoluene	Ethylbenzene
Fluoranthene	4-chlorophenyl phenyl ether
4-bromophenyl phenyl ether	Bis(2-chloroisopropyl) ether
Bis(2-chloroethoxy) methane	Methylene chloride (dichloromethane)
Methyl chloride (dichloromethane)	Methyl bromide (bromomethane)
Bromoform (tribromomethane)	Dichlorobromomethane
Chlorodibromomethane	Hexachlorobutadiene
Hexachloromyclopentadiene	Isophorone
Naphthalene	Nitrobenzene
2-nitrophenol	4-nitrophenol
2,4-dinitrophenol	4,6-dinitro-o-cresol
N-nitrosodimethylamine	N-nitrosodiphenylamine
N-nitrosodi-n-propylamin	Pentachlorophenol
Phenol	Bis(2-ethylhexyl) phthalate
Butyl benzyl phthalate	Di-N-Butyl Phthalate
Di-n-octyl phthalate	Diethyl Phthalate
Dimethyl phthalate	1,2-benzanthracene (benzo(a) anthracene)
Benzo(a)pyrene (3,4-benzo-pyrene)	3,4-Benzofluoranthene (benzo(b) fluoranthene)
11,12-benzofluoranthene (benzo(b) fluoranthene)	Chrysene
Acenaphthylene	Anthracene
1,12-benzoperylene (benzo(ghi) perylene)	Fluorene
Phenanthrene	1,2,5,6-dibenzanthracene (dibenzo,(h) anthracene)
Indeno (,1,2,3-cd) pyrene (2,3-o-pheynylene pyrene)	Pyrene
Tetrachloroethylene	Toluene
Trichloroethylene	Vinyl chloride (chloroethylene)
Aldrin	Dieldrin
Chlordane (technical mixture and metabolites)	4,4-DDT
4,4-DDE (p,p-DDX)	4,4-DDD (p,p-TDE)
Alpha-endosulfan	Beta-endosulfan
Endosulfan sulfate	Endrin
Endrin aldehyde	Heptachlor
Heptachlor epoxide (BHC-hexachlorocyclohexane)	Alpha-BHC
Beta-BHC	Gamma-BHC (lindane)
Delta-BHC (PCB-polychlorinated biphenyls)	PCB-1242 (Arochlor 1242)
PCB-1254 (Arochlor 1254)	PCB-1221 (Arochlor 1221)



PCB-1232 (Arochlor 1232)  
PCB-1260 (Arochlor 1260)  
Toxaphene  
Arsenic  
Beryllium  
Chromium  
Cyanide, Total  
Mercury  
Selenium  
Thallium  
2,3,7,8-tetrachloro-dibenzo-p-dioxin (TCDD)

PCB-1248 (Arochlor 1248)  
PCB-1016 (Arochlor 1016)  
Antimony  
Asbestos  
Cadmium  
Copper  
Lead  
Nickel  
Silver  
Zinc

**D. COOLING WATER INTAKE REQUIREMENTS**

1. The entity providing water to the permittee is both from a public water system in accordance with Section 1401 of the Safe Drinking Water Act and a private well; therefore, the permittee is exempt from the requirements of this permit condition.

ADEM REVISED PERMIT RATIONALE

PREPARED DATE: April 6, 2020  
REVISION DATE: May 14, 2020  
REVISION DATE: August 6, 2020  
REVISION DATE: March 15, 2021  
PREPARED BY: Scott Ramsey

Permittee Name: Alabama Power Company  
Facility Name: APCO Theodore Cogen Facility  
Permit Number: AL0072290

PERMIT IS REISSUANCE DUE TO EXPIRATION

DISCHARGE SERIAL NUMBERS & DESCRIPTIONS:

DSN001: Cooling tower blowdown, boiler blowdown, low volume wastewater (001A) and storm water runoff associated with the production of steam and electricity.

DSN01A: Low volume wastewater.

**INDUSTRIAL CATEGORY:** 40 CFR Part 423.15 – Steam Electric Power Generating Point Source

**MAJOR:** N

**STREAM INFORMATION:**

Receiving Stream:	Middle Fork Deer River via Canal
Classification:	Fish & Wildlife
River Basin:	Mobile River
7QI0:	34.92 cfs
1Q10:	26.19 cfs
Annual Ave Flow:	34.92 cfs
303(d) List:	Yes
Impairment:	<u>Organic Enrichment (BOD)</u>
TMDL:	No

**DISCUSSION:**

APCO Theodore Cogeneration Facility operates one combustion turbine with a supplementally fired heat recovery generator, a steam driven turbine, 2 package boilers, and associated facilities. The nameplate rating of the combustion turbine is 160 MW nominally. The combustion turbine is fired with natural gas.

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.

The discharge is located on a tidally-influenced estuary for which there are no conventional low-flow estimates. However, ADEM acknowledges that there is dilution given the sheer volume of the receiving waterbody, local freshwater inflow, and circulation of water due to tidal fluctuations and currents.

001I: Cooling tower blowdown, boiler blowdown, low volume wastewater (001A) and storm water runoff associated with the production of steam and electricity.

<u>Parameter</u>	<u>Monthly Avg Loading</u>	<u>Daily Max Loading</u>	<u>Daily Min Concentration</u>	<u>Monthly Avg Concentration</u>	<u>Daily Max Concentration</u>	<u>Sample Frequency</u>	<u>Sample Type</u>	<u>Basis*</u>
Temperature, Water Deg. Fahrenheit	-	-	-	-	90 F	Monthly due Quarterly	Grab	WQBEL
pH	-	-	6.0 S.U.	-	8.5 S.U.	Monthly due Quarterly	Grab	WQBEL
Flow, In Conduit or Thru Treatment Plant	-	REPORT MGD	-	-	-	Monthly due Quarterly	Measured	BPJ
Chlorine, Total Residual	-	-	-	0.2 mg/l	0.5 mg/l	Monthly due Quarterly	Grab	WQBEL
Chlorination Duration	-	-	-	-	120 min/day	Daily due Quarterly	Recorder	EGL

001Q: Cooling tower blowdown, boiler blowdown, low volume wastewater (001A) and storm water runoff associated with the production of steam and electricity.

<u>Parameter</u>	<u>Monthly Avg Loading</u>	<u>Daily Max Loading</u>	<u>Daily Min Concentration</u>	<u>Monthly Avg Concentration</u>	<u>Daily Max Concentration</u>	<u>Sample Frequency</u>	<u>Sample Type</u>	<u>Basis*</u>
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Quarterly	Grab	BPJ
Zinc Total Recoverable	-	-	-	1.0 mg/l	1.0 mg/l	Quarterly	Grab	WQBEL
Chromium Total Recoverable	-	-	-	0.2 mg/l	0.2 mg/l	Quarterly	Grab	EGL
Oil and Grease	-	-	-	-	15 mg/l	Quarterly	Grab	BPJ

001Y: Cooling tower blowdown, boiler blowdown, low volume wastewater (001A) and storm water runoff associated with the production of steam and electricity.

<u>Parameter</u>	<u>Monthly Avg Loading</u>	<u>Daily Max Loading</u>	<u>Daily Min Concentration</u>	<u>Monthly Avg Concentration</u>	<u>Daily Max Concentration</u>	<u>Sample Frequency</u>	<u>Sample Type</u>	<u>Basis*</u>
Priority Pollutants Total Effluent	-	-	-	-	0 ug/l	See Permit Requirements	Grab	EGL

01AQ: Low volume wastewater.

<u>Parameter</u>	<u>Monthly Avg Loading</u>	<u>Daily Max Loading</u>	<u>Daily Min Concentration</u>	<u>Monthly Avg Concentration</u>	<u>Daily Max Concentration</u>	<u>Sample Frequency</u>	<u>Sample Type</u>	<u>Basis*</u>
Solids, Total Suspended	-	-	-	30.0 mg/l	100.0 mg/l	Twice/Quarter	Grab	EGL
Oil and Grease	-	-	-	15.0 mg/l	20.0 mg/l	Twice/Quarter	Grab	EGL
Flow, In Conduit or Thru Treatment Plant	-	REPORT MGD	-	-	-	Twice/Quarter	Estimate	BPJ

\*Basis for Permit Limitation

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

## Discussion

**DSN001:** Cooling tower blowdown, boiler blowdown, low volume wastewater (001A) and storm water runoff associated with the production of steam and electricity.

### **Best Professional Judgment (BPJ)**

The parameters of concern for this facility are based on the parameters of concern listed in EPA form 2C and from the current permit. These parameters are consistent with similar facilities in the state and have been proven to be reflective of the operations at this facility. The parameters with specific limits are discussed below.

#### **Oil & Grease**

The daily maximum limit 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.

### **Water Quality Based Effluent Limits (WOBEL)**

#### **Temperature**

ADEM Administrative Code, Division 6 Regulations, specifically 335-6-10-.09(5) states that the maximum temperature in the UT to Middle Fork of Deer River shall not exceed 90° Fahrenheit. Therefore, 90 degrees will be required as a daily maximum only. This is consistent with the limitation imposed for cooling water discharges from other facilities in the area and has shown to be protective of water quality.

#### **pH**

ADEM Administrative Code, Division 6 Regulations, specifically 335-6-10-.09(5) – 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 then normal or natural pH, nor be less than 6.0, nor greater than 8.5 standard units.”

#### **Total Residual Chlorine**

The daily maximum and monthly average limits for FAC are 0.5 mg/l and 0.2 mg/l, respectively. According to the EPA Development Document for 40 CFR 423 – Steam Electric Power Generating Point Source Category, chlorine may be present in cooling water as free available chlorine (FAC) or as combined residual chlorine (CRC). It may be measured by FAC, CRC, or total residual chlorine (TRC). TRC measures both FAC and CRC. FAC is the most toxic pollutant of the three forms. However, CRC is also toxic to aquatic life. Therefore, EPA concluded that TRC would better protect aquatic life from the toxic effects of FAC and CRC. For this same reason, EPA based its water quality criteria for chlorine on TRC rather than FAC and CRC. Based on EPA’s Development Document, the Total Residual Chlorine allocation in this permit will be deemed more stringent to the Free Available Chlorine effluent limitation.

Based on the previously mentioned rationale for TRC and FAC, FAC guidelines were deemed equivalent to TRC guidelines and therefore, the guideline daily maximum and monthly average for TRC are 0.5 mg/l and 0.2 mg/l, respectively. However, these limitations must be compared to water quality standards to determine which is more stringent. EPA’s recommended saltwater criteria for total residual chlorine is 0.0075 mg/l for chronic toxicity and 0.013 mg/l for acute toxicity.

Based on the dilution available in the receiving stream, the guideline limits for TRC will continue in this permit because they are more stringent.

Monitoring for TRC is proposed at once per month frequency.

The NSPS guidelines only allow a two-hour time limitation for the discharge of total residual chlorine during any one day and from no more than one unit per day. Time of TRC discharge is monitored since time of chlorine discharge from a cooling tower is much longer than the time of chlorine addition due to the recirculation in the tower.

### **Reasonable Potential**

A Reasonable Potential Analysis was performed (see attached) for the process discharge and the pollutants of concern identified by the analysis were Arsenic, Copper, Mercury, and Zinc. Water Quality based limits were developed for all of these parameters. Quarterly monitoring will be required for these parameters. It should be noted that Water Quality – Based limits for Zinc are more stringent than effluent guidelines and are therefore implemented in this draft.

### **Federal Effluent Guideline Limitations (EGL)**

Parameters based upon EGL have had effluent guidelines established under the 40 CFR 423.15.

#### **Total Chromium and Total Zinc**

From the guidelines, the daily maximum and monthly average limits for total chromium are continued from the current permit.

#### **Priority Pollutants**

In accordance with 40 CFR 423.15 the discharge shall not contain detectable amounts of the 129 priority pollutants, except chromium and zinc. The priority pollutants are listed by the guidelines and listed in Part IV of the permit. Monitoring for the priority pollutants is still required once per year unless approval for alternate methods of demonstrating compliance is acquired by the permittee. A footnote has been continued in the permit stating that in lieu of monitoring for the priority pollutants, the permittee may submit an electronic annual certification by January 28<sup>th</sup> of non-use of maintenance chemicals containing any priority pollutant.

#### **Chemical Metal Cleaning Wastes**

A prohibition statement continues from the current permit to be included in outfall DSN001 regarding the discharge of metal cleaning wastes since the permittee did not identify this waste in the permit application.

#### **Polychlorinated Biphenyl Compounds**

In accordance with 40 CFR 423.15, the permit continues to prohibit the discharge of PCBs such as those commonly used for transformer fluid

### **Best Management Practices (BMPs)**

It is believed that 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. The effectiveness of the BMPs will be measured through the monitoring of the pollutants of concern.

#### **Secondary Containment**

Best Management Practices (BMPs) are imposed for discharges from petroleum storage areas. Only uncontaminated storm water is authorized for discharge. A requirement for no oil sheen is imposed. This requirement coupled with the use of absorbents has been found through BPJ to be sufficient to ensure the adequate removal of petroleum products.

### **DSN01A**

#### **Best Professional Judgment (BPJ)**

The parameters of concern for this facility are based on the parameters of concern listed in EPA form 2C and from the current permit. These parameters are consistent with similar facilities in the state and have been proven to be reflective of the operations at this facility.

### **Federal Effluent Guideline Limitations (EGL)**

Parameters based upon EGL have had effluent guidelines established under the 40 CFR 423.15. Low volume wastes are subject to 40 CFR 423.15 for NSPS. Low volume wastes as defined by the guidelines include, but are not limited to: Wastewaters from ion exchange water treatment systems, water treatment evaporator blowdown, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, recirculating house service water systems, and wet scrubber air pollution control systems whose primary purpose is particulate removal. Sanitary wastes, air conditioning wastes, and wastewater from carbon capture or sequestration systems are not included in this definition.

### **Total Suspended Solids and Oil & Grease**

The limits for Total Suspended Solids (TSS) and Oil and Grease (O&G) are based on the guidelines.

### **316(b) Requirements**

The entity providing water to the permittee is both from a public water system in accordance with Section 1401 of the Safe Drinking Water Act and a private well; therefore, the permittee is exempt from the requirements of this permit condition.

### **303(d) List of Impaired Waters**

The discharge is to Middle Fork Deer River which is listed on the 2018 303(d) List of Impaired Waters for BOD. The discharge is not expected to contribute to the impairment.

### **May 11, 2020 Revision**

1. The facility requests that the receiving stream be updated from U.T. to Middle Fork Deer River to Middle Fork Deer River. All TRC calculations have been updated accordingly. A revised potential analysis (RPA) of the discharge based on laboratory data provided in the Permittee's application was conducted. Based on the analytical data available to the Department a reasonable potential now does not exist to cause an in-stream water quality exceedance for Arsenic, Copper, Mercury, and Zinc. Zinc will be revised to reflect the Federal Guidelines.
2. The footnotes have been updated per the facility's request.
3. Per the facility's request, the reporting frequency has been changed to quarterly for DSN001. The sampling frequency shall remain at monthly.

### **March 15, 2021 Revision**

1. The permit was updated based on administrative comments from the Permittee.





600 North 18<sup>th</sup> Street  
Post Office Box 2641  
Birmingham, Alabama 35291

July 3, 2019

Mr. Jeff Kitchens  
Alabama Department of  
Environmental Management  
1400 Coliseum Boulevard  
Montgomery, AL 36110

**Re: Alabama Power Company – Theodore Cogeneration Plant: NPDES Permit Number AL0072290; Permit Renewal Application**

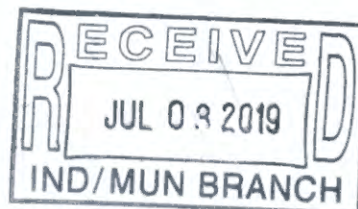
Dear Mr. Kitchens:

Please find enclosed the NPDES permit renewal application for Alabama Power Company's Theodore Cogeneration Plant. The permit renewal application includes ADEM Form 187 and EPA Forms 1 and 2C, along with the supplementary information requested by the enclosed Forms, such as site maps and plant flow schematics, and a check in the amount of \$5,615.00 for the application fee.

The application also includes sampling analysis and discharge information required by ADEM Form 187 and EPA Form 2C at the following locations: the influent water and discharge points 001 and 01A. This data is representative of current wastewater characteristics and discharge flows from the plant site recorded during the period beginning January 1, 2014 and ending December 31, 2018.

#### **Miscellaneous**

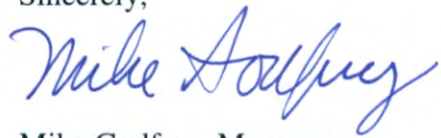
The Theodore Cogeneration Plant has a Best Management Practices (BMP) Plan that has been prepared in accordance with Part IV.C. of the NPDES permit. This plan is available for review upon your request.



Mr. Jeff Kitchens  
Page Two  
July 3, 2019

If you have any additional questions or concerns, please contact Zach Ryals at (205) 257-3213.

Sincerely,



Mike Godfrey, Manager  
Environmental Affairs

:ZTR

cc: Daphne Lutz  
Scott Ramsey  
Theo Pinson

**Alabama Power Company NPDES Permit Application**

The following documents are enclosed in this NPDES permit application:

- ADEM Form 187
- EPA Form 1
- EPA Form 2C
- Additional pertinent information

Supplementary information (i.e. describing any assumptions made when calculating average flows or detailing specific discharge points) can be found on the General Comments page immediately preceding each Form.

**General Comments – Form 187**

**Section C. Question 2b.**

The highest monthly average flow over the last 12 months was taken from the monthly flows recorded between January 1, 2018 and December 31, 2018.

The monthly average of the highest flow year of the last 5 years was taken from the monthly flows recorded each year for the 5-year period beginning January 1, 2014 and ending December 31, 2018.

**Section D – Water Supply**

The water for the generation of electricity at the Theodore Cogeneration Plant is supplied by an on-site well and the Mobile Area Water and Sewer System (MAWSS). A small amount of demineralized water is also provided by Evonik as a makeup source.

**Section E – Waste Storage and Disposal Information**

All used oil and oil contaminated solids are handled, stored, and disposed of in accordance with ADEM regulations.

Used oils and oil contaminated solids generated by the plant are temporarily stored onsite in the designated storage areas. The storage containers provide secondary containment and are accounted for in the plant's SPCC plan. The plant has contracted with an offsite vendor for the ultimate disposal.

Used oil generated by the plant is disposed of through:

Aaron Oil Company Inc.  
PO Box 2304  
Mobile, AL 35662  
(251) 479-1616

HEPACO and Oil Recovery Co. Inc. are contracted to transport oil contaminated solids generated by the plant. Disposal is currently provided through Pecan Grove Landfill and Chastang Landfill.

Additionally, Ranger Environmental also manages the disposal of the cooling tower sludge generated by the plant.

HEPACO Inc.  
5995 Rangeline Rd  
Mobile, AL 36605  
(251) 443-6288

Oil Recovery Co. Inc.  
1101 S. Conception St.  
Mobile, AL 36603  
(251) 690-9010

Ranger Environmental  
10601 Highway 43  
Creola, AL 36525-4537  
(251) 679-8611

Pecan Grove Landfill  
9685 Firetower Rd  
Pass Christian, MS 39571  
1-800-963-4776

Chastang Landfill  
17045 Highway 43  
Mt. Vernon, AL 36560  
1-800-963-4776

## **Water Use Diagram**

The Water Use Diagram included in this application reflects plant wastewater flow paths and discharge points under the current operating conditions.

Due to changing plant operating conditions, actual total plant water usage is irregular as it will differ over time with varying operating conditions. The flows shown on the water use diagram are average flows calculated from actual flows measured during the calendar years 2016 through 2018.

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

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

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

**PURPOSE OF THIS APPLICATION**

- |  |   |
|--|---|
| <input type="checkbox"/> Initial Permit Application for New Facility*<br><input type="checkbox"/> Modification of Existing Permit<br><input type="checkbox"/> Revocation & Reissuance of Existing Permit | <input type="checkbox"/> Initial Permit Application for Existing Facility*<br><input checked="" type="checkbox"/> Reissuance of Existing Permit<br><br><i>* An application for participation in the ADEM's Electronic Environmental (E2) Reporting must be submitted to allow permittee to electronically submit reports as required.</i> |
|--|---|

**SECTION A - GENERAL INFORMATION**

1. Facility Name: ALABAMA POWER COMPANY - THEODORE COGENERATION PLANT
  - a. Operator Name: ALABAMA POWER COMPANY
  - b. Is the operator identified in A.1.a, the owner of the facility?  Yes  No  
If no, provide name and address of the operator and submit information indicating the operator's scope of responsibility for the facility.  
  
\_\_\_\_\_
  
2. NPDES Permit Number: AL 0 0 7 2 2 9 0 (not applicable if initial permit application)
3. SID Permit Number (if applicable): IU \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_
4. NPDES General Permit Number (if applicable): ALG \_\_\_\_\_
5. Facility Physical Location: (Attach a map with location marked; street, route no. or other specific identifier)  
Street: 7910 Rangeline Road  
City: Theodore County: Mobile State: Alabama Zip: 36582  
Facility Location (Front Gate): Latitude: 30° 31' 36" Longitude: 88° 07' 37"
6. Facility Mailing Address: P.O. Box 2641; BIN 12N-0830  
City: Birmingham County: Jefferson State: Alabama Zip: 35291-0830
7. Responsible Official (as described on the last page of this application):  
Name and Title: Susan B. Comensky, Vice President - Environmental Affairs  
Address: P.O. Box 2641; BIN 12N-0830  
City: Birmingham State: Alabama Zip: 35291  
Phone Number: (205) 257-0298 Email Address: scomensk@southernco.com
8. Designated Facility Contact:  
Name and Title: John M. (Mike) Godfrey, Manager - Environmental Affairs  
Phone Number: (205) 257-6131 Email Address: jgodfrey@southernco.com

9. Designated Discharge Monitoring Report (DMR) Contact:

Name and Title: Zachary T. Ryals, Senior Engineer

Phone Number: (205) 257-3213

Email Address: ztryals@southernco.com

10. Type of Business Entity:

- Corporation  
 General Partnership  
 Limited Partnership  
 Limited Liability Company  
 Sole Proprietorship  
 Other (Please Specify) \_\_\_\_\_

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

a) Location of Incorporation:

Address: 600 North 18th Street

City: Birmingham

County: Jefferson

State: Alabama

Zip: 35203

b) Parent Corporation of Applicant:

Name: Southern Company

Address: 30 Ivan Allan Jr. Boulevard NW

City: Atlanta

State: Georgia

Zip: 30308

c) Subsidiary Corporation(s) of Applicant:

Name: See Attachment A

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Zip: \_\_\_\_\_

d) Corporate Officers:

Name: See Attachment A

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Zip: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Zip: \_\_\_\_\_

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

Name: Teresa G. Minor - Risk Services Director

Address: P.O. Box 2641

City: Birmingham

State: Alabama

Zip: 35291

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

Name: N/A

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Zip: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Zip: \_\_\_\_\_

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

Name: N/A

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

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

<u>Permit Name</u>	<u>Permit Number</u>	<u>Held By</u>
See Attachment B		
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

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

<u>Facility Name</u>	<u>Permit Number</u>	<u>Type of Action</u>	<u>Date of Action</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

**SECTION B – BUSINESS ACTIVITY**

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

- a. 4931 - Electric & Other Services
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_
- e. \_\_\_\_\_
- f. \_\_\_\_\_



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

**Industrial Categories**

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

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

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

Alabama Power Company operates one combustion turbine with a supplementally fired heat recovery generator, a steam driven turbine, 2 package boilers, and associated facilities at the Theodore Cogen Plant site. The nameplate rating of the combustion turbine is 160 MW nominally. The combustion turbine is fired with natural gas. The water supply for the facility is obtained mainly from an on-site well and the Mobile Area Water and Sewer System.

**SECTION C – WASTEWATER DISCHARGE INFORMATION**

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

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

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

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

- a. Number of batch discharges: \_\_\_\_\_ per day
- b. Average discharge per batch: \_\_\_\_\_ (GPD)
- c. Time of batch discharges \_\_\_\_\_ at \_\_\_\_\_  
(days of week) (hours of day)
- d. Flow rate: \_\_\_\_\_ gallons/minute
- e. Percent of total discharge: \_\_\_\_\_

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

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

Yes

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

2a.

