LANCE R. LEFLEUR
DIRECTOR

ROBERT J. BENTLEY
GOVERNOR

Alabama Department of Environmental Management
adem.alabama.gov

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

November 14, 2016

MR JOHN LAKENAN
PLANT MANAGER
ARKEMA INC
13755 HIGHWAY 43 N
AXIS AL 36505

RE: REVISED DRAFT PERMIT
NPDES PERMIT NUMBER AL0042447

Dear Mr. Lakenan:

Transmitted herein is a revised draft of the referenced permit.

We would appreciate your comments on the permit within **14 days** of the date of this letter. Please direct any comments of a technical or administrative nature to the undersigned.

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

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

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

If you have questions regarding this permit or monitoring requirements, please contact Latoya Hall by e-mail at **lahall@adem.alabama.gov** or by phone at **(334) 394-4366.**

Sincerely,

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

Enclosure: Revised 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: ARKEMA INC

FACILITY LOCATION: 13755 HWY 43 N
AXIS, AL 36505

PERMIT NUMBER: AL0042447

RECEIVING WATERS:

DSN001:	MOBILE RIVER
DSN003:	COLD CREEK
DSN004:	COLD CREEK
DSN006:	UNNAMED TRIBUTARY TO COLD 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

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

DSN0011: Total facility discharge from wastewater treatment. 3/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
pH 5/	-	-	REPORT S.U.	-	REPORT S.U.	Continuous	Recorder	-
Nitrogen, Ammonia Total (As N)	-	-	-	-	REPORT mg/l	Monthly	Composite	April - October
Nitrogen, Kjeldahl Total (As N)	-	-	-	-	REPORT mg/l	Monthly	Composite	April - October
Nitrite Plus Nitrate Total 1 Det. (As N)	-	-	-	-	REPORT mg/l	Monthly	Composite	April - October
Phosphorus, Total (As P)	-	-	-	-	REPORT mg/l	Monthly	Composite	April - October
Chloride (As Cl)	-	-	-	-	REPORT mg/l	Monthly	Composite	-
Sulfate, Total (As SO4)	-	-	-	-	REPORT mg/l	Monthly	Composite	-
Tin, Total (As Sn) 4/	-	-	-	-	REPORT mg/l	Weekly	Composite	-

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/ For the purpose of demonstration of compliance with this parameter, "Total" and "Total Recoverable" shall be considered equivalent.

5/ pH measurements other than from continuous monitoring, shall comply with a daily minimum of 6.0 and a daily max of 9.0 standard units. Where the pH is measured continuously, the total time during which the pH values are outside the required range of 6.0 to 9.0 standard units shall not exceed 7 hours and 26 minutes in any calendar month and no individual excursion from the range of pH values shall exceed 60 minutes in duration.

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

DSN0011 (continued): Total facility discharge from wastewater treatment. 3/

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

	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS 1/				
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Continuous	Totalizer	-
Tin, Tri-Organo	-	-	-	0.035 mg/l	1.51 mg/l	Weekly	Composite	-
Enterococci	-	-	-	REPORT col/100mL	REPORT col/100mL	2X Monthly	Grab	-
Solids, Total Dissolved	-	-	-	REPORT mg/l	REPORT mg/l	Weekly	Composite	-
Length of Longest pH Excursion 4/	-	60 min	-	-	-	Continuous	Measured	-
pH Range Excursions, > 60 Minutes 4/	-	0.0 Occurence/ Month	-	-	-	Continuous	Measured	-
pH Range Excursions, Monthly Total Accum 4/	-	446.0 min	-	-	-	Continuous	Measured	-

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/ pH measurements other than from continuous monitoring, shall comply with a daily minimum of 6.0 and a daily max of 9.0 standard units. Where the pH is measured continuously, the total time during which the pH values are outside the required range of 6.0 to 9.0 standard units shall not exceed 7 hours and 26 minutes in any calendar month and no individual excursion from the range of pH values shall exceed 60 minutes in duration.

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

DSN001T: Total facility discharge from wastewater treatment. 3/ 5/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Toxicity, Ceriodaphnia Acute 4/	-	0 pass(0)/fail(1)	-	-	-	Monthly	Composite	-
Toxicity, Pimephales Acute 4/	-	0 pass(0)/fail(1)	-	-	-	Monthly	Composite	-

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 for Effluent Toxicity Limitations and Biomonitoring Requirements.

5/ In compliance with Part II.A.2.a of this permit, the Department has approved the use of well water to dilute the effluent to ensure compliance with the effluent toxicity limitations. The well water is added after compliance with all guideline limitations.

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

DSN003S: Stormwater runoff from non-process areas associated with organic and inorganic chemical manufacturing, air conditioner condensate, freeze protection water and fire protection water. 3/ 4/ 5/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
pH	-	-	REPORT S.U.	-	REPORT S.U.	Twice per Year	Grab	-
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Oil & Grease	-	-	-	-	15 mg/l	Twice per Year	Grab	-
Chloride (As Cl)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Zinc Total Recoverable 6/	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Flow, In Conduit or Thru Treatment Plant	-	REPORT MGD	-	-	-	Twice per Year	Estimate	-
Solids, Total Dissolved	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Mercury Total Recoverable 6/	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-

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

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

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

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

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

5/ DSN004 is deemed representative and therefore no sampling is required at DSN003.

6/ For the purpose of demonstration of compliance with this parameter, "Total" and "Total Recoverable" shall be considered equivalent.

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

DSN003S (continued): Stormwater runoff from non-process areas associated with organic and inorganic chemical manufacturing, air conditioner condensate, freeze protection water and fire protection water. 3/ 4/ 5/

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

	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS 1/				
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Chemical Oxygen Demand (COD)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-

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

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

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

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

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

5/ DSN004 is deemed representative and therefore no sampling is required at DSN003.

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

DSN004S: Stormwater runoff from non-process areas associated with organic and inorganic chemical manufacturing, air conditioner condensate, freeze protection water, and fire protection water. 3/ 4/

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

	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS 1/				
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
pH	-	-	REPORT S.U.	-	REPORT S.U.	Twice per Year	Grab	-
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Oil & Grease	-	-	-	-	15 mg/l	Twice per Year	Grab	-
Chloride (As Cl)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Zinc Total Recoverable 5/	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Flow, In Conduit or Thru Treatment Plant	-	REPORT MGD	-	-	-	Twice per Year	Estimate	-
Solids, Total Dissolved	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Mercury Total Recoverable 5/	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-

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

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

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

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

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

5/ For the purpose of demonstration of compliance with this parameter, "Total" and "Total Recoverable" shall be considered equivalent.

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

DSN004S (continued): Stormwater runoff from non-process areas associated with organic and inorganic chemical manufacturing, air conditioner condensate, freeze protection water, and fire protection water. 3/ 4/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Chemical Oxygen Demand (COD)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-

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

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

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

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

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

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

DSN006S: Stormwater runoff from non-process areas associated with organic and inorganic chemical manufacturing, air conditioner condensate, freeze protection water, and fire protection water. 3/ 4/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
pH	-	-	REPORT S.U.	-	REPORT S.U.	Twice per Year	Grab	-
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Oil & Grease	-	-	-	-	15 mg/l	Twice per Year	Grab	-
Chloride (As Cl)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Zinc Total Recoverable 5/	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Tin, Total (As Sn) 5/	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Flow, In Conduit or Thru Treatment Plant	-	REPORT MGD	-	-	-	Twice per Year	Estimate	-
Tin, Tri-Organo	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-

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

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

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

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

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

5/ For the purpose of demonstration of compliance with this parameter, "Total" and "Total Recoverable" shall be considered equivalent.

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

DSN006S (continued): Stormwater runoff from non-process areas associated with organic and inorganic chemical manufacturing, air conditioner condensate, freeze protection water, and fire protection water. 3/ 4/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Solids, Total Dissolved	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Mercury Total Recoverable 5/	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Chemical Oxygen Demand (COD)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-

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

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

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

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

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

5/ For the purpose of demonstration of compliance with this parameter, "Total" and "Total Recoverable" shall be considered equivalent.

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

DSN01A1: Tier I: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater. 3/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
BOD, 5-Day (20 Deg. C)	86.5 lbs/day	225.0 lbs/day	-	-	-	Weekly	Composite	-
pH	-	-	REPORT S.U.	-	REPORT S.U.	Daily	Recorder	-
Solids, Total Suspended	121.4 lbs/day	381.0 lbs/day	-	-	-	Weekly	Composite	-
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	-

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.

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

DSN01A2:Tier II: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater 3/ 4/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
BOD, 5-Day (20 Deg. C)	113.9 lbs/day	298.0 lbs/day	-	-	-	Weekly	Composite	-
pH	-	-	REPORT S.U.	-	REPORT S.U.	Daily	Recorder	-
Solids, Total Suspended	158.3 lbs/day	500.2 lbs/day	-	-	-	Weekly	Composite	-
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	-

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/ Prior to reporting under Tier II, Arkema Inc. must submit written notification to the Department.

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

DSN01AY: Tier I: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater. 3/ 4/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/ 4/	Sample Type	Seasonal
Cyanide, Total (As CN) 5/	REPORT lbs/day	REPORT lbs/day	-	-	-	See Permit Requirements	Grab	-
Chromium, Total (As Cr) 6/	2.453 lbs/day	6.122 lbs/day	-	-	-	See Permit Requirements	Composite	-
Copper, Total (As Cu) 6/	3.205 lbs/day	7.470 lbs/day	-	-	-	See Permit Requirements	Composite	-
Lead, Total (As Pb) 6/	0.707 lbs/day	1.525 lbs/day	-	-	-	See Permit Requirements	Composite	-
Nickel, Total (As Ni) 6/	3.735 lbs/day	8.796 lbs/day	-	-	-	See Permit Requirements	Composite	-
Zinc, Total (As Zn) 6/	2.321 lbs/day	5.768 lbs/day	-	-	-	See Permit Requirements	Composite	-
Carbon Tetrachloride	0.043 lbs/day	0.091 lbs/day	-	-	-	See Permit Requirements	Grab	-
1,2-Dichloroethane	0.163 lbs/day	0.505 lbs/day	-	-	-	See Permit Requirements	Grab	-

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

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

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

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

4/ Monitoring shall be twice per year where samples shall be obtained at least ten (10) days apart within the same calendar month.

5/ In lieu of monitoring, the permittee may submit an annual certification that no raw materials containing cyanide are used in the process, and that stored products containing cyanide are managed in such a manner as to prevent the material containing cyanide from reaching a water of the State.

6/ For the purpose of demonstration of compliance with this parameter, "Total" and "Total Recoverable" shall be considered equivalent.

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

DSN01AY: (continued) Tier I: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater. 3/ 4/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/ 4/	Sample Type	Seasonal
Chloroform	0.050 lbs/day	0.110 lbs/day	-	-	-	See Permit Requirements	Grab	-
Toluene	0.062 lbs/day	0.191 lbs/day	-	-	-	See Permit Requirements	Grab	-
Benzene	0.089 lbs/day	0.325 lbs/day	-	-	-	See Permit Requirements	Grab	-
Acenaphthylene	0.053 lbs/day	0.141 lbs/day	-	-	-	See Permit Requirements	Composite	-
Acenaphthene	0.053 lbs/day	0.141 lbs/day	-	-	-	See Permit Requirements	Composite	-
Acrylonitrile	0.230 lbs/day	0.579 lbs/day	-	-	-	See Permit Requirements	Grab	-
Anthracene	0.053 lbs/day	0.141 lbs/day	-	-	-	See Permit Requirements	Composite	-
Benzo (K) Fluoranthene	0.053 lbs/day	0.141 lbs/day	-	-	-	See Permit Requirements	Composite	-

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/ Monitoring shall be twice per year where samples shall be obtained at least ten (10) days apart within the same calendar month.

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

DSN01AY: (continued) Tier I: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater. 3/ 4/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/ 4/	Sample Type	Seasonal
Benzo (A) Pyrene	0.055 lbs/day	0.146 lbs/day	-	-	-	See Permit Requirements	Composite	-
Chlorobenzene	0.036 lbs/day	0.067 lbs/day	-	-	-	See Permit Requirements	Grab	-
Chrysene	0.053 lbs/day	0.141 lbs/day	-	-	-	See Permit Requirements	Composite	-
Diethyl Phthalate	0.194 lbs/day	0.486 lbs/day	-	-	-	See Permit Requirements	Composite	-
Dimethyl Phthalate	0.045 lbs/day	0.112 lbs/day	-	-	-	See Permit Requirements	Composite	-
Ethylbenzene	0.077 lbs/day	0.258 lbs/day	-	-	-	See Permit Requirements	Grab	-
Fluoranthene	0.060 lbs/day	0.163 lbs/day	-	-	-	See Permit Requirements	Composite	-
Fluorene	0.053 lbs/day	0.141 lbs/day	-	-	-	See Permit Requirements	Composite	-

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/ Monitoring shall be twice per year where samples shall be obtained at least ten (10) days apart within the same calendar month.

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

DSN01AY: (continued) Tier I: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater. 3/ 4/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/ 4/	Sample Type	Seasonal
Hexachloroethane	0.050 lbs/day	0.129 lbs/day	-	-	-	See Permit Requirements	Composite	-
Methyl Chloride	0.206 lbs/day	0.454 lbs/day	-	-	-	See Permit Requirements	Grab	-
Methylene Chloride	0.096 lbs/day	0.213 lbs/day	-	-	-	See Permit Requirements	Grab	-
Nitrobenzene	0.065 lbs/day	0.163 lbs/day	-	-	-	See Permit Requirements	Composite	-
Phenanthrene	0.053 lbs/day	0.141 lbs/day	-	-	-	See Permit Requirements	Composite	-
Pyrene	0.060 lbs/day	0.160 lbs/day	-	-	-	See Permit Requirements	Composite	-
Tetrachloroethylene	0.053 lbs/day	0.134 lbs/day	-	-	-	See Permit Requirements	Grab	-
1,1-Dichloroethane	0.053 lbs/day	0.141 lbs/day	-	-	-	See Permit Requirements	Grab	-

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

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

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

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

4/ Monitoring shall be twice per year where samples shall be obtained at least ten (10) days apart within the same calendar month.

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

DSN01AY: (continued) Tier I: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater. 3/ 4/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/ 4/	Sample Type	Seasonal
1,1-Dichloroethylene	0.038 lbs/day	0.060 lbs/day	-	-	-	See Permit Requirements	Grab	-
1,1,1-Trichloroethane	0.050 lbs/day	0.129 lbs/day	-	-	-	See Permit Requirements	Grab	-
1,1,2-Trichloroethane	0.050 lbs/day	0.129 lbs/day	-	-	-	See Permit Requirements	Grab	-
Benzo (A) Anthracene	0.053 lbs/day	0.141 lbs/day	-	-	-	See Permit Requirements	Composite	-
1,2-Dichlorobenzene	0.184 lbs/day	0.39 lbs/day	-	-	-	See Permit Requirements	Grab	-
1,2-Dichloropropane	0.366 lbs/day	0.550 lbs/day	-	-	-	See Permit Requirements	Grab	-
1,2-Trans-Dichloroethylene	0.050 lbs/day	0.129 lbs/day	-	-	-	See Permit Requirements	Grab	-
1,2,4-Trichlorobenzene	0.163 lbs/day	0.335 lbs/day	-	-	-	See Permit Requirements	Composite	-

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/ Monitoring shall be twice per year where samples shall be obtained at least ten (10) days apart within the same calendar month.

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

DSN01AY: (continued) Tier I: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater. 3/ 4/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/ 4/	Sample Type	Seasonal
1,3-Dichlorobenzene	0.074 lbs/day	0.105 lbs/day	-	-	-	See Permit Requirements	Grab	-
1,4-Dichlorobenzene	0.036 lbs/day	0.067 lbs/day	-	-	-	See Permit Requirements	Composite	-
2-Chlorophenol	0.074 lbs/day	0.234 lbs/day	-	-	-	See Permit Requirements	Composite	-
2-Nitrophenol	0.098 lbs/day	0.165 lbs/day	-	-	-	See Permit Requirements	Composite	-
2,4-Dichlorophenol	0.093 lbs/day	0.268 lbs/day	-	-	-	See Permit Requirements	Composite	-
2,4-Dimethylphenol	0.043 lbs/day	0.086 lbs/day	-	-	-	See Permit Requirements	Composite	-
2,4-Dinitrotoluene	0.270 lbs/day	0.682 lbs/day	-	-	-	See Permit Requirements	Composite	-
2,4-Dinitrophenol	0.170 lbs/day	0.294 lbs/day	-	-	-	See Permit Requirements	Composite	-

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/ Monitoring shall be twice per year where samples shall be obtained at least ten (10) days apart within the same calendar month.

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

DSN01AY: (continued) Tier I: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater. 3/ 4/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/ 4/	Sample Type	Seasonal
2,6-Dinitrotoluene	0.610 lbs/day	1.533 lbs/day	-	-	-	See Permit Requirements	Composite	-
4-Nitrophenol	0.172 lbs/day	0.297 lbs/day	-	-	-	See Permit Requirements	Composite	-
4,6-Dinitro-O-Cresol	0.187 lbs/day	0.663 lbs/day	-	-	-	See Permit Requirements	Composite	-
Phenol, Single Compound	0.036 lbs/day	0.062 lbs/day	-	-	-	See Permit Requirements	Grab	-
Naphthalene	0.053 lbs/day	0.141 lbs/day	-	-	-	See Permit Requirements	Composite	-
Bis (2-Ethylhexyl) Phthalate	0.246 lbs/day	0.667 lbs/day	-	-	-	See Permit Requirements	Composite	-
Di-N-Butyl Phthalate	0.065 lbs/day	0.136 lbs/day	-	-	-	See Permit Requirements	Composite	-
Vinyl Chloride	0.249 lbs/day	0.641 lbs/day	-	-	-	See Permit Requirements	Grab	-

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

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

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

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

4/ Monitoring shall be twice per year where samples shall be obtained at least ten (10) days apart within the same calendar month.

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

DSN01AY: (continued) Tier I: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater. 3/ 4/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/ 4/	Sample Type	Seasonal
Trichloroethylene	0.050 lbs/day	0.129 lbs/day	-	-	-	See Permit Requirements	Grab	-
Hexachlorobenzene	0.022035 lbs/day	0.036 lbs/day	-	-	-	See Permit Requirements	Composite	-
Hexachlorobutadiene	0.048 lbs/day	0.117 lbs/day	-	-	-	See Permit Requirements	Composite	-
1,3 Dichloropropylene	0.069 lbs/day	0.105 lbs/day	-	-	-	See Permit Requirements	Grab	-
Mercury, Total (As Hg) 5/	REPORT lbs/day	REPORT lbs/day	-	-	-	See Permit Requirements	Grab	-
3,4 Benzofluoranthene	0.055 lbs/day	0.146 lbs/day	-	-	-	See Permit Requirements	Composite	-
Chloroethane	0.249 lbs/day	0.641 lbs/day	-	-	-	See Permit Requirements	Grab	-

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

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

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

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

4/ The required twice per year samples shall be obtained at least ten (10) days apart within the same calendar month.

5/ Monitoring shall be twice per year where samples shall be obtained at least ten (10) days apart within the same calendar month.

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

DSN01AZ:Tier II: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater 3/ 4/ 7/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/ 4/	Sample Type	Seasonal
Cyanide, Total (As CN) 5/	REPORT lbs/day	REPORT lbs/day	-	-	-	See Permit Requirements	Grab	-
Chromium, Total (As Cr) 6/	2.453 lbs/day	6.122 lbs/day	-	-	-	See Permit Requirements	Composite	-
Copper, Total (As Cu) 6/	3.205 lbs/day	7.470 lbs/day	-	-	-	See Permit Requirements	Composite	-
Lead, Total (As Pb) 6/	0.707 lbs/day	1.525 lbs/day	-	-	-	See Permit Requirements	Composite	-
Nickel, Total (As Ni) 6/	3.735 lbs/day	8.796 lbs/day	-	-	-	See Permit Requirements	Composite	-
Zinc, Total (As Zn) 6/	2.321 lbs/day	5.768 lbs/day	-	-	-	See Permit Requirements	Composite	-
Carbon Tetrachloride	0.056 lbs/day	0.118 lbs/day	-	-	-	See Permit Requirements	Grab	-
1,2-Dichloroethane	0.211 lbs/day	0.656 lbs/day	-	-	-	See Permit Requirements	Grab	-

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

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

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

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

4/ Monitoring shall be twice per year where samples shall be obtained at least ten (10) days apart within the same calendar month.

5/ In lieu of monitoring, the permittee may submit an annual certification that no raw materials containing cyanide are used in the process, and that stored products containing cyanide are managed in such a manner as to prevent the material containing cyanide from reaching a water of the State.

6/ For the purpose of demonstration of compliance with this parameter, "Total" and "Total Recoverable" shall be considered equivalent.

7/ Prior to reporting under Tier II, Arkema Inc. must submit written notification to the Department.

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

DSN01AZ: (continued) Tier II: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater 3/ 4/ 5/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/ 4/	Sample Type	Seasonal
Chloroform	0.065 lbs/day	0.143 lbs/day	-	-	-	See Permit Requirements	Grab	-
Toluene	0.081 lbs/day	0.249 lbs/day	-	-	-	See Permit Requirements	Grab	-
Benzene	0.115 lbs/day	0.423 lbs/day	-	-	-	See Permit Requirements	Grab	-
Acenaphthylene	0.068 lbs/day	0.183 lbs/day	-	-	-	See Permit Requirements	Composite	-
Acenaphthene	0.068 lbs/day	0.183 lbs/day	-	-	-	See Permit Requirements	Composite	-
Acrylonitrile	0.298 lbs/day	0.752 lbs/day	-	-	-	See Permit Requirements	Grab	-
Anthracene	0.068 lbs/day	0.183 lbs/day	-	-	-	See Permit Requirements	Composite	-
Benzo (K) Fluoranthene	0.068 lbs/day	0.183 lbs/day	-	-	-	See Permit Requirements	Composite	-

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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/ Monitoring shall be twice per year where samples shall be obtained at least ten (10) days apart within the same calendar month.

5/ Prior to reporting under Tier II, Arkema Inc. must submit written notification to the Department.

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

DSN01AZ: (continued) Tier II: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater 3/ 4/ 5/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/ 4/	Sample Type	Seasonal
Benzo (A) Pyrene	0.072 lbs/day	0.190 lbs/day	-	-	-	See Permit Requirements	Composite	-
Chlorobenzene	0.047 lbs/day	0.087 lbs/day	-	-	-	See Permit Requirements	Grab	-
Chrysene	0.068 lbs/day	0.183 lbs/day	-	-	-	See Permit Requirements	Composite	-
Diethyl Phthalate	0.252 lbs/day	0.631 lbs/day	-	-	-	See Permit Requirements	Composite	-
Dimethyl Phthalate	0.059 lbs/day	0.146 lbs/day	-	-	-	See Permit Requirements	Composite	-
Ethylbenzene	0.099 lbs/day	0.336 lbs/day	-	-	-	See Permit Requirements	Grab	-
Fluoranthene	0.078 lbs/day	0.211 lbs/day	-	-	-	See Permit Requirements	Composite	-
Fluorene	0.068 lbs/day	0.183 lbs/day	-	-	-	See Permit Requirements	Composite	-

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/ Monitoring shall be twice per year where samples shall be obtained at least ten (10) days apart within the same calendar month.

5/ Prior to reporting under Tier II, Arkema Inc. must submit written notification to the Department

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

DSN01AZ: (continued) Tier II: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater 3/ 4/ 5/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/ 4/	Sample Type	Seasonal
Hexachloroethane	0.065 lbs/day	0.168 lbs/day	-	-	-	See Permit Requirements	Composite	-
Methyl Chloride	0.267 lbs/day	0.591 lbs/day	-	-	-	See Permit Requirements	Grab	-
Methylene Chloride	0.124 lbs/day	0.277 lbs/day	-	-	-	See Permit Requirements	Grab	-
Nitrobenzene	0.084 lbs/day	0.211 lbs/day	-	-	-	See Permit Requirements	Composite	-
Phenanthrene	0.068 lbs/day	0.183 lbs/day	-	-	-	See Permit Requirements	Composite	-
Pyrene	0.078 lbs/day	0.208 lbs/day	-	-	-	See Permit Requirements	Composite	-
Tetrachloroethylene	0.068 lbs/day	0.174 lbs/day	-	-	-	See Permit Requirements	Grab	-
1,1-Dichloroethane	0.068 lbs/day	0.183 lbs/day	-	-	-	See Permit Requirements	Grab	-

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

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

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

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

4/ Monitoring shall be twice per year where samples shall be obtained at least ten (10) days apart within the same calendar month.

5/ Prior to reporting under Tier II, Arkema Inc. must submit written notification to the Department

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

DSN01AZ: (continued) Tier II: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater 3/ 4/ 5/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/ 4/	Sample Type	Seasonal
1,1-Dichloroethylene	0.050 lbs/day	0.078 lbs/day	-	-	-	See Permit Requirements	Grab	-
1,1,1-Trichloroethane	0.065 lbs/day	0.168 lbs/day	-	-	-	See Permit Requirements	Grab	-
1,1,2-Trichloroethane	0.065 lbs/day	0.168 lbs/day	-	-	-	See Permit Requirements	Grab	-
Benzo (A) Anthracene	0.068 lbs/day	0.183 lbs/day	-	-	-	See Permit Requirements	Composite	-
1,2-Dichlorobenzene	0.239 lbs/day	0.507 lbs/day	-	-	-	See Permit Requirements	Grab	-
1,2-Dichloropropane	0.476 lbs/day	0.715 lbs/day	-	-	-	See Permit Requirements	Grab	-
1,2-Trans-Dichloroethylene	0.065 lbs/day	0.168 lbs/day	-	-	-	See Permit Requirements	Grab	-
1,2,4-Trichlorobenzene	0.211 lbs/day	0.435 lbs/day	-	-	-	See Permit Requirements	Composite	-

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/ Monitoring shall be twice per year where samples shall be obtained at least ten (10) days apart within the same calendar month.

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

DSN01AZ: (continued) Tier II: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater 3/ 4/ 5/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/ 4/	Sample Type	Seasonal
1,3-Dichlorobenzene	0.096 lbs/day	0.137 lbs/day	-	-	-	See Permit Requirements	Grab	-
1,4-Dichlorobenzene	0.047 lbs/day	0.087 lbs/day	-	-	-	See Permit Requirements	Composite	-
2-Chlorophenol	0.096 lbs/day	0.305 lbs/day	-	-	-	See Permit Requirements	Composite	-
2-Nitrophenol	0.127 lbs/day	0.215 lbs/day	-	-	-	See Permit Requirements	Composite	-
2,4-Dichlorophenol	0.121 lbs/day	0.348 lbs/day	-	-	-	See Permit Requirements	Composite	-
2,4-Dimethylphenol	0.056 lbs/day	0.112 lbs/day	-	-	-	See Permit Requirements	Composite	-
2,4-Dinitrotoluene	0.351 lbs/day	0.886 lbs/day	-	-	-	See Permit Requirements	Composite	-
2,4-Dinitrophenol	0.221 lbs/day	0.382 lbs/day	-	-	-	See Permit Requirements	Composite	-

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/ Monitoring shall be twice per year where samples shall be obtained at least ten (10) days apart within the same calendar month.

5/ Prior to reporting under Tier II, Arkema Inc. must submit written notification to the Department

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

DSN01AZ: (continued) Tier II: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater 3/ 4/ 5/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/ 4/	Sample Type	Seasonal
2,6-Dinitrotoluene	0.793 lbs/day	1.993 lbs/day	-	-	-	See Permit Requirements	Composite	-
4-Nitrophenol	0.224 lbs/day	0.386 lbs/day	-	-	-	See Permit Requirements	Composite	-
4,6-Dinitro-O-Cresol	0.243 lbs/day	0.861 lbs/day	-	-	-	See Permit Requirements	Composite	-
Phenol, Single Compound	0.047 lbs/day	0.081 lbs/day	-	-	-	See Permit Requirements	Grab	-
Naphthalene	0.068 lbs/day	0.183 lbs/day	-	-	-	See Permit Requirements	Composite	-
Bis (2-Ethylhexyl) Phthalate	0.320 lbs/day	0.867 lbs/day	-	-	-	See Permit Requirements	Composite	-
Di-N-Butyl Phthalate	0.084 lbs/day	0.177 lbs/day	-	-	-	See Permit Requirements	Composite	-
Vinyl Chloride	0.323 lbs/day	0.833 lbs/day	-	-	-	See Permit Requirements	Grab	-

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

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

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

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

4/ Monitoring shall be twice per year where samples shall be obtained at least ten (10) days apart within the same calendar month.

5/ Prior to reporting under Tier II, Arkema Inc. must submit written notification to the Department

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

DSN01AZ: (continued) Tier II: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater 3/ 4/ 5/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/ 4/	Sample Type	Seasonal
Trichloroethylene	0.065 lbs/day	0.168 lbs/day	-	-	-	See Permit Requirements	Grab	-
Hexachlorobenzene	0.022035 lbs/day	0.04407 lbs/day	-	-	-	See Permit Requirements	Composite	-
Hexachlorobutadiene	0.062 lbs/day	0.152 lbs/day	-	-	-	See Permit Requirements	Composite	-
1,3 Dichloropropylene	0.090 lbs/day	0.137 lbs/day	-	-	-	See Permit Requirements	Grab	-
Mercury, Total (As Hg) 6/	REPORT lbs/day	REPORT lbs/day	-	-	-	See Permit Requirements	Grab	-
3,4 Benzofluoranthene	0.072 lbs/day	0.190 lbs/day	-	-	-	See Permit Requirements	Composite	-
Chloroethane	0.323 lbs/day	0.833 lbs/day	-	-	-	See Permit Requirements	Grab	-

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

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

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

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

4/ Monitoring shall be twice per year where samples shall be obtained at least ten (10) days apart within the same calendar month.

5/ Prior to reporting under Tier II, Arkema Inc. must submit written notification to the Department

6/ For the purpose of demonstration of compliance with this parameter, "Total" and "Total Recoverable" shall be considered equivalent.

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

DSN01B1: Treated wastewaters from manufacturing of tin tetrachloride and organotin compounds through the 800 Area Treatment System. 3/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Tin, Total (As Sn) 4/	-	-	-	REPORT mg/l	REPORT mg/l	2X Monthly	Grab	-
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	-
Tin, Tri-Organo	-	-	-	REPORT mg/l	REPORT mg/l	2X Monthly	Grab	-

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

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

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

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

4/ For the purpose of demonstration of compliance with this parameter, "Total" and "Total Recoverable" shall be considered equivalent.

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

DSN01CS: Discharge from storm water surface impoundment (organotin unit). 3/

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

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Once/Discharge	Totalizer	-
Tin, Tri-Organo 4/	-	-	-	REPORT mg/l	REPORT mg/l	Once/Discharge	Grab	-

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

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

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

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

4/ If tri-organotin is noted above the 0.030 mg/l, the wastewater is required to be treated in the Area 800 Organotin Wastewater Treatment System.

B. DISCHARGE MONITORING AND RECORD KEEPING REQUIREMENTS

1. Representative Sampling

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

2. Test Procedures

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

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

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

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

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

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

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

3. Recording of Results

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

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

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

c. The dates and times the analyses were performed;

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

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

f. The results of all required analyses.

4. Records Retention and Production

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

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

5. Monitoring Equipment and Instrumentation

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

C. DISCHARGE REPORTING REQUIREMENTS

1. Reporting of Monitoring Requirements

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

d. All reports and forms required to be submitted by this permit, the AWPCA and the Department's Rules, shall be electronically signed (or, if allowed by the Department, traditionally signed) by a "responsible official" of the permittee as defined in ADEM Administrative Code Rule 335-6-5-.14 or a "duly authorized representative" of such official as defined in ADEM Administrative Code Rule 335-6-5-.14 and shall bear the following certification:

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

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

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

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

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

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

Alabama Department of Environmental Management

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

Certified and Registered Mail shall be addressed to:

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

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

1. 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 copy of the Noncompliance Notification Form provided with this permit and shall include the following information:

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

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

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

D. OTHER REPORTING AND NOTIFICATION REQUIREMENTS

1. Anticipated Noncompliance

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

2. Termination of Discharge

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

3. Updating Information

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

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

4. Duty to Provide Information

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

5. Cooling Water and Boiler Water Additives

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

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

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

(2) quantities to be used;

(3) frequencies of use;

(4) proposed discharge concentrations; and

(6) EPA registration number, if applicable.

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

6. Permit Issued Based On Estimated Characteristics

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

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

E. SCHEDULE OF COMPLIANCE

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

COMPLIANCE SHALL BE ATTAINED ON THE EFFECTIVE DATE OF THIS PERMIT

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

PART II OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES

A. OPERATIONAL AND MANAGEMENT REQUIREMENTS

1. Facilities Operation and Maintenance

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

2. Best Management Practices

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

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

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

3. Spill Prevention, Control, and Management

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

B. OTHER RESPONSIBILITIES

1. Duty to Mitigate Adverse Impacts

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

2. Right of Entry and Inspection

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

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

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

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

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

C. BYPASS AND UPSET

1. Bypass

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

b. A bypass is not prohibited if:

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

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

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

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

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

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

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

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

2. Upset

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

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

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

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

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

1. Duty to Comply

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

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

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

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

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

2. Removed Substances

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

3. Loss or Failure of Treatment Facilities

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

4. Compliance with Statutes and Rules

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

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

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

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

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

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

2. Change in Discharge

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

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

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

(a) one hundred micrograms per liter;

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

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

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

(a) five hundred micrograms per liter;

(b) one milligram per liter for antimony;

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

3. Transfer of Permit

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

4. Permit Modification and Revocation

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

5. Permit Termination

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

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

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

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

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

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

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

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

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

6. Permit Suspension

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

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

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

F. COMPLIANCE WITH TOXIC POLLUTANT STANDARD OR PROHIBITION

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

G. DISCHARGE OF WASTEWATER GENERATED BY OTHERS

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

PART III OTHER PERMIT CONDITIONS

A. CIVIL AND CRIMINAL LIABILITY

1. Tampering

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

2. False Statements

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

3. Permit Enforcement

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

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

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

(2) An action for damages;

(3) An action for injunctive relief; or

(4) An action for penalties.

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

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

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

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

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

4. Relief from Liability

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

B. OIL AND HAZARDOUS SUBSTANCE LIABILITY

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

C. PROPERTY AND OTHER RIGHTS

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

D. AVAILABILITY OF REPORTS

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

E. EXPIRATION OF PERMITS FOR NEW OR INCREASED DISCHARGES

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

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

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

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

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

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

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

F. COMPLIANCE WITH WATER QUALITY STANDARDS

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

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

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

G. GROUNDWATER

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

H. DEFINITIONS

2. 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).

3. 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).

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

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

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

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

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

9. 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.

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

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

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

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

14. Director - means the Director of the Department.

15. 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).

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

17. DO – means dissolved oxygen.

18. 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.

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

20. FC – means the pollutant parameter fecal coliform.

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

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

23. 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).

24. 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.

25. 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.

26. 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.

27. MGD – means million gallons per day.

28. 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.

29. 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.

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

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

32. 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).

33. 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.

34. 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".

35. 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.

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

37. 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.

38. 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.

39. 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.

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

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

42. TRC – means Total Residual Chlorine.

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

44. 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.

45. 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.

46. 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.

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

48. 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. EFFLUENT TOXICITY LIMITATIONS AND BIOMONITORING REQUIREMENTS

1. The permittee shall perform 48-hour acute toxicity tests on the wastewater discharges required to be tested for acute toxicity by Part I of this permit.

a. Test Requirements

(1) The samples shall be diluted using an appropriate control water, to the Instream Waste Concentration (IWC) which is 6 % effluent. The IWC is the actual concentration of effluent, after mixing, in the receiving stream during a 1-day, 10-year flow period.

(2) Any test where survival in the effluent concentration is less than 90% and statistically lower than the control indicates acute toxicity and constitutes noncompliance with this permit.

b. General Test Requirements:

(1) A 24-hour composite sample shall be obtained for use in above biomonitoring tests. The holding time for each sample shall not exceed 36 hours. The control water shall be a water prepared in the laboratory in accordance with the EPA procedure described in EPA 821-R-02-012 or most current edition or another control water selected by the permittee and approved by the Department.

Effluent toxicity tests in which the control survival is less than 90% or in which the other requirements of the EPA Test Procedure are not met shall be unacceptable and the permittee shall rerun the tests as soon as practical within the monitoring period.

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

c. Reporting Requirements:

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

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

d. Additional Testing Requirements:

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

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

e. Test Methods:

(1) The tests shall be performed in accordance with the latest edition of the "EPA Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms" and shall be performed using the fathead minnow (*Pimephales promelas*) and the cladoceran (*Ceriodaphnia dubia*).

