LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

Alabama Department of Environmental Management
adem.alabama.gov

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Montgomery, Alabama 36130-1463
(334) 271-7700 ▪ FAX (334) 271-7950

JULY 22, 2022

DENNIS BARRY
PLANT MANAGER
RED STAR YEAST, LLC
13211 HIGHWAY 431 SOUTH
HEADLAND, AL 36345

RE: DRAFT PERMIT
NPDES PERMIT NUMBER AL0057801

Dear Mr. Barry:

Transmitted herein is a draft of the referenced permit.

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

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

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

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

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

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

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

Sincerely,

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

Enclosure: Draft Permit

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

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

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

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

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

Alabama Department of Environmental Management

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE: RED STAR YEAST COMPANY LLC

FACILITY: RED STAR YEAST LLC
13211 HIGHWAY 431 SOUTH
HEADLAND, ALABAMA 36345
HENRY COUNTY

PERMIT NUMBER: AL0057801

RECEIVING WATERS: DSN001, DSN005, DSN013, DSN014: BLACKWOOD CREEK
DSN002, DSN003, DSN006 – DSN012: SPIVEY MILL CREEK

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

ISSUANCE DATE:

EFFECTIVE DATE:

EXPIRATION DATE:

Draft

Alabama Department of Environmental Management

INDUSTRIAL SECTION
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

TABLE OF CONTENTS

PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

DSN001S: Stormwater runoff associated with the production of food grade yeast.

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 DSN001, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency[2]	Sample Type[1]	Seasonal
BOD, 5-Day (20 Deg. C) (00310) Effluent Gross Value	*****	*****	*****	*****	*****	100 Maximum Daily	mg/l	Semi-Annual	Grab	All Months
pH (00400) Effluent Gross Value	*****	*****	*****	(Report) Minimum Daily	*****	(Report) Maximum Daily	S.U.	Semi-Annual	Grab	All Months
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	*****	15 Maximum Daily	mg/l	Semi-Annual	Grab	All Months
Nitrogen, Ammonia Total (As N) (00610) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months
Nitrogen, Kjeldahl Total (As N) (00625) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months
Nitrite Plus Nitrate Total 1 Det. (As N) (00630) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months
Phosphorus, Total (As P) (00665) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months
Selenium, Total (As Se) (01147) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months

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

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

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

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

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

DSN001S(Continued): Stormwater runoff associated with the production of food grade yeast.

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 DSN001, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency[2]	Sample Type[1]	Seasonal
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	*****	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Semi-Annual	Estimate	All Months

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

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

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

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

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

DSN002S, DSN003S, DSN005S-014S: Stormwater runoff from the land application of process wastewaters generated by the production of food grade yeast. 5/

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from DSN002S, DSN003S, DSN005S-014S, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency[2]	Sample Type[1]	Seasonal
BOD, 5-Day (20 Deg. C) (00310) Effluent Gross Value	*****	*****	*****	*****	*****	100 Maximum Daily	mg/l	Semi-Annual	Grab	All Months
pH (00400) Effluent Gross Value	*****	*****	*****	(Report) Minimum Daily	*****	(Report) Maximum Daily	S.U.	Semi-Annual	Grab	All Months
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	*****	15 Maximum Daily	mg/l	Semi-Annual	Grab	All Months
Nitrogen, Ammonia Total (As N) (00610) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months
Nitrogen, Kjeldahl Total (As N) (00625) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months
Nitrite Plus Nitrate Total 1 Det. (As N) (00630) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months
Phosphorus, Total (As P) (00665) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months
Selenium, Total (As Se) (01147) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months

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

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

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

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

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

5/ Monitoring requirements apply only to DSN003, DSN005, DSN009 and DSN012 as these outfalls have been deemed representative sampling sites for the other stormwater outfalls.

DSN002S, DSN003S, DSN005S-014S (Continued): Stormwater runoff from the land application of process wastewaters generated by the production of food grade yeast. 5/

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from DSN002S, DSN003S, DSN005S-014S, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency[2]	Sample Type[1]	Seasonal
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	*****	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Semi-Annual	Estimate	All Months

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

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

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

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

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

5/ Monitoring requirements apply only to DSN003, DSN005, DSN009 and DSN012 as these outfalls have been deemed representative sampling sites for the other stormwater outfalls.

DSN01A1: Process and non-process wastewaters associated with yeast production prior to land application. 4/ 5/

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from DSN01A, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency[2]	Sample Type[1]	Seasonal
BOD, 5-Day (20 Deg. C) (00310) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	mg/l	Weekly	Composite	All Months
pH (00400) Effluent Gross Value	*****	*****	*****	(Report) Minimum Daily	*****	(Report) Maximum Daily	S.U.	Weekly	Grab	All Months
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	mg/l	Weekly	Grab	All Months
Nitrogen, Total (As N) (00600) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	lbs/day	*****	*****	*****	*****	Weekly	Composite	All Months
Nitrogen, Ammonia Total (As N) (00610) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	mg/l	Weekly	Composite	All Months
Nitrogen, Kjeldahl Total (As N) (00625) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	mg/l	Weekly	Composite	All Months
Nitrite Plus Nitrate Total 1 Det. (As N) (00630) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	mg/l	Weekly	Composite	All Months
Phosphorus, Total (As P) (00665) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	mg/l	Weekly	Composite	All Months
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Daily	Totalizer	All Months
Nitrogen Limit Excursions **6/**	(Report) Total	*****	# Exceedances	*****	*****	*****	*****	Monthly	Not Applicable	All Months

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

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

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

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

4/ See Part IV.C Industrial Land Application Requirements.

5/ The permittee shall not apply more than the amount of nitrogen necessary to maintain a healthy cover crop and under no circumstance exceed the nitrogen uptake value for the cover crop. The maximum monthly uptake value has been calculated for each spray zone and is listed in the tables in Part IV. C. of this permit. The permittee shall determine the cumulative total of nitrogen applied to each zone each month using the measured flow to that zone and the monthly average nitrogen concentration reported for the month at DSN01A. These values shall be reported in the semi-annual reports which are due to the Department no later than July 28th and January 28th of each year. Total nitrogen includes Total Kjeldahl Nitrogen (TKN) plus Nitrates and Nitrites.

6/ The value reported should be the Applied Nitrogen Loading minus the Allowed Nitrogen Loading. A value of less than or equal to zero indicates compliance with this parameter.

B. DISCHARGE MONITORING AND RECORD KEEPING REQUIREMENTS

1. Representative Sampling

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

2. Test Procedures

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

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

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

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

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

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

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

3. Recording of Results

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

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

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

c. The dates and times the analyses were performed;

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

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

f. The results of all required analyses.

4. Records Retention and Production

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

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

5. Monitoring Equipment and Instrumentation

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

C. DISCHARGE REPORTING REQUIREMENTS

1. Reporting of Monitoring Requirements

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

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

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

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

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

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

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

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

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

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

c. Except as allowed by Provision I.C.1.c.(1) or (2), the permittee shall submit all Discharge Monitoring Reports (DMRs) required by Provision I.C.1.b electronically.

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

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

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

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

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

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

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

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

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

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

Alabama Department of Environmental Management
Water Division
Office of Water Services
Post Office Box 301463
Montgomery, Alabama 36130-1463

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

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

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

Alabama Department of Environmental Management
Water Division

Post Office Box 301463
Montgomery, Alabama 36130-1463

Certified and Registered Mail shall be addressed to:

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

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

2. Noncompliance Notification

a. 24-Hour Noncompliance Reporting

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

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

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

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

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

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

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

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

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

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

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

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

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

D. OTHER REPORTING AND NOTIFICATION REQUIREMENTS

1. Anticipated Noncompliance

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

2. Termination of Discharge

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

3. Updating Information

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

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

4. Duty to Provide Information

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

5. Cooling Water and Boiler Water Additives

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

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

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

(3) quantities to be used;

(4) frequencies of use;

(5) proposed discharge concentrations; and

(6) EPA registration number, if applicable.

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

6. Permit Issued Based On Estimated Characteristics

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

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

E. SCHEDULE OF COMPLIANCE

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

COMPLIANCE SHALL BE ATTAINED ON THE EFFECTIVE DATE OF THIS PERMIT

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

PART II OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES

A. OPERATIONAL AND MANAGEMENT REQUIREMENTS

1. Facilities Operation and Maintenance

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

2. Best Management Practices

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

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

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

3. Spill Prevention, Control, and Management

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

B. OTHER RESPONSIBILITIES

1. Duty to Mitigate Adverse Impacts

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

2. Right of Entry and Inspection

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

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

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

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

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

C. BYPASS AND UPSET

1. Bypass

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

b. A bypass is not prohibited if:

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

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

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

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

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

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

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

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

2. Upset

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

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

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

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

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

1. Duty to Comply

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

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

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

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

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

2. Removed Substances

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

3. Loss or Failure of Treatment Facilities

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

4. Compliance with Statutes and Rules

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

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

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

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

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

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

2. Change in Discharge

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

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

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

(a) one hundred micrograms per liter;

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

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

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

(a) five hundred micrograms per liter;

(b) one milligram per liter for antimony;

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

3. Transfer of Permit

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

4. Permit Modification and Revocation

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

5. Permit Termination

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

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

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

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

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

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

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

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

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

6. Permit Suspension

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

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

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

F. COMPLIANCE WITH TOXIC POLLUTANT STANDARD OR PROHIBITION

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

G. DISCHARGE OF WASTEWATER GENERATED BY OTHERS

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

PART III OTHER PERMIT CONDITIONS

A. CIVIL AND CRIMINAL LIABILITY

1. Tampering

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

2. False Statements

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

3. Permit Enforcement

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

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

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

(2) An action for damages;

(3) An action for injunctive relief; or

(4) An action for penalties.

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

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

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

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

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

4. Relief from Liability

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

B. OIL AND HAZARDOUS SUBSTANCE LIABILITY

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

C. PROPERTY AND OTHER RIGHTS

This permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, trespass, or any infringement of federal, state, or local laws or regulations,

nor does it authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any waters of the state or of the United States.

D. AVAILABILITY OF REPORTS

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

E. EXPIRATION OF PERMITS FOR NEW OR INCREASED DISCHARGES

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

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

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

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

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

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

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

F. COMPLIANCE WITH WATER QUALITY STANDARDS

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

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

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

G. GROUNDWATER

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

H. DEFINITIONS

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

2. Average weekly discharge limitation - means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges"

measured during that week (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).

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

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

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

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

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

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

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

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

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

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

13. Director - means the Director of the Department.

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

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

16. DO – means dissolved oxygen.

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

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

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

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

19. FC – means the pollutant parameter fecal coliform.

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

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

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

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

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

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

26. MGD – means million gallons per day.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

41. TRC – means Total Residual Chlorine.

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

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

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

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

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

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

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

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

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

I. SEVERABILITY

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

PART IV ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS

A. BEST MANAGEMENT PRACTICES (BMP) PLAN REQUIREMENTS

1. BMP Plan

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

2. Plan Content

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

a. Establish specific objectives for the control of pollutants:

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

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

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

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

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

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

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

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

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

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

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

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

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

m. Provide spill prevention, control, and/or management sufficient to prevent or minimize contaminated stormwater runoff. Any containment system used to implement this requirement shall be constructed of materials compatible with the

substance(s) contained and shall prevent the contamination of groundwater. The containment system shall also be capable of retaining a volume equal to 110 percent of the capacity of the largest tank for which containment is provided;

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

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

p. Bear the signature of the plant manager.

3. Compliance Schedule

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

4. Department Review

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

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

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

5. Administrative Procedures

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

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

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

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

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

B. 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. INDUSTRIAL LAND APPLICATION REQUIREMENTS

1. A healthy cover crop consisting of Bermuda or fescue with rye or oats overseed or any comparable alternative nitrogen consuming crop shall be maintained at all times during land application of wastewater. If necessary, the cover crop shall be maintained by fertilization, reseeding, etc.

2. Erosion control measures, using best management practices shall be utilized to minimize soil loss.

3. Wastewater shall not be applied during periods of rain and/or high winds which could carry the wastewater off site, when the ground is saturated such that percolation will not occur, prior to periods of rain or when the ground is frozen.

4. Wastewater shall not be applied to fields with a slope greater than 10% and shall not be applied within 50 feet of all creeks, drainage ways, sinkholes and springs. It is highly recommended that the vegetative buffer zones be increased along upland ditches, gulleys, swales and other features that are likely to convey stormwater to the receiving stream.

5. All spray and monitoring equipment shall be properly operated and maintained at all times to prevent leaks and spills. The equipment shall be installed so that there is no overlap of spray patterns from the individual sprinklers.

6. As a minimum, the following records shall be maintained by the permittee which will be subject to inspection by the Department.

   a. All information required by land application monitoring reports;

   b. Field, date and time span of application and volume applied;

   c. Field, date, quantity and type of fertilizer applied;

   d. Date and amount of rainfall;

   e. Nitrogen loading (lbs per day and lbs per month) for each zone/pivot.

7. The permittee shall submit to the Department semi-annual reports due on **July 28th** for the period from January 1 to June 30 and **January 28th** for the period from July 1 to December 31 of each year. These submittals shall report the monthly nitrogen loading applied to the spray areas shown in the charts below:

The spray field shall be limited by the following monthly Nitrogen limits for each land application site based the use of Bermuda or fescue grass with rye grass or oats overseed:

Month	N	G1	G2	G4	P1	P2	P3	P4	P5	P6	P7
	(lbs/ac/mo)	19.34	8.1	8.06	35.38	33.4	33	43.9	40.39	17	91.96
Jan	45.17	874	366	364	1598	1509	1491	1983	1824	768	4154
Feb	50.62	979	410	408	1791	1691	1670	2222	2045	861	4655
Mar	67.69	1309	548	546	2395	2261	2234	2972	2734	1151	6225
Apr	88.15	1705	714	710	3119	2944	2909	3870	3560	1499	8106
May	114.76	2219	930	925	4060	3833	3787	5038	4635	1951	10553
Jun	94.83	1834	768	764	3355	3167	3129	4163	3830	1612	8721
Jul	101.52	1963	822	818	3592	3391	3350	4457	4100	1726	9336
Aug	90.74	1755	735	731	3210	3031	2994	3983	3665	1543	8344
Sep	78.19	1512	633	630	2766	2612	2580	3433	3158	1329	7190
Oct	75.19	1454	609	606	2660	2511	2481	3301	3037	1278	6914
Nov	50.21	971	407	405	1776	1677	1657	2204	2028	854	4617
Dec	35.41	685	287	285	1253	1183	1169	1554	1430	602	3256

Month	N	P8	P9	P10	P11	P13	P14	P15	P16	P17	P18
	(lbs/ac/mo)	29.9	27.3	52.3	49.7	26	30	51.4	12.5	12	50.2
Jan	45.17	1351	1233	2362	2245	1174	1355	2322	565	542	2268
Feb	50.62	1514	1382	2647	2516	1316	1519	2602	633	607	2541
Mar	67.69	2024	1848	3540	3364	1760	2031	3479	846	812	3398
Apr	88.15	2636	2406	4610	4381	2292	2645	4531	1102	1058	4425
May	114.76	3431	3133	6002	5704	2984	3443	5899	1435	1377	5761
Jun	94.83	2835	2589	4960	4713	2466	2845	4874	1185	1138	4760
Jul	101.52	3035	2771	5309	5046	2640	3046	5218	1269	1218	5096
Aug	90.74	2713	2477	4746	4510	2359	2722	4664	1134	1089	4555
Sep	78.19	2338	2135	4089	3886	2033	2346	4019	977	938	3925
Oct	75.19	2248	2053	3932	3737	1955	2256	3865	940	902	3775
Nov	50.21	1501	1371	2626	2495	1305	1506	2581	628	603	2521
Dec	35.41	1059	967	1852	1760	921	1062	1820	443	425	1778

D. GROUNDWATER MONITORING REQUIREMENTS

1. Monitoring wells BG1, BG2 and MW1, MW2, MW3, MW5 and MW8 shall be monitored once per six months for static water level, pH, Total Sulfates, Total Chlorides, Nitrate (as N), Total Dissolved Solids, Total Phosphorus, Total Kjeldahl Nitrogen, Ammonia (as N), Conductivity, Total Cadmium, Total Copper, Total Lead, Total Nickel, Total Selenium and Total Zinc.

2. Groundwater samples must be analyzed utilizing EPA approved analytical laboratory methods.

3. The permittee must determine whether there is a statistically significant increase over the background quality at each well. If it is determined that there is a statistically significant increase of the constituents, then further action may be warranted by the Department.

4. The permittee must submit an annual report no later than **February 28th** summarizing the semi-annual sample results. The annual report shall include the following:

    a. The rate and the extent of contamination (if any) and include contour maps showing the groundwater flow direction;

    b. Discussion of all analysis collected;

    c. Discussion of concentration trends in each monitoring well;

    d. All potentiometric data collected during each monitoring event including top casing elevations, measured water levels, total well depths and calculated groundwater elevations;

    e. A potentiometric map illustrating the groundwater flow direction for each monitoring event;

    f. All field parameter data collected during the well purging activities;

    g. The specific dates that the groundwater sampling activities were conducted and;

    h. The report shall be prepared by and bear the signature and the license number of a professional geologist registered in the State of Alabama.

ADEM PERMIT RATIONALE

PREPARED DATE: April 29, 2022
PREPARED BY: Victoria Kim

Permittee Name:	Red Star Yeast Company LLC
Facility Name:	Red Star Yeast LLC
Permit Number:	AL0057801

PERMIT IS REISSUANCE DUE TO EXPIRATION

DISCHARGE SERIAL NUMBERS & DESCRIPTIONS:

DSN001: Stormwater runoff associated with the production of food grade yeast

DSN002- 003, 005-014: Stormwater runoff from the land application of process wastewaters generated by the production of food grade yeast

DSN01A: Process and non-process wastewaters associated with yeast production prior to land application

INDUSTRIAL CATEGORY: NON-CATEGORICAL

MAJOR: **No**

STREAM INFORMATION:

Receiving Stream:	Spivey Mill Creek, Blackwood Creek
Classification:	Fish & Wildlife
River Basin:	Choctawhatchee Basin
7Q10:	0.0 cfs
7Q2:	0.0 cfs
1Q10:	0.0 cfs
303(d) List:	No
Impairment:	N/A
TMDL:	No

DISCUSSION:

Red Star produces liquid food grade yeast by the fermentation of certain substrates including molasses, water and yeast inoculants. The yeast is sold to bakeries for use in producing baked goods. The process generates excess water which is stored in ponds and then used to irrigate over 500 acres of hybrid Bermuda grass (summer crop) and oats (winter crop). The irrigation system consists of center pivots and spray guns.