Regulated Process	Applicable Category	Applicable Subpart	Type of Discharge Flow (batch, continuous, intermittent)
Low Volume Waste	40 CFR 423	12(b)(3)	Continuous
Cooling Tower Blowdown	40 CFR 423	13(d)	Continuous
_____	_____	_____	_____

2b.

Process Description	Last 12 Months (gals/day), (lbs/day), etc. Highest Month Average*	Highest Flow Year of Last 5 (gals/day), (lbs/day), etc. Monthly Average*	Discharge Type (batch, continuous, intermittent)
Low Volume Waste	30,000 gal/day	44,000 gal/day	Continuous
Cooling Tower Blowdown	90,000 gal/day	71,000 gal/day	Continuous
_____	_____	_____	_____

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

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

- a. Number of batch discharges: N/A per day
- b. Average discharge per batch: \_\_\_\_\_ (GPD)
- c. Time of batch discharges \_\_\_\_\_ at \_\_\_\_\_  
(days of week) (hours of day)
- d. Flow rate: \_\_\_\_\_ gallons/minute
- e. Percent of total discharge: \_\_\_\_\_

2c.

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

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

- a. Number of batch discharges: \_\_\_\_\_ per day
- b. Average discharge per batch: \_\_\_\_\_ (GPD)
- c. Time of batch discharges \_\_\_\_\_ at \_\_\_\_\_  
(days of week) (hours of day)
- d. Flow rate: \_\_\_\_\_ gallons/minute
- e. Percent of total discharge: \_\_\_\_\_

2d.

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

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

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

For each shared outfall, provide the following:

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

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

- |                 |                    |   |  |   |
|-----------------|--------------------|---|--|---|
| <b>Current:</b> | Flow Metering      | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | <input type="checkbox"/> N/A            |
|                 | Sampling Equipment | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | <input type="checkbox"/> N/A            |
| <b>Planned:</b> | Flow Metering      | <input type="checkbox"/> Yes            | <input type="checkbox"/> No            | <input checked="" type="checkbox"/> N/A |
|                 | Sampling Equipment | <input type="checkbox"/> Yes            | <input type="checkbox"/> No            | <input checked="" type="checkbox"/> N/A |

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

Plant process wastewater streams flow through DSN001A to DSN001 for final discharge. Theodore Cogen Plant discharges sanitary waste to the MAWSS sewer system.

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

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

N/A

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

Trade Name	Chemical Composition
Sodium Thiosulfate 30%	See Attachment C
Tower 16T Dispersant	
Sodium Hypochlorite 12.5%	

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

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

**SECTION D – WATER SUPPLY**

Water Sources (check as many as are applicable):

- Private Well  Surface Water  
 Municipal Water Utility (Specify City):  Other (Specify): Make-up from Evonik

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

City: 0.53 MGD\* Well: 0.36 MGD\* Well Depth: 184 Ft. Latitude: 30° 31' 32.821"N Longitude: 88° 7' 44.589"W

Surface Intake Volume: \_\_\_\_\_ MGD\* Intake Elevation in Relation to Bottom: \_\_\_\_\_ Ft.

Intake Elevation: \_\_\_\_\_ Ft. Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_

Name of Surface Water Source: N/A

\* MGD – Million Gallons per Day

**Cooling Water Intake Structure Information**

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

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

a) Name of Provider: Mobile Area Water and Sewer System b) Location of Provider: Mobile, Alabama

c) Latitude: 30°43'13.1"N Longitude: 88°18'14.7"W

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

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

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

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

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

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

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

7. When was the intake installed? \_\_\_\_\_  
(Please provide dates for all major construction/installation of intake components including screens)
8. What is the maximum intake volume? \_\_\_\_\_  
(maximum pumping capacity in gallons per day)
9. What is the average intake volume? \_\_\_\_\_  
(average intake pump rate in gallons per day average in any 30-day period)
10. What is the actual intake flow (AIF) as defined in 40 CFR §125.92(a)? \_\_\_\_\_ MGD
11. How is the intake operated? (e.g., continuously, intermittently, batch) \_\_\_\_\_
12. What is the mesh size of the screen on your intake? \_\_\_\_\_
13. What is the intake screen flow-through area? \_\_\_\_\_
14. What is the through-screen design intake flow velocity? \_\_\_\_\_ ft/sec
15. What is the through-screen actual velocity (in ft/sec)? \_\_\_\_\_ ft/sec
16. What is the mechanism for cleaning the screen? (e.g., does it rotate for cleaning) \_\_\_\_\_
17. Do you have any additional fish detraction technology on your intake?  Yes  No
18. Have there been any studies to determine the impact of the intake on aquatic organisms?  Yes  No (If yes, please provide.)
19. Attach a site map showing the location of the water intake in relation to the facility, shoreline, water depth, etc.

**SECTION E – WASTE STORAGE AND DISPOSAL INFORMATION**

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

Description of Waste	Description of Storage Location
Used oil may be generated and stored on site in approved areas for short periods.	Stored in accordance with ADEM regulations and SPCC

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

Description of Waste	Quantity (lbs/day)	Disposal Method*
Sanitary Sewage		Discharged to sanitary sewer (MAWSS)

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

**SECTION F – COASTAL ZONE INFORMATION**

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

- |   | Yes                      | No                                  |
|---|--------------------------|-------------------------------------|
| 1. Does the project require new construction?.....          | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Will the project be a source of new air emissions? ..... | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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

**SECTION G – ANTI-DEGRADATION EVALUATION**

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

1. Is this a new or increased discharge that began after April 3, 1991?    Yes    No  
 If yes, complete G.2 below. If no, go to Section H.
2. Has an Anti-Degradation Analysis been previously conducted and submitted to the Department for the new or increased discharge referenced in G.1?    Yes    No

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

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

- A. What environmental or public health problem will the discharger be correcting?  
 \_\_\_\_\_
- B. How much will the discharger be increasing employment (at its existing facility or as the result of locating a new facility)?  
 \_\_\_\_\_
- C. How much reduction in employment will the discharger be avoiding?  
 \_\_\_\_\_
- D. How much additional state or local taxes will the discharger be paying?  
 \_\_\_\_\_
- E. What public service to the community will the discharger be providing?  
 \_\_\_\_\_
- F. What economic or social benefit will the discharger be providing to the community?  
 \_\_\_\_\_

**SECTION H – EPA Application Forms**

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

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

**SECTION I – ENGINEERING REPORT/BMP PLAN REQUIREMENTS**

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

**SECTION J– RECEIVING WATERS**

Outfall No.	Receiving Water(s)	303(d) Segment?		Included in TMDL?*	
001	UT of Middle Fork of Deer River	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No

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

- (1) Justification for the requested Compliance Schedule (e.g. time for design and installation of control equipment, etc.);
- (2) Monitoring results for the pollutant(s) of concern which have not previously been submitted to the Department (sample collection dates, analytical results (mass and concentration), methods utilized, MDL/ML, etc. should be submitted as available);
- (3) Requested interim limitations, if applicable;
- (4) Date of final compliance with the TMDL limitations; and,
- (5) Any other additional information available to support requested compliance schedule.



**SECTION K – APPLICATION CERTIFICATION**

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

*"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."*

Signature of Responsible Official: Susan Comensky Date Signed: 7/2/19  
Name and Title: Susan B. Comensky, Vice President - Environmental Affairs

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

Mailing Address: P.O. Box 2641; BIN 12N-0830  
City: Birmingham State: Alabama Zip: 35291  
Phone Number: (205) 257-0298 Email Address: scomensk@southernco.com

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

- (1) The application for an NPDES permit shall be signed by a responsible official, as indicated below:
- (a) In the case of a corporation, by a principal executive officer of at least the level of vice president, or a manager assigned or delegated in accordance with corporate procedures, with such delegation submitted in writing if required by the Department, who is responsible for manufacturing, production, or operating facilities and is authorized to make management decisions which govern the operation of the regulated facility;
  - (b) In the case of a partnership, by a general partner;
  - (c) In the case of a sole proprietorship, by the proprietor; or
  - (d) In the case of a municipal, state, federal, or other public entity, by either a principal executive officer, or ranking elected official.



FORM <b>1</b> GENERAL		U.S. ENVIRONMENTAL PROTECTION AGENCY <b>GENERAL INFORMATION</b> Consolidated Permits Program <i>(Read the "General Instructions" before starting.)</i>	I. EPA I.D. NUMBER ALR000054007
LABEL ITEMS I. EPA I.D. NUMBER III. FACILITY NAME V. FACILITY MAILING ADDRESS VI. FACILITY LOCATION		PLEASE PLACE LABEL IN THIS SPACE	GENERAL INSTRUCTIONS If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

**II. POLLUTANT CHARACTERISTICS**

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	Mark "X"			SPECIFIC QUESTIONS	Mark "X"		
	YES	NO	FORM ATTACHED		YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X		B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)	X		X	D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)		X		F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

**III. NAME OF FACILITY**

c	1	SKIP	Alabama Power Company - Theodore Cogeneration Plant
---	---	------	---

**IV. FACILITY CONTACT**

c	2	A. NAME & TITLE (last, first, & title)	Mike Godfrey, Manager - Environmental Affairs	B. PHONE (area code & no.)	(205) 257-6131
---	---	--	---	----------------------------	----------------

**V. FACILITY MAILING ADDRESS**

c	3	A. STREET OR P.O. BOX	P.O. Box 2641, BIN 12N-0830		
c	4	B. CITY OR TOWN	Birmingham	C. STATE	AL
c	5	D. ZIP CODE	35291		

**VI. FACILITY LOCATION**

c	5	A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER	7910 Rangeline Road		
c	6	B. COUNTY NAME	Mobile		
c	6	C. CITY OR TOWN	Theodore	D. STATE	AL
c	6	E. ZIP CODE	36582		
c	6	F. COUNTY CODE (if known)			

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)			
A. FIRST		B. SECOND	
C	7	C	7
15	16	15	16
4931 (specify) Electric and other services		(specify)	
C. THIRD		D. FOURTH	
C	7	C	7
15	16	15	16
(specify)		(specify)	

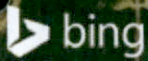
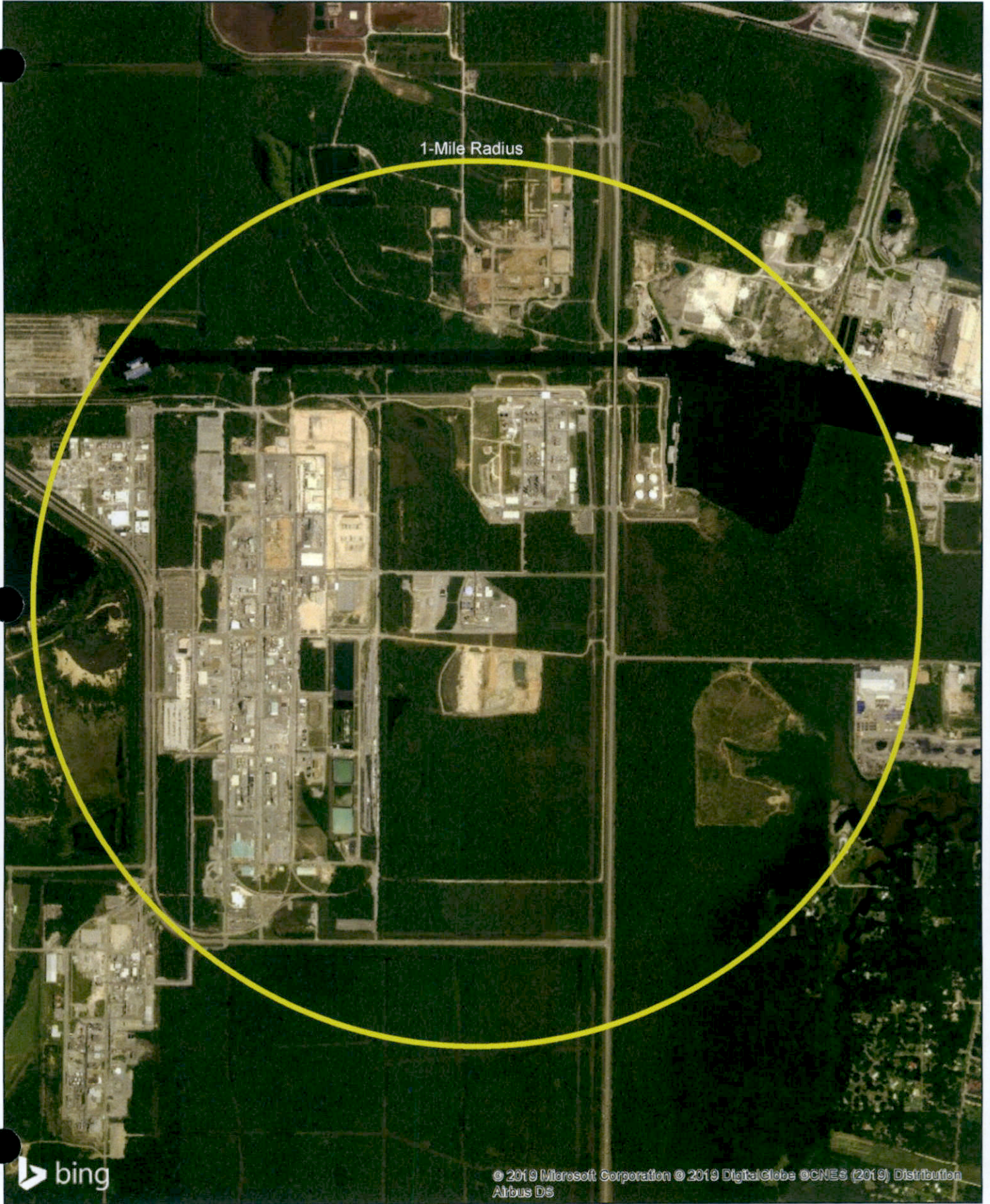
VIII. OPERATOR INFORMATION	
A. NAME	
C	8
15	16
Alabama Power Company	
B. Is the name listed in Item VIII-A also the owner? <input type="checkbox"/> YES <input type="checkbox"/> NO	

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box: if "Other," specify.)		D. PHONE (area code & no.)	
F = FEDERAL	M = PUBLIC (other than federal or state)	C	A
S = STATE	O = OTHER (specify)	15	16
P = PRIVATE		17	18
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# Plant Theodore 1-Mile Radius Map

1-Mile Radius



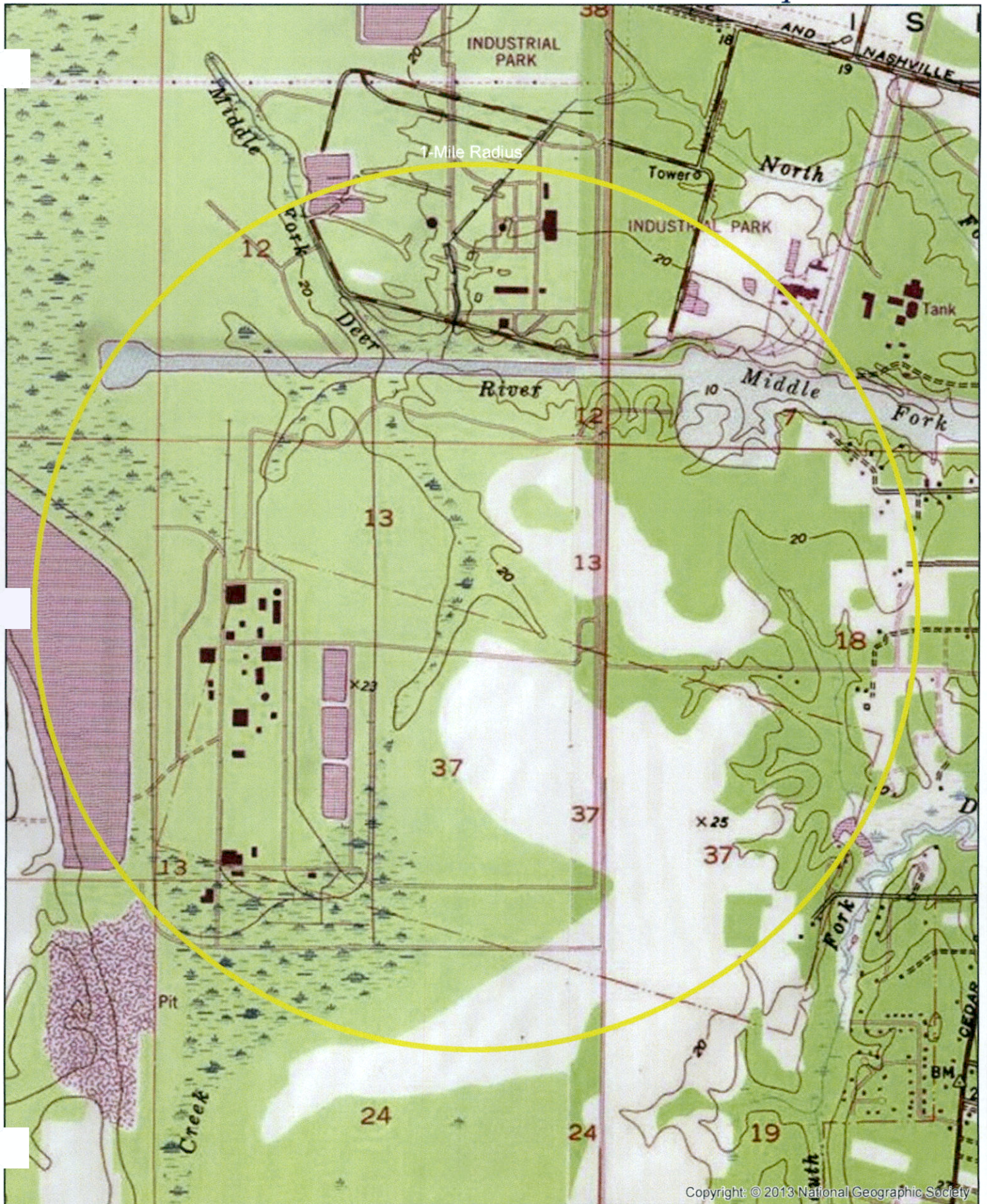
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Alabama Power Company





# Plant Theodore 1-Mile Radius Map



Copyright: © 2013 National Geographic Society

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Alabama Power Company

2,000 1,000 0 2,000 4,000 Feet

Alabama Power





## **General Comments – Form 2C**

All wastewater discharge points are included in Form 2C. Specific details regarding each outfall are included in the following information.

For DMR reporting purposes, APC requests the existing discharge points retain their current discharge number designation.

### **Section II. Part A.**

The Water Use Diagram included in this application reflects plant wastewater flow paths and discharge points under the current operating conditions.

Due to changing plant operating conditions, actual total plant water usage is irregular as it will differ over time with varying operating conditions. The flows shown on the water use diagram are average flows calculated from actual flows measured during the calendar years 2016 through 2018.

### **Section II. Part B. 1**

#### **001 – Cooling Tower Blowdown, Boiler Blowdown, and Low Volume Wastewater**

This is the final process wastewater discharge point for the plant. Effluent from this discharge point is a combination of all process wastewaters from the plant.

#### **01A – Low Volume Wastewater**

All low volume wastewaters are combined at this internal point before combining with other plant effluents and discharged through 001.

### **Section II. Part B. 2b.**

Due to the fluctuating demand for electricity and plant operating conditions, the actual discharge flows associated with electrical generation vary greatly. For this reason, the average flows listed in this section were calculated from actual values reported at NPDES discharge locations (other than no flow or no discharge values) for the time period between January 1, 2016 and December 31, 2018.

### **Section V.**

The format used for data reporting is similar to previously submitted APC NPDES permits.

“Less than” (<) values result when the detectable concentration of a sample is less than the reporting limit of the sufficiently sensitive test method used to analyze the sample. “Less than” data in this report will be computed as follows:

To calculate a mean when a “less than” value appears in the data, for all parameters except flow, the resultant of below detection was changed to a zero and added to other data and used to calculate the average value.

All long-term average data and minimum and maximum pH values were acquired from NPDES permit compliance samples collected between January 1, 2018 and December 31, 2018 and the repermitting sampling event on February 20, 2019.

#### **Section V. Part B**

Per correspondence with ADEM, Escherichia Coli (E. Coli) was sampled in place of Fecal Coliform. Fecal Coliform should be removed from the form and replaced with E. Coli.

Radioactivity was not sampled as part of this application as it is believed absent, except for naturally occurring radioactive material.

#### **Section V. Part C**

Dioxin was not sampled as part of this application because this site does not use or manufacture one of the following compounds:

- 2, 4, 5-trichlorophenoxy acetic acid, (2, 4, 5-T);
- 2-(2, 4, 5-trichlorophenoxy) propanoic acid, (Silvex, 2, 4, 5-TP);
- 2-(2, 4, 5-trichlorophenoxy) ethyl 2, 2-dichloropropionate, (Erbon);
- 0, 0-dimethyl 0-(2, 4, 5-trichlorophenyl) phosphorothioate, (Ronnell);
- 2, 4, 5-trichlorophenol, (TCP); or
- Hexachlorophene, (HCP)

Per the requirements of 40 CFR 122, Appendix D, Table I, the testing of GC/MS Pesticide Fractions has been suspended. For these corresponding discharges, an "n/a" has been shown on the form next to the corresponding pollutants in Section V. Part C to indicate the suspension of the testing requirements.

Per the list of toxic pollutants listed on 40 CFR 122, Appendix D, Table II, the volatiles listed which require sampling have been reduced and no longer include 4V. Bis (*Chloromethyl*) Ether, 13V. Dichlorodifluoromethane, or 30V. Trichlorodifluoromethane. An "n/a" has been shown on the form next to these volatiles.

The Certificate of Analysis, which contains the analytical results of both the grab and composite samples, are attached following the data provided for each discharge point presented in Part V.



CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?  
 YES (complete the following table)  NO (go to Section III)

1. OUTFALL NUMBER (list)	2. OPERATION(S) CONTRIBUTING FLOW (list)	3. FREQUENCY		4. FLOW				C. DURATION (in days)
		a. DAYS PER WEEK (specify average)	b. MONTHS PER YEAR (specify average)	a. FLOW RATE (in mgd)		B. TOTAL VOLUME (specify with units)		
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	
N/A								

**III. PRODUCTION**

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?  
 YES (complete Item III-B)  NO (go to Section IV)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (or other measure of operation)?  
 YES (complete Item III-C)  NO (go to Section IV)

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION			2. AFFECTED OUTFALLS (list outfall numbers)
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (specify)	
N/A			

**IV. IMPROVEMENTS**

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operations of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.  
 YES (complete the following table)  NO (go to Item IV-B)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
	a. NO.	b. SOURCE OF DISCHARGE		a. REQUIRED	b. PROJECTED
N/A					

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED



EPA I.D. NUMBER (copy from Item 1 of Form 1)

ALR000054007

CONTINUED FROM PAGE 2

**V. INTAKE AND EFFLUENT CHARACTERISTICS**

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided.

NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
NONE			

**VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS**

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

YES (list all such pollutants below )

NO (go to Item VI-B)

**VII. BIOLOGICAL TOXICITY TESTING DATA**

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 3 years?

YES (identify the test(s) and describe their purposes below)

NO (go to Section VIII)

*(This area is currently blank as the respondent selected "NO")*

**VIII. CONTRACT ANALYSIS INFORMATION**

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?