2. Effluent toxicity testing reports

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

a. Introduction

(1) Facility Name, location and county

(2) Permit number

(3) Toxicity testing requirements of permit

(4) Name of receiving water body

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

(a) Name of firm

(b) Telephone number

(c) Address

(6) Objective of test

b. Plant Operations

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

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

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

c. Source of Effluent and Dilution Water

(1) Effluent samples

(a) Sampling point

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

(c) Sample collection method

(d) Physical and chemical data of undiluted effluent samples (water temperature, pH, alkalinity, hardness, specific conductance, total residual chlorine (if applicable), etc.)

(e) Sample temperature when received at the laboratory

(f) Lapsed time from sample collection to delivery

(g) Lapsed time from sample collection to test intiation

(2) Dilution Water Samples

(a) Source

(b) Collection date(s) and time(s) (where applicable)

(c) Pretreatment

(d) Physical and chemical characteristics (pH, hardness, water temperature, alkalinity, specific conductance, etc.)

d. Test Conditions

(1) Toxicity test method utilized

(2) End point(s) of test

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

(4) Date and time test started

(5) Date and time test terminated

(6) Type and volume of test chambers

(7) Volume of solution per chamber

(8) Number of organisms per test chamber

(9) Number of replicate test chambers per treatment

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

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

(12) Light intensity (mean)

e. Test Organisms

(1) Scientific name

(2) Life stage and age

(3) Source

(4) Disease treatment (if applicable)

f. Quality Assurance

(1) Reference toxicant utilized and source

(2) Date and time of most recent acute reference toxicant test(s), raw data, and current cusum chart(s)

(3) Dilution water utilized in reference toxicant test

(4) Results of reference toxicant test(s) (LC50, etc.), report concentration-response relationship and evaluate test sensitivity. The most recent reference toxicant test shall be conducted within 30-days of the routine.

(5) Physical and chemical methods utilized

g. Results

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

(2) Provide table of endpoints: LC50, NOAEC, Pass/Fail (as required in the applicable NPDES permit)

(3) Indicate statistical methods used to calculate endpoints

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

(5) Results of test(s) (LC50, NOAEC, Pass/Fail, etc.), report concentration-response relationship **(definitive test only)**, report percent minimum significant difference (PMSD).

h. Conclusions and Recommendations

(1) Relationship between test endpoints and permit limits

(2) Action to be taken

1/ Adapted from "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms", Fifth Edition, October 2002 (EPA 821-R-02-012), Section 12, Report Preparation

D. 316(B) REQUIREMENTS

The permittee receives a small percentage of its water from a public water system in accordance with Section 1401 of the Safe Drinking Water Act or the water used for cooling consists of effluent which would otherwise be discharged, therefore, the permittee is exempt from the requirements of this permit condition.

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
WATER DIVISION – INDUSTRIAL AND MUNICIPAL SECTIONS
NONCOMPLIANCE NOTIFICATION FORM

PERMITTEE NAME: _____ PERMIT NO: _____

FACILITY LOCATION: _____

DMR REPORTING PERIOD: _____

1. DESCRIPTION OF DISCHARGE: (Include outfall number (s))

2. DESCRIPTION OF NON-COMPLIANCE: (Attach additional pages if necessary):

LIST EFFLUENT VIOLATIONS (If applicable)			
Outfall Number (s)	NONCOMPLIANCE PARAMETER(S)	Result Reported (Include units)	Permit Limit (Include units)

LIST MONITORING / REPORTING VIOLATIONS (If applicable)		
Outfall Number (s)	NONCOMPLIANCE PARAMETER(S)	Monitoring / Reporting Violation (Provide description)

3. CAUSE OF NON-COMPLIANCE (Attach additional pages if necessary):

4. PERIOD OF NONCOMPLIANCE: (Include exact date(s) and time(s) or, if not corrected, the anticipated time the noncompliance is expected to continue):

5. DESCRIPTION OF STEPS TAKEN AND/OR BEING TAKEN TO REDUCE OR ELIMINATE THE NONCOMPLYING DISCHARGE AND TO PREVENT ITS RECURRENCE (attach additional pages if necessary):

"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 AND TITLE OF RESPONSIBLE OFFICIAL (type or print)

_____ / _____
SIGNATURE OF RESPONSIBLE OFFICIAL / DATE SIGNED

ADEM Form 421 09/05

ADEM PERMIT RATIONALE

PREPARED DATE: September 1, 2015
PREPARED BY: Latoya Hall
REVISED: October 21, 2016

Permittee Name: Arkema Inc

Permit Number: AL0042447

PERMIT IS REISSUANCE DUE TO EXPIRATION

DISCHARGE SERIAL NUMBERS & DESCRIPTIONS:

DSN001: Total facility discharge from wastewater treatment

DSN003: Storm water runoff from non-process areas associated with organic and inorganic chemical manufacturing, air conditioner condensate, freeze protection water and fire protection water.

DSN004: Storm water runoff from non-process areas associated with organic and inorganic chemical manufacturing, air conditioner condensate, freeze protection water and fire protection water.

DSN006: Storm water runoff from non-process areas associated with organic and inorganic chemical manufacturing, air conditioner condensate, freeze protection water, and fire protection water.

DSN01A: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler and cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater.

DSN01B: Treated wastewaters from manufacturing of tin tetrachloride and organotin compounds through the 800 Area Treatment System.

DSN01C: Discharge from storm water surface impoundment.

INDUSTRIAL CATEGORY: 40 CFR 414; Subparts D, G and H

MAJOR: Y

STREAM INFORMATION:

Receiving Stream:	Mobile River (DSN001), Cold Creek (DSN003 and DSN004) and UT to Cold Creek (DSN006)
Classification:	Fish and Wildlife
River Basin:	Mobile River Basin
7Q10:	2089.49 cfs
7Q2:	3939.65 cfs
1Q10:	1567.12 cfs
Annual Average Flow:	24370.4 cfs
303(d) List:	Yes
Impairment:	Mercury
TMDL:	No

0011: Total facility discharge from wastewater treatment

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
pH	-	-	REPORT S.U.	-	REPORT S.U.	Continuous	Recorder	WQBEL/ BPJ
Nitrogen, Ammonia Total (As N)	-	-	-	-	REPORT mg/l	Monthly	Composite	BPJ
Chloride (As Cl)	-	-	-	-	REPORT mg/l	Monthly	Composite	BPJ
Sulfate, Total (As SO4)	-	-	-	-	REPORT mg/l	Monthly	Composite	BPJ
Tin, Total (As Sn)	-	-	-	-	REPORT mg/l	Weekly	Composite	BPJ
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Continuous	Totalizer	BPJ
Tin, Tri-Organo	-	-	-	0.035 mg/l	1.51 mg/l	Weekly	Composite	BPJ
Entercocci	-	-	-	70 col/100 mL	316 col/100mL	2X Monthly	Grab	BPJ
Solids, Total Dissolved	-	-	-	REPORT mg/l	REPORT mg/l	Weekly	Composite	BPJ
Length of Longest pH Excursion	-	60 min	-	-	-	Continuous	Measured	WQBEL
pH Range Excursions, > 60 Minutes	-	0.0 Occurence/Month	-	-	-	Continuous	Measured	WQBEL
pH Range Excursions, Monthly Total Accum	-	446.0 min	-	-	-	Continuous	Measured	WQBEL
Nitrogen, Kjeldahl Total (As N)	-	-	-	-	REPORT mg/l	Monthly	Composite	BPJ
Nitrite Plus Nitrate Total 1 Det. (As N)	-	-	-	-	REPORT mg/l	Monthly	Composite	BPJ
Phosphorus, Total (As P)	-	-	-	-	REPORT mg/l	Monthly	Composite	BPJ
Mercury, Total (As Hg)	-	-	-	-	REPORT mg/l	Monthly	Composite	BPJ

001T: Total facility discharge from wastewater treatment

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

01A1: Tier I: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater.

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
BOD, 5-Day (20 Deg. C)	86.5 lbs/day	225.0 lbs/day	-	-	-	Weekly	Composite	EGL
pH	-	-	REPORT S.U.	-	REPORT S.U.	Daily	Recorder	EGL
Solids, Total Suspended	121.4 lbs/day	381.0 lbs/day	-	-	-	Weekly	Composite	EGL
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	BPJ

01AY: Tier I: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater.

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
Cyanide, Total (As CN)	REPORT lbs/day	REPORT lbs/day	-	-	-	See Permit Requirements	Grab	BPJ
Chromium, Total (As Cr)	2.453 lbs/day	6.122 lbs/day	-	-	-	See Permit Requirements	Composite	BPJ
Copper, Total (As Cu)	3.205 lbs/day	7.470 lbs/day	-	-	-	See Permit Requirements	Composite	BPJ
Lead, Total (As Pb)	0.707 lbs/day	1.525 lbs/day	-	-	-	See Permit Requirements	Composite	BPJ
Nickel, Total (As Ni)	3.735 lbs/day	8.796 lbs/day	-	-	-	See Permit Requirements	Composite	BPJ
Zinc, Total (As Zn)	2.321 lbs/day	5.768 lbs/day	-	-	-	See Permit	Composite	BPJ

						Requirements		
Carbon Tetrachloride	0.043 lbs/day	0.091 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
1,2-Dichloroethane	0.163 lbs/day	0.505 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
Chloroform	0.050 lbs/day	0.110 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
Toluene	0.062 lbs/day	0.191 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
Benzene	0.089 lbs/day	0.325 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
Acenaphthylene	0.053 lbs/day	0.141 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Acenaphthene	0.053 lbs/day	0.141 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Acrylonitrile	0.230 lbs/day	0.579 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
Anthracene	0.053 lbs/day	0.141 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Benzo (K) Fluoranthene	0.053 lbs/day	0.141 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Benzo (A) Pyrene	0.055 lbs/day	0.146 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Chlorobenzene	0.036 lbs/day	0.067 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
Chrysene	0.053 lbs/day	0.141 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Diethyl Phthalate	0.194 lbs/day	0.486 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Dimethyl Phthalate	0.045 lbs/day	0.112 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Ethylbenzene	0.077 lbs/day	0.258 lbs/day	-	-	-	See Permit Requirements	Grab	EGL

Fluoranthene	0.060 lbs/day	0.163 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Fluorene	0.053 lbs/day	0.141 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Hexachloroethane	0.050 lbs/day	0.129 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Methyl Chloride	0.206 lbs/day	0.454 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
Methylene Chloride	0.096 lbs/day	0.213 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
Nitrobenzene	0.065 lbs/day	0.163 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Phenanthrene	0.053 lbs/day	0.141 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Pyrene	0.060 lbs/day	0.160 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Tetrachloroethylene	0.053 lbs/day	0.134 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
1,1-Dichloroethane	0.053 lbs/day	0.141 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
1,1-Dichloroethylene	0.038 lbs/day	0.060 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
1,1,1-Trichloroethane	0.050 lbs/day	0.129 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
1,1,2-Trichloroethane	0.050 lbs/day	0.129 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
Benzo (A) Anthracene	0.053 lbs/day	0.141 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
1,2-Dichlorobenzene	0.184 lbs/day	0.39 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
1,2-Dichloropropane	0.366 lbs/day	0.550 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
1,2-Trans-Dichloroethylene	0.050 lbs/day	0.129 lbs/day	-	-	-	See Permit Requirements	Grab	EGL

1,2,4-Trichlorobenzene	0.163 lbs/day	0.335 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
1,3-Dichlorobenzene	0.074 lbs/day	0.105 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
1,4-Dichlorobenzene	0.036 lbs/day	0.067 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
2-Chlorophenol	0.074 lbs/day	0.234 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
2-Nitrophenol	0.098 lbs/day	0.165 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
2,4-Dichlorophenol	0.093 lbs/day	0.268 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
2,4-Dimethylphenol	0.043 lbs/day	0.086 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
2,4-Dinitrotoluene	0.270 lbs/day	0.682 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
2,4-Dinitrophenol	0.170 lbs/day	0.294 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
2,6-Dinitrotoluene	0.610 lbs/day	1.533 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
4-Nitrophenol	0.172 lbs/day	0.297 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
4,6-Dinitro-O-Cresol	0.187 lbs/day	0.663 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Phenol, Single Compound	0.036 lbs/day	0.062 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
Naphthalene	0.053 lbs/day	0.141 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Bis (2-Ethylhexyl) Phthalate	0.246 lbs/day	0.667 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Di-N-Butyl Phthalate	0.065 lbs/day	0.136 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Vinyl Chloride	0.249 lbs/day	0.641 lbs/day	-	-	-	See Permit Requirements	Grab	EGL

Trichloroethylene	0.050 lbs/day	0.129 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
Hexachlorobenzene	0.022035 lbs/day	0.036 lbs/day	-	-	-	See Permit Requirements	Composite	WQBEL
Hexachlorobutadiene	0.048 lbs/day	0.117 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
1,3 Dichloropropylene	0.069 lbs/day	0.105 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
3,4 Benzofluoranthene	0.055 lbs/day	0.146 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Chloroethane	0.249 lbs/day	0.641 lbs/day	-	-	-	See Permit Requirements	Grab	EGL

01A2: Tier II: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater.

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
BOD, 5-Day (20 Deg. C)	113.9 lbs/day	298.0 lbs/day	-	-	-	Weekly	Composite	EGL
pH	-	-	REPORT S.U.	-	REPORT S.U.	Daily	Recorder	EGL
Solids, Total Suspended	158.3 lbs/day	500.2 lbs/day	-	-	-	Weekly	Composite	EGL
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	BPJ

01AZ: Tier II: Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN001B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater.

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
Cyanide, Total (As CN)	REPORT lbs/day	REPORT lbs/day	-	-	-	See Permit Requirements	Grab	BPJ
Chromium, Total (As Cr)	2.453 lbs/day	6.122 lbs/day	-	-	-	See Permit	Composite	BPJ

						Requirements		
Copper, Total (As Cu)	3.205 lbs/day	7.470 lbs/day	-	-	-	See Permit Requirements	Composite	BPJ
Lead, Total (As Pb)	0.707 lbs/day	1.525 lbs/day	-	-	-	See Permit Requirements	Composite	BPJ
Nickel, Total (As Ni)	3.735 lbs/day	8.796 lbs/day	-	-	-	See Permit Requirements	Composite	BPJ
Zinc, Total (As Zn)	2.321 lbs/day	5.768 lbs/day	-	-	-	See Permit Requirements	Composite	BPJ
Carbon Tetrachloride	0.056 lbs/day	0.118 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
1,2-Dichloroethane	0.211 lbs/day	0.656 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
Chloroform	0.065 lbs/day	0.143 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
Toluene	0.081 lbs/day	0.249 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
Benzene	0.115 lbs/day	0.423 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
Acenaphthylene	0.068 lbs/day	0.183 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Acenaphthene	0.068 lbs/day	0.183 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Acrylonitrile	0.298 lbs/day	0.752 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
Anthracene	0.068 lbs/day	0.183 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Benzo (K) Fluoranthene	0.068 lbs/day	0.183 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Benzo (A) Pyrene	0.072 lbs/day	0.190 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Chlorobenzene	0.047 lbs/day	0.087 lbs/day	-	-	-	See Permit Requirements	Grab	EGL

Chrysene	0.068 lbs/day	0.183 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Diethyl Phthalate	0.252 lbs/day	0.631 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Dimethyl Phthalate	0.059 lbs/day	0.146 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Ethylbenzene	0.099 lbs/day	0.336 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
Fluoranthene	0.078 lbs/day	0.211 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Fluorene	0.068 lbs/day	0.183 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Hexachloroethane	0.065 lbs/day	0.168 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Methyl Chloride	0.267 lbs/day	0.591 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
Methylene Chloride	0.124 lbs/day	0.277 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
Nitrobenzene	0.084 lbs/day	0.211 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Phenanthrene	0.068 lbs/day	0.183 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Pyrene	0.078 lbs/day	0.208 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Tetrachloroethylene	0.068 lbs/day	0.174 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
1,1-Dichloroethane	0.068 lbs/day	0.183 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
1,1-Dichloroethylene	0.050 lbs/day	0.078 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
1,1,1-Trichloroethane	0.065 lbs/day	0.168 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
1,1,2-Trichloroethane	0.065 lbs/day	0.168 lbs/day	-	-	-	See Permit Requirements	Grab	EGL

Benzo (A) Anthracene	0.068 lbs/day	0.183 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
1,2-Dichlorobenzene	0.239 lbs/day	0.507 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
1,2-Dichloropropane	0.476 lbs/day	0.715 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
1,2-Trans-Dichloroethylene	0.065 lbs/day	0.168 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
1,2,4-Trichlorobenzene	0.211 lbs/day	0.435 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
1,3-Dichlorobenzene	0.096 lbs/day	0.137 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
1,4-Dichlorobenzene	0.047 lbs/day	0.087 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
2-Chlorophenol	0.096 lbs/day	0.305 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
2-Nitrophenol	0.127 lbs/day	0.215 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
2,4-Dichlorophenol	0.121 lbs/day	0.348 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
2,4-Dimethylphenol	0.056 lbs/day	0.112 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
2,4-Dinitrotoluene	0.351 lbs/day	0.886 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
2,4-Dinitrophenol	0.221 lbs/day	0.382 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
2,6-Dinitrotoluene	0.793 lbs/day	1.993 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
4-Nitrophenol	0.224 lbs/day	0.386 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
4,6-Dinitro-O-Cresol	0.243 lbs/day	0.861 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Phenol, Single Compound	0.047 lbs/day	0.081 lbs/day	-	-	-	See Permit Requirements	Grab	EGL

Naphthalene	0.068 lbs/day	0.183 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Bis (2-Ethylhexyl) Phthalate	0.320 lbs/day	0.867 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Di-N-Butyl Phthalate	0.084 lbs/day	0.177 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Vinyl Chloride	0.323 lbs/day	0.833 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
Trichloroethylene	0.065 lbs/day	0.168 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
Hexachlorobenzene	0.022035 lbs/day	0.04407 lbs/day	-	-	-	See Permit Requirements	Composite	WQBEL
Hexachlorobutadiene	0.062 lbs/day	0.152 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
1,3 Dichloropropylene	0.090 lbs/day	0.137 lbs/day	-	-	-	See Permit Requirements	Grab	EGL
3,4 Benzofluoranthene	0.072 lbs/day	0.190 lbs/day	-	-	-	See Permit Requirements	Composite	EGL
Chloroethane	0.323 lbs/day	0.833 lbs/day	-	-	-	See Permit Requirements	Grab	EGL

01B1: Treated wastewaters from manufacturing of tin tetrachloride and organotin compounds through the 800 Area Treatment System.

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
Tin, Total (As Sn)	-	-	-	REPORT mg/l	REPORT mg/l	2X Monthly	Grab	BPJ
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	BPJ
Tin, Tri-Organo	-	-	-	REPORT mg/l	REPORT mg/l	2X Monthly	Grab	BPJ

01CS: Discharge from storm water surface impoundment.

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Once/Discharge	Totalizer	BPJ
Tin, Tri-Organo	-	-	-	REPORT mg/l	REPORT mg/l	Once/Discharge	Grab	BPJ

003S: Storm water runoff from non-process areas associated with organic and inorganic chemical manufacturing, air conditioner condensate, freeze protection water and fire protection water.

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
pH	-	-	REPORT S.U.	-	REPORT S.U.	Twice per Year	Grab	BPJ
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Chloride (As Cl)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Zinc Total Recoverable	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Oil and Grease	-	-	-	-	15 mg/l	Twice per Year	Grab	BPJ
Flow, In Conduit or Thru Treatment Plant	-	REPORT MGD	-	-	-	Twice per Year	Estimate	BPJ
Solids, Total Dissolved	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Mercury Total Recoverable	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Chemical Oxygen Demand (COD)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ

004S: Storm water runoff from non-process areas associated with organic and inorganic chemical manufacturing, air conditioner condensate, freeze protection water and fire protection water.

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
pH	-	-	REPORT S.U.	-	REPORT S.U.	Twice per Year	Grab	BPJ
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Nitrogen, Total (As N)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Chloride (As Cl)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Zinc Total Recoverable	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Oil and Grease	-	-	-	-	15 mg/l	Twice per Year	Grab	BPJ
Flow, In Conduit or Thru Treatment Plant	-	REPORT MGD	-	-	-	Twice per Year	Estimate	BPJ
Solids, Total Dissolved	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Mercury Total Recoverable	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Chemical Oxygen Demand (COD)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ

006S: Storm water runoff from non-process areas associated with organic and inorganic chemical manufacturing, air conditioner condensate, freeze protection water and fire protection water.

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
pH	-	-	REPORT S.U.	-	REPORT S.U.	Twice per Year	Grab	BPJ
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Nitrogen, Total (As N)	-	-	-	-	REPORT mg/l	Twice per	Grab	BPJ

						Year		
Chloride (As Cl)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Zinc Total Recoverable	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Tin, Total (As Sn)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Oil and Grease	-	-	-	-	15 mg/l	Twice per Year	Grab	BPJ
Flow, In Conduit or Thru Treatment Plant	-	REPORT MGD	-	-	-	Twice per Year	Estimate	BPJ
Tin, Tri-Organo	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Solids, Total Dissolved	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Mercury Total Recoverable	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Chemical Oxygen Demand (COD)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	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

DSN001: Total facility discharge from wastewater treatment

FLOW
The information gathered from the permittee's monitoring will be useful in evaluating the effluent's impact on the receiving stream.

pH
Although the in-stream water quality standard for pH is 6.0 to 8.5, it is the opinion of the permit writer that the discharge will not adversely affect the in-stream pH based on the low effluent/stream flow ratio.

Due to potential reporting issues, pH will be listed as monitor only with the following footnote.

> pH measurements other than from continuous monitoring, shall comply with a daily minimum of 6.0 and a daily max of 9.0 standard units. Where the pH is measured continuously, the total time during which the pH values are outside the required range of 6.0 to 9.0 standard units shall not exceed 7 hours and 26 minutes in any calendar month and no individual excursion from the range of pH values shall exceed 60 minutes in duration.

A Reasonable Potential Analysis was performed to determine if the effluent discharge to the receiving stream would cause a potential to violate the Water Quality Criteria at the point of discharge. Per the Analysis, it was determined that presently none of the pollutants scanned showed a Reasonable Potential to exceed the Water Quality Criteria based on the data reported in the application and past Discharge Monitoring Reports (DMRs).

TOTAL SULFATE, TOTAL CHLORIDES, & TDS:
The information gathered from the permittee's monitoring will be useful in evaluating the effluent's impact on the receiving stream.

TRI-ORGANOTIN AND TOTAL TIN:
Due the potential contribution to the receiving stream, these pollutants are a concern. Based on the toxic nature of TBT, the Department has determined to establish a Water Quality based effluent limit. The daily maximum limit for TBT is 0.408 mg/l and the monthly average limit for TBT is 0.010 mg/l are based on the Marine acute and chronic water quality criteria. However, Arkema's method for analyzing tri-organotin does not distinquish between tri-butyl tin and other tri-organotins. Their number will include tri-butyl tins among others. Therefore, the TBT limit will be applied as tri-organotin.

Total Tin will continued to be monitored this permit cycle. The information gathered will be used to evaluate the effluent's impact on the receiving stream.

NUTRIENTS MONITORING: (Ammonia, Nitrite + Nitrate, TKN, and Total Phosphorus)
Departmental policy requires that all major sources monitor nutrients from the process discharge during the growing season which is defined as April through October. The information gathered will be used to evaluate the effluent's impact on the receiving stream.

Revised October 21, 2016 (Bio-monitoring and Entercocci requirements)

ENTERCOCCI
Due to facility reportedly discharging sanitary wastewater, the Department has determined that bacteria monitoring is required. This area is considered a coastal waterbody which requires bacteria of the Entercocci Group. Since Arkema utilizes a multi-port diffuser, dilution is considered. Based on the dilution available at the edge of the zone of initial dilution (ZID), the discharge is not expected to exceed the in-stream water quality standards. Therefore, monitoring will be included with no limitation at this time.

BIO-MONITORING & DISCHARGE INFORMATION ZONE REQUIREMENTS
Based on the most recent updates to the CORMIX2 model, the in-stream waste concentration (IWC) at the edge of the zone of initial dilution (ZID) is 5.101%. Therefore, based on Department procedure, the IWC will be included at 6%; this is more stringent due to the change in the low flow values of the receiving stream. This area is considered a coastal waterbody and is tidally influenced. However, there is rarely a sustained saltwater presence and salinity values are consistently low. Therefore based on BPJ, freshwater species should be used.

Based on Part II A.2 of the permit, 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. A provision has been maintained in the permit which prohibits the permittee from augmenting process wastewater as partial or total substitute for adequate treatment to achieve compliance with any guideline limitation in the permit. All guideline requirements are to be met at internal compliance point DSN01A prior to any dilution which has been granted to meet any water quality standards set at DSN001. Adequate well water dilution of discharge from outfall DSN001 to ensure compliance with the effluent toxicity limitation shall be maintained at all times.

Discharge Information Zone (DIZ) monitoring requirements apply at permit renewal and shall be conducted within the same season as the original characterization utilizing the same sampling locations approved in the original DIZ Study Plan. If the biological monitoring shows evidence of biological damage or adverse water quality impacts at the perimeter, or outside the boundaries of the original characterization, the permittee will be in violation of the permit, unless the permittee can demonstrate that the cause to the adverse impacts are due to a source other than the permittee's discharge. The permittee will be required within 30 days after becoming aware of the violation to submit a plan to correct and eliminate the biological damage and adverse water quality impacts caused by the discharge.

DSN01A (Tier I- DSN01A/DSN01AY and Tier II-DSN01A2/DSN01AZ): Treated process wastewaters from organic chemical manufacturing, wastewaters from the 800 Area Treatment System (DSN01B), including boiler blow-down, cooling tower blow-down, de-ionization regeneration water, and sanitary wastewater.

FLOW

The information gathered from the permittee's monitoring will be useful in evaluating the effluent's impact on the receiving stream.

pH

The OCPSF BPT limitations for pH of 6.0 - 9.0 s.u. are maintained in the permit. These limitations must be meet prior to any dilution granted to meet water quality standards. Due to potential reporting issues, pH will be listed as monitor only with the following footnote.

> pH measurements other than from continuous monitoring, shall comply with a daily minimum of 6.0 and a daily max of 9.0 standard units. Where the pH is measured continuously, the total time during which the pH values are outside the required range of 6.0 to 9.0 standard units shall not exceed 7 hours and 26 minutes in any calendar month and no individual excursion from the range of pH values shall exceed 60 minutes in duration.

Organic Chemicals Guideline Calculations

Discharges from the thiogylcolic acid (TGA), 2-ethylhexyl mercapto acetate (2-EHMA), butyl/octyl tin crudes, organotin end products, and impact modifiers production processes are subject to the Organic Chemicals, Plastics, and Synthetic Fibers (OCPSF) Effluent Guidelines (40CFR Part 414).

Best Practicable Technology (BPT) limitations for these processes are subject to three separate subparts of the guidelines: Subpart H- Specialty Organic Chemicals (40CFR Part 414.81), Subpart D- Thermoplastic Resins (40CFR Part 414.41), and Subpart G- Bulk Organic Chemicals (40CFR Part 414.71). In applying the BPT limitations set forth in the guidelines for TSS and BOD_5, a building block approach was used to take into consideration all of the characteristics of each subpart and to proportion production quantities within each subpart. The limitations were weighted, based on production data from each process. In applying the BPT limitations, the total wastewater flow from the aforementioned processes (0.2868 MGD) was used to calculate mass limitations. (See Attachment 1)

> Similarly, a production increase tier was added (Tier II: DSN01A2 and DSN01AY) and the total wastewater flow from the aforementioned processes (0.3728 MGD) was used to calculate mass limitations. (See Attachment 2)

In addition to BOD and TSS, BAT limitations for the priority pollutants were determined by multiplying the process wastewater flow times the concentration listed in Subpart I. The developed limitations were compared to the previous permit and upon comparison, it was determined that the newly proposed limitations are less stringent than the current permit limitations. However, based on a production increase at the facility anti-backslide does not apply.

To calculate the remaining BOD, TSS, and Metal loadings, the cyanide/metal bearing waste streams and the non-OCPSF waste streams were considered. These waste stream calculations are based on Best Professional Judgment (BPJ). Listed below is a summary detailing the BPJ calculations (See Attachment 1 for Tier I calculations and Attachment 2 for Tier II Calculations):

Best Professional Judgment (BPJ) Limitations:

Since none of the processes were defined in Appendix A of the regulations as either metal or cyanide bearing waste streams, the guidelines do not provide an allowance for these parameters (See Attachment 1 for Tier I calculations and Attachment 2 for Tier II Calculations):

Cyanide:

In consideration that cyanide is not used in any of the processes listed, no limitations are proposed. However, a provision which couples with the monitoring requirements states that an annual certification that no raw materials containing cyanide are used in the process, and that stored products containing cyanide are managed in such a manner as to prevent the material containing cyanide from reaching a water of the State. The permittee may submit an annual certification in lieu of monitoring.

Metals (chromium, copper, lead, nickel, and zinc):

These waste streams do contain metal pollutants; therefore, BPJ allowances were calculated using the concentration factors provided in the guidelines. Based on BPJ, the current metal limitation will continue with no additional allocation at this time.

Total Mercury

Based on the Reasonable Potential Analysis, Mercury did not show the potential to exceed the Water Quality Criteria at the point of discharge. However, since the receiving stream is on the 303(d) list for being impaired for Mercury, a "monitor only" requirement is proposed.

BOD & TSS: (See Non-OCPSF Wastewater and Non-Process Wastewater)

In developing the BPT limitation for biochemical oxygen demand (BOD) and total suspended solids (TSS), allowances from the utility water, sanitary wastewater, and process storm water were given in addition to the allowance from the OCPSF process loadings. The following is a summary of the allowances for TSS and BOD for the aforementioned waste streams:

Process Stormwater, Utility Water and Laboratory Water:

The concentration factors used to determine the daily maximum and monthly average mass allowances for TSS and BOD for the utility water were 20 mg/l and 10 mg/l, respectively. These concentration levels are similar to other facilities and are within the range expected based on Department experience.

Sanitary Wastewater:

For sanitary wastewater the secondary treatment levels of 45 mg/l (daily maximum) and 30 mg/l (monthly average) were used to determine allocations for BOD and TSS. These concentration levels were allocated in the previous permit and are within the range expected based on Department experience.

DSN001B: Treated wastewater from tin tetrachloride, butyl/octyl tin crudes, organotin end products, tri-n-butyl tin oxide production processes, cooling tower blowdown, laboratory wastewater, and the storm water surface impoundment (organotin unit).

This wastewater is pretreated in the 800 Area Treatment System prior to meeting the OCPSF guideline regulations at DSN01A. This internal monitoring point will continue to verify the adequate removal of Total Tin and Tri-Organotins from the facility's wastewater.

DSN001C: Discharge from storm water surface impoundment (organotin unit)

Arkema utilizes a surface impoundment as a stormwater retention pond for stormwater collected from areas around the organotin production units and roof drainage from the organotin production unit and warehouse. This impoundment is used to hold stormwater from these areas until a sample can be analyzed for organotins. To ensure that storm water from the storm water surface impoundment does not contain organotins at levels above the recommended EPA's water quality criteria, the permit includes a requirement that the permittee test for tri-organotin prior to discharge from the storm water surface impoundment. If tri-organotin is noted above the 0.030 mg/l, the wastewater is required to be treated in the Area 800 Organotin Wastewater Treatment System. Else, the wastewater is released through the effluent dilution system to the Mobile River via outfall DSN001.

DSN003, DSN004, and DSN006: Storm water runoff from non-process areas associated with organic and inorganic chemical manufacturing, steam condensate, freeze protection water, and fire protection water.

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.

DSN004 has been deemed representation of DSN003 and therefore no sampling is required at DSN003. Monitoring requirements only apply for outfalls DSN004 and DSN006.

pH

pH will be monitored to detect any problems with the storm water runoff from contact with material stored on the site.

Oil & Grease

The oil and grease limit of 15 mg/l as a daily maximum has been demonstrated through experience by the Department to be achievable using best management practices.

TSS, Total Chlorides, TDS, and COD:

Due the potential contribution to the receiving stream, these pollutants are a concern; however, the concentrations reported do not demonstrate a potential to adversely impact the receiving stream. Therefore, as an effective measure of BMPs, the facility shall monitor for the subject parameters.

Total Zinc:

Zinc will be monitored as an effective measure of BMPs.

Mercury Monitoring:

Monitoring for mercury shall continue in the permit to collect additional data for the mercury TMDL for Cold Creek.

316(B) REQUIREMENTS

The permittee receives a small percentage of its water from a public water system in accordance with Section 1401 of the Safe Drinking Water Act or the water used for cooling consists of effluent which would otherwise be discharged, therefore, the permittee is exempt from the requirements of this permit condition.

The remainder of the permitee's source water comes from private wells, which are not regulated by 316(b).

ATTACHMENT 1

OCPSF PERMIT LIMITS CALCULATIONS

FACILITY NAME : Arkema Inc.