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.

DSN001S: Stormwater runoff associated with the production of food grade yeast

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq	Sample Type	Seasonal	Basis
BOD, 5-Day (20 Deg. C) (00310) Effluent Gross Value	*****	*****	*****	*****	*****	100 Maximum Daily	mg/l	Semi-Annual	Grab	All Months	BPJ
pH (00400) Effluent Gross Value	*****	*****	*****	6.0 Minimum Daily	*****	8.5 Maximum Daily	S.U.	Semi-Annual	Grab	All Months	WQBEL
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months	BPJ
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	*****	15 Maximum Daily	mg/l	Semi-Annual	Grab	All Months	BPJ
Nitrogen, Ammonia Total (As N) (00610) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months	BPJ
Nitrogen, Kjeldahl Total (As N) (00625) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months	BPJ
Nitrite Plus Nitrate Total 1 Det. (As N) (00630) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months	BPJ
Phosphorus, Total (As P) (00665) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months	BPJ
Selenium, Total (As Se) (01147) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months	BPJ
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	*****	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Semi-Annual	Estimate	All Months	BPJ

DSN002S, 003S, 005-014S: Stormwater runoff from the land application of process wastewaters generated by the production of food grade yeast

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq	Sample Type	Seasonal	Basis
BOD, 5-Day (20 Deg. C) (00310) Effluent Gross Value	*****	*****	*****	*****	*****	100 Maximum Daily	mg/l	Semi-Annual	Grab	All Months	BPJ
pH (00400) Effluent Gross Value	*****	*****	*****	6.0 Minimum Daily	*****	8.5 Maximum Daily	S.U.	Semi-Annual	Grab	All Months	WQBEL
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months	BPJ
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	*****	15 Maximum Daily	mg/l	Semi-Annual	Grab	All Months	BPJ
Nitrogen, Ammonia Total (As N) (00610) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months	BPJ
Nitrogen, Kjeldahl Total (As N) (00625) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months	BPJ
Nitrite Plus Nitrate Total 1 Det. (As N) (00630) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months	BPJ
Phosphorus, Total (As P) (00665) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months	BPJ
Selenium, Total (As Se) (01147) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annual	Grab	All Months	BPJ
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	*****	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Semi-Annual	Estimate	All Months	BPJ

DSN01A1: Process and non-process wastewaters associated with yeast production prior to land application

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq	Sample Type	Seasonal	Basis
BOD, 5-Day (20 Deg. C) (00310) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	mg/l	Weekly	Composite	All Months	BPJ
pH (00400) Effluent Gross Value	*****	*****	*****	(Report) Minimum Daily	*****	(Report) Maximum Daily	S.U.	Weekly	Grab	All Months	BPJ
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	mg/l	Weekly	Grab	All Months	BPJ
Nitrogen, Total (As N) (00600) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	lbs/day	*****	*****	*****	*****	Weekly	Composite	All Months	BPJ
Nitrogen, Ammonia Total (As N) (00610) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	mg/l	Weekly	Composite	All Months	BPJ
Nitrogen, Kjeldahl Total (As N) (00625) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	mg/l	Weekly	Composite	All Months	BPJ
Nitrite Plus Nitrate Total 1 Det. (As N) (00630) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	mg/l	Weekly	Composite	All Months	BPJ
Phosphorus, Total (As P) (00665) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	mg/l	Weekly	Composite	All Months	BPJ
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Daily	Totalizer	All Months	BPJ
Nitrogen Limit Excursions 7/	(Report) Total	*****	# Exceedances	*****	*****	*****	*****	Monthly	Not Applicable	All Months	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

In the previous permit the facility had twelve stormwater outfalls. Outfalls DSN001 and 004 drain stormwater from the production site most of which is under roof. Outfalls DSN 002, 003 and 005 – 012 were associated with the land application site. In this reissuance the facility requested to removed Outfall DSN004, add two additional stormwater outfall(DSN013 & DSN014), and add two additional monitoring wells(MW9 &MW10). Outfalls DSN001, 003, 005, 009 and 012 have been deemed to be representative of the other outfalls. Testing for parameters of concern will be performed at these locations.

The facility will also be required to perform internal monitoring of wastewater at DSN001A prior to this waste being land applied. The Total Nitrogen testing performed at this location will be used to determine the Nitrogen loading on spray field zones. Testing for flow, BOD, pH, O&G, TKN, Nitrates + Nitrites, Ammonia and Phosphorus will provide a characterization of the waste stream.

Best Professional Judgment (BPJ)

The parameters of concern for this facility are based on the parameters of concern listed in EPA form 2F 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:

BOD5

A limit of 100 mg/l is being continued at each of the outfalls based on BPJ. It should be noted that stormwater runoff from non-industrial areas is typically around 100 mg/l. Therefore, BOD concentrations below this level will be a good indicator that land application activity is not causing contamination in excess of typical farming activities.

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.”

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.

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

DSN01A: Process and non-process wastewaters associated with yeast production prior to land application

Monitoring is proposed to be continued for the parameters listed in the table above. These results will provide a useful characterization of the wastewater to be land applied. Of particular interest is the mass of Nitrogen being applied per acre to the land application site as this has been determined to be the limiting factor in the operation of the disposal site. The results of the Nitrogen testing will be used to determine the loading as discussed in the Land Application Requirements below.

Land Application Requirements

The facility uses wastewater generated from the production of yeast to irrigate approximately 556 acres of Bermuda grass and oats or comparable nitrogen consuming crops. The allowable amount Nitrogen per acre per month is shown below for each gun or pivot location (e.g. G1-G4 represents Gun #1 - Gun#4, P1-P11,P13-P18 represents Pivot #1 – Pivot #11, Pivot#13 – Pivot#18).

The facility will be required to sample at DSN01A weekly to determine the monthly average Total Nitrogen. The monthly average Total Nitrogen concentration and the volume of wastewater discharged to each land application area will be used to calculate the pounds of Nitrogen applied to each area. The land application areas, the size of each area

(indicated in the row below the pivot locations), the crops used and the allowable monthly Nitrogen in pounds per month are listed in the charts(Attachment #1). The spray fields shall be limited by the monthly Nitrogen limit for each land application area.

Monitoring Wells

The facility has monitoring wells located both up gradient and down gradient of the land application site. The permitee will be required to monitor wells BG1, BG2, MW1, MW2, MW3, MW5 and MW8. Semi-annual sampling will be required for pH, Sulfates, Chlorides, Nitrates (as N), Total Dissolved Solids, Total Phosphorus, Static Water Level, TKN, Ammonia (as N), Conductivity, Total Cadmium, Total Copper, Total Lead, Total Nickel, Total Selenium and Total Zinc. Results of this testing is to be submitted to the ADEM Groundwater Branch for their review to determine if the land application activity is adversely impacting groundwater in this area.

Selenium

The company's NPDES permit was modified in 2014 to include selenium testing in connection with the proposed production of a new selenium rich yeast for the animal feed industry. According to the facility's application, they are no longer producing this product; however, monitoring results at the stormwater outfalls continue to indicate measurable levels of this pollutant. For this reason the permit proposes the continuation of selenium testing at these sites. If future monitoring results show concentrations to drop below detectible levels, the permittee can request modification of the permit to reduce/eliminate selenium testing. Because selenium is no longer present in the process, testing at DSN01A is being eliminated in this issuance.

Biocides/Water Treatment Chemicals

The use of biocides and corrosion inhibitors with non-process wastewaters (e.g. cooling tower blowdown, etc.) can introduce the potential for toxicity. Red Star routes these non-process waste streams to the holding ponds to be commingled with process wastewaters and land applied. The facility is expected to verify that the use of these chemicals will not adversely impact the operation of the land application system nor present potential toxic affects to representative organisms in the receiving waters as result of storm runoff from the land application site. It is also the permittee's responsibility to ensure that the chemicals are used in a manner that is consistent with their labeling and standard industry practices.

Attachment #1

Nitrogen loading for each spray site based the use of Bermuda or Fescue with rye grass or oats overseed:

Month	N	G1	G2	G4	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P13	P14	P15	P16	P17	P18
	(lbs/ac/mo)	19.34	8.1	8.06	35.38	33.4	33	43.9	40.39	17	91.96	29.9	27.3	52.3	49.7	26	30	51.4	12.5	12	50.2
Jan	45.17	874	366	364	1598	1509	1491	1983	1824	768	4154	1351	1233	2362	2245	1174	1355	2322	565	542	2268
Feb	50.62	979	410	408	1791	1691	1670	2222	2045	861	4655	1514	1382	2647	2516	1316	1519	2602	633	607	2541
Mar	67.69	1309	548	546	2395	2261	2234	2972	2734	1151	6225	2024	1848	3540	3364	1760	2031	3479	846	812	3398
Apr	88.15	1705	714	710	3119	2944	2909	3870	3560	1499	8106	2636	2406	4610	4381	2292	2645	4531	1102	1058	4425
May	114.76	2219	930	925	4060	3833	3787	5038	4635	1951	10553	3431	3133	6002	5704	2984	3443	5899	1435	1377	5761
Jun	94.83	1834	768	764	3355	3167	3129	4163	3830	1612	8721	2835	2589	4960	4713	2466	2845	4874	1185	1138	4760
Jul	101.52	1963	822	818	3592	3391	3350	4457	4100	1726	9336	3035	2771	5309	5046	2640	3046	5218	1269	1218	5096
Aug	90.74	1755	735	731	3210	3031	2994	3983	3665	1543	8344	2713	2477	4746	4510	2359	2722	4664	1134	1089	4555
Sep	78.19	1512	633	630	2766	2612	2580	3433	3158	1329	7190	2338	2135	4089	3886	2033	2346	4019	977	938	3925
Oct	75.19	1454	609	606	2660	2511	2481	3301	3037	1278	6914	2248	2053	3932	3737	1955	2256	3865	940	902	3775
Nov	50.21	971	407	405	1776	1677	1657	2204	2028	854	4617	1501	1371	2626	2495	1305	1506	2581	628	603	2521
Dec	35.41	685	287	285	1253	1183	1169	1554	1430	602	3256	1059	967	1852	1760	921	1062	1820	443	425	1778

Permit Application

NPDES PERMIT RENEWAL APPLICATION
PERMIT NUMBER: AL 0057801

Prepared for
Red Star Yeast Company, LLC
13211 US Highway 431 South
Headland, AL 36345

POLY INC.
234 Aquarius Drive
Ste 116
Birmingham, AL 35209

RED STAR YEAST, LLC

January 21, 2022

Table of Contents

1. Introduction

1.1. Location

Red Star Yeast Company, LLC (Red Star) is located in Section 22, Township 5 North, Range 27 East, Henry County, near Headland, Alabama on the eastern side of U.S. Highway 431. The entrance road at the edge of US Highway 431 office is at approximately 31° 23' 55" N and 85° 19' 26" W (NAD27). Figure 1-1 is a location map of the facility on an excerpt from the Newville USGS topographical map.

1.2. Facility Operation

Red Star produces liquid food grade yeast by the fermentation of certain substrates including molasses, water, and yeast inoculants. The yeast is sold to bakeries that use the yeast in their baked products. The facility operates seven days a week, 365 days per year. While a small percentage of the water used in the yeast production is consumed, the production process does result in excess water that contains nitrogen and phosphorous. The excess water is stored in retention ponds, and then used to irrigate over a 500 acres of hybrid Bermuda grass (summer crop) and oats (winter crop). The land application is performed under National Pollution Discharge Elimination System (NPDES) permit, Permit No.: AL 0057801.

1.3. Purpose

The purpose of this document is to provide the completed required forms to the Alabama Department of Environmental Management (ADEM) for the purpose of renewing and modifying the existing facility's NPDES permit, AL 0057801.

The yeast and yeast-based products to be manufactured at the facility is categorized as follows: "Operations consist of producing yeast products through fermentation processes for use in multiple research and development, test marketing, and commercial applications (e.g., producing naturally occurring and genetically modified strains of Saccharomyces cerevisiae through fermentation of molasses-based feedstock, water, and yeast inoculants for use in baking applications). Yeast production includes, but is not limited to, production of yeast varieties for various end-use applications, such as baking applications, biofuel applications and yeast production processes for other yeast-based products such as organic based flavorings or extracts".
We also provided a statement that none of the potential varieties of yeast or yeast products produced at the facility are expected to change the effluent characteristics as provided in the permit application and thusly, the data presented in EPA Form 2C should remain representative of the effluent which will be discharged under this permit.

The yeast manufacturing operation facility produces cream yeast. The drying facility takes the cream yeast manufactured by the fermentation process and dries the cream to a moisture content of approximately 5%. Minor effluent is generated by the dryer facility and largely consists of rinse and CIP waters. The characteristics of the effluent from this

facility are consistent with the existing effluent generated during the fermentation process. The volume of effluent is inconsequential to the overall operation of the land application system. There is no increase in the volume or change in the characteristics of the effluent.

The modification component of the renewal application focuses on the following:

1. The addition of approximately 130 acres for irrigation;
2. Change of the location and method of sampling of the effluent;
3. Change of the method of calculating the total nitrogen to be used in the land application calculator;
4. The addition of two storm water outfalls (these outfalls will coincide with additional acreage to be brought under irrigation)
5. The timing of monitoring well installation for the additional irrigation fields.

These items will be discussed in detail in Section 5.

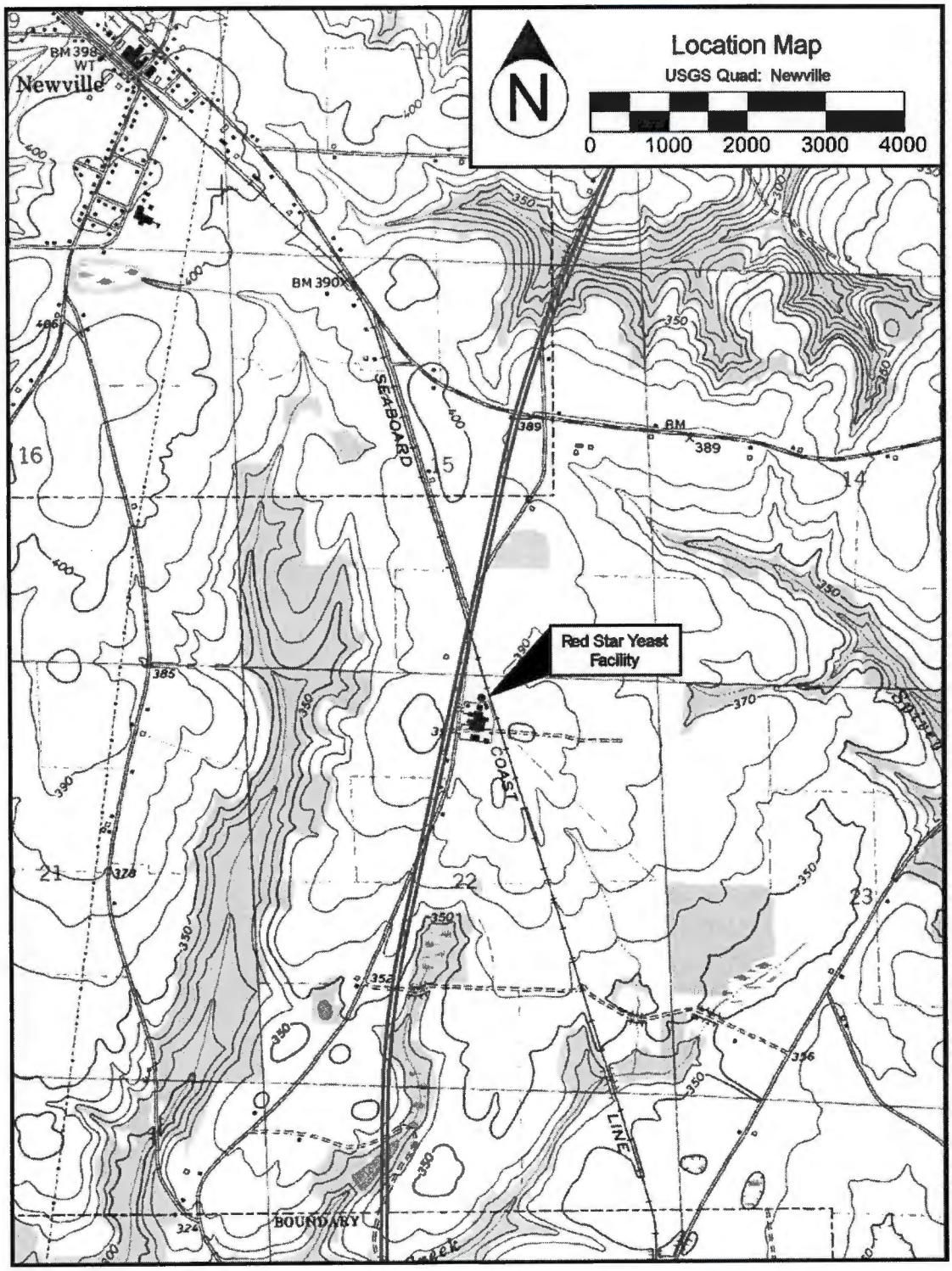


Figure 1-1. Location Map.

2. General Facility Information

2.1. Facility Owner, Address, and Telephone

Red Star Yeast Company, LLC
13211 US Highway 431 South
Headland, AL 36345

Responsible Official:
Mr. Dennis Barry, Plant Manager
(334) 889-8801

Environmental Contact:
Sherre-Ann Wallace, ES&H Manager
(334) 889-8801 Office; (334) 400-3532 Cell

2.2. Effluent Process Description

Red Star Yeast Company, LLC, grows yeast using a substrate (i.e.; molasses) and nutrients (e.g., nitrogen and phosphorus) in a controlled environment. Red Star Yeast Company, LLC then harvests the yeast by separation of solids from the wort. The separation process generates a nutrient rich effluent. The drying facility takes the cream yeast manufactured by the fermentation process and dries the cream to a moisture content of approximately 5%. The minor effluent generated by this new facility largely consists of rinse and CIP waters. These streams are routed into one of the four holding cells that range in size from 590,000 to 15,000,000 gallons. The water from the ponds is used to irrigate and fertilize various fields with a total area over 500 acres.