YES (list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)

NO (go to Section IX)

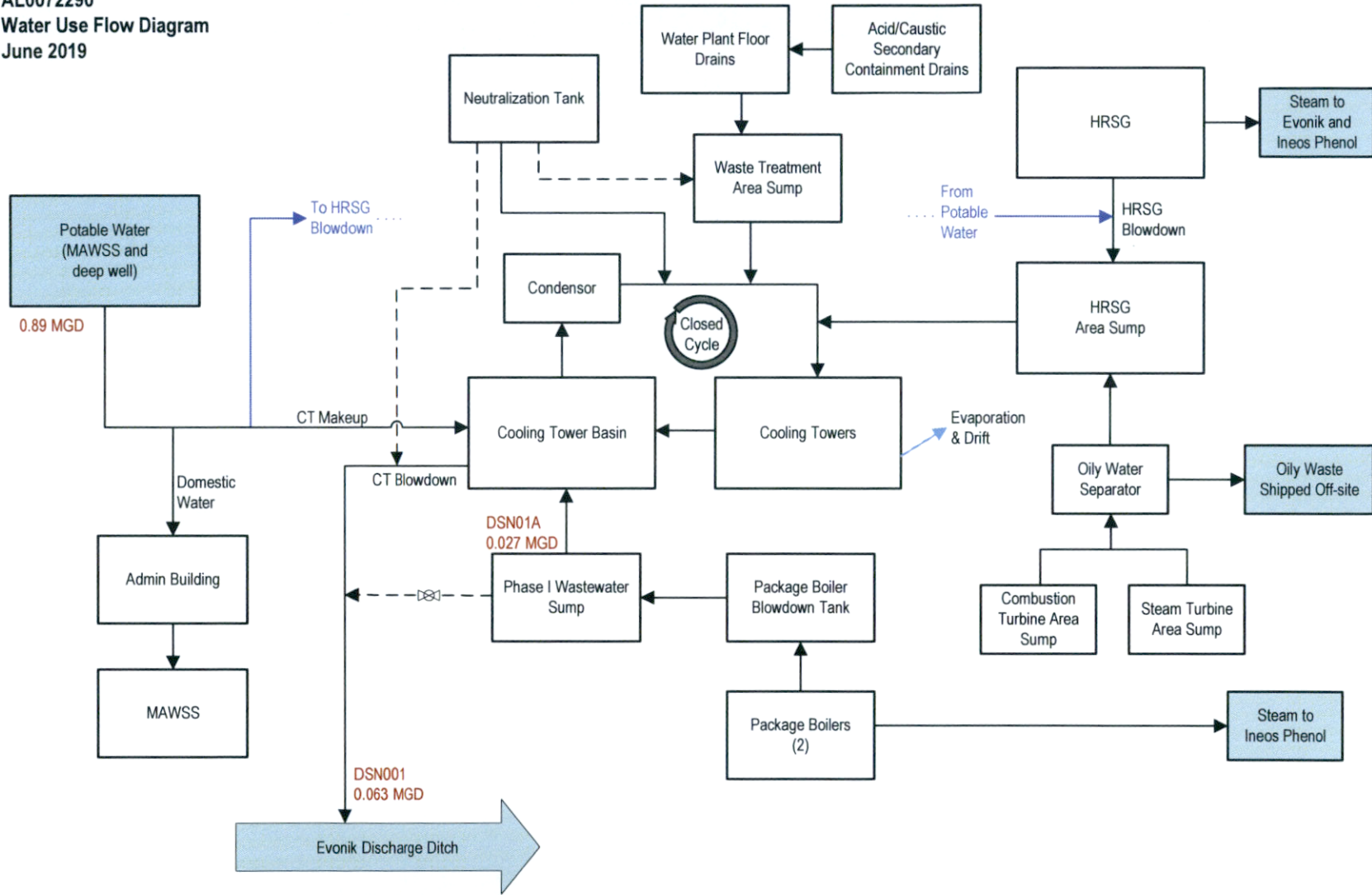
A. NAME	B. ADDRESS	C. TELEPHONE (area code & no.)	D. POLLUTANTS ANALYZED (list)
Pace Analytical Services	3516 Greensboro Ave. Tuscaloosa, AL 35401	(205) 614-6630	Refer to attached Certificate of Analyses

**IX. 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 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.

A. NAME & OFFICIAL TITLE (type or print) Susan B. Comensky, Vice President of Environmental Affairs	B. PHONE NO. (area code & no.) (205) 257-0298
C. SIGNATURE 	D. DATE SIGNED 7/2/19

**THEODORE COGENERATION PLANT**  
**AL0072290**  
**Water Use Flow Diagram**  
**June 2019**





# Plant Theodore General Arrangement Map



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# Plant Theodore General Arrangement Map



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 Alabama Power





PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER (copy from Item 1 of Form 1)  
ALR000054007

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)	OUTFALL NO. 001
--	--------------------

PART A – 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.

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	2.2						1	mg/L		<2.0		1
b. Chemical Oxygen Demand (COD)	46.8						1	mg/L		<5.0		1
c. Total Organic Carbon (TOC)	19.4						1	mg/l		2.24		1
d. Total Suspended Solids (TSS)	<2.5				<2.5		5	mg/l		<2.5		1
e. Ammonia (as N)	<0.1						1	mg/l		<0.1		1
f. Flow	VALUE 0.090		VALUE		VALUE 0.063		1	MGD		VALUE 0.13		1
g. Temperature (winter)	VALUE 27.2		VALUE		VALUE 20.3		19	°C		VALUE 17.9		1
h. Temperature (summer)	VALUE 31.1		VALUE		VALUE 26.2		18	°C		VALUE		0
i. pH	MINIMUM 6.25	MAXIMUM 7.55	MINIMUM	MAXIMUM			13	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24859-67-9)			2.70						1	mg/l		0.17		1
b. Chlorine, Total Residual			<0.05						13	mg/l		1.80		1
c. Color			43.0						1	ADMI		<10		1
d. Fecal Coliform			<1						1	MPN100ml		<1		1
e. Fluoride (16984-48-8)			5.04						1	mg/l		0.73		1
f. Nitrate-Nitrite (as N)			1.08						1	mg/l		<0.3		1

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1)	(2) MASS	(1)	(2) MASS	(1)	(2) MASS				(1)	(2) MASS	
			CONCENTRATION		CONCENTRATION		CONCENTRATION					CONCENTRATION		
g. Nitrogen, Total Organic (as N)			<0.681					1	mg/l		<0.1		1	
h. Oil and Grease			<5					5	mg/l		<5		1	
i. Phosphorus (as P), Total (7723-14-0)			1.96				1.46	5	mg/l		0.168		1	
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (as SO <sub>4</sub> ) (14808-79-8)			287					1	mg/l		29.1		1	
l. Sulfide (as S)			0.050					1	mg/l		0.010		1	
m. Sulfite (as SO <sub>3</sub> ) (14265-45-3)			<4					1	mg/l		<4		1	
n. Surfactants			0.11					1	mg/l		<0.05		1	
o. Aluminum, Total (7429-90-5)			1.16					1	mg/l		0.232		1	
p. Barium, Total (7440-39-3)			0.202					1	mg/l		0.0255		1	
q. Boron, Total (7440-42-8)			0.201					1	mg/l		<0.1015		1	
r. Cobalt, Total (7440-48-4)			0.00335					1	mg/l		<0.000203		1	
s. Iron, Total (7439-89-6)			1.33					1	mg/l		0.0236		1	
t. Magnesium, Total (7439-95-4)			9.42					1	mg/l		1.03		1	
u. Molybdenum, Total (7439-98-7)			0.0234					1	mg/l		<0.000203		1	
v. Manganese, Total (7439-96-5)			0.0285					1	mg/l		0.000781		1	
w. Tin, Total (7440-31-5)			0.000467					1	mg/l		<0.000203		1	
x. Titanium, Total (7440-32-6)			<0.001015					1	mg/l		<0.001015		1	

EPA I.D. NUMBER (copy from Item 1 of Form 1)

OUTFALL NUMBER

ALR000054007

001

CONTINUED FROM PAGE 3 OF FORM 2-C

**PART C -** If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2c for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
<b>METALS, CYANIDE, AND TOTAL PHENOLS</b>															
1M. Antimony, Total (7440-36-0)	X			0.00941						1	mg/l		<0.000203		1
2M. Arsenic, Total (7440-38-2)	X			0.00220						1	mg/l		<0.000203		1
3M. Beryllium, Total (7440-41-7)	X			0.000385						1	mg/l		<0.000203		1
4M. Cadmium, Total (7440-43-9)	X			<0.000203						1	mg/l		0.000269		1
5M. Chromium, Total (7440-47-3)	X			0.000451						1	mg/l		<0.000203		1
6M. Copper, Total (7440-50-8)	X			0.00439						1	mg/l		0.000733		1
7M. Lead, Total (7439-92-1)	X			<0.000203						1	mg/l		<0.000203		1
8M. Mercury, Total (7439-97-6)	X			11.2						1	ng/l		<5		1
9M. Nickel, Total (7440-02-0)	X			0.00677						1	mg/l		<0.001015		1
10M. Selenium, Total (7782-49-2)	X			0.000582						1	mg/l		<0.000203		1
11M. Silver, Total (7440-22-4)	X			<0.000203						1	mg/l		<0.000203		1
12M. Thallium, Total (7440-28-0)	X			<0.000203						1	mg/l		<0.000203		1
13M. Zinc, Total (7440-66-6)	X			0.0408						1	mg/l		0.0217		1
14M. Cyanide, Total (57-12-5)	X			<0.010						1	mg/l		<0.010		1
15M. Phenols, Total	X			<0.10						1	mg/l		<0.10		1
<b>DIOXIN</b>															
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											



CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X			<0.100						1	mg/l		<0.100		1
2V. Acrylonitrile (107-13-1)	X			<0.100						1	mg/l		<0.100		1
3V. Benzene (71-43-2)	X			<0.005						1	mg/l		<0.005		1
4V. Bis (Chloro- methyl) Ether (542-88-1)				n/a						0			n/a		0
5V. Bromoform (75-25-2)	X			<0.005						1	mg/l		<0.005		1
6V. Carbon Tetrachloride (58-23-5)	X			<0.005						1	mg/l		<0.005		1
7V. Chlorobenzene (108-90-7)	X			<0.005						1	mg/l		<0.005		1
8V. Chlorodi- bromomethane (124-48-1)	X			<0.005						1	mg/l		<0.005		1
9V. Chloroethane (75-00-3)	X			<0.010						1	mg/l		<0.010		1
10V. 2-Chloro- ethylvinyl Ether (110-75-8)	X			<0.010						1	mg/l		<0.010		1
11V. Chloroform (67-66-3)	X			<0.005						1	mg/l		0.025		1
12V. Dichloro- bromomethane (75-27-4)	X			<0.005						1	mg/l		0.008		1
13V. Dichloro- difluoromethane (75-71-8)				n/a						0			n/a		0
14V. 1,1-Dichloro- ethane (75-34-3)	X			<0.005						1	mg/l		<0.005		1
15V. 1,2-Dichloro- ethane (107-06-2)	X			<0.005						1	mg/l		<0.005		1
16V. 1,1-Dichloro- ethylene (75-35-4)	X			<0.005						1	mg/l		<0.005		1
17V. 1,2-Dichloro- propane (78-87-5)	X			<0.005						1	mg/l		<0.005		1
18V. 1,3-Dichloro- propylene (542-75-6)	X			<0.005						1	mg/l		<0.005		1
19V. Ethylbenzene (100-41-4)	X			<0.005						1	mg/l		<0.005		1
20V. Methyl Bromide (74-83-9)	X			<0.010						1	mg/l		<0.010		1
21V. Methyl Chloride (74-87-3)	X			<0.005						1	mg/l		<0.005		1

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (continued)															
22V. Methylene Chloride (75-09-2)	X			<0.005						1	mg/l		<0.005		1
23V. 1,1,2,2-Tetrachloroethane (79-34-9)	X			<0.005						1	mg/l		<0.005		1
24V. Tetrachloroethylene (127-18-4)	X			<0.005						1	mg/l		<0.005		1
25V. Toluene (108-88-3)	X			<0.005						1	mg/l		<0.005		1
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X			<0.005						1	mg/l		<0.005		1
27V. 1,1,1-Trichloroethane (71-55-6)	X			<0.005						1	mg/l		<0.005		1
28V. 1,1,2-Trichloroethane (79-00-5)	X			<0.005						1	mg/l		<0.005		1
29V. Trichloroethylene (79-01-6)	X			<0.005						1	mg/l		<0.005		1
30V. Trichlorofluoromethane (75-69-4)				n/a						0			n/a		0
31V. Vinyl Chloride (75-01-4)	X			<0.002						1	mg/l		<0.002		1
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X			<0.009						1	mg/l		<0.009		1
2A. 2,4-Dichlorophenol (120-83-2)	X			<0.009						1	mg/l		<0.009		1
3A. 2,4-Dimethylphenol (105-67-9)	X			<0.009						1	mg/l		<0.009		1
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X			<0.047						1	mg/l		<0.047		1
5A. 2,4-Dinitrophenol (51-28-5)	X			<0.047						1	mg/l		<0.047		1
6A. 2-Nitrophenol (88-75-5)	X			<0.009						1	mg/l		<0.009		1
7A. 4-Nitrophenol (100-02-7)	X			<0.047						1	mg/l		<0.047		1
8A. P-Chloro-M-Cresol (59-50-7)	X			<0.009						1	mg/l		<0.009		1
9A. Pentachlorophenol (87-86-5)	X			<0.023						1	mg/l		<0.023		1
10A. Phenol (108-95-2)	X			<0.009						1	mg/l		<0.009		1
11A. 2,4,6-Trichlorophenol (88-05-2)	X			<0.009						1	mg/l		<0.009		1

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1)	(2) MASS	(1)	(2) MASS	(1)	(2) MASS				(1)	(2) MASS	
				CONCENTRATION		CONCENTRATION		CONCENTRATION					CONCENTRATION		
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X			<0.009						1	mg/l		<0.009		1
2B. Acenaphthylene (208-96-8)	X			<0.009						1	mg/l		<0.009		1
3B. Anthracene (120-12-7)	X			<0.009						1	mg/l		<0.009		1
4B. Benzidine (92-87-5)	X			<0.047						1	mg/l		<0.047		1
5B. Benzo (a) Anthracene (56-55-3)	X			<0.009						1	mg/l		<0.009		1
6B. Benzo (a) Pyrene (50-32-8)	X			<0.009						1	mg/l		<0.009		1
7B. 3,4-Benzo- fluoranthene (205-99-2)	X			<0.009						1	mg/l		<0.009		1
8B. Benzo (ghi) Perylene (191-24-2)	X			<0.009						1	mg/l		<0.009		1
9B. Benzo (k) Fluoranthene (207-08-9)	X			<0.009						1	mg/l		<0.009		1
10B. Bis (2-Chloro- ethoxy) Methane (111-91-1)	X			<0.009						1	mg/l		<0.009		1
11B. Bis (2-Chloro- ethyl) Ether (111-44-4)	X			<0.009						1	mg/l		<0.009		1
12B. Bis (2- Chloroisopropyl) Ether (102-80-1)	X			<0.009						1	mg/l		<0.009		1
13B. Bis (2-Ethyl- hexyl) Phthalate (117-81-7)	X			<0.009						1	mg/l		<0.009		1
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X			<0.009						1	mg/l		<0.009		1
15B. Butyl Benzyl Phthalate (85-68-7)	X			<0.009						1	mg/l		<0.009		1
16B. 2-Chloro- naphthalene (91-58-7)	X			<0.009						1	mg/l		<0.009		1
17B. 4-Chloro- phenyl Phenyl Ether (7005-72-3)	X			<0.009						1	mg/l		<0.009		1
18B. Chrysene (218-01-9)	X			<0.009						1	mg/l		<0.009		1
19B. Dibenz (a,h) Anthracene (53-70-3)	X			<0.009						1	mg/l		<0.009		1
20B. 1,2-Dichloro- benzene (95-50-1)	X			<0.005						1	mg/l		<0.005		1
21B. 1,3-Di-chloro- benzene (541-73-1)	X			<0.005						1	mg/l		<0.005		1

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)															
22B. 1,4-Dichlorobenzene (106-46-7)	X			<0.005						1	mg/l		<0.005		1
23B. 3,3-Dichlorobenzidine (91-94-1)	X			<0.019						1	mg/l		<0.019		1
24B. Diethyl Phthalate (84-66-2)	X			<0.009						1	mg/l		<0.009		1
25B. Dimethyl Phthalate (131-11-3)	X			<0.009						1	mg/l		<0.009		1
26B. Di-N-Butyl Phthalate (84-74-2)	X			<0.009						1	mg/l		<0.009		1
27B. 2,4-Dinitrotoluene (121-14-2)	X			<0.009						1	mg/l		<0.009		1
28B. 2,6-Dinitrotoluene (606-20-2)	X			<0.009						1	mg/l		<0.009		1
29B. Di-N-Octyl Phthalate (117-84-0)	X			<0.009						1	mg/l		<0.009		1
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)	X			<0.047						1	mg/l		<0.047		1
31B. Fluoranthene (206-44-0)	X			<0.009						1	mg/l		<0.009		1
32B. Fluorene (86-73-7)	X			<0.009						1	mg/l		<0.009		1
33B. Hexachlorobenzene (118-74-1)	X			<0.009						1	mg/l		<0.009		1
34B. Hexachlorobutadiene (87-68-3)	X			<0.009						1	mg/l		<0.009		1
35B. Hexachlorocyclopentadiene (77-47-4)	X			<0.009						1	mg/l		<0.009		1
36B Hexachloroethane (67-72-1)	X			<0.009						1	mg/l		<0.009		1
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)	X			<0.009						1	mg/l		<0.009		1
38B. Isophorone (78-59-1)	X			<0.009						1	mg/l		<0.009		1
39B. Naphthalene (91-20-3)	X			<0.009						1	mg/l		<0.009		1
40B. Nitrobenzene (98-95-3)	X			<0.009						1	mg/l		<0.009		1
41B. N-Nitrosodimethylamine (62-75-9)	X			<0.009						1	mg/l		<0.009		1
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X			<0.009						1	mg/l		<0.009		1

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (continued)															
43B. N-Nitrosodiphenylamine (86-30-6)	X			<0.009						1	mg/l		<0.009		1
44B. Phenanthrene (85-01-8)	X			<0.009						1	mg/l		<0.009		1
45B. Pyrene (129-00-0)	X			<0.009						1	mg/l		<0.009		1
46B. 1,2,4-Trichlorobenzene (120-82-1)	X			<0.009						1	mg/l		<0.009		1
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)				n/a									n/a		
2P. α-BHC (319-84-6)				n/a									n/a		
3P. β-BHC (319-85-7)				n/a									n/a		
4P. γ-BHC (58-89-9)				n/a									n/a		
5P. δ-BHC (319-86-8)				n/a									n/a		
6P. Chlordane (57-74-9)				n/a									n/a		
7P. 4,4'-DDT (50-29-3)				n/a									n/a		
8P. 4,4'-DDE (72-55-9)				n/a									n/a		
9P. 4,4'-DDD (72-54-8)				n/a									n/a		
10P. Dieldrin (60-57-1)				n/a									n/a		
11P. α-Endosulfan (115-29-7)				n/a									n/a		
12P. β-Endosulfan (115-29-7)				n/a									n/a		
13P. Endosulfan Sulfate (1031-07-8)				n/a									n/a		
14P. Endrin (72-20-8)				n/a									n/a		
15P. Endrin Aldehyde (7421-93-4)				n/a									n/a		
16P. Heptachlor (76-44-8)				n/a									n/a		

EPA I.D. NUMBER (copy from Item 1 of Form 1)	OUTFALL NUMBER
ALR000054007	001

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (continued)															
17P. Heptachlor Epoxide (1024-57-3)				n/a										n/a	
18P. PCB-1242 (53469-21-9)				n/a										n/a	
19P. PCB-1254 (11097-69-1)				n/a										n/a	
20P. PCB-1221 (11104-28-2)				n/a										n/a	
21P. PCB-1232 (11141-16-5)				n/a										n/a	
22P. PCB-1248 (12672-29-6)				n/a										n/a	
23P. PCB-1260 (11096-82-5)				n/a										n/a	
24P. PCB-1016 (12674-11-2)				n/a										n/a	
25P. Toxaphene (8001-35-2)				n/a										n/a	

Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
 (205) 664 - 6032 or 6171  
 (205) 257-1654

# CERTIFICATE OF ANALYSIS



To: **Catie Boss**  
 Theodore Cogen Facility

Customer Account : NTHE001R  
 Sample Date/Time : 20-Feb-19 10:55 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore CTB/LVW/SW  
 Repermitting-DSN001

Laboratory ID Number: AZ04536

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
<b>Metals, Cyanide, Total Phenols</b>										
* Mercury, Total by CVAF	ABB	2/21/2019	EPA 245.7		1	0.9	5		11.2	ng/L
Cyanide, Total, by Pace		3/1/2019	SM 4500-CN CE		1		0.01		< 0.010	mg/L
Phenol, Total, by TTL		3/8/2019	SM 5330		1		0.1		< 0.10	mg/L
<b>General Characteristics</b>										
Flow (MGD)	JBH/L	2/20/2019	Field Data		1				0.06	MGD
Field Temperature	JBH/L	2/20/2019	SM-2550		1				22.9	Deg. C
Field Sulfite	JBH/L	2/20/2019	HACH 8216		1	4			Not Detected	mg/l
Field pH	JBH/L	2/20/2019	SM-4500H		1				6.98	SU
Chlorine, Total Residual	JBH/L	2/20/2019	Field Test		1	0.05			0.01	mg/L
* Escherichia Coli (E. Coli)	HRG	2/21/2018	SM 9223B		1	1			<1	MPN/100ml
* Incubation Start Time	HRG	2/20/2019	SM 9223B		1				15:28	HH MM
* Oil and Grease	HRG	2/28/2019	EPA 1664B		1	1.4	5		< 5	mg/L

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: Cyanide and Total Phenols analysis performed by Pace Tuscaloosa\_ fkk 2/22/19

cc: Pepe Daw  
 Dutton/Ryals  
 Angel Daw

Quality Control

Supervision

Reported: 3/22/2019

Version: 4.4

Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
 (205) 664 - 6032 or 6171  
 X (205) 257-1654

# CERTIFICATE OF ANALYSIS

 Alabama Power



To: **Catie Boss**  
 Theodore Cogen Facility

Customer Account : NTHE001R  
 Sample Date/Time : 20-Feb-19 10:45 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore CTB/LVW/SW  
 Repermitting-DSN001

Laboratory ID Number: AZ04545

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
<b>Volatile Compounds</b>										
Acrolein, by Pace Tuscaloosa		3/1/2019	EPA 624				0.1		< 0.100	mg/L
Acrylonitrile, by Pace Tuscaloosa		3/1/2019	EPA 624				0.1		< 0.100	mg/L
Carbon Tetrachloride, by Pace Tuscalo		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Benzene, by Pace Tuscaloosa		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Trichloroethene, by Pace Tuscaloosa		3/1/2019	EPA 624				0.005		< 0.005	mg/L
1,1-Dichloroethane, by Pace Tuscaloo		3/1/2019	EPA 624				0.005		< 0.005	mg/L
1,1,1-Trichloroethane, by Pace Tuscal		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Bromoform, by Pace Tuscaloosa		3/1/2019	EPA 624				0.005		< 0.005	mg/l
Vinyl Chloride, by Pace Tuscaloosa		3/1/2019	EPA 624				0.002		< 0.002	mg/L
Chlorobenzene, by Pace Tuscaloosa		3/1/2019	EPA 624				0.005		< 0.005	mg/l
Dibromochloromethane, by Pace Tusc		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Tetrachloroethene, by Pace Tuscaloos		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Chloroethane, by Pace TuscaloosaL		3/1/2019	EPA 624				0.01		< 0.010	mg/l
rans-1,2-Dichloroethene, by Pace Tu		3/1/2019	EPA 624				0.005		< 0.005	mg/L
2-Chloroethyl vinyl ether, by Pace Tusc		3/1/2019	EPA 624				0.01		< 0.010	mg/L
Chloroform, by Pace Tuscaloosa		3/1/2019	EPA 624				0.005		< 0.005	mg/L
1,1,2-Trichloroethane, by Pace Tuscalo		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Bromodichloromethane, by Pace Tusc		3/1/2019	EPA 624				0.005		< 0.005	mg/L
1,2-Dichloroethane, by Pace Tuscaloo		3/1/2019	EPA 624				0.005		< 0.005	mg/l
1,1-Dichloroethene, by Pace Tuscaloos		3/1/2019	EPA 624				0.005		< 0.005	mg/l