LOCATION : Axis Alabama

NPDES NUMBER : AL0042447

IS THIS A RAYON MANUFACTURING FACILITY THAT USES THE VISCOSE PROCESS OR AN ACRYLIC MANUFACTURER THAT USES THE ZINC CHLORIDE/SOLVENT PROCESS (YES =0, NO =1)	1
DOES THIS FACILITY USE END-OF-PIPE BIOLOGICAL TREATMENT (SUBPART I) (YES =0, NO =1)	0

OCPSF PRODUCT	SIC CODE	ANNUAL PROD. MILLION LBS/YR	PROCESS WASTE FLOW MGD
Subpart B Rayon Fibers		0	0
Subpart C Other Fibers		0	0
Subpart D Thermoplastic Resins		0	0.14
Subpart E Thermosetting Resins		0	0
Subpart F Commodity Organic Chemicals		0	0
Subpart G Bulk Organic		0	0.0316
Subpart H Specialty Organic		0	0.1152
OCPSF RELATED FLOWS	TOTAL	0	0.2868

FLOW FROM OTHER SOURCES (e.g. POTWs)	0	MGD
TOTAL FLOW FROM PROCESS, NON-PROCESS AND OTHER SOURCES	0.39345	MGD
RECEIVING STREAM 1Q10	1567.12	CFS
RECEIVING STREAM 7Q10	2089.49	CFS
RECEIVING STREAM ANNUAL-AVERAGE FLOW	24370.4	CFS
METAL-BEARING WASTE STREAM VOLUME	0.265	MGD
CYANIDE-BEARING WASTE STREAM VOLUME	0	MGD

Non-OCPSF Process Wastewater and Non-Process Wastewater						
	Non-OCPSF Flow	Additional Allowance BOD5 (MG/L)		TSS (MG/L)		
Description	(MGD)	Max.	Avg.	Max.	Avg.	
Utility	0.0430	20	10	20	10	BPJ
Sanitary	0.0014	45	30	45	30	Based on 40 CFR 133.102
Storm water	0.0612	20	10	20	10	BPJ
Laboratory	0.0010	20	10	20	10	BPJ
Total	0.1066					

40 CFR 414 Subpart	OCPSF Product	Annual Production (Million lbs/year)	Subtotal	Subcat Proportio	Subcategory Limits BOD5 Max.	BOD5 Avg.	TSS Max.	TSS Avg.	Calculated Limits BOD5 Max.	BOD5 Avg.	TSS Max.	TSS Avg.
B Rayon Fibers		0	0	0	64	24	130	40	0	0	0	0
C Other Fibers (Lyocel Fibers)		0	0	0	48	18	115	36	0	0	0	0
D Thermoplastic Resi		50.25	50.25	0.512389	64	24	130	40	32.79	12.297	66.61	20.4956
E Thermosetting Resins		0	0	0	163	61	216	67	0	0	0	0
F Commodity Organic Chemicals		0	0	0	80	30	149	46	0	0	0	0
G Bulk Organic		16.82	16.82	0.17151	92	34	159	49	15.78	5.8313	27.27	8.404
H Specialty Organic		31	31	0.316101	120	45	183	57	37.93	14.225	57.85	18.0177
		TOTAL =	98.07									

	BOD5 (ppd)		TSS (ppd)		
	Max.	Avg.	Max.	Avg.	
OCPSF Process Total (40CFR414)	206.9	77.4	362.9	112.2	Based on 40 CFR 414
Non-process Total (utilities, sanitary, process SW and Lab	18.089	9.135	18.089	9.135	Based on 40 CFR 133.102 And BPJ
Final Mass Limits (lb/day)	225.0	86.5	381.0	121.4	

BAT Limits are based on 40 CFR 414 Subpart I requirements

PARAMETER	LIMITS UG/L MAX.	AVG.	MASS LIMIT LBS/D MAX.	AVG.	ACUTE	CHRONIC LBS/D	HUMAN HEALTH Fish Consumption	Water Consumption
Acenaphthene	59	22	0.141	0.053			6514.455312	5107.445328
Acenaphthylene	59	22	0.141	0.053				
Acrylonitrile*	242	96	0.579	0.230			18.907505	0.503352
Anthracene	59	22	0.141	0.053			262712.160394	81543.005629
Benzene *	136	37	0.325	0.089			2031.637633	12.607143
Benzo(a)anthracene*	59	22	0.141	0.053			1.398893	0.037234
3,4-Benzofluoranthene*	61	23	0.146	0.055				0.037234
Benzo(k)fluoranthene*	59	22	0.141	0.053			1.398893	0.037234
Benzo(a)pyrene*	61	23	0.146	0.055			1.398893	0.037234
Bis(2-ethylhexyl) phthalate	279	103	0.667	0.246			14.436219	9 542971
Carbon Tetrachloride *	38	18	0.091	0.043			125.690263	2.366222
Chlorobenzene	28	15	0.067	0.036			10203.870934	1365.524434
Chloroethane	268	104	0.641	0.249				
Chloroform *	46	21	0.110	0 050			13392.815777	61.168129
2-Chlorophenol	98	31	0.234	0.074			980.409352	654.691935
Chrysene*	59	22	0.141	0.053			1.398893	0.037234
Di-n-Butyl phthalate	57	27	0.136	0.065			29522.437237	16878.991679
1,2-Dichlorobenzene	163	77	0.390	0.184			8506.285311	3868.179818
1,3-Dichlorobenzene	44	31	0.105	0.074			6332.455354	2879.642830
1,4-Dichlorobenzene	28	15	0.067	0.036			1266.491071	575.928566
1,1-Dichloroethane	59	22	0.141	0.053				
1,2-Dichloroethane *	211	68	0.505	0.163			2805.600578	4.254462
1,1-Dichloroethylene *	25	16	0.060	0.038			547092.148186	3635.832701
1,2-trans-Dichloroethylene	54	21	0.129	0.050			66518.910444	1539.999991
2,4-Dichlorophenol	112	39	0.268	0.093			193672800.969	734.165562
1,2-Dichloropropane	230	153	0.550	0.366			95.649635	5.540265
1,3-Dichloropropylene	44	29	0.105	0.069			138.289294	3.832028
Diethyl phthalate	203	81	0.486	0.194			287944.872899	150501.017748
2,4-Dimethylphenol	36	18	0.086	0.043			5602.338960	3274.819641
Dimethyl phthalate	47	19	0.112	0.045			7298601.000215	2559242.0967
4,6-Dinitro-o-cresol**	277	78	0.663	0.187			1852.897719	141.994065
2,4-Dinitophenol	123	71	0.294	0.170			35033.167690	770.903757
2,4-Dinitotoluene*	285	113	0.682	0.270			260.070100	1.202812
2,6-Dinitotoluene	641	255	1.533	0.610				
Ethylbenzene	108	32	0.258	0.077			14013.312119	5044.794164
Fluoranthene	68	25	0.163	0.060			913.911983	863.834620
Fluorene	59	22	0.141	0.053			35033.280297	10872.401201
Hexachlorobenzene *	**28**	**15**	**0.067**	**0.036**			**0.022035**	**0.001875**

Hexachlorobutadiene *	49	20	0.117	0.048			1412.892170	4.850603
Hexachloroethane *	54	21	0.129	0.050			251.812510	12.221239
Methyl Chloride*	190	86	0.454	0.206				
Methylene Chloride*	89	40	0.213	0.096			45388.383970	51.849899
Naphthalene	59	22	0.141	0.053				
Nitrobenzene	68	27	0.163	0.065			4545.832492	188.874560
2-Nitrophenol	69	41	0.165	0.098				
4-Nitrophenol	124	72	0.297	0.172				
Phenanthrene	59	22	0.141	0.053				
Phenol	26	15	0.062	0.036			5630350.629960	115805.448809
Pyrene	67	25	0.160	0.060			26274.965853	8154.300563
Tetrachloroethylene *	56	22	0.134	0.053			251 712720	6.791363
Toluene	80	26	0.191	0.062			98224.185411	13584.646049
Total Chromium	2770	1110	6.122	2.453	12989.7773	2252.7301		
Total Copper	3380	1450	7.470	3.205	152.2522	143.7481		
Total Cyanide	1200	420	0.000	0.000	185.8199	58.5556	105099.878051	1553.199785
Total Lead	690	320	1.525	0.707	545.0525	13.2201		
Total Nickel	3980	1690	8.796	3.735	4356.8331	645.1601	11180.838114	4623.161810
Total Zinc	2610	1050	5.768	2.321	1667.0555	2240.6748	167712.571717	69347.427111
1,2,4-Trichlorobenzene	140	68	0.335	0.163			460.964351	290.866819
1,1,1-Trichloroethane	54	21	0.129	0.050				
1,1,2-Trichloroethane *	54	21	0.129	0.050			1194.431710	6.477257
Trichloroethylene *	54	21	0.129	0.050			2293.887348	26.988523
Vinyl Chloride *	268	104	0.641	0.249			187.039863	0.276662

* DESIGNATES CARCINOGENIC COMPOUNDS

Metal acute and chronic calculations are based on a hardness of 50 mg/l as CaCO3

** SAME AS 4,6-DINITRO-2-METHYLPHENOL

	Subpart I	Effluent Limitations	
		Daily max	Monthly Avg
		ppd	ppd
720	Cyanide	0.000	0.000
1034	Chromium, Total	6.122	2.453
1042	Copper, Total	7.470	3.205
1051	Lead, Total	1.525	0.707
1067	Nickel, Total	8.796	3.735
1092	Zinc, Total	5.768	2.321
32102	Carbon Tetrachloride	0.091	0.043
32103	1,2-Dichloroethane	0.505	0.163
32106	Chloroform	0.110	0.050
34010	Toluene	0.191	0.062
34030	Benzene	0.325	0.089
34200	Acenaphthylene	0.141	0.053
34205	Acenaphthene	0.141	0.053
34215	Acrylonitrile	0.579	0.230
34220	Anthracene	0.141	0.053
34242	Benzo (K) Fluoranthene	0.141	0.053
34247	Benzo (A) Pyrene	0.146	0.055
34301	Chlorobenzene	0.067	0.036
34320	Chrysene	0.141	0.053
34336	Diethyl Phthalate	0.486	0.194
34341	Dimethyl Phthalate*	0.112	0.045
34376	Fluoranthene	0.163	0.060
34381	Fluorene	0.141	0.053
34391	Hexachlorobutadiene	0.117	0.048
34396	Hexachloroethane	0.129	0.050
34418	Methyl Chloride	0.454	0.206
34423	Methylene Chloride	0.213	0.096
34447	Nitrobenzene	0.163	0.065
34461	Phenanthrene	0.141	0.053
34469	Pyrene	0.160	0.060
34475	Tetrachloroethylene	0.134	0.053
34496	1,1-Dichloroethane	0.141	0.053
34501	1,1-Dichloroethylene	0.060	0.038
34506	1,1,1-Trichloroethane	0.129	0.050
34511	1,1,2-Trichloroethane	0.129	0.050
34526	Benzo (A) Anthracene	0.141	0.053
34536	1,2-Dichlorobenzene	0.390	0.184
34541	1,2-Dichloropropane	0.550	0.366
34546	1,2-Trans-Dichloroethylene	0.129	0.050
34551	1,2,4-Trichlorobenzene	0.335	0.163
34566	1,3-Dichlorobenzene	0.105	0.074
34571	1,4-Dichlorobenzene	0.067	0.036
34586	2-Chlorophenol	0.234	0.074
34591	2-Nitrophenol	0.165	0.098
34601	2,4-Dichlorophenol	0.268	0.093
34606	2,4-Dimethylphenol	0.086	0.043
34611	2,4-Dinitrotoluene	0.682	0.270
34616	2,4-Dinitrophenol	0.294	0.170
34626	2,6-Dinitrotoluene	1.533	0.610
34646	4-Nitrophenol	0.297	0.172
34657	4,6-Dinitro-O-Cresol	0.663	0.187
34694	Phenol, Single Compound	0.062	0.036
34696	Naphthalene	0.141	0.053
39100	Bis (2-Ethylhexyl) Phthalate	0.667	0.246
39110	Di-N-Butyl Phthalate	0.136	0.065
39175	Vinyl Chloride	0.641	0.249
39180	Trichloroethylene	0.129	0.050
39700	Hexachlorobenzene	0.067	0.036
77163	1,3 Dichloropropylene'	0.105	0.069
78113	Ethyl Benzene	0.258	0.077
79531	3,4 Benzofluoranthene	0.146	0.055
85811	Chloroethane	0.641	0.249

ATTACHMENT 2

OCPSF PERMIT LIMITS CALCULATIONS

FACILITY NAME : Arkema Inc.

LOCATION : Axis Alabama

NPDES NUMBER : AL0042447

IS THIS A RAYON MANUFACTURING FACILITY THAT USES THE VISCOSE PROCESS OR AN ACRYLIC MANUFACTURER THAT USES THE ZINC CHLORIDE/SOLVENT PROCESS (YES =0, NO =1)	1
DOES THIS FACILITY USE END-OF-PIPE BIOLOGICAL TREATMENT (SUBPART I) (YES =0, NO =1)	0

OCPSF PRODUCT	SIC CODE	ANNUAL PROD. MILLION LBS/YR	PROCESS WASTE FLOW MGD
Subpart B Rayon Fibers		0	0
Subpart C Other Fibers		0	0
Subpart D Thermoplastic Resins		0	0.14
Subpart E Thermosetting Resins		0	0
Subpart F Commodity Organic Chemicals		0	0
Subpart G Bulk Organic		0	0.0316
Subpart H Specialty Organic		**0**	**0.2012**
OCPSF RELATED FLOWS	TOTAL	0	0.3728

FLOW FROM OTHER SOURCES (e.g. POTWs)	0	MGD
TOTAL FLOW FROM PROCESS, NON-PROCESS AND OTHER SOURCES	0.47945	MGD
RECEIVING STREAM 1Q10	1567.12	CFS
RECEIVING STREAM 7Q10	2089.49	CFS
RECEIVING STREAM ANNUAL-AVERAGE FLOW	24370.4	CFS
METAL-BEARING WASTE STREAM VOLUME	0.265	MGD
CYANIDE-BEARING WASTE STREAM VOLUME	0	MGD

Non-OCPSF Process Wastewater and Non-Process Wastewater						
	Non-OCPSF Flow	Additional Allowance BOD5 (MG/L)		TSS (MG/L)		
Description	(MGD)	Max.	Avg.	Max.	Avg.	
Utility	0.0430	20	10	20	10	BPJ
Sanitary	0.0014	45	30	45	30	Based on 40 CFR 133.102
Storm water	0.0612	20	10	20	10	BPJ
Laboratory	0.0010	20	10	20	10	BPJ
Total	0.1066					

40 CFR 414 Subpart	OCPSF Product	Annual Production (Million lbs/year)	Subtotal	Subcat Proportic	Subcategory Limits BOD5 Max.	BOD5 Avg.	TSS Max.	TSS Avg.	Calculated Limits BOD5 Max.	BOD5 Avg.	TSS Max.	TSS Avg.
B	Rayon Fibers	0	0	0	64	24	130	40	0	0	0	0
C	Other Fibers (Lyocel Fibers)	0	0	0	48	18	115	36	0	0	0	0
D	Thermoplastic Resi	52.28	52.28	0.454214	64	24	130	40	29.07	10.901	59.05	18.1685
E	Thermosetting Resins	0	0	0	163	61	216	67	0	0	0	0
F	Commodity Organic Chemicals	0	0	0	80	30	149	46	0	0	0	0
G	Bulk Organic	18.6	18.6	0.161599	92	34	159	49	14.87	5.4944	25.69	7.91833
H	Specialty Organic	44.22	44.22	0.384188	120	45	183	57	46.1	17.288	70.31	21.8987
		TOTAL =	115.1									

	BOD5 (ppd)		TSS (ppd)		
	Max.	Avg.	Max.	Avg.	
OCPSF Process Total (40CFR414)	279.9	104.7	482.1	149.2	Based on 40 CFR 414
Non-process Total (utilities, sanitary, process SW and Lab	18.089	9.135	18.089	9.135	Based on 40 CFR 133.102 And BPJ
Final Mass Limits (lb/day)	298.0	113.9	500.2	158.3	

BAT Limits are based on 40 CFR 414 Subpart 1 requirements

PARAMETER	LIMITS UG/L MAX.	AVG.	MASS LIMIT LBS/D MAX.	AVG.	ACUTE	CHRONIC LBS/D	HUMAN HEALTH Fish Consumption	Water Consumption
Acenaphthene	59	22	0.183	0.068			6514.870244	5107.770642
Acenaphthylene	59	22	0.183	0.068				
Acrylonitrile*	242	96	0.752	0.298			18.907608	0.503384
Anthracene	59	22	0.183	0.068			262728.893603	81548.199436
Benzene *	136	37	0.423	0.115			2031.648730	12.607946
Benzo(a)anthracene*	59	22	0.183	0.068			1.398900	0.037237
3,4-Benzofluoranthene*	61	23	0.190	0.072				0.037237
Benzo(k)fluoranthene*	59	22	0.183	0.068			1.398900	0.037237
Benzo(a)pyrene*	61	23	0.190	0.072			1.398900	0.037237
Bis(2-ethylhexyl) phthalate	279	103	0.867	0.320			14.437139	9.543579
Carbon Tetrachloride *	38	18	0.118	0.056			125.690950	2.366373
Chlorobenzene	28	15	0.087	0.047			10204.520860	1365.611410
Chloroethane	268	104	0.833	0.323				
Chloroform *	46	21	0.143	0.065			13392.888935	61.172025
2-Chlorophenol	98	31	0.305	0.096			980.471798	654.733635
Chrysene*	59	22	0.183	0.068			1.398900	0.037237
Di-n-Butyl phthalate	57	27	0.177	0.084			29524.317642	16880.066771
1,2-Dichlorobenzene	163	77	0.507	0.239			8506.827111	3868.426198
1,3-Dichlorobenzene	44	31	0.137	0.096			6332.858693	2879.826246
1,4-Dichlorobenzene	28	15	0.087	0.047			1266.571739	575.965249
1,1-Dichloroethane	59	22	0.183	0.068				
1,2-Dichloroethane *	211	68	0.656	0.211			2805.615904	4.254733
1,1-Dichloroethylene *	25	16	0.078	0.050			547095.136686	3636.064282
1,2-trans-Dichloroethylene	54	21	0.168	0.065			66523.147304	1540.098080
2,4-Dichlorophenol	112	39	0.348	0.121			193685136.780	734.212324
1,2-Dichloropropane	230	153	0.715	0.476			95.655727	5.540618
1,3-Dichloropropylene	44	29	0.137	0.090			138.298102	3.832272
Diethyl phthalate	203	81	0.631	0.252			287963.213282	150510.603771
2,4-Dimethylphenol	36	18	0.112	0.056			5602.695796	3275.028228
Dimethyl phthalate	47	19	0.146	0.059			7299065.877886	2559405.1053
4,6-Dinitro-o-cresol**	277	78	0.861	0.243			1853.015738	142.003109
2,4-Dinitophenol	123	71	0.382	0.221			35035.399095	770.952859
2,4-Dinitotoluene*	285	113	0.886	0.351			260.071521	1.202888
2,6-Dinitotoluene	641	255	1.993	0.793				
Ethylbenzene	108	32	0.336	0.099			14014.204684	5045.115488
Fluoranthene	68	25	0.211	0.078			913.970194	863.889641
Fluorene	59	22	0.183	0.068			35035.511709	10873.093709
Hexachlorobenzene *	**28**	**15**	**0.087**	**0.047**			**0.022035**	**0.001875**

Hexachlorobutadiene *	49	20	0.152	0.062			1412.899888	4.850912
Hexachloroethane *	54	21	0.168	0.065			251.813886	12.222017
Methyl Chloride*	190	86	0.591	0.267				
Methylene Chloride*	89	40	0.277	0.124			45388.631905	51.853201
Naphthalene	59	22	0.183	0.068				
Nitrobenzene	68	27	0.211	0.084			4546.122034	188.886590
2-Nitrophenol	69	41	0.215	0.127				
4-Nitrophenol	124	72	0.386	0.224				
Phenanthrene	59	22	0.183	0.068				
Phenol	26	15	0.081	0.047			5630709.249960	115812.824931
Pyrene	67	25	0.208	0.078			26276.639413	8154.819944
Tetrachloroethylene *	56	22	0.174	0.068			251.714095	6.791795
Toluene	80	26	0.249	0.081			98230.441710	13585.511311
Total Chromium	2770	1110	6.122	2.453	12990.8804	2252.8736		
Total Copper	3380	1450	7.470	3.205	152.2651	143.7572		
Total Cyanide	1200	420	0.000	0.000	185.8357	58.5594	105106.572291	1553.298715
Total Lead	690	320	1.525	0.707	545.0987	13.2209		
Total Nickel	3980	1690	8.796	3.735	4357.2030	645.2012	11181.550268	4623.456278
Total Zinc	2610	1050	5.768	2.321	1667.1970	2240.8175	167723.254015	69351.844131
1,2,4-Trichlorobenzene	140	68	0.435	0.211			460.993711	290.885345
1,1,1-Trichloroethane	54	21	0.168	0.065				
1,1,2-Trichloroethane *	54	21	0.168	0.065			1194.438235	6.477669
Trichloroethylene *	54	21	0.168	0.065			2293.899878	26.990242
Vinyl Chloride *	268	104	0.833	0.323			187.040885	0.276680

* DESIGNATES CARCINOGENIC COMPOUNDS

Metal acute and chronic calculations are based on a hardness of 50 mg/l as CaCO3

** SAME AS 4,6-DINITRO-2-METHYLPHENOL

	Subpart I	Effluent Limitations	
		Daily max ppd	Monthly Avg ppd
720	Cyanide	0.000	0.000
1034	Chromium, Total	6.122	2.453
1042	Copper, Total	7.470	3.205
1051	Lead, Total	1.525	0.707
1067	Nickel, Total	8.796	3.735
1092	Zinc, Total	5.768	2.321
32102	Carbon Tetrachloride	0.118	0.056
32103	1,2-Dichloroethane	0.656	0.211
32106	Chloroform	0.143	0.065
34010	Toluene	0.249	0.081
34030	Benzene	0.423	0.115
34200	Acenaphthylene	0.183	0.068
34205	Acenaphthene	0.183	0.068
34215	Acrylonitrile	0.752	0.298
34220	Anthracene	0.183	0.068
34242	Benzo (K) Fluoranthene	0.183	0.068
34247	Benzo (A) Pyrene	0.190	0.072
34301	Chlorobenzene	0.087	0.047
34320	Chrysene	0.183	0.068
34336	Diethyl Phthalate	0.631	0.252
34341	Dimethyl Phthalate*	0.146	0.059
34376	Fluoranthene	0.211	0.078
34381	Fluorene	0.183	0.068
34391	Hexachlorobutadiene	0.152	0.062
34396	Hexachloroethane	0.168	0.065
34418	Methyl Chloride	0.591	0.267
34423	Methylene Chloride	0.277	0.124
34447	Nitrobenzene	0.211	0.084
34461	Phenanthrene	0.183	0.068
34469	Pyrene	0.208	0.078
34475	Tetrachloroethylene	0.174	0.068
34496	1,1-Dichloroethane	0.183	0.068
34501	1,1-Dichloroethylene	0.078	0.050
34506	1,1,1-Trichloroethane	0.168	0.065
34511	1,1,2-Trichloroethane	0.168	0.065
34526	Benzo (A) Anthracene	0.183	0.068
34536	1,2-Dichlorobenzene	0.507	0.239
34541	1,2-Dichloropropane	0.715	0.476
34546	1,2-Trans-Dichloroethylene	0.168	0.065
34551	1,2,4-Trichlorobenzene	0.435	0.211
34566	1,3-Dichlorobenzene	0.137	0.096
34571	1,4-Dichlorobenzene	0.087	0.047
34586	2-Chlorophenol	0.305	0.096
34591	2-Nitrophenol	0.215	0.127
34601	2,4-Dichlorophenol	0.348	0.121
34606	2,4-Dimethylphenol	0.112	0.056
34611	2,4-Dinitrotoluene	0.886	0.351
34616	2,4-Dinitrophenol	0.382	0.221
34626	2,6-Dinitrotoluene	1.993	0.793
34646	4-Nitrophenol	0.386	0.224
34657	4,6-Dinitro-O-Cresol	0.861	0.243
34694	Phenol, Single Compound	0.081	0.047
34696	Naphthalene	0.183	0.068
39100	Bis (2-Ethylhexyl) Phthalate	0.867	0.320
39110	Di-N-Butyl Phthalate	0.177	0.084
39175	Vinyl Chloride	0.833	0.323
39180	Trichloroethylene	0.168	0.065
39700	Hexachlorobenzene	0.087	0.047
77163	1,3 Dichloropropylene'	0.137	0.090
78113	Ethyl Benzene	0.336	0.099
79531	3,4 Benzofluoranthene	0.190	0.072
85811	Chloroethane	0.833	0.323

otc

Mixing Zone Analysis Summary

General Information

Comments included: ☑ Yes ☐ No

Year File Was Started: 1994

Information Verified By: cpr

Date of Response: 8/30/1996

Name of Receiving Stream: Mobile River

Previous file name: Or-AKA (If applicable)

Discharger Name: Arkema

Previous Name of Discharger: Elf Atochem and Atofina Or-AKA (If applicable)

11 Digit HUC Code USGS: 03160204020

Other Point Sources? ☐ Yes ☑ No

12 Digit HUC Code: 031602040201

Sources Included in the Model:

River Basin: Mobile

County: Mobile

Use Classification: F&W

Discharge Latitude: 30.96722

Discharge Longitude: -87.99667

Site Visit Completed? ☐ Yes ☑ No

Date of Site Visit:

Discharge Status: Existing

Print Record

Close Form

Permit Information

Type of Discharger
- ☐ Municipal
- ☑ Industrial
- ☐ Semipublic/Private

Permit Number: AL0042447

Permit Status: Active

Hydrology

			Method Used to Calculate
Drainage Area		sq mi	
Stream 7Q10	4000	cfs	USGS Estimate
Stream 1Q10	3000	cfs	USGS Estimate
Stream 7Q2	6000	cfs	USGS Estimate

Date of MZ Analysis: 8/30/1996

Model Completed by: Charles Reynolds

Discharge Design Flow: 0.864 MGD

Seasonal? ☐ Yes ☑ No

If not seasonal, only the summer sections will be used

Pollutant Category

Whole Effluent Toxicity (WET) ☑ Thermal ☐ Pathogens ☐

Mixing Zone Analysis Summary

REQUEST INFORMATION

request number: 3297

From: (Responsible Engineer) Latoya Hall | In Branch/Section: Industrial

Date Submitted: 11/23/2015 | **Date Required:** 12/23/2015 | **FUND Code:** 605

Receiving Waterbody: Mobile River | Date Permit application received by NPDES program:

Previous Stream Name:

Facility Name: Arkema (Name of Discharger-WQ will use to file)

Previous Discharger Name:

River Basin: Mobile | **Outfall Latitude:** 30.98 (decimal degrees)

***County:** Mobile | **Outfall Longitude:** -87.997 (decimal degrees)

Permit Number: AL0042447 | **Permit Type:** Permit Reissuance

Permit Status: Active

Type of Discharger: INDUSTRIAL

Do other discharges exist that may impact the model? ☐ Yes ☑ No

If yes, impacting dischargers names.	Impacting dischargers permit numbers.

Existing Discharge Design Flow: 0.74 MGD

Proposed Discharge Design Flow: MGD

Note: The flow rates given should be those requested for modeling.

Seasonal limits requested? ☐ Yes ☑ No

If not seasonal, only the summer sections will be used

Comments included ☐ Yes ☒ No

Information Verified By: JBR

Year File Was Started: 1994

12 Digit HUC Code: 031602040106

Use Classification: F&W

Site Visit Completed? ☐ Yes ☑ No

Date of MZ Response: 10/21/2016

Date of Site Visit:

Hydrology

			Method Used to Calculate
Drainage Area	43000	sq mi	
Stream 7Q10	2089.49	cfs	ADEM Estimate w/USGS Gage Data
Stream 1Q10	1567.12	cfs	75%of 7Q10
Stream 7Q2	3939.65	cfs	ADEM Estimate w/USGS Gage Data
Annual Average	24370	cfs	ADEM Estimate w/USGS Gage Data

Date of MZ Analysis: 10/12/2016 | **Model Completed by:** JBR

Pollutant Category

Whole Effluent Toxicity (WET) ☑ | **Thermal** ☐ | **Pathogens** ☐

Mixing Zone Analysis Summary

WET Parameters

Summer

Acute

Ambient Streamflow	1567.12	cfs
ZID Length	4.5	Meters
ZID IWC	5.101	%

Chronic

Ambient Streamflow		cfs
Mixing Zone Length		Meters
Mixing Zone IWC		%

Winter

Acute

Ambient Streamflow		cfs
ZID Length	4.5	Meters
ZID IWC		%

Chronic

Ambient Streamflow		cfs
Mixing Zone Length		Meters
Mixing Zone IWC		%

Thermal Parameters

Summer

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

Winter

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

Pathogen Parameters

Summer

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

Winter

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

Comments and/or Notations

Facility Name: Arkema

NPDES No.: AL0042447

						Freshwater Acute (µg/l) Q_s = 1Q10						Freshwater Chronic (µg/l) Q_s = 7Q10				Human Health Consumption Fish only (µg/l) Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10			
Freshwater F&W classification.					Max Daily Discharge as reported by Applicant (C_{dmax})						Avg Daily Discharge as reported by Applicant (C_{davg})								
ID	Pollutant	RP?	Carcinogen yes	Background from upstream source (Cd2) Daily Max		Water Quality Criteria (C_s)	Draft Permit Limit (C_{dmax})	20% of Draft Permit Limit	RP?	Background from upstream source (Cd2) Monthly Ave		Water Quality Criteria (C_s)	Draft Permit Limit (C_{davg})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_s)	Draft Permit Limit (C_{davg})	20% of Draft Permit Limit	RP?
1	Antimony			0	1300	-	-	-	-	0	420	-	-	-	-	3.73E+02	5.84E+05	1.17E+05	No
2	Arsenic		YES	0	7.8	592.334	694977.199	138995.440	No	0	7.8	261.324	408723.009	81744.602	No	3.03E-01	5.52E+03	1.10E+03	No
3	Beryllium			0	0		-			0	0	-	-						-
4	Cadmium			0	0	4.347	5100.422	1020.084	No	0	0	0.644	1006.635	201.327	No			-	-
5	Chromium/ Chromium III			0	0	1537.913	1804410.205	360882.041	No	0	0	200.051	312888.911	62577.782	No			-	-
6	Chromium/ Chromium VI			0	0	16.000	18772.561	3754.512	No	0	0	11.000	17204.514	3440.903	No			-	
7	Copper			0	0	18.026	21150.077	4230.015	No	0	0	12.766	19965.946	3993.189	No	1.30E+03	2.03E+06	4.07E+05	No
8	Lead			0	5.9	64.531	75713.097	15142.619	No	0	2	2.515	3933.069	786.614	No	-		-	
9	Mercury			0	0	2.400	2815.884	563.177	No	0	0	0.012	18.769	3.754	No	4.24E-02	5.64E+01	1.33E+01	No
10	Nickel			0	8.2	515.824	605206.996	121041.799	No	0	2.8	57.292	89607.616	17921.523	No	9.93E+02	1.55E+06	3.11E+05	No
11	Selenium			0	13	20.000	23465.701	4693.140	No	0	13	5.000	7820.234	1564.047	No	2.43E+03	3.80E+06	7.60E+05	No
12	Silver			0	0	0.976	1145.645	229.129	No	0	0	-		-	-	-	-	-	
13	Thallium			0	0	-	-	-	-	0	0	-	-	-		2.74E-01	4.28E+02	8.56E+01	No
14	Zinc			0	0	197.369	231569.871	46313.974	No	0	0	196.983	311219.143	62243.829	No	1.49E+04	2.33E+07	4.66E+06	No
15	Cyanide			0	0	22.000	25812.271	5162.454	No	0	0	5.200	8133.043	1626.609	No	9.33E+03	1.46E+07	2.92E+06	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-		-	-	-	-	-	
17	Hardness (As CaCO3)			0	0	-		-	-	0	0	-		-	-	-	-	-	-
18	Acrolein			0	0	-		-	-	0	0	-		-	-	5.43E+00	8.49E+03	1.70E+03	No
19	Acrylonitrile		YES	0	0	-	-		-	0	0	-		-	-	1.44E-01	2.63E+03	5.25E+02	No
20	Aldrin		YES	0	0	3.000	3519.855	703.971	No	0	0	1.300	2033.261	406.652	No	2.94E-05	5.36E-01	1.07E-01	No
21	Benzene		YES	0	0	-	-			0	0	-	-		-	1.55E+01	2.82E+05	5.64E+04	No
22	Bromoform		YES	0	0	-	-	-	-	0	0		-			7.88E+01	1.44E+06	2.87E+05	No
23	Carbon Tetrachloride		YES	0	0	-	-	-	-	0	0	-	-			9.57E-01	1.75E+04	3.49E+03	No
24	Chlordane		YES	0	0	2.400	2815.884	563.177	No	0	0	0.004	6.725	1.345	No	4.73E-04	8.62E+00	1.72E+00	No
25	Clorobenzene			0	0		-			0	0		-		-	9.06E+02	1.42E+06	2.83E+05	No
26	Chlorodibromo-Methane		YES	0	0		-		-	0	0		-			7.41E+00	1.35E+05	2.70E+04	No
27	Chloroethane			0	0		-			0	0	-	-	-	-	-	-	-	-
28	2-Chloro-Ethylvinyl Ether			0	0	-	-			0	0	-	-			-	-	-	-
29	ChloroForm		YES	0	0		-		-	0	0	-	-	-	-	1.02E+02	1.86E+06	3.72E+05	No
30	4,4' - DDD		YES	0	0	-	-		-	0	0	-	-	-	-	1.81E-04	3.31E+00	6.61E-01	No
31	4,4' - DDE		YES	0	0	-	-		-	0	0	-	-	-	-	1.28E-04	2.33E+00	4.67E-01	No
32	4,4' - DDT		YES	0	0		-	-	-	0	0	-		-	-	1.28E-04	2.33E+00	4.67E-01	No
33	Dichlorobromo-Methane		YES	0	0		-	-	-	0	0	-		-	-	1.00E+01	1.83E+05	3.66E+04	No
34	1, 1-Dichloroethane			0	0	-		-	-	0	0			-	-	-	-	-	-
35	1, 2-Dichloroethane		YES	0	0	-		-	-	0	0	-		-	-	2.14E+01	3.90E+05	7.79E+04	No
36	Trans-1, 2-Dichloro-Ethylene			0	0	-		-	-	0	0	-		-	-	5.91E+03	9.24E+06	1.85E+06	No
37	1, 1-Dichloroethylene		YES	0	0	-		-	-	0	0		-	-	-	4.17E+03	7.60E+07	1.52E+07	No
38	1, 2-Dichloropropane			0	0	-		-	-	0	0	-		-	-	8.49E+00	1.33E+04	2.66E+03	No
39	1, 3-Dichloro-Propylene			0	0		-	-	-	0	0	-	-			1.23E+01	1.92E+04	3.84E+03	No
40	Dieldrin		YES	0	0	0.240	281.588	56.318	No	0	0	0.056	87.587	17.517	No	3.12E-05	5.69E-01	1.14E-01	No
41	Ethylbenzene			0	0	-	-	-	-	0	0	-				1.24E+03	1.95E+06	3.89E+05	No
42	Methyl Bromide			0	0	-	-			0	0		-			8.71E+02	1.36E+06	2.72E+05	No
43	Methyl Chloride			0	0	-	-	-		0	0			-		-			-
44	Methylene Chloride		YES	0	0	-	-	-		0	0		-		-	3.46E+02	6.30E+06	1.26E+06	No
45	1, 1, 2, 2-Tetrachloro-Ethane		YES	0	0	-	-	-		0	0		-		-	2.33E+00	4.25E+04	8.51E+03	No
46	Tetrachloro-Ethylene		YES	0	0		-		-	0	0		-	-	-	1.92E+00	3.50E+04	6.99E+03	No
47	Toluene			0	0		-			0	0	-	-	-	-	8.72E+03	1.36E+07	2.73E+06	No
48	Toxaphene		YES	0	0	0.730	856.496	171.300	No	0	0	0.0002	0.313	0.063	No	1.62E-04	2.95E+00	5.90E-01	No
49	Tributyltin (TBT)		YES	0	0	0.460	539.711	107.942	No	0	0	0.072	112.611	22.522	No	-	-	-	
50	1, 1, 1-Trichloroethane			0	0		-		-	0	0	-	-	-	-	-	-	-	-
51	1, 1, 2-Trichloroethane		YES	0	0		-		-	0	0	-	-	-	-	9.10E+00	1.66E+05	3.32E+04	No
52	Trichlorethylene		YES	0	0		-		-	0	0	-		-	-	1.75E+01	3.19E+05	6.37E+04	No
53	Vinyl Chloride		YES	0	0	-	-		-	0	0	-		-		1.42E+00	2.60E+04	5.19E+03	No
54	P-Chloro-M-Cresol			0	0	-		-	-	0	0	-		-	-	-	-	-	-
55	2-Chlorophenol			0	0	-		-	-	0	0	-		-	-	8.71E+01	1.36E+05	2.72E+04	No
56	2, 4-Dichlorophenol			0	0	-		-	-	0	0	-	-	-	-	1.72E+02	2.69E+05	5.38E+04	No
57	2, 4-Dimethylphenol			0	0	-		-	-	0	0	-		-	-	4.98E+02	7.78E+05	1.56E+05	No
58	4, 6-Dinitro-O-Cresol			0	0	-		-	-	0	0	-	-			-	-	-	
59	2, 4-Dinitrophenol			0	0	-		-	-	0	0	-		-	-	3.11E+03	4.87E+06	9.73E+05	No
60	4,6-Dinitro-2-methylphenol		YES	0	0	-	-	-		0	0	-		-		1.65E+02	3.02E+06	6.03E+05	No
61	Dioxin (2,3,7,8-TCDD)		YES	0	0	-	-	-	-	0	0	-				2.67E-08	4.86E-04	9.72E-05	No
62	2-Nitrophenol			0	0	-		-	-	0	0				-	-	-	-	-
63	4-Nitrophenol			0	0		-	-	-	0	0		-	-			-	-	-
64	Pentachlorophenol		YES	0	0	8.723	10234.942	2046.988	No	0	0	6.693	10467.514	2093.503	No	1.77E+00	3.22E+04	6.45E+03	No
65	Phenol			0	0		-		-	0	0					5.00E+05	7.82E+06	1.56E+06	No
66	2, 4, 6-Trichlorophenol		YES	0	0		-		-	0	0		-			1.41E+00	2.58E+04	5.16E+03	No
67	Acenaphthene			0	0		-	-		0	0	-	-			5.79E+02	9.05E+05	1.81E+05	No
68	Acenaphthylene			0	0	-	-			0	0			-		-	-	-	-
69	Anthracene			0	0		-			0	0	-	-	-	-	2.33E+04	3.65E+07	7.30E+06	No
70	Benzidine			0	0		-		-	0	0	-	-	-	-	1.16E-04	1.81E-01	3.63E-02	No
71	Benzo(A)Anthracene		YES	0	0		-	-	-	0	0	-	-	-	-	1.07E-02	1.94E+02	3.88E+01	No
72	Benzo(A)Pyrene		YES	0	0	-		-	-	0	0	-	-	-	-	1.07E-02	1.94E+02	3.88E+01	No
73	3, 4 Benzo-Fluoranthene			0	0	-		-	-	0	0	-	-	-	-	1.07E-02	1.67E+01	3.33E+00	No
74	Benzo(GHI)Perylene			0	0	-		-	-	0	0	-		-	-	-	-	-	-
75	Benzo(K)Fluoranthene			0	0	-		-	-	0	0	-	-	-	-	1.07E-02	1.67E+01	3.33E+00	No
76	Bis (2-Chloroethoxy) Methane			0	0		-	-	-	0	0	-	-	-	-		-		-
77	Bis (2-Chloroethyl)-Ether		YES	0	0	-	-	-	-	0	0				-	3.07E-01	5.60E+03	1.12E+03	No
78	Bis (2-Chloroiso-Propyl) Ether			0	0	-	-	-	-	0	0		-			3.78E+04	5.91E+07	1.18E+07	No
79	Bis (2-Ethylhexyl) Phthalate		YES	0	0		-			0	0		-		-	1.28E+00	2.34E+04	4.67E+03	No
80	4-Bromophenyl Phenyl Ether			0	0	-	-		-	0	0	-	-			-	-		
81	Butyl Benzyl Phthalate			0	0	-			-	0	0	-	-			1.13E+03	1.76E+06	3.53E+05	No
82	2-Chloronaphthalene			0	0	-		-	-	0	0		-			9.24E+02	1.45E+06	2.89E+05	No
83	4-Chlorophenyl Phenyl Ether			0	0		-		-	0	0	-			-	-	-		-
84	Chrysene		YES	0	0	-		-	-	0	0	-	-	-	-	1.07E-02	1.94E+02	3.88E+01	No
85	Di-N-Butyl Phthalate			0	0	-		-	-	0	0	-		-	-	2.62E+03	4.10E+06	8.20E+05	No
86	Di-N-Octyl Phthalate			0	0		-	-	-	0	0	-		-	-	-		-	-
87	Dibenzo(A,H)Anthracene		YES	0	0		-	-	-	0	0	-	-	-	-	1.07E-02	1.94E+02	3.88E+01	No
88	1, 2-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	7.55E+02	1.18E+06	2.36E+05	No
89	1, 3-Dichlorobenzene			0	0		-	-	-	0	0	-	-		-	5.62E+02	8.80E+05	1.76E+05	No
90	1, 4-Dichlorobenzene			0	0		-	-	-	0	0	-	-		-	1.12E+02	1.76E+05	3.52E+04	No
91	3, 3-Dichlorobenzene		YES	0	0	-	-	-	-	0	0		-	-	-	1.66E-02	3.03E+02	6.06E+01	No
92	Diethyl Phthalate			0	0	-		-		0	0		-	-	-	2.56E+04	4.00E+07	8.00E+06	No
93	Dimethyl Phthalate			0	0	-				0	0			-	-	6.48E+05	1.01E+09	2.03E+08	No
94	2, 4-Dinitrotoluene		YES	0	0	-			-	0	0			-	-	1.98E+00	3.61E+04	7.22E+03	No
95	2, 6-Dinitrotoluene			0	0	-	-	-	-	0	0	-		-	-	-	-		-
96	1,2-Diphenylhydrazine			0	0	-	-	-	-	0	0	-		-	-	1.17E-01	1.83E+02	3.66E+01	No
97	Endosulfan (alpha)		YES	0	0	0.22	258.123	51.625	No	0	0	0.056	87.587	17.517	No	5.19E+01	9.45E+05	1.89E+05	No
98	Endosulfan (beta)		YES	0	0	0.22	258.123	51.625	No	0	0	0.056	87.587	17.517	No	5.19E+01	9.45E+05	1.89E+05	No
99	Endosulfan sulfate		YES	0	0	-	-	-		0	0	-	-			5.19E+01	9.45E+05	1.89E+05	No
100	Endrin		YES	0	0	0.086	100.903	20.181	No	0	0	0.036	56.306	11.261	No	3.53E-02	6.43E+02	1.29E+02	No
101	Endrin Aldeyhde		YES	0	0	-	-			0	0	-	-	-	-	1.76E+00	3.21E+04	6.43E+03	No
102	Fluoranthene			0	0	-	-			0	0	-	-	-	-	8.12E+01	1.27E+05	2.54E+04	No
103	Fluorene			0	0	-	-			0	0	-	-	-	-	3.11E+03	4.87E+06	9.73E+05	No
104	Heptachlor		YES	0	0	0.52	610.108	122.022	No	0	0	0.004	5.943	1.189	No	4.63E-05	8.44E-01	1.69E-01	No
105	Heptachlor Epoxide		YES	0	0	0.52	610.108	122.022	No	0	0	0.004	5.943	1.189	No	2.29E-05	4.17E-01	8.35E-02	No
106	Hexachlorobenzene		YES	0	0			-	-	0	0			-	-	1.68E-04	3.06E+00	8.12E-01	No
107	Hexachlorobutadiene		YES	0	0		-	-	-	0	0	-		-	-	1.08E+01	1.96E+05	3.92E+04	No
108	Hexachlorocyclohexan (alpha)		YES	0	0		-	-		0	0	-	-			2.85E-03	5.19E+01	1.04E+01	No
109	Hexachlorocyclohexan (beta)		YES	0	0		-	-	-	0	0	-	-	-	-	9.97E-03	1.82E+02	3.64E+01	No
110	Hexachlorocyclohexan		YES	0	0	0.95	1114.621	222.924	No	0	0	-	-	-	-	1.08E+00	1.96E+04	3.93E+03	No
111	HexachlorocycloPentadiene			0	0		-		-	0	0			-	-	6.45E+02	1.01E+06	2.02E+05	No
112	Hexachloroethane			0	0	-			-	0	0		-		-	1.92E+00	3.00E+03	6.00E+02	No
113	Indeno(1, 2, 3-CK)Pyrene		YES	0	0		-		-	0	0	-	-	-	-	1.07E-02	1.94E+02	3.88E+01	No
114	Isophorone			0	0	-	-	-	-	0	0	-	-	-	-	5.61E+02	8.77E+05	1.75E+05	No
115	Naphthalene			0	0	-	-	-	-	0	0	-		-	-	-	-	-	-
116	Nitrobenzene			0	0	-	-	-	-	0	0	-		-	-	4.04E+02	6.31E+05	1.26E+05	No
117	N-Nitrosodi-N-Propylamine		YES	0	0	-	-	-	-	0	0	-	-		-	2.95E-01	5.38E+03	1.08E+03	No
118	N-Nitrosodi-N-Methylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E+00	3.21E+04	6.42E+03	No
119	N-Nitrosodi-N-Phenylamine		YES	0	0	-	-	-	-	0	0		-	-	-	3.50E+00	6.38E+04	1.28E+04	No
120	PCB-1016		YES	0	0	-	-	-	-	0	0	0.014	21.897	4.379	No	3.74E-05	6.82E-01	1.36E-01	No
121	PCB-1221		YES	0	0	-	-	-	-	0	0	0.014	21.897	4.379	No	3.74E-05	6.82E-01	1.36E-01	No
122	PCB-1232		YES	0	0	-	-	-	-	0	0	0.014	21.897	4.379	No	3.74E-05	6.82E-01	1.36E-01	No
123	PCB-1242		YES	0	0	-	-	-	-	0	0	0.014	21.897	4.379	No	3.74E-05	6.82E-01	1.36E-01	No
124	PCB-1248		YES	0	0	-	-	-	-	0	0	0.014	21.897	4.379	No	3.74E-05	6.82E-01	1.36E-01	No
125	PCB-1254		YES	0	0	-	-	-	-	0	0	0.014	21.897	4.379	No	3.74E-05	6.82E-01	1.36E-01	No
126	PCB-1260		YES	0	0	-	-	-	-	0	0	0.014	21.897	4.379	No	3.74E-05	6.82E-01	1.36E-01	No
127	Phenanthrene			0	0	-	-	-	-	0	0	-		-	-	-	-	-	-
128	Pyrene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+03	3.65E+06	7.30E+05	No
129	1, 2, 4-Trichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.09E+01	6.40E+04	1.28E+04	No