Red Star process water is land applied in accordance with the facility NPDES permit and the Land Application Plan. Red Star has identified 14 outfalls at this facility, outfalls one (001) and four (004) discharges consist mostly of storm water runoff from the facility yard. The outfalls associated with the crop irrigation include outfalls 002, 003, and 005 through 014.

2.3. Topography and Site Plan

As shown on Figure 1-1, the facility is at or near the crest of a hill. The terrain in the vicinity is relatively flat. The drainage arrows on Figure 2-1 show that stormwater runoff generally follows the natural grade to the west (toward the highway) or to the east (toward the railroad). Surface runoff that drains toward the railroad collects near the railroad at the pump station. From there the surface runoff is pumped to a lagoon for later land application. As shown on Figure 2-1, some surface runoff near and primarily south of, the cooling towers enters a drop inlet. The drop inlet drains westerly, by means of a buried drainage pipe, toward the highway.

Figure 2-1 and 2-2 shows the approximate facility & spray fields' boundary map and the outfalls locations superimposed on an excerpt of the Newville USGS topographical map.

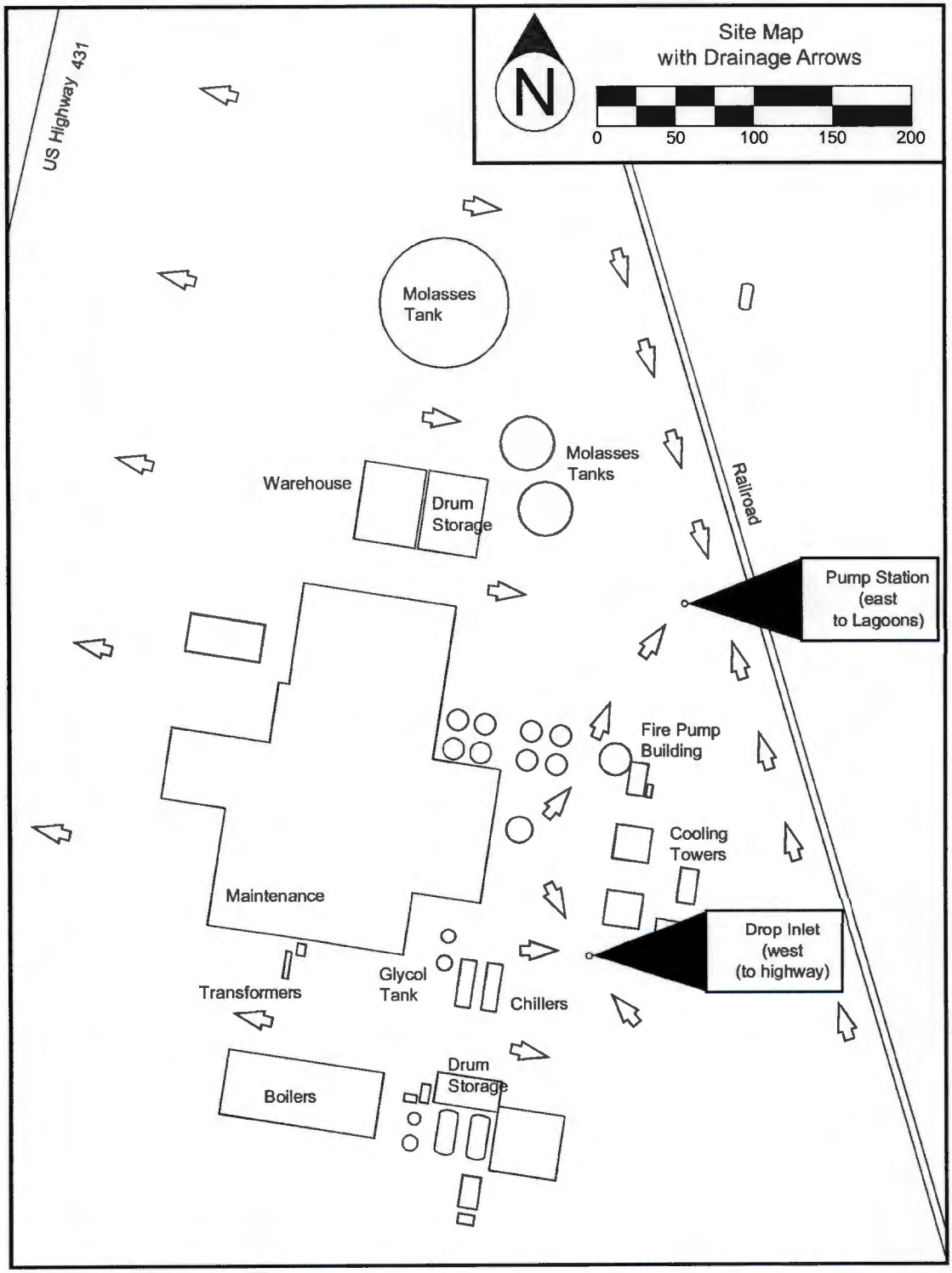


Figure 2-1. Site Map with Drainage Arrows.

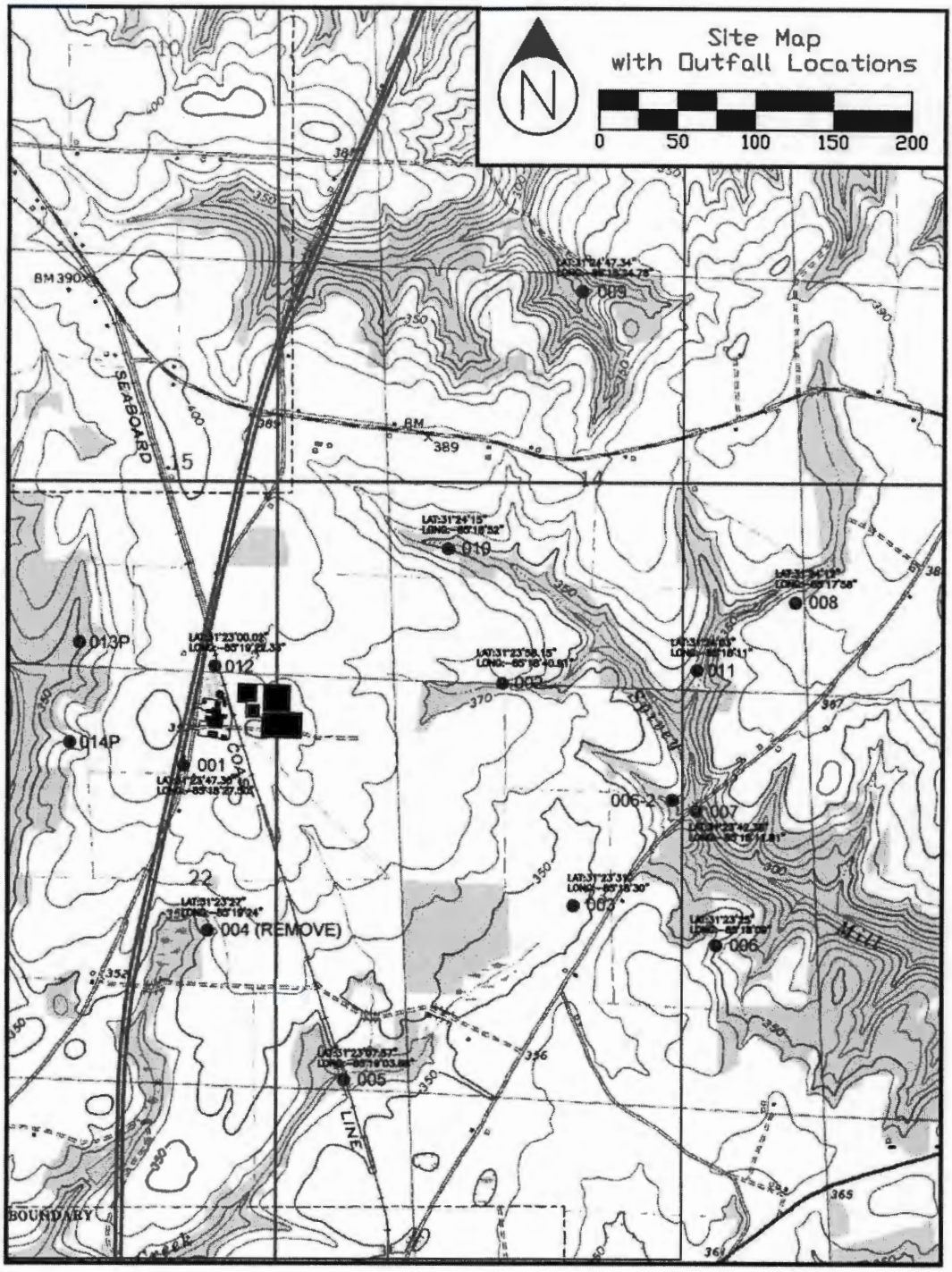


Figure 2-2. Outfall Locations.

2.4. Streams and Outfalls

Any runoff from the facility and spray fields will potentially enter one of two creeks, Spivey Mill Creek or Blackwood Creek. The table below provides the coordinates for each of the site's twelve existing outfalls plus the two new requested outfalls.

I. OUTFALL LOCATION
For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER *(list)*	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER *(name)*
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
001	N31°	23'	47.30"	W85°	19'	27.50"	US Route 431 Ditch
002	N31°	23'	58.15"	W85°	18'	40.91"	Spivey Mill Creek
003	N31°	23'	40"	W85°	18'	40"	Blackwood Creek (Moved due to property acquisition)
004 (remove)	N31°	23'	27"	W85°	19'	24"	Remove – Off property. 001 will be adequate.
005	N31°	23'	07.57"	W85°	19'	03.68"	Blackwood Creek
006	N31°	23'	25"	W85°	18'	9"	Spivey Mill Creek
006-2	N31°	23'	43"	W85°	18'	15"	Spivey Mill Creek
007	N31°	23'	42.38"	W85°	18'	11.81"	Spivey Mill Creek
008	N31°	24'	12"	W85°	17'	58"	Spivey Mill Creek
009	N31°	24'	47.34"	W85°	18'	24.76"	Spivey Mill Creek
010	N31°	24'	15"	W85°	18'	52"	Spivey Mill Creek
011	N31°	24'	3"	W85°	18'	11"	Spivey Mill Creek
012	N31°	24'	00.02"	W85°	19'	22.33"	Spivey Mill Creek
013P	N31°	24'	01"	W85°	19'	50"	Blackwood Creek (proposed-sprayfield expansion)
014P	N31°	23'	51"	W85°	19'	50"	Blackwood Creek (proposed-sprayfield expansion)

2.5. Water Composition and Storage

The facility water holding ponds can store approximately 27.1 million gallons. The storage capacity and process allow Red Star to handle approximately 600,000 gallons per day from the yeast production and drying processes. Water generated from facility operations consist of:

- Non-contact water (boilers & cooling towers)
- Stormwater
- First pass water
- Cleaning in Place (CIP)

Other minor contributions from:

- Other miscellaneous production related waters (dryer facility included)
- Dryer Fire Pump testing waters
- Fresh water flush of pivots and pivot lines

The facility operates three boilers and multiple cooling towers. The facility utilizes chlorine gas, Isoplus, and Ultrex PBB to treat the boiler and cooling tower waters. Attachment A contains copies of the water treatment chemicals. The boilers and cooling towers blow down are not discharged to a stream and are collected for land application.

No sanitary wastewaters are discharged through the land application system.

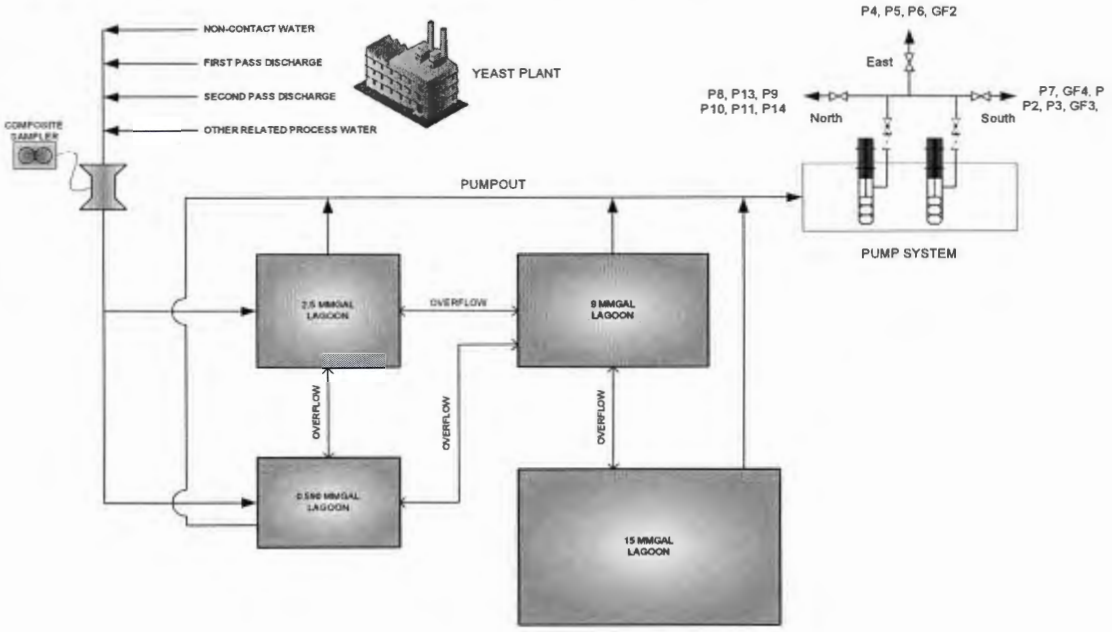
The facility process waters are categorized as "First Pass" and "Second Pass & Other Miscellaneous Waters". The "First Pass" constitutes less than 20 percent of the total water generated. However, the "First Pass" stream contains the highest nutrient values.

3. Process Water

3.1. Existing Process Water Configuration

Presently Red Star discharges all process related waters generated from the facility to the holding cells through a parshall flume that is equipped with a composite sampler. Please see the current schematic provided in Figure 3-1.

Figure 3-1. Existing Process Water Schematic.



4. Permit Application Forms

4.1. Permitted Activities

The yeast production and drying activities are performed inside the enclosed plant buildings. Neither the raw ingredients nor the final product is exposed to storm water. There are multiple outside closed top tanks, some are diked, the facility parking lot, and other open areas where runoff occurs during rain events. Figure 2-1 shows the general storm water runoff from the facility, some of the storm water drain to the west toward HWY 431South, and the remaining runoff goes east where it is collected and pumped into the lagoon cells for later use during land irrigation. Outfalls one (001) and four (004) are associated with storm water runoff from the manufacturing facilities; the remaining outfalls are associated with the land application fields.

The process wastewater is distributed to the land application system. The land application system is currently configured with Pivots P1-P11, Pivots P13 and P14 as well as Gun Fields G1-G5. Gun Field 5 has not been installed. Gun Field 3 is not currently in service. There is no Pivot 12 installed although it has been previously permitted. The figure (4.1) below shows the current distribution system.

Figure 4.1 Current Distribution System

4.2. Forms

Red Star discharges storm water, non-contact waters, and process waters. The following Forms are included in this application:

- ADEM Form 187, Supplementary Information
- EPA Form 1, General Information
- EPA Form 2C, Process Water Discharge
- EPA Form 2F, Storm water Discharge from Industrial Activity

The forms are attached at the end of this report.

4.3. Forms Supplemental Information

The forms contain 12-month Discharge Monitoring Report (DMR) data from the land application and the storm water runoff.

Red Star operation includes 12 existing outfalls and 2 proposed storm water outfalls, where additional pages are needed to report the required information for each of the outfalls; those pages were appended to the back of the application Form.

5. Modification Items

5.1. Permit Modifications Requested

The following requested modifications to the permit are listed below:

1. The addition of approximately 130 acres for irrigation;
2. Change of the location and method of sampling of the effluent;
3. Change of the method of calculating the total nitrogen to be used in the land application calculator;
4. The addition of two storm water outfalls (these outfalls will coincide with additional acreage to be brought under irrigation)
5. The timing of monitoring well installation for the additional irrigation fields.

5.1.1. Addition Acreage for Effluent Application

Red Star is requesting to add approximately 130 acres of pasture to the application fields. The application field locations appear on figure 5.1. These fields are generally described as Fields 15, 16, 17 and 18 with 51.4, 12.5, 50.2 and 15.5 acres, respectively. These fields will be brought into service as the need for additional acreage is necessary. Please note that the facility is not increasing its flow volumes but adding additional acreage to allow better management of effluent application. The fields will be operated in the same manner as the existing acreage. As required, a 100-foot buffer will be maintained between the disposal field and the adjacent property. The land application plan is presented in Section 5.1.1.1.

5.1.1.1. Land Application Plan

As production rates have increased additional fields have been added to allow the application of the effluent. The fields have been determined to be nitrogen limited, therefore the land application plan will detail the amount of nitrogen to be land applied per month per application area.

Design percolation rates for irrigation of the fields were selected based on percolation test data taken in the different soil horizons in the fields. The design percolation rate was selected as 0.45 inches/day. This value is more conservative than the recommended 4 to 10% of clear water percolation rate as outlined in Process Design Manual for Land Treatment of Municipal Wastewater, EPA publication 625/1-81-013, page 4-29.

