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OCTOBER 5, 2016

MS BONNIE TULLY
VP AND SITE MANAGER
EVONIK CORPORATION
4201 DEGUSSA ROAD
THEODORE AL 36590

RE: **DRAFT PERMIT**
NPDES PERMIT NUMBER AL0023272

Dear Ms. Tully:

Transmitted herein is a draft of the referenced permit.

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

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

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Ramsey", is written over a circular stamp.

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

Enclosure: Draft Permit

pc via website:

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

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)



NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE: EVONIK CORPORATION

FACILITY LOCATION: 4201 DEGUSSA ROAD
THEODORE, AL 36590

PERMIT NUMBER: AL0023272

RECEIVING WATERS: DSN001: THEODORE BARGE CANAL
DSN002, DSN003, DSN005: UNNAMED TRIBUTARY TO MIDDLE FORK
DEER RIVER

In accordance with and subject to the provisions of the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§1251-1378 (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-15, 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: JULY 30, 2012

EFFECTIVE DATE: AUGUST 1, 2012

EXPIRATION DATE: JULY 31, 2017

MODIFICATION ISSUED DATE:

MODIFICATION EFFECTIVE DATE:

Draft

Alabama Department of Environmental Management

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

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PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

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

DSN0011: Treated process wastewater from DSN001a and 001b, boiler blowdown, noncontact cooling water, cooling tower blowdown, contaminated stormwater and treated groundwater.

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

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>			<u>MONITORING REQUIREMENTS 1/</u>				
	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Daily Minimum</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Measurement Frequency 2/</u>	<u>Sample Type</u>	<u>Seasonal</u>
Temperature, Water Deg. Fahrenheit	-	-	-	REPORT F	90 F	Daily	Grab	-
Oxygen, Dissolved (DO) 3/	-	-	REPORT mg/l	-	-	3X Weekly test	Grab	May - October
Oxygen, Dissolved (DO) 3/	-	-	REPORT mg/l	-	-	Weekly	Grab	November - April
BOD, 5-Day (20 Deg. C)	141.14 lbs/day	380.39 lbs/day	-	4.0 mg/l	8.0 mg/l	Daily	Composite	-
pH	-	-	6.0 S.U.	-	9.0 S.U.	Daily	Grab	-
Solids, Total Suspended	1042.56 lbs/day	2718.63 lbs/day	-	-	-	3X Weekly test	Composite	-
Nitrogen, Ammonia Total (As N)	45 lbs/day	68 lbs/day	-	-	-	Daily	Composite	-
Nitrogen, Kjeldahl Total (As N)	125 lbs/day	175 lbs/day	-	-	-	Once/2 Weeks	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/ Samples shall be collected from the Theodore Barge Canal at a location downstream of the discharge and at a depth of 5 feet. During periods when the D.O. is less than 5.0 mg/l the permittee shall cease the discharge of process wastewaters to the Theodore Barge Canal.

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): Treated process wastewater from DSN001a and 001b, boiler blowdown, noncontact cooling water, cooling tower blowdown, contaminated stormwater and treated groundwater.

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

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>			<u>MONITORING REQUIREMENTS 1/</u>				
	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Daily Minimum</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Measurement Frequency 2/</u>	<u>Sample Type</u>	<u>Seasonal</u>
Nitrite Plus Nitrate Total I Det. (As N)	102 lbs/day	167 lbs/day	-	-	-	Once/2 Weeks	Composite	-
Phosphorus, Total (As P)	528 lbs/day	688 lbs/day	-	-	-	Once/2 Weeks	Composite	-
Carbon, Tot Organic (TOC)	670 lbs/day	1260 lbs/day	-	-	-	3X Weekly test	Composite	-
Chloride (As Cl)	-	-	-	6100 mg/l	9000 mg/l	Weekly	Composite	-
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	-
Chlorine, Total Residual	-	-	-	0.022 mg/l	0.039 mg/l	Weekly	Grab	-
Cyanide, Free Available 3/	0.154 lbs/day	0.154 lbs/day	-	-	-	Monthly	Grab	-
Solids, Total Dissolved	-	-	-	REPORT mg/l	REPORT mg/l	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/ Monitoring for compliance with permit limitations for Cyanide shall be conducted using a site-specific minimum level (ML) of detection of 0.057 mg/l.

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

DSN001Q: Treated process wastewater from DSN001a and 001b, boiler blowdown, noncontact cooling water, cooling tower blowdown, contaminated stormwater and treated groundwater.

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

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>			<u>MONITORING REQUIREMENTS 1/</u>				
	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Daily Minimum</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Measurement Frequency 2/</u>	<u>Sample Type</u>	<u>Seasonal</u>
LF P/F Statre 7 Day Chr Cyprinodon Variega	-	-	-	-	0 pass(0)/fail(1)	Quarterly	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.C. Effluent Toxicity and Biomonitoring Requirements. Compliance shall be determined as no significant difference between the control and the test at 95 % confidence level for the larval survival and growth test.

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:

DSN001S: Treated process wastewater from DSN001a and 001b, boiler blowdown, noncontact cooling water, cooling tower blowdown, contaminated stormwater and treated groundwater.

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

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>			<u>MONITORING REQUIREMENTS 1/</u>				
	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Daily Minimum</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Measurement Frequency 2/ 3/</u>	<u>Sample Type</u>	<u>Seasonal</u>
Nickel Total Recoverable 4/	3.258 lbs/day	6.516 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Lead, Total Recoverable 4/	0.236 lbs/day	1.130 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Copper Total Recoverable 4/	1.603 lbs/day	1.900 lbs/day	-	-	-	Twice Every 6 Months	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/ Sample collection shall occur the same month at least 10 days apart.
- 4/ For the purpose of determining compliance with permit limits, "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:

DSN001T: Treated process wastewater from DSN001a and 001b, boiler blowdown, noncontact cooling water, cooling tower blowdown, contaminated stormwater and treated groundwater.

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

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>			<u>MONITORING REQUIREMENTS 1/</u>				
	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Daily Minimum</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Measurement Frequency 2/</u>	<u>Sample Type</u>	<u>Seasonal</u>
P/F Statre 7 Day Chr Arbacia 3/	-	-	-	-	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.C. Effluent Toxicity and Biomonitoring Requirements. Compliance shall be determined as no significant difference between the control and the test at 95 % confidence level for the fertilization test.

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:

DSN002S: North site stormwater runoff from north non-process areas. 3/4/

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

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>			<u>MONITORING REQUIREMENTS 1/</u>				
	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Daily Minimum</u> REPORT S.U.	<u>Monthly Average</u>	<u>Daily Maximum</u> REPORT S.U.	<u>Measurement Frequency 2/</u>	<u>Sample Type</u>	<u>Seasonal</u>
pH	-	-	-	-	-	Twice per Year	Grab	-
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Oil & Grease	-	-	-	-	15.0 mg/l	Twice per Year	Grab	-
Nitrogen, Ammonia Total (As N)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Carbon, Tot Organic (TOC)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Chloride (As Cl)	-	-	-	-	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	-

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:

DSN003S: North site stormwater runoff from east non-process areas and stormwater from non-process areas associated with the BASF and BCS facilities and hydrostatic test water from the BCS site. 3/4/

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

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>			<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>MONITORING REQUIREMENTS 1/</u>		
	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Daily Minimum</u> REPORT S.U.			<u>Measurement Frequency 2/</u>	<u>Sample Type</u>	<u>Seasonal</u>
pH					REPORT S.U.	Twice per Year	Grab	-
Solids, Total Suspended					REPORT mg/l	Twice per Year	Grab	-
Oil & Grease	-	-	-	-	15.0 mg/l	Twice per Year	Grab	-
Nitrogen, Ammonia Total (As N)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Carbon, Tot Organic (TOC)					REPORT mg/l	Twice per Year	Grab	-
Chloride (As Cl)					REPORT mg/l	Twice per Year	Grab	-
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD				Twice per Year	Estimate	-
Solids, Total Dissolved					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:

DSN005S: South site stormwater runoff from non-process areas. 3/4/

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

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>			<u>MONITORING REQUIREMENTS 1/</u>				
	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Daily Minimum</u> REPORT S.U.	<u>Monthly Average</u>	<u>Daily Maximum</u> REPORT S.U.	<u>Measurement Frequency 2/</u>	<u>Sample Type</u>	<u>Seasonal</u>
pH	-	-	-	-	REPORT S.U.	Twice per Year	Grab	-
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Oil & Grease	-	-	-	-	15.0 mg/l	Twice per Year	Grab	-
Nitrogen, Ammonia Total (As N)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Nitrogen, Kjeldahl Total (As N)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Nitrite Plus Nitrate Total 1 Det. (As N)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Carbon, Tot Organic (TOC)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	-
Cyanide, Total (As CN)	-	-	-	-	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:

DSN005S (continued): South site stormwater runoff from non-process areas. 3/4/

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

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS 1/</u>			
	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Daily Minimum</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Measurement Frequency 2/</u>	<u>Sample Type</u>	<u>Seasonal</u>
Chloride (As Cl)	-	-	-	-	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	-

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:

DSN01A1: Treated wastewater (south pond) resulting from the manufacture of inorganic chemicals.

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

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>			<u>MONITORING REQUIREMENTS 1/</u>				
	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Daily Minimum</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Measurement Frequency 2/</u>	<u>Sample Type</u>	<u>Seasonal</u>
pH	-	-	REPORT S.U.	-	REPORT S.U.	Daily	Grab	-
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	-

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- 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.

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:

DSN01BS: Biological and high TDS treatment systems effluent including treated process wastewaters from the manufacture of organic and inorganic chemicals, contaminated stormwater and treated groundwater.

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

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>			<u>MONITORING REQUIREMENTS 1/</u>				
	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Daily Minimum</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Measurement Frequency 2/ 3/</u>	<u>Sample Type</u>	<u>Seasonal</u>
Cyanide, Total (As CN)	1.536 lbs/day	4.389 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Chromium, Total (As Cr)	6.448 lbs/day	16.090 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Zinc, Total (As Zn)	6.099 lbs/day	15.161 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Carbon Tetrachloride	0.105 lbs/day	0.221 lbs/day	-	-	-	Twice Every 6 Months	Grab	-
1,2-Dichloroethane	0.395 lbs/day	1.226 lbs/day	-	-	-	Twice Every 6 Months	Grab	-
Chloroform	0.122 lbs/day	0.267 lbs/day	-	-	-	Twice Every 6 Months	Grab	-
Toluene	0.151 lbs/day	0.465 lbs/day	-	-	-	Twice Every 6 Months	Grab	-
Benzene	0.215 lbs/day	0.790 lbs/day	-	-	-	Twice Every 6 Months	Grab	-

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	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Daily Minimum</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Measurement Frequency 2/ 3/</u>	<u>Sample Type</u>	<u>Seasonal</u>
Acenaphthylene	0.128 lbs/day	0.343 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Acenaphthene	0.128 lbs/day	0.343 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Acrylonitrile	0.028 lbs/day	1.406 lbs/day	-	-	-	Twice Every 6 Months	Grab	-
Anthracene	0.128 lbs/day	0.343 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Benzo (K) Fluoranthene	0.0021 lbs/day	0.343 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Benzo (A) Pyrene	0.0021 lbs/day	0.354 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Chlorobenzene	0.087 lbs/day	0.163 lbs/day	-	-	-	Twice Every 6 Months	Grab	-
Chrysene	0.0021 lbs/day	0.343 lbs/day	-	-	-	Twice Every 6 Months	Composite	-

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	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Daily Minimum</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Measurement Frequency 2/ 3/</u>	<u>Sample Type</u>	<u>Seasonal</u>
Diethyl Phthalate	0.471 lbs/day	1.179 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Dimethyl Phthalate	0.110 lbs/day	0.273 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Ethylbenzene	0.186 lbs/day	0.627 lbs/day	-	-	-	Twice Every 6 Months	Grab	-
Fluoranthene	0.145 lbs/day	0.395 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Fluorene	0.128 lbs/day	0.343 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Hexachloroethane	0.122 lbs/day	0.314 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Methyl Chloride	0.500 lbs/day	1.104 lbs/day	-	-	-	Twice Every 6 Months	Grab	-
Methylene Chloride	0.232 lbs/day	0.517 lbs/day	-	-	-	Twice Every 6 Months	Grab	-

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Nitrobenzene	0.157 lbs/day	0.395 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Phenanthrene	0.128 lbs/day	0.343 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Pyrene	0.145 lbs/day	0.389 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Tetrachloroethylene	0.128 lbs/day	0.325 lbs/day	-	-	-	Twice Every 6 Months	Grab	-
1,1-Dichloroethane	0.128 lbs/day	0.343 lbs/day	-	-	-	Twice Every 6 Months	Grab	-
1,1-Dichloroethylene	0.093 lbs/day	0.145 lbs/day	-	-	-	Twice Every 6 Months	Grab	-
1,1,1-Trichloroethane	0.122 lbs/day	0.314 lbs/day	-	-	-	Twice Every 6 Months	Grab	-
1,1,2-Trichloroethane	0.122 lbs/day	0.314 lbs/day	-	-	-	Twice per Year	Grab	-

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	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Daily Minimum</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Measurement Frequency 2/ 3/</u>	<u>Sample Type</u>	<u>Seasonal</u>
Benzo (A) Anthracene	0.0021 lbs/day	0.343 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
1,2-Dichlorobenzene	0.447 lbs/day	0.947 lbs/day	-	-	-	Twice Every 6 Months	Grab	-
1,2-Dichloropropane	0.889 lbs/day	1.336 lbs/day	-	-	-	Twice Every 6 Months	Grab	-
1,2-Trans-Dichloroethylene	0.122 lbs/day	0.314 lbs/day	-	-	-	Twice Every 6 Months	Grab	-
1,2,4-Trichlorobenzene	0.395 lbs/day	0.813 lbs/day	-	-	-	Twice per Year	Composite	-
1,3-Dichlorobenzene	0.180 lbs/day	0.256 lbs/day	-	-	-	Twice Every 6 Months	Grab	-
1,4-Dichlorobenzene	0.087 lbs/day	0.163 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
2-Chlorophenol	0.180 lbs/day	0.569 lbs/day	-	-	-	Twice Every 6 Months	Composite	-

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2-Nitrophenol	0.238 lbs/day	0.401 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
2,4-Dichlorophenol	0.227 lbs/day	0.651 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
2,4-Dimethylphenol	0.105 lbs/day	0.209 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
2,4-Dinitrotoluene	0.384 lbs/day	1.656 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
2,4-Dinitrophenol	0.412 lbs/day	0.714 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
2,6-Dinitrotoluene	1.481 lbs/day	3.723 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
4-Nitrophenol	0.418 lbs/day	0.720 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
4,6-Dinitro-O-Cresol	0.453 lbs/day	1.609 lbs/day	-	-	-	Twice Every 6 Months	Composite	-

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	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Daily Minimum</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Measurement Frequency 2/ 3/</u>	<u>Sample Type</u>	<u>Seasonal</u>
Phenol, Single Compound	0.087 lbs/day	0.151 lbs/day	-	-	-	Twice Every 6 Months	Grab	-
Naphthalene	0.128 lbs/day	0.343 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Bis (2-Ethylhexyl) Phthalate	0.249 lbs/day	1.621 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Di-N-Butyl Phthalate	0.157 lbs/day	0.331 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Vinyl Chloride	0.276 lbs/day	1.557 lbs/day	-	-	-	Twice Every 6 Months	Grab	-
Trichloroethylene	0.122 lbs/day	0.314 lbs/day	-	-	-	Twice Every 6 Months	Grab	-
Hexachlorobenzene	0.000033 lbs/day	0.163 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Hexachlorobutadiene	0.116 lbs/day	0.285 lbs/day	-	-	-	Twice Every 6 Months	Composite	-

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1,3 Dichloropropene	0.168 lbs/day	0.256 lbs/day	-	-	-	Twice Every 6 Months	Grab	-
3,4 Benzofluoranthene	0.0021 lbs/day	0.354 lbs/day	-	-	-	Twice Every 6 Months	Composite	-
Chloroethane	0.604 lbs/day	1.557 lbs/day	-	-	-	Twice Every 6 Months	Grab	-

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- 3/ Sample collection shall occur during the same month at least 10 days apart.

B. DISCHARGE MONITORING AND RECORD KEEPING REQUIREMENTS

1. Representative Sampling

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

2. Test Procedures

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

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

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

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

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

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

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

3. Recording of Results

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

- a. The facility name and location, point source number, date, time and exact place of sampling;
- b. The name(s) of person(s) who obtained the samples or measurements;
- c. The dates and times the analyses were performed;
- d. The name(s) of the person(s) who performed the analyses;
- e. The analytical techniques or methods used, including source of method and method number; and
- f. The results of all required analyses.

4. Records Retention and Production

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

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

5. Monitoring Equipment and Instrumentation

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

C. DISCHARGE REPORTING REQUIREMENTS

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 DMRs).

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 due for the month of the semiannual period, i.e. (June and December DMRs).