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\* Test results for those accredited parameters meet all 2003 NELAP and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: BOD, COD, Color, Sulfide, Surfactants, EPA 624 and EPA 625 analyses performed by Pace Tuscaloosa, \_fkk 2/22/19

cc: **Pepe Daw**  
**Dutton/Ryals**  
**Angel Daw**

Quality Control \_\_\_\_\_

Supervision \_\_\_\_\_

Reported: 3/22/2019

Version: 4.4



# CERTIFICATE OF ANALYSIS



Customer Account : NTHE001R  
 Sample Date/Time : 20-Feb-19 10:45 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Client: **Catie Boss**  
 Theodore Cogen Facility

Description: Theodore CTB/LVW/SW  
 Repermitting-DSN001

Laboratory ID Number: AZ04545

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
1,2-Dichloropropane, by Pace Tuscalo		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
cis-1,3-Dichloropropene, by Pace Tusc		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l
trans-1,3-Dichloropropene, by Pace Tu		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l
1,2-Dichlorobenzene, by Pace Tuscalo		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
1,3-Dichlorobenzene, by Pace Tuscalo		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Bromomethane, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.01		< 0.010	mg/l
Ethylbenzene, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
1,4-Dichlorobenzene, by Pace Tuscalo		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Chloromethane, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Methylene Chloride, by Pace Tuscaloo		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
1,1,2,2-Tetrachloroethane, by Pace Tu		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l
Toluene, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
<b>Metals, Cyanide, Total Phenols</b>										
Total, Low Level Prep Date	DLJ	2/21/2019	EPA 1638		1				2/21/19	DATE
Aluminum, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.003379	0.01015		1.16	mg/L
Antimony, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000172	0.000203		0.00941	mg/L
Arsenic, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000068	0.000203		0.00220	mg/L
Barium, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000068	0.000203		0.202	mg/L
Beryllium, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000068	0.000203		0.000385	mg/L
Boron, Total	GAS	2/25/2019	EPA 200.7		1.015	0.033495	0.1015		0.201	mg/L
Cadmium, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000068	0.000203	U	Not Detected	mg/L

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\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: BOD, COD, Color, Sulfide, Surfactants, EPA 624 and EPA 625 analyses performed by Pace Tuscaloosa\_ fkk 2/22/19

cc: Pepe Daw  
 Dutton/Ryals  
 Angel Daw

Quality Control \_\_\_\_\_ Supervision \_\_\_\_\_

Reported: 3/22/2019

Version: 4.4

Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
 (205) 664 - 6032 or 6171  
 (205) 257-1654

# CERTIFICATE OF ANALYSIS

 Alabama Power



To: **Catie Boss**  
 Theodore Cogen Facility

Customer Account : **NTHE001R**  
 Sample Date/Time : **20-Feb-19 10:45 AM**  
 Customer ID: **AL-0072280**  
 Delivery Date : **20-Feb-19**

Description: **Theodore CTB/LVW/SW**  
 Repermitting-DSN001

Laboratory ID Number: **AZ04545**

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
Calcium, Total	DLJ	2/25/2019	EPA 200.8			10.15	1.69505	5.075	107	mg/L
* Chromium, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000101	0.000203	0.000451	mg/L
* Cobalt, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000068	0.000203	0.00335	mg/L
* Copper, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000152	0.000203	0.00439	mg/L
Iron, Total	DLJ	2/25/2019	EPA 200.8			10.15	0.00812	0.016341	1.33	mg/L
* Lead, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000068	0.000203	< 0.000203	mg/L
Magnesium, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.169505	0.5075	9.42	mg/L
* Manganese, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000068	0.000203	0.0285	mg/L
* Molybdenum, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000068	0.000203	0.0234	mg/L
* Nickel, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000337	0.001015	0.00677	mg/L
* Selenium, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000172	0.000203	0.000582	mg/L
* Silver, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000101	0.000203	U Not Detected	mg/L
* Thallium, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000068	0.000203	U Not Detected	mg/L
Tin, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000068	0.000203	0.000467	mg/L
Titanium, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000337	0.001015	< 0.001015	mg/L
* Zinc, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000337	0.001015	0.0408	mg/L
<b>General Characteristics</b>										
Hardness, Total, (as CaCO3)	DLJ	2/25/2019	SM 2340 B			1			305	mg/L
Filter Completion Date	CRB	2/22/2019	SM 2540D			1			02/22/2019	Date
* Solids, Suspended	CRB	2/25/2019	SM 2540D			1		2.5	< 2.5	mg/L
Biochemical Oxygen Demand, 5 Day, b		2/21/2019	SM 5210 B-2001			1		2	2.2	mg/L

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\* Test results for these accredited parameters meet all 2003 NELAP and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: BOD, COD, Color, Sulfide, Surfactants, EPA 624 and EPA 625 analyses performed by Pace Tuscaloosa, \_fkk 2/22/19

cc: **Pepe Daw**  
**Dutton/Ryals**  
**Angel Daw**

Quality Control \_\_\_\_\_ Supervision \_\_\_\_\_

Reported: 3/22/2019

Version: 4.4

# CERTIFICATE OF ANALYSIS



To: **Catie Boss**  
 Theodore Cogen Facility

Customer Account : NTHE001R  
 Sample Date/Time : 20-Feb-19 10:45 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore CTB/LVW/SW  
 Repermitting-DSN001

Laboratory ID Number: AZ04545

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
* Bromide	CES	2/26/2019	EPA 300.0		1	0.04	0.08		2.70	mg/L
* Fluoride	CES	2/26/2019	EPA 300.0		2	0.04	0.08		5.04	mg/L
* Sulfate	CES	3/1/2019	EPA 300.0		5	3.75	5		287	mg/L
Color, by TTL		2/22/2019	SM 2120 E		1		10		43.0	ADMI
* Nitrogen, Nitrate/Nitrite	CES	3/5/2019	EPA 353.2		1	0.1	0.3		1.08	mg/L as N
Nitrogen, Total Organic	JCC	2/25/2019	EPA 351.3		1	0.1			< 0.681	mg/l as N
Sulfide, by TTL		2/25/2019	SM4500 S2 D		1		0.01		0.050	mg/l
Surfactants (Foaming Agents), by TTL		2/21/2019	SM 5540C		1		0.05		0.11	mg/l
* Phosphorus, Total	EMG	3/7/2019	SM 4500PE-TP		2	0.042	0.06		1.24	mg/L
Nitrogen, Ammonia by Gas Diffusion	JCC	2/21/2019	EPA 350.1		1	0.03	0.1		< 0.1	mg/L as N
* Nitrogen, Total Kjeldahl	JCC	2/25/2019	EPA 351.2		1	0.1	0.5		0.681	mg/L as N
* Total Organic Carbon	HRG	2/21/2019	SM 5310 B		1	0.5	2		19.4	mg/L
Chemical Oxygen Demand, by Pace		2/22/2019	SM 5220 D		1		5		46.8	mg/L
<b>Base/Neutral Compounds</b>										
Acenaphthene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Acenaphthylene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Anthracene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
Benzidine, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.047		< 0.047	mg/l
Benz(a)anthracene, by Pace Tuscaloo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Benzo(a)pyrene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Benzo(b)fluoranthene, by Pace Tuscal		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: BOD, COD, Color, Sulfide, Surfactants, EPA 624 and EPA 625 analyses performed by Pace Tuscaloosa\_fkk 2/22/19

cc: Pepe Daw  
 Dutton/Ryals  
 Angel Daw

Quality Control \_\_\_\_\_ Supervision \_\_\_\_\_

Reported: 3/22/2019

Version: 4.4

Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
 (205) 664 - 6032 or 6171  
 (205) 257-1654

# CERTIFICATE OF ANALYSIS

 Alabama Power



To: **Catie Boss**  
 Theodore Cogen Facility

Customer Account : **NTHE001R**  
 Sample Date/Time : **20-Feb-19 10:45 AM**  
 Customer ID: **AL-0072290**  
 Delivery Date : **20-Feb-19**

Description: **Theodore CTB/LVW/SW**  
**Repermitting-DSN001**

Laboratory ID Number: **AZ04545**

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
Benzo(g,h,i)perylene, by Pace Tuscalo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
Benzo(k)fluoranthene, by Pace Tuscal		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Bis(2-chloroethoxy)methane, by Pace		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
Bis(2-chloroethyl)ether, by Pace Tusca		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
Bis(2-chloroisopropyl)ether, by Pace Tu		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
Bis(2-ethylhexyl)phthalate, by Pace Tu		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
4-Bromophenyl phenyl ether, by Pace		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
Butyl benzyl phthalate, by Pace Tuscal		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
2-Chloronaphthalene, by Pace Tuscalo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
4-Chlorophenyl phenyl ether, by Pace		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
Chrysene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Dibenzo(a,h)anthracene, by Pace Tusc		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
3,3-Dichlorobenzidine, by Pace Tuscalo		2/25/2019	EPA 625.1		1		0.019		< 0.019	mg/L
Diethyl phthalate, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Dimethyl phthalate, by Pace Tuscaloos		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Di-n-butyl phthalate, by Pace Tuscaloo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
2,4-Dinitrotoluene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
2,6-Dinitrotoluene, by Pace Tuscaloos		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Di-n-octyl phthalate, by Pace Tuscaloo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
1,2-Diphenylhydrazine, by Pace Tuscal		2/25/2019	EPA 625.1		1		0.047		< 0.047	mg/L
Fluoranthene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAP and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: BOD, COD, Color, Sulfide, Surfactants, EPA 624 and EPA 625 analyses performed by Pace Tuscaloosa, fkk 2/22/19

cc: Pepe Daw  
 Dutton/Ryals  
 Angel Daw

Quality Control \_\_\_\_\_ Supervision \_\_\_\_\_

Reported: 3/22/2019

Version: 4.4

Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
 (205) 664 - 6032 or 6171  
 (205) 257-1654

 Alabama Power

# CERTIFICATE OF ANALYSIS



To: **Catie Boss**  
 Theodore Cogen Facility

Customer Account : **NTHE001R**  
 Sample Date/Time : **20-Feb-19 10:45 AM**  
 Customer ID: **AL-0072290**  
 Delivery Date : **20-Feb-19**

Description: **Theodore CTB/LVW/SW**  
**Repermitting-DSN001**

Laboratory ID Number: **AZ04545**

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
Fluorene, by Pace Tuscaloosa		2/25/2019	EPA 625.1				0.009		< 0.009	mg/L
Hexachlorobenzene, by Pace Tuscaloo		2/25/2019	EPA 625.1				0.009		< 0.009	mg/L
Hexachlorobutadiene, by Pace Tuscalo		2/25/2019	EPA 625.1				0.009		< 0.009	mg/L
Hexachlorocyclopentadiene, by Pace T		2/25/2019	EPA 625.1				0.009		< 0.009	mg/L
Hexachloroethane, by Pace Tuscaloosa		2/25/2019	EPA 625.1				0.009		< 0.009	mg/L
Indeno(1,2,3-cd)pyrene, by Pace Tusc		2/25/2019	EPA 625.1				0.009		< 0.009	mg/L
Isophorone, by Pace Tuscaloosa		2/25/2019	EPA 625.1				0.009		< 0.009	mg/L
Naphthalene, by Pace Tuscaloosa		2/25/2019	EPA 625.1				0.009		< 0.009	mg/L
Nitrobenzene, by Pace Tuscaloosa		2/25/2019	EPA 625.1				0.009		< 0.009	mg/L
N-Nitrosodimethylamine, by Pace Tusc		2/25/2019	EPA 625.1				0.009		< 0.009	mg/L
N-Nitrosodi-n-propylamine, by Pace Tu		2/25/2019	EPA 625.1				0.009		< 0.009	mg/L
N-Nitrosodiphenylamine, by Pace Tusc		2/25/2019	EPA 625.1				0.009		< 0.009	mg/L
Phenanthrene, by Pace Tuscaloosa		2/25/2019	EPA 625.1				0.009		< 0.009	mg/L
Pyrene, by Pace Tuscaloosa		2/25/2019	EPA 625.1				0.009		< 0.009	mg/L
2,4-Trichlorobenzene, by Pace Tuscal		2/25/2019	EPA 625.1				0.009		< 0.009	mg/L
<b>Acid Compounds</b>										
2-Chlorophenol, by Pace Tuscaloosa		2/25/2019	EPA 625.1				0.009		< 0.009	mg/l
2,4-Dichlorophenol, by Pace Tuscaloo		2/25/2019	EPA 625.1				0.009		< 0.009	mg/L
2,4-Dimethylphenol, by Pace Tuscaloo		2/25/2019	EPA 625.1				0.009		< 0.009	mg/L
4,6-Dinitro-2-methylphenol, by Pace Tu		2/25/2019	EPA 625.1				0.047		< 0.047	mg/L
2,4-Dinitrophenol, by Pace Tuscaloosa		2/25/2019	EPA 625.1				0.047		< 0.047	mg/L

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MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: BOD, COD, Color, Sulfide, Surfactants, EPA 624 and EPA 625 analyses performed by Pace Tuscaloosa, \_fkk 2/22/19

cc: **Pepe Daw**  
**Dutton/Ryals**  
**Angel Daw**

Quality Control \_\_\_\_\_ Supervision \_\_\_\_\_

Reported: 3/22/2019

Version: 4.4

Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
 (205) 664 - 6032 or 6171  
 (205) 257-1654

 Alabama Power

# CERTIFICATE OF ANALYSIS



To: Catie Boss  
 Theodore Cogen Facility

Customer Account : NTHE001R  
 Sample Date/Time : 20-Feb-19 10:45 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore CTB/LVW/SW  
 Repermitting-DSN001

Laboratory ID Number: AZ04545

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
2-Nitrophenol, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
4-Nitrophenol, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.047		< 0.047	mg/L
4-chloro-3-methylphenol, by Pace Tus		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Pentachlorophenol, by Pace Tuscaloos		2/25/2019	EPA 625.1		1		0.023		< 0.023	mg/L
Phenol, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
2,4,6-Trichlorophenol, by Pace Tuscal		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
<b>Miscellaneous</b>										
Method 625.1 - Extraction Date, by Pa SHM		2/22/2019			1				02/22/2019	

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MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: BOD, COD, Color, Sulfide, Surfactants, EPA 624 and EPA 625 analyses performed by Pace Tuscaloosa.\_fkk 2/22/19

cc: Pepe Daw  
 Dutton/Ryals  
 Angel Daw

Quality Control

 Supervision 

Reported: 3/22/2019

Version: 4.4



PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER (copy from Item 1 of Form 1)  
ALR000054007

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)	OUTFALL NO. 001A
--	---------------------

PART A – 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.

1. POLLUTANT	2. EFFLUENT							3. UNITS (specify if blank)		4. INTAKE (optional)						
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES				
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS					
a. Biochemical Oxygen Demand (BOD)	<2.0						1	mg/l		<2.0		1				
b. Chemical Oxygen Demand (COD)	<5.0						1	mg/l		<5.0		1				
c. Total Organic Carbon (TOC)	2.28						1	mg/l		2.24		1				
d. Total Suspended Solids (TSS)	4.1					<2.5	9	mg/l		<2.5		1				
e. Ammonia (as N)	<0.1						1	mg/l		<0.1		1				
f. Flow	VALUE	0.030		VALUE			VALUE	0.027		1	MGD		VALUE	0.13		1
g. Temperature (winter)	VALUE	31.4		VALUE			VALUE			1	°C		VALUE	17.9		1
h. Temperature (summer)	VALUE			VALUE			VALUE			0	°C		VALUE			0
i. pH	MINIMUM	7.2	MAXIMUM	7.2	MINIMUM		MAXIMUM			1	STANDARD UNITS					

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)			0.18						1	mg/l		0.17		1
b. Chlorine, Total Residual			1.43						1	mg/l		1.80		1
c. Color			19.0						1	ADMI		<10		1
d. Fecal Coliform			<1						1	MPN100ml		<1		1
e. Fluoride (16984-48-8)			0.63						1	mg/l		0.73		1
f. Nitrate-Nitrite (as N)			<0.3						1	mg/l		<0.3		1

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1)	(2) MASS	(1)	(2) MASS	(1)	(2) MASS				(1)	(2) MASS	
			CONCENTRATION		CONCENTRATION		CONCENTRATION					CONCENTRATION		
g. Nitrogen, Total Organic (as N)			<0.1					1	mg/l		<0.1		1	
h. Oil and Grease			<5				<5	9	mg/l		<5		1	
i. Phosphorus (as P), Total (7723-14-0)			0.271					1	mg/l		0.168		1	
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (as SO <sub>4</sub> ) (14808-79-8)			27.7					1	mg/l		29.1		1	
l. Sulfide (as S)			0.010					1	mg/l		0.010		1	
m. Sulfite (as SO <sub>3</sub> ) (14265-45-3)			<4					1	mg/l		<4		1	
n. Surfactants			<0.05					1	mg/l		<0.05		1	
o. Aluminum, Total (7429-90-5)			0.185					1	mg/l		0.232		1	
p. Barium, Total (7440-39-3)			0.0253					1	mg/l		0.0255		1	
q. Boron, Total (7440-42-8)			<0.1015					1	mg/l		<0.1015		1	
r. Cobalt, Total (7440-48-4)			<0.000203					1	mg/l		<0.000203		1	
s. Iron, Total (7439-89-6)			0.172					1	mg/l		0.0236		1	
t. Magnesium, Total (7439-95-4)			0.916					1	mg/l		1.03		1	
u. Molybdenum, Total (7439-98-7)			0.000771					1	mg/l		<0.000203		1	
v. Manganese, Total (7439-96-5)			0.00764					1	mg/l		0.000781		1	
w. Tin, Total (7440-31-5)			<0.000203					1	mg/l		<0.000203		1	
x. Titanium, Total (7440-32-6)			<0.001015					1	mg/l		<0.001015		1	



EPA I.D. NUMBER (copy from Item 1 of Form 1)

OUTFALL NUMBER

ALR000054007

001A

CONTINUED FROM PAGE 3 OF FORM 2-C

**PART C -** If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (all 7 pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
<b>METALS, CYANIDE, AND TOTAL PHENOLS</b>															
1M. Antimony, Total (7440-38-0)	X			0.000323						1	mg/l		<0.000203		1
2M. Arsenic, Total (7440-38-2)	X			<0.000203						1	mg/l		<0.000203		1
3M. Beryllium, Total (7440-41-7)	X			<0.000203						1	mg/l		<0.000203		1
4M. Cadmium, Total (7440-43-9)	X			<0.000203						1	mg/l		0.000269		1
5M. Chromium, Total (7440-47-3)	X			<0.000203						1	mg/l		<0.000203		1
6M. Copper, Total (7440-50-8)	X			0.00149						1	mg/l		0.000733		1
7M. Lead, Total (7439-92-1)	X			<0.000203						1	mg/l		<0.000203		1
8M. Mercury, Total (7439-97-6)	X			<5						1	ng/l		<5		1
9M. Nickel, Total (7440-02-0)	X			<0.001015						1	mg/l		<0.001015		1
10M. Selenium, Total (7782-49-2)	X			<0.000203						1	mg/l		<0.000203		1
11M. Silver, Total (7440-22-4)	X			<0.000203						1	mg/l		<0.000203		1
12M. Thallium, Total (7440-28-0)	X			<0.000203						1	mg/l		<0.000203		1
13M. Zinc, Total (7440-66-6)	X			0.0128						1	mg/l		0.0217		1
14M. Cyanide, Total (57-12-5)	X			<0.010						1	mg/l		<0.010		1
15M. Phenols, Total	X			<0.10						1	mg/l		<0.10		1
<b>DIOXIN</b>															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-8)				DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X			<0.100						1	mg/l		<0.100		1
2V. Acrylonitrile (107-13-1)	X			<0.100						1	mg/l		<0.100		1
3V. Benzene (71-43-2)	X			<0.005						1	mg/l		<0.005		1
4V. Bis (Chloromethyl) Ether (542-88-1)				n/a									n/a		
5V. Bromoform (75-25-2)	X			<0.010						1	mg/l		<0.005		1
6V. Carbon Tetrachloride (56-23-5)	X			<0.005						1	mg/l		<0.005		1
7V. Chlorobenzene (108-90-7)	X			<0.005						1	mg/l		<0.005		1
8V. Chlorodibromomethane (124-48-1)	X			<0.005						1	mg/l		<0.005		1
9V. Chloroethane (75-00-3)	X			<0.010						1	mg/l		<0.010		1
10V. 2-Chloroethylvinyl Ether (110-75-8)	X			<0.010						1	mg/l		<0.010		1
11V. Chloroform (67-66-3)	X			0.018						1	mg/l		0.025		1
12V. Dichlorobromomethane (75-27-4)	X			0.006						1	mg/l		0.008		1
13V. Dichlorodifluoromethane (75-71-8)				n/a									n/a		
14V. 1,1-Dichloroethane (75-34-3)	X			<0.005						1	mg/l		<0.005		1
15V. 1,2-Dichloroethane (107-06-2)	X			<0.005						1	mg/l		<0.005		1
16V. 1,1-Dichloroethylene (75-35-4)	X			<0.005						1	mg/l		<0.005		1
17V. 1,2-Dichloropropane (78-87-5)	X			<0.005						1	mg/l		<0.005		1
18V. 1,3-Dichloropropylene (542-75-6)	X			<0.005						1	mg/l		<0.005		1
19V. Ethylbenzene (100-41-4)	X			<0.005						1	mg/l		<0.005		1
20V. Methyl Bromide (74-83-9)	X			<0.010						1	mg/l		<0.010		1
21V. Methyl Chloride (74-87-3)	X			<0.005						1	mg/l		<0.005		1

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
<b>GC/MS FRACTION – VOLATILE COMPOUNDS (continued)</b>															
22V. Methylene Chloride (75-09-2)	X			<0.005						1	mg/l		<0.005		1
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X			<0.005						1	mg/l		<0.005		1
24V. Tetrachloroethylene (127-18-4)	X			<0.005						1	mg/l		<0.005		1
25V. Toluene (108-88-3)	X			<0.005						1	mg/l		<0.005		1
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X			<0.005						1	mg/l		<0.005		1
27V. 1,1,1-Trichloroethane (71-55-6)	X			<0.005						1	mg/l		<0.005		1
28V. 1,1,2-Trichloroethane (79-00-5)	X			<0.005						1	mg/l		<0.005		1
29V. Trichloroethylene (79-01-6)	X			<0.005						1	mg/l		<0.005		1
30V. Trichlorofluoromethane (75-69-4)				n/a									n/a		
31V. Vinyl Chloride (75-01-4)	X			<0.002						1	mg/l		<0.002		1
<b>GC/MS FRACTION – ACID COMPOUNDS</b>															
1A. 2-Chlorophenol (95-57-8)	X			<0.009						1	mg/l		<0.009		1
2A. 2,4-Dichlorophenol (120-83-2)	X			<0.009						1	mg/l		<0.009		1
3A. 2,4-Dimethylphenol (105-67-9)	X			<0.009						1	mg/l		<0.009		1
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X			<0.047						1	mg/l		<0.047		1
5A. 2,4-Dinitrophenol (51-28-5)	X			<0.047						1	mg/l		<0.047		1
6A. 2-Nitrophenol (88-75-5)	X			<0.009						1	mg/l		<0.009		1
7A. 4-Nitrophenol (100-02-7)	X			<0.047						1	mg/l		<0.047		1
8A. P-Chloro-M-Cresol (59-50-7)	X			<0.009						1	mg/l		<0.009		1
9A. Pentachlorophenol (87-86-5)	X			<0.023						1	mg/l		<0.023		1
10A. Phenol (108-95-2)	X			<0.009						1	mg/l		<0.009		1
11A. 2,4,6-Trichlorophenol (88-05-2)	X			<0.009						1	mg/l		<0.009		1