The annual nitrogen uptake per the last several permit cycles is 892.5 lbs N/acre/year. Sufficient data on uptake rates versus season for crop species were not available, requiring monthly values to be estimated from the ratio of monthly ET to the total growing season ET multiplied by the annual crop uptake rate. The planned application rate per month for the additional fields are detailed in the tables below:

Allowable Nitrogen (lbs/acre/year)			892.5	Field Size (acres)		51.4
	Month	Lb/acre uptake Rate	ET (in)	ET per month as a % of Annual Total	Max N Loading Rate (field)	Gallons @ 240 mg/l Total N
FIELD 15	January	45.17	2.04	5%	2321.783	1,158,574.29
	February	50.62	2.28	6%	2602.104	1,298,455.32
	March	67.69	3.05	8%	3479.074	1,736,064.80
	April	88.15	3.97	10%	4530.923	2,260,939.50
	May	114.76	5.17	13%	5898.584	2,943,404.95
	June	94.83	4.27	11%	4874.51	2,432,390.02
	July	101.52	4.57	11%	5218.096	2,603,840.53
	August	90.74	4.09	10%	4664.14	2,327,415.08
	September	78.19	3.52	9%	4019.143	2,005,560.37
	October	75.19	3.39	8%	3864.838	1,928,561.63
	November	50.21	2.26	6%	2581.016	1,287,932.16
	December	35.41	1.60	4%	1820.29	908,328.40
	Annually	892.5	40.22	100%	45874.5	22,891,467.07

Allowable Nitrogen (lbs/acre/year)		892.5		Field Size (acres)		12.5
	Month	Lb/acre uptake Rate	ET (in)	ET per month as a % of Annual Total	Max N Loading Rate (field)	Gallons @ 240 mg/l Total N
FIELD 16	January	45.17	2.04	5%	564.6359	281,754.45
	February	50.62	2.28	6%	632.8075	315,772.21
	March	67.69	3.05	8%	846.0783	422,194.75
	April	88.15	3.97	10%	1101.878	549,839.37
	May	114.76	5.17	13%	1434.48	715,808.60
	June	94.83	4.27	11%	1185.435	591,534.54
	July	101.52	4.57	11%	1268.992	633,229.70
	August	90.74	4.09	10%	1134.275	566,005.61
	September	78.19	3.52	9%	977.418	487,733.55
	October	75.19	3.39	8%	939.8924	469,008.18
	November	50.21	2.26	6%	627.679	313,213.07
	December	35.41	1.60	4%	442.6776	220,896.99
	Annually	892.5	40.22	100%	11156.25	5,566,991.02

Allowable Nitrogen (lbs/acre/year)		892.5		Field Size (acres)		12
	Month	Lb/acre uptake Rate	ET (in)	ET per month as a % of Annual Total	Max N Loading Rate (field)	Gallons @ 240 mg/l Total N
FIELD 17	January	45.17	2.04	5%	542.0505	270,484.27
	February	50.62	2.28	6%	607.4952	303,141.32
	March	67.69	3.05	8%	812.2351	405,306.96
	April	88.15	3.97	10%	1057.803	527,845.80
	May	114.76	5.17	13%	1377.101	687,176.25
	June	94.83	4.27	11%	1138.018	567,873.16
	July	101.52	4.57	11%	1218.233	607,900.51
	August	90.74	4.09	10%	1088.904	543,365.39
	September	78.19	3.52	9%	938.3213	468,224.21
	October	75.19	3.39	8%	902.2967	450,247.85
	November	50.21	2.26	6%	602.5718	300,684.55
	December	35.41	1.60	4%	424.9705	212,061.11
	Annually	892.5	40.22	100%	10710	5,344,311.38

Allowable Nitrogen (lbs/acre/year)		892.5		Field Size (acres)		50.2
	Month	Lb/acre uptake Rate	ET (in)	ET per month as a % of Annual Total	Max N Loading Rate (field)	Gallons @ 240 mg/l Total N
FIELD 18	January	45.17	2.04	5%	2267.578	1,131,525.86
	February	50.62	2.28	6%	2541.355	1,268,141.19
	March	67.69	3.05	8%	3397.85	1,695,534.10
	April	88.15	3.97	10%	4425.142	2,208,154.92
	May	114.76	5.17	13%	5760.873	2,874,687.33
	June	94.83	4.27	11%	4760.708	2,375,602.70
	July	101.52	4.57	11%	5096.273	2,543,050.48
	August	90.74	4.09	10%	4555.249	2,273,078.54
	September	78.19	3.52	9%	3925.311	1,958,737.95
	October	75.19	3.39	8%	3774.608	1,883,536.85
	November	50.21	2.26	6%	2520.759	1,257,863.71
	December	35.41	1.60	4%	1777.793	887,122.29
		892.5	40.22	100%	44803.5	22,357,035.93

5.1.2. Sampling Location and Sampling Method for Effluent Application

5.1.2.1. Background and Current Sampling Methodology

On May 13, 2020 Red Star Yeast Company, LLC received a Notice of Violation from the Alabama Department of Environmental Management (dated May 5, 2020). As part of the requirements of this notice, Red Star contracted and filed a detailed Engineering Report. It was determined in the Engineering Report that a modification of the current flow measurement and sampling methodology would present a more sustainable overall compliance and monitoring system. The current flow and sampling methodology as well as the proposed modifications are presented in the following sections.

5.1.2.2. Current Sampling Methodology

The basis of the currently permitted discharges are total nitrogen loading to each area. According to the Permit, Red Star must determine total nitrogen as the sum of Total Kjeldahl Nitrogen ("TKN") plus nitrate and nitrite nitrogen from composite samples collected at DSN01A which is the flume structure on the outfall line to the lagoons. The current protocol is for Red Star to collect daily composite samples over a consecutive seven-day period to "represent one complete fermentation cycle" and the composite period shall not exceed 24 hours. It is important to point out that the language in the *permit is somewhat misleading, as if a fermentation cycle takes seven days. In actuality*, the fermentation cycle is about 22 hours including all stages through cleaning and re-

charging the fermenters. Hence, seven consecutive daily composite samples closely mimic *seven* fermentation cycles.

5.1.2.3. Proposed Flow Measurement

Per the recommendation in the Engineering Report, the facility has installed AgSense flow metering equipment on all Pivots and Gun Fields. The previous method of calculating flow to a single Pivot or Gun Field was based on pivot capacities and pumping duration (e.g. A pivot is rated for 100 gallons per minute. If it ran for ten minutes the application volume would be 1,000 gallons). The newly installed flow meters measure the actual volume of effluent applied through the Pivot. Please note that the Engineering report documented significant over reporting based on the previously used method of calculation.

Therefore, Red star requests to change the flow monitoring method from the Parshall Flume to direct measurement from installed and calibrated flow metering system on the application devices.

5.1.2.4. Proposed Sampling Methodology

The lagoon storage capacity at the facility is approximately 27,000,000 gallons. These lagoons are equalized through the piping network. As such, the lagoon systems acts as a large equalization system. The current composite sampling system (7 24-hr composite samples over a 7-day period) is effective in determining an average nitrogen content for the period. However, a simpler, more accurate way to sample the effluent would be to collect a weekly 24-hr composite of the effluent as applied. Red Star has been collecting a weekly composite as recommended in the Engineering Report. Based on the data collected thus far, the Total Nitrogen rolling average has a variance of less than 10%. Please note that a sample will not be taken if no irrigation has occurred during the calendar week. In short, no weekly effluent flow equals no weekly sample.

The specific sampling methodology requested as part of the permit modification is as follows:

- *Collect weekly composite samples for Total Nitrogen and other permit required constituents*
- *Average the weekly samples into a monthly average*
- *Once 6 months of the composite samples are gathered, develop an annual rolling average based on weekly composites and monthly averages. A 6-month rolling average can be developed by permit issuance*
- *The 6-month rolling average will be used for allocation of nitrogen for the following month (e.g. January average total nitrogen would be used for the February application allocation).*
- *High and low data outliers would be removed from the data set per Section 5.1.2.4.1*

5.1.2.4.1. Proposed Treatment of Data Outliers

Statistically, a data set is considered valid when the data follows a normal distribution or a Gaussian curve. Any value in the data set that does not follow a normal distribution is referred to as an outlier. The widely accepted method for determining if a data set contains an outlier is the InterQuartile Range (IQR) method. The interquartile range (IQR) is the range of values that resides in the middle of the scores. When a distribution is skewed, and the median is used instead of the mean to show a central tendency, the appropriate measure of variability is the Interquartile range. It is a measure of dispersion based on the lower and upper quartile. Specifically, with the IQR method, if a specific piece data from the data set does not conform to and is outside the normal distribution, it is considered an outlier. This is sometimes referred to as the "two-sigma" method.

The facility will evaluate all 6-month rolling monthly data for consistency via the IQR method. Any data that does not conform to the data set, be it high or low will treated as an outlier and not be used in determining the rolling average. This will allow the facility to re-sample an outlier for quality control/quality assurance determination. An initial evaluation of the current rolling monthly average data set for the parameter of total nitrogen was calculated. Based on the evaluation all values below 143.75 mg/l total nitrogen and values greater than 329.75 mg/l total nitrogen would be removed from the data as outliers. These values will be updated monthly.

5.1.3. Storm Water Outfalls

With the addition of additional acreage under irrigation, at least two new storm water outfalls will be required. The new proposed outfalls are presented in the 2F forms attached. These two new outfalls would be located across US 431 from the plant to provide compliance data for Field 17 & 18. These two new outfall locations are presented in Figure 2-2.

Outfall 004, to the south of the plant is being removed. This outfall was added prior to the anticipated purchase of the property due south of the facility. The facility did not acquire this parcel. Outfall 001 is currently located at the southern extent of the property.

Outfall 003 will be moved to monitor newly acquired property adjacent to and across Henry CR 45. This parcel is referred to as the Armstrong parcel which is being added to the application for potential future irrigation. The location of outfall 003 has been moved to representatively monitor use of this parcel. The new location of outfall 003 is presented in the forms attached and in Figure 2-2.

5.1.4. Proposed Addition of Groundwater Monitoring Wells

With the addition of additional acreage under irrigation, at least two new groundwater monitoring wells will be required. The proposed monitoring well installations will be identified, and potential locations will be presented in the Annual Groundwater Monitoring

Report required by ADEM. This report is due the 1st quarter of 2022. These two new monitoring wells would be located across US 431 from the plant to provide compliance data for Field 17 & 18. The current plan would be to install these monitoring wells concurrent to the installation of land application infrastructure.

attached. These two new outfalls would be located across US 431 from the plant to provide compliance data for Field 17 & 18. These two new outfall locations are presented in Figure 2-2

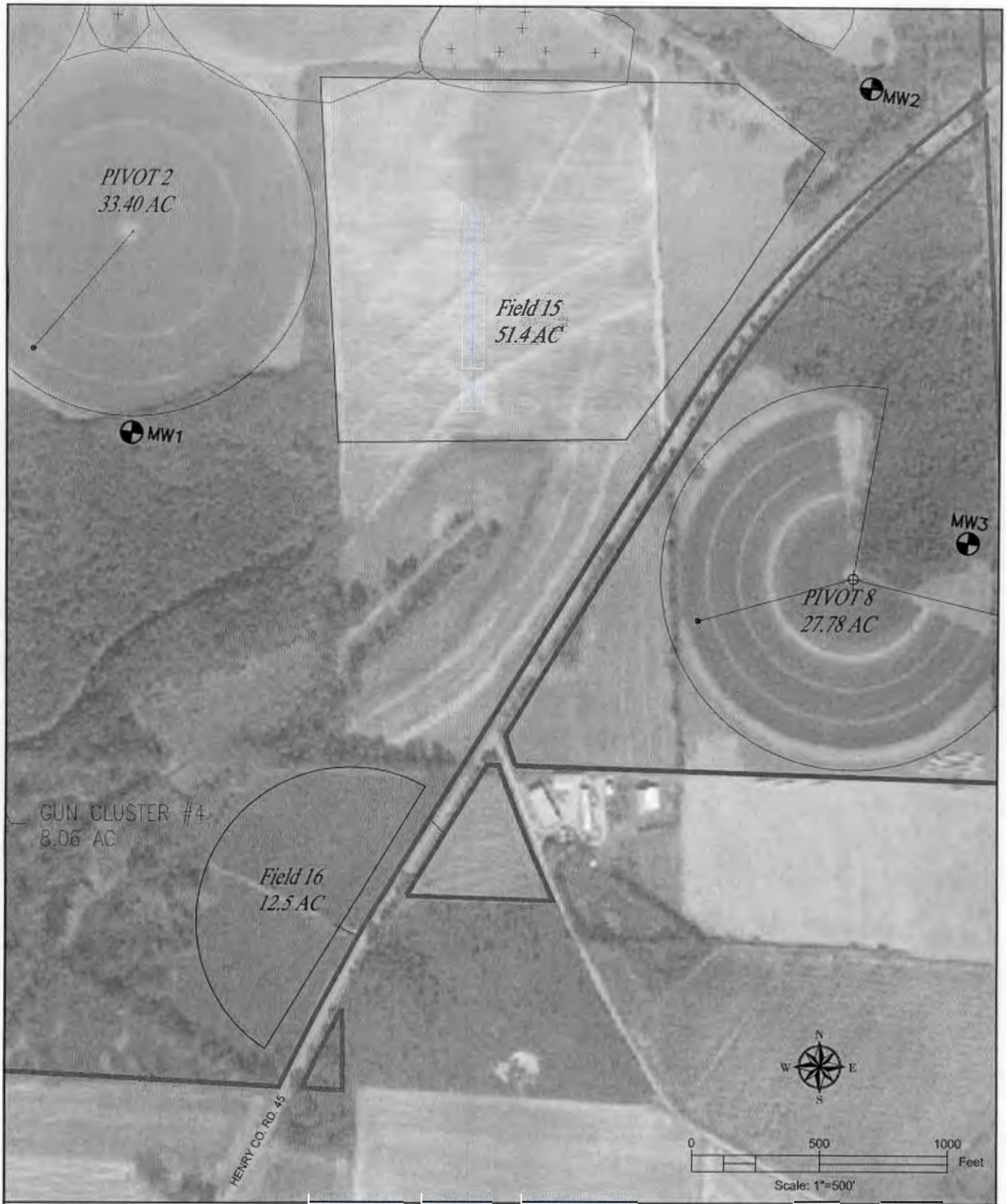
5.1.1. Proposed Addition of Groundwater Monitoring Wells

With the addition of additional acreage under irrigation, at least two new groundwater monitoring wells will be required. The proposed monitoring well installations will be identified, and potential locations will be presented in the Annual Groundwater Monitoring Report required by ADEM. This report is due the 1st quarter of 2022. These two new monitoring wells would be located across US 431 from the plant to provide compliance data for Field 17 & 18. The current plan would be to install these monitoring wells concurrent to the installation of land application infrastructure.

ADDITIONAL FIGURES


U.S. HIGHWAY 431
CSX RAILROAD
HENRY CO. RD. 156
HENRY CO. RD. 12
HENRY CO. RD. 45
Scale: 1"=1200'
POLY, INC.
WWW.POLY-INC.COM
SHEET No.
SU-1
PROJECT No.
8521080
PRELIMINARY
NOT FOR
CONSTRUCTION

SHEET No. SU-2	RED STAR	POLY, INC. 1935 Headland Avenue Dothan, AL 36303 334-793-4700 102 Sunset Lane, Shalimar, FL 32579, 850-609-1100 234 Aquarius Dr., Ste. 116, Birmingham, AL 35209, 205-913-0330 WWW.POLY-INC.COM
PROJECT No. 8521094		DESIGNED BY: / DRAWN BY: / DATE: NOVEMBER 2021 ENG / ARCH / SURVEYOR OF RECORD: / REGISTRATION No. Cert. of Auth. No. (AL. / FL. / GA.) ARCHITECT: CA-0480 / AA-C001551 / 001118 ENGINEER: CA-754E / CA-1818 / 001116



SHEET No. SU-3	RED STAR	POLY, INC. 1935 Headland Avenue Dothan, AL 36303 334-793-4700 102 Sunset Lane Shalimar, FL 32579 850-609-1100 234 Aquarius Dr., Ste. 116 Birmingham, AL 35209 205-913-0330 WWW.POLY-INC.COM	DESIGNED BY:	DRAWN by:	DATE: NOVEMBER 2021
PROJECT No. 8521094			ENG / ARCH / SURVEYOR OF RECORD:		REGISTRATION No.
			Cert. of Auth. No.	AL FL GA	These drawings are copyrighted and the property of Poly-Inc. Any use, partial or full reproduction is prohibited except by written Agreement with Poly-Inc.
			ARCHITECT	CA-0480 AA-C001551 001118	
			ENGINEER	CA-7542 CA-1515 001115	

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

version 2.3

(Submission #: HPG-6NAB-HW1C6, version 1)

Details

Submission ID HPG-6NAB-HW1C6

Status In Process

Fees

Fee	$5,615.00
Payments/Adjustments	($5,615.00)
Balance Due	$0.00 (Paid)

Form Input

General Instructions

Processing Information

Purpose of Application
Reissuance of Permit Due to Approaching Expiration

Please indicate if the Permittee is applying for a permit transfer and/or name change in addition to permit modification or reissuance:
None

Action Type
Reissuance

If applicable, briefly describe any planned changes at the facility that are included in this reissuance application:
The modification component of the renewal application focuses on the following:
1. The addition of approximately 130 acres for irrigation;
2. Change of the location and method of sampling of the effluent;
3. Change of the method of calculating the total nitrogen to be used in the land application calculator;
4. The addition of two storm water outfalls (these outfalls will coincide with additional acreage to be brought under irrigation)
5. The timing of monitoring well installation for the additional irrigation fields.

General Information

SID Permit Number (if your facility currently holds an SID permit, please provide that number below):
NONE PROVIDED

NPDES or General Permit Numbers (if applicable, please list all permit numbers):
AL0057801

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

Permit Information

Permit Number
AL0057801

Current Permittee Name
Red Star Yeast Company LLC

Permittee

Permittee Name
Red Star Yeast Company LLC

Mailing Address

13211 Highway 431 South

Headland, AL 36345

Responsible Official

Prefix
Mr.

First Name	Last Name
Dennis	*Barry*

Title
Plant Manager

Organization Name
Red Star Yeast, LLC

Phone Type	Number	Extension
Business	3346493904	

Email
Dennis.Barry@lsaf.com

Mailing Address

13211 Highway 431 South

Headland, AL 36345

Existing Permit Contacts

Affiliation Type	Contact Information	Remove?
Notification Recipient,Responsible Official	Dennis Barry, Red Star Yeast, LLC	Keep
Permittee	Red Star Yeast Company LLC	Keep
DMR Contact,Environmental Contact	Sherre-Ann Wallace, Red Star Yeast, LLC	Keep

Facility/Site Information

Facility/Site Name
Red Star Yeast LLC

Organization/Ownership Type
Corporation

Facility/Site Address or Location Description

13211 Highway 431 South

Headland, AL 36345

Facility/Site County
Henry

Detailed Directions to the Facility/Site
On the east side of highway 431 in Henry county near Headland. same as the street address...

Facility Map
Add fig su1.pdf - 03/15/2022 01:03 PM
Comment
NONE PROVIDED

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

Facility/Site Front Gate Latitude and Longitude
31.39860000000000,-85.32111100000000

SIC Code(s) [Please enter Primary SIC Code first followed by any additional applicable SIC Codes]
2099-Food Preparations

NAICS Code(s) [Please enter Primary NAICS Code first followed by any additional applicable NAICS Codes]
311999-All Other Miscellaneous Food Manufacturing

Facility/Site Contact

Prefix
Ms.