Facility Name: **Arkema**

NPDES No.: **AL0042447**

Marine F&W classification.					Max Daily Discharge as reported by Applicant (C_{dmax})	Marine Acute (µg/l) 1Q10 for F&W up				Background from upstream source (Cd2) Monthly Ave	Avg Daily Discharge as reported by Applicant (C_{davg})	Marine Chronic (µg/l) 7Q10				Human Health Consumption Fish only (µg/l) Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10			
ID	Pollutant	RP?	Carcinogen yes	Background from upstream source (Cd2) Daily Max		Water Quality Criteria (C_t)	Draft Permit Limit (C_{dmax})	20% of Draft Permit Limit	RP?			Water Quality Criteria (C_t)	Draft Permit Limit (C_{davg})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_t)	Draft Permit Limit (C_{davg})	20% of Draft Permit Limit	RP?
1	Antimony			0	1300	-	-	-	-	0	420	-	-	-	-	3.73E+02	5.84E+05	1.17E+05	No
2	Arsenic		YES	0	7.8	69	80956.667	16191.3335	No	0	7.8	36	56305.682	11261.1363	No	3.03E-01	5.52E+03	1.10E+03	No
3	Beryllium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
4	Cadmium			0	0	40	46931.401	9386.28028	No	0	0	8.8	13763.611	2752.72222	No	-	-	-	-
5	Chromium/ Chromium III			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
6	Chromium/ Chromium VI			0	0	1100	##########	258122.708	No	0	0	50	78202.336	15640.4671	No	-	-	-	-
7	Copper			0	0	4.8	5631.768	1126.35363	No	0	0	3.1	4848.545	969.708962	No	1.30E+03	2.03E+06	4.07E+05	No
8	Lead			0	5.9	210	246389.857	49277.9715	No	0	2	8.1	12668.778	2533.75568	No	-	-	-	-
9	Mercury			0	0	2.1	2463.899	492.779715	No	0	0	0.025	39.101	7.82023357	No	4.24E-02	6.64E+01	1.33E+01	No
10	Nickel			0	8.2	74	86823.093	17364.6185	No	0	2.8	8.2	12825.183	2565.03681	No	9.93E+02	1.55E+06	3.11E+05	No
11	Selenium			0	13	290	340252.660	68050.532	No	0	13	71	111047.317	22209.4633	No	2.43E+03	3.80E+06	7.60E+05	No
12	Silver			0	0	1.9	2229.242	445.848313	No	0	0	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	2.74E-01	4.28E+02	8.56E+01	No
14	Zinc			0	0	90	105595.653	21119.1306	No	0	0	81	126687.784	25337.5568	No	1.49E+04	2.33E+07	4.66E+06	No
15	Cyanide			0	0	0.13	152.527	30.5054109	No	0	0	0.001	1.564	0.31280934	No	9.33E+03	1.46E+07	2.92E+06	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
18	Acrolein			0	0	-	-	-	-	0	0	-	-	-	-	5.43E+00	8.49E+03	1.70E+03	No
19	Acrylonitrile		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.44E-01	2.63E+03	5.25E+02	No
20	Aldrin		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.94E-05	5.36E-01	1.07E-01	No
21	Benzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.55E+01	2.82E+05	5.64E+04	No
22	Bromoform		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.88E+01	1.44E+06	2.87E+05	No
23	Carbon Tetrachloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.57E-01	1.75E+04	3.49E+03	No
24	Chlordane		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.73E-04	8.62E+00	1.72E+00	No
25	Clorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	9.06E+02	1.42E+06	2.83E+05	No
26	Chlorodibromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.41E+00	1.35E+05	2.70E+04	No
27	Chloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
28	2-Chloro-Ethylvinyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
29	ChloroForm		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.02E+02	1.86E+06	3.72E+05	No
30	4,4' - DDD		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.81E-04	3.31E+00	6.61E-01	No
31	4,4' - DDE		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E-04	2.33E+00	4.67E-01	No
32	4,4' - DDT		YES	0	0	0.13	152.527	30.5054109	No	0	0	0.001	1.564	0.31280934	No	1.28E-04	2.33E+00	4.67E-01	No
33	Dichlorobromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.00E+01	1.83E+05	3.66E+04	No
34	1, 1-Dichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
35	1, 2-Dichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.14E+01	3.90E+05	7.79E+04	No
36	Trans-1, 2-Dichloro-Ethylene			0	0	-	-	-	-	0	0	-	-	-	-	5.91E+03	9.24E+06	1.85E+06	No
37	1, 1-Dichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.17E+03	7.60E+07	1.52E+07	No
38	1, 2-Dichloropropane			0	0	-	-	-	-	0	0	-	-	-	-	8.49E+00	1.33E+04	2.66E+03	No
39	1, 3-Dichloro-Propylene			0	0	-	-	-	-	0	0	-	-	-	-	1.23E+01	1.92E+04	3.84E+03	No
40	Dieldrin		YES	0	0	0.71	833.032	166.606475	No	0	0	0.0019	2.972	0.59433775	No	3.12E-05	5.69E-01	1.14E-01	No
41	Ethylbenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.24E+03	1.95E+06	3.89E+05	No
42	Methyl Bromide			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+02	1.36E+06	2.72E+05	No
43	Methyl Chloride			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
44	Methylene Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.46E+02	6.30E+06	1.26E+06	No
45	1, 1, 2, 2-Tetrachloro-Ethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.33E+00	4.25E+04	8.51E+03	No
46	Tetrachloro-Ethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	3.50E+04	6.99E+03	No
47	Toluene			0	0	-	-	-	-	0	0	-	-	-	-	8.72E+03	1.36E+07	2.73E+06	No
48	Toxaphene		YES	0	0	0.21	246.390	49.2779715	No	0	0	0.0002	0.313	0.06256187	No	1.62E-04	2.95E+00	5.90E-01	No
49	Tributyltin (TBT)		YES	0	0	0.42	492.780	98.555943	No	0	0	0.0074	11.574	2.31478914	No	-	-	-	-
50	1, 1, 1-Trichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
51	1, 1, 2-Trichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.10E+00	1.66E+05	3.32E+04	No
52	Trichlorethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.75E+01	3.19E+05	6.37E+04	No
53	Vinyl Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.42E+00	2.60E+04	5.19E+03	No
54	P-Chloro-M-Cresol			0	0	13	15252.705	3050.54109	No	0	0	7.9	12355.969	2471.19381	No	-	-	-	-
55	2-Chlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+01	1.36E+05	2.72E+04	No
56	2, 4-Dichlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	1.72E+02	2.69E+05	5.38E+04	No
57	2, 4-Dimethylphenol			0	0	-	-	-	-	0	0	-	-	-	-	4.98E+02	7.78E+05	1.56E+05	No
58	4, 6-Dinitro-O-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
59	2, 4-Dinitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	4.87E+06	9.73E+05	No
60	4,6-Dinitro-2-methylphenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.65E+02	3.02E+06	6.03E+05	No
61	Dioxin (2,3,7,8-TCDD)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.67E-08	4.86E-04	9.72E-05	No
62	2-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
63	4-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
64	Pentachlorophenol		YES	0	0	13	15252.705	3050.54109	No	0	0	7.9	12355.969	2471.19381	No	1.77E+00	3.22E+04	6.45E+03	No
65	Phenol			0	0	-	-	-	-	0	0	-	-	-	-	5.00E+05	7.82E+08	1.56E+08	No
66	2, 4, 6-Trichlorophenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.41E+00	2.58E+04	5.16E+03	No
67	Acenaphthene			0	0	-	-	-	-	0	0	-	-	-	-	5.79E+02	9.05E+05	1.81E+05	No
68	Acenaphthylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
69	Anthracene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+04	3.65E+07	7.30E+06	No
70	Benzidine			0	0	-	-	-	-	0	0	-	-	-	-	1.16E-04	1.81E-01	3.63E-02	No
71	Benzo(A)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.94E+02	3.88E+01	No
72	Benzo(A)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.94E+02	3.88E+01	No
73	3, 4 Benzo-Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.67E+01	3.33E+00	No
74	Benzo(GHI)Perylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
75	Benzo(K)Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.67E+01	3.33E+00	No
76	Bis (2-Chloroethoxy) Methane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
77	Bis (2-Chloroethyl)-Ether		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.07E-01	5.60E+03	1.12E+03	No
78	Bis (2-Chloroiso-Propyl) Ether			0	0	-	-	-	-	0	0	-	-	-	-	3.78E+04	5.91E+07	1.18E+07	No
79	Bis (2-Ethylhexyl) Phthalate		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E+00	2.34E+04	4.67E+03	No
80	4-Bromophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
81	Butyl Benzyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	1.13E+03	1.76E+06	3.53E+05	No
82	2-Chloronaphthalene			0	0	-	-	-	-	0	0	-	-	-	-	9.24E+02	1.45E+06	2.89E+05	No
83	4-Chlorophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
84	Chrysene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.94E+02	3.88E+01	No
85	Di-N-Butyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.62E+03	4.10E+06	8.20E+05	No
86	Di-N-Octyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
87	Dibenzo(A,H)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.94E+02	3.88E+01	No
88	1, 2-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	7.55E+02	1.18E+06	2.36E+05	No
89	1, 3-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	5.62E+02	8.80E+05	1.76E+05	No
90	1, 4-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.12E+02	1.76E+05	3.52E+04	No
91	3, 3-Dichlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.66E-02	3.03E+02	6.06E+01	No
92	Diethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.56E+04	4.00E+07	8.00E+06	No
93	Dimethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	6.48E+05	1.01E+09	2.03E+08	No
94	2, 4-Dinitrotoluene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.98E+00	3.61E+04	7.22E+03	No
95	2, 6-Dinitrotoluene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
96	1,2-Diphenylhydrazine			0	0	-	-	-	-	0	0	-	-	-	-	1.17E-01	1.83E+02	3.66E+01	No
97	Endosulfan (alpha)		YES	0	0	0.034	39.892	7.97833824	No	0	0	0.0087	13.607	2.72144128	No	5.19E+01	9.45E+05	1.89E+05	No
98	Endosulfan (beta)		YES	0	0	0.034	39.892	7.97833824	No	0	0	0.0087	13.607	2.72144128	No	5.19E+01	9.45E+05	1.89E+05	No
99	Endosulfan sulfate		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.19E+01	9.45E+05	1.89E+05	No
100	Endrin		YES	0	0	0.037	43.412	8.68230926	No	0	0	0.0023	3.597	0.71946149	No	3.53E-02	6.43E+02	1.29E+02	No
101	Endrin Aldeyhde		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E+00	3.21E+04	6.43E+03	No
102	Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	8.12E+01	1.27E+05	2.54E+04	No

Facility Name: **Arkema**

NPDES No.: **AL0042447**

$Q_d*C_d + Q_{d2}*C_{d2} + Q_s*C_s = Q_r*C_r$

ID	Pollutant	Carcinogen "yes"	Type	Background from upstream source (C_{d2}) Daily Max ug/l	Background from upstream source (C_{d2}) Monthly Ave ug/l	Background Instream (C_s) Daily Max ug/l	Background Instream (C_s) Monthly Ave ug/l	Enter Max Daily Discharge as reported by Applicant (C_{dmax}) ug/l	Enter Avg Daily Discharge as reported by Applicant (C_{davg}) ug/l	Partition Coefficient (Stream / Lake)
1	Antimony		Metals	0	0	0	0	1300	420	-
2	**Arsenic*,****	YES	Metals	0	0	0	0	7.8	7.8	0.574
3	Beryllium		Metals	0	0	0	0	0	0	-
4	Cadmium**		Metals	0	0	0	0	0	0	0.236
5	Chromium / Chromium III**		Metals	0	0	0	0	0	0	0.210
6	Chromium / Chromium VI**		Metals	0	0	0	0	0	0	
7	Copper**		Metals	0	0	0	0	0	0	0.388
8	Lead**		Metals	0	0	0	0	5.9	2	0.467
9	Mercury**		Metals	0	0	0	0	0	0	0.302
10	Nickel**		Metals	0	0	0	0	8.2	2.8	0.505
11	Selenium		Metals	0	0	0	0	13	13	-
12	Silver		Metals	0	0	0	0	0	0	-
13	Thallium		Metals	0	0	0	0	0	0	-
14	Zinc**		Metals	0	0	0	0	0	0	0.330
15	Cyanide		Metals	0	0	0	0	0	0	-
16	Total Phenolic Compounds		Metals	0	0	0	0	0	0	-
17	Hardness (As CaCO3)		Metals	0	0	0	0	0	0	-
18	Acrolein		VOC	0	0	0	0	0	0	-
19	**Acrylonitrile***	YES	VOC	0	0	0	0	0	0	-
20	**Aldrin**	YES	VOC	0	0	0	0	0	0	-
21	**Benzene***	YES	VOC	0	0	0	0	0	0	-
22	**Bromoform***	YES	VOC	0	0	0	0	0	0	-
23	**Carbon Tetrachloride***	YES	VOC	0	0	0	0	0	0	-
24	**Chlordane**	YES	VOC	0	0	0	0	0	0	-
25	Clorobenzene		VOC	0	0	0	0	0	0	-
26	**Chlorodibromo-Methane***	YES	VOC	0	0	0	0	0	0	-
27	Chloroethane		VOC	0	0	0	0	0	0	-
28	2-Chloro-Ethylvinyl Ether		VOC	0	0	0	0	0	0	-
29	**Chloroform***	YES	VOC	0	0	0	0	0	0	-
30	**4,4'-DDD**	YES	VOC	0	0	0	0	0	0	-
31	**4,4'-DDE**	YES	VOC	0	0	0	0	0	0	-
32	**4,4'-DDT**	YES	VOC	0	0	0	0	0	0	-
33	**Dichlorobromo-Methane***	YES	VOC	0	0	0	0	0	0	-
34	1, 1-Dichloroethane		VOC	0	0	0	0	0	0	-
35	**1, 2-Dichloroethane***	YES	VOC	0	0	0	0	0	0	-
36	Trans-1, 2-Dichloro-Ethylene		VOC	0	0	0	0	0	0	-
37	**1, 1-Dichloroethylene***	YES	VOC	0	0	0	0	0	0	-
38	1, 2-Dichloropropane		VOC	0	0	0	0	0	0	-
39	1, 3-Dichloro-Propylene		VOC	0	0	0	0	0	0	-
40	**Dieldrin**	YES	VOC	0	0	0	0	0	0	-
41	Ethylbenzene		VOC	0	0	0	0	0	0	-
42	Methyl Bromide		VOC	0	0	0	0	0	0	-
43	Methyl Chloride		VOC	0	0	0	0	0	0	-
44	**Methylene Chloride***	YES	VOC	0	0	0	0	0	0	-
45	**1, 1, 2, 2-Tetrachloro-Ethane***	YES	VOC	0	0	0	0	0	0	-
46	**Tetrachloro-Ethylene***	YES	VOC	0	0	0	0	0	0	-
47	Toluene		VOC	0	0	0	0	0	0	-
48	**Toxaphene**	YES	VOC	0	0	0	0	0	0	-
49	**Tributyltine (TBT)**	YES	VOC	0	0	0	0	0	0	-
50	1, 1, 1-Trichloroethane		VOC	0	0	0	0	0	0	-
51	**1, 1, 2-Trichloroethane***	YES	VOC	0	0	0	0	0	0	-
52	**Trichlorethylene***	YES	VOC	0	0	0	0	0	0	-
53	**Vinyl Chloride***	YES	VOC	0	0	0	0	0	0	-
54	P-Chloro-M-Cresol		Acids	0	0	0	0	0	0	-
55	2-Chlorophenol		Acids	0	0	0	0	0	0	-
56	2, 4-Dichlorophenol		Acids	0	0	0	0	0	0	-
57	2, 4-Dimethylphenol		Acids	0	0	0	0	0	0	-
58	4, 6-Dinitro-O-Cresol		Acids	0	0	0	0	0	0	-
59	2, 4-Dinitrophenol		Acids	0	0	0	0	0	0	-
60	**4,6-Dintro-2-methylophenol**	YES	Acids	0	0	0	0	0	0	-
61	**Dioxin (2,3,7,8-TCDD)**	YES	Acids	0	0	0	0	0	0	-
62	2-Nitrophenol		Acids	0	0	0	0	0	0	-
63	4-Nitrophenol		Acids	0	0	0	0	0	0	-
64	**Pentachlorophenol***	YES	Acids	0	0	0	0	0	0	-
65	Phenol		Acids	0	0	0	0	0	0	-
66	**2, 4, 6-Trichlorophenol***	YES	Acids	0	0	0	0	0	0	-
67	Acenaphthene		Bases	0	0	0	0	0	0	-
68	Acenaphthylene		Bases	0	0	0	0	0	0	-
69	Anthracene		Bases	0	0	0	0	0	0	-
70	Benzidine		Bases	0	0	0	0	0	0	-
71	**Benzo(A)Anthracene***	YES	Bases	0	0	0	0	0	0	-
72	**Benzo(A)Pyrene***	YES	Bases	0	0	0	0	0	0	-
73	3, 4 Benzo-Fluoranthene		Bases	0	0	0	0	0	0	-
74	Benzo(GHI)Perylene		Bases	0	0	0	0	0	0	-
75	Benzo(K)Fluoranthene		Bases	0	0	0	0	0	0	-
76	Bis (2-Chloroethoxy) Methane		Bases	0	0	0	0	0	0	-
77	**Bis (2-Chloroethyl)-Ether***	YES	Bases	0	0	0	0	0	0	-
78	Bis (2-Chloroiso-Propyl) Ether		Bases	0	0	0	0	0	0	-
79	**Bis (2-Ethylhexyl) Phthalate***	YES	Bases	0	0	0	0	0	0	-
80	4-Bromophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
81	Butyl Benzyl Phthalate		Bases	0	0	0	0	0	0	-
82	2-Chloronaphthalene		Bases	0	0	0	0	0	0	-
83	4-Chlorophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
84	**Chrysene***	YES	Bases	0	0	0	0	0	0	-
85	Di-N-Butyl Phthalate		Bases	0	0	0	0	0	0	-
86	Di-N-Octyl Phthalate		Bases	0	0	0	0	0	0	-
87	**Dibenzo(A,H)Anthracene***	YES	Bases	0	0	0	0	0	0	-
88	1, 2-Dichlorobenzene		Bases	0	0	0	0	0	0	-
89	1, 3-Dichlorobenzene		Bases	0	0	0	0	0	0	-
90	1, 4-Dichlorobenzene		Bases	0	0	0	0	0	0	-
91	**3, 3-Dichlorobenzene***	YES	Bases	0	0	0	0	0	0	-
92	Diethyl Phthalate		Bases	0	0	0	0	0	0	-
93	Dimethyl Phthalate		Bases	0	0	0	0	0	0	-
94	**2, 4-Dinitrotoluene***	YES	Bases	0	0	0	0	0	0	-
95	2, 6-Dinitrotoluene		Bases	0	0	0	0	0	0	-
96	1,2-Diphenylhydrazine		Bases	0	0	0	0	0	0	-
97	**Endosulfan (alpha)**	YES	Bases	0	0	0	0	0	0	-
98	**Endosulfan (beta)**	YES	Bases	0	0	0	0	0	0	-
99	**Endosulfan sulfate**	YES	Bases	0	0	0	0	0	0	-
100	**Endrin**	YES	Bases	0	0	0	0	0	0	
101	**Endrin Aldeyhide**	YES	Bases	0	0	0	0	0	0	-
102	Fluoranthene		Bases	0	0	0	0	0	0	-
103	Fluorene		Bases	0	0	0	0	0	0	-
104	Heptochlor	YES	Bases	0	0	0	0	0	0	-
105	Heptachlor Epoxide	YES	Bases	0	0	0	0	0	0	-
106	**Hexachlorobenzene***	YES	Bases	0	0	0	0	0	0	
107	**Hexachlorobutadiene***	YES	Bases	0	0	0	0	0	0	-
108	**Hexachlorocyclohexan (alpa)**	YES	Bases	0	0	0	0	0	0	-
109	**Hexachlorocyclohexan (beta)**	YES	Bases	0	0	0	0	0	0	-
110	**Hexachlorocyclohexan (gamme)**	YES	Bases	0	0	0	0	0	0	-
111	HexachlorocycloPentadiene		Bases	0	0	0	0	0	0	-
112	Hexachloroethane		Bases	0	0	0	0	0	0	-
113	**Indeno(1, 2, 3-CK)Pyrene***	YES	Bases	0	0	0	0	0	0	-
114	Isophorone		Bases	0	0	0	0	0	0	-
115	Naphthalene		Bases	0	0	0	0	0	0	-
116	Nitrobenzene		Bases	0	0	0	0	0	0	-
117	**N-Nitrosodi-N-Propylamine***	YES	Bases	0	0	0	0	0	0	-
118	**N-Nitrosodi-N-Methylamine***	YES	Bases	0	0	0	0	0	0	-
119	**N-Nitrosodi-N-Phenylamine***	YES	Bases	0	0	0	0	0	0	-
120	**PCB-1016**	YES	Bases	0	0	0	0	0	0	-
121	**PCB-1221**	YES	Bases	0	0	0	0	0	0	-
122	**PCB-1232**	YES	Bases	0	0	0	0	0	0	-
123	**PCB-1242**	YES	Bases	0	0	0	0	0	0	-
124	**PCB-1248**	YES	Bases	0	0	0	0	0	0	-
125	**PCB-1254**	YES	Bases	0	0	0	0	0	0	-
126	**PCB-1260**	YES	Bases	0	0	0	0	0	0	
127	Phenanthrene		Bases	0	0	0	0	0	0	-
128	Pyrene		Bases	0	0	0	0	0	0	-
129	1, 2, 4-Trichlorobenzene		Bases	0	0	0	0	0	0	-

0.864	Enter Q_d = wastewater discharge flow from facility (MGD)
1.336806	Q_r = wastewater discharge flow (cfs) (this value is calculated from the MGD)
0	Enter or estimated, Qd2 = background stream flow from upstream source (cfs)
2066.49	Enter 7Q10, Q_s = background stream flow in cfs above point of discharge
1567.118	Enter or estimated, 1Q10, Q_s = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of 7Q10)
0	Enter flow from upstream discharge Qd2 = background stream flow in MGD above point of discharge
24370.38	Enter Mean Annual Flow, Q_s = background stream flow in cfs above point of discharge
0	Enter 7Q2, Q_s = background stream flow in cfs above point of discharge (For LWF class streams)
Enter in Left	Enter C_s = background in-stream pollutant concentration in µg/l (assuming this is zero "0" unless there is data)
Q_s +Qd2+Q_d	Q_r = resultant in-stream flow, after discharge
Calculated on other	C_r = resultant in-stream pollutant concentration in µg/l in the stream (after complete mixing occurs)
50	Enter, Background Hardness above point of discharge (assumed 50 South of Birmingham and 100 North of Birmingham)
7.00 s.u.	Enter, Background pH above point of discharge
YES	Enter, Is discharge to a stream? "YES" Other option would be to a Lake. (This changes the partition coefficients for the metals)

** Using Partition Coefficients

September 1, 2015

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PERMIT APPLICATION SUPPLEMENTARY INFORMATION

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
WATER DIVISION – INDUSTRIAL / MINING PERMIT SECTION
POST OFFICE BOX 301463
MONTGOMERY, ALABAMA 36130-1463

INSTRUCTIONS: APPLICATIONS SHOULD BE TYPED OR PRINTED IN INK AND SUBMITTED TO THE DEPARTMENT IN DUPLICATE. IF INSUFFICIENT SPACE IS AVAILABLE TO ADDRESS ANY ITEM, PLEASE CONTINUE ON AN ATTACHED SHEET OF PAPER. PLEASE MARK N/A IN THE APPROPRIATE BOX WHEN AN ITEM IS NON-APPLICABLE TO THE APPLICANT.

PURPOSE OF THIS APPLICATION

- ☐ INITIAL PERMIT APPLICATION FOR NEW FACILITY
- ☐ INITIAL PERMIT APPLICATION FOR EXISTING FACILITY
- ☐ MODIFICATION OF EXISTING PERMIT
- ☑ REISSUANCE OF EXISTING PERMIT
- ☐ REVOCATION & REISSUANCE OF EXISTING PERMIT

1. Facility Name: Arkema Inc.

   a. Operator Name: Arkema Inc.

   b. Is the operator identified in 1.a., the owner of the facility? Yes ☑ No ☐
   If no, provide the name and address of the operator and submit information indicating the operator's scope of responsibility for the facility.

2. NPDES Permit Number AL 0 0 4 2 4 4 7

3. SID Permit Number (if applicable): IU ___ ___ - ___ ___ - ___ ___ ___ ___ ___

4. NPDES General Permit Number (if applicable) ALG ___ ___ ___ ___ ___ ___ ___

5. Facility Physical Location: (Attach a map with location marked; street, route no. or other specific identifier)

   Street: 13755 Highway 43 North

   City: Axis County: Mobile State: Alabama Zip: 36505

   Facility (Front Gate) Latitude: 30°58'45" Longitude: 88°01'42"

6. Facility Mailing Address (Street or Post Office Box): 13755 Highway 43 North

   City: Axis State: AL Zip: 36505

7. Responsible Official (as described on page 13 of this application):

Name and Title: John Lakenan, Plant Manager

Address: 13755 Highway 43 North

City: Axis State: AL Zip: 36505

Phone Number: (251) 829-9421

EMAIL Address: john.lakenan@arkema.com

8. Designated Facility Contact:

Name and Title: Michelle Haney, Environmental Manager

Phone Number: (251) 829-4314

EMAIL Address: michelle.haney@arkema.com

9. Designated Discharge Monitoring Report Contact:

Name and Title: Michelle Haney, Environmental Manager

Phone Number: (251) 829-4314

EMAIL Address: michelle.haney@arkema.com

10. Type of Business Entity:

☑ Corporation ☐ General Partnership ☐ Limited Partnership

☐ Sole Proprietorship ☐ Other (Please Specify) _____

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

a) Location of Incorporation:

Address: 900 First Avenue

City: King of Prussia County: Montgomery State: PA Zip: 19406

b) Parent Corporation of Applicant:

Name: Arkema Inc.

Address: 900 First Avenue

City: King of Prussia State: PA Zip: 19406

c) Subsidiary Corporation(s) of Applicant:

Name: n/a

Address: _____

City: _____ State: _____ Zip: _____

d) Corporate Officers:

Name: Bernard Roche, President & CEO

Address: 900 First Avenue

City: King of Prussia State: PA Zip: 19406

Name: n/a

Address: _____

City: _____ State: _____ Zip: _____

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

Name: n/a

Address: _____

City: _____ State: _____ Zip: _____

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

Name: n/a

Address: _____

City: _____ State: _____ Zip: _____

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

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

Name: n/a

Address: _____

City: _____ State: _____ Zip: _____

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

Permit Name	Permit Number	Held By
NPDES	AL0042447	Arkema Inc.
Title V Air Operating	503-5017	Arkema Inc.
RCRA	ALD000827154	Arkema Inc.

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

Facility Name	Permit Number	Type of Action	Date of Action
n/a			

SECTION B – BUSINESS ACTIVITY

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

a. 2869

b. 2821

c. 2819

d. _____

e. _____

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

Industrial Categories

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

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

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

The plant is engaged in the production of tin tetrachloride, organotin compounds, thioglycolic acid and plastic additives/impact modifiers.

SECTION C – WASTEWATER DISCHARGE INFORMATION

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

1. **For Non-Categorical Users Only**: Provide wastewater flows for each of the processes or proposed processes. Using the process flow schematic (Figure 1, pg 14), enter the description that corresponds to each process. [New facilities should provide estimates for each discharge.]

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

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

a. Number of batch discharges: _____ per day

b. Average discharge per batch: _____ (GPD)

c. Time of batch discharges _____ at _____
(days of week) (hours of day)

d. Flow rate: _____ gallons/minute

e. Percent of total discharge: _____

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

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

[ ] Yes

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

2a.

Regulated Process	Applicable Category	Applicable Subpart	Type of Discharge Flow (batch, continuous, intermittent)
see attachment - pg 1			

2b.

Process Description	Last 12 Months (gals/day) Highest Month Average*	Highest Flow Year of Last 5 (gals/day) Monthly Average*	Discharge Type (batch, continuous, intermittent)
see attachment - pg 1			

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

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

a. Number of batch discharges: n/a per day

b. Average discharge per batch: n/a (GPD)

c. Time of batch discharges n/a (days of week) at _____ (hours of day)

d. Flow rate: n/a gallons/minute

Percent of total discharge: n/a

2c.

Non categorical Process Description	Last 12 Months (gals/day) Highest Month Avg. Flow	Highest Flow Year of Last 5 (gals/day) Monthly Avg. Flow	Discharge Type (batch, continuous, intermittent)
see attachment pg - 1			

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

a. Number of batch discharges: n/a per day

b. Average discharge per batch: n/a (GPD)

c. Time of batch discharges n/a (days of week) at _____ (hours of day)

d. Flow rate: n/a gallons/minute

Percent of total discharge: n/a

2d.

Non-Process Discharges (e.g. non-contact cooling water)	Last 12 Months (gals/day) Highest Month Avg. Flow	Highest Flow Year of Last 5 (gals/day) Monthly Avg. Flow
non-process stormwater flows	69,120	69,120

All Applicants must complete Questions 3 – 5.

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

Flow Metering	Yes	✓	No	___	N/A ___
Sampling Equipment	Yes	✓	No	___	N/A ___

If so, please indicate the present or future location of this equipment on the sewer schematic and describe the equipment below:

continuous flow metering installed on DSN 01A (flume) and DSN011 (outfall to river)

composite sampler installed on DSN 01A and DSN 011 to comply with permit

4. Are any process changes or expansions planned during the next three years that could alter wastewater volumes or characteristics? Yes ☐ No ☑ (If no, skip Question 5)

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

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

Trade Name	Chemical Composition
see attachment - pg 2	

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

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

SECTION D – WATER SUPPLY

Water Sources (check as many as are applicable):

[✓] Private Well
[✓] Municipal Water Utility (Specify City):
[ ] Surface Water
[ ] Other (Specify): _____

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

City: see att *MGD Well: see att *MGD Well Depth: ____ Ft. Latitude: _____ Longitude: _____

Surface Intake Volume: _____*MGD Intake Elevation in Relation to Bottom _____Ft.