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] or [quarterly] basis. The first report is due on the 28th day of []. 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 []. 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. The Department is utilizing a web-based electronic environmental (E2) DMR reporting system for submittal of DMRs. **If the permittee is not already participating in the E2 DMR system, the permittee must apply for participation in the system within 180 days of coverage under this permit unless the facility submits in writing valid justification as to why they cannot participate and the Department approves in writing utilization of hard copy DMR submittals.** Once the permittee is enrolled in the E2 DMR system, the permittee must utilize the system for the submittal of DMRs unless otherwise allowed by this permit. To participate in the E2 DMR system, the Permittee Participation Package may be downloaded online at <https://e2.adem.alabama.gov/npdes>. If the E2 DMR system is down (i.e., electronic submittal of DMR data is unable to be completed due to technical problems originating with the

Department's 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 required submittal date. However, if the E2 DMR system is down on the 28th day of the month or is down for an extended period of time as determined by the Department when a DMR is required to be submitted, the facility 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 five calendar days of the E2 DMR system resuming operation, the permittee shall enter the data into the E2 DMR 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 dated e-mail, or hand-delivery stamped date). If a permittee is allowed to submit via the US Postal Service, 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. 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 form and the increased frequency shall be indicated on the DMR form. 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 form.

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

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

- e. All Discharge Monitoring Report forms required to be submitted by this permit, the AWPCA, and the Department's Rules 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 36110-2059**

- 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 36110-2059**

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

2. Noncompliance Notification

a. 24-Hour Noncompliance Reporting

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

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

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

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

c. Any written report required to be submitted to the Director or Designee by Part I.C.2 a. or b. shall be submitted using a 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.

PERMIT TRANSFER, MODIFICATION, SUSPENSION, REVOCATION, AND REISSUANCE

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

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

2. Change in Discharge

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

3. Transfer of Permit

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

4. Permit Modification and Revocation

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

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

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

- (1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to modify this permit instead of terminating this permit;
- (2) There are material and substantial alterations or additions to the facility or activity generating wastewater which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit;
- (3) The Director has received new information that was not available at the time of permit issuance and that would have justified the application of different permit conditions at the time of issuance;
- (4) A new or revised requirement(s) of any applicable standard or limitation is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA;
- (5) Errors in calculation of discharge limitations or typographical or clerical errors were made;
- (6) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, when the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued;
- (7) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, permits may be modified to change compliance schedules;
- (8) To agree with a granted variance under 301(c), 301(g), 301(h), 301(k), or 316(a) of the FWPCA or for fundamentally different factors;
- (9) To incorporate an applicable 307(a) FWPCA toxic effluent standard or prohibition;
- (10) When required by the reopener conditions in this permit;
- (11) When required under 40 CFR 403.8(e) (compliance schedule for development of pretreatment program);
- (12) Upon failure of the state to notify, as required by Section 402(b)(3) of the FWPCA, another state whose waters may be affected by a discharge permitted by this permit;
- (13) When required to correct technical mistakes, such as errors in calculation, or mistaken interpretations of law made in determining permit conditions; or
- (14) When requested by the permittee and the Director determines that the modification has cause and will not result in a violation of federal or state law, regulations or rules.

5. Permit Termination

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

- a. Violation of any term or condition of this permit;
- b. The permittee's misrepresentation or failure to disclose fully all relevant facts in the permit application or during the permit issuance process or the permittee's misrepresentation of any relevant facts at any time;
- c. Materially false or inaccurate statements or information in the permit application or the permit;
- d. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;
- e. The permittee's discharge threatens human life or welfare or the maintenance of water quality standards;
- f. Permanent closure of the facility generating the wastewater permitted to be discharged by this permit or permanent cessation of wastewater discharge;
- g. New or revised requirements of any applicable standard or limitation that is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA that the Director determines cannot be complied with by the permittee; or
- h. Any other cause allowed by the ADEM Administrative Code, Chapter 335-6-6.

6. Permit Suspension

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

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

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

F. COMPLIANCE WITH TOXIC POLLUTANT STANDARD OR PROHIBITION

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

G. DISCHARGE OF WASTEWATER GENERATED BY OTHERS

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

PART III OTHER PERMIT CONDITIONS

A. CIVIL AND CRIMINAL LIABILITY

1. Tampering

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

2. False Statements

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

3. Permit Enforcement

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

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

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

(2) An action for damages;

(3) An action for injunctive relief; or

(4) An action for penalties.

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

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

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

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

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

4. Relief from Liability

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

B. OIL AND HAZARDOUS SUBSTANCE LIABILITY

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

C. PROPERTY AND OTHER RIGHTS

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

D. AVAILABILITY OF REPORTS

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

E. EXPIRATION OF PERMITS FOR NEW OR INCREASED DISCHARGES

1. If this permit was issued for a new discharger or new source, this permit shall expire eighteen months after the issuance date if construction of the facility has not begun during the eighteen-month period.
2. If this permit was issued or modified to allow the discharge of increased quantities of pollutants to accommodate the modification of an existing facility and if construction of this modification has not begun during the eighteen month period after issuance of this permit or permit modification, this permit shall be modified to reduce the quantities of pollutants allowed to be discharged to those levels that would have been allowed if the modification of the facility had not been planned.
3. Construction has begun when the owner or operator has:
 - a. begun, or caused to begin as part of a continuous on-site construction program:
 - (1) any placement, assembly, or installation of facilities or equipment; or
 - (2) significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment; or
 - b. entered into a binding contractual obligation for the purpose of placement, assembly, or installation of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under the paragraph. The entering into a lease with the State of Alabama for exploration and production of hydrocarbons shall also be considered beginning construction.

F. COMPLIANCE WITH WATER QUALITY STANDARDS

1. On the basis of the permittee's application, plans, or other available information, the Department has determined that compliance with the terms and conditions of this permit should assure compliance with the applicable water quality standards.
2. Compliance with permit terms and conditions notwithstanding, if the permittee's discharge(s) from point sources identified in Provision I. A. of this permit cause or contribute to a condition in contravention of state water quality standards, the Department may require abatement action to be taken by the permittee in emergency situations or modify the permit pursuant to the Department's Rules, or both.
3. If the Department determines, on the basis of a notice provided pursuant to this permit or any investigation, inspection or sampling, that a modification of this permit is necessary to assure maintenance of water quality standards or compliance with other provisions of the AWPCA or FWPCA, the Department may require such modification and, in cases of emergency, the Director may prohibit the discharge until the permit has been modified.

G. GROUNDWATER

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

H. DEFINITIONS

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

4. AWPCA - means the Alabama Water Pollution Control Act.
5. BOD – means the five-day measure of the pollutant parameter biochemical oxygen demand.
6. Bypass - means the intentional diversion of waste streams from any portion of a treatment facility.
7. CBOD – means the five-day measure of the pollutant parameter carbonaceous biochemical oxygen demand.
8. Daily discharge - means the discharge of a pollutant measured during any consecutive 24-hour period in accordance with the sample type and analytical methodology specified by the discharge permit.
9. Daily maximum - means the highest value of any individual sample result obtained during a day.
10. Daily minimum - means the lowest value of any individual sample result obtained during a day.
11. Day - means any consecutive 24-hour period.
12. Department - means the Alabama Department of Environmental Management.
13. Director - means the Director of the Department.
14. Discharge - means "[t]he addition, introduction, leaking, spilling or emitting of any sewage, industrial waste, pollutant or other wastes into waters of the state". Code of Alabama 1975, Section 22-22-1(b)(8).
15. Discharge Monitoring Report (DMR) - means the form approved by the Director to accomplish reporting requirements of an NPDES permit.
16. DO – means dissolved oxygen.
17. 8HC – means 8-hour composite sample, including any of the following:
 - a. The mixing of at least 5 equal volume samples collected at constant time intervals of not more than 2 hours over a period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.
 - b. A sample continuously collected at a constant rate over period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.
18. EPA - means the United States Environmental Protection Agency.
19. FC – means the pollutant parameter fecal coliform.
20. Flow – means the total volume of discharge in a 24-hour period.
21. FWPCA - means the Federal Water Pollution Control Act.
22. Geometric Mean – means the Nth root of the product of the individual values of any set of values where N is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For purposes of calculating the geometric mean, values of zero (0) shall be considered one (1).
23. Grab Sample – means a single influent or effluent portion which is not a composite sample. The sample(s) shall be collected at the period(s) most representative of the discharge.
24. Indirect Discharger – means a nondomestic discharger who discharges pollutants to a publicly owned treatment works or a privately owned treatment facility operated by another person.
25. Industrial User – means those industries identified in the Standard Industrial Classification manual, Bureau of the Budget 1967, as amended and supplemented, under the category “Division D – Manufacturing” and such other classes of significant waste producers as, by regulation, the Director deems appropriate.
26. MGD – means million gallons per day.
27. Monthly Average – means, other than for fecal coliform bacteria, the arithmetic mean of the entire composite or grab samples taken for the daily discharges collected in one month period. The monthly average for fecal coliform bacteria is the geometric mean of daily discharge samples collected in a one month period. The monthly average for flow is the arithmetic mean of all flow measurements taken in a one month period.

28. New Discharger – means a person, owning or operating any building, structure, facility or installation:
 - a. from which there is or may be a discharge of pollutants;
 - b. that did not commence the discharge of pollutants prior to August 13, 1979, and which is not a new source; and
 - c. which has never received a final effective NPDES permit for dischargers at that site.
29. NH3-N – means the pollutant parameter ammonia, measured as nitrogen.
30. Permit application - means forms and additional information that is required by ADEM Administrative Code Rule 335-6-6-.08 and applicable permit fees.
31. Point source - means "any discernible, confined and discrete conveyance, including but not limited to any pipe, channel, ditch, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, . . . from which pollutants are or may be discharged." Section 502(14) of the FWPCA, 33 U.S.C. Section 1362(14).
32. Pollutant - includes for purposes of this permit, but is not limited to, those pollutants specified in Code of Alabama 1975, Section 22-22-1(b)(3) and those effluent characteristics specified in Provision I. A. of this permit.
33. Privately Owned Treatment Works – means any devices or system which is used to treat wastes from any facility whose operator is not the operator of the treatment works, and which is not a "POTW".
34. Publicly Owned Treatment Works – means a wastewater collection and treatment facility owned by the State, municipality, regional entity composed of two or more municipalities, or another entity created by the State or local authority for the purpose of collecting and treating municipal wastewater.
35. Receiving Stream – means the "waters" receiving a "discharge" from a "point source".
36. Severe property damage - means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
37. Significant Source – means a source which discharges 0.025 MGD or more to a POTW or greater than five percent of the treatment work's capacity, or a source which is a primary industry as defined by the U.S. EPA or which discharges a priority or toxic pollutant.
38. Solvent – means any virgin, used or spent organic solvent(s) identified in the F-Listed wastes (F001 through F005) specified in 40 CFR 261.31 that is used for the purpose of solubilizing other materials.
39. TKN – means the pollutant parameter Total Kjeldahl Nitrogen.
40. TON – means the pollutant parameter Total Organic Nitrogen.
41. TRC – means Total Residual Chlorine.
42. TSS – means the pollutant parameter Total Suspended Solids.
43. 24HC – means 24-hour composite sample, including any of the following:
 - a. the mixing of at least 12 equal volume samples collected at constant time intervals of not more than 2 hours over a period of 24 hours;
 - b. a sample collected over a consecutive 24-hour period using an automatic sampler composite to one sample. As a minimum, samples shall be collected hourly and each shall be no more than one twenty-fourth (1/24) of the total sample volume collected; or
 - c. a sample collected over a consecutive 24-hour period using an automatic composite sampler composited proportional to flow.
44. Upset - means an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based permit discharge limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

45. Waters - means "[a]ll waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the state, natural or artificial. This does not include waters which are entirely confined and retained completely upon the property of a single individual, partnership or corporation unless such waters are used in interstate commerce." Code of Alabama 1975, Section 22-22-1(b)(2). Waters "include all navigable waters" as defined in Section 502(7) of the FWPCA, 22 U.S.C. Section 1362(7), which are within the State of Alabama.
46. Week - means the period beginning at twelve midnight Saturday and ending at twelve midnight the following Saturday.
47. Weekly (7-day and calendar week) Average – is the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The calendar week is defined as beginning on Sunday and ending on Saturday. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for the calendar week shall be included in the data for the month that contains the Saturday.

I. SEVERABILITY

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

PART IV ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS

A. BEST MANAGEMENT PRACTICES (BMP) PLAN REQUIREMENTS

1. BMP Plan

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

2. Plan Content

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

- a. Establish specific objectives for the control of pollutants:
 - (1) Each facility component or system shall be examined for its potential for causing a release of significant amounts of pollutants to waters of the State due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.
 - (2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g. precipitation), or circumstances to result in significant amounts of pollutants reaching surface waters, the plan should include a prediction of the direction, rate of flow, and total quantity of pollutants which could be discharged from the facility as a result of each condition or circumstance.
- b. Establish specific best management practices to meet the objectives identified under paragraph a. of this section, addressing each component or system capable of causing a release of significant amounts of pollutants to the waters of the State, and identifying specific preventative or remedial measures to be implemented;
- c. Establish a program to identify and repair leaking equipment items and damaged containment structures, which may contribute to contaminated stormwater runoff. This program must include regular visual inspections of equipment, containment structures and of the facility in general to ensure that the BMP is continually implemented and effective;
- d. Prevent the spillage or loss of fluids, oil, grease, gasoline, etc. from vehicle and equipment maintenance activities and thereby prevent the contamination of stormwater from these substances;
- e. Prevent or minimize stormwater contact with material stored on site;
- f. Designate by position or name the person or persons responsible for the day to day implementation of the BMP;
- g. Provide for routine inspections, on days during which the facility is manned, of any structures that function to prevent stormwater pollution or to remove pollutants from stormwater and of the facility in general to ensure that the BMP is continually implemented and effective;
- h. Provide for the use and disposal of any material used to absorb spilled fluids that could contaminate stormwater;
- i. Develop a solvent management plan, if solvents are used on site. The solvent management plan shall include as a minimum lists of the solvents on site; the disposal method of solvents used instead of dumping, such as reclamation, contract hauling; and the procedures for assuring that solvents do not routinely spill or leak into the stormwater;
- j. Provide for the disposal of all used oils, hydraulic fluids, solvent degreasing material, etc. in accordance with good management practices and any applicable state or federal regulations;
- k. Include a diagram of the facility showing the locations where stormwater exits the facility, the locations of any structure or other mechanisms intended to prevent pollution of stormwater or to remove pollutants from stormwater, the locations of any collection and handling systems;
- l. Provide control sufficient to prevent or control pollution of stormwater by soil particles to the degree required to maintain compliance with the water quality standard for turbidity applicable to the waterbody(s) receiving discharge(s) under this permit;
- m. Provide spill prevention, control, and/or management sufficient to prevent or minimize contaminated stormwater runoff. Any containment system used to implement this requirement shall be constructed of materials compatible with the substance(s) contained and shall prevent the contamination of groundwater. The containment system shall also be capable of retaining a volume equal to 110 percent of the capacity of the largest tank for which containment is provided;

- n. Provide and maintain curbing, diking or other means of isolating process areas to the extent necessary to allow segregation and collection for treatment of contaminated stormwater from process areas;
- o. Be reviewed by plant engineering staff and the plant manager; and
- p. Bear the signature of the plant manager.

3. Compliance Schedule

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

4. Department Review

- a. When requested by the Director or his designee, the permittee shall make the BMP available for Department review.
- b. The Director or his designee may notify the permittee at any time that the BMP is deficient and require correction of the deficiency.
- c. The permittee shall correct any BMP deficiency identified by the Director or his designee within 30 days of receipt of notification and shall certify to the Department that the correction has been made and implemented.

5. Administrative Procedures

- a. A copy of the BMP shall be maintained at the facility and shall be available for inspection by representatives of the Department.
- b. A log of the routine inspection required above shall be maintained at the facility and shall be available for inspection by representatives of the Department. The log shall contain records of all inspections performed for the last three years and each entry shall be signed by the person performing the inspection.
- c. The permittee shall provide training for any personnel required to implement the BMP and shall retain documentation of such training at the facility. This documentation shall be available for inspection by representatives of the Department. Training shall be performed prior to the date that implementation of the BMP is required.
- d. BMP Plan Modification. The permittee shall amend the BMP plan whenever there is a change in the facility or change in operation of the facility which materially increases the potential for the ancillary activities to result in a discharge of significant amounts of pollutants.
- e. BMP Plan Review. The permittee shall complete a review and evaluation of the BMP plan at least once every three years from the date of preparation of the BMP plan. Documentation of the BMP Plan review and evaluation shall be signed and dated by the Plant Manager.