First Name	Last Name
Sherre-Ann	*Wallace*

Title
EHS Manager

Organization Name
Red Star Yeast, LLC

Phone Type	Number	Extension
Business	3348898801	

Email
Sherre-Ann.Wallace@lsaf.com

Address
13211 Highway 431 South
Headland, AL 36345

DMR Contact(s) (1 of 2)

DMR Contact

Prefix
Mr.

First Name	Last Name
Dennis	*Barry*

Title
Plant Manager

Phone Type	Number	Extension
Business	3346493904	

Email
Dennis.Barry@lsaf.com

Address
13211 Highway 431 South
Headland, AL 36345

DMR Contact(s) (2 of 2)

DMR Contact

Prefix
Ms.

First Name	Last Name
Sherre-Ann	*Wallace*

Title
NONE PROVIDED

Phone Type	Number	Extension
Business	3348898801	

Email
Sherre-Ann.Wallace@lsaf.com

Address
13211 Highway 431 South
Headland, AL 36345

Applicant Business Entity Information

Address of Incorporation
Red Star Yeast, LLC
1125 N Old World 3rd St
Milwaukee, WI 53203

Agent Designated by the Corporation for Purposes of Service

Name	Address
Chris Kaltenbach, General Counsel	1125 N Old World 3rd St Milwaukee, WI 53203

Please provide all corporate officers

Name	Title	Address
Chris Kaltenbach	Corporate Counsel	1125 N Old World 3rd St Milwaukee, WI 53203
Anthony Maradalo	VP Operations	1125 N Old World 3rd St Milwaukee, WI 53203

Does the applicant applying for coverage have a Parent Corporation?
Yes

Parent Corporation of Applicant

Name	Address
Lesaffre International	Marcq-en-Bar◆ul HQ 137 Rue Gabriel P◆ri

Does the applicant applying for coverage have Subsidiary Corporations?
No

Enforcement History

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

Identify all Notices of Violation, Orders (Consent or Administrative/Unilateral), or Judicial Actions (Complaint, Settlement Agreement, Consent Decree, or Court Order) concerning water pollution or other permit violations, if any, against the Applicant within the State of Alabama in the past five years.

Facility/Site Name	Permit Number, If Applicable	Type of Action	Date of Action
Red Star Yeast, LLC	AL0057801	Notice of Violation	05/05/2020

Business Activity

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

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

Give a brief description of all operations at this facility including primary products or services:
The yeast and yeast-based products to be manufactured at the facility is categorized as follows: ◆Operations consist of producing yeast products through fermentation processes for use in multiple research and development, test marketing, and commercial applications (e.g., producing naturally occurring and genetically modified strains of Saccharomyces cerevisiae through fermentation of molasses-based feedstock, water,
and yeast inoculants for use in baking applications). Yeast production includes, but is not limited to, production of yeast varieties for various end-use applications, such as baking applications, biofuel applications and yeast production processes for other yeast-based products such as organic based flavorings or extracts◆.

Water Supply

Water Sources (check all that apply):
Municipal Water Utility
Private Well

Please specify the City of the Municipal Water Utility:
City of Headland

Name of Utility	Million Gallons per Day (MGD)
Headland Water	0.05

Well ID	Private Well in Million Gallons per Day (MGD)
East	0.3
West	0.3
	Sum: 0.6

Cooling Water Intake Structure Information

Does the provider of your source water operate a surface water intake?
No

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

Outfalls (1 of 16)

Outfall Identifier
001

Receiving Water
Blackwood Creek

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

Indicate if either of the following characteristics apply to this discharge:
Stormwater only (no comingled process waste water excluding air conditioner condensate and fire testing waters)

Monitoring/Sampling Point Location
31.396472,-85.324306

Outfalls (2 of 16)

Outfall Identifier
002

Receiving Water
Spivey Mill Creek

Does the discharge enter the named receiving water via an unnamed tributary?
NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:
Stormwater only (no comingled process waste water excluding air conditioner condensate and fire testing waters)

Monitoring/Sampling Point Location
31.399486,-85.311364

Outfalls (3 of 16)

Outfall Identifier
003

Receiving Water
Blackwood Creek

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

Indicate if either of the following characteristics apply to this discharge:
Stormwater only (no comingled process waste water excluding air conditioner condensate and fire testing waters)

Monitoring/Sampling Point Location
31.394444,-85.311111

Outfalls (4 of 16)

Outfall Identifier
004

Receiving Water
Blackwood Creek

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

Indicate if either of the following characteristics apply to this discharge:
Stormwater only (no comingled process waste water excluding air conditioner condensate and fire testing waters)

Monitoring/Sampling Point Location
31.390833,-85.323333

Outfalls (5 of 16)

Outfall Identifier
005

Receiving Water
Blackwood Creek

Does the discharge enter the named receiving water via an unnamed tributary?
NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:
Stormwater only (no comingled process waste water excluding air conditioner condensate and fire testing waters)

Monitoring/Sampling Point Location
31.385436,-85.317689

Outfalls (6 of 16)

Outfall Identifier
006

Receiving Water
Spivey Mill Creek

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

Indicate if either of the following characteristics apply to this discharge:
Stormwater only (no comingled process waste water excluding air conditioner condensate and fire testing waters)

Monitoring/Sampling Point Location
31.390278,-85.319167

Outfalls (7 of 16)

Outfall Identifier
007

Receiving Water
Spivey Mill Creek

Does the discharge enter the named receiving water via an unnamed tributary?
NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:
Stormwater only (no comingled process waste water excluding air conditioner condensate and fire testing waters)

Monitoring/Sampling Point Location
31.395106,-85.303281

Outfalls (8 of 16)

Outfall Identifier
008

Receiving Water
Spivey Mill Creek

Does the discharge enter the named receiving water via an unnamed tributary?
NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:
Stormwater only (no comingled process waste water excluding air conditioner condensate and fire testing waters)

Monitoring/Sampling Point Location
31.40333300000000, -85.29944399999999

Outfalls (9 of 16)

Outfall Identifier
009

Receiving Water
Spivey Mill Creek

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

Indicate if either of the following characteristics apply to this discharge:
Stormwater only (no comingled process waste water excluding air conditioner condensate and fire testing waters)

Monitoring/Sampling Point Location
31.41305600000000, -85.30638900000000

Outfalls (10 of 16)

Outfall Identifier
010

Receiving Water
Spivey Mill Creek

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

Indicate if either of the following characteristics apply to this discharge:
Stormwater only (no comingled process waste water excluding air conditioner condensate and fire testing waters)

Monitoring/Sampling Point Location
31.40416700000000, -85.31444400000000

Outfalls (11 of 16)

Outfall Identifier
011

Receiving Water
Spivey Mill Creek

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

Indicate if either of the following characteristics apply to this discharge:
Stormwater only (no comingled process waste water excluding air conditioner condensate and fire testing waters)

Monitoring/Sampling Point Location
31.40083300000000, -85.30305600000000

Outfalls (12 of 16)

Outfall Identifier
012

Receiving Water
Spivey Mill Creek

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

Indicate if either of the following characteristics apply to this discharge:
Stormwater only (no comingled process waste water excluding air conditioner condensate and fire testing waters)

Monitoring/Sampling Point Location
31.400006,-85.322869

Outfalls (13 of 16)

Outfall Identifier
01A

Receiving Water
Blackwater Creek

Does the discharge enter the named receiving water via an unnamed tributary?
NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:
None apply

Estimated Average Daily Flow (MGD)
0.6

Monitoring/Sampling Point Location
31.39750000000000, -85.32305599999999

Outfalls (14 of 16)

Outfall Identifier
013

Receiving Water
Blackwood Creek

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

Indicate if either of the following characteristics apply to this discharge:
Stormwater only (no comingled process waste water excluding air conditioner condensate and fire testing waters)

Monitoring/Sampling Point Location
31.400278,-85.330556

Outfalls (15 of 16)

Outfall Identifier
014

Receiving Water
Blackwood Creek

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

Indicate if either of the following characteristics apply to this discharge:
Stormwater only (no comingled process waste water excluding air conditioner condensate and fire testing waters)

Monitoring/Sampling Point Location
31.3975,-85.330556

Outfalls (16 of 16)

Outfall Identifier
015

Receiving Water
Spivey Mill Creek

Does the discharge enter the named receiving water via an unnamed tributary?
NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:
Stormwater only (no comingled process waste water excluding air conditioner condensate and fire testing waters)

Monitoring/Sampling Point Location
31.395278,-85.304167

Anti-Degradation Evaluation

Is this a new or increased discharge that began after April 3, 1991?
No

Additional Information

Do you share an outfall with another facility?
No

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

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

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

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

Please describe the equipment below:
Flow metering system has been added to all pivots to record the as applied volume of effluent

Please attach the process schematic with sampling equipment locations.
sampling location.pdf - 03/15/2022 02:37 PM
Comment
Sampling location is proposed to be moved from the Parshall flume to the wet well that delivers effluent to the irrigation system.

Are any process changes or expansions planned during the next three years that could alter wastewater volumes or characteristics (Consider production processes as well as air or water pollution treatment processes that may affect the discharge.)?
No

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

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

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

List of Biocides

Please list biocides below:
Chlorine Gas
Isoplus
Ultrex PBB

Biocide/Corrosion Inhibitor Summary Sheet
NONE PROVIDED
Comment
NONE PROVIDED

Safety Data Sheets (SDS)
SDS.pdf - 03/15/2022 02:07 PM
Comment
NONE PROVIDED

Treatment

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

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

Is any form of wastewater treatment (or changes to an existing wastewater treatment) planned for this facility within the next three years?
No

Facility Operational Characteristics

Indicate whether the facility discharge is:
Continuous through the year

Comments:
NONE PROVIDED

Non-Discharged Wastes

Are any waste liquids or sludges generated and not disposed of in the sanitary sewer system?
No

Does any outside firm remove any of the above checked wastes?
No

EPA Application Forms

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

Form 1 - General Information Form required for all applications

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

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

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

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

EPA Form 1
Form 1 11.17.21.pdf - 03/15/2022 02:46 PM
Comment
NONE PROVIDED

Additional EPA Forms (EPA Form 2C, 2D, 2E and/or 2F)
FORM 2C CR_Final.pdf - 03/15/2022 02:48 PM
Form 2F (2020-2021) TF.pdf - 03/15/2022 02:48 PM
Comment
NONE PROVIDED

Other attachments (as needed)
Red Star Renewal Ver 2.pdf - 03/15/2022 02:50 PM
Comment
NONE PROVIDED

Additional Attachments

Please attach any additional information as needed.
NONE PROVIDED
Comment
NONE PROVIDED

Application Preparer

Application Preparer

Prefix
Mr.

First Name **Last Name**
Tim *Floyd*

Title
Principal

Organization Name
Poly, Inc.

Phone Type **Number** **Extension**
Mobile 12059130330

Email
tfloyd@poly-inc.com

Address
117 Gemini Circle Ste 416
Birmingham, AL 35442

Attachments

Date	Attachment Name	Context	Confidential?	User
3/15/2022 2:50 PM	Red Star Renewal Ver 2.pdf	Attachment	No	Tim Floyd
3/15/2022 2:48 PM	Form 2F (2020-2021) TF.pdf	Attachment	No	Tim Floyd
3/15/2022 2:48 PM	FORM 2C CR_Final.pdf	Attachment	No	Tim Floyd
3/15/2022 2:46 PM	Form 1 11.17.21.pdf	Attachment	No	Tim Floyd
3/15/2022 2:37 PM	sampling location.pdf	Attachment	No	Tim Floyd
3/15/2022 2:07 PM	SDS.pdf	Attachment	No	Tim Floyd
3/15/2022 1:03 PM	Add fig su1.pdf	Attachment	No	Tim Floyd

Agreements and Signature(s)

SUBMISSION AGREEMENTS

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

Responsible Official

I certify under penalty of lawthat this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted; based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. I further certify under penalty of lawthat all analyses reported as less than detectable in this application or attachments thereto were performed using the EPA approved test method having the lowest detection limit for the substance tested. NOTE: 335-6-5-.14 SIGNATORIES TO PERMIT APPLICATIONS AND REPORTS. The application for a SID permit shall be signed by a responsible official, a request for variance from categorical pretreatment standards, and a category determination request shall be signed b a responsible official, as indicated below. In the case of a corporation, by a principal executive officer of at least the level of vice president; In the case of a partnership, by a general partner; In the case of a sole proprietorship, by the proprietor; or In the case of a municipal, state, federal, or other public entity, by either a principal executive officer, or ranking elected official

Signed By Dennis Barry on 03/15/2022 at 3:45 PM

S1.1

Red Star Yeast Permit Renewal

Outfall #	Receiving Water Name	Latitude	Longitude
1	US Route 431 Ditch	N31°23'47.30"	W85°19'27.50"
2	Spivey Mill Creek	N31°23'58.15"	W85°18'40.91"
3	Blackwood Creek	N31°23'40"	W85°18'40"
4	R.R. R.O.W. Ditch then 431 R.O.W. Ditch	N31°23'27"	W85°19'24"
5	Blackwood Creek	N31°23'07.57"	W85°19'03.68"
6	Spivey Mill Creek	N31°23'25"	W85°18'9"
6-2	Spivey Mill Creek	N31°23'43"	W85°18'15"
7	Spivey Mill Creek	N31°23'42.38"	W85°18'11.81"
8	Spivey Mill Creek	N31°24'12"	W85°17'58"
9	Spivey Mill Creek	N31°24'47.34"	W85°18'24.76"
10	Spivey Mill Creek	N31°24'15"	W85°18'52"
11	Spivey Mill Creek	N31°24'3"	W85°18'11"
12	Spivey Mill Creek	N31°24'00.02"	W85°19'22.33"
13	Blackwood Creek	N31°24'01"	W85°19'50"
12	Blackwood Creek	N31°23'51"	W85°19'40"

S4.1

Redstar Yeast Permit Renewal

Outfall #	Impervious Surface Area	Units1	Total Surface Area Drained	Units2
1	32799	Square Feet	696960	Square Feet
2	0	Square Feet	7884360	Square Feet
3	0	Square Feet	3288780	Square Feet
4	87100	Square Feet	314789	Square Feet
5	0	Square Feet	6011280	Square Feet
6	0	Square Feet	1524600	Square Feet
7	0	Square Feet	3397680	Square Feet
8	0	Square Feet	2352240	Square Feet
9	0	Square Feet	3593700	Square Feet
10	0	Square Feet	1154340	Square Feet
11	0	Square Feet	2918520	Square Feet
12	0	Square Feet	2352240	Square Feet
13		Square Feet	675180	Square Feet
14	0	Square Feet	2186712	Square Feet

EXISTING

003S

Pollutant or Parameter	Max. Daily Discharge (Grab Sample)	Unit	Avg. Daily Discharge (Grab Sample)	Unit2	# of Storm Events Sampled	Sources of Pollutants
BOD_5	694	mg/L	352.65	mg/L	3	Land Application of Wastewater
TSS	185	mg/L	114.80	mg/L	3	Land Application of Wastewater
O&G	1.52	mg/L	1.52	mg/L	3	Land Application of Wastewater
Total N	19.6	mg/L	13.46	mg/L	3	Land Application of Wastewater
TKN	15.9	mg/L	10.67	mg/L	3	Land Application of Wastewater
Total P	8.25	mg/L	6.48	mg/L	3	Land Application of Wastewater
COD	NS	mg/L	NS	mg/L	3	Land Application of Wastewater
pH (Min)	7.02	S.U.	6.83	S.U.	3	Land Application of Wastewater
pH (Max)	7.02	S.U.	6.83	S.U.	3	Land Application of Wastewater

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Pollutant or Parameter	Max. Daily Discharge (Grab Sample)	Unit	Avg. Daily Discharge (Grab Sample)	Unit2	# of Storm Events Sampled	Sources of Pollutants
BOD_5	8.09	mg/L	4.06	mg/L	3	Land Application of Wastewater
TSS	23.5	mg/L	9.70	mg/L	3	Land Application of Wastewater
O&G	1.55	mg/L	1.53	mg/L	3	Land Application of Wastewater
Total N	10.075	mg/L	4.27	mg/L	3	Land Application of Wastewater
TKN	1.045	mg/L	1.02	mg/L	3	Land Application of Wastewater
Total P	4.7	mg/L	1.65	mg/L	3	Land Application of Wastewater
COD	NS	mg/L	NS	mg/L	3	Land Application of Wastewater
pH (Min)	7.47	S.U.	6.99	S.U.	3	Land Application of Wastewater
pH (Max)	7.47	S.U.	7.06	S.U.	3	Land Application of Wastewater

005S

Pollutant or Parameter	Max. Daily Discharge (Grab Sample)	Unit	Avg. Daily Discharge (Grab Sample)	Unit2	# of Storm Events Sampled	Sources of Pollutants
BOD_5	38.15	mg/L	22.32	mg/L	3	Land Application of Wastewater
TSS	167	mg/L	81.20	mg/L	3	Land Application of Wastewater
O&G	1.77	mg/L	1.64	mg/L	3	Land Application of Wastewater
Total N	6.522	mg/L	3.73	mg/L	3	Land Application of Wastewater
TKN	5.785	mg/L	2.93	mg/L	3	Land Application of Wastewater
Total P	5.7	mg/L	2.23	mg/L	3	Land Application of Wastewater
COD	NS	mg/L	NS	mg/L	3	Land Application of Wastewater
pH (Min)	7.41	S.U.	6.90	S.U.	3	Land Application of Wastewater
pH (Max)	7.41	S.U.	6.92	S.U.	3	Land Application of Wastewater

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Pollutant or Parameter	Max. Daily Discharge (Grab Sample)	Unit	Avg. Daily Discharge (Grab Sample)	Unit2	# of Storm Events Sampled	Sources of Pollutants
BOD_5	8.71	mg/L	4.24	mg/L	3	Land Application of Wastewater
TSS	37.3	mg/L	19.77	mg/L	3	Land Application of Wastewater
O&G	1.55	mg/L	1.53	mg/L	3	Land Application of Wastewater
Total N	4.66	mg/L	3.02	mg/L	3	Land Application of Wastewater
TKN	1	mg/L	1.00	mg/L	3	Land Application of Wastewater
Total P	0.143	mg/L	0.11	mg/L	3	Land Application of Wastewater
COD	NS	mg/L	NS	mg/L	3	Land Application of Wastewater
pH (Min)	7.3	S.U.	6.88	S.U.	3	Land Application of Wastewater
pH (Max)	7.3	S.U.	6.88	S.U.	3	Land Application of Wastewater