Intake Elevation: _____ Ft. Latitude: _____ Longitude: _____

Name of Surface Water Source: n/a

*** MGD – Million Gallons per Day**

Cooling Water Intake Structure Information

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

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

   a) Name of Provider n/a b)Location of Provider _____

   c) Latitude: _____ Longitude: _____

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

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

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

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

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

6. Is the cooling water used in a once-through or closed cycle cooling system? Yes [ ] No [ ]

7. When was the intake installed?
   (Please provide dates for all major construction/installation of intake components including screens)

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

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

10. How is the intake operated? (e.g., continuously, intermittently, batch)
11. What is the mesh size of the screen on your intake?
12. What is the intake screen flow-through area?
13. What is the through screen design intake flow velocity? _____ft/sec
14. What is the mechanism for cleaning the screen? (e.g., does it rotate for cleaning)
15. Do you have any additional fish detraction technology on your intake? Yes ☐ No ☐
16. Have there been any studies to determine the impact of the intake on aquatic organisms? Yes ☐ No ☐ (If yes please provide.)
17. Attach a site map showing the location of the water intake in relation to the facility, shoreline, water depth, etc.

SECTION E – WASTE STORAGE AND DISPOSAL INFORMATION

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

Description of Waste	Description of Storage Location
n/a	

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

Description of Waste	Quantity (lbs/day)	Disposal Method*
Sludges (biological treatment)	+/- 50,000	Off-site Landfill (Chastang Landfill)
Sludges (organotin treatment)	+/- 2700	Off-site Reclamation (PMC Organometallix)

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

SECTION F – COASTAL ZONE INFORMATION

Is the discharge(s) located within 10-foot elevation of Mobile or Baldwin County?

Yes [✓] No [ ] If yes, then complete items A through M below:

	YES	NO
A. Does the project require new construction?	[ ]	[✓]
B. Will the project be a source of new air emissions?	[ ]	[✓]
C. Does the project involve dredging and/or filling?	[ ]	[✓]
Has the Corps of Engineers (COE) permit been received?	[ ]	[✓]
Corps Project Number _____		
D. Does the project involve wetlands and/or submersed grassbeds?	[ ]	[✓]
E. Are oyster reefs located near the project site? (Include a map showing project and discharge location with respect to oyster reefs)	[ ]	[✓]
F. Does the project involve the siting, construction and operation of an energy facility as defined in ADEM Admin. Code R. 335-8-1-.02(bb)?	[ ]	[✓]
G. Does the project involve shoreline erosion mitigation?	[ ]	[✓]
H. Does the project involve construction on beaches and dunes?	[ ]	[✓]
I. Will the project interfere with public access to coastal waters?	[ ]	[✓]
J. Does the project lie within the 100-year floodplain?	[ ]	[✓]
K. Does the project involve the registration, sale, use, or application of pesticides?	[ ]	[✓]
L. Does the project propose to construct a new well or alter an existing well to pump more than 50 GPD?	[ ]	[✓]
M. Has the applicable permit been obtained?	[ ]	[✓]

SECTION G – ANTI-DEGRADATION EVALUATION

In accordance with 40 CFR 131.12 and the Alabama Department of Environmental Management Administrative Code, Section 335-6-10-.04 for antidegradation, the following information must be provided, if applicable. It is the applicant's responsibility to demonstrate the social and economic importance of the proposed activity. If further information is required to make this demonstration, attach additional sheets to the application.

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

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

   If yes, do not complete this section.

If no, and the discharge is to a Tier II waterbody as defined in ADEM Admin. Code r. 335-6-10-.12(4), complete questions A through F below and ADEM forms 311 and 313 (attached). Form 313 must be provided for each alternative considered technically viable.

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

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

n/a

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

n/a

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

n/a

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

n/a

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

n/a

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

n/a

SECTION H – EPA Application Forms

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

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

SECTION I – ENGINEERING REPORT/BMP PLAN REQUIREMENTS

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

SECTION J– RECEIVING WATERS

Receiving Water(s)	303(d) Segment? (Y / N)	Included in TMDL?* (Y / N)
Mobile River	Y	N
Cold Creek	Y	N
un named tributary to Cold Creek	N	N

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

SECTION K – APPLICATION CERTIFICATION

THE INFORMATION CONTAINED IN THIS FORM MUST BE CERTIFIED BY A RESPONSIBLE OFFICIAL AS DEFINED IN ADEM ADMINISTRATIVE RULE 335-6-6-.09 "SIGNATORIES TO PERMIT APPLICATIONS AND REPORTS" (SEE BELOW).

"I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

"I FURTHER CERTIFY UNDER PENALTY OF LAW THAT ALL ANALYSES REPORTED AS LESS THAN DETECTABLE IN THIS APPLICATION OR ATTACHMENTS THERETO WERE PERFORMED USING THE EPA APPROVED TEST METHOD HAVING THE LOWEST DETECTION LIMIT FOR THE SUBSTANCE TESTED."

SIGNATURE OF RESPONSIBLE OFFICIAL: _____ DATE SIGNED: _____

(TYPE OR PRINT)
NAME OF RESPONSIBLE OFFICIAL: John Lakenan

TITLE OF RESPONSIBLE OFFICIAL: Plant Manager

MAILING ADDRESS: 13755 Highway 43 North

CITY, STATE, ZIP: Axis, AL 36505 PHONE: 251-829-9421

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

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

SECTION J– RECEIVING WATERS

Receiving Water(s)	303(d) Segment? (Y / N)	Included in TMDL?* (Y / N)
Mobile River	Y	N
Cold Creek	Y	N
un named tributary to Cold Creek	N	N

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

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"I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

"I FURTHER CERTIFY UNDER PENALTY OF LAW THAT ALL ANALYSES REPORTED AS LESS THAN DETECTABLE IN THIS APPLICATION OR ATTACHMENTS THERETO WERE PERFORMED USING THE EPA APPROVED TEST METHOD HAVING THE LOWEST DETECTION LIMIT FOR THE SUBSTANCE TESTED."

SIGNATURE OF RESPONSIBLE OFFICIAL: John E. Lakenan DATE SIGNED: 4/2/14

(TYPE OR PRINT)
NAME OF RESPONSIBLE OFFICIAL: John Lakenan

TITLE OF RESPONSIBLE OFFICIAL: Plant Manager

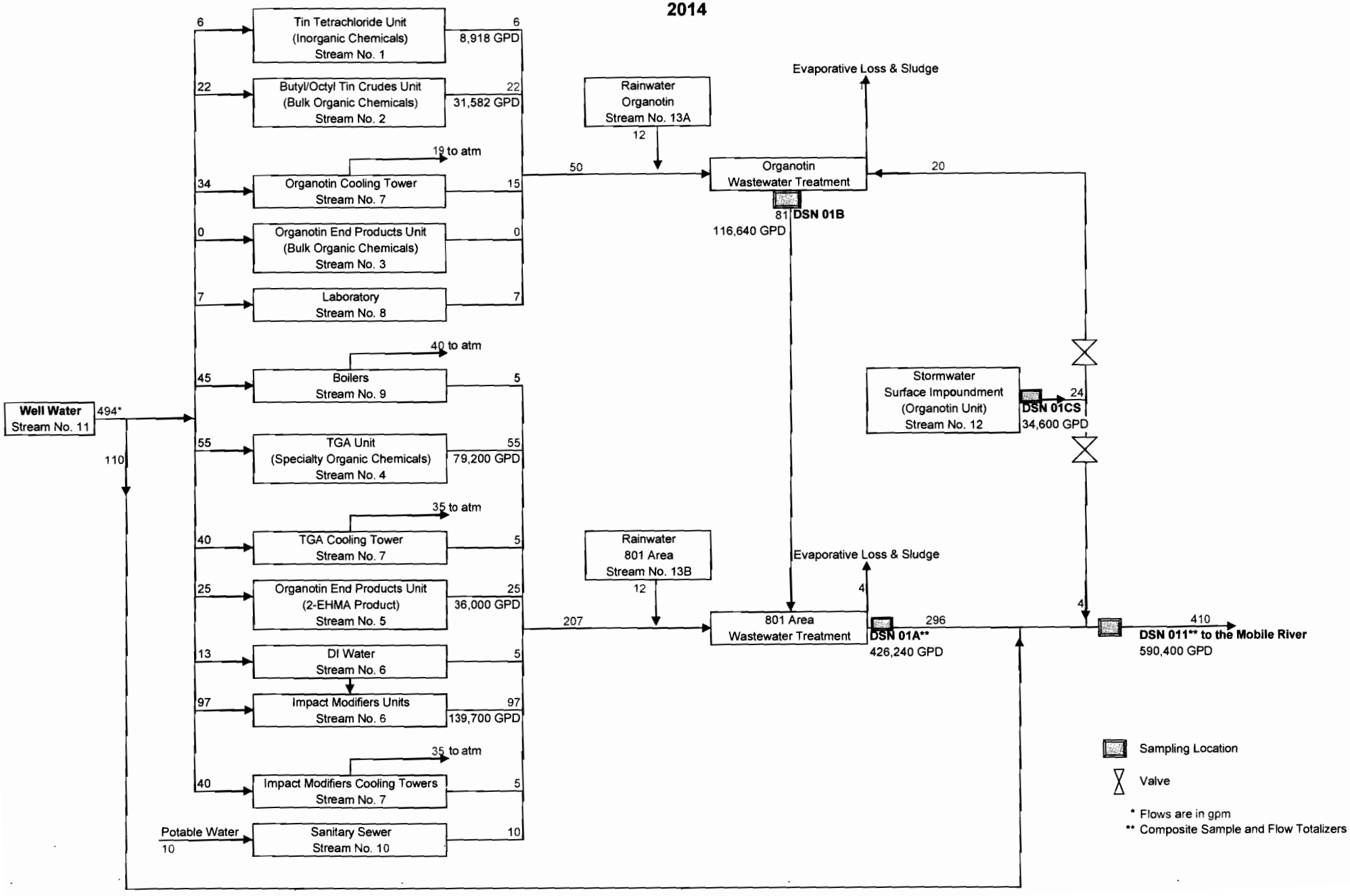
MAILING ADDRESS: 13755 Highway 43 North

CITY, STATE, ZIP: Axis, AL 36505 PHONE: 251-829-9421

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

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

NPDES Permit Application
Average Water Flow Diagram
2014



ATTACHMENT
ADEM Form 187

Section C – Wastewater Discharge Information

2a.

Regulated Process	Applicable Category	Applicable Subpart	Type of Discharge
Butyl/Octyl Crudes/ Organotin End Prod.	OCPSF	Bulk	Continuous
Thioglycolic Acid (TGA)/ 2-Ethyl Hexyl Mercapto Acetate (2-EHMA)	OCPSF	Specialty	Continuous
Impact Modifiers	OCPSF	Thermoplastic Resin	Continuous

2b. Process Description	Last 12 Months Highest Avg g/day	Highest flow of last 5 yrs, Mon.Avg, g/day	Type of Discharge
Butyl/Octyl Crudes/ Organotin End Prod.	31,582	31,680	Continuous
Thioglycolic Acid (TGA)/ 2-Ethyl Hexyl Mercapto Acetate (2-EHMA)	115,200	115,200	Continuous
Impact Modifiers	139,700	140,000	Continuous

2c. Non-Categorical Process Description	Last 12 Months Highest Avg g/day	Highest flow of last 5 yrs, Mon.Avg, g/day	Type of Discharge
Tin Tetrachloride	8,918	8,918	Continuous
Utility	50,400	50,400	Continuous
Sanitary	14,400	14,400	Continuous
Laboratory	10,080	10,080	Continuous

5. List of biocides and corrosion inhibitors

Trade Name	Chemical Composition	(1)	(2)	(3)	(4)	(5)
ANCOTREAT 1290	sodium polyacrylate and potassium salts	n/a	1090 lb/yr	cont.	non-det	n/a
MB-38 (biocide)	sodium hypchlorite	2.1 mg/L	1900 lb/yr	cont.	non-det	n/a
ANCOSTEAM 2021	cyclohexylamine	>80 mg/L	880 lb/yr	cont.	non-det	n/a
ANCOOL 3350	sodium and phosphoric compounds	n/a	1080 lb/yr	cont.	non-det	n/a

(1) 96-hr median tolerance limit for Ceriodaphnia dubia, if available
(2) quantities to be used
(3) frequencies of use
(4) Proposed discharge concentrations
(5) EPA registration number, if applicable

Section D – Water Supply

Municipal Water (Mount Vernon Water): 0.009 MGD

Private Wells:

Well No.1: 0.432 MGD	Well Depth: 96 Ft.	Lat: 30°58'52"	Long: -88°01'47"
Well No.2: 0.432 MGD	Well Depth: 94 Ft.	Lat: 30°58'50"	Long: -88°01'47"
Well No.3: 0.720 MGD	Well Depth: 94 Ft.	Lat: 30°58'54"	Long: -88°01'49"

Please print or type in the unshaded areas only.

Form Approved. OMB No. 2040-0086.

FORM 1 GENERAL

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER: S F AL0042447 T/A C D

LABEL ITEMS	
I.	EPA I.D. NUMBER
III.	FACILITY NAME
V.	FACILITY MAILING ADDRESS
VI.	FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully, if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

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

SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)		X		B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.**? (FORM 2B)		X	
	16	17	18		19	20	21
C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)	X		X	D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.**? (FORM 2D)		X	
	22	23	24		25	26	27
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)		X		F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
	28	29	30		31	32	33
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
	34	35	36		37	38	39
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)		X	
	40	41	42		43	44	45

III. NAME OF FACILITY

1 SKIP: Arkema Inc.

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2 Haney, Michelle Environmental Manager	(251) 829-4314

V. FACILTY MAILING ADDRESS

A. STREET OR P.O. BOX: 3 13755 Highway 43 North

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 Axis	AL	36505

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER: 5 13755 Highway 43 North

B. COUNTY NAME: Mobile

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
6 Axis	AL	36505	

CONTINUED FROM THE FRONT

VII. SIC CODES *(4-digit, in order of priority)*

A. FIRST	B. SECOND
2869 *(specify)* Industrial Organic Chemicals	2821 *(specify)* Manufacturing -Plastic Materials & Resins
C. THIRD	**D. FOURTH**
2819 *(specify)* Industrial Inorganic Chemicals	*(specify)*

VIII. OPERATOR INFORMATION

A. NAME

Arkema Incorporated

B. Is the name listed in Item VIII-A also the owner? ☑ YES ☐ NO

C. STATUS OF OPERATOR *(Enter the appropriate letter into the answer box: if "Other," specify.)*

F = FEDERAL
S = STATE
P = PRIVATE
M = PUBLIC *(other than federal or state)*
O = OTHER *(specify)*

P

(specify)

D. PHONE *(area code & no.)*

A (251) 829-7421

E. STREET OR P.O. BOX

13755 Highway 43 North

F. CITY OR TOWN

Axis

G. STATE

AL

H. ZIP CODE

36505

IX. INDIAN LAND

Is the facility located on Indian lands? ☐ YES ☑ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES *(Discharges to Surface Water)*	AL0042447	**D. PSD** *(Air Emissions from Proposed Sources)*	P
B. UIC *(Underground Injection of Fluids)*	U	**E. OTHER** *(specify)*	*(specify)*
C. RCRA *(Hazardous Wastes)*	R ALD000827154	**E. OTHER** *(specify)*	*(specify)*

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS *(provide a brief description)*

This plant is engaged in the production of tin tetrachloride, organotin compounds, thioglycolic acid, and plastic additives/impact modifiers.

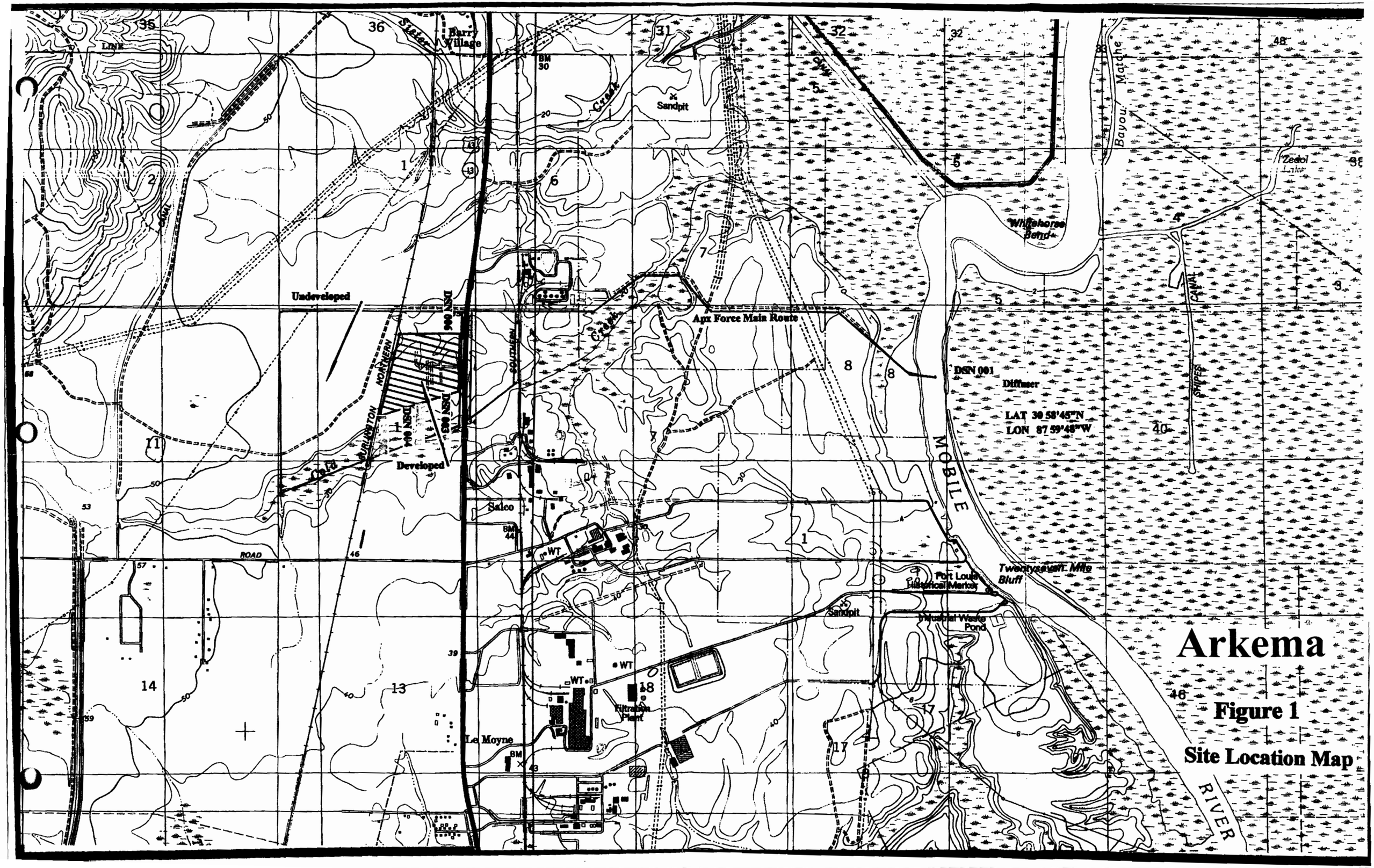
XIII. CERTIFICATION *(see instructions)*

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE *(type or print)*	B. SIGNATURE	C. DATE SIGNED
John Lakenan, Plant Manager	John E. Lakenan	4/2/14

COMMENTS FOR OFFICIAL USE ONLY

C



Arkema

Figure 1

Site Location Map

Please print or type in the unshaded areas only.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*): AL0042447

Form Approved.
OMB No. 2040-0086.
Approval expires 3-31-98.

FORM 2C NPDES

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS
Consolidated Permits Program

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	30.00	58.00	45.00	87.00	59.00	48.00	Mobile River

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (*e.g., for certain mining activities*), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUTFALL NO. (*list*)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
001	Organotin & Tintet Process	62 gpm	chemical precipitation	2	C
	Cooling Water	0.089 MGD	Chemical Oxidation	2	B
	Laboratory		Activated Sludge Biological Treatment	3	A
	Stormwater				
001	IM process,EHMA Process,TGA process	238 gpm			
	Cooling tower blowdown	0.343 MGD			
	De-ionization regeneration water		Activated Sludge biological Treatment	3	A
	sanitary wastewater				
001 (cont)	boiler blowdown				
	stormwater impoundment				
	stormwater				

OFFICIAL USE ONLY (*effluent guidelines sub-categories*)

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☐ YES (*complete the following table*) ☑ NO (*go to Section III*)

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

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☑ YES (*complete Item III-B*) ☐ NO (*go to Section IV*)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (*or other measure of operation*)?

☑ YES (*complete Item III-C*) ☐ NO (*go to Section IV*)

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

1. AVERAGE DAILY PRODUCTION			2. AFFECTED OUTFALLS (*list outfall numbers*)
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (*specify*)	
31,582	GPD	butyl/octyl crudes and organotin end products	DSN 001
115,200	GPD	TGA/ 2-EHMA Products	DSN 001
139,700	GPD	Impact Modifiers Products	DSN 001

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operations of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES (*complete the following table*) ☑ NO (*go to Item IV-B*)

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

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

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

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
ALD000827154

CONTINUED FROM PAGE 2

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided.
NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

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

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
Methyl methacrylate	raw material		
Xylene	raw material		
Styrene	raw material		

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

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

☐ YES (*list all such pollutants below*) ☑ NO (*go to Item VI-B*)

CONTINUED FROM THE FRONT

VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☑ YES (*identify the test(s) and describe their purposes below*) ☐ NO (*go to Section VIII*)

The plant conducts monthly biological tests for acute toxicity on a monthly basis for Outfall 001 to comply with the current NPDES permit conditions. The tests have all passed and the results of these tests are submitted with the montly Discharge Monitoring Reports.

VIII. CONTRACT ANALYSIS INFORMATION

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

☑ YES (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☐ NO (*go to Section IX*)

A. NAME	B. ADDRESS	C. TELEPHONE (*area code & no.*)	D. POLLUTANTS ANALYZED (*list*)
Test America Pensacola	3355 McLemore Drive, Pensacola, FL 32514	(850) 474-1001	All, Except BOD, TSS. pH, TOC, Ammonia-N
ENVIRON International Corporation	201 Summit View Drive, Suite 300 Brentwood, TN 37027	(615) 277-7570	Effluent Toxicity Testing

IX. CERTIFICATION

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

A. NAME & OFFICIAL TITLE (*type or print*)	B. PHONE NO. (*area code & no.*)
John Lakenan, Plant Manager	(251) 829-9421
C. SIGNATURE: John E. Lakenan	D. DATE SIGNED: 4/2/14

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

EPA I.D. NUMBER (*copy from Item 1 of Form 1*): AL0042447

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO. 001

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

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	5.7	56	n/a	n/a	1.55	5.6	155	mg/L	lb/day	n/a	n/a	n/a
b. Chemical Oxygen Demand (*COD*)	38	201	n/a	n/a	38	201	1	mg/L	lb/day	n/a	n/a	n/a
c. Total Organic Carbon (*TOC*)	8.0	33	n/a	n/a	4.1	20.0	347	mg/L	lb/day	n/a	n/a	n/a
d. Total Suspended Solids (*TSS*)	28	117	n/a	n/a	8.9	30.1	157	mg/L	lb/day	n/a	n/a	n/a
e. Ammonia (*as N*)	<0.5	n/a	n/a	n/a	<0.5	n/a	14	mg/L	n/a	n/a	n/a	n/a
f. Flow	VALUE 1.044		VALUE n/a		VALUE 0.590		365	MGD	n/a	VALUE n/a		n/a
g. Temperature (*winter*)	VALUE ambient		VALUE n/a		VALUE ambient		0	°C		VALUE n/a		n/a
h. Temperature (*summer*)	VALUE ambient		VALUE n/a		VALUE ambient		0	°C		VALUE n/a		n/a
i. pH	MINIMUM 6.3	MAXIMUM 7.6	MINIMUM n/a	MAXIMUM n/a			365	STANDARD UNITS				

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

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform	X		240	n/a	n/a	n/a	n/a	n/a	1	CFU	n/a	n/a	n/a	n/a
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (*as N*)	X		110	n/a	n/a	n/a	93	n/a	4	mg/L	n/a	n/a	n/a	n/a

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)	X		0.59	n/a	n/a	n/a	0.15	n/a	4	mg/L	n/a	n/a	n/a	n/a
h. Oil and Grease		X												
i. Phosphorus (as P), Total (7723-14-0)	X		2.10	n/a	n/a	n/a	1.22	n/a	4	mg/L	n/a	n/a	n/a	n/a
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (*as SO_4*) (14808-79-8)	X		710	n/a	n/a	n/a	372	n/a	12	mg/L	n/a	n/a	n/a	n/a
l. Sulfide (*as S*)		X												
m. Sulfite (*as SO_3*) (14265-45-3)		X												
n. Surfactants	X		<0.10	n/a	n/a	n/a	n/a	n/a	1	mg/L	n/a	n/a	n/a	n/a
o. Aluminum, Total (7429-90-5)		X												
p. Barium, Total (7440-39-3)		X												
q. Boron, Total (7440-42-8)		X												
r. Cobalt, Total (7440-48-4)		X												
s. Iron, Total (7439-89-6)		X												
t. Magnesium, Total (7439-95-4)	X		0.53	2.80	n/a	n/a	n/a	n/a	1	mg/L	lb/d	n/a	n/a	n/a
u. Molybdenum, Total (7439-98-7)		X												
v. Manganese, Total (7439-96-5)	X		0.69	3.65	n/a	n/a	n/a	n/a	1	mg/L	lb/d	n/a	n/a	n/a
w. Tin, Total (7440-31-5)	X		0.148	n/a	n/a	n/a	0.044	n/a	55	mg/L	n/a	n/a	n/a	n/a
x. Titanium, Total (7440-32-6)		X												

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER*
AL0042447	001

CONTINUED FROM PAGE 3 OF FORM 2-C

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

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X			1.3		n/a		0.42		4	mg/L		n/a		
2M. Arsenic, Total (7440-38-2)	X			0.0078	0.041	n/a		n/a		1	mg/L	lb/day	n/a		
3M. Beryllium, Total (7440-41-7)	X			<0.0030		n/a		n/a		1	mg/L		n/a		
4M. Cadmium, Total (7440-43-9)	X			<0.0050		n/a		n/a		1	mg/L		n/a		
5M. Chromium, Total (7440-47-3)	X			<0.010		n/a		<0.010		3	mg/L		n/a		
6M. Copper, Total (7440-50-8)	X			<0.020		n/a		<0.020		3	mg/L		n/a		
7M. Lead, Total (7439-92-1)	X			0.0059		n/a		0.0020		3	mg/L		n/a		
8M. Mercury, Total (7439-97-6)	X			<0.0002		n/a		n/a		1	mg/L		n/a		
9M. Nickel, Total (7440-02-0)	X			0.0082		n/a		0.0028		3	mg/L		n/a		
10M. Selenium, Total (7782-49-2)	X			0.013	0.069	n/a		n/a		1	mg/L	lb/day	n/a		
11M. Silver, Total (7440-22-4)	X			<0.0050		n/a		n/a		1	mg/L		n/a		
12M. Thallium, Total (7440-28-0)	X			<0.010		n/a		n/a		1	mg/L		n/a		
13M. Zinc, Total (7440-66-6)	X			<0.020		n/a		<0.020		3	mg/L		n/a		
14M. Cyanide, Total (57-12-5)	X			<0.010		n/a		<0.010		3	mg/L		n/a		
15M. Phenols, Total	X			<10		n/a		n/a		1	mg/L		n/a		
DIOXIN															
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X			<20		n/a		<20		3	ug/L		n/a		
2V. Acrylonitrile (107-13-1)	X			<20		n/a		<20		3	ug/L		n/a		
3V. Benzene (71-43-2)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
4V. Bis (*Chloro-methyl*) Ether (542-88-1)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
5V. Bromoform (75-25-2)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
6V. Carbon Tetrachloride (56-23-5)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
7V. Chlorobenzene (108-90-7)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
8V. Chlorodi-bromomethane (124-48-1)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
9V. Chloroethane (75-00-3)	X			<5.0		n/a		<5.0		3	ug/L		n/a		
10V. 2-Chloro-ethylvinyl Ether (110-75-8)	X			<10		n/a		<10		3	ug/L		n/a		
11V. Chloroform (67-66-3)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
12V. Dichloro-bromomethane (75-27-4)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
13V. Dichloro-difluoromethane (75-71-8)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
14V. 1,1-Dichloro-ethane (75-34-3)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
15V. 1,2-Dichloro-ethane (107-06-2)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
16V. 1,1-Dichloro-ethylene (75-35-4)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
17V. 1,2-Dichloro-propane (78-87-5)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
18V. 1,3-Dichloro-propylene (542-75-6)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
19V. Ethylbenzene (100-41-4)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
20V. Methyl Bromide (74-83-9)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
21V. Methyl Chloride (74-87-3)	X			<1.0		n/a		<1.0		3	ug/L		n/a		

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X			<5.0		n/a		<5.0		3	ug/L		n/a		
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
24V. Tetrachloroethylene (127-18-4)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
25V. Toluene (108-88-3)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
27V. 1,1,1-Trichloroethane (71-55-6)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
28V. 1,1,2-Trichloroethane (79-00-5)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
29V Trichloroethylene (79-01-6)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
30V. Trichlorofluoromethane (75-69-4)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
31V. Vinyl Chloride (75-01-4)	X			<1.0		n/a		<1.0		3	ug/L		n/a		
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X			<10		n/a		<10		3	ug/L		n/a		
2A. 2,4-Dichlorophenol (120-83-2)	X			<10		n/a		<10		3	ug/L		n/a		
3A. 2,4-Dimethylphenol (105-67-9)	X			<10		n/a		<10		3	ug/L		n/a		
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X			<50		n/a		<50		3	ug/L		n/a		
5A. 2,4-Dinitrophenol (51-28-5)	X			<50		n/a		<50		3	ug/L		n/a		
6A. 2-Nitrophenol (88-75-5)	X			<10		n/a		<10		3	ug/L		n/a		
7A. 4-Nitrophenol (100-02-7)	X			<50		n/a		<50		3	ug/L		n/a		
8A. P-Chloro-M-Cresol (59-50-7)	X			<10		n/a		<10		3	ug/L		n/a		
9A. Pentachlorophenol (87-86-5)	X			<50		n/a		<50		3	ug/L		n/a		
10A. Phenol (108-95-2)	X			<10		n/a		<10		3	ug/L		n/a		
11A. 2,4,6-Trichlorophenol (88-05-2)	X			<10		n/a		<10		3	ug/L		n/a		

CONTINUED FROM THE FRONT

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

CONTINUE ON PAGE V-7

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)	X			<10		n/a		<10		3	ug/L		n/a		
23B. 3,3-Dichloro-benzidine (91-94-1)	X			<60		n/a		<60		3	ug/L		n/a		
24B. Diethyl Phthalate (84-66-2)	X			<10		n/a		<10		3	ug/L		n/a		
25B. Dimethyl Phthalate (131 -11-3)	X			<10		n/a		<10		3	ug/L		n/a		
26B. Di-N-Butyl Phthalate (84-74-2)	X			<10		n/a		<10		3	ug/L		n/a		
27B. 2,4-Dinitro-toluene (121-14-2)	X			<10		n/a		<10		3	ug/L		n/a		
28B. 2,6-Dinitro-toluene (606-20-2)	X			<10		n/a		<10		3	ug/L		n/a		
29B. Di-N-Octyl Phthalate (117-84-0)	X			<10		n/a		<10		3	ug/L		n/a		
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)	X			<10		n/a		<10		3	ug/L		n/a		
31B. Fluoranthene (206-44-0)	X			<10		n/a		<10		3	ug/L		n/a		
32B. Fluorene (86-73-7)	X			<10		n/a		<10		3	ug/L		n/a		
33B. Hexachloro-benzene (118-74-1)	X			<10		n/a		<10		3	ug/L		n/a		
34B. Hexachloro-butadiene (87-68-3)	X			<10		n/a		<10		3	ug/L		n/a		
35B. Hexachloro-cyclopentadiene (77-47-4)	X			<20		n/a		<20		3	ug/L		n/a		
36B Hexachloro-ethane (67-72-1)	X			<10		n/a		<10		3	ug/L		n/a		
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X			<10		n/a		<10		3	ug/L		n/a		
38B. Isophorone (78-59-1)	X			<10		n/a		<10		3	ug/L		n/a		
39B. Naphthalene (91-20-3)	X			<10		n/a		<10		3	ug/L		n/a		
40B. Nitrobenzene (98-95-3)	X			<10		n/a		<10		3	ug/L		n/a		
41B. N-Nitro-sodimethylamine (62-75-9)	X			<20		n/a		<20		3	ug/L		n/a		
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X			<10		n/a		<10		3	ug/L		n/a		

CONTINUED FROM THE FRONT

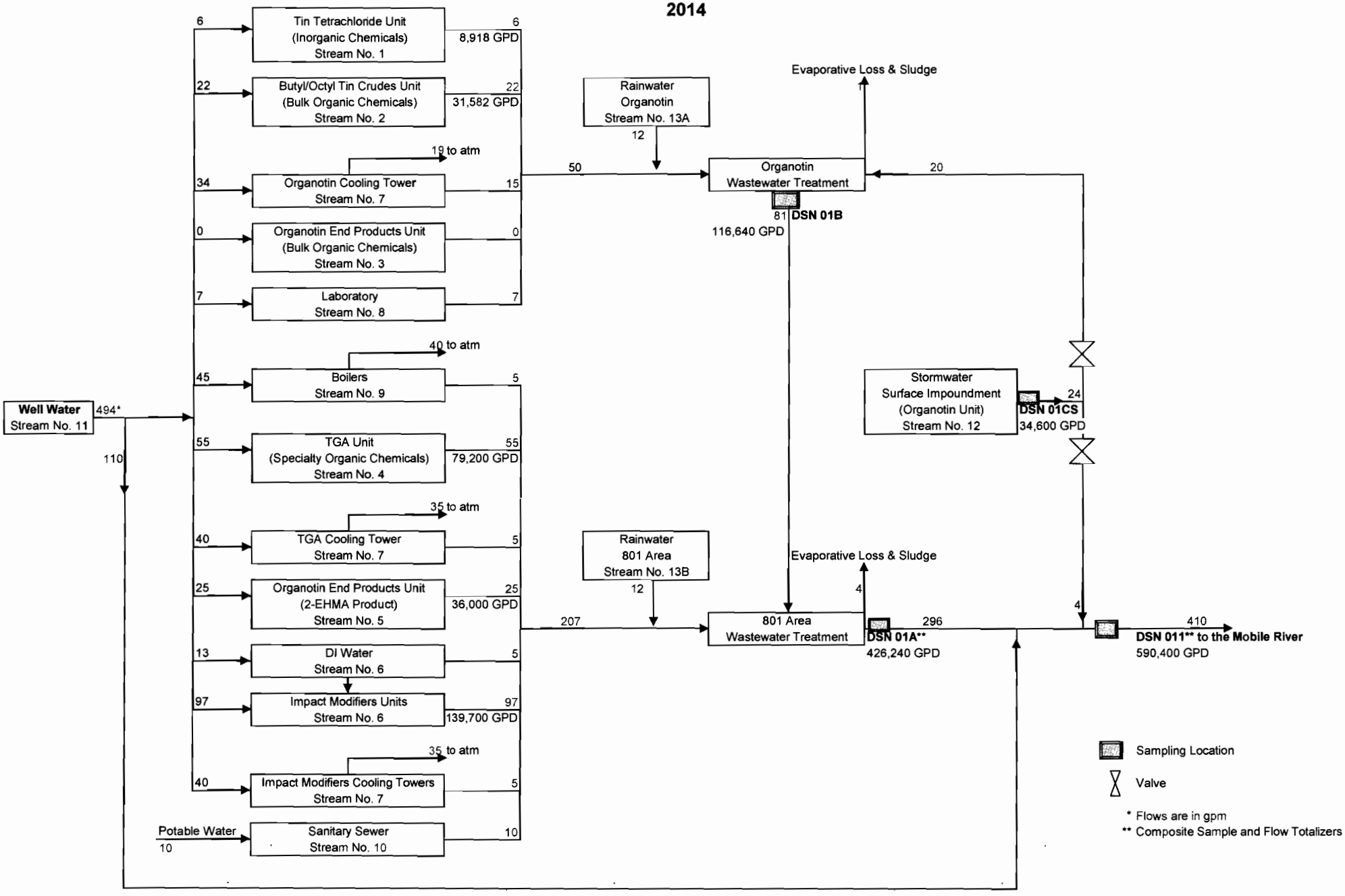
1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)	X			<10		n/a		<10		3	ug/L		n/a		
44B. Phenanthrene (85-01-8)	X			<10		n/a		<10		3	ug/L		n/a		
45B. Pyrene (129-00-0)	X			<10		n/a		<10		3	ug/L		n/a		
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X			<10		n/a		<10		3	ug/L		n/a		
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)	X			<0.020		n/a		<0.020		1	ug/L		n/a		
2P. α-BHC (319-84-6)	X			<0.020		n/a		<0.020		1	ug/L		n/a		
3P. β-BHC (319-85-7)	X			<0.020		n/a		<0.020		1	ug/L		n/a		
4P. γ-BHC (58-89-9)	X			<0.020		n/a		<0.020		1	ug/L		n/a		
5P. δ-BHC (319-86-8)	X			<0.020		n/a		<0.020		1	ug/L		n/a		
6P. Chlordane (57-74-9)	X			<0.20		n/a		<0.20		1	ug/L		n/a		
7P. 4,4'-DDT (50-29-3)	X			<0.020		n/a		<0.020		1	ug/L		n/a		
8P. 4,4'-DDE (72-55-9)	X			<0.020		n/a		<0.020		1	ug/L		n/a		
9P. 4,4'-DDD (72-54-8)	X			<0.020		n/a		<0.020		1	ug/L		n/a		
10P. Dieldrin (60-57-1)	X			<0.020		n/a		<0.020		1	ug/L		n/a		
11P. α-Enosulfan (115-29-7)	X			<0.020		n/a		<0.020		1	ug/L		n/a		
12P. β-Endosulfan (115-29-7)	X			<0.020		n/a		<0.020		1	ug/L		n/a		
13P. Endosulfan Sulfate (1031-07-8)	X			<0.020		n/a		<0.020		1	ug/L		n/a		
14P. Endrin (72-20-8)	X			<0.020		n/a		<0.020		1	ug/L		n/a		
15P. Endrin Aldehyde (7421-93-4)	X			<0.020		n/a		<0.020		1	ug/L		n/a		
16P. Heptachlor (76-44-8)	X			<0.020		n/a		<0.020		1	ug/L		n/a		

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
AL0042447	001

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)	X			<0.020		n/a		<0.020		1	ug/L		n/a		
18P. PCB-1242 (53469-21-9)	X			<0.50		n/a		<0.50		1	ug/L		n/a		
19P. PCB-1254 (11097-69-1)	X			<0.50		n/a		<0.50		1	ug/L		n/a		
20P. PCB-1221 (11104-28-2)	X			<0.50		n/a		<0.50		1	ug/L		n/a		
21P. PCB-1232 (11141-16-5)	X			<0.50		n/a		<0.50		1	ug/L		n/a		
22P. PCB-1248 (12672-29-6)	X			<0.50		n/a		<0.50		1	ug/L		n/a		
23P. PCB-1260 (11096-82-5)	X			<0.50		n/a		<0.50		1	ug/L		n/a		
24P. PCB-1016 (12674-11-2)	X			<0.50		n/a		<0.50		1	ug/L		n/a		
25P. Toxaphene (8001-35-2)	X			<1.2		n/a		<1.2		1	ug/L		n/a		

NPDES Permit Application
Average Water Flow Diagram
2014



Please print or type in the unshaded areas only.