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X			<0.009						1	mg/l		<0.009		1
2B. Acenaphthylene (208-98-8)	X			<0.009						1	mg/l		<0.009		1
3B. Anthracene (120-12-7)	X			<0.009						1	mg/l		<0.009		1
4B. Benzidine (82-87-5)	X			<0.047						1	mg/l		<0.047		1
5B. Benzo (a) Anthracene (56-55-3)	X			<0.009						1	mg/l		<0.009		1
6B. Benzo (a) Pyrene (50-32-8)	X			<0.009						1	mg/l		<0.009		1
7B. 3,4-Benzo-fluoranthene (205-99-2)	X			<0.009						1	mg/l		<0.009		1
8B. Benzo (ghi) Perylene (191-24-2)	X			<0.009						1	mg/l		<0.009		1
9B. Benzo (k) Fluoranthene (207-08-9)	X			<0.009						1	mg/l		<0.009		1
10B. Bis (2-Chloro-ethoxy) Methane (111-91-1)	X			<0.009						1	mg/l		<0.009		1
11B. Bis (2-Chloro-ethyl) Ether (111-44-4)	X			<0.009						1	mg/l		<0.009		1
12B. Bis (2-Chloroisopropyl) Ether (102-80-1)	X			<0.009						1	mg/l		<0.009		1
13B. Bis (2-Ethyl-hexyl) Phthalate (117-81-7)	X			<0.009						1	mg/l		<0.009		1
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X			<0.009						1	mg/l		<0.009		1
15B. Butyl Benzyl Phthalate (85-68-7)	X			<0.009						1	mg/l		<0.009		1
16B. 2-Chloro-naphthalene (91-58-7)	X			<0.009						1	mg/l		<0.009		1
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X			<0.009						1	mg/l		<0.009		1
18B. Chrysene (218-01-9)	X			<0.009						1	mg/l		<0.009		1
19B. Dibenzo (a,h) Anthracene (53-70-3)	X			<0.009						1	mg/l		<0.009		1
20B. 1,2-Dichloro-benzene (95-50-1)	X			<0.005						1	mg/l		<0.005		1
21B. 1,3-Di-chloro-benzene (541-73-1)	X			<0.005						1	mg/l		<0.005		1

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)															
22B. 1,4-Dichlorobenzene (106-46-7)	X			<0.005						1	mg/l		<0.005		1
23B. 3,3-Dichlorobenzidine (91-94-1)	X			<0.019						1	mg/l		<0.019		1
24B. Diethyl Phthalate (84-66-2)	X			<0.009						1	mg/l		<0.009		1
25B. Dimethyl Phthalate (131-11-3)	X			<0.009						1	mg/l		<0.009		1
26B. Di-N-Butyl Phthalate (84-74-2)	X			<0.009						1	mg/l		<0.009		1
27B. 2,4-Dinitrotoluene (121-14-2)	X			<0.009						1	mg/l		<0.009		1
28B. 2,6-Dinitrotoluene (606-20-2)	X			<0.009						1	mg/l		<0.009		1
29B. Di-N-Octyl Phthalate (117-84-0)	X			<0.009						1	mg/l		<0.009		1
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)	X			<0.047						1	mg/l		<0.047		1
31B. Fluoranthene (206-44-0)	X			<0.009						1	mg/l		<0.009		1
32B. Fluorene (86-73-7)	X			<0.009						1	mg/l		<0.009		1
33B. Hexachlorobenzene (118-74-1)	X			<0.009						1	mg/l		<0.009		1
34B. Hexachlorobutadiene (87-68-3)	X			<0.009						1	mg/l		<0.009		1
35B. Hexachlorocyclopentadiene (77-47-4)	X			<0.009						1	mg/l		<0.009		1
36B Hexachloroethane (67-72-1)	X			<0.009						1	mg/l		<0.009		1
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)	X			<0.009						1	mg/l		<0.009		1
38B. Isophorone (78-59-1)	X			<0.009						1	mg/l		<0.009		1
39B. Naphthalene (91-20-3)	X			<0.009						1	mg/l		<0.009		1
40B. Nitrobenzene (98-95-3)	X			<0.009						1	mg/l		<0.009		1
41B. N-Nitrosodimethylamine (62-75-9)	X			<0.009						1	mg/l		<0.009		1
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X			<0.009						1	mg/l		<0.009		1

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
<b>GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (continued)</b>															
43B. N-Nitrosodiphenylamine (86-30-8)	X			<0.009						1	mg/l		<0.009		1
44B. Phenanthrene (85-01-8)	X			<0.009						1	mg/l		<0.009		1
45B. Pyrene (129-00-0)	X			<0.009						1	mg/l		<0.009		1
46B. 1,2,4-Trichlorobenzene (120-82-1)	X			<0.009						1	mg/l		<0.009		1
<b>GC/MS FRACTION – PESTICIDES</b>															
1P. Aldrin (309-00-2)				n/a									n/a		
2P. α-BHC (319-84-6)				n/a									n/a		
3P. β-BHC (319-85-7)				n/a									n/a		
4P. γ-BHC (58-89-9)				n/a									n/a		
5P. δ-BHC (319-86-8)				n/a									n/a		
6P. Chlordane (57-74-9)				n/a									n/a		
7P. 4,4'-DDT (50-29-3)				n/a									n/a		
8P. 4,4'-DDE (72-55-9)				n/a									n/a		
9P. 4,4'-DDD (72-54-8)				n/a									n/a		
10P. Dieldrin (60-57-1)				n/a									n/a		
11P. α-Endosulfan (115-29-7)				n/a									n/a		
12P. β-Endosulfan (115-29-7)				n/a									n/a		
13P. Endosulfan Sulfate (1031-07-8)				n/a									n/a		
14P. Endrin (72-20-8)				n/a									n/a		
15P. Endrin Aldehyde (7421-93-4)				n/a									n/a		
16P. Heptachlor (76-44-8)				n/a									n/a		

EPA I.D. NUMBER (copy from Item 1 of Form 1)	OUTFALL NUMBER
ALR000054007	001A

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (continued)															
17P. Heptachlor Epoxida (1024-57-3)				n/a									n/a		
18P. PCB-1242 (53469-21-9)				n/a									n/a		
19P. PCB-1254 (11097-69-1)				n/a									n/a		
20P. PCB-1221 (11104-28-2)				n/a									n/a		
21P. PCB-1232 (11141-16-5)				n/a									n/a		
22P. PCB-1248 (12672-29-6)				n/a									n/a		
23P. PCB-1260 (11096-82-5)				n/a									n/a		
24P. PCB-1016 (12674-11-2)				n/a									n/a		
25P. Toxaphene (8001-35-2)				n/a									n/a		

Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
 (205) 664 - 6032 or 6171  
 (205) 257-1654

# CERTIFICATE OF ANALYSIS



To: Calie Boss  
 Theodore Cogen Facility

Customer Account : NTHE01AR  
 Sample Date/Time : 20-Feb-19 9:55 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore Low Volume Wastewaters  
 Repermitting-DSN001A

Laboratory ID Number: AZ04531

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
<b>Metals, Cyanide, Total Phenols</b>										
* Mercury, Total by CVAF	ABB	2/21/2019	EPA 245.7		1	0.9	5	U	Not Detected	ng/L
Cyanide, Total, by Pace		3/1/2019	SM 4500-CN CE		1		0.01		< 0.010	mg/L
Phenol, Total, by TTL		3/8/2019	SM 5330		1		0.1		< 0.10	mg/L
<b>General Characteristics</b>										
Flow (MGD)	JBH/L	2/20/2019	Field Data		1				0.02	MGD
Field Temperature	JBH/L	2/20/2019	SM-2550		1				31.4	Deg. C.
Field Sulfite	JBH/L	2/20/2019	HACH 8216		1	4			Not Detected	mg/l
Field pH	JBH/L	2/20/2019	SM-4500H		1				7.20	SU
Chlorine, Total Residual	JBH/L	2/20/2019	Field Test		1	0.05			1.43	mg/L
* Escherichia Coli (E. Coli)	HRG	2/21/2018	SM 9223B		1	1			<1	MPN/100ml
* Incubation Start Time	HRG	2/20/2019	SM 9223B		1				15:28	HH.MM
* Oil and Grease	HRG	2/28/2019	EPA 1664B		1	1.4	5		< 5	mg/L

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAP and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: Cyanide and Total Phenols analysis performed by Pace Tuscaloosa.\_fkk 2/22/19

cc: Pepe Daw  
 Dutton/Ryals  
 Angel Daw

Quality Control

Supervision

Reported: 3/22/2019

Version: 4.4



Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
 5) 664 - 6032 or 6171  
 (205) 257-1654



# CERTIFICATE OF ANALYSIS



To: **Catie Boss**  
 Theodore Cogen Facility

Customer Account : NTHE01AR  
 Sample Date/Time : 20-Feb-19 9:15 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore Low Volume Wastewaters  
 Repermitting-DSN001A

Laboratory ID Number: AZ04541

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
<b>Volatile Compounds</b>										
Acrolein, by Pace Tuscaloosa		3/1/2019	EPA 624				0.1		< 0.100	mg/L
Acrylonitrile, by Pace Tuscaloosa		3/1/2019	EPA 624				0.1		< 0.100	mg/L
Carbon Tetrachloride, by Pace Tuscalo		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Benzene, by Pace Tuscaloosa		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Trichloroethene, by Pace Tuscaloosa		3/1/2019	EPA 624				0.005		< 0.005	mg/L
1,1-Dichloroethane, by Pace Tuscaloo		3/1/2019	EPA 624				0.005		< 0.005	mg/L
1,1,1-Trichloroethane, by Pace Tuscal		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Bromoform, by Pace Tuscaloosa		3/1/2019	EPA 624				0.005		< 0.005	mg/l
Vinyl Chloride, by Pace Tuscaloosa		3/1/2019	EPA 624				0.002		< 0.002	mg/L
Chlorobenzene, by Pace Tuscaloosa		3/1/2019	EPA 624				0.005		< 0.005	mg/l
Dibromochloromethane, by Pace Tusc		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Tetrachloroethene, by Pace Tuscaloos		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Chloroethane, by Pace TuscaloosaL		3/1/2019	EPA 624				0.01		< 0.010	mg/l
trans-1,2-Dichloroethene, by Pace Tu		3/1/2019	EPA 624				0.005		< 0.005	mg/L
2-Chloroethyl vinyl ether, by Pace Tusc		3/1/2019	EPA 624				0.01		< 0.010	mg/L
Chloroform, by Pace Tuscaloosa		3/1/2019	EPA 624				0.005		0.018	mg/L
1,1,2-Trichloroethane, by Pace Tuscalo		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Bromodichloromethane, by Pace Tusc		3/1/2019	EPA 624				0.005		0.006	mg/L
1,2-Dichloroethane, by Pace Tuscaloo		3/1/2019	EPA 624				0.005		< 0.005	mg/l
1,1-Dichloroethene, by Pace Tuscaloos		3/1/2019	EPA 624				0.005		< 0.005	mg/l

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAP and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: BOD, COD, Color, Sulfide, Surfactants, EPA 624 and EPA 625 analyses performed  
 by Pace Tuscaloosa\_ fkk 2/22/19

cc: **Pepe Daw**  
**Dutton/Ryals**  
**Angel Daw**

Quality Control \_\_\_\_\_ Supervision \_\_\_\_\_

Reported: 3/22/2019  
 Version: 4.4

Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
 (205) 664 - 6032 or 6171  
 (205) 257-1654

# CERTIFICATE OF ANALYSIS

 Alabama Power



To: **Catie Boss**  
 Theodore Cogen Facility

Customer Account : NTHE01AR  
 Sample Date/Time : 20-Feb-19 9:15 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore Low Volume Wastewaters  
 Repermitting-DSN001A

Laboratory ID Number: AZ04541

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
1,2-Dichloropropane, by Pace Tuscalo		3/1/2019	EPA 624				0.005		< 0.005	mg/L
cis-1,3-Dichloropropene, by Pace Tusc		3/1/2019	EPA 624				0.005		< 0.005	mg/l
trans-1,3-Dichloropropene, by Pace Tu		3/1/2019	EPA 624				0.005		< 0.005	mg/l
1,2-Dichlorobenzene, by Pace Tuscalo		3/1/2019	EPA 624				0.005		< 0.005	mg/L
1,3-Dichlorobenzene, by Pace Tuscalo		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Bromomethane, by Pace Tuscaloosa		3/1/2019	EPA 624				0.01		< 0.010	mg/l
Ethylbenzene, by Pace Tuscaloosa		3/1/2019	EPA 624				0.005		< 0.005	mg/L
1,4-Dichlorobenzene, by Pace Tuscalo		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Chloromethane, by Pace Tuscaloosa		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Methylene Chloride, by Pace Tuscaloo		3/1/2019	EPA 624				0.005		< 0.005	mg/L
1,1,2,2-Tetrachloroethane, by Pace Tu		3/1/2019	EPA 624				0.005		< 0.005	mg/l
Toluene, by Pace Tuscaloosa		3/1/2019	EPA 624				0.005		< 0.005	mg/L
<b>Metals, Cyanide, Total Phenols</b>										
Total, Low Level Prep Date	DLJ	2/21/2019	EPA 1638						2/21/19	DATE
Aluminum, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.003379	0.01015	0.185	mg/L
Antimony, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000172	0.000203	0.000323	mg/L
Arsenic, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000068	0.000203	< 0.000203	mg/L
Barium, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000068	0.000203	0.0253	mg/L
Beryllium, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000068	0.000203	U Not Detected	mg/L
Boron, Total	GAS	2/25/2019	EPA 200.7			1.015	0.033495	0.1015	U Not Detected	mg/L
Cadmium, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000068	0.000203	< 0.000203	mg/L

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MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAP and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: BOD, COD, Color, Sulfide, Surfactants, EPA 624 and EPA 625 analyses performed  
 by Pace Tuscaloosa, flk 2/22/19

cc: Pepe Daw  
 Dutton/Ryals  
 Angel Daw

Quality Control \_\_\_\_\_ Supervision \_\_\_\_\_

Reported: 3/22/2019

Version: 4.4

Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
 (205) 664 - 6032 or 6171  
 (205) 257-1654

# CERTIFICATE OF ANALYSIS

 Alabama Power



To: **Catie Boss**  
 Theodore Cogen Facility

Customer Account : NTHE01AR  
 Sample Date/Time : 20-Feb-19 9:15 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore Low Volume Wastewaters  
 Repermitting-DSN001A

Laboratory ID Number: AZ04541

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
Calcium, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.169505	0.5075	13.3	mg/L
* Chromium, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000101	0.000203	< 0.000203	mg/L
* Cobalt, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000068	0.000203	< 0.000203	mg/L
* Copper, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000152	0.000203	0.00149	mg/L
Iron, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000812	0.001634	0.172	mg/L
* Lead, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000068	0.000203	U Not Detected	mg/L
Magnesium, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.169505	0.5075	0.916	mg/L
* Manganese, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000068	0.000203	0.00764	mg/L
* Molybdenum, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000068	0.000203	0.000771	mg/L
* Nickel, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000337	0.001015	U Not Detected	mg/L
* Selenium, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000172	0.000203	U Not Detected	mg/L
* Silver, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000101	0.000203	U Not Detected	mg/L
* Thallium, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000068	0.000203	U Not Detected	mg/L
in, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000068	0.000203	U Not Detected	mg/L
titanium, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000337	0.001015	U Not Detected	mg/L
* Zinc, Total	DLJ	2/25/2019	EPA 200.8			1.015	0.000337	0.001015	0.0128	mg/L
<b>General Characteristics</b>										
Hardness, Total, (as CaCO3)	DLJ	2/25/2019	SM 2340 B		1				37.1	mg/L
Filter Completion Date	CRB	2/22/2019	SM 2540D		1				02/22/2019	Date
* Solids, Suspended	CRB	2/25/2019	SM 2540D		1		2.5		< 2.5	mg/L
Biochemical Oxygen Demand, 5 Day, b		2/21/2019	SM 5210 B-2001		1		2		< 2.0	mg/L

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\* Test results for these accredited parameters meet all 2003 NELAP and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: BOD, COD, Color, Sulfide, Surfactants, EPA 624 and EPA 625 analyses performed by Pace Tuscaloosa\_fkk 2/22/19

cc: Pepe Daw  
 Dutton/Ryals  
 Angel Daw

Quality Control \_\_\_\_\_ Supervision \_\_\_\_\_

Reported: 3/22/2019  
 Version: 4.4

Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
 (205) 664 - 6032 or 6171  
 (205) 257-1654

 Alabama Power

# CERTIFICATE OF ANALYSIS



To: **Catie Boss**  
 Theodore Cogen Facility

Customer Account : **NTHE01AR**  
 Sample Date/Time : **20-Feb-19 9:15 AM**  
 Customer ID: **AL-0072290**  
 Delivery Date : **20-Feb-19**

Description: **Theodore Low Volume Wastewaters**  
 Repermitting-DSN001A

Laboratory ID Number: **AZ04541**

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
• Bromide	CES	2/26/2019	EPA 300.0		1	0.04	0.08		0.18	mg/L
• Fluoride	CES	2/26/2019	EPA 300.0		1	0.02	0.04		0.63	mg/L
• Sulfate	CES	2/26/2019	EPA 300.0		1	0.75	1		27.7	mg/L
Color, by TTL		2/22/2019	SM 2120 E		1		10		19.0	ADMI
• Nitrogen, Nitrate/Nitrite	CES	3/5/2019	EPA 353.2		1	0.1	0.3		< 0.3	mg/L as N
Nitrogen, Total Organic	JCC	2/25/2019	EPA 351.3		1	0.1			Not Detected	mg/l as N
Sulfide, by TTL		2/25/2019	SM4500 S2 D		1		0.01		0.010	mg/l
Surfactants (Foaming Agents), by TTL		2/21/2019	SM 5540C		1		0.05		< 0.05	mg/l
• Phosphorus, Total	EMG	2/25/2019	SM 4500PE-TP		1	0.021	0.03		0.271	mg/L
Nitrogen, Ammonia by Gas Diffusion	JCC	2/21/2019	EPA 350.1		1	0.03	0.1	U	Not Detected	mg/L as N
• Nitrogen, Total Kjeldahl	JCC	2/25/2019	EPA 351.2		1	0.1	0.5	U	Not Detected	mg/L as N
• Total Organic Carbon	HRG	2/21/2019	SM 5310 B		1	0.5	2		2.28	mg/L
Chemical Oxygen Demand, by Pace		2/22/2019	SM 5220 D		1		5		< 5.0	mg/L
<b>Base/Neutral Compounds</b>										
Acenaphthene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Acenaphthylene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Anthracene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
Benzidine, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.047		< 0.047	mg/l
Benz(a)anthracene, by Pace Tuscaloo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Benzo(a)pyrene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Benzo(b)fluoranthene, by Pace Tuscal		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L

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MDL's and RL's are adjusted for sample dilution, as applicable

Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571144

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: BOD, COD, Color, Sulfide, Surfactants, EPA 624 and EPA 625 analyses performed by Pace Tuscaloosa, fkk 2/22/19

cc: **Pepe Daw**  
**Dutton/Ryals**  
**Angel Daw**

Quality Control \_\_\_\_\_ Supervision \_\_\_\_\_

Reported:3/22/2019  
 Version: 4.4

Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
 (205) 664 - 6032 or 6171  
 (205) 257-1654



# CERTIFICATE OF ANALYSIS



To: **Catie Boss**  
 Theodore Cogen Facility

Customer Account : **NTHE01AR**  
 Sample Date/Time : **20-Feb-19 9:15 AM**  
 Customer ID: **AL-0072290**  
 Delivery Date : **20-Feb-19**

Description: **Theodore Low Volume Wastewaters  
 Repermitting-DSN001A**

Laboratory ID Number: **AZ04541**

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
Benzo(g,h,i)perylene, by Pace Tuscalo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
Benzo(k)fluoranthene, by Pace Tuscal		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Bis(2-chloroethoxy)methane, by Pace		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
Bis(2-chloroethyl)ether, by Pace Tusca		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
Bis(2-chloroisopropyl)ether, by Pace Tu		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
Bis(2-ethylhexyl)phthalate, by Pace Tu		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
4-Bromophenyl phenyl ether, by Pace		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
Butyl benzyl phthalate, by Pace Tuscal		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
2-Chloronaphthalene, by Pace Tuscalo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
4-Chlorophenyl phenyl ether, by Pace		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
Chrysene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Dibenzo(a,h)anthracene, by Pace Tusc		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
3,3-Dichlorobenzidine, by Pace Tuscalo		2/25/2019	EPA 625.1		1		0.019		< 0.019	mg/L
Diethyl phthalate, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Dimethyl phthalate, by Pace Tuscaloos		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Di-n-butyl phthalate, by Pace Tuscaloo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
2,4-Dinitrotoluene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
2,6-Dinitrotoluene, by Pace Tuscaloos		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Di-n-octyl phthalate, by Pace Tuscaloo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
1,2-Diphenylhydrazine, by Pace Tuscal		2/25/2019	EPA 625.1		1		0.047		< 0.047	mg/L
Fluoranthene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: **BOD, COD, Color, Sulfide, Surfactants, EPA 624 and EPA 625 analyses performed  
 by Pace Tuscaloosa\_fkk 2/22/19**

cc: **Pepe Daw**  
**Dutton/Ryals**  
**Angel Daw**

Quality Control \_\_\_\_\_ Supervision \_\_\_\_\_

Reported:3/22/2019

Version: 4.4

Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
 (205) 664 - 6032 or 6171  
 (205) 257-1654

 Alabama Power

# CERTIFICATE OF ANALYSIS



To: **Catie Boss**  
 Theodore Cogen Facility

Customer Account : NTHE01AR  
 Sample Date/Time : 20-Feb-19 9:15 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore Low Volume Wastewaters  
 Repermitting-DSN001A

Laboratory ID Number: AZ04541

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
Fluorene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Hexachlorobenzene, by Pace Tuscaloo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Hexachlorobutadiene, by Pace Tuscalo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Hexachlorocyclopentadiene, by Pace T		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Hexachloroethane, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Indeno(1,2,3-cd)pyrene, by Pace Tusc		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Isophorone, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Naphthalene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Nitrobenzene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
N-Nitrosodimethylamine, by Pace Tusc		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
N-Nitrosodi-n-propylamine, by Pace Tu		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
N-Nitrosodiphenylamine, by Pace Tusc		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Phenanthrene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Pyrene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
1,2,4-Trichlorobenzene, by Pace Tuscal		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
<b>Acid Compounds</b>										
2-Chlorophenol, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
2,4-Dichlorophenol, by Pace Tuscaloo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
2,4-Dimethylphenol, by Pace Tuscaloo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
4,6-Dinitro-2-methylphenol, by Pace Tu		2/25/2019	EPA 625.1		1		0.047		< 0.047	mg/L
2,4-Dinitrophenol, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.047		< 0.047	mg/L

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\* Test results for these accredited parameters meet all 2003 NELAP and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: BOD, COD, Color, Sulfide, Surfactants, EPA 624 and EPA 625 analyses performed  
 by Pace Tuscaloosa\_fkk 2/22/19

cc: Pepe Daw  
 Dutton/Ryals  
 Angel Daw

Quality Control \_\_\_\_\_ Supervision \_\_\_\_\_

Reported: 3/22/2019

Version: 4.4



Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
 P 664 - 6032 or 6171  
 F (205) 257-1654

 Alabama Power

# CERTIFICATE OF ANALYSIS



To: Catie Boss  
 Theodore Cogen Facility

Customer Account : NTHE01AR  
 Sample Date/Time : 20-Feb-19 9:15 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore Low Volume Wastewaters  
 Repermitting-DSN001A

Laboratory ID Number: AZ04541

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
2-Nitrophenol, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
4-Nitrophenol, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.047		< 0.047	mg/L
4-chloro-3-methylphenol, by Pace Tus		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Pentachlorophenol, by Pace Tuscaloos		2/25/2019	EPA 625.1		1		0.023		< 0.023	mg/L
Phenol, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
2,4,6-Trichlorophenol, by Pace Tuscal		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
<b>Miscellaneous</b>										
Method 625.1 - Extraction Date, by Pa SHM		2/22/2019			1				02/22/2019	

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\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

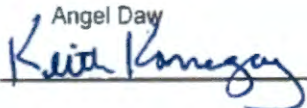
Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: BOD, COD, Color, Sulfide, Surfactants, EPA 624 and EPA 625 analyses performed by Pace Tuscaloosa, fkk 2/22/19

cc: Pepe Daw  
 Dutton/Ryals  
 Angel Daw

Quality Control



Supervision



Reported: 3/22/2019  
 Version: 4.4

**General Comments – Form 2F**

APC does not store or treat raw materials, intermediate products, final products, or waste products on-site which could be exposed to or contaminate stormwater.

During rain events, stormwater runoff from the site is directed offsite to surrounding wooded areas through either drainage features or sheet flow.

Occasionally, pesticides and herbicides may be used onsite in limited amounts to control vegetation and fire ants. All pesticides and herbicides are applied by a licensed contractor according to the product instruction label.

Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
 (205) 664 - 6032 or 6171  
 (205) 257-1654

# CERTIFICATE OF ANALYSIS

 Alabama Power



To: **Catie Boss**  
 Theodore Cogen Facility

Customer Account : NTHEINTK  
 Sample Date/Time : 20-Feb-19 10:15 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore Intake Water  
 Repermitting - Intake

Laboratory ID Number: AZ04534

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
<b>Metals, Cyanide, Total Phenols</b>										
* Mercury, Total by CVAF	ABB	2/21/2019	EPA 245 7		1	0.9	5	U	Not Detected	ng/L
Cyanide, Total, by Pace		3/1/2019	SM 4500-CN CE		1		0.01		< 0.010	mg/L
Phenol, Total, by TTL		3/8/2019	SM 5330		1		0.1		< 0.10	mg/L
<b>General Characteristics</b>										
Flow (MGD)	JBH/L	2/20/2019	Field Data		1				0.13	MGD
Field Temperature	JBH/L	2/20/2019	SM-2550		1				17.9	Deg. C.
Field Sulfite	JBH/L	2/20/2019	HACH 8216		1	4			Not Detected	mg/l
Field pH	JBH/L	2/20/2019	SM-4500H		1				7.74	SU
Chlorine, Total Residual	JBH/L	2/20/2019	Field Test		1	0.05			1.80	mg/L
* Escherichia Coli (E. Coli)	HRG	2/21/2018	SM 9223B		1	1			<1	MPN/100ml
* Incubation Start Time	HRG	2/20/2019	SM 9223B		1				15:28	HH:MM
* Oil and Grease	HRG	2/28/2019	EPA 1664B		1	1.4	5		< 5	mg/L

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\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

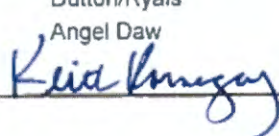
Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: Cyanide and Total Phenols analysis performed by Pace Tuscaloosa\_fkk 2/22/19

cc: Pepe Daw  
 Dutton/Ryals  
 Angel Daw

Quality Control



Supervision



Reported: 3/22/2019

Version: 4.4

Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
 (205) 664 - 6032 or 6171  
 (205) 257-1654

Alabama Power

CERTIFICATE OF ANALYSIS



To: **Catie Boss**  
 Theodore Cogen Facility

Customer Account : **NTHEINTK**  
 Sample Date/Time : **20-Feb-19 9:30 AM**  
 Customer ID: **AL-0072290**  
 Delivery Date : **20-Feb-19**

Description: **Theodore Intake Water**  
 Repermitting

Laboratory ID Number: **AZ04543**

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
<b>Volatile Compounds</b>										
Acrolein, by Pace Tuscaloosa		3/1/2019	EPA 624				0.1		< 0.100	mg/L
Acrylonitrile, by Pace Tuscaloosa		3/1/2019	EPA 624				0.1		< 0.100	mg/L
Carbon Tetrachloride, by Pace Tuscalo		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Benzene, by Pace Tuscaloosa		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Trichloroethene, by Pace Tuscaloosa		3/1/2019	EPA 624				0.005		< 0.005	mg/L
1,1-Dichloroethane, by Pace Tuscaloo		3/1/2019	EPA 624				0.005		< 0.005	mg/L
1,1,1-Trichloroethane, by Pace Tuscal		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Bromoform, by Pace Tuscaloosa		3/1/2019	EPA 624				0.005		< 0.005	mg/l
Vinyl Chloride, by Pace Tuscaloosa		3/1/2019	EPA 624				0.002		< 0.002	mg/L
Chlorobenzene, by Pace Tuscaloosa		3/1/2019	EPA 624				0.005		< 0.005	mg/l
Dibromochloromethane, by Pace Tusc		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Tetrachloroethene, by Pace Tuscaloos		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Chloroethane, by Pace TuscaloosaL		3/1/2019	EPA 624				0.01		< 0.010	mg/l
trans-1,2-Dichloroethene, by Pace Tu		3/1/2019	EPA 624				0.005		< 0.005	mg/L
2-Chloroethyl vinyl ether, by Pace Tusc		3/1/2019	EPA 624				0.01		< 0.010	mg/L
Chloroform, by Pace Tuscaloosa		3/1/2019	EPA 624				0.005		0.025	mg/L
1,1,2-Trichloroethane, by Pace Tuscalo		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Bromodichloromethane, by Pace Tusc		3/1/2019	EPA 624				0.005		0.008	mg/L
1,2-Dichloroethane, by Pace Tuscaloo		3/1/2019	EPA 624				0.005		< 0.005	mg/l
1,1-Dichloroethene, by Pace Tuscaloos		3/1/2019	EPA 624				0.005		< 0.005	mg/l

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MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: **BOD, COD, Color, Sulfide, Surfactants, EPA 624 and EPA 625 analyses performed**  
 by Pace Tuscaloosa\_ fkk 2/22/19

cc: **Pepe Daw**  
**Dutton/Ryals**  
**Angel Daw**

Quality Control \_\_\_\_\_ Supervision \_\_\_\_\_

Reported: 3/22/2019

Version: 4.4

Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
 (205) 664-6032 or 6171  
 (205) 257-1654

# CERTIFICATE OF ANALYSIS

 Alabama Power



To: **Calie Boss**  
 Theodore Cogen Facility

Customer Account : NTHEINTK  
 Sample Date/Time : 20-Feb-19 9:30 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore Intake Water  
 Repermitting

Laboratory ID Number: AZ04543

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
1,2-Dichloropropane, by Pace Tuscalo		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
cis-1,3-Dichloropropene, by Pace Tusc		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l
trans-1,3-Dichloropropene, by Pace Tu		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l
1,2-Dichlorobenzene, by Pace Tuscalo		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
1,3-Dichlorobenzene, by Pace Tuscalo		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Bromomethane, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.01		< 0.010	mg/l
Ethylbenzene, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
1,4-Dichlorobenzene, by Pace Tuscalo		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Chloromethane, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Methylene Chloride, by Pace Tuscaloo		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
1,1,2,2-Tetrachloroethane, by Pace Tu		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l
Toluene, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
<b>Metals, Cyanide, Total Phenols</b>										
Total, Low Level Prep Date	DLJ	2/21/2019	EPA 1638		1				2/21/19	DATE
Aluminum, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.003379	0.01015		0.232	mg/L
Antimony, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000172	0.000203	U	Not Detected	mg/L
Arsenic, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000068	0.000203		< 0.000203	mg/L
Barium, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000068	0.000203		0.0255	mg/L
Beryllium, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000068	0.000203	U	Not Detected	mg/L
Boron, Total	GAS	2/25/2019	EPA 200.7		1.015	0.033495	0.1015	U	Not Detected	mg/L
Cadmium, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000068	0.000203		0.000269	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: BOD, COD, Color, Sulfide, Surfactants, EPA 624 and EPA 625 analyses performed  
 by Pace Tuscaloosa, flk 2/22/19

cc: Pepe Daw  
 Dutton/Ryals  
 Angel Daw

Quality Control \_\_\_\_\_ Supervision \_\_\_\_\_

Reported: 3/22/2019

Version: 4.4

Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
 (205) 664 - 6032 or 6171  
 (205) 257-1654

# CERTIFICATE OF ANALYSIS



To: **Catie Boss**  
 Theodore Cogen Facility

Customer Account : NTHEINTK  
 Sample Date/Time : 20-Feb-19 9:30 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore Intake Water  
 Repermitting

Laboratory ID Number: AZ04543

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
Calcium, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.169505	0.5075		15.3	mg/L
Chromium, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000101	0.000203	U	Not Detected	mg/L
Cobalt, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000068	0.000203	U	Not Detected	mg/L
Copper, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000152	0.000203		0.000733	mg/L
Iron, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000812	0.001634		0.0236	mg/L
Lead, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000068	0.000203	U	Not Detected	mg/L
Magnesium, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.169505	0.5075		1.03	mg/L
Manganese, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000068	0.000203		0.000781	mg/L
Molybdenum, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000068	0.000203		< 0.000203	mg/L
Nickel, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000337	0.001015	U	Not Detected	mg/L
Selenium, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000172	0.000203	U	Not Detected	mg/L
Silver, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000101	0.000203	U	Not Detected	mg/L
Thallium, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000068	0.000203	U	Not Detected	mg/L
Tin, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000068	0.000203	U	Not Detected	mg/L
Titanium, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000337	0.001015	U	Not Detected	mg/L
Zinc, Total	DLJ	2/25/2019	EPA 200.8		1.015	0.000337	0.001015		0.0217	mg/L
<b>General Characteristics</b>										
Hardness, Total, (as CaCO3)	DLJ	2/25/2019	SM 2340 B		1				42.5	mg/L
Filter Completion Date	CRB	2/22/2019	SM 2540D		1				02/22/2019	Date
Solids, Suspended	CRB	2/25/2019	SM 2540D		1		2.5		< 2.5	mg/L
Biochemical Oxygen Demand, 5 Day, b		2/21/2019	SM 5210 B-2001		1		2		< 2.0	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: BOD, COD, Color, Sulfide, Surfactants, EPA 624 and EPA 625 analyses performed  
 by Pace Tuscaloosa\_fkk 2/22/19

cc: Pepe Daw  
 Dutton/Ryals  
 Angel Daw

Quality Control \_\_\_\_\_ Supervision \_\_\_\_\_

Reported: 3/22/2019  
 Version: 4.4



# CERTIFICATE OF ANALYSIS



To: **Catie Boss**  
 Theodore Cogen Facility

Customer Account : **NTHEINTK**  
 Sample Date/Time : **20-Feb-19 9:30 AM**  
 Customer ID: **AL-0072290**  
 Delivery Date : **20-Feb-19**

Description: **Theodore Intake Water**  
 Repermitting

Laboratory ID Number: **AZ04543**

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
* Bromide	CES	2/26/2019	EPA 300.0		1	0.04	0.08		0.17	mg/L
* Fluoride	CES	2/26/2019	EPA 300.0		1	0.02	0.04		0.73	mg/L
* Sulfate	CES	2/26/2019	EPA 300.0		1	0.75	1		29.1	mg/L
Color, by TTL		2/22/2019	SM 2120 E		1		10		< 10	ADMI
* Nitrogen, Nitrate/Nitrite	CES	3/5/2019	EPA 353.2		1	0.1	0.3		< 0.3	mg/L as N
Nitrogen, Total Organic	JCC	2/25/2019	EPA 351.3		1	0.1			Not Detected	mg/l as N
Sulfide, by TTL		2/25/2019	SM4500 S2 D		1		0.01		0.010	mg/l
Surfactants (Foaming Agents), by TTL		2/21/2019	SM 5540C		1		0.05		< 0.05	mg/l
* Phosphorus, Total	EMG	2/25/2019	SM 4500PE-TP		1	0.021	0.03		0.168	mg/L
Nitrogen, Ammonia by Gas Diffusion	JCC	2/21/2019	EPA 350.1		1	0.03	0.1	U	Not Detected	mg/L as N
* Nitrogen, Total Kjeldahl	JCC	2/25/2019	EPA 351.2		1	0.1	0.5	U	Not Detected	mg/L as N
* Total Organic Carbon	HRG	2/21/2019	SM 5310 B		1	0.5	2		2.24	mg/L
Chemical Oxygen Demand, by Pace		2/22/2019	SM 5220 D		1		5		< 5.0	mg/L
<b>Base/Neutral Compounds</b>										
Acenaphthene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Acenaphthylene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Anthracene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
Benzidine, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.047		< 0.047	mg/l
Benz(a)anthracene, by Pace Tuscaloo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Benzo(a)pyrene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Benzo(b)fluoranthene, by Pace Tuscal		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: BOD, COD, Color, Sulfide, Surfactants, EPA 624 and EPA 625 analyses performed by Pace Tuscaloosa, fkk 2/22/19

cc: **Pepe Daw**  
**Dutton/Ryals**  
**Angel Daw**

Quality Control \_\_\_\_\_ Supervision \_\_\_\_\_

Reported: 3/22/2019

Version: 4.4

Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
 (205) 664 - 6032 or 6171  
 (205) 257-1654

 Alabama Power

# CERTIFICATE OF ANALYSIS



To: **Calie Boss**  
 Theodore Cogen Facility

Customer Account : NTHEINTK  
 Sample Date/Time : 20-Feb-19 9:30 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore Intake Water  
 Repermitting

Laboratory ID Number: AZ04543

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
Benzo(g,h,i)perylene, by Pace Tuscalo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
Benzo(k)fluoranthene, by Pace Tuscal		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Bis(2-chloroethoxy)methane, by Pace		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
Bis(2-chloroethyl)ether, by Pace Tusca		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
Bis(2-chloroisopropyl)ether, by Pace Tu		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
Bis(2-ethylhexyl)phthalate, by Pace Tu		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
4-Bromophenyl phenyl ether, by Pace		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
Butyl benzyl phthalate, by Pace Tuscal		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
2-Chloronaphthalene, by Pace Tuscalo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
4-Chlorophenyl phenyl ether, by Pace		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
Chrysene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Dibenzo(a,h)anthracene, by Pace Tusc		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
3,3-Dichlorobenzidine, by Pace Tuscalo		2/25/2019	EPA 625.1		1		0.019		< 0.019	mg/L
Diethyl phthalate, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Dimethyl phthalate, by Pace Tuscaloos		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Di-n-butyl phthalate, by Pace Tuscaloo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
2,4-Dinitrotoluene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
2,6-Dinitrotoluene, by Pace Tuscaloos		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Di-n-octyl phthalate, by Pace Tuscaloo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
1,2-Diphenylhydrazine, by Pace Tuscal		2/25/2019	EPA 625.1		1		0.047		< 0.047	mg/L
Fluoranthene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: BOD, COD, Color, Sulfide, Surfactants, EPA 624 and EPA 625 analyses performed  
 by Pace Tuscaloosa\_fkk 2/22/19

cc: Pepe Daw  
 Dutton/Ryals  
 Angel Daw

Quality Control \_\_\_\_\_ Supervision \_\_\_\_\_

Reported: 3/22/2019

Version: 4.4

Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
 (205) 664 - 6032 or 6171  
 (205) 257-1654

# CERTIFICATE OF ANALYSIS

 Alabama Power



To: **Catie Boss**  
 Theodore Cogen Facility

Customer Account : **NTHEINTK**  
 Sample Date/Time : **20-Feb-19 9:30 AM**  
 Customer ID: **AL-0072290**  
 Delivery Date : **20-Feb-19**

Description: **Theodore Intake Water  
 Repermitting**

Laboratory ID Number: **AZ04543**

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
Fluorene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Hexachlorobenzene, by Pace Tuscaloo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Hexachlorobutadiene, by Pace Tuscalo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Hexachlorocyclopentadiene, by Pace T		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Hexachloroethane, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Indeno(1,2,3-cd)pyrene, by Pace Tusc		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Isophorone, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Naphthalene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Nitrobenzene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
N-Nitrosodimethylamine, by Pace Tusc		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
N-Nitrosodi-n-propylamine, by Pace Tu		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
N-Nitrosodiphenylamine, by Pace Tusc		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Phenanthrene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Pyrene, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
,2,4-Trichlorobenzene, by Pace Tuscal		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
<b>Acid Compounds</b>										
2-Chlorophenol, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/l
2,4-Dichlorophenol, by Pace Tuscaloo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
2,4-Dimethylphenol, by Pace Tuscaloo		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
4,6-Dinitro-2-methylphenol, by Pace Tu		2/25/2019	EPA 625.1		1		0.047		< 0.047	mg/L
2,4-Dinitrophenol, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.047		< 0.047	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments: **BOD, COD, Color, Sulfide, Surfactants, EPA 624 and EPA 625 analyses performed  
 by Pace Tuscaloosa, fkk 2/22/19**

cc: **Pepe Daw  
 Dutton/Ryals  
 Angel Daw**

Quality Control \_\_\_\_\_ Supervision \_\_\_\_\_

Reported:3/22/2019

Version: 4.4

Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
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 Alabama Power

# CERTIFICATE OF ANALYSIS



To: Catie Boss  
 Theodore Cogen Facility

Customer Account : NTHEINTK  
 Sample Date/Time : 20-Feb-19 9:30 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore Intake Water  
 Repermitting

Laboratory ID Number: AZ04543

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
2-Nitrophenol, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
4-Nitrophenol, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.047		< 0.047	mg/L
4-chloro-3-methylphenol, by Pace Tus		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
Pentachlorophenol, by Pace Tuscaloos		2/25/2019	EPA 625.1		1		0.023		< 0.023	mg/L
Phenol, by Pace Tuscaloosa		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
2,4,6-Trichlorophenol, by Pace Tuscal		2/25/2019	EPA 625.1		1		0.009		< 0.009	mg/L
<b>Miscellaneous</b>										
Method 625.1 - Extraction Date, by Pa SHM		2/22/2019			1				02/22/2019	

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

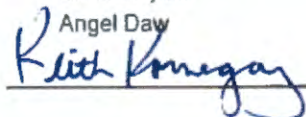
Expiration: June 30, 2019

Comments: BOD, COD, Color, Sulfide, Surfactants, EPA 624 and EPA 625 analyses performed  
 by Pace Tuscaloosa\_fkk 2/22/19

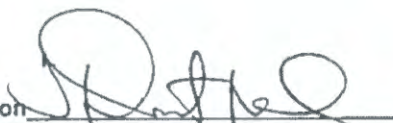
cc: Pepe Daw  
 Dutton/Ryals

Angel Daw

Quality Control



Supervision



Reported: 3/22/2019

Version: 4.4

Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
 (205) 664 - 6032 or 6171  
 FAX (205) 257-1654

 Alabama Power

# CERTIFICATE OF ANALYSIS



To: **Catie Boss**  
 Theodore Cogen Facility

Customer Account : **NTHEBLK**  
 Sample Date/Time : **20-Feb-19 9:15 AM**  
 Customer ID: **AL-0072290**  
 Delivery Date : **20-Feb-19**

Description: **Theodore Cogen Blank**  
**Trip Blank**

Laboratory ID Number: **AZ04542**

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
<b>Volatile Compounds</b>										
Acrolein, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.1		< 0.100	mg/L
Acrylonitrile, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.1		< 0.100	mg/L
Carbon Tetrachloride, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Benzene, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Trichloroethene, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
1,1-Dichloroethane, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
1,1,1-Trichloroethane, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Bromoform, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l
Vinyl Chloride, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.002		< 0.002	mg/L
Chlorobenzene, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l
Dibromochloromethane, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Tetrachloroethene, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
1,1,2-Trichloroethane, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.01		< 0.010	mg/l
trans-1,2-Dichloroethene, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
2-Chloroethyl vinyl ether, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.01		< 0.010	mg/L
Chloroform, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
1,1,2-Trichloroethane, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Bromodichloromethane, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
1,2-Dichloroethane, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l
1,1-Dichloroethene, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l

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MDL's and RL's are adjusted for sample dilution, as applicable

Comments: EPA 624 analyses performed by Pace Tuscaloosa, flk 2/22/19

cc: **Pepe Daw**  
**Dutton/Ryals**  
**Angel Daw**

Quality Control \_\_\_\_\_ Supervision \_\_\_\_\_

Reported: 3/22/2019  
 Version: 4.4

Alabama Power  
 General Test Laboratory  
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# CERTIFICATE OF ANALYSIS



To: Catie Boss  
 Theodore Cogen Facility

Customer Account : NTHEBLK  
 Sample Date/Time : 20-Feb-19 9:15 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore Cogen Blank  
 Trip Blank

Laboratory ID Number: AZ04542

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
1,2-Dichloropropane, by Pace Tuscalo		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
cis-1,3-Dichloropropene, by Pace Tusc		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l
trans-1,3-Dichloropropene, by Pace Tu		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l
Bromomethane, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.01		< 0.010	mg/l
Ethylbenzene, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Chloromethane, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Methylene Chloride, by Pace Tuscaloo		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
1,1,2,2-Tetrachloroethane, by Pace Tu		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l
Toluene, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L

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MDL's and RL's are adjusted for sample dilution, as applicable

Comments: EPA 624 analyses performed by Pace Tuscaloosa. \_fkk 2/22/19

cc: Pepe Daw  
 Dutton/Ryals  
 Angel Daw

Quality Control

 Supervision 

Reported: 3/22/2019  
 Version: 4.4

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 (205) 257-1654

# CERTIFICATE OF ANALYSIS

 Alabama Power



To: **Catie Boss**  
 Theodore Cogen Facility

Customer Account : NTHEBLK  
 Sample Date/Time : 20-Feb-19 9:30 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore Cogen Blank  
 Trip Blank

Laboratory ID Number: AZ04544

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
<i>Volatile Compounds</i>										
Acrolein, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.1		< 0.100	mg/L
Acrylonitrile, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.1		< 0.100	mg/L
Carbon Tetrachloride, by Pace Tuscalo		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Benzene, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Trichloroethene, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
1,1-Dichloroethane, by Pace Tuscaloo		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
1,1,1-Trichloroethane, by Pace Tuscal		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Bromoform, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l
Vinyl Chloride, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.002		< 0.002	mg/L
Chlorobenzene, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l
Dibromochloromethane, by Pace Tusc		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Tetrachloroethene, by Pace Tuscaloos		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Chloroethane, by Pace Tuscaloosal		3/1/2019	EPA 624		1		0.01		< 0.010	mg/l
trans-1,2-Dichloroethene, by Pace Tu		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
2-Chloroethyl vinyl ether, by Pace Tusc		3/1/2019	EPA 624		1		0.01		< 0.010	mg/L
Chloroform, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
1,1,2-Trichloroethane, by Pace Tuscalo		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Bromodichloromethane, by Pace Tusc		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l
1,2-Dichloroethane, by Pace Tuscaloo		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l
1,1-Dichloroethane, by Pace Tuscaloos		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: EPA 624 analyses performed by Pace Tuscaloosa.\_fkk 2/22/19

cc: Pepe Daw  
 Dutton/Ryals  
 Angel Daw

Quality Control \_\_\_\_\_ Supervision \_\_\_\_\_

Reported:3/22/2019

Version: 4.4



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# CERTIFICATE OF ANALYSIS

 Alabama Power



To: **Catie Boss**  
 Theodore Cogen Facility

Customer Account : NTHEBLK  
 Sample Date/Time : 20-Feb-19 9:30 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore Cogen Blank  
 Trip Blank

Laboratory ID Number: AZ04544

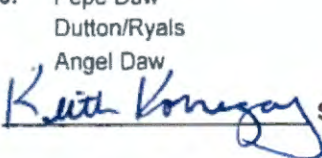
Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
1,2-Dichloropropane, by Pace Tuscalo		3/1/2019	EPA 624				0.005		< 0.005	mg/L
cis-1,3-Dichloropropene, by Pace Tusc		3/1/2019	EPA 624				0.005		< 0.005	mg/l
trans-1,3-Dichloropropene, by Pace Tu		3/1/2019	EPA 624				0.005		< 0.005	mg/l
Bromomethane, by Pace Tuscaloosa		3/1/2019	EPA 624				0.01		< 0.010	mg/l
Ethylbenzene, by Pace Tuscaloosa		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Chloromethane, by Pace Tuscaloosa		3/1/2019	EPA 624				0.005		< 0.005	mg/L
Methylene Chloride, by Pace Tuscaloo		3/1/2019	EPA 624				0.005		< 0.005	mg/L
1,1,2,2-Tetrachloroethane, by Pace Tu		3/1/2019	EPA 624				0.005		< 0.005	mg/l
Toluene, by Pace Tuscaloosa		3/1/2019	EPA 624				0.005		< 0.005	mg/L

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Comments: EPA 624 analyses performed by Pace Tuscaloosa.\_fkk 2/22/19

cc: Pepe Daw  
 Dutton/Ryals  
 Angel Daw

Quality Control



Supervision



Reported: 3/22/2019  
 Version: 4.4

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 (205) 257-1654

# CERTIFICATE OF ANALYSIS

 Alabama Power



To: **Catie Boss**  
 Theodore Cogen Facility

Customer Account : NTHEBLK  
 Sample Date/Time : 20-Feb-19 10:45 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore Cogen Blank  
 Trip Blank