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Pollutant or Parameter	Max. Daily Discharge (Grab Sample)	Unit	Avg. Daily Discharge (Grab Sample)	Unit2	# of Storm Events Sampled	Sources of Pollutants
BOD_5	15.2	mg/L	7.76	mg/L	3	Land Application of Wastewater
TSS	13.3	mg/L	9.57	mg/L	3	Land Application of Wastewater
O&G	1.67	mg/L	1.56	mg/L	3	Land Application of Wastewater
Total N	9.64	mg/L	6.54	mg/L	3	Land Application of Wastewater
TKN	1.5	mg/L	1.17	mg/L	3	Land Application of Wastewater
Total P	0.318	mg/L	0.18	mg/L	3	Land Application of Wastewater
COD	NS	mg/L	NS	mg/L	3	Land Application of Wastewater
pH (Min)	6.98	S.U.	6.72	S.U.	3	Land Application of Wastewater
pH (Max)	6.98	S.U.	6.72	S.U.	3	Land Application of Wastewater

PROPOSED

013S

Pollutant or Parameter	Max. Daily Discharge (Grab Sample)	Unit	Avg. Daily Discharge (Grab Sample)	Unit2	# of Storm Events Sampled	Sources of Pollutants
BOD_5	152.83	mg/L	78.20	mg/L	Average of 3 Events and 5 Existing Outfalls	Land Application of Wastewater
TSS	85.22	mg/L	47.01	mg/L	Average of 3 Events and 5 Existing Outfalls	Land Application of Wastewater
O&G	1.61	mg/L	1.55	mg/L	Average of 3 Events and 5 Existing Outfalls	Land Application of Wastewater
Total N	10.10	mg/L	6.20	mg/L	Average of 3 Events and 5 Existing Outfalls	Land Application of Wastewater
TKN	5.05	mg/L	3.36	mg/L	Average of 3 Events and 5 Existing Outfalls	Land Application of Wastewater
Total P	3.82	mg/L	2.13	mg/L	Average of 3 Events and 5 Existing Outfalls	Land Application of Wastewater
COD	NS	mg/L	NS	mg/L	Average of 3 Events and 5 Existing Outfalls	Land Application of Wastewater
pH (Min)	7.24	S.U.	6.86	S.U.	Average of 3 Events and 5 Existing Outfalls	Land Application of Wastewater
pH (Max)	7.24	S.U.	6.88	S.U.	Average of 3 Events and 5 Existing Outfalls	Land Application of Wastewater

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Pollutant or Parameter	Max. Daily Discharge (Grab Sample)	Unit	Avg. Daily Discharge (Grab Sample)	Unit2	# of Storm Events Sampled	Sources of Pollutants
BOD_5	17.54	mg/L	9.59	mg/L	Average of 3 Events and 5 Existing Outfalls	Land Application of Wastewater
TSS	78.79	mg/L	39.69	mg/L	Average of 3 Events and 5 Existing Outfalls	Land Application of Wastewater
O&G	18.35	mg/L	10.65	mg/L	Average of 3 Events and 5 Existing Outfalls	Land Application of Wastewater
Total N	6.50	mg/L	3.82	mg/L	Average of 3 Events and 5 Existing Outfalls	Land Application of Wastewater
TKN	3.89	mg/L	2.46	mg/L	Average of 3 Events and 5 Existing Outfalls	Land Application of Wastewater
Total P	3.18	mg/L	1.51	mg/L	Average of 3 Events and 5 Existing Outfalls	Land Application of Wastewater
COD	3.82	mg/L	2.13	mg/L	Average of 3 Events and 5 Existing Outfalls	Land Application of Wastewater
pH (Min)	7.29	S.U.	6.87	S.U.	Average of 3 Events and 5 Existing Outfalls	Land Application of Wastewater
pH (Max)	7.28	S.U.	6.89	S.U.	Average of 3 Events and 5 Existing Outfalls	Land Application of Wastewater

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Pollutant or	Max. Daily Discharge	Unit	Avg. Daily Discharge	Unit2	# of Storm Events	Sources of Pollutants
Ammonia	2.38	mg/L	1.34	mg/L	3	Land Application of Wastewater
Selenium	0.01	mg/L	0.01	mg/L	3	Land Application of Wastewater

004S

Pollutant or	Max. Daily Discharge	Unit	Avg. Daily Discharge	Unit2	# of Storm Events	Sources of Pollutants
Ammonia	0.1135	mg/L	0.10	mg/L	3	Land Application of Wastewater
Selenium	0.01	mg/L	0.01	mg/L	3	Land Application of Wastewater

005S

Pollutant or Parameter	Max. Daily Discharge (Grab Sample)	Unit	Avg. Daily Discharge (Grab Sample)	Unit2	# of Storm Events Sampled	Sources of Pollutants
Ammonia	1.15	mg/L	0.51	mg/L	3	Land Application of Wastewater
Selenium	0.01	mg/L	0.01	mg/L	3	Land Application of Wastewater

009S

Pollutant or Parameter	Max. Daily Discharge (Grab Sample)	Unit	Avg. Daily Discharge (Grab Sample)	Unit2	# of Storm Events Sampled	Sources of Pollutants
Ammonia	0.127	mg/L	0.11	mg/L	3	Land Application of Wastewater
Selenium	0.01	mg/L	0.01	mg/L	3	Land Application of Wastewater

012S

Pollutant or Parameter	Max. Daily Discharge (Grab Sample)	Unit	Avg. Daily Discharge (Grab Sample)	Unit2	# of Storm Events Sampled	Sources of Pollutants
Ammonia	0.422	mg/L	0.21	mg/L	3	Land Application of Wastewater
Selenium	0.01	mg/L	0.01	mg/L	3	Land Application of Wastewater

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PROPOSED

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Pollutant or Parameter	Max. Daily Discharge (Grab Sample)	Unit	Avg. Daily Discharge (Grab Sample)	Unit2	# of Storm Events Sampled	Sources of Pollutants
Ammonia	0.8385	mg/L	0.45	mg/L	Average of 3 Events and 5 Existing Outfalls	Land Application of Wastewater
Selenium	0.010	mg/L	0.007	mg/L	Average of 3 Events and 5 Existing Outfalls	Land Application of Wastewater

014S

Pollutant or Parameter	Max. Daily Discharge (Grab Sample)	Unit	Avg. Daily Discharge (Grab Sample)	Unit2	# of Storm Events Sampled	Sources of Pollutants
Ammonia	0.8385	mg/L	0.45	mg/L	Average of 3 Events and 5 Existing Outfalls	Land Application of Wastewater
Selenium	0.01	mg/L	0.01	mg/L	Average of 3 Events and 5 Existing Outfalls	Land Application of Wastewater

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
	AL0057801	Red Star Yeast, LLC	

Form 2C NPDES

EPA

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

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

Outfall Location

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

Outfall Number	Receiving Water Name	Latitude	Longitude
DSN01A1	NA - Spray Field	NA° NA′ NA″	NA° NA′ NA″
		° ′ ″	° ′ ″
		° ′ ″	° ′ ″

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

Line Drawing

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

☐ Yes ☐ No

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

Average Flows and Treatment

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

****Outfall Number**** DSN01A1

Operations Contributing to Flow

Operation	Average Flow
Yeast Production	0.6 mgd
	mgd
	mgd
	mgd

Treatment Units

Description (include size, flow rate through each treatment unit, retention time, etc.)	Code from Table 2C-1	Final Disposal of Solid or Liquid Wastes Other Than by Discharge
Spray Field Irrigation	3-F	
Spray Field Irrigation	4-A	

Average Flows and Treatment Continued

3.1 cont.

****Outfall Number**** _____

Operations Contributing to Flow

Operation	Average Flow
	mgd
	mgd
	mgd
	mgd

Treatment Units

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

****Outfall Number**** _____

Operations Contributing to Flow

Operation	Average Flow
	mgd
	mgd
	mgd
	mgd

Treatment Units

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

System Users

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

☐ Yes ☑ No ➔ SKIP to Section 4.

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

☐ Yes ☐ No

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

Intermittent Flows

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

☐ Yes ☑ No ➔ SKIP to Section 5.

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

Outfall Number	Operation (list)	Frequency		Flow Rate		Duration
		Average Days/Week	Average Months/Year	Long-Term Average	Maximum Daily	
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days

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

Applicable ELGs

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

☐ Yes ☑ No ➔ SKIP to Section 6.

5.2 Provide the following information on applicable ELGs.

ELG Category	ELG Subcategory	Regulatory Citation

Production-Based Limitations

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

☐ Yes ☐ No ➔ SKIP to Section 6.

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

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

SECTION 6. IMPROVEMENTS (40 CFR 122.21(g)(6))

Upgrades and Improvements

6.1 Are you presently required by any federal, state, or local authority to meet an implementation schedule for constructing, upgrading, or operating wastewater treatment equipment or practices or any other environmental programs that could affect the discharges described in this application?

☐ Yes ☑ No ➔ SKIP to Item 6.3.

6.2 Briefly identify each applicable project in the table below.

Brief Identification and Description of Project	Affected Outfalls (list outfall number)	Source(s) of Discharge	Final Compliance Dates	
			Required	Projected

6.3 Have you attached sheets describing any additional water pollution control programs (or other environmental projects that may affect your discharges) that you now have underway or planned? *(optional item)*

☐ Yes ☐ No ☑ Not applicable

SECTION 7. EFFLUENT AND INTAKE CHARACTERISTICS (40 CFR 122.21(g)(7))

Effluent and Intake Characteristics

See the instructions to determine the pollutants and parameters you are required to monitor and, in turn, the tables you must complete. Not all applicants need to complete each table.

Table A. Conventional and Non-Conventional Pollutants

7.1 Are you requesting a waiver from your NPDES permitting authority for one or more of the Table A pollutants for any of your outfalls?

☐ Yes ☑ No ➔ SKIP to Item 7.3.

7.2 If yes, indicate the applicable outfalls below. Attach waiver request and other required information to the application.

Outfall Number _____ Outfall Number _____ Outfall Number _____

7.3 Have you completed monitoring for all Table A pollutants at each of your outfalls for which a waiver has not been requested and attached the results to this application package?

☑ Yes ☐ No; a waiver has been requested from my NPDES permitting authority for all pollutants at all outfalls.

Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants

7.4 Do any of the facility's processes that contribute wastewater fall into one or more of the primary industry categories listed in Exhibit 2C-3? (See end of instructions for exhibit.)

☐ Yes ☑ No ➔ SKIP to Item 7.8.

7.5 Have you checked "Testing Required" for all toxic metals, cyanide, and total phenols in Section 1 of Table B?

☐ Yes ☐ No

7.6 List the applicable primary industry categories and check the boxes indicating the required GC/MS fraction(s) identified in Exhibit 2C-3.

Primary Industry Category	Required GC/MS Fraction(s) (Check applicable boxes.)			
	☐ Volatile	☐ Acid	☐ Base/Neutral	☐ Pesticide
	☐ Volatile	☐ Acid	☐ Base/Neutral	☐ Pesticide
	☐ Volatile	☐ Acid	☐ Base/Neutral	☐ Pesticide

Effluent and Intake Characteristics Continued

7.7	Have you checked "Testing Required" for all required pollutants in Sections 2 through 5 of Table B for each of the GC/MS fractions checked in Item 7.6? ☐ Yes ☐ No
7.8	Have you checked "Believed Present" or "Believed Absent" for all pollutants listed in Sections 1 through 5 of Table B where testing is not required? ☑ Yes ☐ No
7.9	Have you provided (1) quantitative data for those Section 1, Table B, pollutants for which you have indicated testing is required or (2) quantitative data or other required information for those Section 1, Table B, pollutants that you have indicated are "Believed Present" in your discharge? ☑ Yes ☐ No
7.10	Does the applicant qualify for a small business exemption under the criteria specified in the instructions? ☐ Yes ➔ Note that you qualify at the top of Table B, then SKIP to Item 7.12. ☑ No
7.11	Have you provided (1) quantitative data for those Sections 2 through 5, Table B, pollutants for which you have determined testing is required or (2) quantitative data or an explanation for those Sections 2 through 5, Table B, pollutants you have indicated are "Believed Present" in your discharge? ☑ Yes ☐ No
Table C. Certain Conventional and Non-Conventional Pollutants	
7.12	Have you indicated whether pollutants are "Believed Present" or "Believed Absent" for all pollutants listed on Table C for all outfalls? ☑ Yes ☐ No
7.13	Have you completed Table C by providing (1) quantitative data for those pollutants that are limited either directly or indirectly in an ELG and/or (2) quantitative data or an explanation for those pollutants for which you have indicated "Believed Present"? ☑ Yes ☐ No
Table D. Certain Hazardous Substances and Asbestos	
7.14	Have you indicated whether pollutants are "Believed Present" or "Believed Absent" for all pollutants listed in Table D for all outfalls? ☑ Yes ☐ No
7.15	Have you completed Table D by (1) describing the reasons the applicable pollutants are expected to be discharged and (2) by providing quantitative data, if available? ☐ Yes ☑ No
Table E. 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (2,3,7,8-TCDD)	
7.16	Does the facility use or manufacture one or more of the 2,3,7,8-TCDD congeners listed in the instructions, or do you know or have reason to believe that TCDD is or may be present in the effluent? ☐ Yes ➔ Complete Table E. ☐ No ➔ SKIP to Section 8.
7.17	Have you completed Table E by reporting *qualitative* data for TCDD? ☐ Yes ☐ No

SECTION 8. USED OR MANUFACTURED TOXICS (40 CFR 122.21(g)(9))

Used or Manufactured Toxics

8.1	Is any pollutant listed in Table B a substance or a component of a substance used or manufactured at your facility as an intermediate or final product or byproduct? ☐ Yes ☑ No ➔ SKIP to Section 9.
8.2	List the pollutants below.

1.	4.	7.
2.	5.	8.
3.	6.	9.

SECTION 9. BIOLOGICAL TOXICITY TESTS (40 CFR 122.21(g)(11))

Biological Toxicity Tests

9.1 Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made within the last three years on (1) any of your discharges or (2) on a receiving water in relation to your discharge?

☐ Yes ☑ No ➔ SKIP to Section 10.

9.2 Identify the tests and their purposes below.

Test(s)	Purpose of Test(s)	Submitted to NPDES Permitting Authority?	Date Submitted
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	

SECTION 10. CONTRACT ANALYSES (40 CFR 122.21(g)(12))

Contract Analyses

10.1 Were any of the analyses reported in Section 7 performed by a contract laboratory or consulting firm?

☑ Yes ☐ No ➔ SKIP to Section 11.

10.2 Provide information for each contract laboratory or consulting firm below.

	Laboratory Number 1	Laboratory Number 2	Laboratory Number 3
Name of laboratory/firm	Pace Analytical	Poly Environmental Corp., Environmental Lab	
Laboratory address	12065 Lebanon Rd Mt. Juliet, TN 37122	1885 Headland Avenue P.O. Box 837 Dothan, AL 36302	
Phone number	(803) 791-9700	(334) 793-4700	
Pollutant(s) analyzed	All others	TDS, Oil & Grease, BOD, TSS, COD, Plant and Stormwater Effluent	

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

Additional Information

11.1 Has the NPDES permitting authority requested additional information?

☐ Yes ☑ No ➔ SKIP to Section 12.

11.2 List the information requested and attach it to this application.

1.	4.
2.	5.
3.	6.

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
	AL0057801	Red Star Yeast, LLC	

SECTION 12. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))

Checklist and Certification Statement

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

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

12.2 **Certification Statement**

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

Name (print or type first and last name)	Official title
Signature	**Date signed**

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
	AL0057801	Red Star Yeast, LLC	DSN01A1

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

TABLE A. CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(iii))[1]

	Pollutant	Waiver Requested (if applicable)	Units (specify)		Effluent: Maximum Daily Discharge (required)	Effluent: Maximum Monthly Discharge (if available)	Effluent: Long-Term Average Daily Discharge (if available)	Effluent: Number of Analyses	Intake (Optional): Long-Term Average Value	Intake (Optional): Number of Analyses
☐	Check here if you have applied to your NPDES permitting authority for a waiver for *all* of the pollutants listed on this table for the noted outfall.									
1.	Biochemical oxygen demand (BOD_5)	☐	Concentration	mg/L	14,583			84		
			Mass	lb/day	73,061			84		
2.	Chemical oxygen demand (COD)	☐	Concentration	mg/L	12,600			1		
			Mass	lb/day	63,126			1		
3.	Total organic carbon (TOC)	☐	Concentration	mg/L	3640			1		
			Mass	lb/day	18,236			1		
4.	Total suspended solids (TSS)	☐	Concentration	mg/L	2433			1		
			Mass	lb/day	12,189			1		
5.	Ammonia (as N)	☐	Concentration	mg/L	133			84		
			Mass	lb/day	666			84		
6.	Flow	☐	Rate	MGD	0.600					
7.	Temperature (winter)	☐	°C	°C	80					
	Temperature (summer)	☐	°C	°C	60					
8.	pH (minimum)	☐	Standard units	s.u.	2.4			84		
	pH (maximum)	☐	Standard units	s.u.	13.6			84		

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
	AL0057801	Red Star Yeast, LLC	DSN01A1

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
☐	Check here if you qualify as a small business per the instructions to Form 2C and, therefore, do not need to submit quantitative data for any of the organic toxic pollutants in Sections 2 through 5 of this table. Note, however, that you must still indicate in the appropriate column of this table if you believe any of the pollutants listed are present in your discharge.											
Section 1. Toxic Metals, Cyanide, and Total Phenols												
1.1	Antimony, total (7440-36-0)	☐	☐	☑	Concentration	mg/L	<0.025			1		
					Mass	lb/day	NA					
1.2	Arsenic, total (7440-38-2)	☐	☐	☑	Concentration	mg/L	0.005			1		
					Mass	lb/day	0.025			1		
1.3	Beryllium, total (7440-41-7)	☐	☐	☑	Concentration	mg/L	<0.002			1		
					Mass	lb/day	NA					
1.4	Cadmium, total (7440-43-9)	☐	☐	☑	Concentration	mg/L	0.004			1		
					Mass	lb/day	0.02			1		
1.5	Chromium, total (7440-47-3)	☐	☐	☑	Concentration	mg/L	0.036			1		
					Mass	lb/day	0.180			1		
1.6	Copper, total (7440-50-8)	☐	☑	☐	Concentration	mg/L	0.598			1		
					Mass	lb/day	3.00			1		
1.7	Lead, total (7439-92-1)	☐	☐	☑	Concentration	mg/L	0.0102			1		
					Mass	lb/day	0.051			1		
1.8	Mercury, total (7439-97-6)	☐	☐	☑	Concentration	ng/L	<50			1		
					Mass	lb/day	NA					
1.9	Nickel, total (7440-02-0)	☐	☐	☑	Concentration	mg/L	0.102			1		
					Mass	lb/day	0.511			1		
1.10	Selenium, total (7782-49-2)	☐	☐	☑	Concentration	mg/L	0.051			1		
					Mass	lb/day	0.256			1		
1.11	Silver, total (7440-22-4)	☐	☐	☑	Concentration	mg/L	<0.005			1		
					Mass	lb/day	NA					