EPA ID Number (*copy from Item 1 of Form 1*)
AL0042447

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

FORM 2F NPDES

U.S. Environmental Protection Agency
Washington, DC 20460

Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information, or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

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*)
DSN003	30.00	58.00	37.00	-88.00	1.00	45.00	COLD CREEK
DSN004	30.00	58.00	37.00	-88.00	1.00	50.00	COLD CREEK
DSN006	30.00	58.00	53.00	-88.00	1.00	41.00	Un-named Tributary to COLD CREEK

II. Improvements

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	number	source of discharge		a. req.	b. proj.
Not Applicable					

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

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfalls(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage of disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which received storm water discharges from the facility.

Continue on Page 2

Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of imperious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)	Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)
DSN003S	81,368 Sq Ft	384,201 Sq ft	DSN004S	76,510 sq.ft.	541,673 sq. ft.
DSN006S	155,000 Sq Ft	963,796 Sq Ft			

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas, and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

No material has been treated, stored, or disposed of on-site to allow exposure to storm water. Tanks and hazardous material storage areas have secondary containment areas to prevent contact with non-process area storm water runoff. Storm water from process and tank storage areas is treated on-site through the wastewater treatment system as detailed in EPA Form 2C. Loading and unloading areas are also provided with secondary containment. Storm water from non-process areas, air conditioner condensate, freeze protection water and fire protection water may be included in the discharge from these outfalls. Best management practices are employed to prevent storm water contamination. No leaks or spills past the storm water discharge gates have occured at the plant in at least the past six years.

Approximately one or two times a year herbicides may be used by contract landscape companies to control weeds. The application is done by a certified technician and no problems have been experienced in the past.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
DSN003S DSN004S DSN006S	A manual gate valve controls all stormwater discharge outfalls and are normally kept closed. No discharge occurs until at least a visible inspection of the stormwater prior to discharge.	4-A

V. Nonstormwater Discharges

A. I certify under penalty of law hat the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharged from these outfall(s) are identified in either an accompanying Form 2C or From 2E application for the outfall.

Name and Official Title (type or print)	Signature	Date Signed
John Lakenan, Plant Manager	John E. Lakenan	4/2/14

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

Personnel observations and plant knowledge

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

No leaks or spills past the storm water discharge gates have occured at the plant in at least the past six years.

Continued from Page 2

EPA ID Number *(copy from Item 1 of Form 1)*
AL0042447

VII. Discharge Information

A, B, C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided.
Table VII-A, VII-B, VII-C are included on separate sheets numbers VII-1 and VII-2.

E. Potential discharges not covered by analysis – is any toxic pollutant listed in table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☑ Yes (*list all such pollutants below*) ☐ No (*go to Section IX*)

Chlorine
Tin
Surfactants
Methyl Methacrylate
Styrene
Sulfate, Sulfide, Sulfite

VIII. Biological Toxicity Testing Data

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ Yes (*list all such pollutants below*) ☑ No (*go to Section IX*)

IX. Contract Analysis Information

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

☑ Yes (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☐ No (*go to Section X*)

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
Test America	3355 McLemore Drive Pensacola, FL 32514	850-474-1001	Cyanide Oil & Grease COD Total Phosphorus Chloride Chromium Copper Nickel Lead Zinc Mercury Method 624 Volatile Organic Compounds Method 625 Semivolatile Organic Compounds

X. Certification

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

A. Name & Official Title (*Type Or Print*)	B. Area Code and Phone No.
John Lakenan, Plant Manager	(251) 829-9421
C. Signature: John C. Lakenan	D. Date Signed: 4/2/14

VII. Discharge information *(Continued from page 3 of Form 2F)*

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

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	<5.0 mg/L	N/A	<5.0 mg/L	N/A	2.00	DSN003S
Biological Oxygen Demand (BOD5)	1.1 mg/L	1.2 mg/L	1.1 mg/L	1.2 mg/L	1.00	
Chemical Oxygen Demand (COD)	<10.0 mg/L	21 mg/L	<10.0 mg/L	21 mg/L	3.00	
Total Suspended Solids (TSS)	62 mg/L	58 mg/L	43 mg/L	58 mg/L	3.00	
Total Nitrogen	1.6 mg/L	0.9 mg/L	0.8 mg/L	0.9 mg/L	2.00	
Total Phosphorus	<0.10 mg/L	<0.10 mg/L	<o.10 mg/L	<0.10 mg/L	2.00	
pH	Minimum 6.10	Maximum 7.44	Minimum	Maximum		

Part B – List each pollutant that is limited in an effluent guideline which 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 Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Chloride	3.0 mg/L	<2.0 mg/L	1.5 mg/L	<2.0 mg/L	3.00	
Zinc	0.064 mg/L	0.049 mg/L	0.051 mg/L	0.049 mg/L	4.00	
Tin, Total	0.011 mg/L	0.007 mg/L	0.008 mg/L	0.007 mg/L	3.00	
Tin, Tri-Organo	0.004 mg/L	0.002 mg/L	0.002 mg/L	0.002 mg/L	3.00	
TDS	112 mg/L	n/a	69 mg/L	n/a	3.00	
Mercury, total	<0.0020 mg/L	<0.0020 mg/L	<0.0020mg/L	<0.0020 mg/L	2.00	
Nickel	<0.005 mg/L	<0.005 mg/L	<0.005 mg/L	<0.005 mg/L	2.00	
Chromium	<0.010 mg/L	<0.010 mg/L	<0.010 mg/L	<0.010 mg/L	2.00	
Copper	<0.010 mg/L	<0.010 mg/L	<0.010 mg/L	<0.010 mg/L	2.00	
Lead	<0.005 mg/L	<0.005 mg/L	<0.005 mg/L	<0.005 mg/L	2.00	
Cyanide	<0.0050 mg/L	n/a	<0.0050mg/L	n/a	1.00	
Acrolein	<20 ug/L	<20 ug/L	<20 ug/L	<20 ug/L	2.00	
Acrylonitrile	<10 ug/L	<10 ug/L	<10 ug/L	<10 ug/L	2.00	
Benzene	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Dichlorobromome	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Bromoform	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	2.00	
Bromomethane	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Carbon tetrach.	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Chlorobenzene	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Chloroethane	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
2-Chloroethyl.	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	2.00	
Chloroform	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Chloromethane	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Chlorodibromo.	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
1,1-Dichloroeth	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
1,2-Dichloroeth	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
1,1-Dichloroeth	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
trans-1,2-Dichl	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
1,2-Dichloropro	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
cis-1,3-Dichlor	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	2.00	

VII. Discharge information *(Continued from page 3 of Form 2F)*

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

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease		N/A				DSN003S Cont.
Biological Oxygen Demand (BOD5)						
Chemical Oxygen Demand (COD)						
Total Suspended Solids (TSS)						
Total Nitrogen						
Total Phosphorus						
pH	Minimum	Maximum	Minimum	Maximum		

Part B – List each pollutant that is limited in an effluent guideline which 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 Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
trans-1,3-Dichl	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	2.00	DSN003S Cont.
Ethylbenzene	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Methylene Chlor	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	2.00	
1,1,2,2-Tetrach	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Tetrachloroethe	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Toluene	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
1,1,1-Trichloro	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
1,1,2-Trichloro	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	2.00	
Trichloroethene	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Vinyl Chloride	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Acenapthene	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Acenaphthylene	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Anthracene	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Benzidine	<48 ug/L	<48 ug/L	<48 ug/L	<48 ug/L	2.00	
Benzo(a)anthrac	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Benzo(b)flouran	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Benzo(k)flouran	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Benzo(g,h,i)per	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Benzo(a)pyrene	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Bis(2-chloroeth	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Bis(2-chloroeth	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Bis(2-ethylhexl	<9.5 ug/L	16 ug/L	<9.5 ug/L	16 ug/L	2.00	
4-Bromophenyl p	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Butyl Benzyl ph	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
4-Chloro-3-meth	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
2-Chloronaphtha	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
2-Chlorophenol	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
4-Chlorophenyl	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Chrysene	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Dibenz(a,h)anth	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	

EPA ID Number (*copy from Item 1 of Form 1*)
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VII. Discharge information *(Continued from page 3 of Form 2F)*

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

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease		N/A				DSN003S Cont.
Biological Oxygen Demand (BOD5)						
Chemical Oxygen Demand (COD)						
Total Suspended Solids (TSS)						
Total Nitrogen						
Total Phosphorus						
pH	Minimum	Maximum	Minimum	Maximum		

Part B – List each pollutant that is limited in an effluent guideline which 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 Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Di-n-butyl phth	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	DSN003S Cont.
1,2-Dichloroben	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
1,3-Dichloroben	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
1,4-Dichloroben	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
3,3-Dichloroben	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
2,4-Dichlorophe	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Diethyl phthala	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
2,4-Dimethylphe	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Dimethyl phthal	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
4,6-Dintro-2-me	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
2,4-Dinitrophen	<29 ug/L	<29 ug/L	<29 ug/L	<29 ug/L	2.00	
2,4-Dinitrotolu	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
2,6-Dinitrotolu	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Di-n-octyl phth	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Fluoranthene	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Fluorene	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Hexachlorobenze	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Hexachlorobutad	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Hexachlorocyclo	<19 ug/L	<19 ug/L	<19 ug/L	<19 ug/L	2.00	
Hexachloroethan	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Indeno(1,2,3-cd	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Isophorone	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Naphthalene	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Nitrobenzene	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
2-Nitrophenol	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
4-Nitrophenol	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
N-Nitrosodimeth	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
N-Nitrosodiphen	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
N-Nitrosi-n-pro	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Pentachlorophen	<19 ug/L	<19 ug/L	<19 ug/L	<19 ug/L	2.00	

VII. Discharge information *(Continued from page 3 of Form 2F)*

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

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease		N/A				DSN003S Cont.
Biological Oxygen Demand (BOD5)						
Chemical Oxygen Demand (COD)						
Total Suspended Solids (TSS)						
Total Nitrogen						
Total Phosphorus						
pH	Minimum	Maximum	Minimum	Maximum		

Part B – List each pollutant that is limited in an effluent guideline which 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 Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Phenanthrene	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	DSN003S Cont.
Phenol	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
Pyrene	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
1,2,4-Trichloro	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
2,4,6-Dichlorop	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	
1,2-Diphenylhyd	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	<9.5 ug/L	2.00	

EPA ID Number (*copy from Item 1 of Form 1*)
AL0042447

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VII. Discharge information *(Continued from page 3 of Form 2F)*

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

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	<5.0 mg/L	N/A	<5.0 mg/L	N/A	2.00	DSN004S
Biological Oxygen Demand (BOD5)	1.3 mg/L	1.5 mg/L	1.3 mg/L	1.5 mg/L	1.00	
Chemical Oxygen Demand (COD)	32 mg/L	<10.0 mg/L	29 mg/L	<10.0 mg/L	3.00	
Total Suspended Solids (TSS)	45 mg/L	59 mg/L	40 mg/L	59 mg/L	3.00	
Total Nitrogen	1.4 mg/L	<0.5 mg/L	1.0 mg/L	<0.5 mg/L	2.00	
Total Phosphorus	<0.10 mg/L	<0.10 mg/L	<0.10 mg/L	<0.10 mg/L	2.00	
pH	Minimum 6.43	Maximum 6.50	Minimum	Maximum		

Part B – List each pollutant that is limited in an effluent guideline which 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 Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Chloride	2.60 mg/L	<2.0 mg/L	1.3 mg/L	<2.0 mg/L	3.00	DSN004S
Zinc	0.130 mg/L	0.093 mg/L	0.104 mg/L	0.093 mg/L	4.00	
Tin, Total	0.008 mg/L	0.009 mg/L	0.007 mg/L	0.009 mg/L	3.00	
Tin, Tri-Organo	<0.001 mg/L	0.001 mg/L	<0.001 mg/L	0.001 mg/L	3.00	
TDS	100 mg/L	n/a	92 mg/L	n/a	3.00	
Mercury, total	<0.0020 mg/L	<0.0020 mg/L	<0.0020mg/L	<0.0020 mg/L	2.00	
Nickel	<0.005 mg/L	<0.005 mg/L	<0.005 mg/L	<0.005 mg/L	2.00	
Chromium	<0.010 mg/L	<0.010 mg/L	<0.010 mg/L	<0.010 mg/L	2.00	
Copper	<0.010 mg/L	<0.010 mg/L	<0.010 mg/L	<0.010 mg/L	2.00	
Lead	<0.005 mg/L	0.0068 mg/L	<0.005 mg/L	0.0068 mg/L	2.00	
Cyanide	<0.0050 mg/L	n/a	<0.0050mg/L	n/a	1.00	
Acrolein	<20 ug/L	<20 ug/L	<20 ug/L	<20 ug/L	2.00	
Acrylonitrile	<10 ug/L	<10 ug/L	<10 ug/L	<10 ug/L	2.00	
Benzene	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Dichlorobromome	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Bromoform	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	2.00	
Bromomethane	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Carbon tetrach.	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Chlorobenzene	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Chloroethane	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
2-Chloroethyl.	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	2.00	
Chloroform	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Chloromethane	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Chlorodibromo.	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
1,1-Dichloroeth	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
1,2-Dichloroeth	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
1,1-Dichloroeth	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
trans-1,2-Dichl	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
1,2-Dichloropro	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
cis-1,3-Dichlor	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	2.00	

EPA ID Number (*copy from Item 1 of Form 1*)
AL0042447

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VII. Discharge information *(Continued from page 3 of Form 2F)*

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

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease		N/A				DSN004S Cont.
Biological Oxygen Demand (BOD5)						
Chemical Oxygen Demand (COD)						
Total Suspended Solids (TSS)						
Total Nitrogen						
Total Phosphorus						
pH	Minimum	Maximum	Minimum	Maximum		

Part B – List each pollutant that is limited in an effluent guideline which 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 Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
trans-1,3-Dichl	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	2.00	DSN004S Cont.
Ethylbenzene	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Methylene Chlor	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	2.00	
1,1,2,2-Tetrach	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Tetrachloroethe	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Toluene	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
1,1,1-Trichloro	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
1,1,2-Trichloro	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	2.00	
Trichloroethene	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Vinyl Chloride	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Acenapthene	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Acenaphthylene	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Anthracene	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Benzidine	<48 ug/L	n/a	<48 ug/L	n/a	1.00	
Benzo(a)anthrac	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Benzo(b)flouran	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Benzo(k)flouran	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Benzo(g,h,i)per	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Benzo(a)pyrene	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Bis(2-chloroeth	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Bis(2-chloroeth	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Bis(2-ethylhexl	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
4-Bromophenyl p	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Butyl Benzyl ph	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
4-Chloro-3-meth	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
2-Chloronaphtha	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
2-Chlorophenol	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
4-Chlorophenyl	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Chrysene	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Dibenz(a,h)anth	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	

EPA ID Number (*copy from Item 1 of Form 1*)
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VII. Discharge information *(Continued from page 3 of Form 2F)*

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

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease		N/A				DSN004S Cont.
Biological Oxygen Demand (BOD5)						
Chemical Oxygen Demand (COD)						
Total Suspended Solids (TSS)						
Total Nitrogen						
Total Phosphorus						
pH	Minimum	Maximum	Minimum	Maximum		

Part B – List each pollutant that is limited in an effluent guideline which 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 Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Di-n-butyl phth	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	DSN004S Cont.
1,2-Dichloroben	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
1,3-Dichloroben	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
1,4-Dichloroben	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
3,3-Dichloroben	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
2,4-Dichlorophe	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Diethyl phthala	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
2,4-Dimethylphe	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Dimethyl phthal	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
4,6-Dintro-2-me	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
2,4-Dinitrophen	<29 ug/L	n/a	<29 ug/L	n/a	1.00	
2,4-Dinitrotolu	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
2,6-Dinitrotolu	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Di-n-octyl phth	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Fluoranthene	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Fluorene	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Hexachlorobenze	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Hexachlorobutad	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Hexachlorocyclo	<19 ug/L	n/a	<19 ug/L	n/a	1.00	
Hexachloroethan	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Indeno(1,2,3-cd	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Isophorone	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Naphthalene	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Nitrobenzene	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
2-Nitrophenol	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
4-Nitrophenol	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
N-Nitrosodimeth	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
N-Nitrosodiphen	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
N-Nitrosi-n-pro	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Pentachlorophen	<19 ug/L	n/a	<19 ug/L	n/a	1.00	

VII. Discharge information *(Continued from page 3 of Form 2F)*

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

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease		N/A				DSN004S Cont.
Biological Oxygen Demand (BOD5)						
Chemical Oxygen Demand (COD)						
Total Suspended Solids (TSS)						
Total Nitrogen						
Total Phosphorus						
pH	Minimum	Maximum	Minimum	Maximum		

Part B – List each pollutant that is limited in an effluent guideline which 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 Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Phenanthrene	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	DSN004S Cont.
Phenol	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Pyrene	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
1,2,4-Trichloro	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
2,4,6-Dichlorop	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
1,2-Diphenylhyd	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	

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VII. Discharge information *(Continued from page 3 of Form 2F)*

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

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	<5.0 mg/L	N/A	<5.0 mg/L	N/A	2.00	DSN006S
Biological Oxygen Demand (BOD5)	1.6 mg/L	1.5 mg/L	1.6 mg/L	1.5 mg/L	1.00	
Chemical Oxygen Demand (COD)	56 mg/L	<10.0 mg/L	49 mg/L	<10.0 mg/L	3.00	
Total Suspended Solids (TSS)	287 mg/L	102 mg/L	174 mg/L	102 mg/L	3.00	
Total Nitrogen	8.8 mg/L	<0.50 mg/L	5.7 mg/L	<0.50 mg/L	2.00	
Total Phosphorus	<0.10 mg/L	<0.10 mg/L	<o.10 mg/L	<0.10 mg/L	2.00	
pH	Minimum 6.20	Maximum 7.24	Minimum	Maximum		

Part B – List each pollutant that is limited in an effluent guideline which 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 Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Chloride	5.6 mg/L	2.3 mg/L	5.6 mg/L	2.3 mg/L	3.00	DSN006S
Zinc	0.130 mg/L	0.091 mg/L	0.082 mg/L	0.091 mg/L	4.00	
Tin, Total	0.032 mg/L	0.011 mg/L	0.025 mg/L	0.011 mg/L	3.00	
Tin, Tri-Organo	<0.001 mg/L	0.003 mg/L	<0.001 mg/L	0.003 mg/L	3.00	
TDS	196 mg/L	n/a	155 mg/L	n/a	3.00	
Mercury, total	<0.0020 mg/L	<0.0020 mg/L	<0.0020mg/L	<0.0020 mg/L	2.00	
Nickel	<0.005 mg/L	<0.005 mg/L	<0.005 mg/L	<0.005 mg/L	2.00	
Chromium	<0.010 mg/L	<0.010 mg/L	<0.010 mg/L	<0.010 mg/L	2.00	
Copper	<0.010 mg/L	<0.010 mg/L	<0.010 mg/L	<0.010 mg/L	2.00	
Lead	<0.005 mg/L	<0.005 mg/L	<0.005 mg/L	<0.005 mg/L	2.00	
Cyanide	<0.0050 mg/L	n/a	<0.0050mg/L	n/a	1.00	
Acrolein	<20 ug/L	<20 ug/L	<20 ug/L	<20 ug/L	2.00	
Acrylonitrile	<10 ug/L	<10 ug/L	<10 ug/L	<10 ug/L	2.00	
Benzene	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Dichlorobromome	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Bromoform	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	2.00	
Bromomethane	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Carbon tetrach.	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Chlorobenzene	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Chloroethane	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
2-Chloroethyl.	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	2.00	
Chloroform	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Chloromethane	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Chlorodibromo.	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
1,1-Dichloroeth	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
1,2-Dichloroeth	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
1,1-Dichloroeth	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
trans-1,2-Dichl	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
1,2-Dichloropro	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
cis-1,3-Dichlor	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	2.00	

VII. Discharge information *(Continued from page 3 of Form 2F)*

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

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease		N/A				DSN006S Cont.
Biological Oxygen Demand (BOD5)						
Chemical Oxygen Demand (COD)						
Total Suspended Solids (TSS)						
Total Nitrogen						
Total Phosphorus						
pH	Minimum	Maximum	Minimum	Maximum		

Part B – List each pollutant that is limited in an effluent guideline which 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 Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
trans-1,3-Dichl	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	2.00	DSN006S Cont.
Ethylbenzene	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Methylene Chlor	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	2.00	
1,1,2,2-Tetrach	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Tetrachloroethe	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Toluene	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
1,1,1-Trichloro	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
1,1,2-Trichloro	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	<5.0 ug/L	2.00	
Trichloroethene	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Vinyl Chloride	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	<1.0 ug/L	2.00	
Acenapthene	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Acenaphthylene	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Anthracene	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Benzidine	<48 ug/L	n/a	<48 ug/L	n/a	1.00	
Benzo(a)anthrac	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Benzo(b)flouran	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Benzo(k)flouran	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Benzo(g,h,i)per	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Benzo(a)pyrene	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Bis(2-chloroeth	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Bis(2-chloroeth	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Bis(2-ethylhexl	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
4-Bromophenyl p	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Butyl Benzyl ph	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
4-Chloro-3-meth	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
2-Chloronaphtha	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
2-Chlorophenol	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
4-Chlorophenyl	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Chrysene	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Dibenz(a,h)anth	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	

EPA ID Number (*copy from Item 1 of Form 1*)
AL0042447

Form Approved. OMB No. 2040-0086
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VII. Discharge information *(Continued from page 3 of Form 2F)*

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

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease		N/A				DSN006S Cont.
Biological Oxygen Demand (BOD5)						
Chemical Oxygen Demand (COD)						
Total Suspended Solids (TSS)						
Total Nitrogen						
Total Phosphorus						
pH	Minimum	Maximum	Minimum	Maximum		

Part B – List each pollutant that is limited in an effluent guideline which 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 Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Di-n-butyl phth	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	DSN006S Cont.
1,2-Dichloroben	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
1,3-Dichloroben	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
1,4-Dichloroben	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
3,3-Dichloroben	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
2,4-Dichlorophe	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Diethyl phthala	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
2,4-Dimethylphe	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Dimethyl phthal	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
4,6-Dintro-2-me	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
2,4-Dinitrophen	<29 ug/L	n/a	<29 ug/L	n/a	1.00	
2,4-Dinitrotolu	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
2,6-Dinitrotolu	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Di-n-octyl phth	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Fluoranthene	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Fluorene	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Hexachlorobenze	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Hexachlorobutad	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Hexachlorocyclo	<19 ug/L	n/a	<19 ug/L	n/a	1.00	
Hexachloroethan	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Indeno(1,2,3-cd	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Isophorone	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Naphthalene	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Nitrobenzene	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
2-Nitrophenol	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
4-Nitrophenol	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
N-Nitrosodimeth	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
N-Nitrosodiphen	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
N-Nitrosi-n-pro	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Pentachlorophen	<19 ug/L	n/a	<19 ug/L	n/a	1.00	

VII. Discharge information *(Continued from page 3 of Form 2F)*

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

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease		N/A				DSN006S Cont.
Biological Oxygen Demand (BOD5)						
Chemical Oxygen Demand (COD)						
Total Suspended Solids (TSS)						
Total Nitrogen						
Total Phosphorus						
pH	Minimum	Maximum	Minimum	Maximum		

Part B – List each pollutant that is limited in an effluent guideline which 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 Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Phenanthrene	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	DSN006S Cont.
Phenol	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
Pyrene	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
1,2,4-Trichloro	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
2,4,6-Dichlorop	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	
1,2-Diphenylhyd	<9.5 ug/L	n/a	<9.5 ug/L	n/a	1.00	

Continued from the Front

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

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
None						

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
3/16/14	150 min	3.2 inches	> 72 hours	100 gpm DSN003S 190 gpm DSN004S 300 gpm DSN006S	26,700 gal DSN003S 48,000 gal DSN004S 74,700 gal DSN006S

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

The flow rates were estimated using the modified rational method. The amount of rainfall was multiplied by size of the drainage areas and the appropriate runoff coefficients for pervious and impervious areas.

Supplemental Information

to the April 2014 Application for Renewal of NPDES Permit AL0042447

Prepared for

Arkema Inc.

August 2014

CH2MHILL®

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Montgomery, AL 36106

Contents

Tables **Page**

Acronyms and Abbreviations

2-EHMA	2-ethylhexyl mercaptoacetate
AWT	Area Wastewater Treatment
ADEM	Alabama Department of Environmental Management
BOD_5	5-day biochemical oxygen demand
BPJ	best professional judgment
BPT	Best Practical Control Technology
CFR	*Code of Federal Regulations*
cfs	cubic feet per second
DMR	discharge monitoring report
ELG	Effluent Limitations Guidelines
EPA	U.S. Environmental Protection Agency
DMR	discharge monitoring report
F&W	Fish and Wildlife
gpd	gallons per day
IM	impact modifiers
lbs/day	pounds per day
µg/L	micrograms per liter
mg/L	milligrams per liter
mgd	million gallons per day
MM lbs/day	million pounds per day
NPDES	National Pollutant Discharge Elimination System
OCPSF	Organic Chemicals, Plastics, and Synthetic Fibers
RPA	reasonable potential analysis
SIC	Standard Industrial Classification
SID	State Indirect Discharge
TGA	thioglycolic acid
TSS	total suspended solids
TTC	tin tetrachloride

SECTION 1

Introduction and Facility Information

Arkema Inc. (Arkema) located in Axis, Alabama, submitted an application for renewal of its National Pollutant Discharge Elimination System (NPDES) Permit No. AL0042447 to the Alabama Department of Environmental Management (ADEM) on April 3, 2014. Arkema's current NPDES permit is effective October 1, 2009, through September 30, 2014. Submittal of the application on the April 3, 2014, required submittal date ensures automatic continuation of the permit until the permit is reissued.

This data package has been prepared to provide ADEM with additional information for consideration and use during reissuance of the permit. Following an overview of the facility (including the NPDES outfalls), the supplemental information is organized as follows:

- Section 2: Derivation of Permit Limits
- Section 3: Requested Permit Limits and Monitoring Requirements

1.1 Facility Description

Arkema operates an organic and inorganic chemicals manufacturing facility in Axis, Alabama, (Mobile County) and employs approximately 104 people with an additional 6 contract employees. The facility operates 365 days per year on an approximate 60-acre site.

The plant manufactures: 1) tin tetrachloride (TTC) using tin and chlorine as raw materials; 2) organotin (butyl/octyl tin crudes) using TTC as a raw material; 3) thioglycolic acid (TGA); 4) 2-ethylhexyl mercaptoacetate (2-EHMA) is produced using TGA as a raw material; and 5) impact modifiers (IM). The tin-based production units (TTC and butyl/octyl tin crudes) are operated and maintained by Arkema; however, these production units were sold to PMC Organometallix Inc. in 2012.

Process wastewaters from the TTC and organotin processes are combined with the cooling tower blowdown, laboratory wastewater, and process area stormwater, and are treated in the 800 Area Wastewater Treatment (AWT) system. This system consists of equalization, neutralization, polymerization, and clarification. The treated wastewater from the 800 AWT system is monitored as outfall DSN01B in the current permit.

Wastewaters from the remainder of the facility, including process waters from the TGA, 2-EHMA, and IM units, sanitary wastewater, boiler blowdown, de-ionization regeneration water, and process area stormwater, are equalized and then settled in primary clarifiers after polymer addition. The 800 AWT and other wastewaters are mixed, and all the wastewaters are treated in the 801 AWT system prior to being discharged to the Mobile River through a diffuser. The treated wastewater from the 801 AWT system is monitored as outfall DSN01A in the current permit.

Stormwater from the organotin production units is collected in a surface impoundment. Water in this surface impoundment is managed based on the surface water level in the impoundment. Prior to discharge from the impoundment, the stormwater is analyzed for tri-organotin. If the tri-organotin concentration is above 0.030 milligrams per liter (mg/L), the wastewater is treated in the 800 AWT system. Otherwise, this stormwater is discharged to the Mobile River through outfall DSN001. Stormwater from the surface impoundment is monitored as outfall DSN01C in the current permit.

Non-process area stormwater is managed through one of three stormwater retention areas and discharged through outfalls DSN003, DSN004, and DSN006.

1.2 NPDES Outfall Descriptions

Arkema is authorized to discharge treated process wastewater, treated sanitary wastewater, and stormwater runoff from process and non-process areas to the Mobile River, Cold Creek, and an unnamed

tributary to Cold Creek via the existing NPDES permit. The existing permit includes four permitted outfalls, including one designated for process wastewater (DSN001) and three designated for non-process wastewater and non-process stormwater (DSN003, DSN004, and DSN006).

The four permitted outfalls are described as follows:

- **DSN001** is the process wastewater, non-process wastewater, process unit stormwater, and groundwater discharge to the Mobile River. The wastewater discharged through DSN001 comes from the following sources:
  - Wastewater and stormwater from the TTC process unit
  - Wastewater and stormwater from the butyl/octyl tin crudes and organotin processes
  - Wastewater and stormwater from the TGA process
  - Wastewater and stormwater from the 2-EHMA process
  - Wastewater and stormwater from the IM process
  - Stormwater from the surface impoundment
  - Sanitary wastewater
  - Cooling tower and boiler blowdown
  - De-ionization regeneration water
  - Laboratory wastewaters
  - Other wastewaters from maintenance activities and spills within the process unit areas
- **DSN003** is a stormwater outfall associated with industrial activity runoff from material storage areas, access roads, and railroad yard.
- **DSN004** is a stormwater outfall associated with industrial activity runoff from material storage areas, access roads, and the railroad yard.
- **DSN006** is a stormwater outfall associated with industrial activity runoff from material storage areas, 800 and 801 AWT, access roads, office buildings, and employee parking areas.

1.3 Production Information

The Arkema facility has experienced significant production variations since 2007. The production of tin-based pesticides ceased in 2007 and there are no plans to produce tin-based pesticides in the future. Other tin-based products (butyl/octyl tin crudes, organotin end products, and TTC) are still manufactured at the facility; however, these production units were sold to PMC Organometallix Inc. in 2012. The production units are operated and maintained by Arkema staff, and the units discharge to Arkema's wastewater treatment plant under State Indirect Discharge (SID) permit IU 41-49-00001. The maximum annual production for the past 5 years (2009 to 2013) of butyl/octyl tin crudes was approximately 16.4 million pounds in 2012. The maximum annual production of TTC was 11.4 million pounds in 2010, with similar production in 2012. Organotin end products were only produced in 2012 and the annual production was 44,000 pound.

Production of TGA at Arkema peaked in 2007, and as a result of economic and market conditions, annual production over the past 5 years has been approximately 5 million pounds per year below the 2007 maximum. Market conditions for TGA have changed and based on new orders, production of TGA will increase in 2014. The 2014 production of TGA is expected to approach 14 million pounds and peak production of 19 million pounds is expected in 2016.

Production of 2-EHMA closely follows production of TGA since approximately 75 percent of the TGA produced is used as the raw material for 2-EHMA. Over the past 5 years, maximum annual production of 2-EHMA was 7.3 million pounds in 2010. Similar to TGA, production of 2-EHMA will increase in 2014, with production is expected to be approximately 17 million pounds. Peak production of 25.2 million pounds is expected in 2016.

The IM unit is the largest production unit at the Arkema facility. Maximum production over the past 5 years was 56.7 million pounds in 2010. Production was approximately 49.2 million pounds in both 2012 and 2013. A slight increase in production (approximately 5 percent per year) is expected during the next NPDES permit cycle.

It should be noted that none of the increased production is dependent on installation of new production facilities at Arkema. Increases in production will be mainly a result of yield improvements for existing process equipment.

Derivation of Permit Limits

The April 2014 application for NPDES permit renewal included the required U.S. Environmental Protection Agency (EPA) Forms 1, 2C, and 2F, and ADEM Form 187. Using the data provided with the application, along with additional information for anticipated production increases, this section discusses the applicable effluent limitation guidelines (ELGs) for Arkema's facility, the production values and flows used in calculating ELG-based permit limits, and water quality calculations applicable to Arkema's process wastewater outfall DSN001.

2.1 Applicable Effluent Limitation Guidelines

The organic chemicals manufacturing wastewater discharge from the Arkema facility is regulated by 40 *Code of Federal Regulations* (CFR) 414–Organic Chemicals, Plastics, and Synthetic Fibers (OCPSF). Subcategories for OCPSF facilities are listed in Table 2-1.

TABLE 2-1
40 CFR 414 OCPSF Subparts and their Applicability
Arkema NPDES Permit Renewal Application: Supplemental Information

Subpart	Subcategory	Applicability
B	Rayon Fibers	Process wastewater discharges resulting from the manufacture of rayon fiber by the viscose process only
C	Other Fibers	Process wastewater discharges resulting from the manufacture of products classified under SIC 2823 cellulosic man-made fibers, except Rayon, and SIC 2824 synthetic organic fibers, including those fibers and fiber groups listed in 40 CFR 414 Subpart C
D	**Thermoplastic Resins**	**Process wastewater discharges resulting from the manufacture of the products classified under SIC 28213 thermoplastic resins, including those resins and resin groups listed in 40 CFR 414 Subpart D**
E	Thermosetting Resins	Process wastewater discharges resulting from the manufacture of the products classified under SIC 28214 thermosetting resins, including those resins and resin groups listed in 40 CFR 414 Subpart E
F	Commodity Organic Chemicals	Process wastewater discharges resulting from the manufacture of the SIC 2865 and SIC 2869 commodity organic chemicals and commodity organic chemical groups listed in 40 CFR 414 Subpart F
G	**Bulk Organic Chemicals**	**Process wastewater discharges resulting from the manufacture of the SIC 2865 and 2869 bulk organic chemicals and bulk organic chemical groups listed in 40 CFR 414 Subpart G**
H	**Specialty Organic Chemicals**	**Process wastewater discharges resulting from the manufacture of all SIC 2865 and 2869 organic chemicals and organic chemical groups, which are not defined as commodity or bulk organic chemicals in 40 CFR 414 Subparts F and G**
I	**Direct Discharge Point Sources That Use End-of-Pipe Biological Treatment**	**Process wastewater discharges resulting from the manufacture of the OCPSF products and product groups defined by 40 CFR §414.11 from any point source that uses end-of-pipe biological treatment or installs end-of-pipe biological treatment to comply with BPT effluent limitations**
J	Direct Discharge Point Sources That Do Not Use End-of-Pipe Biological Treatment	Process wastewater discharges resulting from the manufacture of the OCPSF products and product groups defined by 40 CFR §414.11 from any point source that does not use end-of-pipe biological treatment and does not install end-of-pipe biological treatment to comply with BPT effluent limitations

TABLE 2-1
40 CFR 414 OCPSF Subparts and their Applicability
Arkema NPDES Permit Renewal Application: Supplemental Information

Subpart	Subcategory	Applicability
K	Indirect Discharge Point Sources	Process wastewater discharges resulting from the manufacture of the OCPSF products and product groups defined by 40 CFR §414.11 from any indirect discharge point source

Notes:
BPT = best practicable control technology
CFR = *Code of Federal Regulations*
OCPSF = Organic Chemicals, Plastics, and Synthetic Fibers
SIC = Standard Industrial Classification
***Bold Subparts are applicable to the Arkema facility.**

On the basis of facility operations, Subparts D, G, H, and I of 40 CFR 414 are applicable to the Arkema facility process wastewater discharge. IM are listed in Subpart D as thermoplastic resins. The butyl/octyl tin crudes and organotin end products fall under the bulk organic chemicals in Subpart G. TGA and 2-EHMA fall under the specialty organic chemicals in Subpart H because they are not specifically defined as a commodity or bulk organic chemicals in Subparts F or G. Arkema uses a biological treatment process for wastewaters discharged through Outfall DSN001 and therefore is subject to Subpart I.