Laboratory ID Number: AZ04546

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
<b>Volatile Compounds</b>										
Acrolein, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.1		< 0.100	mg/L
Acrylonitrile, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.1		< 0.100	mg/L
Carbon Tetrachloride, by Pace Tuscalo		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Benzene, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Trichloroethene, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
1,1-Dichloroethane, by Pace Tuscaloo		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
1,1,1-Trichloroethane, by Pace Tuscal		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Bromoform, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l
Vinyl Chloride, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.002		< 0.002	mg/L
Chlorobenzene, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l
Dibromochloromethane, by Pace Tusc		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Tetrachloroethene, by Pace Tuscaloos		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Chloroethane, by Pace TuscaloosaL		3/1/2019	EPA 624		1		0.01		< 0.010	mg/l
rans-1,2-Dichloroethene, by Pace Tu		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
z-Chloroethyl vinyl ether, by Pace Tusc		3/1/2019	EPA 624		1		0.01		< 0.010	mg/L
Chloroform, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
1,1,2-Trichloroethane, by Pace Tuscalo		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Bromodichloromethane, by Pace Tusc		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
1,2-Dichloroethane, by Pace Tuscaloo		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l
1,1-Dichloroethene, by Pace Tuscaloos		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

MDL's and RL's are adjusted for sample dilution, as applicable

Comments: EPA 624 analyses performed by Pace Tuscaloosa\_ fkk 2/22/19

cc: Pepe Daw  
 Dutton/Ryals  
 Angel Daw

Quality Control \_\_\_\_\_ Supervision \_\_\_\_\_

Reported: 3/22/2019

Version: 4.4

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# CERTIFICATE OF ANALYSIS

 Alabama Power



To: Catie Boss  
 Theodore Cogen Facility

Customer Account : NTHEBLK  
 Sample Date/Time : 20-Feb-19 10:45 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore Cogen Blank  
 Trip Blank

Laboratory ID Number: AZ04546

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
1,2-Dichloropropane, by Pace Tuscalo		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
cis-1,3-Dichloropropene, by Pace Tusc		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l
trans-1,3-Dichloropropene, by Pace Tu		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l
Bromomethane, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.01		< 0.010	mg/l
Ethylbenzene, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Chloromethane, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
Methylene Chloride, by Pace Tuscaloo		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L
1,1,2,2-Tetrachloroethane, by Pace Tu		3/1/2019	EPA 624		1		0.005		< 0.005	mg/l
Toluene, by Pace Tuscaloosa		3/1/2019	EPA 624		1		0.005		< 0.005	mg/L

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.  
 MDL's and RL's are adjusted for sample dilution, as applicable

Comments: EPA 624 analyses performed by Pace Tuscaloosa, \_fkk 2/22/19

cc: Pepe Daw  
 Dutton/Ryals  
 Angel Daw

Quality Control

 Supervision 

Reported: 3/22/2019  
 Version: 4.4

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Calera, AL 35040  
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(205) 257-1654

# CERTIFICATE OF ANALYSIS

 Alabama Power



TO: Catie Boss  
Theodore Cogen Plant

Customer Account : NTHEBLK  
Sample Date/Time : 20-Feb-19 9:55 AM  
Customer ID: AL-0072290  
Delivery Date : 20-Feb-19

Description: Theodore Cogen Field Blank  
Field Blank

Laboratory ID Number: AZ04532

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
<i>Metals, Cyanide, Total Phenols</i>										
* Mercury, Total by CVAF	ABB	2/21/2019	EPA 245.7		1	0.9	5	U	Not Detected	ng/L

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

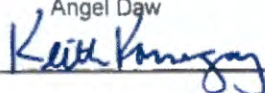
Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

## Comments:

cc: Pepe Daw  
Dutton/Ryals  
Angel Daw

Quality Control



Supervision




Reported: 3/22/2019

Version: 4.4



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 General Test Laboratory  
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 (205) 257-1654

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# CERTIFICATE OF ANALYSIS



To: Catie Boss  
 Theodore Cogen Plant

Customer Account : NTHEBLK  
 Sample Date/Time : 20-Feb-19 9:55 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore Cogen Lab Blank  
 Lab Blank

Laboratory ID Number: AZ04533

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
<i>Metals, Cyanide, Total Phenols</i>										
* Mercury, Total by CVAF	ABB	2/21/2019	EPA 245.7		1	0.9	5	U	Not Detected	ng/L

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MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAP and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

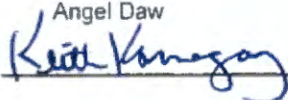
Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

**Comments:**

cc: Pepe Daw  
 Dutton/Ryals  
 Angel Daw

Quality Control



Supervision



Reported: 3/22/2019

Version: 4.4

Alabama Power  
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 (205) 257-1654

# CERTIFICATE OF ANALYSIS

 Alabama Power



To: Catie Boss  
 Theodore Cogen Plant

Customer Account : NTHEBLK  
 Sample Date/Time : 20-Feb-19 10:15 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore Cogen Field Blank  
 Field Blank

Laboratory ID Number: AZ04535

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
<i>Metals, Cyanide, Total Phenols</i>										
* Mercury, Total by CVAF	ABB	2/21/2019	EPA 245.7		1	0.9	5	U	Not Detected	ng/L

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MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

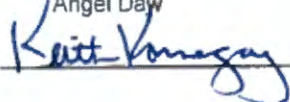
Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

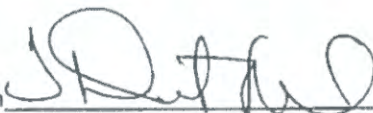
Comments:

cc: Pepe Daw  
 Dutton/Ryals  
 Angel Daw

Quality Control



Supervision



Reported: 3/22/2019

Version: 4.4

Alabama Power  
 General Test Laboratory  
 744 County Road 87, GSC #8  
 Calera, AL 35040  
 (205) 664 - 6032 or 6171  
 FAX (205) 257-1654

 Alabama Power

# CERTIFICATE OF ANALYSIS



By: Catie Boss  
 Theodore Cogen Plant

Customer Account : NTHEBLK  
 Sample Date/Time : 20-Feb-19 10:55 AM  
 Customer ID: AL-0072290  
 Delivery Date : 20-Feb-19

Description: Theodore Cogen Field Blank  
 Field Blank

Laboratory ID Number: AZ04537

Name	Analyst	Test Date	Reference	V Spec	DF	MDL	RL	Q	Results	Units
<i>Metals, Cyanide, Total Phenols</i>										
* Mercury, Total by CVAF	ABB	2/21/2019	EPA 245.7		1	0.9	5	U	Not Detected	ng/L

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MDL's and RL's are adjusted for sample dilution, as applicable

\* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

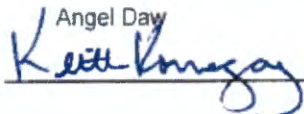
Issued By: State of Florida, Department of Health

Expiration: June 30, 2019

Comments:

cc: Pepe Daw  
 Dutton/Ryals  
 Angel Daw

Quality Control



Supervision



Reported: 3/22/2019

Version: 4.4



# Definitions



Abbreviation	Description
DF	Dilution Factor
LFB	Lab Fortified Blank
MB	Method Blank
MDL	Method Detection Limit; minimum concentration of an analyte that can be determined with 99% confidence that the concentration is greater than zero.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
Prec	Precision (% RPD)
Q	Qualifier; comment used to note deviations or additional information associated with analytical results.
QC	Quality Control
Rec	Recovery of Matrix Spike
RL	Reporting Limit; lowest concentration at which an analyte can be quantitatively measured.
Vio Spe	Violation Specification; regulatory limit which has been exceeded by the sample analyzed.

Qualifier	Description
B	Analyte found in reagent blank. Indicates possible reagent or background contamination.
E	Estimated reported value exceeded calibration range.
J	Reported value is an estimate because concentration is less than reporting limit.
N	Organic constituents tentatively identified. Confirmation is needed.
R	Matrix spike recovery or matrix spike duplicate recovery is outside of specification limit.
U	Compound was analyzed, but not detected.
P	Precision is out of specification limit.
C	Analyte was verified by re-analysis.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.
L	Check standard is outside of specification limit.
D	All samples were stored at less than or equal to 6 °C and for no longer than 48 hours from time of sampling, unless otherwise noted.
F	Water Field Group (WFG) qualifier; see comments for more information
I	Improper sample preservation.
T	Sample temperature is outside of specification limit.
BA	Analyte found in reagent blank is = RL AND is > 1/10 the amount of the sample.
FA	Field results were reviewed by the Water Field Group.
K	No MB or LCS were submitted with the sample for dissolved analysis.
LL	Analyte recovery in the check standard was below specification limit. Results may be biased low.
M	LOQ verification analyzed with batch was outside of specification limit.
LA	Analyte recovery in the check standard was above specification limit. Results may be biased high.
RA	Matrix spike is invalid due to sample concentration.
S	Surrogate recovery is outside of specification limit.

### **Theodore Cogeneration Plant 316(b) Evaluation**

The Theodore Cogeneration Facility is a closed-cycle cooling electric generating facility, current in operation. The normal water usage is from the onsite well; water is also purchased from the MAWSS. There is no withdrawal structure on any waterbody operated by this facility.

As this is not a new facility, it is not a Phase I facility per the 316(b) regulations. As the water withdrawal is not directly from a source waterbody but purchased from a public water system, the facility is not subject to or required to meet the 316(b) portions of 40 CFR 125. Therefore, the Clean Water Act 316(b) requirements are not applicable to this facility.

# **Attachment A**

**11. c) Subsidiary Corporation(s) of Applicant:**

Alabama Energy Partners  
600 North 18<sup>th</sup> street  
Birmingham, Alabama 35291

Alabama Property Company  
600 North 18<sup>th</sup> street  
Birmingham, Alabama 35291

Southern Electric Generating Company  
600 North 18<sup>th</sup> street  
Birmingham, Alabama 35291

**11. d) Corporate Officers:**

Mark A. Crosswhite  
President, Chief Executive Officer and Director  
600 North 18<sup>th</sup> Street  
Birmingham, Alabama 35291

Philip C. Raymond  
Executive Vice President, Chief Financial Officer and Treasurer  
600 North 18<sup>th</sup> street  
Birmingham, Alabama 35291

Zeke W. Smith  
Executive Vice President  
600 North 18<sup>th</sup> Street  
Birmingham, Alabama 35291

Alexia B. Borden  
Senior Vice President and General Counsel  
600 North 18<sup>th</sup> Street  
Birmingham, Alabama 35291

Jim P. Heilbron  
Senior Vice President and Senior Production Officer  
600 North 18<sup>th</sup> Street  
Birmingham, Alabama 35291

Ronald Q. Patterson  
Vice President and Assistant Treasurer  
600 North 18<sup>th</sup> Street  
Birmingham, Alabama 35291

# **Attachment B**

**Fossil Plants**

	Permit Type	Permit Number	Effective Date	Expiration Date	
Barry Steam Plant	Acid Rain		1/1/2009	12/31/2013	Submitted 6/13/2018
	LANDFILL	Mobile County #126	8/25/2017	8/24/2018	
	LANDFILL	ADEM #49-18	1/22/2014	8/21/2019	
	NPDES	AL-0002879	11/1/1990	10/31/2013	Submitted 2/18/2016
	Title V	503-1001	12/20/2010	12/31/2015	
	AIR	503-1001-X008	9/14/2010		
	AIR	503-1001-X09	11/6/2014		
	AIR	503-1001-X010	11/6/2014		
	AIR	503-1001-X011	12/8/2015		
E B Harris Generating Plant	Acid Rain		6/8/2016	6/7/2021	Submitted 9/25/2017
	BMP	3/31/2003	11/5/2012	11/5/2015	
	NPDES	AL-0074179	1/1/2002	3/30/2018	
	Title V	201-0010	6/8/2016	6/7/2021	
Gadsden Steam Plant	Acid Rain		1/1/2005	12/31/2009	Submitted 6/13/2018
	LANDFILL	ADEM #28-05	1/9/2016	1/8/2021	
	NPDES	AL-0002887	2/1/2017	1/31/2022	
	Title V	307-0002	1/31/2017	1/30/2022	
Gaston Steam Plant	Acid Rain		1/1/2009	12/31/2013	Submitted 6/13/2018
	AIR	411-0005-X012	6/4/2013		
	AIR	411-0005-X013	2/14/2014		
	AIR	411-0005-X014	2/14/2014		Submitted 5/7/2018
	AIR	411-0005-X015	2/14/2014		
	AIR	411-0005-X005	4/14/2015		
	LANDFILL	ADEM #59-14	1/9/2016	1/8/2021	
	NPDES	AL-0003140	12/1/2001	6/30/2012	
	Title V	411-0005	12/20/2010	12/31/2015	
Gorgas Barge Loading Facility #2	USCG	AID200100702269	3/1/2004	Submitted 2/20/2017	
Gorgas Steam Plant	NPDES	AL-0025551	10/1/1992	9/30/2013	Submitted 5/16/2018
	Acid Rain		1/1/2009	12/31/2013	Submitted 6/13/2018
	AIR	414-0001-X012	11/12/2013		
	LANDFILL	ADEM #64-10	1/9/2016	1/8/2021	
	NPDES	AL-0002909	10/1/2001	9/5/2012	
	Title V	414-0001	12/20/2010	12/31/2015	Submitted 2/18/2016
Greene County Steam Plant	Acid Rain		1/1/2005	12/31/2009	Submitted 7/24/2008
	LANDFILL	ADEM #32-02	1/9/2016	1/8/2021	
	NPDES	AL-0002917	4/1/2019	3/31/2024	
	Title V	405-0001	8/29/2003	8/28/2008	Submitted 2/18/2016
	AIR	405-0001-X012	10/5/2015		
	AIR	405-0001-X013	10/5/2015		
Miller Steam Plant	LANDFILL	ADEM #37-16	12/22/2016	12/21/2021	Submitted 6/13/2017
	NPDES	AL-0027146	10/1/2001	1/31/2012	
	Title V	4-07-0011-04	1/11/2017	1/10/2022	
Plant H Allen Franklin	Acid Rain		6/8/2016	6/7/2021	
	NPDES	AL-0073555	6/1/2012	5/31/2017	
	Title V	206-0036	6/8/2016	6/7/2021	
Theodore Cogenerating Plant	Acid Rain		4/1/2016	3/31/2021	
	NPDES	AL-0072290	1/1/2015	12/31/2019	
	Title V	503-8073	4/1/2016	3/31/2021	
	AIR	503-8073-X004	5/3/2016		
Washington County Cogenerating Plant	Acid Rain		4/1/2016	3/31/2021	Submitted 8/3/2018
	NPDES	AL-0071951	2/1/2014	1/31/2019	
	Title V	108-0018	4/1/2016	3/31/2021	

**Hydro Plants**

	Permit Type	Permit Number	Effective Date	Expiration Date
Bankhead Dam	NPDES	ALG360001	2/1/2016	1/31/2021
Bouldin Dam	NPDES	ALG360005	2/1/2016	1/31/2021
Holt Dam	NPDES	ALG360003	2/1/2016	1/31/2021
Jordan Dam	NPDES	ALG360016	2/1/2016	1/31/2021
Lay Dam	NPDES	ALG360006	2/1/2016	1/31/2021
Logan Martin Dam	NPDES	ALG360004	2/1/2016	1/31/2021
Logan Martin Batch Plant	NPDES	ALG110208	2/1/2016	1/31/2021
Martin Dam	NPDES	ALG360014	2/1/2016	1/31/2021
Mitchell Dam	NPDES	ALG360015	2/1/2016	1/31/2021
Neely Henry Dam	NPDES	ALG360002	2/1/2016	1/31/2021



R L Harris Dam	NPDES	ALG360017	2/1/2016	1/31/2021
Smith Dam	NPDES	ALG360008	2/1/2016	1/31/2021
Thurlow Dam	NPDES	ALG360013	2/1/2016	1/31/2021
Weiss Dam	NPDES	ALG360007	2/1/2016	1/31/2021
Yates Dam	NPDES	ALG360010	2/1/2016	1/31/2021

### Birmingham Division

	Permit Type	Permit Number	Effective Date	Expiration Date
Birmingham Division Garage	AIR	4-07-2034-002	7/20/1998	
County Hwy 45	AIR	4-07-1184-8601	4/15/1986	
Gardendale Crew Headquarters	AIR	4-07-1670-8601	4/15/1986	
General Services Complex	AIR	411-G059-X001	8/17/1998	
	AIR	4-07-1116-8601	4/15/1986	
Hueytown Crew Headquarters	NPDES	ALG140133	10/1/2012	9/30/2017
	AIR	4-07-1688-8601	4/15/1986	
Patton Chapel Crew HQ	NPDES	ALG140132	10/1/2012	9/30/2017
	AIR	4-07-1579-8601	4/15/1986	
Trussville Crew Headquarters	NPDES	ALG140131	10/1/2012	9/30/2017

### Corporate

	Permit Type	Permit Number	Effective Date	Expiration Date
Corporate	AIR	4-07-0456-03	6/14/2016	
Central Utilities Plant	NPDES	ALG250054	4/1/2012	3/31/2017

### Eastern Division

	Permit Type	Permit Number	Effective Date	Expiration Date
Gadsden Garage	AIR	307-G129-X001	12/19/2008	

### Southeast Division

	Permit Type	Permit Number	Effective Date	Expiration Date
Eufaula Crew HQ	UIC	ALSI9903437	12/29/2013	12/27/2018
Farley Garage	AIR	607-G127-X001	12/29/2008	
Valley Crew HQ	UIC	ALSI9909429	6/23/2013	6/22/2018

### Southern Division

	Permit Type	Permit Number	Effective Date	Expiration Date
Selma Crew HQ	NPDES	ALG140244	10/1/2012	9/30/2017

### Western Division

	Permit Type	Permit Number	Effective Date	Expiration Date
Jasper Garage	AIR	414-GO25-X001	4/28/1995	
Tuscaloosa District Crew HQ & Div. Garage	AIR	413-G005-X001	11/22/1991	

### Construction Stormwater

	Permit Type	Permit Number	Effective Date	Expiration Date
APC Jasper	NPDES	ALR10BEAI	10/18/2018	3/31/2021
Barry Ash Pond Closure (Barry Bridge)	NPDES	ALR10BDZO	9/25/2018	3/31/2021
Bessemer - Calera	NPDES	ALR10BD36	1/29/2019	3/31/2021
Bessemer-Gorgas 115kV TL	NPDES	ALR10BCAM	5/23/2017	3/31/2021
Butler-Cuba 115kV	NPDES	ALR10BCVH	11/29/2017	3/31/2021
Clay TS	NPDES	ALR10BDY4	9/20/2018	3/31/2021
Clay TS - Rainbow City SS 115kV TL	NPDES	ALR10BB94	9/19/2016	3/31/2021
Cook Springs 115 Tap (2.5 mi) New (2234003)	NPDES	ALR10BBKS	12/8/2016	3/31/2021
County Line Rd-Autauga Creek 115	NPDES	ALR10BCXA	11/30/2017	3/31/2021
Dallas County Borrow Pit	NPDES	ALG890197	3/31/2016	3/31/2021
Dearmanville-Heflin	NPDES	ALR10BEOV	3/15/2019	3/31/2021
Enterprise Tap 115kV	NPDES	ALR10BDEA	3/27/2018	3/31/2021
Fuller Rd-Power South	NPDES	ALR10BCIW	7/17/2017	3/31/2021
Fuller Road-Nostasuga Reconductor (11 mi) (2210134)	NPDES	ALR10BBVO	3/27/2017	3/31/2021
Gaston Ash Pond Closure	NPDES	ALR10BEMT	3/4/2019	3/31/2021
Gaston Co. Line Rd	NPDES	ALR10BCRA	9/28/2017	3/31/2021
Gaston Low Volume Waste Pond	NPDES	ALR10B832	4/1/2016	3/31/2021
Gaston-Co. Line Rd	NPDES	ALR10BCRA	9/28/2017	3/31/2021
Gaston-Fayetteville 230kV	NPDES	ALR10BDVF	8/28/2018	3/31/2021
GE-Burkville-Hunter	NPDES	ALR10BCLS	8/16/2017	3/31/2021
Georgiana-Evergreen 115kV	NPDES	ALR10BEHY	1/19/2019	3/31/2021
Goodsprings TS	NPDES	ALR10BEMV	3/5/2019	3/31/2021
Gorgas - Fairfield 2nd Circuit	NPDES	ALR10BD39	1/16/2018	3/31/2021
Gorgas Ash Pond Closure	NPDES	ALR10BDH3	3/27/2018	3/31/2021
Gorgas Bottom Ash	NPDES	ALR10BELA	2/18/2019	3/31/2021
Gorgas-Fairfield X-Line	NPDES	ALR10BDS3	7/17/2018	3/31/2021
Gorgas-Tuscaloosa AB 115kV	NPDES	ALR10BEO5	3/15/2019	3/31/2021

Greene County Ash Pond Closure	NPDES	ALR10BEMU	2/18/2019	3/31/2021
Greene County Borrow Pit	NPDES	ALR167503	3/31/2016	3/31/2021
Greenville-Georgiana	NPDES	ALR10BEDK	12/5/2018	3/31/2021
GSC Borrow Pit	NPDES	ALG890444	3/31/2016	3/31/2021
GSC Building 9H	NPDES	ALR10BDHJ	4/11/2018	3/31/2021
Haleyville-Wilson Dam	NPDES	ALR10BEJ8	1/17/2019	3/31/2021
Hamilton-Hodges-Bear Creek 46kkV TL	NPDES	ALR10BCJR	8/14/2017	3/31/2021
Holt-South Bessemer	NPDES	ALR10BBHF	10/17/2016	3/31/2021
Jordan Dam-Bouldin Dam	NPDES	ALR10BENP	3/12/2019	3/31/2021
Miller Wasterwater Management Area	NPDES	ALR10BDMA	5/17/2018	3/31/2021
Miller Water Management Area	NPDES	ALR10BCIR	7/19/2017	3/31/2021
Mitchell Dam-North Selma	NPDES	ALR10BDD4	3/13/2018	3/31/2021
Naheola-Butler 115kV Relocation	NPDES	ALR10BDMV	5/17/2018	3/31/2021
Pinckard-Ft. Rucker-Enterprise	NPDES	ALR10BDLE	5/14/2018	3/31/2021
Remlap DS (2254794)	NPDES	ALR10BDSY	7/26/2018	3/31/2021
Ross Bridge Microgrid	NPDES	ALR10BCHD	7/18/2017	3/31/2021
Santuck DS	NPDES	ALR10BEJP	1/24/2019	3/31/2021
Smith Dam-Fulton Springs	NPDES	ALR10BETA	3/30/2019	3/31/2021
South Tuscaloosa-Eutaw 115kV TL	NPDES	ALR10BDQO	6/25/2018	3/31/2021
Theodore SS	NPDES	ALRBCVF	11/30/2017	3/31/2021
Thurlow Dam Laydown Area	NPDES	ALR10BDH4	4/5/2018	3/31/2021
Thweatt TS 115kV Tap	NPDES	ALR10BBUA	3/9/2017	3/31/2021
Troy-Luverne	NPDES	ALR10BCVM	11/30/2017	3/31/2021
Waugh DS 115kV TL	NPDES	ALR10BCY7	12/18/2017	3/31/2021
West Blountsville DS 46kV Tap (2179805) (2179812)	NPDES	ALR10BCJQ	8/14/2017	3/31/2021

#### Drinking Water Supply

	Permit Type	Permit Number	Effective Date	Expiration Date
Greene County Steam Plant	PWS-0642	2017-520	10/1/2016	9/30/2026
Energy Center Water System (PWSID #AL0001815)	PWS	2017-636	9/22/2017	9/30/2027

#### Pesticide Permit

	Permit Type	Permit Number	Effective Date	Expiration Date
APC ServiceTerritory	NPDES	ALG870003	10/31/2016	10/30/2021

#### Water Quality

	Permit Type	Permit Number	Effective Date	Expiration Date
Weiss Waterfowl Project	COE + WQ			

# **Attachment C**

**Plant Theodore Chemical Usage**

Chemical Name	Quantity Used	Frequency of Usage
Sodium Hypochlorite	320 gal.	7 days
Sodium Thiosulfate 30%	285 gal.	30 to 40 days
Tower 16T	330 gal.	60 to 90 days

Free available chlorine from Sodium Hypochlorite is consumed with Sodium Thiosulfate before discharging from the cooling tower basin. Tower 16T is a dispersant that prevents suspended solids from settling in the cooling tower basin. The Safety Data Sheets that follow provide additional information on these chemicals.