B. STORMWATER FLOW MEASUREMENT AND SAMPLING REQUIREMENTS

1. Stormwater Flow Measurement

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

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

C. EFFLUENT TOXICITY LIMITATIONS AND BIOMONITORING REQUIREMENTS

1. The permittee shall perform short-term chronic toxicity tests on the wastewater discharges required to be tested for chronic toxicity by Part I of this permit.
 - a. Test Requirements
 - (1) The samples shall be diluted using appropriate control water, to the Instream Waste Concentration (IWC) which is 25 % effluent. The IWC is the actual concentration of effluent, after mixing, in the receiving stream during a 7-day, 10-year flow period.
 - (2) Any test result that shows a statistically significant reduction in survival, growth, reproduction or fertilization between the control and the test at the 95% confidence level indicate chronic toxicity and constitute noncompliance with this permit. Effluent concentrations exhibiting greater than 70% fertilization, will not be considered statistically different from the controls for NOEC reporting.
 - b. General Test Requirements
 - (1) A minimum of three (3) 24-hour composite samples shall be obtained for use in the above biomonitoring tests and collected every other day so that the laboratory receives water samples on the first, third, and fifth day of the seven-day test period. The holding time for each composite sample shall not exceed 36 hours. The control water shall be a water prepared in the laboratory in accordance with the EPA procedure described in EPA 821-R-02-013 or the most current edition or another control water selected by the permittee and approved by the Department.
 - (2) Effluent toxicity tests in which the control survival is less than 80% or in which the other requirements of the EPA Test Procedure are not met shall be unacceptable and the permittee shall rerun the tests as soon as practical within the monitoring period.
 - (3) In the event of an invalid test, upon subsequent completion of a valid test, the results of all tests, valid and invalid, are reported with an explanation of the tests performed and results.
 - 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 chronic toxicity is indicated (noncompliance with permit limit), the permittee shall perform two additional valid chronic toxicity tests in accordance with these procedures to determine the extent and duration of the toxic condition. The toxicity tests shall run consecutively beginning on the first calendar week following the date on which the permittee became aware of the permit noncompliance and the results of these tests shall be submitted no later than 28 days following the month in which the tests were performed.
 - (2) After evaluation of the results of the follow-up tests, the Department will determine if additional action is appropriate and may require additional testing and/or toxicity reduction measures. The permittee may be required to perform a Toxicity Identification Evaluation (TIE) and/or a Toxicity Reduction Evaluation (TRE). The TIE/TRE shall be performed in accordance with the most recent protocols/guidance outlined by EPA (e.g., EPA/600/2-88/062, EPA/600/R-92/080, EPA/600/R-91-003, EPA/600/R-92/081, EPA/833/B-99/022 and/or EPA/600/6-91/005F, etc.)

48.

e. Test Methods

- (1) The tests shall be performed in accordance with the latest edition of the "EPA Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms". The Larval Survival and Growth Test, Methods 1004.0, Section 11 shall be used for the Sheephead minnow (*Cyprinodon Variegatus*) test and the Fertilization Test, Method 1008.0, Section 15 shall be used for the sea urchin (*Arbacia Punctulata*) test.

2. Effluent Toxicity Testing Reports

The following information shall be submitted with each discharge monitoring report unless otherwise directed by the Department. The Department may at any time suspend or reinstate these requirements or may decrease or increase 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 Operation

- (1) Discharge Operating schedule (if other than continuous)
- (2) Volume of discharge during sample collection to include Mean daily discharge on sample collection dates (MGD, CFS, GPM)
- (3) Design flow of treatment facility at time of sampling

49.

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) Lapsed time from sample collection to delivery
 - (f) Lapsed time from sample collection to test initiation
 - (g) Sample temperature when received at the laboratory

50.

(2) Dilution Water

- (a) Source
- (b) Collection/preparation date(s) and time(s)
- (c) Pretreatment (if applicable)
- (d) Physical and chemical characteristics (water temperature, pH, alkalinity, hardness, specific conductance, etc.)

51.

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) Specify if aeration was needed
 - (12) Feeding frequency, amount, and type of food
 - (13) Specify if (and how) pH control measures were implemented
 - (14) Light intensity (mean)
- e. Test Organisms
- (1) Scientific name
 - (2) Life stage and age
 - (3) Source
 - (4) Disease(s) treatment (if applicable)
- f. Quality Assurance
- (1) Reference toxicant utilized and source
 - (2) Date and time of most recent chronic reference toxicant test(s), raw data and current control chart(s). The most recent chronic reference toxicant test shall be conducted within 30 days of the routine.
 - (3) Dilution water utilized in reference toxicant test
 - (4) Results of reference toxicant test(s) (NOEC, IC25, PASS/FAIL, etc.), report concentration response relationship and evaluate test sensitivity
 - (5) Physical and chemical methods utilized
- 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: NOECs, IC25s, PASS/FAIL, etc. (as required in the applicable NPDES permit)
 - (3) Indicate statistical methods used to calculate endpoints
 - (4) Provide all physical and chemical data required by method
 - (5) Results of test(s) (NOEC, IC25, PASS/FAIL, etc.), report concentration-response relationship (definitive test only), report percent minimum significant difference (PMSD) calculated for sub-lethal endpoints determined by hypothesis testing.
- h. Conclusions and Recommendations

- (1) Relationship between test endpoints and permit limits
- (2) Actions to be taken
- g. Conclusions and Recommendations
 - (1) Relationship between test endpoints and permit limits
 - (2) Actions to be taken

1/ Adapted from “Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms”, Fourth Edition, October 2002 (EPA 821-R-02-014).

D. DISCHARGE INFORMATION ZONE (DIZ) REQUIREMENTS

1. Annually the permittee shall perform a sediment and benthic community characterization utilizing the same sampling locations approved in the original DIZ study plan, unless a modified study plan is approved by the Department. The DIZ monitoring shall be repeated if the permittee fails accelerated testing and is required to initiate a Toxicity Reduction Evaluation (TRE) pursuant to Part IV.C. of this permit.
2. Monitoring shall be conducted during the same season as the original characterization and shall conform to the DIZ study plan, unless otherwise approved by the Department. Monitoring results shall be submitted to the Department along with the application for permit renewal or with the discharge monitoring report form in the event that repeated monitoring is required.
3. The permittee shall not allow biological damage or adverse water quality impacts to occur at the perimeter or outside the boundaries of the original characterization. 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 of the adverse impacts are due to a source other than the permittee’s discharge. In the case that it is determined to be a permit violation, 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.
4. The Department may suspend or otherwise modify the DIZ monitoring requirements if:
 - a. The Department determines, through review of discharge information and/or its own modeling efforts, that the discharge is having no significant impact to coastal resources beyond 400 feet of the discharge point; or
 - b. The Department determines, through the review of discharge information and/or its own modeling efforts, that the discharge monitoring is inadequate to detect significant impacts to coastal resources beyond 400 feet of the discharge point; or
 - c. The Department determines, based on available biological and chemical data that, due to the nature of the discharge, no significant impacts to coastal resources will occur beyond 400 feet of the discharge point; or
 - d. Deemed necessary by the Department to ensure protection of coastal resources.

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 PERMIT RATIONALE

PREPARED DATE: February 16, 2016
PREPARED BY: Ed Hughes
REVISED BY: Latoya Hall
REVISED DATE: October 5, 2016

Permittee Name: EVONIK CORPORATION
Facility Name: EVONIK CORPORATION
Permit Number: AL0023272

PERMIT IS MODIFICATION OF EXISTING PERMIT

DISCHARGE SERIAL NUMBERS & DESCRIPTIONS:

DSN001: Treated process wastewater from organic and inorganic chemical manufacturing, boiler blowdown, non-contact cooling water, cooling tower blowdown, stormwater and treated groundwater.

DSN002: North site stormwater runoff from north non-process areas.

DSN003: North site stormwater runoff from east non-process areas including stormwater from non-process areas associated with the BASF and BCS facilities and hydrostatic test waters from the BCS site.

DSN005: South site stormwater runoff from non-process areas.

DSN01A: Treated wastewater (south pond) resulting from the manufacture of inorganic chemicals.

DSN01B: Biological and high TDS treatment systems effluent including treated process wastewater from the manufacture of organic and inorganic chemicals, stormwater and treated groundwater.

INDUSTRIAL CATEGORY: Organic and Inorganic Chemicals

MAJOR: Y

STREAM INFORMATION:

Receiving Stream: Theodore Barge Canal (DSN001) & UT to Middle Fork Deer River (DSN002, DSN003 & DSN005)

Classification: Fish & Wildlife

River Basin: Mobile

7Q10: 34.92 cfs

1Q10: 26.19 cfs

Annual Average Flow: 34.92 cfs

303(d) List: Yes (Middle Fork Deer River)

Impairment: Organic Enrichment

TMDL: No

DISCUSSION:

This facility manufactures specialty organic and inorganic chemicals at their Theodore plant. In addition they receive and treat wastewater from other industries (indirect dischargers) that produce organic chemicals. Evonik has requested a modification of their permit to address the proposed addition of wastewater flow from new OCPSF production processes at their site in addition to receiving wastewater resulting from organic chemical manufacturing processes performed by two other companies, BASF and Bayer Crop Science (BCS).

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

The proposed frequencies are based on a review of site specific conditions and an evaluation of similar facilities.

Revised October 5, 2016

After further review of the facility, the Department determined that the storm water outfalls discharge to an Unnamed Tributary to Middle Fork Deer River. In previous permittee applications, the receiving stream was listed as Dykes Creek.

003S:

<u>Parameter</u>	<u>Monthly Avg Loading</u>	<u>Daily Max Loading</u>	<u>Daily Min Concentration</u>	<u>Monthly Avg Concentration</u>	<u>Daily Max Concentration</u>	<u>Sample Frequency</u>	<u>Sample Type</u>	<u>Basis*</u>
pH			REPORT S.U.		REPORT S.U.	Twice per Year	Grab	BPJ
Solids, Total Suspended					REPORT mg/l	Twice per Year	Grab	BPJ
Oil & Grease	-	-	-	-	15.0 mg/l	Twice per Year	Grab	BPJ
Nitrogen, Ammonia Total (As N)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Carbon, Tot Organic (TOC)					REPORT mg/l	Twice per Year	Grab	BPJ
Chloride (As Cl)					REPORT mg/l	Twice per Year	Grab	BPJ
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD				Twice per Year	Estimate	BPJ
Solids, Total Dissolved					REPORT mg/l	Twice per Year	Grab	BPJ

005S:

<u>Parameter</u>	<u>Monthly Avg Loading</u>	<u>Daily Max Loading</u>	<u>Daily Min Concentration</u>	<u>Monthly Avg Concentration</u>	<u>Daily Max Concentration</u>	<u>Sample Frequency</u>	<u>Sample Type</u>	<u>Basis*</u>
pH	-	-	REPORT S.U.	-	REPORT S.U.	Twice per Year	Grab	BPJ
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Oil & Grease	-	-	-	-	15.0 mg/l	Twice per Year	Grab	BPJ
Nitrogen, Ammonia Total (As N)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Nitrogen, Kjeldahl Total (As N)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ

Nitrite Plus Nitrate Total 1 Det. (As N)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Carbon, Tot Organic (TOC)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Cyanide, Total (As CN)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Chloride (As Cl)	-	-	-	-	REPORT 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

01BS:

<u>Parameter</u>	<u>Monthly Avg Loading</u>	<u>Daily Max Loading</u>	<u>Daily Min Concentration</u>	<u>Monthly Avg Concentration</u>	<u>Daily Max Concentration</u>	<u>Sample Frequency</u>	<u>Sample Type</u>	<u>Basis*</u>
Cyanide, Total (As CN)	1.536 lbs/day	4.389 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
Chromium, Total (As Cr)	6.448 lbs/day	16.090 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
Zinc, Total (As Zn)	6.009 lbs/day	15.161 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
Carbon Tetrachloride	0.105 lbs/day	0.221 lbs/day	-	-	-	Twice Every 6 Months	Grab	EGL
1,2-Dichloroethane	0.395 lbs/day	1.226 lbs/day	-	-	-	Twice Every 6 Months	Grab	EGL
Chloroform	0.122 lbs/day	0.267 lbs/day	-	-	-	Twice Every 6 Months	Grab	EGL
Toluene	0.151 lbs/day	0.465 lbs/day	-	-	-	Twice Every 6 Months	Grab	EGL
Benzene	0.215 lbs/day	0.790 lbs/day	-	-	-	Twice Every 6 Months	Grab	EGL
Acenaphthylene	0.128 lbs/day	0.343 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL

Acenaphthene	0.128 lbs/day	0.343 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
Acrylonitrile	0.028 lbs/day	1.406 lbs/day	-	-	-	Twice Every 6 Months	Grab	WQBEL/ EGL
Anthracene	0.128 lbs/day	0.343 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
Benzo (K) Fluoranthene	0.0021 lbs/day	0.343 lbs/day	-	-	-	Twice Every 6 Months	Composite	WQBEL/ EGL
Benzo (A) Pyrene	0.0021 lbs/day	0.354 lbs/day	-	-	-	Twice Every 6 Months	Composite	WQBEL/ EGL
Chlorobenzene	0.087 lbs/day	0.163 lbs/day	-	-	-	Twice Every 6 Months	Grab	EGL
Chrysene	0.0021 lbs/day	0.343 lbs/day	-	-	-	Twice Every 6 Months	Composite	WQBEL/ EGL
Diethyl Phthalate	0.471 lbs/day	1.179 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
Dimethyl Phthalate	0.110 lbs/day	0.273 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
Ethylbenzene	0.186 lbs/day	0.627 lbs/day	-	-	-	Twice Every 6 Months	Grab	EGL
Fluoranthene	0.145 lbs/day	0.395 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
Fluorene	0.128 lbs/day	0.343 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
Hexachloroethane	0.122 lbs/day	0.314 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
Methyl Chloride	0.500 lbs/day	1.104 lbs/day	-	-	-	Twice Every 6 Months	Grab	EGL
Methylene Chloride	0.232 lbs/day	0.517 lbs/day	-	-	-	Twice Every 6 Months	Grab	EGL
Nitrobenzene	0.157 lbs/day	0.395 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
Phenanthrene	0.128 lbs/day	0.343 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL

Pyrene	0.145 lbs/day	0.389 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
Tetrachloroethylene	0.128 lbs/day	0.325 lbs/day	-	-	-	Twice Every 6 Months	Grab	EGL
1,1-Dichloroethane	0.128 lbs/day	0.343 lbs/day	-	-	-	Twice Every 6 Months	Grab	EGL
1,1-Dichloroethylene	0.093 lbs/day	0.145 lbs/day	-	-	-	Twice Every 6 Months	Grab	EGL
1,1,1-Trichloroethane	0.122 lbs/day	0.314 lbs/day	-	-	-	Twice Every 6 Months	Grab	EGL
1,1,2-Trichloroethane	0.122 lbs/day	0.314 lbs/day	-	-	-	Twice per Year	Grab	EGL
Benzo (A) Anthracene	0.0021 lbs/day	0.343 lbs/day	-	-	-	Twice Every 6 Months	Composite	WQBEL/ EGL
1,2-Dichlorobenzene	0.447 lbs/day	0.947 lbs/day	-	-	-	Twice Every 6 Months	Grab	EGL
1,2-Dichloropropane	0.889 lbs/day	1.336 lbs/day	-	-	-	Twice Every 6 Months	Grab	EGL
1,2-Trans-Dichloroethylene	0.122 lbs/day	0.314 lbs/day	-	-	-	Twice Every 6 Months	Grab	EGL
1,2,4-Trichlorobenzene	0.395 lbs/day	0.813 lbs/day	-	-	-	Twice per Year	Composite	EGL
1,3-Dichlorobenzene	0.180 lbs/day	0.256 lbs/day	-	-	-	Twice Every 6 Months	Grab	EGL
1,4-Dichlorobenzene	0.087 lbs/day	0.163 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
2-Chlorophenol	0.180 lbs/day	0.569 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
2-Nitrophenol	0.238 lbs/day	0.401 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
2,4-Dichlorophenol	0.227 lbs/day	0.651 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
2,4-Dimethylphenol	0.105 lbs/day	0.209 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL

2,4-Dinitrotoluene	0.384 lbs/day	1.656 lbs/day	-	-	-	Twice Every 6 Months	Composite	WQBEL/ EGL
2,4-Dinitrophenol	0.412 lbs/day	0.714 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
2,6-Dinitrotoluene	1.481 lbs/day	3.723 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
4-Nitrophenol	0.418 lbs/day	0.720 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
4,6-Dinitro-O-Cresol	0.453 lbs/day	1.609 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
Phenol, Single Compound	0.087 lbs/day	0.151 lbs/day	-	-	-	Twice Every 6 Months	Grab	EGL
Naphthalene	0.128 lbs/day	0.343 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
Bis (2-Ethylhexyl) Phthalate	0.249 lbs/day	1.621 lbs/day	-	-	-	Twice Every 6 Months	Composite	WQBEL/ EGL
Di-N-Butyl Phthalate	0.157 lbs/day	0.331 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
Vinyl Chloride	0.276 lbs/day	1.557 lbs/day	-	-	-	Twice Every 6 Months	Grab	WQBEL/ EGL
Trichloroethylene	0.122 lbs/day	0.314 lbs/day	-	-	-	Twice Every 6 Months	Grab	EGL
Hexachlorobenzene	0.000033 lbs/day	0.163 lbs/day	-	-	-	Twice Every 6 Months	Composite	WQBEL/ EGL
Hexachlorobutadiene	0.116 lbs/day	0.285 lbs/day	-	-	-	Twice Every 6 Months	Composite	EGL
1,3 Dichloropropene	0.168 lbs/day	0.256 lbs/day	-	-	-	Twice Every 6 Months	Grab	EGL
3,4 Benzofluoranthene	0.0021 lbs/day	0.354 lbs/day	-	-	-	Twice Every 6 Months	Composite	WQBEL/ EGL
Chloroethane	0.604 lbs/day	1.557 lbs/day	-	-	-	Twice Every 6 Months	Grab	EGL

001S:

<u>Parameter</u>	<u>Monthly Avg Loading</u>	<u>Daily Max Loading</u>	<u>Daily Min Concentration</u>	<u>Monthly Avg Concentration</u>	<u>Daily Max Concentration</u>	<u>Sample Frequency</u>	<u>Sample Type</u>	<u>Basis*</u>
Nickel Total Recoverable	3.258 lbs/day	6.516 lbs/day	-	-	-	Twice Every 6 Months	Composite	WQBEL
Lead, Total Recoverable	0.236 lbs/day	1.130 lbs/day	-	-	-	Twice Every 6 Months	Composite	WQBEL/ BPJ
Copper Total Recoverable	1.603 lbs/day	1.900 lbs/day	-	-	-	Twice Every 6 Months	Composite	WQBEL

0011:

<u>Parameter</u>	<u>Monthly Avg Loading</u>	<u>Daily Max Loading</u>	<u>Daily Min Concentration</u>	<u>Monthly Avg Concentration</u>	<u>Daily Max Concentration</u>	<u>Sample Frequency</u>	<u>Sample Type</u>	<u>Basis*</u>
Temperature, Water Deg. Fahrenheit	-	-	-	REPORT F	90 F	Daily	Grab	WQBEL
Oxygen, Dissolved (DO)	-	-	REPORT mg/l	-	-	3X Weekly test	Grab	BPJ
Oxygen, Dissolved (DO)	-	-	REPORT mg/l	-	-	Weekly	Grab	BPJ
BOD, 5-Day (20 Deg. C)	141.14 lbs/day	380.39 lbs/day	-	4.0 mg/l	8.0 mg/l	Daily	Composite	BPJ/ WQBEL
pH	-	-	6.0 S.U.	-	9.0 S.U.	Daily	Grab	EGL
Solids, Total Suspended	1042.56 lbs/day	2718.63 lbs/day	-	-	-	3X Weekly test	Composite	EGL
Nitrogen, Ammonia Total (As N)	45 lbs/day	68 lbs/day	-	-	-	Daily	Composite	BPJ
Nitrogen, Kjeldahl Total (As N)	125 lbs/day	175 lbs/day	-	-	-	Once/2 Weeks	Composite	BPJ
Nitrite Plus Nitrate Total I Det. (As N)	102 lbs/day	167 lbs/day	-	-	-	Once/2 Weeks	Composite	BPJ
Phosphorus, Total (As P)	528 lbs/day	688 lbs/day	-	-	-	Once/2 Weeks	Composite	BPJ
Carbon, Tot Organic (TOC)	670 lbs/day	1260 lbs/day	-	-	-	3X Weekly test	Composite	BPJ

Chloride (As Cl)	-	-	-	6100 mg/l	9000 mg/l	Weekly	Composite	BPJ
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	BPJ
Chlorine, Total Residual	-	-	-	0.022 mg/l	0.039 mg/l	Weekly	Grab	WQBEL
Cyanide, Free Available	0.154 lbs/day	0.154 lbs/day	-	-	-	Monthly	Grab	WQBEL
Solids, Total Dissolved	-	-	-	REPORT mg/l	REPORT mg/l	Monthly	Composite	BPJ

001Q:

<u>Parameter</u>	<u>Monthly Avg Loading</u>	<u>Daily Max Loading</u>	<u>Daily Min Concentration</u>	<u>Monthly Avg Concentration</u>	<u>Daily Max Concentration</u>	<u>Sample Frequency</u>	<u>Sample Type</u>	<u>Basis*</u>
LF P/F Statre 7 Day Chr Cyprinodon Variega	-	-	-	-	0 pass(0)/fail(1)	Quarterly	Composite	WQBEL

001T:

<u>Parameter</u>	<u>Monthly Avg Loading</u>	<u>Daily Max Loading</u>	<u>Daily Min Concentration</u>	<u>Monthly Avg Concentration</u>	<u>Daily Max Concentration</u>	<u>Sample Frequency</u>	<u>Sample Type</u>	<u>Basis*</u>
P/F Statre 7 Day Chr Arbacia	-	-	-	-	0 pass(0)/fail(1)	Monthly	Composite	WQBEL

002S:

<u>Parameter</u>	<u>Monthly Avg Loading</u>	<u>Daily Max Loading</u>	<u>Daily Min Concentration</u>	<u>Monthly Avg Concentration</u>	<u>Daily Max Concentration</u>	<u>Sample Frequency</u>	<u>Sample Type</u>	<u>Basis*</u>
pH	-	-	REPORT S.U.	-	REPORT S.U.	Twice per Year	Grab	BPJ
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Oil & Grease	-	-	-	-	15.0 mg/l	Twice per Year	Grab	BPJ
Nitrogen, Ammonia Total (As N)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ
Carbon, Tot Organic (TOC)	-	-	-	-	REPORT mg/l	Twice per Year	Grab	BPJ

Chloride (As Cl)	-	-	-	-	REPORT 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

01A1:

<u>Parameter</u>	<u>Monthly Avg Loading</u>	<u>Daily Max Loading</u>	<u>Daily Min Concentration</u>	<u>Monthly Avg Concentration</u>	<u>Daily Max Concentration</u>	<u>Sample Frequency</u>	<u>Sample Type</u>	<u>Basis*</u>
pH	-	-	REPORT S.U.	-	REPORT S.U.	Daily	Grab	BPJ
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	BPJ

***Basis for Permit Limitation**

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

Discussion

Evonik proposes to treat and discharge additional process wastewaters from the following sources:

<u>Product</u>	<u>Source</u>	<u>EGL regulation</u>	<u>Flow (MGD)</u>
Mepron	Evonik	40CFR 414 Subpart G	0.01
ACA (Acroliencyanhydrin-O-Acetate)	Evonik	40CFR 414 Subpart H	0.003168
Trilon M (Methylglycinediacetic acid)	BASF	40CFR 414 Subpart H	0.028
ACM (3-Acetoxy-3-cyanopropyl methyl-phosphinic acid butyl ester)	BCS	40CFR 414 Subpart H	0.006336

These processes will add 10,000 gpd to Subpart G process flow and 37,504 gpd to Subpart H process flow. The attached spreadsheet calculates the OCPSF guideline based limits for BPT and BAT pollutants using the OCPSF process flows from the previous permit application in addition to the proposed flows listed above. (Note: BPT is equivalent to NSPS) The non-process flow of 0.803 MGD used in the spreadsheet was based on the highest year in the past three years. Non-process flows include sources such as non-contact cooling water, boiler blowdown, stormwater and treated groundwater. EGL based limits were compared to water quality and human health based limits with the most stringent limit applying. Both freshwater and salt water criteria were considered because the receiving stream is tidally influenced. The more stringent of the two criteria was used in the spreadsheet.

Human health based limits were determined to be more stringent than EGL based limits for 10 of the organic pollutants. Specifically, monthly average limits for Acrylonitrile, Bis(2-Ethylhexyl)Phthlate, 2,4-Dinitrotoluene, Vinyl Chloride, Benzo(a)Anthracene, Benzo(a)Pyrene, 3,4-Benzofluoranthene, Benzo(k)fluoranthene, Hexachlorobenzene and Chysene were based on human health standards which are more stringent than OCPSF guideline requirements.

The proposed process flows are all considered cyanide bearing waste streams. As result OCPSF based limits for Cyanide will be increased at outfall DSN001B. However, both monthly average and daily maximum limits for Cyanide at outfall DSN001 will continue to be based on water quality standards and will remain 0.154 ug/l. as in the existing permit. Water quality based Cyanide limits apply at DSN001 to account for Cyanide from all sources.

The proposed process flows are also considered metal bearing waste streams. Metal limits will be increased based on the additional OCPSF flow with the exception of Lead, Copper and Nickel. Monthly average limits for these parameters will be based on water quality standards as calculated in the spreadsheet. The daily maximum limit for Copper will be based on the acute WQ standard. The Nickel daily maximum limit will be calculated based on a peaking factor of 2 as in the existing permit. Based on BPJ, the Lead daily maximum limit will remain 1.130 ug/l. Monitoring for these metals will continue at DSN001 to address all sources of these pollutants. Limits will be listed as "Total Recoverable".

Existing BOD limits were based on BPJ but were developed to protect water quality. These limits are more stringent than the limits calculated based on OCPSF production. For this reason BOD limits at DSN001 will not be increased as result of increased OCPSF related flow

Existing TSS limits are based on BPJ. A review of DMR data for the past five years revealed that the permittee is discharging at levels significantly less than the current permitted allowance. For this reason no additional allocation is being proposed for this pollutant.

Monthly biomonitoring requirements using the sea urchin test and quarterly testing using the Sheephead minnow will be continued and will be used to confirm that the new sources do not cause toxicity in the effluent.

The Reasonable Potential Analysis did not reveal any additional pollutants of concern.

All other requirements of the existing permit will be continued in this modification.

DSN003: Stormwater from non-process areas.

BASF and BCS will obtain NPDES stormwater permits for their respective operations and BCS will obtain a general permit for the discharge of hydrostatic test waters prior to start up. These discharges will combine with Evonik's stormwater prior to discharging through outfall DSN003. For this reason the description for this outfall is being modified to include stormwater from non-process areas associated with the proposed BASF and BCS plants and hydrostatic test water from BCS. Because BASF and BCS will be monitoring to ensure compliance with their permit requirements in addition to incorporating BMP measures, no additional requirements are being proposed in Evonik's permit.

OCPSF PERMIT LIMITS CALCULATIONS

FACILITY NAME : Evonik Corporation

LOCATION : Theodore, Alabama

NPDES NUMBER : AL0023272

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
Subpart E Thermosetting Resins		0	0
Subpart F Commodity Organic Chemicals		0	0
Subpart G Bulk Organic		970.0	0.581
Subpart H Specialty Organic		342.6	0.1155

OCPSF RELATED FLOWS TOTAL 1312.6 0.6965

FLOW FROM OTHER SOURCES (e.g. POTWs) 0 MGD
 TOTAL FLOW FROM PROCESS, NON-PROCESS AND OTHER SOURCES 1.4995 MGD

RECEIVING STREAM 1Q10 26.19 CFS

RECEIVING STREAM 7Q10 34.92 CFS

RECEIVING STREAM ANNUAL-AVERAGE FLOW 34.92 CFS

METAL-BEARING WASTE STREAM VOLUME 0.697 MGD

CYANIDE-BEARING WASTE STREAM VOLUME 0.439 MGD

	BOD5		TSS	
	Max.	Avg.	Max.	Avg.
Process Total (mg/l)	99.3	36.9	165.3	51.1
Process Total (lb/day)	576.9	214.2	960.0	296.8
Non-process total (lb/day)	0.000	0.000	0.000	0.000
Final Mass Limits (lb/day)	576.9	214.2	960.0	296.8

BAT Limits are based on 40 CFR 414 Subpart 1 requirements

PARAMETER	LIMITS		MASS LIMIT		ACUTE CHRONIC HUMAN HEALTH	
	UG/L		LBS/D		LBS/D Fish	Water
	MAX.	AVG.	MAX.	AVG.	Consumption	Consumption
Acenaphthene	59	22	0.343	0.128	116.074	91.004
Acenaphthylene	59	22	0.343	0.128		
Acrylonitrile*	242	96	1.406	0.558	0.0289	0.0090
Anthracene	59	22	0.343	0.128	4680.98	1452.93
Benzene *	136	37	0.790	0.215	3.1045	0.2246
Benzo(a)anthracene*	59	22	0.343	0.128	0.0021	0.0007
3,4-Benzo(a)fluoranthene*	61	23	0.354	0.134	0.0021	0.0007
Benzo(k)fluoranthene*	59	22	0.343	0.128	0.0021	0.0007
Benzo(a)pyrene*	61	23	0.354	0.134	0.0021	0.0007
Bis(2-ethylhexyl) phthalate	279	103	1.621	0.598	0.2572	0.1700
Carbon Tetrachloride *	38	18	0.221	0.105	0.1921	0.0422
Chlorobenzene	28	15	0.163	0.087	181.812	24.331
Chloroethane	268	104	1.557	0.604		
Chloroform *	46	21	0.267	0.122	20.4655	1.0899
2-Chlorophenol	98	31	0.569	0.180	17.4689	11.6652
Chrysene*	59	22	0.343	0.128	0.0021	0.0007
Di-n-Butyl phthalate	57	27	0.331	0.157	526.028	300.748
1,2-Dichlorobenzene	163	77	0.947	0.447	151.5643	68.9229
1,3-Dichlorobenzene	44	31	0.256	0.180	112.8312	51.3092
1,4-Dichlorobenzene	28	15	0.163	0.087	22.5662	10.2618

	LIMITS		MASS LIMIT		ACUTE CHRONIC HUMAN HEALTH		
	UG/L		LBS/D		LBS/D	Fish	Water
	MAX.	AVG.	MAX.	AVG.		Consumptio:	Consumption
1,1-Dichloroethane	59	22	0.343	0.128			
1,2-Dichloroethane *	211	68	1.226	0.395		4.2872	0.0758
1,1-Dichloroethylene *	25	16	0.145	0.093		836.009	64.783
1,2-trans-Dichloroethylene	54	21	0.314	0.122		1185.228	27.440
2,4-Dichlorophenol	112	39	0.651	0.227		3450845.5	13.08
1,2-Dichloropropane	230	153	1.336	0.889		1.7043	0.0987
1,3-Dichloropropylene	44	29	0.256	0.168		2.4640	0.0683
Diethyl phthalate	203	81	1.179	0.471		5130.58	2681.61
2,4-Dimethylphenol	36	18	0.209	0.105		99.8220	58.3505
Dimethyl phthalate	47	19	0.273	0.110		130045.9	45600.4
4,6-Dinitro-o-cresol**	277	78	1.609	0.453		33.0148	2.5300
2,4-Dinitophenol	123	71	0.714	0.412		624.2180	13.7359
2,4-Dinitotoluene*	285	113	1.656	0.656		0.3974	0.0214
2,6-Dinitotoluene	641	255	3.723	1.481			
Ethylbenzene	108	32	0.627	0.186		249.6880	89.8877
Fluoranthene	68	25	0.395	0.145		16.2840	15.3917
Fluorene	59	22	0.343	0.128		624.2200	193.7235
Hexachlorobenzene *	28	15	0.163	0.087		0.000034	0.000033
Hexachlorobutadiene *	49	20	0.285	0.116		2.1590	0.0864
Hexachloroethane *	54	21	0.314	0.122		0.3848	0.2178
Methyl Chloride*	190	86	1.104	0.500			
Methylene Chloride*	89	40	0.517	0.232		69.3578	0.9239
Naphthalene	59	22	0.343	0.128			
Nitrobenzene	68	27	0.395	0.157		80.9973	3.3654
2-Nitrophenol	69	41	0.401	0.238			
4-Nitrophenol	124	72	0.720	0.418			
Phenanthrene	59	22	0.343	0.128			
Phenol	26	15	0.151	0.087		100321.11	2063.41
Pyrene	67	25	0.389	0.145		468.17	145.29
Tetrachloroethylene *	56	22	0.325	0.128		0.3846	0.1210
Toluene	80	26	0.465	0.151		1750.150	242.050
Total Chromium	2770	1110	16.090	6.448	236.236	40.139	
Total Copper	3380	1450	19.634	8.423	1.900 ^	1.603 ^	
Total Cyanide	1200	420	4.389	1.536	0.154 ^	0.201 ^	1872.66 27.67
Total Lead	690	320	4.008	1.859	9.912	0.236	
Total Nickel	3980	1690	23.119	9.817	22.509 ^	3.258 ^	199.2192 82.3751
Total Zinc	2610	1050	15.161	6.099	30.318	39.924	2988.29 1235.63
1,2,4-Trichlorobenzene	140	68	0.813	0.395		8.2134	5.1826

34376	Fluoranthene	0.395	0.145
34381	Fluorene	0.343	0.128
34391	Hexachlorobutadiene	0.285	0.116
34396	Hexachloroethane	0.314	0.122
34418	Methyl Chloride	1.104	0.500
34423	Methylene Chloride	0.517	0.232
34447	Nitrobenzene	0.395	0.157
34461	Phenanthrene	0.343	0.128
34469	Pyrene	0.389	0.145
34475	Tetrachloroethylene	0.325	0.128
34496	1,1-Dichloroethane	0.343	0.128
34501	1,1-Dichloroethylene	0.145	0.093
34506	1,1,1-Trichloroethane	0.314	0.122
34511	1,1,2-Trichloroethane	0.314	0.122
34526	Benzo (A) Anthracene	0.343	0.128
34536	1,2-Dichlorobenzene	0.947	0.447
34541	1,2-Dichloropropane	1.336	0.889
34546	1,2-Trans-Dichloroethylene	0.314	0.122
34551	1,2,4-Trichlorobenzene	0.813	0.395
34566	1,3-Dichlorobenzene	0.256	0.180
34571	1,4-Dichlorobenzene	0.163	0.087
34586	2-Chlorophenol	0.569	0.180
34591	2-Nitrophenol	0.401	0.238
34601	2,4-Dichlorophenol	0.651	0.227
34606	2,4-Dimethylphenol	0.209	0.105
34611	2,4-Dinitrotoluene	1.656	0.656
34616	2,4-Dinitrophenol	0.714	0.412
34626	2,6-Dinitrotoluene	3.723	1.481
34646	4-Nitrophenol	0.720	0.418
34657	4,6-Dinitro-O-Cresol	1.609	0.453
34694	Phenol, Single Compound	0.151	0.087
34696	Naphthalene	0.343	0.128
39100	Bis (2-Ethylhexyl) Phthalate	1.621	0.598
39110	Di-N-Butyl Phthalate	0.331	0.157
39175	Vinyl Chloride	1.557	0.604
39180	Trichloroethylene	0.314	0.122
39700	Hexachlorobenzene	0.163	0.087
77163	1,3 Dichloropropene	0.256	0.168
78113	Ethyl Benzene	0.627	0.186
79531	3,4 Benzofluoranthene	0.354	0.134
85811	Chloroethane	1.557	0.604