2.2 Process Water and Receiving Stream Flows

2.2.1 Process Water Flow for Effluent Limitation Guideline Calculations

Arkema's current NPDES permit is based on an OCPSF process wastewater flow of 0.2650 million gallons per day (mgd), which reflected a flow of 0.0320 mgd from butyl/octyl tin crudes, 0.118 mgd from IM, 0.1010 mgd from TGA, and 0.0140 mgd from 2-EHMA operations. Table 2-2 lists the highest monthly average flow for the last 12 months and the monthly average flow for the highest flow year out of the last 5 years for all of the process wastewater flows subject to the ELGs.

TABLE 2-2
Process Wastewater Flows Subject to the ELG
Arkema NPDES Permit Renewal Application: Supplemental Information

Operation/Process	Last 12 Months Highest Monthly Average (gpd)	Highest Flow Year of Last 5 Monthly Average (gpd)	Applicable 40 CFR 414 Subpart
Butyl/Octyl Crudes & Organotin End Products	31,582	31,680	G, I
TGA & 2-EHMA	115,200	115,200	H, I
IM	139,700	140,000	D, I
Totals	**286,482**	**286,880**	

Notes:
2-EHMA = 2-ethylhexyl mercaptoacetate
gpd = gallons per day
TGA = thioglycolic acid

As required by ADEM Form 187, Arkema determined the highest monthly average flows for the last 12 months and the monthly average flow for the highest flow year of the last 5 years for regulated processes and non-regulated process. Arkema is requesting the highest monthly average flow year for the last 5 years be used in calculating permit limits for this permit application, as it is believed that this most accurately

reflects Arkema's flows in the pending term of the NPDES permit. These flows are listed in ADEM Form 187, included with the April 2014 permit application, as well as Tables 2-2 and 2-5 of this section.

2.2.2 Applicable Flows for Water Quality-based Permit Limit Calculations

The Mobile River at the location of the Arkema discharge is classified as Fish & Wildlife (F&W). Because this river is also considered a coastal water, in addition to freshwater aquatic life water quality standards, the marine aquatic life water quality standards are also applicable. For parameters where ADEM has established a freshwater or marine acute or chronic aquatic life or human health consumption of fish water quality standard, the water quality-based permit limit was calculated for comparison to the technology-based limit. The water quality based permit limits were calculated using an average effluent flow of 0.590 mgd, which is the sum of the process flow, other utility wastewaters, and dilution water.

Flow estimates for the Mobile River used to calculate the water quality based limits are the same as those used for the current permit and documented in ADEM's permit basis dated June 5, 2009:

- $7Q_{10}$ = 4,000 cubic feet per second (cfs)
- $1Q_{10}$ = 3,000 cfs
- Annual Average = 32,000 cfs

2.3 Effluent Limit Calculations

2.3.1 Current Production

As described in Section 1.3, the production values for the products manufactured by Arkema have varied over the past 5 years, primarily based on market demand. 2012 was the maximum production year of butyl/octyl crudes and organotin end products (combined) and TGA and 2-EHMA (combined) and second highest production year of IM for the years 2009 through 2013. With overall market conditions improving and increased production of TGA and 2-EHMA scheduled for 2014, Arkema proposes to use the production which Arkema will achieve on a consistent basis in 2014 to calculate the base tier for the effluent limits for the renewed permit.

2.3.1.1 Biochemical Oxygen Demand and Total Suspended Solids

Five-day biochemical oxygen demand (BOD_5) and total suspended solids (TSS) limitations were calculated in accordance with 40 CFR 414 Subparts D, G, and H, using the building block approach identified in 40 CFR 414.11(i). This approach takes into account the characteristic limits of each subpart and proportions the allocations based on production values from each process. The allocations for 40 CFR 414 Subparts D, G, and H, and the resulting BOD_5 and TSS concentrations, are shown in Tables 2-3 and 2-4, respectively.

TABLE 2-3
BOD_5 Production Proportioned Calculations
Arkema NPDES Permit Renewal Application: Supplemental Information

40 CFR 414 Subpart	Process	2012 Production (MM lbs/yr)	Subpart Production Total (MM lbs/yr)	Subpart Proportion	Subpart Limits		Subpart Proportioned Limit	
					Monthly Average (mg/L)	Daily Maximum (mg/L)	Monthly Average (mg/L)	Daily Maximum (mg/L)
D	IM	50.25	50.25	51.2%	24	64	12.30	32.79
G	Butyl/Octyl Crudes	16.82	16.82	17.2%	34	92	5.83	15.78
	Organotin End Product	0						
H	TGA	17.00	31.00	31.6%	45	120	14.22	37.93
	2-EHMA	14.00						
			Production Proportioned BOD_5 Concentration				**32.35**	**86.50**

Notes:
2-EHMA = 2-ethylhexyl mercaptoacetate
mg/L = milligrams per liter
MM lbs/yr = million pounds per year
TGA = thioglycolic acid

TABLE 2-4
TSS Production Proportioned Calculations
Arkema NPDES Permit Renewal Application: Supplemental Information

40 CFR 414 Subpart	Process	2012 Production (MM lbs/yr)	Subpart Total	Subpart Proportion	Subpart Limits		Subpart Proportioned Limit	
					Monthly Average (mg/L)	Daily Maximum (mg/L)	Monthly Average (mg/L)	Daily Maximum (mg/L)
D	Impact Modifiers	50.25	50.25	51.2%	40	130	20.50	66.64
G	Butyl/Octyl Crudes	16.82	16.82	17.2%	49	159	8.40	27.27
	Organotin End Product	0						
H	Thioglycolic Acid	17.00	31.00	31.6%	57	183	18.02	57.84
	2-EHMA	14.00						
			Production Proportioned TSS Concentration				**46.92**	**151.73**

Notes:
2-EHMA = 2-ethylhexyl mercaptoacetate
mg/L = milligrams per liter
MM lbs/yr = million pounds per year

The current permit contains additional allocations for BOD_5 and TSS for laboratory wastewater, utility wastewater, process unit stormwater, and the sanitary service discharge. The additional allowances of 10 mg/L monthly average and 20 mg/L daily maximum for BOD_5 and TSS for laboratory wastewater and utility wastewater, as well as allowances of 30 mg/L monthly average and 45 mg/L daily maximum for BOD_5 and TSS for process unit stormwater and sanitary wastewater, were based on best professional judgment (BPJ) and have been used historically in many OCPSF permits.

Table VII-50 in the *Development Document for Effluent Limitations Guidelines and Standards for the OCPSF Point Source Category, Volume I*, 1987, presents a list of miscellaneous wastewaters that EPA has determined to be either contaminated, and therefore designated as process wastewater or uncontaminated. Table VII-50 lists sanitary wastewater receiving biological treatment, boiler blowdown, laboratory waste, utility streams, laboratory drains, and contact rainwater as contaminated nonprocess wastewaters designated as process wastewater and therefore subject to the OCPSF allocations. The OCPSF regulated process and contaminated nonprocess wastewaters and their respective flows used to calculate the OCPSF allocations are shown in Table 2-5.

TABLE 2-5
Process and Nonprocess Wastewaters Subject to the OCPSF ELG
Arkema NPDES Permit Renewal Application: Supplemental Information

Operation/Process	Wastewater Type	Flow (gpd)
Butyl/Octyl Crudes	Process	31,680
Organotin End Products	Process	0
Thioglycolic Acid	Process	79,200
2-ethylhexyl mercaptoacetate	Process	36,000
Impact Modifiers	Process	140,000
Process Unit Stormwater	Nonprocess designated as process wastewater	69,120
Laboratory Wastewater	Nonprocess designated as process wastewater	10,800
Boiler Blowdown	Nonprocess designated as process wastewater	7,200
Sanitary Wastewater	Nonprocess designated as process wastewater	14,400
TOTAL		**387,680**

Note:
gpd = gallons per day

The non-contact cooling tower blowdown and de-ionization regeneration water are considered an uncontaminated nonprocess wastewater. The BPJ allocations of 10 mg/L monthly average and 20 mg/L daily maximum used in the current permit will be used to calculate the allocations for the uncontaminated utility wastewaters. Tables 2-6 and 2-7 show the requested BOD_5 and TSS limitations for Outfall DSN001, respectively.

TABLE 2-6
BOD_5 Effluent Limitation Calculations
Arkema NPDES Permit Renewal Application: Supplemental Information

Operation/Process	Flow (mgd)	Monthly Average (mg/L)	Monthly Average (lbs/day)	Daily Maximum (mg/L)	Daily Maximum (lbs/day)
OCPSF Wastewaters	0.388	32.35	104.7	86.50	279.9
Nonprocess Utility Wastewaters	0.043	10	3.6	20	7.2
TOTALS	**0.431**		**108.3**		**287.1**

Notes:
lbs/day = pounds per day
mg/L = milligrams per liter
mgd = million gallons per day
OCPSF = Organic Chemicals, Plastics, and Synthetic Fibers

TABLE 2-7
TSS Effluent Limitation Calculations
Arkema NPDES Permit Renewal Application: Supplemental Information

Operation/Process	Flow (mgd)	Monthly Average (mg/L)	Monthly Average (lbs/day)	Daily Maximum (mg/L)	Daily Maximum (lbs/day)
OCPSF Wastewaters	0.388	46.92	151.8	151.73	490.9
Nonprocess Utility Wastewaters	0.043	10	3.6	20	7.2
TOTALS	**0.431**		**155.4**		**498.1**

Notes:
lbs/day = pounds per day
mg/L = milligrams per liter
mgd = million gallons per day
OCPSF = Organic Chemicals, Plastics, and Synthetic Fibers

2.3.1.2 40 CFR 414 Subpart I Organic Compounds

40 CFR 414 Subpart I is applicable to wastewater discharges resulting from the manufacture of OCPSF products and product groups from a point source that uses end-of-pipe biological treatment. Discharges subject to 40 CFR 414 Subpart I must achieve mass based discharge levels determined by multiplying the applicable wastewater flow by the concentrations of the parameters listed in Subpart I. Table 2-8 provides the list of parameters, their applicable concentrations for monthly average and daily maximum values, and the resulting mass-based ELGs using the OCPSF effluent flow of 0.388 mgd.

TABLE 2-8
40 CFR 414 Subpart I ELG Calculations for Organic Compounds
Arkema NPDES Permit Renewal Application: Supplemental Information

Effluent Characteristic	Daily Maximum (µg/L)	Monthly Average (µg/L)	Daily Maximum (lbs/day)	Monthly Average (lbs/day)
Acenaphthene	59	22	0.191	0.071
Acenaphthylene	59	22	0.191	0.071
Acrylonitrile	242	96	0.783	0.311
Anthracene	59	22	0.191	0.071
Benzene	136	37	0.440	0.120
Benzo(a)anthracene	59	22	0.191	0.071
3,4-Benzofluoranthene	61	23	0.197	0.074
Benzo(k)fluoranthene	59	22	0.191	0.071
Benzo(a)pyrene	61	23	0.197	0.074
Bis(2-ethylhexyl) phthalate	279	103	0.903	0.333
Carbon Tetrachloride	38	18	0.123	0.058
Chlorobenzene	28	15	0.091	0.049
Chloroethane	268	104	0.867	0.336
Chloroform	46	21	0.149	0.068
2-Chlorophenol	98	31	0.317	0.100
Chrysene	59	22	0.191	0.071
Di-n-butyl phthalate	57	27	0.184	0.087
1,2-Dichlorobenzene	163	77	0.527	0.249
1,3-Dichlorobenzene	44	31	0.142	0.100
1,4-Dichlorobenzene	28	15	0.091	0.049
1,1-Dichloroethane	59	22	0.191	0.071
1,2-Dichloroethane	211	68	0.683	0.220
1,1-Dichloroethylene	25	16	0.081	0.052
1,2-trans-Dichloroethylene	54	21	0.175	0.068
2,4-Dichlorophenol	112	39	0.362	0.126
1,2-Dichloropropane	230	153	0.744	0.495
1,3-Dichloropropylene	44	29	0.142	0.094
Diethyl phthalate	203	81	0.657	0.262
2,4-Dimethylphenol	36	18	0.116	0.058
Dimethyl phthalate	47	19	0.152	0.061
4,6-Dinitro-o-cresol	277	78	0.896	0.252
2,4-Dinitrophenol	123	71	0.398	0.230

TABLE 2-8
40 CFR 414 Subpart I ELG Calculations for Organic Compounds
Arkema NPDES Permit Renewal Application: Supplemental Information

Effluent Characteristic	Daily Maximum (µg/L)	Monthly Average (µg/L)	Daily Maximum (lbs/day)	Monthly Average (lbs/day)
2,4-Dinitrotoluene	285	113	0.922	0.366
2,6-Dinitrotoluene	641	255	2.074	0.825
Ethylbenzene	108	32	0.349	0.104
Fluoranthene	68	25	0.220	0.081
Fluorene	59	22	0.191	0.071
Hexachlorobenzene	28	15	0.091	0.049
Hexachlorobutadiene	49	20	0.159	0.065
Hexachloroethane	54	21	0.175	0.068
Methyl Chloride	190	86	0.615	0.278
Methylene Chloride	89	40	0.288	0.129
Naphthalene	59	22	0.191	0.071
Nitrobenzene	68	27	0.220	0.087
2-Nitrophenol	69	41	0.223	0.133
4-Nitrophenol	124	72	0.401	0.233
Phenanthrene	59	22	0.191	0.071
Phenol	26	15	0.084	0.049
Pyrene	67	25	0.217	0.081
Tetrachloroethylene	56	22	0.181	0.071
Toluene	80	26	0.259	0.084
1,2,4-Trichlorobenzene	140	68	0.453	0.220
1,1,1-Trichloroethane	54	21	0.175	0.068
1,1,2-Trichloroethane	54	21	0.175	0.068
Trichloroethylene	54	21	0.175	0.068
Vinyl Chloride	268	104	0.867	0.336

Notes:
lbs/day = pounds per day
µg/L = micrograms per liter

2.3.1.3 Water Quality-based Limits for Organic Compounds

The water quality-based permit limits for parameters that are limited by the ELGs are listed in Table 2-9. However, it is noted that ADEM does not have water quality standards for the following OCPSF parameters: acenaphthylene, chloroethane, 1,1-dichloroethane, 4,6-dinitro-o-cresol, 2,6-dinitrotoluene, methyl chloride, naphthalene, 2-nitrophenol, 4-nitrophenol, phenanthrene, and 1,1,1-trichloroethane. Therefore, these parameters are not included in Table 2-9. On the basis of historical data, as well as the data collected as

part of the permit renewal application, Arkema's effluent does not show a reasonable potential to exceed any of the ELG limits or other parameters for which ADEM has established water quality standards.

Water quality-based permit limits were calculated using the average effluent flow of 0,590 mgd and the flow statistics for the Mobile River presented in Section 2.2.2. ADEM's human health water quality standard for consumption of fish calculation for hexachlorobenzene results in a monthly average permit limit that is more stringent than the OCPSF ELG allocation.

TABLE 2-9
ADEM Water Quality Standard Based Permit Limits for Parameters in 40 CFR 414 Subpart I
Arkema NPDES Permit Renewal Application: Supplemental Information

	Freshwater Aquatic Life		Marine Aquatic Life		Human Health
Effluent Characteristic	Acute (lbs/day)	Chronic (lbs/day)	Acute (lbs/day)	Chronic (lbs/day)	Consumption of Fish (lbs/day)
Acenaphthene	--	--	--	--	12,486
Acenaphthylene	--	--	--	--	--
Acrylonitrile	--	--	--	--	24.9
Anthracene	--	--	--	--	503,608
Benzene	--	--	--	--	2,671
Benzo(a)anthracene	--	--	--	--	1.84
3,4-Benzofluoranthene	--	--	--	--	1.84
Benzo(k)fluoranthene	--	--	--	--	1.84
Benzo(a)pyrene	--	--	--	--	1.84
Bis(2-ethylhexyl) phthalate	--	--	--	--	221
Carbon Tetrachloride	--	--	--	--	165
Chlorobenzene	--	--	--	--	19,558
Chloroethane	--	--	--	--	--
Chloroform	--	--	--	--	17,609
2-Chlorophenol	--	--	--	--	1,879
Chrysene	--	--	--	--	1.84
Di-n-butyl phthalate	--	--	--	--	56,585
1,2-Dichlorobenzene	--	--	--	--	16,304
1,3-Dichlorobenzene	--	--	--	--	12,137
1,4-Dichlorobenzene	--	--	--	--	2,427
1,1-Dichloroethane	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	3,689
1,1-Dichloroethylene	--	--	--	--	89,930
1,2-trans-Dichloroethylene	--	--	--	--	127,496

TABLE 2-9
ADEM Water Quality Standard Based Permit Limits for Parameters in 40 CFR 414 Subpart I
Arkema NPDES Permit Renewal Application: Supplemental Information

	Freshwater Aquatic Life		Marine Aquatic Life		Human Health
Effluent Characteristic	Acute (lbs/day)	Chronic (lbs/day)	Acute (lbs/day)	Chronic (lbs/day)	Consumption of Fish (lbs/day)
2,4-Dichlorophenol	--	--	--	--	3,712
1,2-Dichloropropane	--	--	--	--	1,466
1,3-Dichloropropylene	--	--	--	--	2,120
Diethyl phthalate	--	--	--	--	551,899
2,4-Dimethylphenol	--	--	--	--	10,738
Dimethyl phthalate	--	--	--	--	13,989,116
4,6-Dinitro-o-cresol	--	--	--	--	--
2,4-Dinitrophenol	--	--	--	--	67,148
2,4-Dinitrotoluene	--	--	--	--	3412
2,6-Dinitrotoluene	--	--	--	--	--
Ethylbenzene	--	--	--	--	26,859
Fluoranthene	--	--	--	--	1,752
Fluorene	--	--	--	--	67,148
Hexachlorobenzene	--	--	--	--	0.029
Hexachlorobutadiene	--	--	--	--	1,858
Hexachloroethane	--	--	--	--	331.
Methyl Chloride	--	--	--	--	--
Methylene Chloride	--	--	--	--	59,675
Naphthalene	--	--	--	--	--
Nitrobenzene	--	--	--	--	8,713
2-Nitrophenol	--	--	--	--	--
4-Nitrophenol	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Phenol	--	--	--	--	21,583,208
Pyrene	--	--	--	--	50,361
Tetrachloroethylene	--	--	--	--	331
Toluene	--	--	--	--	188,265
1,2,4-Trichlorobenzene	--	--	--	--	884
1,1,1-Trichloroethane	--	--	--	--	--

TABLE 2-9
ADEM Water Quality Standard Based Permit Limits for Parameters in 40 CFR 414 Subpart I
Arkema NPDES Permit Renewal Application: Supplemental Information

Effluent Characteristic	Freshwater Aquatic Life		Marine Aquatic Life		Human Health
	Acute (lbs/day)	Chronic (lbs/day)	Acute (lbs/day)	Chronic (lbs/day)	Consumption of Fish (lbs/day)
1,1,2-Trichloroethane	--	--	--	--	1,570
Trichloroethylene	--	--	--	--	3,016
Vinyl Chloride	--	--	--	--	246

Notes:
lbs/day = pounds per day

2.3.1.4 Metals and Cyanide

Appendix A of 40 CFR 414 lists the applicable processes for *Non-Complexed Metal-Bearing Waste Streams and Cyanide-Bearing Waste Streams.* Arkema's processes do not fall within those processes listed; therefore, the limitations in 40 CFR Subpart I for metals and cyanide do not apply to the Arkema facility.

Because the current permit imposes limits for the metals in 40 CFR Subpart I and a monitoring requirement for total cyanide and antimony, water quality-based limits for these parameters were calculated. ADEM does not have water quality standards for total chromium and total cyanide. The limits provided in Table 2-10 for total chromium are the sum of the chromium III and chromium VI values for freshwater aquatic life, and only chromium VI for marine aquatic life. The limits listed in Table 2-10 for total cyanide are based on the ADEM water quality standard for free cyanide.

TABLE 2-10
ADEM Water Quality Standard Based Permit Limits for Metals and Cyanide in 40 CFR 414 Subpart I
Arkema NPDES Permit Renewal Application: Supplemental Information

Effluent Characteristic	Freshwater Aquatic Life		Marine Aquatic Life		Human Health
	Acute (lbs/day)	Chronic (lbs/day)	Acute (lbs/day)	Chronic (lbs/day)	Consumption of Fish (lbs/day)
Total Antimony	--	--	--	--	8,058
Total Chromium	25,156 [a]	4,555 [a]	17,808 [b]	1,079 [b]	--
Total Copper	292	276	77.7	66.9	--
Total Cyanide [c]	356	112	2.10	0.022	201,443
Total Lead	1,045	54.3	3,400	175	--
Total Nickel	8,350	1,237	1,198	177	42,436
Total Zinc	3,195	4,295	1,457	1,748	974,097

Notes:
lbs/day = pounds per day
[a] Values shown are the sum of the ADEM limits for freshwater aquatic life for chromium III and chromium VI.
[b] Values shown are the ADEM limits for marine aquatic life for chromium VI.
[c] Values shown are the ADEM limits for free cyanide.

On the basis of the historical data, as well as the data submitted with the permit application, effluent at the Arkema facility does not exceed the reasonable potential threshold for these metals and cyanide. Given that the effluent guidelines for metals and cyanide are not applicable to Arkema's processes, and that there is no reasonable potential for Arkema's discharge to exceed the water quality standards, Arkema is requesting that neither permit limits nor monitoring requirements for metals or cyanide be included in the permit upon reissuance.

2.3.2 Tiered Permit Approach for Future Production

As described in Section 1.3, Arkema will be increasing the production of TGA and 2-EHMA beginning in 2014. Peak production of TGA and 2-EHMA is expected to be reached in 2016. A 5 percent per year increase in production of butyl/octyl crudes and IM has also been forecasted for calculation of a second tier of permit limits. The discharge flow is not expected to increase significantly as a result in the increase in production of TGA and 2-EHMA. For peak production of TGA and 2-EHMA in 2016, the total wastewater flow is forecast to be 0.6764 mgd, which is an increase in OCPSF process wastewater flow from 0.388 mgd to 0.474 mgd.

The increase in TGA and 2-EHMA will increase the proportion of Subpart H and result in higher allocations for BOD_5 and TSS. The 2014 production portion for Subpart H is 31.6 percent and the 2016 projected proportion will increase to 38.4 percent, as shown in Table 2-11. The remainder of this section presents the limitations calculations for Tier 2 production and Arkema proposes the trigger for the Tier II limitations be a 35 percent Subpart H production proportion determined on a monthly basis.

2.3.2.1 Biochemical Oxygen Demand and Total Suspended Solids

BOD_5 and TSS limitations were calculated in accordance with 40 CFR 414 Subparts D, G, and H. The allocations for 40 CFR 414 Subparts D, G, and H and the resulting BOD_5 and TSS concentrations are shown in Tables 2-11 and 2-12, respectively.

TABLE 2-11
BOD_5 2016 Production Proportioned Calculations (Tier II)
Arkema NPDES Permit Renewal Application: Supplemental Information

40 CFR 414 Subpart	Process	2016 Projected Production (MM lbs/yr)	Subpart Total	Subpart Proportion	Subpart Limits		Subpart Proportioned Limit	
					Monthly Average (mg/L)	Daily Maximum (mg/L)	Monthly Average (mg/L)	Daily Maximum (mg/L)
D	IM	52.28	52.28	45.4%	24	64	10.90	29.07
G	Butyl/Octyl Crudes	18.55	18.60	16.2%	34	92	5.49	14.86
	Organotin End Product	0.05						
H	TGA	19.00	44.22	38.4%	45	120	17.29	46.10
	2-EHMA	25.22						
			Production Proportioned BOD_5 Concentration				**33.68**	**90.04**

Notes:
2-EHMA = 2-ethylhexyl mercaptoacetate
IM = impact modifiers
mg/L = milligrams per liter
MM lbs/yr = million pounds per year
TGA = thioglycolic acid

TABLE 2-12
TSS 2016 Production Proportioned Calculations (Tier II)
Arkema NPDES Permit Renewal Application: Supplemental Information

40 CFR 414 Subpart	Process	2012 Projected Production (MM lbs/yr)	Subpart Total	Subpart Proportion	Subpart Limits		Subpart Proportioned Limit	
					Monthly Average (mg/L)	Daily Maximum (mg/L)	Monthly Average (mg/L)	Daily Maximum (mg/L)
D	IM	52.28	52.28	45.4%	40	130	18.17	59.05
G	Butyl/Octyl Crudes	18.55	18.60	16.2%	49	159	7.92	25.69
	Organotin End Product	0.05						
H	TGA	19.00	44.22	38.4%	57	183	21.90	70.31
	2-EHMA	25.22						
			Production Proportioned TSS Concentration				**47.99**	**155.05**

Notes:
2-EHMA = 2-ethylhexyl mercaptoacetate
IM = impact modifiers
mg/L = milligrams per liter
MM lbs/yr = million pounds per year
TGA = thioglycolic acid

The calculated Tier II allocations for BOD_5 and TSS in laboratory wastewater, utility wastewater, process unit stormwater, and the sanitary service discharge are shown in Tables 2-13 and 2-14, respectively.

TABLE 2-13
BOD_5 Effluent Limitation Calculations for Tier II
Arkema NPDES Permit Renewal Application: Supplemental Information

Operation/Process	Flow (mgd)	Monthly Average (mg/L)	Monthly Average (lbs/day)	Daily Maximum (mg/L)	Daily Maximum (lbs/day)
OCPSF Wastewaters	0.474	33.68	133.2	90.04	355.9
Nonprocess Utility Wastewaters	0.043	10	3.6	20	7.2
TOTALS	**0.517**		**136.8**		**363.1**

Notes:
lbs/day = pounds per day
mg/L = milligrams per liter
mgd = million gallons per day
OCPSF = Organic Chemicals, Plastics, and Synthetic Fibers

TABLE 2-14
TSS Effluent Limitation Calculations for Tier II
Arkema NPDES Permit Renewal Application: Supplemental Information

Operation/Process	Flow (mgd)	Monthly Average (mg/L)	Monthly Average (lbs/day)	Daily Maximum (mg/L)	Daily Maximum (lbs/day)
OCPSF Wastewaters	0.474	47.99	189.7	155.05	612.9
Nonprocess Utility Wastewaters	0.043	10	3.6	20	7.2
TOTALS	**0.516**		**193.3**		**620.1**

Notes:
lbs/day = pounds per day
mg/L = milligrams per liter
mgd = million gallons per day
OCPSF = Organic Chemicals, Plastics, and Synthetic Fibers

2.3.2.2 40 CFR 414 Subpart I Organic Compounds

40 CFR 414 Subpart I is applicable to wastewater discharges resulting from the manufacture of OCPSF products and product groups from a point source that uses end-of-pipe biological treatment. Discharges subject to 40 CFR 414 Subpart I must achieve mass based discharge levels determined by multiplying the applicable wastewater flow by the concentrations of the parameters listed in Subpart I. Table 2-15 provides the list of parameters, their applicable concentrations for monthly average and daily maximum values, and the resulting mass-based ELGs using the OCPSF effluent flow of 0.474 mgd.

TABLE 2-15
40 CFR 414 Subpart I ELG Calculations for Organic Compounds for Tier II
Arkema NPDES Permit Renewal Application: Supplemental Information

Effluent Characteristic	Daily Maximum (µg/L)	Monthly Average (µg/L)	Daily Maximum (lbs/day)	Monthly Average (lbs/day)
Acenaphthene	59	22	0.233	0.087
Acenaphthylene	59	22	0.233	0.087
Acrylonitrile	242	96	0.957	0.379
Anthracene	59	22	0.233	0.087
Benzene	136	37	0.538	0.146
Benzo(a)anthracene	59	22	0.233	0.087
3,4-Benzofluoranthene	61	23	0.241	0.091
Benzo(k)fluoranthene	59	22	0.233	0.087
Benzo(a)pyrene	61	23	0.241	0.091
Bis(2-ethylhexyl) phthalate	279	103	1.103	0.407
Carbon Tetrachloride	38	18	0.150	0.071
Chlorobenzene	28	15	0.111	0.059
Chloroethane	268	104	1.059	0.411
Chloroform	46	21	0.182	0.083

TABLE 2-15
40 CFR 414 Subpart I ELG Calculations for Organic Compounds for Tier II
Arkema NPDES Permit Renewal Application: Supplemental Information

Effluent Characteristic	Daily Maximum (µg/L)	Monthly Average (µg/L)	Daily Maximum (lbs/day)	Monthly Average (lbs/day)
2-Chlorophenol	98	31	0.387	0.123
Chrysene	59	22	0.233	0.087
Di-n-butyl phthalate	57	27	0.225	0.107
1,2-Dichlorobenzene	163	77	0.644	0.304
1,3-Dichlorobenzene	44	31	0.174	0.122
1,4-Dichlorobenzene	28	15	0.111	0.059
1,1-Dichloroethane	59	22	0.233	0.087
1,2-Dichloroethane	211	68	0.834	0.269
1,1-Dichloroethylene	25	16	0.099	0.063
1,2-trans-Dichloroethylene	54	21	0.213	0.083
2,4-Dichlorophenol	112	39	0.443	0.154
1,2-Dichloropropane	230	153	0.909	0.605
1,3-Dichloropropylene	44	29	0.174	0.115
Diethyl phthalate	203	81	0.801	0.320
2,4-Dimethylphenol	36	18	0.142	0.071
Dimethyl phthalate	47	19	0.186	0.075
4,6-Dinitro-o-cresol	277	78	1.095	0.308
2,4-Dinitrophenol	123	71	0.486	0.281
2,4-Dinitrotoluene	285	113	1.127	0.447
2,6-Dinitrotoluene	641	255	2.534	1.008
Ethylbenzene	108	32	0.427	0.126
Fluoranthene	68	25	0.269	0.099
Fluorene	59	22	0.233	0.087
Hexachlorobenzene	28	15	0.111	0.059
Hexachlorobutadiene	49	20	0.194	0.079
Hexachloroethane	54	21	0.213	0.083
Methyl Chloride	190	86	0.751	0.340
Methylene Chloride	89	40	0.352	0.158
Naphthalene	59	22	0.233	0.087
Nitrobenzene	68	27	0.269	0.107

TABLE 2-15
40 CFR 414 Subpart I ELG Calculations for Organic Compounds for Tier II
Arkema NPDES Permit Renewal Application: Supplemental Information

Effluent Characteristic	Daily Maximum (µg/L)	Monthly Average (µg/L)	Daily Maximum (lbs/day)	Monthly Average (lbs/day)
2-Nitrophenol	69	41	0.273	0.162
4-Nitrophenol	124	72	0.490	0.285
Phenanthrene	59	22	0.233	0.087
Phenol	26	15	0.103	0.059
Pyrene	67	25	0.265	0.099
Tetrachloroethylene	56	22	0.221	0.087
Toluene	80	26	0.316	0.103
1,2,4-Trichlorobenzene	140	68	0.553	0.269
1,1,1-Trichloroethane	54	21	0.213	0.083
1,1,2-Trichloroethane	54	21	0.213	0.083
Trichloroethylene	54	21	0.213	0.083
Vinyl Chloride	268	104	1.059	0.411

Notes:
lbs/day = pounds per day
µg/L = micrograms per liter

2.3.2.3 Water Quality-based Limits for Organic Compounds

The water quality-based permit limits for parameters that are limited by the effluent guidelines are listed in Table 2-16. However, it is noted that ADEM does not have water quality standards for the following OCPSF parameters: acenaphthylene, chloroethane, 1,1-dichloroethane, 4,6-dinitro-o-cresol, 2,6-dinitrotoluene, methyl chloride, naphthalene, 2-nitrophenol, 4-nitrophenol, phenanthrene, and 1,1,1-trichloroethane. Therefore, these parameters are not included in Table 2-16. On the basis of historical data, as well as the data collected as part of the permit renewal application, Arkema's effluent does not show a reasonable potential to exceed any of the effluent guideline limits or other parameters for which ADEM has established a water quality standard.

Water quality-based permit limits were calculated using the average effluent flow of 0.590 mgd and the flow statistics for the Mobile River presented in Section 2.2.2. ADEM's human health consumption of fish water quality standard for hexachlorobenzene results in a monthly average permit limit that is more stringent than the OCPSF ELG allocation.

TABLE 2-16
ADEM Water Quality Standard Based Permit Limits for Parameters in 40 CFR 414 Subpart I
Arkema NPDES Permit Renewal Application: Supplemental Information

	Freshwater Aquatic Life		Marine Aquatic Life		Human Health
Effluent Characteristic	Acute (lbs/day)	Chronic (lbs/day)	Acute (lbs/day)	Chronic (lbs/day)	Consumption of Fish (lbs/day)
Acenaphthene	--	--	--	--	12,487
Acenaphthylene	--	--	--	--	--
Acrylonitrile	--	--	--	--	24.9
Anthracene	--	--	--	--	503,625
Benzene	--	--	--	--	2,671
Benzo(a)anthracene	--	--	--	--	1.84
3,4-Benzofluoranthene	--	--	--	--	1.84
Benzo(k)fluoranthene	--	--	--	--	1.84
Benzo(a)pyrene	--	--	--	--	1.84
Bis(2-ethylhexyl) phthalate	--	--	--	--	221
Carbon Tetrachloride	--	--	--	--	165
Chlorobenzene	--	--	--	--	19,558
Chloroethane	--	--	--	--	--
Chloroform	--	--	--	--	17,609
2-Chlorophenol	--	--	--	--	1,879
Chrysene	--	--	--	--	1.84
Di-n-butyl phthalate	--	--	--	--	56,587
1,2-Dichlorobenzene	--	--	--	--	16,304
1,3-Dichlorobenzene	--	--	--	--	12,138
1,4-Dichlorobenzene	--	--	--	--	2,428
1,1-Dichloroethane	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	3,689
1,1-Dichloroethylene	--	--	--	--	89,933
1,2-trans-Dichloroethylene	--	--	--	--	127,500
2,4-Dichlorophenol	--	--	--	--	3,712
1,2-Dichloropropane	--	--	--	--	1,466
1,3-Dichloropropylene	--	--	--	--	2,120
Diethyl phthalate	--	--	--	--	551,918
2,4-Dimethylphenol	--	--	--	--	10,738
Dimethyl phthalate	--	--	--	--	13,989,579
4,6-Dinitro-o-cresol	--	--	--	--	--

TABLE 2-16
ADEM Water Quality Standard Based Permit Limits for Parameters in 40 CFR 414 Subpart I
Arkema NPDES Permit Renewal Application: Supplemental Information

	Freshwater Aquatic Life		Marine Aquatic Life		Human Health
Effluent Characteristic	Acute (lbs/day)	Chronic (lbs/day)	Acute (lbs/day)	Chronic (lbs/day)	Consumption of Fish (lbs/day)
2,4-Dinitrophenol	--	--	--	--	67,150
2,4-Dinitrotoluene	--	--	--	--	342
2,6-Dinitrotoluene	--	--	--	--	--
Ethylbenzene	--	--	--	--	26,860
Fluoranthene	--	--	--	--	1,752
Fluorene	--	--	--	--	67,150
Hexachlorobenzene	--	--	--	--	0.029
Hexachlorobutadiene	--	--	--	--	1,858
Hexachloroethane	--	--	--	--	331
Methyl Chloride	--	--	--	--	--
Methylene Chloride	--	--	--	--	59,675
Naphthalene	--	--	--	--	--
Nitrobenzene	--	--	--	--	8,713
2-Nitrophenol	--	--	--	--	--
4-Nitrophenol	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Phenol	--	--	--	--	21,583,922
Pyrene	--	--	--	--	50,362
Tetrachloroethylene	--	--	--	--	331
Toluene	--	--	--	--	188,271
1,2,4-Trichlorobenzene	--	--	--	--	884
1,1,1-Trichloroethane	--	--	--	--	--
1,1,2-Trichloroethane	--	--	--	--	1,570
Trichloroethylene	--	--	--	--	3,016
Vinyl Chloride	--	--	--	--	246

Notes:
lbs/day = pounds per day

2.3.2.4 Metals and Cyanide

Appendix A of 40 CFR 414 lists the applicable processes for *Non-Complexed Metal-Bearing Waste Streams and Cyanide-Bearing Waste Streams.* Arkema's processes do not fall within those processes listed; therefore, the limitations in 40 CFR Subpart I for metals and cyanide do not apply to the Arkema facility.