## 1. Identification

<b>Product identifier</b>	<b>Sodium Hypochlorite 12.5%</b>
<b>Other means of identification</b>	
SDS number	320222-06
Product registration number	EPA 148-1288
<b>Recommended use</b>	Bleaching agent; water treatment; disinfectant; detergent; cleaning agent.
<b>Recommended restrictions</b>	None known.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Company name</b>	Harcros Chemicals Inc
<b>Address</b>	5200 Speaker Rd. Kansas City, KS 66106 United States
<b>Main Telephone Number</b>	1-913-321-3131
<b>Website</b>	www.harcros.com
<b>E-mail</b>	custserv@harcros.com
<b>Emergency #: CHEMTREC</b>	1-800-424-9300
<b>Emergency #: CHEMTREC</b>	1-703-741-5970 (International Number - Call collect)

## 2. Hazard(s) identification

<b>Physical hazards</b>	Oxidizing liquids	Category 2
	Corrosive to metals	Category 1
<b>Health hazards</b>	Skin corrosion/irritation	Category 1A
	Serious eye damage/eye irritation	Category 1
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1
<b>OSHA defined hazards</b>	Not classified.	

### Label elements



<b>Signal word</b>	Danger
<b>Hazard statement</b>	May intensify fire; oxidizer. May be corrosive to metals. Causes severe skin burns and eye damage. Causes severe skin burns and eye damage. Causes serious eye damage. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
<b>Precautionary statement</b>	
Prevention	Keep away from heat. Keep/Store away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles. Keep only in original container. Do not breathe mist or vapor. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

<b>Response</b>	If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Wash contaminated clothing before reuse. In case of fire: Use appropriate media to extinguish. Absorb spillage to prevent material damage.
<b>Storage</b>	Store away from incompatible materials. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in accordance with local/regional/national/international regulations.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	1% of the mixture consists of component(s) of unknown acute oral toxicity. 22.4% of the mixture consists of component(s) of unknown acute dermal toxicity. 12.5% of the mixture consists of component(s) of unknown acute inhalation toxicity. 9.9% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 9.9% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Sodium Hypochlorite		7681-52-9	11.9 - < 15.6
Sodium Hydroxide		1310-73-2	0.1 - < 2
Other components below reportable levels			86.5

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Most important symptoms/effects, acute and delayed</b>	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Take off all contaminated clothing immediately. Contact with combustible material may cause fire. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Foam. Powder. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Greatly increases the burning rate of combustible materials. Containers may explode when heated. During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

May intensify fire; oxidizer. Contact with combustible material may cause fire.

## 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep away from clothing and other combustible materials. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Use water spray to reduce vapors or divert vapor cloud drift. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Ventilate the contaminated area. Wear appropriate protective equipment and clothing during clean-up. This product is miscible in water. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

Precautions for safe handling

Keep away from heat. Take any precaution to avoid mixing with combustibles. Keep away from clothing and other combustible materials. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat. Store in a cool, dry place out of direct sunlight. Store in corrosive resistant container with a resistant inner liner. Store in original tightly closed container. Keep only in the original container. Store in a well-ventilated place. Do not store near combustible materials. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Sodium Hydroxide (CAS 1310-73-2)	PEL	2 mg/m3

### US. ACGIH Threshold Limit Values

Components	Type	Value
Sodium Hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3



**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value
Sodium Hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m <sup>3</sup>

**US. Workplace Environmental Exposure Level (WEEL) Guides**

Components	Type	Value
Sodium Hypochlorite (CAS 7681-52-9)	STEL	2 mg/m <sup>3</sup>

<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Appropriate engineering controls</b>	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product. It is recommended that users of this product perform a risk assessment to determine the appropriate PPE.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Wear chemical goggles and face shield. Do not get in eyes. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.
<b>Other</b>	Wear appropriate chemical resistant clothing.
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	Keep from contact with clothing and other combustible materials. Remove and wash contaminated clothing promptly. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties**

<b>Appearance</b>	Clear.
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Clear to pale yellow.
<b>Odor</b>	Chlorine.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	-4 - 3 °F (-20 - -16.11 °C)
<b>Initial boiling point and boiling range</b>	> 230 °F (> 110 °C)
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.

Explosive limit - upper (%)	Not available.
Vapor pressure	12 mm Hg @20°C
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Soluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	May intensify fire; oxidizer.
pH in aqueous solution	12 - 14 (1% in DI Water)
Specific gravity	1.209 @20°C

## 10. Stability and reactivity

Reactivity	Greatly increases the burning rate of combustible materials. Reacts violently with strong acids. This product may react with oxidizing agents. May be corrosive to metals.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Reacts violently with strong acids. This product may react with oxidizing agents. Hazardous polymerization does not occur.
Conditions to avoid	Heat. Contact with incompatible materials. Do not mix with other chemicals.
Incompatible materials	Strong acids. Acids. Strong oxidizing agents. Oxidizing agents. Combustible material. Reducing agents. Metals. Bases, alkalis (organic).
Hazardous decomposition products	Chlorine. Hydrogen chloride.

## 11. Toxicological information

### Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.

Symptoms related to the physical, chemical and toxicological characteristics Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

### Information on toxicological effects

Acute toxicity	Not known.
Skin corrosion/irritation	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Causes serious eye damage.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Sodium Hypochlorite (CAS 7681-52-9)

3 Not classifiable as to carcinogenicity to humans.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not regulated.

**US. National Toxicology Program (NTP) Report on Carcinogens**

Not listed.

<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	Prolonged inhalation may be harmful.

**12. Ecological information**

**Ecotoxicity** Very toxic to aquatic life with long lasting effects.

Product	Species	Test Results
<b>Sodium Hypochlorite 12.5%</b>		
	EC50	40 mg/l, 96 hours <i>Nitocra Spinipes</i> Fasclatus 4 mg/l, 96 hours <i>Gammarus Fasclatus</i>
<b>Aquatic</b>		
<b>Crustacea</b>	EC50	<i>Daphnia</i> 2519.1724 mg/l, 48 hours estimated 0.07 - 0.7 mg/l, 24 hours <i>magnia</i> 0.006 mg/l, 24 hours <i>Ceriodaphnia sp.</i>
<b>Fish</b>	LC50	Fish 12.5131 mg/l, 96 hours estimated
<b>Components</b>	<b>Species</b>	<b>Test Results</b>
<b>Sodium Hydroxide (CAS 1310-73-2)</b>		
<b>Aquatic</b>		
<b>Crustacea</b>	EC50	<i>Water flea (Ceriodaphnia dubia)</i> 34.59 - 47.13 mg/l, 48 hours
<b>Fish</b>	LC50	<i>Western mosquitofish (Gambusia affinis)</i> 125 mg/l, 96 hours
<b>Sodium Hypochlorite (CAS 7681-52-9)</b>		
<b>Aquatic</b>		
<b>Fish</b>	LC50	<i>Chinook salmon (Oncorhynchus tshawytscha)</i> 0.038 - 0.065 mg/l, 96 hours

\* Estimates for product may be based on additional component data not shown.

<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

**13. Disposal considerations**

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.

Material name: Sodium Hypochlorite 12.5%

1950 Version #: 13 Revision date: 03-02-2018 Issue date: 05-05-2014

<b>Hazardous waste code</b>	D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel] The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

#### 14. Transport information

##### DOT

<b>UN number</b>	UN1791
<b>UN proper shipping name</b>	Hypochlorite solutions, MARINE POLLUTANT
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	8
<b>Packing group</b>	III
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	IB3, N34, T4, TP2, TP24
<b>Packaging exceptions</b>	154
<b>Packaging non bulk</b>	203
<b>Packaging bulk</b>	241
Reportable Quantity for Sodium Hypochlorite = 100 lbs.	
Not a Marine Pollutant by DOT in containers of 119 gallons or less.	

##### IATA

<b>UN number</b>	UN1791
<b>UN proper shipping name</b>	Hypochlorite solution
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	Yes
<b>ERG Code</b>	8L
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Other information</b>	
<b>Passenger and cargo aircraft</b>	Allowed with restrictions.
<b>Cargo aircraft only</b>	Allowed with restrictions.

##### IMDG

<b>UN number</b>	UN1791
<b>UN proper shipping name</b>	Hypochlorite solution, MARINE POLLUTANT
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	8
<b>Packing group</b>	III
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>EmS</b>	Not available.
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not established.

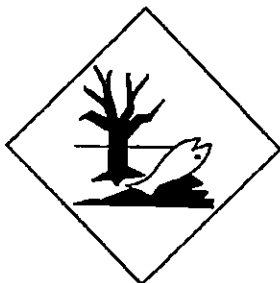
DOT



IATA; IMDG



Marine pollutant



General information

IMDG Regulated Marine Pollutant.

## 15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Sodium Hydroxide (CAS 1310-73-2)

Listed.

Sodium Hypochlorite (CAS 7681-52-9)

Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes

Delayed Hazard - No

Fire Hazard - Yes

Pressure Hazard - No

Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical**      Yes

**SARA 313 (TRI reporting)**  
Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)**      Not regulated.

**FIFRA Information**

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

**US state regulations**

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Sodium Hydroxide (CAS 1310-73-2)

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision**

**Issue date**                      05-05-2014  
**Revision date**                03-02-2018  
**Version #**                        13  
**HMIS® ratings**                Health: 3  
    Flammability: 0  
    Physical hazard: 1

**NFPA ratings**

Health: 3  
Flammability: 0  
Instability: 1  
Special hazards: OX

**Disclaimer**

Harcros Chemicals Inc cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information provided in this 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 Safety Data Sheet, which are generally recognized as being aggravated by exposure to this product.

**Revision information**

Physical & Chemical Properties: Multiple Properties  
Regulatory information: FIFRA Information





**SOUTHERN IONICS INCORPORATED (SII)**  
**SAFETY DATA SHEET**

SDS NO. 210  
Effective Date: April 30, 2015  
Revision Date: April 12, 2018

<b>I. Product and Company Information</b>			
<b>Product Name:</b>	Sodium Thiosulfate Solution (30% and 40%)	<b>Synonym:</b>	STS, Thio
<b>Chemical Name:</b>	Sodium Thiosulfate Solution	<b>CAS Number:</b>	7772-98-7
<b>Manufacturer's Name:</b> Southern Ionics Incorporated 579 Commerce Street West Point, MS 39773 Customer Service: 1-800-953-3585 Web Site <a href="http://www.southernionics.com">www.southernionics.com</a>		<b>Emergency Contacts:</b> Afterhours (Southern Ionics) 1-888-610-2379  For Chemical Emergency, Spill or Accident Call CHEMTREC at 1-800-424-9300 CHEMTREC CCN - 20596	

<b>II. Hazard Identification</b>	
<b>OSHA HCS / GHS Classification(s):</b>	<b>Hazard Statement(s):</b>
Not classified under GHS Rules	May cause eye irritation.
	May cause skin irritation.
	May be harmful if swallowed.
	May be harmful if inhaled.
<b>GHS Signal Word:</b>	<b>Precautionary Statement(s):</b>
	See Section VIII. Personal Protective Equipment.
<b>GHS Symbol(s):</b> Not Applicable	<b>Prevention:</b>
	<b>Response:</b>
	See Section IV. First Aid Measures.

<b>III. Composition / Information on Ingredients</b>		
<b>Chemical Name:</b>	<b>CAS Reg #'s</b>	<b>%</b>
Sodium Thiosulfate	7772-98-7	29 - 49
Water	7732-18-5	Balance

<b>IV. First Aid Measures</b>	
<b>Eyes:</b>	Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Check for and remove any contact lenses. Seek medical attention, if you feel unwell.
<b>Dermal / Skin:</b>	Remove contaminated clothing and wash exposed area thoroughly with soap and water. Seek medical attention, if you feel unwell.
<b>Inhalation:</b>	Move to fresh air immediately. If breathing is difficult, give oxygen. Seek medical attention, if you feel unwell.
<b>Ingestion:</b>	If swallowed, DO NOT induce vomiting. Rinse mouth. If conscious give 4 to 8 ounces of water to dilute material. Seek medical attention, if you feel unwell.

<b>V. Fire Fighting Measures</b>				
<b>NFPA Hazard Rating:</b>	Health (Blue)	Fire (Red)	Reactivity (Yellow)	Special Instructions (White)
	1	0	0	None
<b>NFPA Hazard Classification: 0 = Least 1=Slight 2= Moderate 3= High 4= Extreme</b>				
<b>Extinguishing Media:</b>	Use extinguishing media appropriate for surrounding fire.			
<b>Special Firefighting Procedure:</b>	Wear NIOSH-approved self-contained breathing apparatus (SCBA). Use water spray to keep containers cool and to knock down fumes. CAUTION: when subjected to excess heat, product releases additional sulfur dioxide gas.			

<b>VI. Accidental Release Measures</b>	
<b>Precaution if Spilled or Released:</b>	Steps should be taken to contain spilled liquids and prevent discharges to streams or sewer systems.
<b>Neutralizing Chemicals:</b>	None

<b>VII. Handling and Storage</b>	
<b>Handling:</b>	Handle all chemicals with respect. Keep separated from incompatible substances. Handle only with equipment, materials and supplies specified by their manufacturer as being compatible and appropriate for use with this product.
<b>Storage:</b>	Store at appropriate temperature to protect from freezing or crystallization. Consult the appropriate SII Product Bulletin for temperature recommendations. Do not store this material near food, animal feed or drinking water. Store in well ventilated area. Store away from excessive heat (e.g. steam pipes, radiators), and from reactive materials. Keep container tightly closed when not in use.

<b>VIII. Exposure Control / Personal Protective Equipment</b>				
<b>Component Workplace Control Parameters:</b>				
<b>Components:</b>	<b>CAS-No.</b>	<b>Value</b>	<b>Parameters</b>	<b>Basis</b>
No Data Available				
<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.			
<b>General Hygiene:</b>	Practice good personal hygiene after using this material, especially before eating, drinking, smoking or using the toilet.			
<b>Personal Protection Equipment:</b>				
<b>Eye:</b>	Use chemical splash goggles and face shield. Eye protection worn must be compatible with respiratory protection system employed.			
<b>Skin:</b>	Chemically resistant gloves should be worn whenever this material is handled. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough.			
<b>Respiratory:</b>	None required under normal conditions. When conditions warrant a respirator, use NIOSH approved respirator and cartridge for particulates and Sulfur Dioxide.			
<b>Other Protective Items:</b>	Where splash is possible, full chemically resistant protective clothing and boots should be worn. Ensure that eyewash stations and safety showers are proximal to the work-station location.			
<b>HMIS Classification:</b>	Health (Blue)	Flammability (Red)	Physical Hazard (Yellow)	PPE (White)
	1	0	0	See Above
<b>Hazard Classification: 0 = Minimal 1=Slight 2= Moderate 3= Serious 4= Severe</b>				

IX. Physical and Chemical Properties			
Physical State:	Liquid	pH:	8.0 to 11.0
Appearance:	Clear, colorless to pale yellow	Molecular Weight:	158.1 Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>
Odor:	Sulfur like	Odor Threshold:	No Data Available
Specific Gravity:(H <sub>2</sub> O=1)	1.26 to 1.50 @ 77°F/25°C	Weight per Gallon:	10.5 to 12.5 @ 77°F/25°C
Vapor Density: (Air=1)	No Data Available	Vapor Pressure:	No Data Available
Boiling Point:	217°F/103°C Estimated	Freezing/Melting Point:	14°F/-10°C
Lower Explosive Limit:	Not Applicable	Upper Explosive Limit:	Not Applicable
Flash Point:	Not Applicable	Autoignition Temp:	Not Applicable
Solubility in Water:	Dilutable		
Other:			

X. Stability and Reactivity Data	
Chemical Stability:	Product is stable under normal or expected use.
Conditions To Avoid:	Avoid exposure to excessive heat of dried materials and contact with strong acids.
Incompatible Materials:	Avoid contact with the following: Strong acids.
Hazardous Products of Decomposition:	If dried material is overheated, decomposition may yield sulfur dioxide - toxic fumes.

XI. Toxicological Information						
Routes of Entry:	<input checked="" type="checkbox"/> Eyes <input checked="" type="checkbox"/> Skin <input checked="" type="checkbox"/> Ingestion <input checked="" type="checkbox"/> Inhalation					
Sign and symptoms of Exposure:	May cause irritation to eyes, skin and respiratory passages.					
Eye Contact:	May cause irritation.					
Ingestion:	May be harmful if swallowed.					
Skin Contact:	May cause irritation.					
Inhalation:	May be harmful if inhaled. May cause respiratory tract irritation.					
Carcinogenicity:	NPT	Not Listed	IARC	Not Listed	OSHA	Not Regulated
Ingredient Name:	Species		Test		Route	Results
	No Data Available					
Comments:						

XII. Ecological Information				
Ingredient Name:	Species	Test	Period	Results
Sodium Thiosulfate	Daphnia magna	520mg/L	48 hours	NOEC
Comments:				

XIII. Disposal Considerations	
Waste Disposal:	Always dispose of material in accordance with local, state, and federal regulations.

XIV. Transportation Information			
Proper Shipping Name:	Sodium Thiosulfate Solution		
DOT Classification:	Not Regulated by USDOT		
Identification Number:	Packing Group:	Other Labels:	

## XV. Regulatory Information

Inventory Status:		US Regulations:	
U. S. TSCA	Yes	SARA 302 TPQ	Not Listed
Europe EINECS	Yes	SARA 304 RQ	Not Listed
Canadian DSL	Yes	SARA 313 List	Not Listed
Japan ENCS	No	CERCLA (RQ)	Not Listed
Korean KECI	Yes	RCRA 261.33	Not Listed
Philippines PICCS	Yes		
Australian AICS	Yes		
		SARA 311/312	<input checked="" type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Fire <input type="checkbox"/> Release of Pressure <input type="checkbox"/> Reactive
International Regulations:		Other Regulations:	
EINECS	231-867-5	California PROP 65	Not Listed
		FDA - GRAS	21 CFR 184.1807

## XVI. Other Information

<b>NSF Certification:</b>	_____
<b>Other:</b>	
<b>Revision Notes:</b>	<u>04.12.2018 Added all products covered under the SDS in the product name and revised wording in appearance under Physical and Chemical Properties. Removed the Canada information in the International Regulations Section.</u>
<b>MSDS Replacements:</b>	<u>SII MSDS 037 Sodium Thiosulfate Solution, SII MSDS 079 Sodium Thiosulfate Solution (39% -49%) and SII MSDS 106 Sodium Thiosulfate, 40%.</u>

**For Product Information:**  
 TEL: 662-494-3055  
 FAX: 662-494-2828

**SALES OFFICE**  
 Post Office Drawer 1217  
 West Point, MS 39773

**To Place An Order:**  
 TEL: 800-953-3585  
 FAX: 800-953-3588

### IMPORTANT

Although the information contained is offered in good faith, SUCH INFORMATION IS EXPRESSLY GIVEN WITHOUT ANY WARRANTY (EXPRESS OR IMPLIED) OR ANY GUARANTEE OF ITS ACCURACY OR SUFFICIENCY and is taken at the user's sole risk. User is solely responsible for determining the suitability of use in each particular situation. SII specifically DISCLAIMS ANY LIABILITY WHATSOEVER FOR THE USE OF SUCH INFORMATION, including without limitation any recommendation which user may construe and attempt to apply which may infringe or violate valid patents, licenses, and/or copyright.

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 03/30/2015


Reviewed on 03/30/2015


## 1 Identification

- **Product identifier** Industrial water treatment compound
- **Trade name:** **TOWER 16T**
- **Article number:** WTO160A
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
ZEE COMPANY, INC.  
4146 South Creek Road  
Chattanooga, TN 37406
- **Information department:** Technical Services: 423-698-1401
- **Emergency telephone number:** CHEMTREC: 800-424-9300

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
The product is not classified according to the Globally Harmonized System (GHS).
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Not applicable.
- **Information concerning particular hazards for human and environment:**  
The product does not have to be labeled due to the calculation procedure of international guidelines.
- **Classification system:**  
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **Label elements**
- **Labelling according to EU guidelines:**  
Observe the general safety regulations when handling chemicals.  
The product is not subject to identification regulations according to directives on hazardous materials.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**

	Health = 1
	Fire = 0
	Reactivity = 0
- **HMIS-ratings (scale 0 - 4)**

	Health = 1
	Fire = 0
	Reactivity = 0
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

USA

(Contd. on page 2)



**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 03/30/2015

Reviewed on 03/30/2015

**Trade name: TOWER 16T**

(Contd. of page 1)

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

7631-95-0	Sodium molybdate	≤ 2.5%
-----------	------------------	--------

### 4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Remove to fresh air. If symptoms persist consult a doctor.
- **After skin contact:**  
Remove contaminated clothing and flush area with running water for a minimum of 15 minutes. If irritation persists consult a doctor.
- **After eye contact:**  
Immediately flush open eye with running water for a minimum of 15 minutes. Immediately get medical attention.
- **After swallowing:**  
Immediately contact a doctor or Poison Control Center.  
Do not induce vomiting. Rinse mouth out with water, and drink several glasses of water. Never give anything by mouth to an unconscious person.
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

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### 7 Handling and storage

- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Keep this and all chemicals out of the reach of children.  
Store in a cool, dry, well ventilated area.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

**7631-95-0 Sodium molybdate**

PEL	Long-term value: 5 mg/m <sup>3</sup> as Mo
TLV	Long-term value: 0.5 mg/m <sup>3</sup> as Mo; respirable fraction

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Goggles recommended during refilling.
- **Body protection:** Protective work clothing

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### 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Liquid
Color:	Gold colored
Odor:	Characteristic
Odor threshold:	Not determined.

· **pH-value at 20 °C (68 °F):** 5.5

· **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:**

Decomposition temperature: Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

· **Vapor pressure:** Not determined.

· **Density at 20 °C (68 °F):** 1.22 g/cm<sup>3</sup> (10.181 lbs/gal)

· **Relative density** Not determined.

· **Vapor density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

Water: Fully miscible.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

Dynamic:	Not determined.
Kinematic:	Not determined.

· **Other information** No further relevant information available.

### 10 Stability and reactivity

· **Reactivity**

· **Chemical stability**

· **Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

· **Possibility of hazardous reactions** No dangerous reactions known.

· **Conditions to avoid** No further relevant information available.

· **Incompatible materials:** No further relevant information available.

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· **Hazardous decomposition products:** No dangerous decomposition products known.

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### 11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **Primary irritant effect:**

· **on the skin:** No irritant effect.

· **on the eye:** No irritating effect.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

### 12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:** Generally not hazardous for water

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:** Dispose of in accordance with federal, state, and local regulations.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

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**14 Transport information**

· UN-Number	
· DOT, IMDG, IATA	-
· UN proper shipping name	
· DOT, IMDG, IATA	-
· Transport hazard class(es)	
· DOT, ADR, IMDG, IATA	
· Class	-
· Packing group	
· DOT, IMDG, IATA	-
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	-

**15 Regulatory information**

· Safety, health and environmental regulations/legislation specific for the substance or mixture	
· Sara	
· Section 355 (extremely hazardous substances):	
None of the ingredients is listed.	
· Section 313 (Specific toxic chemical listings):	
None of the ingredients is listed.	
· TSCA (Toxic Substances Control Act):	
All ingredients are listed.	
· Proposition 65	
· Chemicals known to cause cancer:	
None of the ingredients is listed.	
· Chemicals known to cause reproductive toxicity for females:	
None of the ingredients is listed.	
· Chemicals known to cause reproductive toxicity for males:	
None of the ingredients is listed.	
· Chemicals known to cause developmental toxicity:	
None of the ingredients is listed.	
· Carcinogenic categories	
· EPA (Environmental Protection Agency)	
None of the ingredients is listed.	
· TLV (Threshold Limit Value established by ACGIH)	
None of the ingredients is listed.	

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· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **Product related hazard informations:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Contact:** Jim Faller/Keith Seyfried

· **Date of preparation / last revision** 03/30/2015 / -

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

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