$Q_d * C_d + Q_{d2} * C_{d2} + Q_s * C_s = Q_r * C_r$										
ID	Pollutant	Carcinogen Yes	Type	Background from upstream source (C _{d2}) Daily ug/l	Background from upstream source (C _{d2}) Monthly Avg ug/l	Background Instream (C _s) Daily Max ug/l	Background Instream (C _s) Monthly Avg 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	0	0	-
2	Arsenic**	YES	Metals	0	0	0	0	0	0	0.574
3	Beryllium		Metals	0	0	0	0	0	0	-
4	Cadmium**		Metals	0	0	0	0	0	0	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	0	0	0.467
9	Mercury**		Metals	0	0	0	0	0	0	0.000
10	Nickel**		Metals	0	0	0	0	0	0	0.505
11	Selenium		Metals	0	0	0	0	0	0	-
12	Silver		Metals	0	0	0	0	0	0	-
13	Thallium		Metals	0	0	0	0	0	0	-
14	Zinc**		Metals	0	0	0	0	120	82	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	Bassac*	YES	VOC	0	0	0	0	0	0	-
22	Bromoform*	YES	VOC	0	0	0	0	0	0	-
23	Carbon Tetrachloride*	YES	VOC	0	0	0	0	0	0	-
24	Chlordane	YES	VOC	0	0	0	0	0	0	-
25	Chlorobenzene		VOC	0	0	0	0	0	0	-
26	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 Benzene		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	Tropylene	YES	VOC	0	0	0	0	0	0	-
49	Tributyltin (TBT)	YES	VOC	0	0	0	0	0	0	-
50	1,1,1-Trichloroethane		VOC	0	0	0	0	0	0	-
51	1,1,2-Trichloroethane*	YES	VOC	0	0	0	0	0	0	-
52	Trichloroethylene*	YES	VOC	0	0	0	0	0	0	-
53	Vinyl Chloride*	YES	VOC	0	0	0	0	0	0	-
54	9-Chloro-H-Cresol		Acids	0	0	0	0	0	0	-
55	2-Chlorophenol		Acids	0	0	0	0	0	0	-
56	2,4-Dichlorophenol		Acids	0	0	0	0	0	0	-
57	2,4-Dimethylphenol		Acids	0	0	0	0	0	0	-
58	4,6-Dinitro-O-Cresol		Acids	0	0	0	0	0	0	-
59	2,4-Dinitrophenol		Acids	0	0	0	0	0	0	-
60	4,6-Dinitro-2-methylphenol	YES	Acids	0	0	0	0	0	0	-
61	Dieldrin (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	2,4,6-Trichlorophenol*	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	1,2,3,4-Benzo-Fluoranthene		Bases	0	0	0	0	0	0	-
74	Benzo(G)Fluoranthene		Bases	0	0	0	0	0	0	-
75	Benzo(K)Fluoranthene		Bases	0	0	0	0	0	0	-
76	Bis (2-Chloroethoxy) Methane		Bases	0	0	0	0	0	0	-
77	Bis (2-Chloroethyl)-Ether*	YES	Bases	0	0	0	0	0	0	-
78	Bis (2-Chloroisopropyl) 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	Dibenzol(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	1,3-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	Erdrin	YES	Bases	0	0	0	0	0	0	-
101	Erdrin Aldehyde	YES	Bases	0	0	0	0	0	0	-
102	Fluoranthene		Bases	0	0	0	0	0	0	-
103	Fluorene		Bases	0	0	0	0	0	0	-
104	Hexachlor	YES	Bases	0	0	0	0	0	0	-
105	Hexachlor Epoxide	YES	Bases	0	0	0	0	0	0	-
106	Hexachlorobenzene*	YES	Bases	0	0	0	0	0	0	-
107	Hexachlorobutadiene*	YES	Bases	0	0	0	0	0	0	-
108	Hexachlorocyclohexan (alpha)	YES	Bases	0	0	0	0	0	0	-
109	Hexachlorocyclohexan (beta)	YES	Bases	0	0	0	0	0	0	-
110	Hexachlorocyclohexan (gamma)	YES	Bases	0	0	0	0	0	0	-
111	Hexachlorocyclopentadiene		Bases	0	0	0	0	0	0	-
112	Hexachloroethane		Bases	0	0	0	0	0	0	-
113	Indeno(1,2,3-CD)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		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	-

1.6475 Enter Q_d = wastewater discharge flow from facility (MGD)

2.54906 Q_d = wastewater discharge flow (cfs) (this value is calculated from the MGD)

0 Enter or estimated, Q_{d2} = background stream flow from upstream source (cfs)

34.92 Enter TQ10, Q_s = background stream flow in cfs above point of discharge

36.19 Enter or estimated, 1Q10, Q_s = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of TQ10)

0 Enter flow from upstream discharge Q_{d2} = background stream flow in MGD above point of discharge

34.92 Enter Mean Annual Flow, Q_s = background stream flow in cfs above point of discharge

34.92 Enter TQ2, Q_s = background stream flow in cfs above point of discharge (For LWF class streams)

Enter or
Left Enter C_s = background in-stream pollutant concentration in µg/l (assuming this is zero "0" unless there is data)

Q_d
+ Q_{d2} * C_d
C_s = 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)

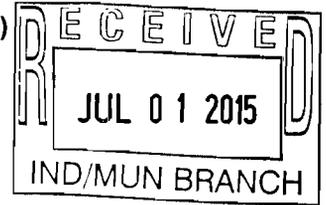
** Using Partition Coefficients

February 18, 2018

Freshwater F&W classification		Freshwater Acute (µg/l) C _a = 1Q10										Freshwater Chronic (µg/l) C _c = 7Q10				Human Health Consumption Risk only (µg/l) Carcinogen C _a = Annual Average Non-Carcinogen C _c = 7Q10				
ID	Pollutant	RP?	Carcinogen yes	Background from upstream source (Cd2) Daily Max	Max Daily Discharge as reported by Applicant (C _{max})	Water Quality Criteria (C _w)	Draft Permit Limit (C _{max})	20% of Draft Permit Limit	RP?	Background from upstream source (Cd2) Monthly Ave	Avg Daily Discharge as reported by Applicant (C _{avg})	Water Quality Criteria (C _w)	Draft Permit Limit (C _{max})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C _w)	Draft Permit Limit (C _{max})	20% of Draft Permit Limit	RP?	
1	Antimony			0	0					0						3.73E+02	5.49E+03	1.10E+03	No	
2	Arsenic		YES	0	0	502.334	6672.202	1335.640	No	0	0	261.324	3841.246	768.249	No	3.03E-01	4.45E+00	8.91E-01	No	
3	Beryllium			0	0					0										
4	Cadmium			0	0	4.347	49.011	9.802	No	0	0	0.644	9.461	1.892	No					
5	Chromium Chromium III			0	0	1537.913	17339.009	3467.802	No	0	0	200.051	2940.562	588.116	No					
6	Chromium Chromium VI			0	0	16.000	180.390	36.078	No	0	0	11.000	161.691	32.338	No					
7	Copper			0	0	18.000	205.236	40.947	No	0	0	12.766	187.943	37.529	No	1.30E+03	1.91E+04	3.82E+03	No	
8	Lead			0	0	84.531	727.545	145.509	No	0	0	2.515	36.964	7.393	No					
9	Mercury			0	0	2.400	27.059	5.412	No	0	0	0.012	0.176	0.035	No	4.24E-02	6.24E-01	1.25E-01	No	
10	Nickel			0	0	515.824	5815.598	1163.120	No	0	0	57.292	842.147	168.429	No	9.83E-02	1.46E+04	2.92E+03	No	
11	Selenium			0	0	20.000	225.488	45.098	No	0	0	5.000	73.496	14.699	No	2.43E+03	3.57E+04	7.15E+03	No	
12	Silver			0	0	0.976	11.009	2.202	No	0	0									
13	Thallium			0	0					0						2.74E-01	4.02E+00	8.04E-01	No	
14	Zinc			120	197.369	2225.210	445.042	No	0	82	198.983	2924.889	584.978	No	1.49E+04	2.19E+05	4.38E+04	No		
15	Cyanide			0	0	22.000	248.036	49.607	No	0	0	5.200	76.436	15.287	No	9.33E-03	1.37E+05	2.74E+04	No	
16	Total Phenolic Compounds			0	0					0										
17	Hardness (As CaCO3)			0	0					0										
18	Azoleth			0	0					0						5.43E+00	7.98E+01	1.60E+01	No	
19	Acrylonitrile	YES		0	0					0						1.44E-01	2.12E+00	4.23E-01	No	
20	Aldrin	YES		0	0	3.000	33.823	6.765	No	0	0	1.300	19.109	3.822	No	2.94E-05	4.32E-04	8.64E-05	No	
21	Benzene	YES		0	0					0						1.55E+01	2.27E+02	4.55E+01	No	
22	Bromofom	YES		0	0					0						7.88E+01	1.16E+03	2.32E+02	No	
23	Carbon Tetrachloride	YES		0	0					0						9.57E-01	1.41E+01	2.81E+00	No	
24	Chlordane	YES		0	0	2.400	27.059	5.412	No	0	0	0.004	0.063	0.013	No	4.73E-04	6.95E-03	1.39E-03	No	
25	Chlorobenzene			0	0					0						9.09E+02	1.33E+04	2.66E+03	No	
26	Chlorobromo-Methane	YES		0	0					0						7.41E+00	1.09E+02	2.18E+01	No	
27	Chloroethane			0	0					0										
28	2-Chloro-Ethylvinyl Ether			0	0					0										
29	Chloroform	YES		0	0					0						1.02E+02	1.50E+03	3.00E+02	No	
30	4,4'-DDD	YES		0	0					0						1.81E-04	2.67E-03	5.33E-04	No	
31	4,4'-DDE	YES		0	0					0						1.28E-04	1.88E-03	3.76E-04	No	
32	4,4'-DDT	YES		0	0					0						1.28E-04	1.88E-03	3.76E-04	No	
33	Dichlorobromo-Methane	YES		0	0					0						1.00E-01	1.48E+02	2.96E+01	No	
34	1,1-Dichloroethane			0	0					0										
35	1,2-Dichloroethane	YES		0	0					0						2.14E+01	3.14E+02	6.28E+01	No	
36	Trans-1,2-Dichloro-Ethylene			0	0					0						5.91E+03	8.68E+04	1.74E+04	No	
37	1,1-Dichloroethylene	YES		0	0					0						4.17E+03	6.12E+04	1.22E+04	No	
38	1,2-Dichloropropane			0	0					0						8.49E+00	1.25E+02	2.50E+01	No	
39	1,3-Dichloro-Propylene			0	0					0						1.23E+01	1.81E+02	3.61E+01	No	
40	Dieldrin	YES		0	0	0.240	2.706	0.541	No	0	0.056	0.823	0.165	No	3.12E-05	4.59E-04	9.18E-05	No		
41	Ethylbenzene			0	0					0						1.24E+03	1.83E+04	3.66E+03	No	
42	Methyl Bromide			0	0					0						8.71E+02	1.28E+04	2.56E+03	No	
43	Methyl Chloride			0	0					0										
44	Methylene Chloride	YES		0	0					0						3.46E+02	5.06E+03	1.02E+03	No	
45	1,1,2,2-Tetrachloro-Ethane	YES		0	0					0						2.33E+00	3.43E+01	6.86E+00	No	
46	Tetrachloro-Ethylene	YES		0	0					0						1.92E+00	2.82E+01	5.64E+00	No	
47	Toluene			0	0					0						8.72E+03	1.28E+05	2.56E+04	No	
48	Toxaphene	YES		0	0	0.730	6.230	1.648	No	0	0.0002	0.003	0.001	No	1.62E-04	2.38E-03	4.76E-04	No		
49	Tributyltin (TBT)	YES		0	0	0.460	5.186	1.037	No	0	0.072	1.058	0.212	No						
50	1,1,1-Trichloroethane			0	0					0										
51	1,1,2-Trichloroethane	YES		0	0					0						9.10E+00	1.34E+02	2.67E+01	No	
52	Trichloroethylene	YES		0	0					0						1.75E+01	2.57E+02	5.14E+01	No	
53	Vinyl Chloride	YES		0	0					0						1.42E+00	2.06E+01	4.19E+00	No	
54	p-Chloro-m-Cresol			0	0					0										
55	2-Chlorophenol			0	0					0						8.71E+01	1.28E+03	2.56E+02	No	
56	2,4-Dichlorophenol			0	0					0						1.72E+02	2.53E+03	5.06E+02	No	
57	2,4-Dimethylphenol			0	0					0						4.98E+02	7.31E+03	1.46E+03	No	
58	4,6-Dinitro-O-Cresol			0	0					0										
59	2,4-Dinitrophenol			0	0					0						3.11E+03	4.57E+04	9.19E+03	No	
60	4,6-Dinitro-2-methylphenol	YES		0	0					0						1.65E+02	2.43E+03	4.86E+02	No	
61	Dioxin (2,3,7,8-TCDD)	YES		0	0					0						2.67E-08	3.92E-07	7.84E-08	No	
62	2-Nitrophenol			0	0					0										
63	4-Nitrophenol			0	0					0										
64	Pentachlorophenol	YES		0	0	8.723	96.350	19.670	No	0	6.693	96.375	19.675	No	1.77E+00	2.60E+01	5.20E+00	No		
65	Phenol			0	0					0						5.00E+05	7.35E+08	1.47E+06	No	
66	2,4,6-Trichlorophenol	YES		0	0					0						1.41E+00	2.08E+01	4.16E+00	No	
67	Acanaphthene			0	0					0						5.79E+02	8.50E+03	1.70E+03	No	
68	Acenaphthylene			0	0					0										
69	Anthracene			0	0					0						2.33E+04	3.43E+05	6.86E+04	No	
70	Benzo(a)anthracene	YES		0	0					0						1.18E-04	1.70E-03	3.41E-04	No	
71	Benzo(a)fluoranthene	YES		0	0					0						1.07E-02	1.57E-01	3.13E-02	No	
72	Benzo(a)pyrene	YES		0	0					0						1.07E-02	1.57E-01	3.13E-02	No	
73	3,4-Benzo-Fluoranthene			0	0					0						1.07E-02	1.57E-01	3.13E-02	No	
74	Benzo(g,h,i)perylene			0	0					0										
75	Benzo(k)fluoranthene			0	0					0						1.07E-02	1.57E-01	3.13E-02	No	
76	Ben (2-Chloroethoxy) Methane			0	0					0										
77	Ben (2-Chloroethyl) Ether	YES		0	0					0						3.07E-01	4.52E+00	9.04E-01	No	
78	Ben (2-Chloroisopropyl) Ether			0	0					0						3.79E-04	5.55E-05	1.11E-05	No	
79	Ben (2-Ethylhexyl) Phthalate	YES		0	0					0						1.28E+00	1.88E+01	3.77E+00	No	
80	4-Bromophenyl Phenyl Ether			0	0					0										
81	Buryl Benzyl Phthalate			0	0					0										
82	2-Chloronaphthalene			0	0					0						1.13E+03	1.66E+04	3.31E+03	No	
83	4-Chlorophenyl Phenyl Ether			0	0					0						9.24E+02	1.36E+04	2.72E+03	No	
84	Chrysene	YES		0	0					0						1.07E-02	1.57E-01	3.13E-02	No	
85	Di-N-Buryl Phthalate			0	0					0						2.62E+03	3.85E+04	7.71E+03	No	
86	Di-N-Octyl Phthalate			0	0					0										
87	Dibenzol(a,h)anthracene	YES		0	0					0						1.07E-02	1.57E-01	3.13E-02	No	
88	1,2-Dichlorobenzene			0	0					0						7.55E+02	1.11E+04	2.22E+03	No	
89	1,3-Dichlorobenzene			0	0					0						5.62E+02	8.27E+03	1.65		

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

1. Facility Name: Evonik Corporation

a. Operator Name: Evonik Corporation

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 2 3 2 7 2

3. SID Permit Number (if applicable): IU 4 1 - 4 9 - 0 0 0 2 1

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: 4201 Evonik Road (Formally Degussa Road)

City: Theodore County: Mobile State: Alabama Zip: 36582

Facility (Front Gate) Latitude: 30 30' 57" Longitude: 88 8' 16"

6. Facility Mailing Address (Street or Post Office Box): Post Office Box 868

City: Theodore State: Alabama Zip: 36590

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

Name and Title: Bonnie Tully, Vice President and Site Manager
Address: Post Office Box 868
City: Theodore State: Alabama Zip: 36590
Phone Number: (251) 443-4340
EMAIL Address: bonnie.tully@evonik.com

8. Designated Facility Contact:

Name and Title: Bill Klutz, Environmental Manager
Phone Number: (251) 443-4763
EMAIL Address: bill.klutz@evonik.com

9. Designated Discharge Monitoring Report Contact:

Name and Title: Chris Bolling, Environmental Lab Manager and Water Compliance Specialist
Phone Number: (251) 443-4611
EMAIL Address: chris.bolling@evonik.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: 4201 Degussa Road
City: Theodore County: Mobile State: Alabama Zip: 36582

b) Parent Corporation of Applicant:

Name: Evonik Corporation
Address: 379 Interpace Parkway, Post Office Box 677
City: Parsippany State: New Jersey Zip: 07054

c) Subsidiary Corporation(s) of Applicant:

Name: N/A

Address: _____

City: _____ State: _____ Zip: _____

d) Corporate Officers:

Name: John Rolando, President

Address: 379 Interpace Parkway / Post Office Box 677

City: Parsippany State: New Jersey Zip: 07054-0677

Name: Bonnie Tully, Vice President and Site Manager

Address: 4201 Evonik Road (Formally Degussa Road)/ Post Office Box 868

City: Theodore State: Alabama Zip: 36582 / 36590

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

Name: The Corporation Company

Address: 2000 Interstate Park Drive, Suite 204

City: Montgomery State: Alabama Zip: 36109

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:

<u>Permit Name</u>	<u>Permit Number</u>	<u>Held By</u>
NPDES	AL0023272	Evonik Corporation
SID	IU 414900021	Evonik Corporation
RCRA / Title 5 (Air)	AL0075045575 / 5035011	Evonik Corporation

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

<u>Facility Name</u>	<u>Permit Number</u>	<u>Type of Action</u>	<u>Date of Action</u>
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. 2819
- c. 2873
- 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

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

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

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

Please see EPA Form 1, Section XII Attached

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)
Please See Attached	Tables		

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.