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	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
1.12	Thallium, total (7440-28-0)	☐	☐	☑	Concentration	mg/L	0.005			1		
					Mass	lb/day	0.025			1		
1.13	Zinc, total (7440-66-6)	☐	☐	☑	Concentration	mg/L	2.53			1		
					Mass	lb/day	12.68			1		
1.14	Cyanide, total (57-12-5)	☐	☐	☑	Concentration	mg/L	<0.05			1		
					Mass	lb/day	NA					
1.15	Phenols, total	☐	☐	☑	Concentration	mg/L	6.84			1		
					Mass	lb/day	34.27			1		
Section 2. Organic Toxic Pollutants (GC/MS Fraction—Volatile Compounds)												
2.1	Acrolein (107-02-8)	☐	☐	☑	Concentration	mg/L	<50.0			1		
					Mass	lb/day	NA					
2.2	Acrylonitrile (107-13-1)	☐	☐	☑	Concentration	mg/L	<10.0			1		
					Mass	lb/day	NA					
2.3	Benzene (71-43-2)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
2.4	Bromoform (75-25-2)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
2.5	Carbon tetrachloride (56-23-5)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
2.6	Chlorobenzene (108-90-7)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
2.7	Chlorodibromomethane (124-48-1)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
2.8	Chloroethane (75-00-3)	☐	☐	☑	Concentration	mg/L	<5.00			1		
					Mass	lb/day	NA					

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	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
2.9	2-chloroethylvinyl ether (110-75-8)	☐	☐	☑	Concentration	mg/L	<50.0			1		
					Mass	lb/day	NA					
2.10	Chloroform (67-66-3)	☐	☐	☑	Concentration	mg/L	<5.00			1		
					Mass	lb/day	NA					
2.11	Dichlorobromomethane (75-27-4)	☐	☐	☑	Concentration	mg/L	<1.00			1		1
					Mass	lb/day	NA					
2.12	1,1-dichloroethane (75-34-3)	☐	☐	☑	Concentration	mg/L	<1.00			1		1
					Mass	lb/day	NA					
2.13	1,2-dichloroethane (107-06-2)	☐	☐	☑	Concentration	mg/L	<1.00			1		1
					Mass	lb/day	NA					
2.14	1,1-dichloroethylene (75-35-4)	☐	☐	☑	Concentration	mg/L	<1.00			1		1
					Mass	lb/day	NA					
2.15	1,2-dichloropropane (78-87-5)	☐	☐	☑	Concentration	mg/L	<1.00			1		1
					Mass	lb/day	NA					
2.16	1,3-dichloropropylene (542-75-6)	☐	☐	☑	Concentration	mg/L	<1.00			1		1
					Mass	lb/day	NA					
2.17	Ethylbenzene (100-41-4)	☐	☐	☑	Concentration	mg/L	<1.00			1		1
					Mass	lb/day	NA					
2.18	Methyl bromide (74-83-9)	☐	☐	☑	Concentration	mg/L	<5.00			1		1
					Mass	lb/day	NA					
2.19	Methyl chloride (74-87-3)	☐	☐	☑	Concentration	mg/L	<5.00			1		1
					Mass	lb/day	NA					
2.20	Methylene chloride (75-09-2)	☐	☐	☑	Concentration	mg/L	<5.00			1		1
					Mass	lb/day	NA					
2.21	1,1,2,2- tetrachloroethane (79-34-5)	☐	☐	☑	Concentration	mg/L	<1.00			1		1
					Mass	lb/day	NA					

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	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
2.22	Tetrachloroethylene (127-18-4)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
2.23	Toluene (108-88-3)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
2.24	1,2-trans-dichloroethylene (156-60-5)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
2.25	1,1,1-trichloroethane (71-55-6)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
2.26	1,1,2-trichloroethane (79-00-5)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
2.27	Trichloroethylene (79-01-6)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
2.28	Vinyl chloride (75-01-4)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
Section 3. Organic Toxic Pollutants (GC/MS Fraction—Acid Compounds)												
3.1	2-chlorophenol (95-57-8)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
3.2	2,4-dichlorophenol (120-83-2)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
3.3	2,4-dimethylphenol (105-67-9)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
3.4	4,6-dinitro-o-cresol (534-52-1)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
3.5	2,4-dinitrophenol (51-28-5)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					

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	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
3.6	2-nitrophenol (88-75-5)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
3.7	4-nitrophenol (100-02-7)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
3.8	p-chloro-m-cresol (59-50-7)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
3.9	Pentachlorophenol (87-86-5)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA	NA				
3.10	Phenol (108-95-2)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
3.11	2,4,6-trichlorophenol (88-05-2)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
Section 4. Organic Toxic Pollutants (GC/MS Fraction—Base /Neutral Compounds)												
4.1	Acenaphthene (83-32-9)	☐	☐	☑	Concentration	mg/L	<0.10			1		
					Mass	lb/day	NA					
4.2	Acenaphthylene (208-96-8)	☐	☐	☑	Concentration	mg/L	<0.10			1		
					Mass	lb/day	NA					
4.3	Anthracene (120-12-7)	☐	☐	☑	Concentration	mg/L	<0.10			1		
					Mass	lb/day	NA					
4.4	Benzidine (92-87-5)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
4.5	Benzo (a) anthracene (56-55-3)	☐	☐	☑	Concentration	mg/L	<0.10			1		
					Mass	lb/day	NA					
4.6	Benzo (a) pyrene (50-32-8)	☐	☐	☑	Concentration	mg/L	<0.10			1		
					Mass	lb/day	NA					

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			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
4.7	3,4-benzofluoranthene (205-99-2)	☐	☐	☑	Concentration	mg/L	<0.10			1		
					Mass	lb/day	NA					
4.8	Benzo (ghi) perylene (191-24-2)	☐	☐	☑	Concentration	mg/L	<0.10			1		
					Mass	lb/day	NA					
4.9	Benzo (k) fluoranthene (207-08-9)	☐	☐	☑	Concentration	mg/L	<0.10			1		
					Mass	lb/day	NA					
4.10	Bis (2-chloroethoxy) methane (111-91-1)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
4.11	Bis (2-chloroethyl) ether (111-44-4)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
4.12	Bis (2-chloroisopropyl) ether (102-80-1)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
4.13	Bis (2-ethylhexyl) phthalate (117-81-7)	☐	☐	☑	Concentration	mg/L	<0.30			1		
					Mass	lb/day	NA					
4.14	4-bromophenyl phenyl ether (101-55-3)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
4.15	Butyl benzyl phthalate (85-68-7)	☐	☐	☑	Concentration	mg/L	<0.30			1		
					Mass	lb/day	NA					
4.16	2-chloronaphthalene (91-58-7)	☐	☐	☑	Concentration	mg/L	<0.10			1		
					Mass	lb/day	NA					
4.17	4-chlorophenyl phenyl ether (7005-72-3)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
4.18	Chrysene (218-01-9)	☐	☐	☑	Concentration	mg/L	<0.10			1		
					Mass	lb/day	NA					
4.19	Dibenzo (a,h) anthracene (53-70-3)	☐	☐	☑	Concentration	mg/L	<0.10			1		
					Mass	lb/day	NA					

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			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
4.20	1,2-dichlorobenzene (95-50-1)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
4.21	1,3-dichlorobenzene (541-73-1)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
4.22	1,4-dichlorobenzene (106-46-7)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
4.23	3,3-dichlorobenzidine (91-94-1)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
4.24	Diethyl phthalate (84-66-2)	☐	☐	☑	Concentration	mg/L	<0.30			1		
					Mass	lb/day	NA					
4.25	Dimethyl phthalate (131-11-3)	☐	☐	☑	Concentration	mg/L	<0.30			1		
					Mass	lb/day	NA					
4.26	Di-n-butyl phthalate (84-74-2)	☐	☐	☑	Concentration	mg/L	<0.30			1		
					Mass	lb/day	NA					
4.27	2,4-dinitrotoluene (121-14-2)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
4.28	2,6-dinitrotoluene (606-20-2)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
4.29	Di-n-octyl phthalate (117-84-0)	☐	☐	☑	Concentration	mg/L	<0.30			1		
					Mass	lb/day	NA					
4.30	1,2-Diphenylhydrazine (as azobenzene) (122-66-7)	☐	☐	☑	Concentration	mg/L	<1.00			1		
					Mass	lb/day	NA					
4.31	Fluoranthene (206-44-0)	☐	☐	☑	Concentration	mg/L	<0.10			1		
					Mass	lb/day	NA					
4.32	Fluorene (86-73-7)	☐	☐	☑	Concentration	mg/L	<0.10			1		
					Mass	lb/day	NA					

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4.33	Hexachlorobenzene (118-74-1)	☐	☐	☑	Concentration	mg/L	<0.10					
					Mass	lb/day	NA					
4.34	Hexachlorobutadiene (87-68-3)	☐	☐	☑	Concentration	mg/L	<1.00					
					Mass	lb/day	NA					
4.35	Hexachlorocyclopentadiene (77-47-4)	☐	☐	☑	Concentration	mg/L	<1.00					
					Mass	lb/day	NA					
4.36	Hexachloroethane (67-72-1)	☐	☐	☑	Concentration	mg/L	<1.00					
					Mass	lb/day	NA					
4.37	Indeno (1,2,3-cd) pyrene (193-39-5)	☐	☐	☑	Concentration	mg/L	<0.10					
					Mass	lb/day	NA					
4.38	Isophorone (78-59-1)	☐	☐	☑	Concentration	mg/L	<1.00					
					Mass	lb/day	NA					
4.39	Naphthalene (91-20-3)	☐	☐	☑	Concentration	mg/L	<0.10					
					Mass	lb/day	NA					
4.40	Nitrobenzene (98-95-3)	☐	☐	☑	Concentration	mg/L	<1.00					
					Mass	lb/day	NA					
4.41	N-nitrosodimethylamine (62-75-9)	☐	☐	☑	Concentration	mg/L	<1.00					
					Mass	lb/day	NA					
4.42	N-nitrosodi-n-propylamine (621-64-7)	☐	☐	☑	Concentration	mg/L	<1.00					
					Mass	lb/day	NA					
4.43	N-nitrosodiphenylamine (86-30-6)	☐	☐	☑	Concentration	mg/L	<1.00					
					Mass	lb/day	NA					
4.44	Phenanthrene (85-01-8)	☐	☐	☑	Concentration	mg/L	<0.10					
					Mass	lb/day	NA					
4.45	Pyrene (129-00-0)	☐	☐	☑	Concentration	mg/L	<0.10					
					Mass	lb/day	NA					

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			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
4.46	1,2,4-trichlorobenzene (120-82-1)	☐	☐	☑	Concentration	mg/L	<1.00					
					Mass	lb/day	NA					
Section 5. Organic Toxic Pollutants (GC/MS Fraction—Pesticides)												
5.1	Aldrin (309-00-2)	☐	☐	☑	Concentration							
					Mass							
5.2	α-BHC (319-84-6)	☐	☐	☑	Concentration							
					Mass							
5.3	β-BHC (319-85-7)	☐	☐	☑	Concentration							
					Mass							
5.4	γ-BHC (58-89-9)	☐	☐	☑	Concentration							
					Mass							
5.5	δ-BHC (319-86-8)	☐	☐	☑	Concentration							
					Mass							
5.6	Chlordane (57-74-9)	☐	☐	☑	Concentration							
					Mass							
5.7	4,4'-DDT (50-29-3)	☐	☐	☑	Concentration							
					Mass							
5.8	4,4'-DDE (72-55-9)	☐	☐	☑	Concentration							
					Mass							
5.9	4,4'-DDD (72-54-8)	☐	☐	☑	Concentration							
					Mass							
5.10	Dieldrin (60-57-1)	☐	☐	☑	Concentration							
					Mass							
5.11	α-endosulfan (115-29-7)	☐	☐	☑	Concentration							
					Mass							

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
	AL0057801	Red Star Yeast, LLC	DSN01A1

Form Approved 03/05/19
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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
5.12	β-endosulfan (115-29-7)	☐	☐	☑	Concentration							
					Mass							
5.13	Endosulfan sulfate (1031-07-8)	☐	☐	☑	Concentration							
					Mass							
5.14	Endrin (72-20-8)	☐	☐	☑	Concentration							
					Mass							
5.15	Endrin aldehyde (7421-93-4)	☐	☐	☑	Concentration							
					Mass							
5.16	Heptachlor (76-44-8)	☐	☐	☑	Concentration							
					Mass							
5.17	Heptachlor epoxide (1024-57-3)	☐	☐	☑	Concentration							
					Mass							
5.18	PCB-1242 (53469-21-9)	☐	☐	☑	Concentration							
					Mass							
5.19	PCB-1254 (11097-69-1)	☐	☐	☑	Concentration							
					Mass							
5.20	PCB-1221 (11104-28-2)	☐	☐	☑	Concentration							
					Mass							
5.21	PCB-1232 (11141-16-5)	☐	☐	☑	Concentration							
					Mass							
5.22	PCB-1248 (12672-29-6)	☐	☐	☑	Concentration							
					Mass							
5.23	PCB-1260 (11096-82-5)	☐	☐	☑	Concentration							
					Mass							
5.24	PCB-1016 (12674-11-2)	☐	☐	☑	Concentration							
					Mass							

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
	AL0057801	Red Star Yeast, LLC	DSN01A1

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
5.25	Toxaphene (8001-35-2)	☐	☐	☑	Concentration							
					Mass							

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
	AL0057801	Red Star Yeast, LLC	

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TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi))[1]

	Pollutant	Presence or Absence (check one)		Units (specify)		Effluent				Intake (Optional)	
		Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
☐	Check here if you believe all pollutants on Table C to be ***present*** in your discharge from the noted outfall. You need *not* complete the "Presence or Absence" column of Table C for *each* pollutant.										
☐	Check here if you believe all pollutants on Table C to be ***absent*** in your discharge from the noted outfall. You need *not* complete the "Presence or Absence" column of Table C for *each* pollutant.										
1.	Bromide (24959-67-9)	☐	☑	Concentration	mg/L	<100			1		
				Mass	lb/day	NA					
2.	Chlorine, total residual	☐	☑	Concentration	mg/L	<0.02			1		
				Mass	lb/day	NA					
3.	Color	☑	☐	Concentration	PCU	25000			1		
				Mass							
4.	Fecal coliform	☐	☑	Concentration	Col/100ml	109			1		
				Mass					1		
5.	Fluoride (16984-48-8)	☐	☑	Concentration	mg/L	17.2			1		
				Mass	lb/day	86			1		
6	Nitrate-nitrite	☑	☐	Concentration	mg/L	28.5			84		
				Mass	lb/day	143			84		
7.	Nitrogen, total organic (as N)	☑	☐	Concentration	mg/L	459			84		
				Mass	lb/day	2300			84		
8.	Oil and grease	☑	☐	Concentration	mg/L	491			84		
				Mass	lb/day	2460			84		
9.	Phosphorus (as P), total (7723-14-0)	☑	☐	Concentration	mg/L	373			84		
				Mass	lb/day	1869			84		
10.	Sulfate (as SO_4) (14808-79-8)	☑	☐	Concentration	mg/L	718			1		
				Mass	lb/day	3597			1		
11.	Sulfide (as S)	☐	☑	Concentration	mg/L	<5.0			1		
				Mass	lb/day	NA					

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
	AL0057801	Red Star Yeast, LLC	

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TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi))[1]

	Pollutant	Presence or Absence (check one)		Units (specify)		Effluent				Intake (Optional)	
		Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
12.	Sulfite (as SO_3) (14265-45-3)	☐	☑	Concentration	mg/L	<30			1		
				Mass	lb/day	NA					
13.	Surfactants	☐	☑	Concentration	mg/L	<0.1			1		
				Mass	lb/day	NA					
14.	Aluminum, total (7429-90-5)	☐	☑	Concentration	mg/L	0.506			1		
				Mass	lb/day	2.54			1		
15.	Barium, total (7440-39-3)	☐	☑	Concentration	mg/L	<0.5			1		
				Mass	lb/day	NA					
16.	Boron, total (7440-42-8)	☐	☑	Concentration	mg/L	<2.0			1		
				Mass	lb/day	NA					
17.	Cobalt, total (7440-48-4)	☐	☑	Concentration	mg/L	<0.2			1		
				Mass	lb/day	NA					
18.	Iron, total (7439-89-6)	☐	☑	Concentration	mg/L	<10			1		
				Mass	lb/day	NA					
19.	Magnesium, total (7439-95-4)	☑	☐	Concentration	mg/L	178			1		
				Mass	lb/day	892			1		
20.	Molybdenum, total (7439-98-7)	☐	☑	Concentration	mg/L	<0.5			1		
				Mass	lb/day	NA					
21.	Manganese, total (7439-96-5)	☐	☑	Concentration	mg/L	1.15			1		
				Mass	lb/day	5.76			1		
22.	Tin, total (7440-31-5)	☐	☑	Concentration	mg/L	<0.1			1		
				Mass	lb/day	NA					
23.	Titanium, total (7440-32-6)	☐	☑	Concentration	mg/L	<0.05			1		
				Mass	lb/day	NA					

TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi))[1]

	Pollutant	Presence or Absence (check one)		Units (specify)		Effluent				Intake (Optional)	
		Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
24.	**Radioactivity**										
	Alpha, total	☐	☑	Concentration							
				Mass							
	Beta, total	☐	☑	Concentration							
				Mass							
	Radium, total	☐	☑	Concentration							
				Mass							
	Radium 226, total	☐	☑	Concentration							
				Mass							

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
	AL0057801	Red Star Yeast, LLC	

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TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))[1]