Because the current permit imposes limits for the metals in 40 CFR Subpart I and a monitoring requirement for total cyanide and total antimony, water quality-based limits for these parameters were calculated. ADEM does not have water quality standards for total chromium and total cyanide. The limits provided in Table 2-17 for total chromium are the sum of the chromium III and chromium VI values for freshwater aquatic life, and only chromium VI for marine aquatic life. The limits listed in Table 2-17 for total cyanide are based on the ADEM water quality standard for free cyanide.

TABLE 2-17
ADEM Water Quality Standard Based Permit Limits for Metals and Cyanide in 40 CFR 414 Subpart I
Arkema NPDES Permit Renewal Application: Supplemental Information

	Freshwater Aquatic Life		Marine Aquatic Life		Human Health
Effluent Characteristic	Acute (lbs/day)	Chronic (lbs/day)	Acute (lbs/day)	Chronic (lbs/day)	Consumption of Fish (lbs/day)
Total Antimony	--	--	--	--	8,058
Total Chromium	25,157 [a]	4,555 [a]	17,808 [b]	1,079 [b]	--
Total Copper	292	276	77.7	66.9	--
Total Cyanide [c]	356	112	2.10	0.022	201,440
Total Lead	1,045	54.3	3,400	175	--
Total Nickel	8,351	1,237	1,198	177	42,437
Total Zinc	3,195	4,295	1,457	1,748	974,129

Notes:
lbs/day = pounds per day
[a] Values shown are the sum of the ADEM limits for freshwater aquatic life for chromium III and chromium VI.
[b] Values shown are the ADEM limits for marine aquatic life for chromium VI.
[c] Values shown are the ADEM limits for free cyanide.

On the basis of the historical data, as well as the data submitted with the permit application, Arkema's effluent for Tier 2 is not expected to exceed the reasonable potential threshold for these metals and cyanide. Given that the effluent guidelines for metals and cyanide are not applicable to processes at the Arkema facility, and that there is no reasonable potential for the facility's discharge to exceed the water quality standards, Arkema is requesting that neither permit limits nor monitoring requirements for metals or cyanide be included in the permit upon reissuance.

2.3.3 Water Quality-Based Permit Limits for Outfall DSN001

A reasonable potential analysis (RPA) was conducted for water-quality based parameters at outfall DSN001. ADEM considers there to be a reasonable potential for a discharge to cause an in-stream water quality standard violation if the discharge is 20 percent or more of the concentration that would be applied as the water quality-based permit limit. Using the data submitted with the permit application as well as discharge monitoring report (DMR) values for March 2013 through February 2014, Arkema's discharge does not have a reasonable potential to exceed the ADEM water quality standards for the current production basis or the Tier II production.

OCPSF limitations for organic compounds are required at outfall DSN01A. The water quality-based limits at outfall DSN001 for the organic compounds were calculated and are presented in Section 2.3.1.3 for base production and 2.3.2.3 for Tier II production. The water quality-based limit for hexachlorobenzene at outfall DNS001 is lower than the OCPSF limitation for outfall DSN01A. Arkema is proposing to accept the water quality-based limitation at outfall DSN01A because no other limitations or monitoring requirements for organic compounds at DSN001 are required.

SECTION 3

Requested Permit Limitations

This section presents the requested permit limitations and monitoring frequencies for Arkema's process wastewater and stormwater outfalls. Where ELG-based limits and water quality-based limits apply (as discussed in the previous section), the more stringent of the values are to be applied as the permit limit. Arkema's current NPDES permit contains limitations and monitoring requirements for the following outfalls:

- DSN001 – Total facility discharge from wastewater treatment
- DSN01A – Treated process wastewaters for organic chemical manufacturing, wastewaters from the 800 AWT system (DSN01B), including boiler blowdown, cooling tower blowdown, de-ionization regeneration water, stormwater, and sanitary wastewater
- DSN01B – Pretreated wastewaters from the tin tetrachloride, butyl/octyl tin crudes, organotin end products, and tri-n-butyl tin oxide production processes, laboratory wastewaters, cooling tower blowdown, boiler blowdown, and stormwater surface impoundment (organotin unit)
- DSN01C – Discharge from stormwater surface impoundment (organotin unit)
- DSN003 – Stormwater runoff from non-process areas associated with organic and inorganic chemical manufacturing, air conditioner condensate, freeze protection water, and fire protection water
- DSN004 – Stormwater runoff from non-process areas associated with organic and inorganic chemical manufacturing, air conditioner condensate, freeze protection water, and fire protection water
- DSN006 – Stormwater runoff from non-process areas associated with organic and inorganic chemical manufacturing, air conditioner condensate, freeze protection water, and fire protection water

The remainder of this section is based on the outfall designations in the current NDPES permit. No changes in the sources contributing wastewater to the outfalls are proposed. The retention time for outfalls DSN001, DSN01A, and DSN01B is greater than 24 hours and Arkema requests that all sample types for the new permit are grab samples.

3.1 DSN001

DSN001 is the total facility discharge from the wastewater treatment process and stormwater retention. ELG -based permit limitations are applied at outfall DSN001 and the only applicable permit limitations at outfall DSN001 are water quality-based limitations. Arkema's current permit only has limitations on pH, tri-organotin, and whole effluent toxicity at outfall DSN001.

Arkema's current permit contains limitations for acute whole effluent toxicity using *Ceriodaphnia dubia* and *Pimephales promelas* as indicator organisms. Samples are to be diluted to an in-stream waste concentration of 2.6 percent. Any test that results in less than 90 percent survival and is statistically lower than the control indicates acute toxicity and constitutes noncompliance with the permit. The January 2011 through February 2014 whole effluent toxicity test results did not show any toxicity in the Arkema discharge (Appendix A). Arkema requests that the whole effluent toxicity limits in the current permit be continued in the new permit and the monitoring frequency be reduced to quarterly.

Even though there was no reasonable potential for any water quality-based parameters, a limitation for tri-organotins is included in the current permit. The limit was calculated using the ADEM water quality standard for tributyltin. Tin-based pesticides are no longer manufactured at the Arkema facility. The January 2011 through February 2013 DMR data does not indicate a reasonable potential and no permit limit is required for tri-organotins.

TABLE 3-1
Requested Permit Limits and Monitoring Requirements for Outfall DSN001 for Current Production (Tier I) and Tier II
Arkema NPDES Permit Renewal Application: Supplemental Information

Parameter	Units	Daily Minimum	Daily Maximum	Monthly Average	Monitoring Frequency
Flow	mgd	-	Monitor	Monitor	Continuous
pH [a]	s.u.	6.0	9.0	-	Continuous
Toxicity, Ceriodaphnia Acute	pass(0)/fail(1)	-	0	-	Quarterly
Toxicity, Pimephales Acute	pass(0)/fail(1)	-	0	-	Quarterly

Notes
mg/L = milligrams per liter
mgd = million gallons per day
s.u. = standard units
[a] Where pH is measured continuously, the total time the pH values are outside the range of 6.0 to 9.0 s.u. shall not exceed 7 hours and 26 minutes in any calendar month, and no individual excursion for the pH shall exceed 60 minutes.

3.2 DSN01A

3.2.1 Current Production (Tier I)

DSN01A is an internal monitoring point for the wastewater treated by the 801 AWT system. Effluent limitation calculations for outfall DSN01A are discussed in Section 2.3. Table 3-2 provides the requested limitations and monitoring frequency for Outfall DSN01A. Several of the parameters included in Table 3-2 reflect Arkema's request to reduce the monitoring frequency for BOD_5 and TSS. Data in Appendix A for outfall DSN01A indicate the BOD_5 and TSS values are less than half of the permitted limits.

On the basis of the calculations included in Section 2.3, the ELGS limits are more stringent than the water quality-based limits for all organic compounds except hexachlorobenzene. The daily maximum limitation for hexachlorobenzene was calculated by multiplying the monthly average value by 1.5.

TABLE 3-2
Requested Permit Limits and Monitoring Requirements for Outfall DSN001 for Current Production (Tier I)
Arkema NPDES Permit Renewal Application: Supplemental Information

Parameter	Units	Daily Minimum	Daily Maximum	Monthly Average	Monitoring Frequency
Flow	mgd	-	Monitor	Monitor	Daily
BOD_5	lbs/day	-	287	108	Weekly
TSS	lbs/day	-	498	155	Weekly
pH [1]	s.u.	6.0	9.0	-	Weekly
Acenaphthene	lbs/day	-	0.191	0.071	Semi-annually
Acenaphthylene	lbs/day	-	0.191	0.071	Semi-annually
Acrylonitrile	lbs/day	-	0.783	0.311	Semi-annually
Anthracene	lbs/day	-	0.191	0.071	Semi-annually
Benzene	lbs/day	-	0.440	0.120	Semi-annually
Benzo(a)anthracene	lbs/day	-	0.191	0.071	Semi-annually
3,4-Benzofluoranthene 1	lbs/day	-	0.197	0.074	Semi-annually

TABLE 3-2
Requested Permit Limits and Monitoring Requirements for Outfall DSN001 for Current Production (Tier I)
Arkema NPDES Permit Renewal Application: Supplemental Information

Parameter	Units	Daily Minimum	Daily Maximum	Monthly Average	Monitoring Frequency
Benzo(k)fluoranthene 1	lbs/day	-	0.191	0.071	Semi-annually
Benzo(a)pyrene	lbs/day	-	0.197	0.074	Semi-annually
Bis(2-ethylhexyl) phthalate	lbs/day	-	0.903	0.333	Semi-annually
Carbon Tetrachloride	lbs/day	-	0.123	0.058	Semi-annually
Chlorobenzene	lbs/day	-	0.091	0.049	Semi-annually
Chloroethane	lbs/day	-	0.867	0.336	Semi-annually
Chloroform	lbs/day	-	0.149	0.068	Semi-annually
2-Chlorophenol	lbs/day	-	0.317	0.100	Semi-annually
Chrysene	lbs/day	-	0.191	0.071	Semi-annually
Di-n-butyl phthalate	lbs/day	-	0.184	0.087	Semi-annually
1,2-Dichlorobenzene	lbs/day	-	0.527	0.249	Semi-annually
1,3-Dichlorobenzene	lbs/day	-	0.142	0.100	Semi-annually
1,4-Dichlorobenzene	lbs/day	-	0.091	0.049	Semi-annually
1,1-Dichloroethane	lbs/day	-	0.191	0.071	Semi-annually
1,2-Dichloroethane	lbs/day	-	0.683	0.220	Semi-annually
1,1-Dichloroethylene	lbs/day	-	0.081	0.052	Semi-annually
1,2-trans-Dichloroethylene	lbs/day	-	0.175	0.068	Semi-annually
2,4-Dichlorophenol	lbs/day	-	0.362	0.126	Semi-annually
1,2-Dichloropropane	lbs/day	-	0.744	0.495	Semi-annually
1,3-Dichloropropylene	lbs/day	-	0.142	0.094	Semi-annually
Diethyl phthalate	lbs/day	-	0.657	0.262	Semi-annually
2,4-Dimethylphenol	lbs/day	-	0.116	0.058	Semi-annually
Dimethyl phthalate	lbs/day	-	0.152	0.061	Semi-annually
4,6-Dinitro-o-cresol	lbs/day	-	0.896	0.252	Semi-annually
2,4-Dinitrophenol	lbs/day	-	0.398	0.230	Semi-annually
2,4-Dinitrotoluene	lbs/day	-	0.922	0.366	Semi-annually
2,6-Dinitrotoluene	lbs/day	-	2.074	0.825	Semi-annually
Ethylbenzene	lbs/day	-	0.349	0.104	Semi-annually
Fluoranthene	lbs/day	-	0.220	0.081	Semi-annually
Fluorene	lbs/day	-	0.191	0.071	Semi-annually
Hexachlorobenzene [b]	lbs/day	-	0.029	0.043	Semi-annually
Hexachlorobutadiene	lbs/day	-	0.159	0.065	Semi-annually

TABLE 3-2
Requested Permit Limits and Monitoring Requirements for Outfall DSN001 for Current Production (Tier I)
Arkema NPDES Permit Renewal Application: Supplemental Information

Parameter	Units	Daily Minimum	Daily Maximum	Monthly Average	Monitoring Frequency
Hexachloroethane	lbs/day	-	0.175	0.068	Semi-annually
Methyl Chloride	lbs/day	-	0.615	0.278	Semi-annually
Methylene Chloride	lbs/day	-	0.288	0.129	Semi-annually
Naphthalene	lbs/day	-	0.191	0.071	Semi-annually
Nitrobenzene	lbs/day	-	0.220	0.087	Semi-annually
2-Nitrophenol	lbs/day	-	0.223	0.133	Semi-annually
4-Nitrophenol	lbs/day	-	0.401	0.233	Semi-annually
Phenanthrene	lbs/day	-	0.191	0.071	Semi-annually
Phenol	lbs/day	-	0.084	0.049	Semi-annually
Pyrene	lbs/day	-	0.217	0.081	Semi-annually
Tetrachloroethylene	lbs/day	-	0.181	0.071	Semi-annually
Toluene	lbs/day	-	0.259	0.084	Semi-annually
1,2,4-Trichlorobenzene	lbs/day	-	0.453	0.220	Semi-annually
1,1,1-Trichloroethane	lbs/day	-	0.175	0.068	Semi-annually
1,1,2-Trichloroethane	lbs/day	-	0.175	0.068	Semi-annually
Trichloroethylene	lbs/day	-	0.175	0.068	Semi-annually
Vinyl Chloride	lbs/day	-	0.867	0.336	Semi-annually

Notes:
BOD_5 = 5-day biological oxygen demand
lbs/day = pounds per day
mgd = million gallons per day
s.u. = standard unit
TSS = total suspended solids
[a] Where pH is measured continuously, the total time the pH values are outside the range of 6.0 to 9.0 s.u. shall not exceed 7 hours and 26 minutes in any calendar month, and no individual excursion for the pH shall exceed 60 minutes.
[b] Permit limit is based on ADEM's human health water quality standard for consumption of fish.

3.2.2 Future Production (Tier II)

ELG calculations for Tier II increased production for outfall DSN01A are discussed in Section 2.3. Table 3-2 provides the requested limitations and monitoring frequency for Outfall DSN01A for the increased production proportion of the Subpart H products TGA and 2-EHMA. The requested trigger for Tier II permit limits is a 35 percent production portion of TGA and 2-EHMA.

TABLE 3-3
Requested Permit Limits and Monitoring Requirements for Outfall DSN001 for Current Production (Tier 2)
Arkema NPDES Permit Renewal Application: Supplemental Information

Parameter	Units	Daily Minimum	Daily Maximum	Monthly Average	Monitoring Frequency
Flow	mgd	-	Monitor	Monitor	Daily
BOD5	lbs/day	-	363	137	Weekly
TSS	lbs/day	-	620	193	Weekly
pH a	s.u.	6.0	9.0	-	Weekly
Toxicity, Ceriodaphnia Acute	pass(0)/fail(1)	-	0	-	Semi-annually
Toxicity, Pimephales Acute	pass(0)/fail(1)	-	0	-	Semi-annually
Acenaphthene	lbs/day	-	0.233	0.087	Semi-annually
Acenaphthylene	lbs/day	-	0.233	0.087	Semi-annually
Acrylonitrile	lbs/day	-	0.957	0.379	Semi-annually
Anthracene	lbs/day	-	0.233	0.087	Semi-annually
Benzene	lbs/day	-	0.538	0.146	Semi-annually
Benzo(a)anthracene	lbs/day	-	0.233	0.087	Semi-annually
3,4-Benzofluoranthene 1	lbs/day	-	0.241	0.091	Semi-annually
Benzo(k)fluoranthene 1	lbs/day	-	0.233	0.087	Semi-annually
Benzo(a)pyrene	lbs/day	-	0.241	0.091	Semi-annually
Bis(2-ethylhexyl) phthalate	lbs/day	-	1.103	0.407	Semi-annually
Carbon Tetrachloride	lbs/day	-	0.150	0.071	Semi-annually
Chlorobenzene	lbs/day	-	0.111	0.059	Semi-annually
Chloroethane	lbs/day	-	1.059	0.411	Semi-annually
Chloroform	lbs/day	-	0.182	0.083	Semi-annually
2-Chlorophenol	lbs/day	-	0.387	0.123	Semi-annually
Chrysene	lbs/day	-	0.233	0.087	Semi-annually
Di-n-butyl phthalate	lbs/day	-	0.225	0.107	Semi-annually
1,2-Dichlorobenzene	lbs/day	-	0.644	0.304	Semi-annually
1,3-Dichlorobenzene	lbs/day	-	0.174	0.122	Semi-annually
1,4-Dichlorobenzene	lbs/day	-	0.111	0.059	Semi-annually
1,1-Dichloroethane	lbs/day	-	0.233	0.087	Semi-annually
1,2-Dichloroethane	lbs/day	-	0.834	0.269	Semi-annually
1,1-Dichloroethylene	lbs/day	-	0.099	0.063	Semi-annually
1,2-trans-Dichloroethylene	lbs/day	-	0.213	0.083	Semi-annually
2,4-Dichlorophenol	lbs/day	-	0.443	0.154	Semi-annually
1,2-Dichloropropane	lbs/day	-	0.909	0.605	Semi-annually

TABLE 3-3
Requested Permit Limits and Monitoring Requirements for Outfall DSN001 for Current Production (Tier 2)
Arkema NPDES Permit Renewal Application: Supplemental Information

Parameter	Units	Daily Minimum	Daily Maximum	Monthly Average	Monitoring Frequency
1,3-Dichloropropylene	lbs/day	-	0.174	0.115	Semi-annually
Diethyl phthalate	lbs/day	-	0.801	0.320	Semi-annually
2,4-Dimethylphenol	lbs/day	-	0.142	0.071	Semi-annually
Dimethyl phthalate	lbs/day	-	0.186	0.075	Semi-annually
4,6-Dinitro-o-cresol	lbs/day	-	1.095	0.308	Semi-annually
2,4-Dinitrophenol	lbs/day	-	0.486	0.281	Semi-annually
2,4-Dinitrotoluene	lbs/day	-	1.127	0.447	Semi-annually
2,6-Dinitrotoluene	lbs/day	-	2.534	1.008	Semi-annually
Ethylbenzene	lbs/day	-	0.427	0.126	Semi-annually
Fluoranthene	lbs/day	-	0.269	0.099	Semi-annually
Fluorene	lbs/day	-	0.233	0.087	Semi-annually
Hexachlorobenzene b	lbs/day	-	0.029	0.043	Semi-annually
Hexachlorobutadiene	lbs/day	-	0.194	0.079	Semi-annually
Hexachloroethane	lbs/day	-	0.213	0.083	Semi-annually
Methyl Chloride	lbs/day	-	0.751	0.340	Semi-annually
Methylene Chloride	lbs/day	-	0.352	0.158	Semi-annually
Naphthalene	lbs/day	-	0.233	0.087	Semi-annually
Nitrobenzene	lbs/day	-	0.269	0.107	Semi-annually
2-Nitrophenol	lbs/day	-	0.273	0.162	Semi-annually
4-Nitrophenol	lbs/day	-	0.490	0.285	Semi-annually
Phenanthrene	lbs/day	-	0.233	0.087	Semi-annually
Phenol	lbs/day	-	0.103	0.059	Semi-annually
Pyrene	lbs/day	-	0.265	0.099	Semi-annually
Tetrachloroethylene	lbs/day	-	0.221	0.087	Semi-annually
Toluene	lbs/day	-	0.316	0.103	Semi-annually
1,2,4-Trichlorobenzene	lbs/day	-	0.553	0.269	Semi-annually
1,1,1-Trichloroethane	lbs/day	-	0.213	0.083	Semi-annually
1,1,2-Trichloroethane	lbs/day	-	0.213	0.083	Semi-annually

TABLE 3-3
Requested Permit Limits and Monitoring Requirements for Outfall DSN001 for Current Production (Tier 2)
Arkema NPDES Permit Renewal Application: Supplemental Information

Parameter	Units	Daily Minimum	Daily Maximum	Monthly Average	Monitoring Frequency
Trichloroethylene	lbs/day	-	0.213	0.083	Semi-annually
Vinyl Chloride	lbs/day	-	1.059	0.411	Semi-annually

Notes:
BOD_5 = 5-day biological oxygen demand
lbs/day = pounds per day
mgd = million gallons per day
s.u. = standard unit
TSS = total suspended solids
[a] Where pH is measured continuously, the total time the pH values are outside the range of 6.0 to 9.0 s.u. shall not exceed 7 hours and 26 minutes in any calendar month, and no individual excursion for the pH shall exceed 60 minutes.
[b] Permit limit is based on ADEM's human health water quality standard for consumption of fish.

3.3 DSN01B

DSN01B is an internal monitoring point for the wastewater treated by the 800 AWT system. This treated wastewater is from the production of tin tetrachloride, butyl/octyl tin crudes, organotin end products, and its associated utility and stormwaters. The wastewater from the 800 AWT is further treated in the 801 AWT before being discharged through outfall DSN001. Arkema proposes to remove this outfall from the renewed NPDES permit since there are no specific ELGs that are applicable at this location and the wastewater is monitored and limited at outfall DSN01A.

3.4 DSN01C

DSN01C is an internal monitoring point for the discharge from the organotin unit stormwater retention pond. The stormwater is retained until a certain level is reached in the pond. Arkema monitors the concentration of tri-organotin in the stormwater and if the concentration is greater than 0.030 mg/L, the water is treated in the 800 AWT. If the tri-organotin concentration is less than 0.030 mg/L, the stormwater is combined with the wastewater from DSN01A and discharged through outfall DSN001.

Arkema proposes to remove this outfall from the renewed NPDES permit since there are no specific ELGs that are applicable at this monitoring point, and the wastewater is monitored and limited at outfall DSN001.

3.5 Stormwater Outfalls

The current permit requires monitoring for 12 parameters and has an oil and grease daily maximum limit of 15 mg/L from outfalls DSN003, DSN004, and DSN006. Drainage sources for outfalls DSN003 and DSN004 are similar and do not include drainage from any areas containing tin-based material or processing. Arkema requests that the new permit allow representative sampling for stormwater outfalls as presented in Table 3-4. Arkema is requesting the monitoring requirement for total tin and tri-organotin be removed from outfalls DSN003 and DSN004 since no tin-based operations are conducted in the outfall drainage areas.

TABLE 3-4
Requested Representative Stormwater Outfalls for Sampling
Arkema NPDES Permit Renewal Application: Supplemental Information

Representative Outfall for Sampling and Analysis	Representative of these Outfalls
DSN004	DSN003, DSN004
DSN006	DSN006

Appendix A
January 2010 through April 2013 DMR Data Summary Statistics

TABLE A-1

Statistical Analysis of January 2012 through February 2014 Discharge Data to Support Monitoring Frequency Reduction for Outfall DSN01A

Arkema NPDES Permit Renewal Application: Supplemental Information

Parameter	Units	Current Monitoring Frequency	Current Permitted Daily Maximum	Current Permitted Monthly Average	Total Count of Samples	Average	Max	Min	# of Detectable Values	% of Detectable Values	# of Non-Detectable Values	% of Non-Detectable Values	% of Long-term Average/Permitted Monthly Average	# of Daily Max Violations	% of Violations
BOD_5 (20 Degrees Celsius)	lbs/day	3/wk	203	84	495	5.94	556.1	0	492	99.4%	3	0.6%	7.1%	0	0%
Solids, Total Suspended	lbs/day	3/wk	348	118	497	42.8	677	0	489	98.4%	8	1.6%	36.3%	5	1.0%

Notes:
BOD_5 = 5-day biological oxygen demand
lbs/day = pounds per day
wk = week

TABLE A-2

Statistical Analysis of January 2012 through February 2014 Discharge Data to Support Monitoring Frequency Reduction for Outfall DSN01A

Arkema NPDES Permit Renewal Application: Supplemental Information

Parameter	Units	Current Monitoring Frequency	Current Permitted Daily Maximum	Current Permitted Monthly Average	Total Count of Samples	Average	Max	Min	# of Detectable Values	% of Detectable Values	# of Non-Detectable Values	% of Non-Detectable Values	% of Long-term Average/Permitted Monthly Average	# of Daily Max Violations	% of Violations
Tin, Total (as Sn)	mg/L	3/wk	Report	Report	502	1.61	9.10	0	500	99.6%	2	0.4%	N/A	N/A	N/A
Tin, Tri-Organo	mg/L	Weekly	Report	Report	351	0.080	0.685	0	349	99.4%	2	0.6%	N/A	N/A	N/A

Notes:
mg/L = milligrams per liter
N/A = not applicable

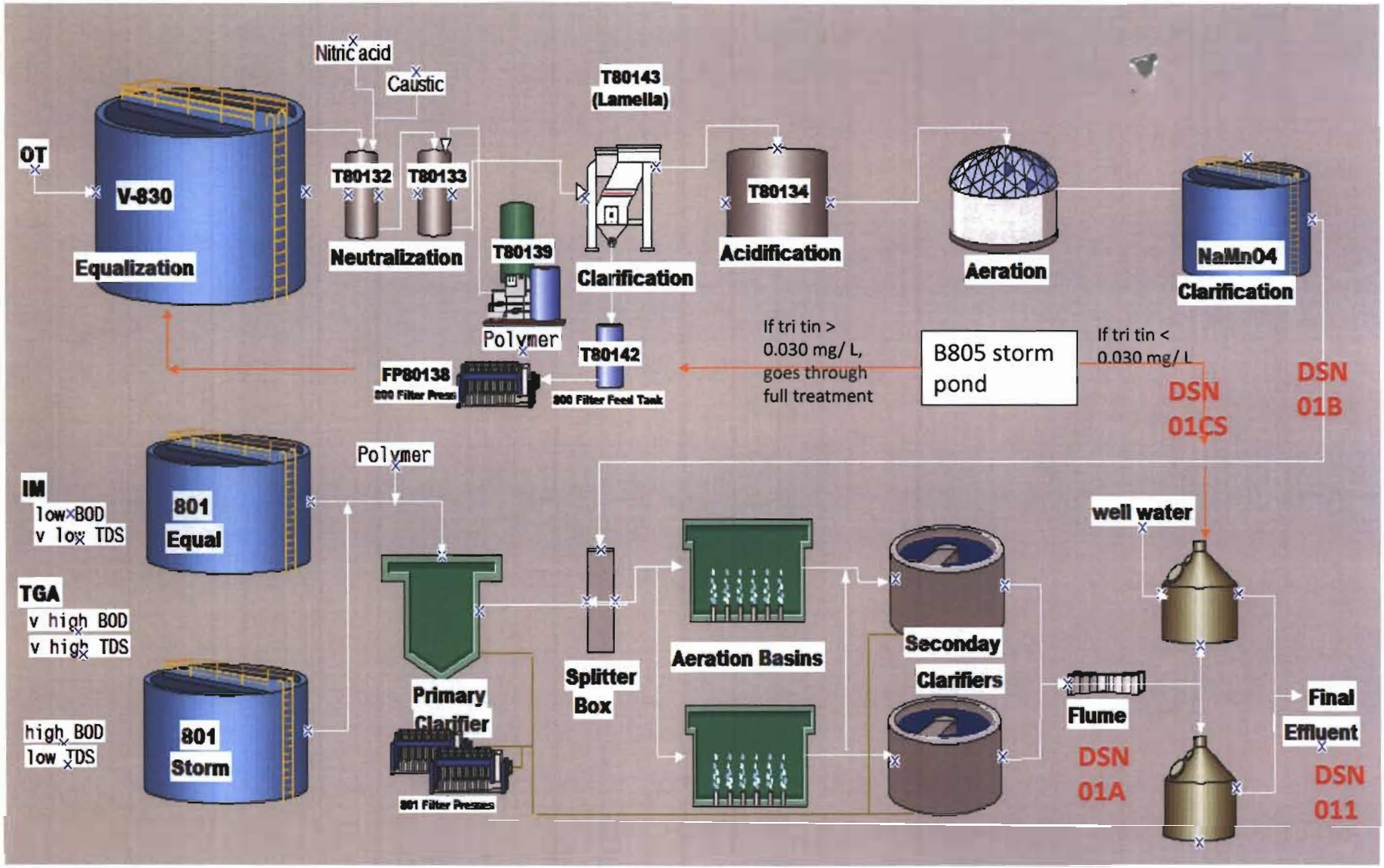
TABLE A-3

Statistical Analysis of January 2012 through February 2014 Discharge Data to Support Monitoring Frequency Reduction for Outfall DSN001

Arkema NPDES Permit Renewal Application: Supplemental Information

Parameter	Units	Current Monitoring Frequency	Current Permitted Daily Maximum	Current Permitted Monthly Average	Total Count of Samples	Average	Max	Min	# of Detectable Values	% of Detectable Values	# of Non-Detectable Values	% of Non-Detectable Values	% of Long-term Average/Permitted Monthly Average	# of Daily Max Violations	% of Violations
Tin, Total (as Sn)	mg/L	Weekly	Report	Report	167	0.027	0.148	0.002	167	100%	0	0%	N/A	N/A	N/A
Tin, Tri-Organo	mg/L	Weekly	1.51	0.035	168	0.0022	0.0120	0	110	65.5%	58	34.5%	6.2%	0	0%

Notes:
mg/L = milligrams per liter
N/A = not applicable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Caustic
T80143
(Lamella)
OT
V-830
Equalization
T80132
T80133
Neutralization
T80139
Polymer
Clarification
T80134
Acidification
Aeration
NaMn04
Clarification
FP80138
800 Filter Press
T80142
800 Filter Feed Tank
If tri tin >
0.030 mg/ L,
goes through
full treatment
B805 storm
pond
If tri tin <
0.030 mg/ L
DSN
01CS
DSN
01B
IM
low BOD
v low TDS
801
Equal
Polymer
TGA
v high BOD
v high TDS
high BOD
low TDS
801
Storm
Primary
Clarifier
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01A
Final
Effluent
DSN
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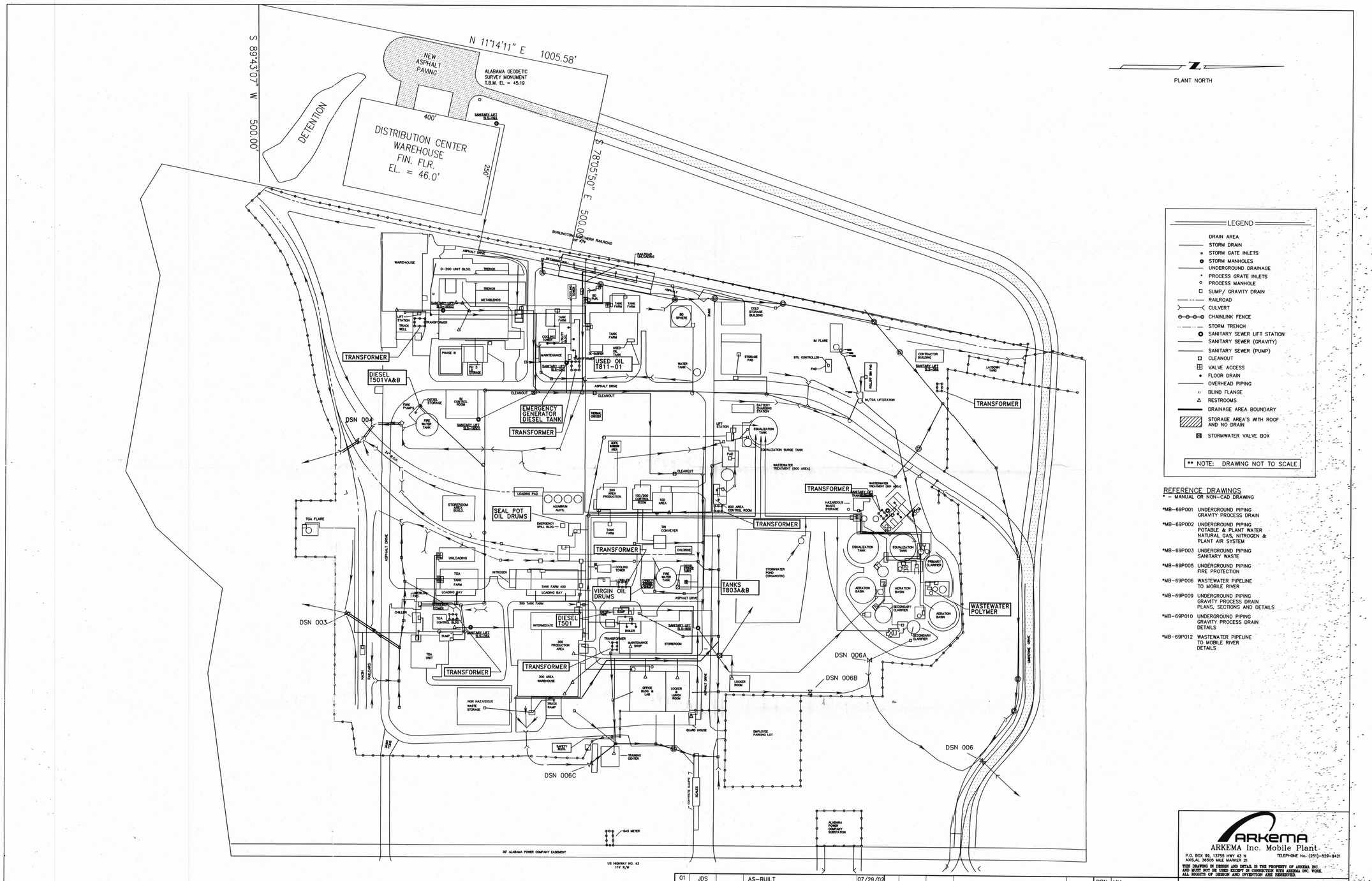

LEGEND

- DRAIN AREA
- STORM DRAIN
- STORM GATE INLETS
- STORM MANHOLES
- UNDERGROUND DRAINAGE
- PROCESS GRATE INLETS
- PROCESS MANHOLE
- SUMP/ GRAVITY DRAIN
- RAILROAD
- CULVERT
- CHAINLINK FENCE
- STORM TRENCH
- SANITARY SEWER LIFT STATION
- SANITARY SEWER (GRAVITY)
- SANITARY SEWER (PUMP)
- CLEANOUT
- VALVE ACCESS
- FLOOR DRAIN
- OVERHEAD PIPING
- BLIND FLANGE
- RESTROOMS
- DRAINAGE AREA BOUNDARY
- STORAGE AREA'S WITH ROOF AND NO DRAIN
- STORMWATER VALVE BOX

** NOTE: DRAWING NOT TO SCALE

REFERENCE DRAWINGS

* - MANUAL OR NON-CAD DRAWING

- *MB-69P001 UNDERGROUND PIPING GRAVITY PROCESS DRAIN
- *MB-69P002 UNDERGROUND PIPING POTABLE & PLANT WATER NATURAL GAS, NITROGEN & PLANT AIR SYSTEM
- *MB-69P003 UNDERGROUND PIPING SANITARY WASTE
- *MB-69P005 UNDERGROUND PIPING FIRE PROTECTION
- *MB-69P006 WASTEWATER PIPELINE TO MOBILE RIVER
- *MB-69P009 UNDERGROUND PIPING GRAVITY PROCESS DRAIN PLANS, SECTIONS AND DETAILS
- *MB-69P010 UNDERGROUND PIPING GRAVITY PROCESS DRAIN DETAILS
- *MB-69P012 WASTEWATER PIPELINE TO MOBILE RIVER DETAILS

REV	DRAWN	APP'D	DESCRIPTION	DATE
01	JDS		AS-BUILT	07/29/02
02	DNM	JB	ADD ARKEMA BORDER	04/05/05

REV	DRAWN	APP'D	DESCRIPTION	DATE

DRN MM
ENG. .
CHK .
SCALE 1"=100"
DATE 09/11/00
PROJ. .

ARKEMA
ARKEMA Inc. Mobile Plant
P.O. BOX 99, 13755 HWY 43 N
AXIS,AL 36505 MILE MARKER 21
TELEPHONE No. (251)-829-8421

MOBILE PLANT
SITE DRAINAGE, UNDERGROUND PIPING AND OIL STORAGE LOCATIONS

PROJECT NUMBER	DRAWING NUMBER						
	PLANT	COST	DIS	SEQ.#	SHT	SIZE	ISSUE
-	MB	69	0	126	00	D	02