<u>Regulated Process</u>	<u>Applicable Category</u>	<u>Applicable Subpart</u>	<u>Type of Discharge Flow (batch, continuous, intermittent)</u>
Please See Attached	Tables		

2b.

<u>Process Description</u>	<u>Last 12 Months (gals/day) Highest Month Average*</u>	<u>Highest Flow Year of Last 5 (gals/day) Monthly Average*</u>	<u>Discharge Type (batch, continuous, intermittent)</u>
Please See Attached	Tables		

*** 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: _____ 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

Percent of total discharge: _____

2c.

<u>Non categorical Process Description</u>	<u>Last 12 Months (gals/day) Highest Month Avg. Flow</u>	<u>Highest Flow Year of Last 5 (gals/day) Monthly Avg. Flow</u>	<u>Discharge Type (batch, continuous, intermittent)</u>
Please See Attached	Tables		

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

Percent of total discharge: _____

2d.

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

All Applicants must complete 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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Sampling Equipment	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

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

Flow Totalizer and Automated 24 hour refrigerated composite sampler.

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
Please see attached Table	
_____	_____
_____	_____

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

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

SECTION D – WATER SUPPLY

Water Sources (check as many as are applicable):

Private Well

Surface Water

Municipal Water Utility (Specify City): _____

Other (Specify): _____

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

City: 0.5 *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: _____

* 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 _____ 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
Wastewater generated in unit operations and treated onsite	South Site Equalization Tank, Blocks: B700, C600, C700,
(See Attached Site plan)	D700, E700, E500, E700, D400, D600

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*
Biological Solids and Inorganic Salts	10,000	Macland Disposal, Mosspoint, MS.

***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? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| B. Will the project be a source of new air emissions? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| C. Does the project involve dredging and/or filling? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Has the Corps of Engineers (COE) permit been received? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Corps Project Number _____ | | |
| D. Does the project involve wetlands and/or submersed grassbeds? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| E. Are oyster reefs located near the project site?
(Include a map showing project and discharge location with respect to oyster reefs) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| G. Does the project involve shoreline erosion mitigation? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| H. Does the project involve construction on beaches and dunes? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| I. Will the project interfere with public access to coastal waters? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| J. Does the project lie within the 100-year floodplain? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| K. Does the project involve the registration, sale, use, or application of pesticides? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| L. Does the project propose to construct a new well or alter an existing well to pump more than 50 GPD? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| M. Has the applicable permit been obtained? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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

SECTION H – EPA Application Forms

All Applicants must submit EPA permit application forms. More than one application form may be required from a facility depending on the number and types of discharges or outfalls found 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?*
Middle Fork of Deer River (Continue below)	Y	No TMDL
(Theodore Industrial Barge Canal)		

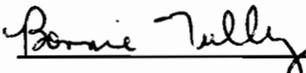
- *If a TMDL Compliance Schedule is requested, the following should be attached as supporting documentation:
- (1) Justification for the requested Compliance Schedule (e.g. time for design and installation of control equipment, etc.);
 - (2) Monitoring results for the pollutant(s) of concern which have 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: June 30, 2015

(TYPE OR PRINT) NAME OF RESPONSIBLE OFFICIAL: Bonnie Tully

TITLE OF RESPONSIBLE OFFICIAL: Vice President and Site Manager, Evonik Corporation

MAILING ADDRESS: Post Office Box 868

CITY, STATE, ZIP: Theodore, Alabama, 36590 PHONE: (251) 443 4340

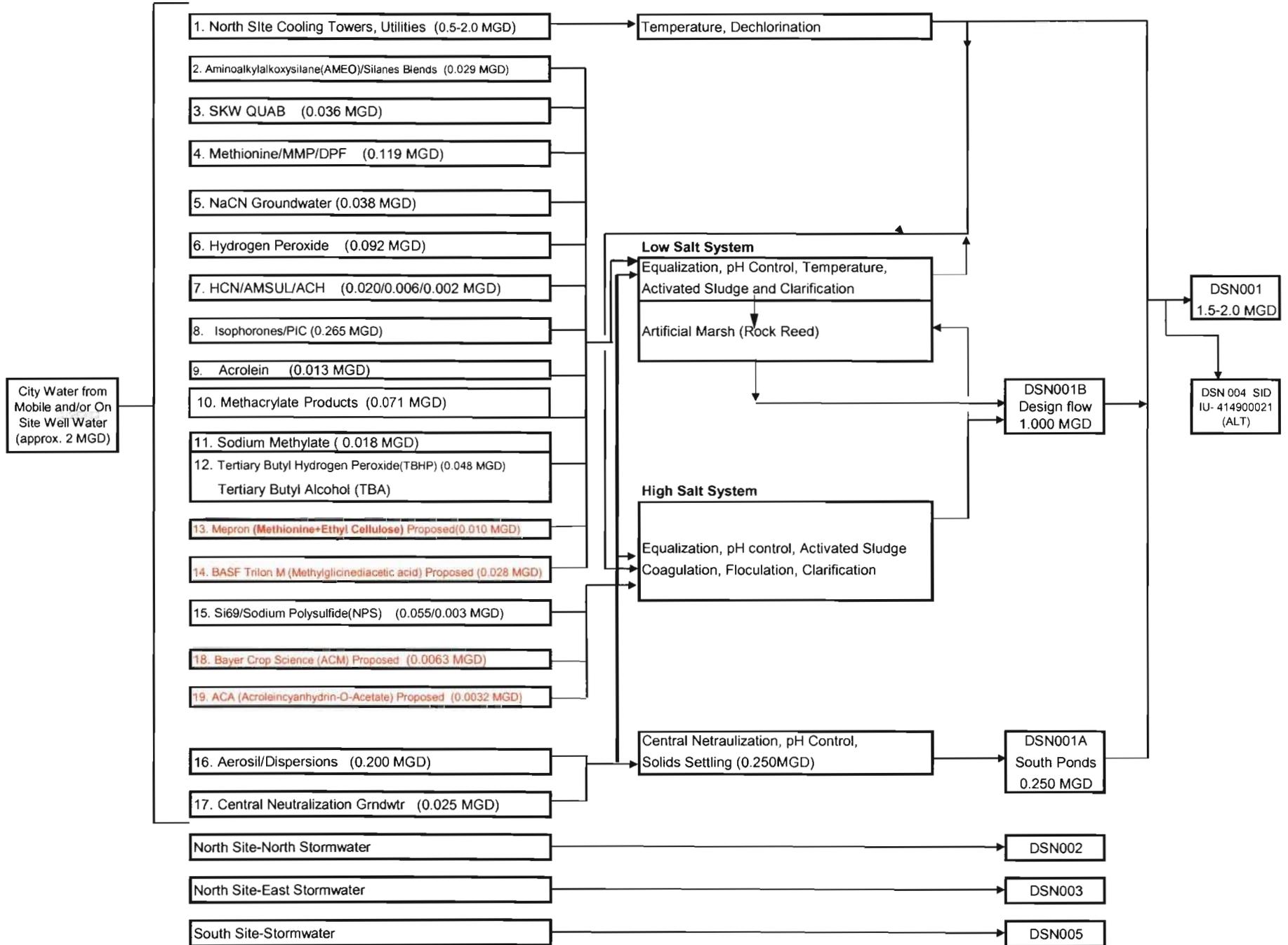
335-6-6-.09 SIGNATORIES TO PERMIT APPLICATIONS AND REPORTS.

- (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.

Products Manufactured	Category	Highest Production Year				Wastewater	
		Highest Month(lbs/da)	Days of Operation	Highest Yearly Avg.(lbs/da)	Days of Operation	Avg. Daily Flow(GPD)	Maximum Flow(GPD)
9 Acrolein	Subpart H-Specialty Organic	318,000	31	250,800	356	13,000	13,000
7 Acetocyanohydrin (ACH)	Subpart G-Bulk Organic	228,999	31	194,971	297	2,000	4,000
16 Aerosil & Dispersions	Not Regulated	63,080	31	54,917	365	200,000	400,000
2 Aminoalkalkoxysilane (AMEO) & Silane Blends	Subpart H-Specialty Organic	27,484	30	22,349	356	29,040	87,120
7 Ammonium Sulfate (Amsul)	Not Regulated	120,938	26	114,313	236	6,000	12,000
4 Degussa Potassium Fertilizer (DPF)	Not Regulated	182,097	30	152,963	322	Included w/Methionine	
7 Hydrocyanic Acid (HCN)	Subpart G-Bulk Organic	204,621	31	188,023	345	20,000	76,000
6 Hydrogen Peroxide (H2O2)	Hydrogen Peroxide Process	607,325	30	538,619	365	92,000	301,000
8 Isophorones/PIC	Subpart G-Bulk Organic	565,103	30	648,883	217	265,000	394,000
4 Methionine	Subpart G-Bulk Organic	691,949	30	690,299	308	119,000	271,000
15 Sodium Polysulfide (NPS)	Not Regulated	24,133	30	24,663	277	2,500	5,000
3 Quaternary Ammonium Bases (SKW QUAB)	Subpart G-Bulk Organic	165,326	26	139,399	318	36,000	56,000
4 MethylMercaptopropionaldehyde (MMP)	Subpart G-Bulk Organic	626,721	29	515,934	322	Included w/Methionine	
15 Si69/Si203/Si230 etc.	Subpart G-Bulk Organic	41,748	30	32,562	365	55,000	165,000
10 Methacrylate Products	Subpart G-Bulk Organic	44,284	31	34,230	365	71,000	105,000
12 Tertiary Butyl Hydrogen Peroxide (TBHP)	Subpart H-Specialty Organic	28,000	20	24,000	268	24,000	72,000
12 Tertiary Butyl Alcohol (TBA)	Subpart G-Bulk Organic	22,000	20	19,000	268	24,000	72,000
11 Sodium Methylate	Subpart H-Specialty Organic	297,408	31	247,748	268	18,000	26,000
14 BASF Trilon M (Methylglycinediacetic acid)	Subpart H-Specialty Organic	151,002	31	151,002	365	28,000	120,000
BASF Ammonia (Estimated)		15,863	31	15,863	365		
13 Meproon (Methionine + Ethyl Cellulose) (Estimated)	Subpart G-Bulk Organic	21,529	31	21,529	365	10,000	16,000
18 Bayer Crop Science(BCS) (ACM) (Estimated)	Subpart H-Specialty Organic	71,781	31	71,781	365	6,336	69,696
19 Acroleincyanhydrin-O-Acetate (ACA) (Estimated)	Subpart H-Specialty Organic	60,411	31	60,411	365	3,168	9,504

Products Manufactured	Category	Production (lbs/da)	Avg. Daily Flow(MGD)	Outfall NPDES	SID
7 Acetocyanohydrin (ACH)	Subpart G-Bulk Organic	228,999	0.002	001BS, 0011	004S
7 Hydrocyanic Acid (HCN)	Subpart G-Bulk Organic	204,621	0.020	001BS, 0011	004S
8 Isophorones/PIC	Subpart G-Bulk Organic	648,883	0.265	001BS, 0011	004S
4 Methionine	Subpart G-Bulk Organic	691,949	0.119	001BS, 0011	004S
4 MethylMercaptopropionaldehyde (MMP)	Subpart G-Bulk Organic	626,721	Included w/Methionine	001BS, 0011	004S
3 Quaternary Ammonium Bases (SKW QUAB)	Subpart G-Bulk Organic	165,326	0.036	001BS, 0011	004S
15 Si69/Si203/Si230 etc.	Subpart G-Bulk Organic	41,748	0.055	001BS, 0011	004S
10 Methacrylate Products	Subpart G-Bulk Organic	44,284	0.071	001BS, 0011	004S
12 Tertiary Butyl Alcohol (TBA)	Subpart G-Bulk Organic	22,000	0.024	001BS, 0011	004S
13 Mepron (Methionine+Ethyl Cellulose) Proposed	Subpart G-Bulk Organic	21,529	0.010	001BS, 0011	004S
TOTAL		2,696,060	0.602		
9 Acrolein	Subpart H-Specialty Organic	318,000	0.013	001BS, 0011	004S
2 Aminoalkyalkoxysilane (AMEO) & Silane Blend	Subpart H-Specialty Organic	27,484	0.029	001BS, 0011	004S
12 Tertiary Butyl Hydrogen Peroxide (TBHP)	Subpart H-Specialty Organic	28,000	0.024	001BS, 0011	004S
11 Sodium Methylate	Subpart H-Specialty Organic	297,408	0.018	001BS, 0011	004S
14 BASF Trilon M (Methylglycinediacetic acid) Proposed	Subpart H-Specialty Organic	151,002	0.028	001BS, 0011	004S
18 Bayer Crop Science (BCS) ACM Proposed	Subpart H-Specialty Organic	71,781	0.0063	001BS, 0011	004S
19 Acroliencyanhydrin-O-Acetate (ACA) Proposed	Subpart H-Specialty Organic	60,411	0.0032	001BS, 0011	004S
TOTAL		954,086	0.122		
TOTAL OCPSF Flow			0.724		
16 Aerosil & Dispersions	Not Regulated	63,080	0.200	001A, 001	004S
7 Ammonium Sulfate (Amsul)	Not Regulated	120,938	0.006	001BS, 0011	004S
4 Degussa Potassium Fertilizer (DPF)	Not Regulated	182,097	Included w/Methionine	001BS, 0011	004S
6 Hydrogen Peroxide (H2O2)	Hydrogen Peroxide Process	607,325	0.092	001BS, 0011	004S
15 Sodium Polysulfide (NPS)	Not Regulated	24,133	0.003	001BS, 0011	004S

Evonik Corporation
Theodore, Alabama
Flow Diagram for Wastewater Treatment System
2015



FORM 1 GENERAL					U.S. ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION <i>Consolidated Permits Program</i> <i>(Read the "General Instructions" before starting.)</i>			I. EPA I.D. NUMBER S F AL0023272			T/A	C
								1	2	13	14	15
LABEL ITEMS								GENERAL INSTRUCTIONS				
I. EPA I.D. NUMBER								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 authorization under which this data is collected.				
III. FACILITY NAME												
V. FACILITY MAILING LIST												
VI. FACILITY LOCATION												
PLEASE PLACE LABEL IN THIS SPACE												
II. POLLUTANT CHARACTERISTICS												
INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms .												
SPECIFIC QUESTIONS			MARK "X"			SPECIFIC QUESTIONS			MARK "X"			
			YES	NO	FORM ATTACHED				YES	NO	FORM ATTACHED	
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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)			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C. Is this facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	D. Is this proposal facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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)			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
G. Do you or will you inject at this facility any produced water 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)			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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)			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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)			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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)			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
III. NAME OF FACILITY												
C	SKIP Evonik Corporation											
1												
15	16-29										30	69
IV. FACILITY CONTACT												
A. NAME & TITLE (last, first, & title)						B. PHONE (area code & no.)						
C	Klutz, Bill - Environmental Compliance Manager					251		443		4765		
2												
15	16					45	46	48	49	51	52	55
V. FACILITY MAILING ADDRESS												
A. STREET OR P.O. BOX												
C	Post Office Box 868											
3												
15	16											
B. CITY OR TOWN				C. STATE				D. ZIP CODE				
C	Theodore			AI				36590				
4												
15	16				40	41	42	47	51			
VI. FACILITY LOCATION												
A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER												
C	4201 Evonik Road (Formerly Degussa Road)											
5												
15	16											
B. COUNTY NAME						C. STATE						
Mobile						AI						
46											70	
C. CITY OR TOWN				D. STATE				E. ZIP CODE		F. COUNTY CODE		
C	Theodore			AI				36582				
6												
15	16				40	41	42	47	51	52	54	