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
1.	Asbestos	☐	☑		
2.	Acetaldehyde	☐	☑		
3.	Allyl alcohol	☐	☑		
4.	Allyl chloride	☐	☑		
5.	Amyl acetate	☐	☑		
6.	Aniline	☐	☑		
7.	Benzonitrile	☐	☑		
8.	Benzyl chloride	☐	☑		
9.	Butyl acetate	☐	☑		
10.	Butylamine	☐	☑		
11.	Captan	☐	☑		
12.	Carbaryl	☐	☑		
13.	Carbofuran	☐	☑		
14.	Carbon disulfide	☐	☑		
15.	Chlorpyrifos	☐	☑		
16.	Coumaphos	☐	☑		
17.	Cresol	☐	☑		
18.	Crotonaldehyde	☐	☑		
19.	Cyclohexane	☐	☑		

TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))[1]

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
20.	2,4-D (2,4-dichlorophenoxyacetic acid)	☐	☑		
21.	Diazinon	☐	☑		
22.	Dicamba	☐	☑		
23.	Dichlobenil	☐	☑		
24.	Dichlone	☐	☑		
25.	2,2-dichloropropionic acid	☐	☑		
26.	Dichlorvos	☐	☑		
27.	Diethyl amine	☐	☑		
28.	Dimethyl amine	☐	☑		
29.	Dintrobenzene	☐	☑		
30.	Diquat	☐	☑		
31.	Disulfoton	☐	☑		
32.	Diuron	☐	☑		
33.	Epichlorohydrin	☐	☑		
34.	Ethion	☐	☑		
35.	Ethylene diamine	☐	☑		
36.	Ethylene dibromide	☐	☑		
37.	Formaldehyde	☐	☑		
38.	Furfural	☐	☑		

TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))[1]

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
39.	Guthion	☐	☑		
40.	Isoprene	☐	☑		
41.	Isopropanolamine	☐	☑		
42.	Kelthane	☐	☑		
43.	Kepone	☐	☑		
44.	Malathion	☐	☑		
45.	Mercaptodimethur	☐	☑		
46.	Methoxychlor	☐	☑		
47.	Methyl mercaptan	☐	☑		
48.	Methyl methacrylate	☐	☑		
49.	Methyl parathion	☐	☑		
50.	Mevinphos	☐	☑		
51.	Mexacarbate	☐	☑		
52.	Monoethyl amine	☐	☑		
53.	Monomethyl amine	☐	☑		
54.	Naled	☐	☑		
55.	Naphthenic acid	☐	☑		
56.	Nitrotoluene	☐	☑		
57.	Parathion	☐	☑		

TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))[1]

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
58.	Phenolsulfonate	☐	☑		
59.	Phosgene	☐	☑		
60.	Propargite	☐	☑		
61.	Propylene oxide	☐	☑		
62.	Pyrethrins	☐	☑		
63.	Quinoline	☐	☑		
64.	Resorcinol	☐	☑		
65.	Strontium	☐	☑		
66.	Strychnine	☐	☑		
67.	Styrene	☐	☑		
68.	2,4,5-T (2,4,5-trichlorophenoxyacetic acid)	☐	☑		
69.	TDE (tetrachlorodiphenyl ethane)	☐	☑		
70.	2,4,5-TP [2-(2,4,5-trichlorophenoxy) propanoic acid]	☐	☑		
71.	Trichlorofon	☐	☑		
72.	Triethanolamine	☐	☑		
73.	Triethylamine	☐	☑		
74.	Trimethylamine	☐	☑		
75.	Uranium	☐	☑		
76.	Vanadium	☐	☑		

TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))[1]

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
77.	Vinyl acetate	☐	☑		
78.	Xylene	☐	☑		
79.	Xylenol	☐	☑		
80.	Zirconium	☐	☑		

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE E. 2,3,7,8 TETRACHLORODIBENZO P DIOXIN (2,3,7,8 TCDD) (40 CFR 122.21(g)(7)(viii))

Pollutant	TCDD Congeners Used or Manufactured	Presence or Absence (check one)		Results of Screening Procedure
		Believed Present	Believed Absent	
2,3,7,8-TCDD	☐	☐	☑	

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
	AL 0057801	Red Star Yeast, LLC	

Form 1 NPDES

EPA

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

GENERAL INFORMATION

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

Activities Requiring an NPDES Permit

1.1 Applicants *Not Required* to Submit Form 1

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

1.2 Applicants *Required* to Submit Form 1

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

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

Name, Mailing Address, and Location

2.1 Facility Name

RED STAR YEAST, LLC

2.2 EPA Identification Number

2.3 Facility Contact

Name (first and last)	Title	Phone number
MR. DENNIS BARRY	PLANT MANAGER	(334) 889-8801

Email address
dennis.barry@lesaffreyeastcorp.com

2.4 Facility Mailing Address

Street or P.O. box
13211 US HWY 431 S

City or town	State	ZIP code
HEADLAND	AL	36345

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
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Name, Mailing Address, and Location Continued

2.5 **Facility Location**

Street, route number, or other specific identifier
13211 US HWY 421 S

County name	County code (if known)	
HENRY		
City or town	**State**	**ZIP code**
HEADLAND	AL	36345

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

SIC and NAICS Codes

3.1

SIC Code(s)	Description (optional)
2099	Food Preparation, Notelsewere Classified

3.2

NAICS Code(s)	Description (optional)

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

Operator Information

4.1 **Name of Operator**

RED STAR YEAST, LLC

4.2 Is the name you listed in Item 4.1 also the owner?

☑ Yes ☐ No

4.3 **Operator Status**

☐ Public—federal ☐ Public—state ☐ Other public (specify)_____

☑ Private ☐ Other (specify) _____

4.4 **Phone Number of Operator**

(334) 889-8801

Operator Information Continued

4.5 **Operator Address**

Street or P.O. Box
13211 US HWY 431 S

City or town	State	ZIP code
HEADLAND	AL	36345

Email address of operator

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

Indian Land

5.1 Is the facility located on Indian Land?

☐ Yes ☑ No

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

Existing Environmental Permits

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

☑ NPDES (discharges to surface water) AL 0057801	☐ RCRA (hazardous wastes)	☐ UIC (underground injection of fluids)
☐ PSD (air emissions)	☐ Nonattainment program (CAA)	☐ NESHAPs (CAA)
☐ Ocean dumping (MPRSA)	☐ Dredge or fill (CWA Section 404)	☐ Other (specify)

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

Map

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

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

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

Nature of Business

8.1 Describe the nature of your business.

Operations consist of producing yeast products through fermentation processes for use in multiple research and development, test marketing, and commercial applications (e.g., producing naturally occurring and genetically modified strains of Saccharomyces cerevisiae through fermentation of molasses based feedstock, water, and yeast inoculants for use in baking applications). Yeast production includes, but is not limited to, production of yeast varieties for various end-use applications, such as baking applications, biofuel applications, and yeast production processes for other yeast-based products such as organic based flavorings or extracts.

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

Cooling Water Intake Structures

9.1 Does your facility use cooling water?

☐ Yes ☑ No ➔ SKIP to Item 10.1.

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

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

Variance Requests

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

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

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

Checklist and Certification Statement

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

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

11.2 **Certification Statement**

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

Name (print or type first and last name)	Official title
Dennis Barry	Plant Manager
Signature	**Date signed**

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Form 2F NPDES

EPA

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

STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY

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

Outfall Location

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

Outfall Number	Receiving Water Name	Latitude	Longitude
*Tot. 12	See Attachment, Page S1.1	° ' "	° ' "
		° ' "	° ' "
		° ' "	° ' "
		° ' "	° ' "
		° ' "	° ' "
		° ' "	° ' "

SECTION 2. IMPROVEMENTS (40 CFR 122.21(g)(6))

Improvements

2.1 Are you presently required by any federal, state, or local authority to meet an implementation schedule for constructing, upgrading, or operating wastewater treatment equipment or practices or any other environmental programs that could affect the discharges described in this application?

☐ Yes ☑ No ➔ SKIP to Section 3.

2.2 Briefly identify each applicable project in the table below.

Brief Identification and Description of Project	Affected Outfalls (list outfall numbers)	Source(s) of Discharge	Final Compliance Dates	
			Required	Projected

2.3 Have you attached sheets describing any additional water pollution control programs (or other environmental projects that may affect your discharges) that you now have underway or planned? (Optional Item)

☐ Yes ☑ No

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SECTION 3. SITE DRAINAGE MAP (40 CFR 122.26(c)(1)(i)(A))

Site Drainage Map

3.1 Have you attached a site drainage map containing all required information to this application? (See instructions for specific guidance.)

☑ Yes ☐ No

SECTION 4. POLLUTANT SOURCES (40 CFR 122.26(c)(1)(i)(B))

Pollutant Sources

4.1 Provide information on the facility's pollutant sources in the table below.

Outfall Number	Impervious Surface Area (within a mile radius of the facility)		Total Surface Area Drained (within a mile radius of the facility)	
001-012	See Attached, Page S4.1	*specify units*		*specify units*
		specify units		*specify units*
		specify units		*specify units*
		specify units		*specify units*
		specify units		*specify units*
		specify units		*specify units*

4.2 Provide a narrative description of the facility's significant material in the space below. (See instructions for content requirements.)

The facility yeast production takes place in a controlled environment inside the main building. However, there are process support equipment (tanks, loading docks, etc.) that are exposed to rain, See Engineering Report. The facility has in place a system of O&M and BMP procedures to address runoff from the facility.

Any additional water generated from the process is used to irrigate and fertilize crop. The land application is performed in accordance with the facility NPDES permit, BMP, and Land Application Plan.

4.3 Provide the location and a description of existing structural and non-structural control measures to reduce pollutants in stormwater runoff. (See instructions for specific guidance.)

Stormwater Treatment		
Outfall Number	Control Measures and Treatment	Codes from Exhibit 2F–1 (list)
NA		

SECTION 5. NON STORMWATER DISCHARGES (40 CFR 122.26(c)(1)(i)(C))

Non-Stormwater Discharges

5.1 *I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of non-stormwater discharges. Moreover, I certify that the outfalls identified as having non-stormwater discharges are described in either an accompanying NPDES Form 2C, 2D, or 2E application.*

Name (print or type first and last name)	Official title
Dennis Barry	Plant Manager
Signature	**Date signed**

5.2 Provide the testing information requested in the table below.

Outfall Number	Description of Testing Method Used	Date(s) of Testing	Onsite Drainage Points Directly Observed During Test
001-014	Visual Observations	11/16/2021	All

SECTION 6. SIGNIFICANT LEAKS OR SPILLS (40 CFR 122.26(c)(1)(i)(D))

Significant Leaks or Spills

6.1 Describe any significant leaks or spills of toxic or hazardous pollutants in the last three years.

NA

SECTION 7. DISCHARGE INFORMATION (40 CFR 122.26(c)(1)(i)(E))

Discharge Information

See the instructions to determine the pollutants and parameters you are required to monitor and, in turn, the tables you must complete. Not all applicants need to complete each table.

7.1 Is this a new source or new discharge?

☐ Yes ➔ See instructions regarding submission of *estimated* data.

☑ No ➔ See instructions regarding submission of *actual* data.

Tables A, B, C, and D

7.2 Have you completed Table A for each outfall?

☑ Yes ☐ No

Discharge Information Continued

7.3	Is the facility subject to an effluent limitation guideline (ELG) or effluent limitations in an NPDES permit for its process wastewater? ☐ Yes ☑ No ➔ SKIP to Item 7.5.
7.4	Have you completed Table B by providing quantitative data for those pollutants that are (1) limited either directly or indirectly in an ELG and/or (2) subject to effluent limitations in an NPDES permit for the facility's process wastewater? ☐ Yes ☐ No
7.5	Do you know or have reason to believe any pollutants in Exhibit 2F–2 are present in the discharge? ☑ Yes ☐ No ➔ SKIP to Item 7.7.
7.6	Have you listed all pollutants in Exhibit 2F–2 that you know or have reason to believe are present in the discharge and provided quantitative data or an explanation for those pollutants in Table C? ☑ Yes ☐ No
7.7	Do you qualify for a small business exemption under the criteria specified in the Instructions? ☐ Yes ➔SKIP to Item 7.18. ☑ No
7.8	Do you know or have reason to believe any pollutants in Exhibit 2F–3 are present in the discharge? ☑ Yes ☐ No ➔ SKIP to Item 7.10.
7.9	Have you listed all pollutants in Exhibit 2F–3 that you know or have reason to believe are present in the discharge in Table C? ☑ Yes ☐ No
7.10	Do you expect any of the pollutants in Exhibit 2F–3 to be discharged in concentrations of 10 ppb or greater? ☐ Yes ☑ No ➔ SKIP to Item 7.12.
7.11	Have you provided quantitative data in Table C for those pollutants in Exhibit 2F–3 that you expect to be discharged in concentrations of 10 ppb or greater? ☑ Yes ☐ No
7.12	Do you expect acrolein, acrylonitrile, 2,4-dinitrophenol, or 2-methyl-4,6-dinitrophenol to be discharged in concentrations of 100 ppb or greater? ☐ Yes ☑ No ➔ SKIP to Item 7.14.
7.13	Have you provided quantitative data in Table C for the pollutants identified in Item 7.12 that you expect to be discharged in concentrations of 100 ppb or greater? ☐ Yes ☐ No
7.14	Have you provided quantitative data or an explanation in Table C for pollutants you expect to be present in the discharge at concentrations less than 10 ppb (or less than 100 ppb for the pollutants identified in Item 7.12)? ☑ Yes ☐ No
7.15	Do you know or have reason to believe any pollutants in Exhibit 2F–4 are present in the discharge? ☐ Yes ☑ No ➔ SKIP to Item 7.17.
7.16	Have you listed pollutants in Exhibit 2F–4 that you know or believe to be present in the discharge and provided an explanation in Table C? ☐ Yes ☐ No
7.17	Have you provided information for the storm event(s) sampled in Table D? ☐ Yes ☑ No

Discharge Information Continued

Used or Manufactured Toxics

7.18 Is any pollutant listed on Exhibits 2F–2 through 2F–4 a substance or a component of a substance used or manufactured as an intermediate or final product or byproduct?

☐ Yes ☑ No ➔ SKIP to Section 8.

7.19 List the pollutants below, including TCDD if applicable.

1.	4.	7.
2.	5.	8.
3.	6.	9.

SECTION 8. BIOLOGICAL TOXICITY TESTING DATA (40 CFR 122.21(g)(11))

Biological Toxicity Testing Data

8.1 Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last three years?

☐ Yes ☑ No ➔ SKIP to Section 9.

8.2 Identify the tests and their purposes below.

Test(s)	Purpose of Test(s)	Submitted to NPDES Permitting Authority?	Date Submitted
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	

SECTION 9. CONTRACT ANALYSIS INFORMATION (40 CFR 122.21(g)(12))

Contract Analysis Information

9.1 Were any of the analyses reported in Section 7 (on Tables A through C) performed by a contract laboratory or consulting firm?

☑ Yes ☐ No ➔ SKIP to Section 10.

9.2 Provide information for each contract laboratory or consulting firm below.

	Laboratory Number 1	Laboratory Number 2	Laboratory Number 3
Name of laboratory/firm	Poly Environmental	Pace Laboratories	
Laboratory address	1935 Headland Ave Dothan, AL 36302	12065 Lebanon Rd Mount Juliet, TN 37122	
Phone number	(334) 793-4700	(615) 758-5858	
Pollutant(s) analyzed	BOD, COD, TOC, TSS, Ammonia, Color, Nitrates, Nitrogen, O&G, Phosphorus, Sulfide, Sulfite, Aluminum, Barium, Boron, Iron, Magnesium, Manganese, Tin, Beryllium, Chromium, Nickel, Selenium, Zinc	Plant and Stormwater Effluent including Phosphorus, Sulfide, Sulfite, Aluminum, Barium, Boron, Iron, Magnesium, Manganese, Tin, Beryllium, Chromium, Nickel, Selenium, Zinc, Ethylbenzene	

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SECTION 10. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))

Checklist and Certification Statement

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

Column 1	Column 2
☑ Section 1	☑ w/ attachments (e.g., responses for additional outfalls)
☑ Section 2	☐ w/ attachments
☑ Section 3	☑ w/ site drainage map
☑ Section 4	☑ w/ attachments
☑ Section 5	☐ w/ attachments
☑ Section 6	☐ w/ attachments
☑ Section 7	☑ Table A ☐ w/ small business exemption request ☑ Table B ☑ w/ analytical results as an attachment ☑ Table C ☐ Table D
☑ Section 8	☐ w/attachments
☑ Section 9	☐ w/attachments (e.g., responses for additional contact laboratories or firms)
☑ Section 10	☐

10.2 **Certification Statement**

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

Name (print or type first and last name)	Official title
Dennis Barry	Plant Manager
Signature	Date signed

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TABLE A. CONVENTIONAL AND NON CONVENTIONAL PARAMETERS (40 CFR 122.26(c)(1)(i)(E)(3))[1]

You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details and requirements.

	Pollutant or Parameter	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
		Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
1.	Oil and grease	003S-005S,009S,012S					
2.	Biochemical oxygen demand (BOD_5)	See Attachment,					
3.	Chemical oxygen demand (COD)						
4.	Total suspended solids (TSS)						
5.	Total phosphorus						
6.	Total Kjeldahl nitrogen (TKN)						
7.	Total nitrogen (as N)						
8.	pH (minimum)						
	pH (maximum)						

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE B. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(A))[1]

List each pollutant that is limited in an effluent limitation guideline (ELG) that the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
003S-005S,009S,012S						
See Attachment, Page T-B&C						

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE C. TOXIC POLLUTANTS, CERTAIN HAZARDOUS SUBSTANCES, AND ASBESTOS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(B) and (vii))[1]

List each pollutant shown in Exhibits 2F–2, 2F–3, and 2F–4 that you know or have reason to believe is present. Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
003S-005S,009S,012S						
See Attachment, Page T-B&C						

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE D. STORM EVENT INFORMATION (40 CFR 122.26(c)(1)(i)(E)(6))

Provide data for the storm event(s) that resulted in the maximum daily discharges for the flow-weighted composite sample.

Date of Storm Event	Duration of Storm Event (in hours)	Total Rainfall During Storm Event (in inches)	Number of Hours Between Beginning of Storm Measured and End of Previous Measurable Rain Event	Maximum Flow Rate During Rain Event (in gpm or specify units)	Total Flow from Rain Event (in gallons or specify units)

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