JUL 01 2015
 IND/MUN BRANCH

VII. SIC CODES (4-digit, in order of priority)									
A. FIRST					B. SECOND				
C	7	2869	(specify)		C	7	2819	(specify)	
15	16	17	Industrial Organic Chemicals		15	16	19	Industrial Inorganic Chemicals	
C. THIRD					D. FOURTH				
C	7	2873	(specify)		C	7		(specify)	
15	16	17	Nitrogenous Fertilizers		15	16	19		

VIII. OPERATOR INFORMATION									
A. NAME								B. Is the name listed in Item VIII-A also the owner?	
C	8	Evonik Corporation						<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
18	19							55	

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other," specify.)					D. PHONE (area code & no.)				
F = FEDERAL	M = PUBLIC (other than federal or state)	P	(specify)		C	251	443	4000	
S = STATE	O = OTHER (specify)	56			A	15	16	18	19
P = PRIVATE					22	25			

E. STREET OR PO BOX									
Post Office Box 868									
26									55

F. CITY OR TOWN				G. STATE		H. ZIP CODE		IX. INDIAN LAND	
C	Theodore			Al		36590		Is the facility located on Indian lands?	
B								<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
15	16	40	42	42	47	51			

X. EXISTING ENVIRONMENTAL PERMITS									
A. NPDES (Discharges to Surface Water)					D. PSD (Air Emissions from Proposed Sources)				
C	T	I	AL0023272		C	T	B		
9	N				9	P			
15	16	17	18	30	15	16	17	18	30
B. UIC (Underground Injection of Fluids)					E. OTHER (specify)				
C	T	I			C	T	B	Title 5 Air Permit 5035011	
9	U				9				
15	16	17	18	30	15	16	17	18	30
C. RCRA (Hazardous Wastes)					E. OTHER (specify)				
C	T	I	AL0075045575		C	T	B	IU41 49 00021 (SID)	
9	R				9				
15	16	17	18	30	15	16	17	18	30

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)
 Evonik Corporation manufactures organic and inorganic chemicals. Products produced are: Acetocyanohydrin (ACH); Acrolein; Aerosil (via silicon tetrachloride)/Dispersions; Aminoalkylalkoxysilane (AMEO)/ Silane Blends; Ammonium Sulfate (AMSUL); Specialty Orthoesters; SI69, SI230, SI203; Hydrogen; Hydrochloric Acid; Hydrogen Cyanide (HCN); Hydrogen Peroxide (H2O2); Isophorones (IP); Isophorone diamine (IPD); Isophorone nitrile (IPN); Isophorone di-isocyanate (IPDI); Methacrylate Products (MMAT); Methionine (via B-methyl-Mercapto-Propionaldehyde); Polyisocyanates (PIC); Quaternary Ammonium Bases (SKW QUAB); Sodium Methylate (NaOMe); Sodium Polysulfide (NPS); Tertiary Butyl Alcohol and Tertiary Butyl Hydrogen Peroxide (United Initiators TBA & TBHP);
 BASF Trilon M(proposed); Mepron (Methionine + Ethyl Cellulose)(proposed);
 ACA(Acroleincyanhydrin-O-Acetate)(proposed) and BCS ACM (3-Acetoxy-3-cyanopropyl methyl phosphinic acid butyl ester)(proposed).

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
Ms. Bonnie Tully, Vice President & Site Manager		June 30, 2015

COMMENTS FOR OFFICIAL USE ONLY										
C										
C										
15	16							55		

FORM 1 GENERAL		U.S. ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION <i>Consolidated Permits Program</i> <i>(Read the "General Instructions" before starting.)</i>	I. EPA I.D. NUMBER <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:5%; text-align: center;">S</td> <td style="width:85%;"></td> <td style="width:5%; text-align: center;">T/A</td> <td style="width:5%; text-align: center;">C</td> </tr> <tr> <td style="text-align: center;">F</td> <td style="text-align: center;">AL0023272</td> <td></td> <td style="text-align: center;">D</td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">13</td> <td style="text-align: center;">14</td> </tr> <tr> <td style="text-align: center;">15</td> <td></td> <td></td> <td></td> </tr> </table>	S		T/A	C	F	AL0023272		D	1	2	13	14	15			
S		T/A	C																
F	AL0023272		D																
1	2	13	14																
15																			
LABEL ITEMS	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 authorization under which this data is collected.																
I. EPA I.D. NUMBER																			
III. FACILITY NAME																			
V. FACILITY MAILING LIST																			
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SPECIFIC QUESTIONS	MARK "X"		SPECIFIC QUESTIONS																
	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)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
	16	17	18																
C. Is this facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
	22	23	24																
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
	28	29	30																
G. Do you or will you inject at this facility any produced water 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)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
	34	35	36																
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)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
	40	41	42																
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)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
	19	20	21																
D. Is this proposal facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>																
	25	26	27																
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)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
	31	32	33																
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)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
	37	38	39																
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)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
	43	44	45																
III. NAME OF FACILITY																			
C	SKIP	Evonik Corporation																	
1																			
15	16-29	30	69																
IV. FACILITY CONTACT																			
A. NAME & TITLE (last, first, & title)		B. PHONE (area code & no.)																	
C	Klutz, Bill - Environmental Compliance Manager		251 443 4765																
2																			
15	16	45	46 48 49 51 52 55																
V. FACILITY MAILING ADDRESS																			
A. STREET OR P.O. BOX																			
C	Post Office Box 868																		
3																			
15	16	45																	
B. CITY OR TOWN		C. STATE	D. ZIP CODE																
C	Theodore	Al	36590																
4																			
15	16	40	41 42 47 51																
VI. FACILITY LOCATION																			
A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER																			
C	4201 Degussa Road																		
5																			
15	16	45																	
B. COUNTY NAME																			
Mobile																			
46																			
70																			
C. CITY OR TOWN		D. STATE	E. ZIP CODE																
C	Theodore	Al	36582																
6																			
15	16	40	41 42 47 51 52 54																

CONTINUED FROM THE FRONT

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

A. FIRST				B. SECOND			
C	7	15	16	7	15	16	19
	2869	(specify)	Industrial Organic Chemicals		2819	(specify)	Industrial Inorganic Chemicals
C. THIRD				D. FOURTH			
C	7	15	16	7	15	16	19
	2873	(specify)	Nitrogenous Fertilizers			(specify)	

VIII. OPERATOR INFORMATION

A. NAME						B. Is the name listed in Item VIII-A also the owner?					
C	8	18	19	55		<input checked="" type="checkbox"/>	YES	<input type="checkbox"/>	NO		
Evonik Corporation											
C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other," specify.)						D. PHONE (area code & no.)					
F = FEDERAL	M = PUBLIC (other than federal or state)	P	(specify)	C	15	16	18	19	21	22	25
S = STATE	O = OTHER (specify)	56		A	251	443	4000				
P = PRIVATE											
E. STREET OR PO BOX											
Post Office Box 868											

F. CITY OR TOWN				G. STATE		H. ZIP CODE		IX. INDIAN LAND			
C	B	15	16	40	42	42	47	51	Is the facility located on Indian lands?		
Theodore				AI		36590		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)				D. PSD (Air Emissions from Proposed Sources)						
C	T	I	30	C	T	8	30			
9	N		AL0023272	9	P					
B. UIC (Underground Injection of Fluids)				E. OTHER (specify)				(Specify)		
C	T	I	30	C	T	8	30			
9	U			9			Title 5 Air Permit 5035011			
C. RCRA (Hazardous Wastes)				E. OTHER (specify)				(Specify)		
C	T	I	30	C	T	8	30			
9	R		AL0075045575	9			IU41 49 00021 (SID)			

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)

Evonik Corporation manufactures organic and inorganic chemicals. Products produced are: Acetocyanohydrin (ACH); Acrolein; Aerosil (via silicon tetrachloride)/Dispersions; Aminoalkylalkoxysilane (AMEO)/ Silane Blends; Ammonium Sulfate (AMSUL); Specialty Orthoesters; SI69, SI230, SI203; Hydrogen; Hydrochloric Acid; Hydrogen Cyanide (HCN); Hydrogen Peroxide (H2O2); Isophorones (IP); Isophorone diamine (IPD); Isophorone nitrile (IPN); Isophorone di-isocyanate (IPDI); Methacrylate Products (MMAT); Methionine (via B-methyl-Mercapto-Propionaldehyde); Polyisocyanates (PIC); Quaternary Ammonium Bases (SKW QUAB); Sodium Methylate (NaOMe); Sodium Polysulfide (NPS); Tertiary Butyl Alcohol and Tertiary Butyl Hydrogen Peroxide (United Initiators TBA & TBHP);

BASF Trilon M(proposed); and Mepron (Methionine + Ethyl Cellulose)(proposed).

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
Ms. Bonnie Tully, Vice President & Site Manager	<i>Bonnie Tully</i>	2/13/2015

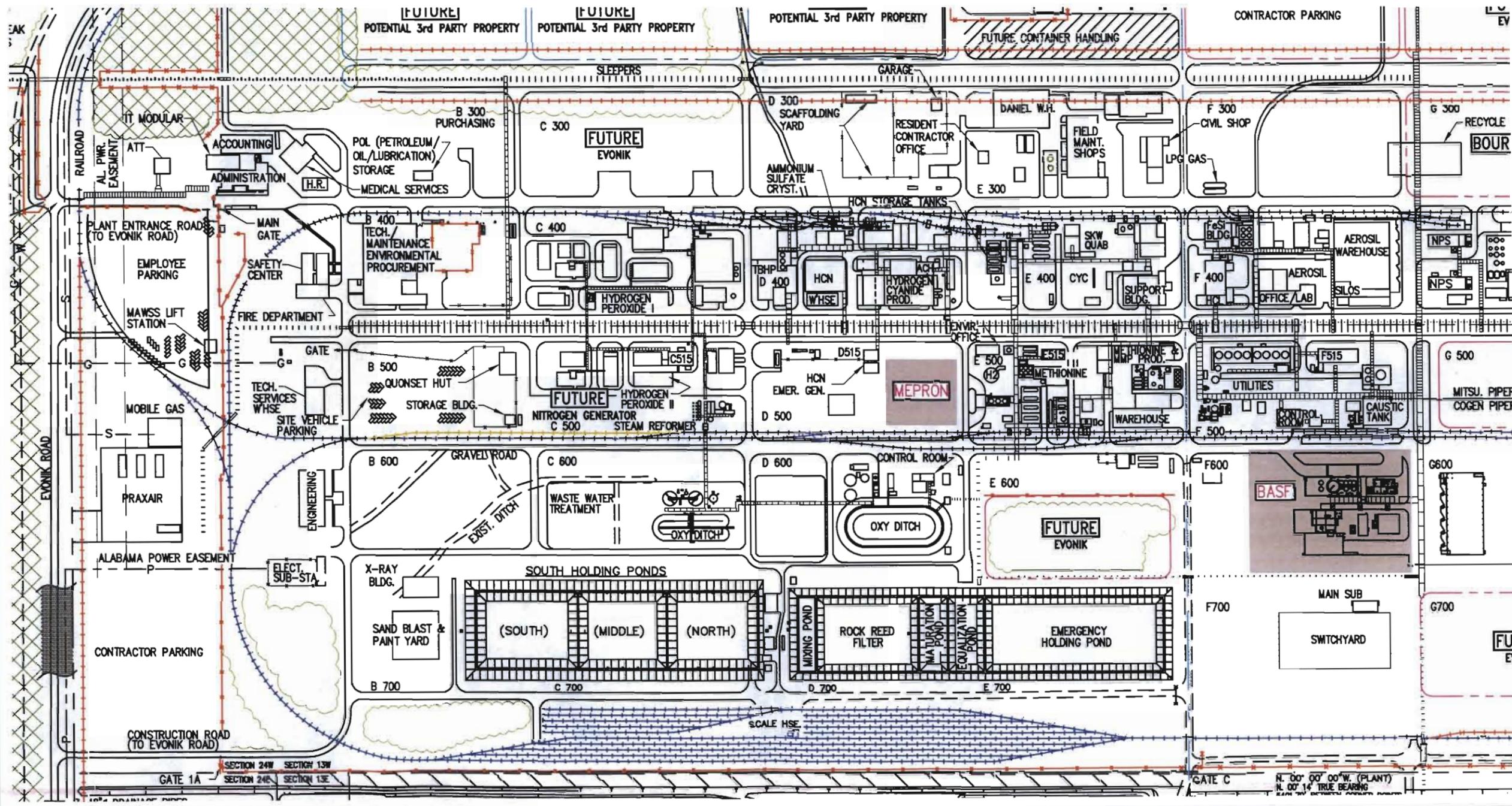
COMMENTS FOR OFFICIAL USE ONLY

C	15	16	55
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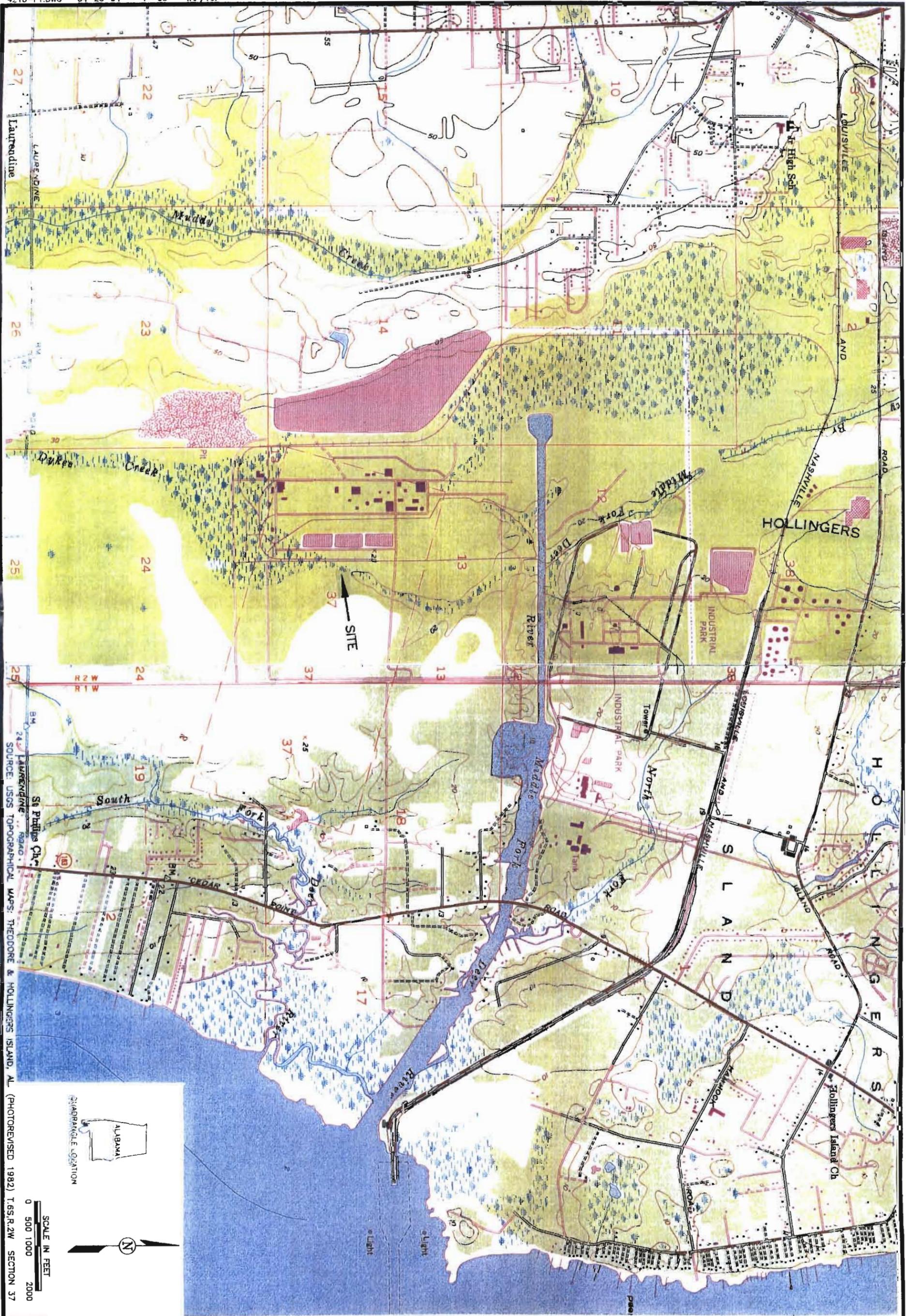


To see all the details that are visible on the screen, use the "Print" link next to the map.





N. 00° 00' 00" W. (PLANT)
 N. 00° 14' TRUE BEARING



SITE LOCATION MAP
Evonik Corporation
THEODORE, ALABAMA

FIGURE

Please print or type in the unshaded areas only	EPA I.D. NUMBER (copy from Item 1 of Form 1) AL0023272	
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Form 2D NPDES		<h2 style="margin: 0;">New Sources and New Dischargers</h2> <h3 style="margin: 0;">Application for Permit to Discharge Process Wastewater</h3>
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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.

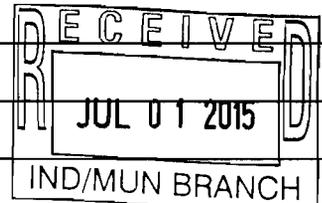
Outfall Number (list)	Latitude			Longitude			Receiving Water (name)
	Deg.	Min.	Sec.	Deg.	Min.	Sec.	
DSN001	30.00	31.00	26.00	88.00	7.00	56.00	Theodore Industrial Barge Canal (Middle Fork Deer River)
DSN001B	30.00	31.00	26.00	88.00	7.00	56.00	DSN001

II. Discharge Date (When do you expect to begin discharging?)
05/01/2015

III. Flows, Sources of Pollution, and Treatment Technologies

A. 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.

Outfall Number	1. Operations Contributing Flow (List)	2. Average Flow (Include Units)	3. Treatment (Description or List codes from Table 2D-1)
DSN001	Final Discharge consisting	1.600 MGD	Sedimentation (1-U) Neutralizatin (2-K)
	of treated wastewater from		Mixing (1-O) Activated Sludge (3-A)
	DSN001A, DSN001B & Boiler/ Cooling tower water.		Nitrification/Denitrification (3-D) Artificial Marsh (3-H)
			Filter Press (5-R) Dechlorination (2-E)
			Discharge to Surface Water (4-A)
DSN001A	Process wastewater from	0.200 MGD	Ph Neutralization (2-K) Sedimentation (1-U)
	Aerosil/Dispersion Unit		
DSN001B	Process wastewater from ACH,	0.800 MGD	Sedimentation (1-U) Neutralizatin (2-K)
	Acrolein, AMEO/Silane Blends		Mixing (1-O) Activated Sludge (3-A)
	AMSUL, SI69/SI230/SI203, HCN,		Nitrification/Denitrification (3-D) Artificial Marsh (3-H)
	H2O2, IP/IPD/IPN/IPDI/PIC,		Filter Press (5-R)
	MMAT, Methionine/MMP/DPF,		
	SKWQUAB, Sodium Methylate,		
	NPS, United Init;TBHP/TBA,		
	BASF (Trilon M) PROPOSED	BCS ACH (PROPOSED)	
	Meproon PROPOSED	ACA (PROPOSED)	



B. 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 III-A. 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.

C. Except for storm runoff, leaks, or spills, will any of the discharges described in Items III-A be intermittent or seasonal?

YES (complete the following table)

NO (go to Section IV)

Outfall Number	1. Frequency		2. Flow		
	a. Days Per Week (specify average)	b. Months Per Year (specify average)	a. Maximum Daily Flow Rate (in mgd)	b. Maximum Total Volume (specify with units)	c. Duration (in days)

IV. Production

If there is an applicable production-based effluent guideline or NSPS, for each outfall list the estimated level of production (projection of actual production level, not design), expressed in the terms and units used in the applicable effluent guideline or NSPS, for each of the first 3 years of operation. If production is likely to vary, you may also submit alternative estimates (attach a separate sheet).

Year	A. Quantity Per Day	B. Units Of Measure	c. Operation, Product, Material, etc. (specify)
			See Attached Table

CONTINUED FROM THE FRONT	EPA I.D. NUMBER (copy from Item 1 of Form 1) AL0023272	
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C. Use the space below to list any of the pollutants listed in Table 2D-3 of the instructions which you know or have reason to believe will be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it will be present.

1. Pollutant	2. Reason for Discharge
Epichlorohydrin	Raw Material from SKWQUAB Process

VI. Engineering Report on Wastewater Treatment

A. If there is any technical evaluation concerning your wastewater treatment, including engineering reports or pilot plant studies, check the appropriate box below.

Report Available No Report

B. Provide the name and location of any existing plant(s) which, to the best of your knowledge resembles this production facility with respect to production processes, wastewater constituents, or wastewater treatments.

Name	Location
N/A	

VII. Other Information (Optional)

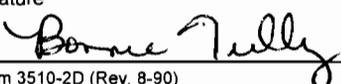
Use the space below to expand upon any of the above questions or to bring to the attention of the reviewer any other information you feel should be considered in establishing permit limitations for the proposed facility. Attach additional sheets if necessary.

This permit modification is to add Mepron (Methionine + Ethyl Cellulose); BASF Trilon M production; Bayer Crop Science (BCS) (3-Acetoxy-3-cyanopropyl)methyl phosphinic acid butyl (ACM); and Acroleincyanhydrin-O-Acetate (ACA) to the present NPDES Permit.

Based on the treatability studies performed by Stein Environmental and Fiss Environmental, there are no increase in pollutants expected in the discharge.

VIII. 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 and Official Title (type or print) Bonnie Tully, Vice President and Site Manager, Evonik Corporation	B. Phone No. (251) 443-4350
C. Signature 	D. Date Signed June 30, 2015

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)
AL0023272 (DSN001)

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

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

1. POLLUTANT	2. EFFLUENT							3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	5.9	102	1.9	31.2	0.6	806	534	Mg/l	Lbs/da	n/a	n/a	n/a
b. Chemical Oxygen Demand (COD)	18	241	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
c. Total Organic Carbon (TOC)	27	426	18	242	14	186	231	Mg/l	Lbs/da	n/a	n/a	n/a
d. Total Suspended Solids (TSS)	106	1271	30	450	15	197	229	Mg/l	Lbs/da	n/a	n/a	n/a
e. Ammonia (as N)	1.1	25	0.28	5.1	0.04	0.7	539	Mg/l	Lbs/da	n/a	n/a	n/a
f. Flow	Value 3.412		Value 2.058		Value 1.608		539	MGD	n/a	Value n/a		n/a
g. Temperature (winter)	Value 23.3		Value 18.6		Value 16.3		90	°C		Value n/a		n/a
h. Temperature (summer)	Value 31.6		Value 29.6		Value 28.6		93	°C		Value n/a		n/a
i. pH	Minimum 7.0	Maximum 8.4	Minimum 7.0	Maximum 8.4			539	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 limitation 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'		2. EFFLUENT							3. UNITS (specify if blank)		4. 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 ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
b. Chlorine, Total Residual	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.1	<2.85	<0.1	<1.72	<0.1	<1.34	74	Mg/l	Lbs/da	n/a	n/a	n/a
c. Color	<input type="checkbox"/>	<input checked="" type="checkbox"/>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
d. Fecal Coliform	<input type="checkbox"/>	<input checked="" type="checkbox"/>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
e. Fluoride (16984-48-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1.0	14	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
f. Nitrate-Nitrite (as N)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.5	146	5.7	80	1.8	27	42	Mg/l	Lbs/da	n/a	n/a	n/a

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		2. EFFLUENT						3. UNITS (specify if blank)		4. 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 ANALYSIS			a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS		a. CONCENTRATION	b. MASS	(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (as N)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2.8	14.5	2.9	29	2.0	26	41	Mg/l	Lbs/da	n/a	n/a	n/a
h. Oil and Grease	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5.0	<75	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
i. Phosphorus (as P), Total (7723-14-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21	250	19	217	10	134	40	Mg/l	Lbs/da	n/a	n/a	n/a
j. Radioactivity														
(1) Alpha, Total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
(2) Bets, Total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
(3) Radium, Total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
(4) Radium 226, Total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
k. Sulfate (as SO ₄) (14808-79-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1100	16,577	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
l. Sulfide (as S)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.10	<1.74	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
m. Sulfite (as SO ₃) (14265-45-3)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5.0	<75	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
n. Surfactants	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.10	<1.5	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
o. Aluminum, Total (7429-90-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.23	3.47	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
p. Barium, Total (7440-39-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.039	0.59	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
q. Boron, Total (7440-42-8)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.05	<0.75	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
r. Cobalt, Total (7440-48-4)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
s. Iron, Total (7439-89-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.31	4.67	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
t. Magnesium, Total (7439-95-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1.9	28.63	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
u. Molybdenum, Total (7439-98-7)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
v. Manganese, Total (7439-96-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.012	0.18	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
w. Tin, Total (7440-31-5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
x. Titanium, Total (7440-32-6)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a

EPA I.D. NUMBER (copy from Item 1 of Form 1)
AL0023272

OUTFALL NUMBER
DSN001

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 non-required 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 NO. (if available)	2. MARK 'X'			2. EFFLUENT						3. UNITS (specify if blank)		4. 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)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.020	<0.30	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
2M. Arsenic, Total (7440-38-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.28	<0.010	<0.17	<0.010	<0.13	18	Mg/l	Lbs/da	n/a	n/a	n/a
3M. Beryllium, Total (7440-41-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.004	<0.06	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
4M. Cadmium, Total (7440-43-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
5M Chromium, Total (7440-47-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
6M Copper, Total (7440-50-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.020	<0.34	<0.020	<0.31	<0.020	<0.27	6	Mg/l	Lbs/da	n/a	n/a	n/a
7M lead, Total (7439-92-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	<0.005	<0.08	<0.005	<0.07	6	Mg/l	Lbs/da	n/a	n/a	n/a
8M Mercury, Total (7439-97-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.0002	<0.003	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
9M Nickel, Total (7440-02-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.040	<0.68	<0.040	<0.62	<0.040	<0.53	6	Mg/l	Lbs/da	n/a	n/a	n/a
10M Selenium, Total (7782-49-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
11M Silver, Total (7440-22-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
12M Thallium, Total (7440-28-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
13M Zinc, Total (7440-66-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.120	1.337	0.082	0.885	0.063	0.822	6	Mg/l	Lbs/da	n/a	n/a	n/a
14M Cyanide, Total (57-12-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.057	<1.622	<0.057	<0.978	<0.057	<0.764	20	Mg/l	Lbs/da	n/a	n/a	n/a
15M Phenols, Total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
DIOXIN															
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1784-01-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DESCRIBE RESULTS											

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT						3. UNITS (specify if blank)		4. 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 - VOLATILE COMPOUNDS															
1V Acrolein (107-02-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.100	<1.51	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
2V Acrylonitrile (107-13-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.100	<1.51	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
3V Benzene (71-43-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
4V Bis (Chloromethyl) Ether (542-88-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5V Bromoform (75-25-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
6V Carbon Tetrachloride (56-23-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
7V Chlorobenzene (108-90-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
8V Chlorodibromomethane (124-48-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
9V Chloroethane (75-00-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
10V 2-Chloroethylvinyl Ether (110-75-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
11V Chloroform (67-66-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
12V Dichlorobromoethane (75-71-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
13V Dichlorodifluoromethane (75-71-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	n/a	n/a	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
14V 1,1-Dichloroethane (75-34-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
15V 1,2-Dichloroethane (107-06-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
16V 1,1-Dichloroethylene (75335-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
17V 1,2-Dichloropropane (78-87-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
18V 1,3-Dichloropropylene (542-76-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
19V Ethylbenzene (100-41-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
20V Methyl Bromide (74-83-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
21V Methyl Chloride (74-87-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a

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				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS - VOLATILE COMPOUNDS (continued)															
22 V Methylene Chloride (75-09-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
23V 1,1,2,2-Tetra-Chloroethane (79-34-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
24V Tetrachloro-ethylene (127-18-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
25V Toluene (108-88-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
26V 1,2-Trans-Dichloroethylene (156-60-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
27V 1,1,1-Trichloroethane (71-55-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
28V 1,1,2-Trichloroethane (79-00-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
29V Trichloro-ethylene (79-01-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.08	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
30V Trichloro-fluoromethane (75-69-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
31V Vinyl Chloride (75-01-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
GC/MS FRACTION - ACID COMPOUNDS															
1A 2-Chlorophenol (95-57-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
2A 2,4-Dichloro-phenol (120-83-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
3A 2,4-Dimethyl-phenol (105-67-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
4A 4,6-Dinitro-O-cresol (534-52-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.050	<0.75	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
5A 2,4-Dinitro-phenol (51-28-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.050	<0.75	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
6A 2-Nitro-phenol (88-75-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
7A 4-Nitro-phenol (100-02-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.050	<0.75	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
8A P-Chloro-M-Cresol (59-50-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
9A Penta-chlorophenol (87-86-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.050	<0.75	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
10A Phenol (101-95-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
11A 2,4,6-Trichlorophenol (88-06-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a

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	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)			a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B Acenaphthene (83-32-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
2B Acenaphthylene (208-96-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
3B Anthracene (120-12-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
4B Benzidine (92-87-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.080	<1.205	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
5B Benzo (a) Anthracene (56-55-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
6B Benzo (a) Pyrene (50-32-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
7B 3,4-Benzofluoranthene (205-99-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
8B Benzo (ghi) Perylene (191-24-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
9B Benzo (k) Fluoranthene (207-08-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
10B Bis (2-Chloroethoxy) Methane (111-91-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
11B Bis (2-Chloroethyl) Ether (111-44-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
12B Bis (2-Chloroisopropyl) Ether (102-60-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
13B Bis(2-Ethylhexyl) Phthalate (117-81-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
14 B 4-Bromophenyl Phenyl Ether (101-65-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
15B Butyl Benzyl Phthalate (85-68-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
16B 2-Chloronaphthalene (91-68-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
17B 4-Chlorophenyl Phenyl Ether (7005-72-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
18B Chrysene (218-01-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
19B Dibenzo (a,h) Anthracene (53-70-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
20B 1,2-Dichlorobenzene (95-50-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
21B 1,3-Dichlorobenzene (541-73-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a

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				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS - BASE/NEUTRAL COMPOUNDS (continued)															
22B 1,4-Dichlorobenzene (106-46-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
23B 3,3'-Dichlorobenzidine (91-94-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.020	<0.30	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
24B Diethyl Phthalate (84-66-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
25B Dimethyl Phthalate (131-11-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
26B Di-N-Butyl Phthalate (131-11-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
27B 2,4-Dinitrotoluene (121-14-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
28B 2,6-Dinitrotoluene (606-20-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
29B Di-N-Octyl Phthalate (117-84-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
30B 1,2-Diphenylhydrazine (as Azo-benzene) (122-66-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
31B Fluoranthene (206-44-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
32B Fluorene (86-73-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
33B Hexachlorobenzene (118-74-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
34B Hexachlorobutadiene (87-68-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
35B Hexachlorocyclopentadiene (77-47-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
36B Hexachloroethane (67-72-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
37B Indeno (1,2,3-cd) Pyrene (193-39-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
38B Isophorone (78-59-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
39B Naphthalene (91-20-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
40B Nitrobenzene (98-95-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
41B N-Nitrosodimethylamine (62-75-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
42B N-Nitrosodi-N-Propylamine (621-64-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)															
43B N-Nitrosodiphenylamine (86-30-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
44B Phenanthrene (85-01-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
45B Pyrene (129-00-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
46B 1,2,4-Trichlorobenzene (120-62-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.15	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
GC/MS FRACTION - PESTICIDES															
1P Aldrin (309-00-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.050	<0.0008	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
2P β-BHC (319-85-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.050	<0.0008	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
4P γ-BHC (58-89-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.050	<0.0008	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
5P δ-BHC (319-86-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.050	<0.0008	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
6P Chlordane (57-74-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.50	<0.008	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
7P 4,4'-DDT (50-29-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.10	<0.002	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
8P 4,4'-DDE (72-55-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.10	<0.002	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
9P 4,4'-DDD (72-54-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.10	<0.002	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
10P Dieldrin (60-57-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.10	<0.002	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
11P α-Endosulfan (115-29-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.050	<0.0008	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
12P β-Endosulfan (115-29-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.10	<0.002	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
13P Endosulfan Sulfate (1031-07-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.10	<0.002	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
14P Endrin (72-20-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.10	<0.002	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
15P Endrin Aldehyde (7421-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.10	<0.002	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
16P Heptachlor (76-44-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.050	<0.0008	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT							3. UNITS (specify if blank)		4. 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 - PESTICIDES (continued)															
17P Heptachlor Epoxide (1024-57-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.050	<0.0008	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
18P PCB-1242 (53469-21-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<1.0	<0.016	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
19P PCB-1254 (11097-69-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<1.0	<0.016	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
20P PCB-1221 (11104-28-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<2.0	<0.032	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
21P PCB-1232 (11141-16-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<1.0	<0.016	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
22P PCB-1248 (12672-29-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<1.0	<0.016	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
23P PCB-1260 (11096-82-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<1.0	<0.016	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
24P PCB-1016 (12674-11-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<1.0	<0.016	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
25P Toxaphene (8001-35-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<5.0	<0.082	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a

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)
AL0023272 (DSN001B)

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

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

1. POLLUTANT	2. EFFLUENT							3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	12.7	85.9	4.6	31.0	2.4	16.2	534	Mg/l	Lbs/da	n/a	n/a	n/a
b. Chemical Oxygen Demand (COD)	20	133	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
c. Total Organic Carbon (TOC)	38	391	33	242	25	163	229	Mg/l	Lbs/da	n/a	n/a	n/a
d. Total Suspended Solids (TSS)	18	119	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
e. Ammonia (as N)	2.1	19.6	0.57	4.5	0.15	1.0	537	Mg/l	Lbs/da	n/a	n/a	n/a
f. Flow	Value 1.441		Value 0.983		Value 0.796		539	MGD	n/a	Value n/a		n/a
g. Temperature (winter)	Value n/a		Value n/a		Value n/a		n/a	°C		Value n/a		n/a
h. Temperature (summer)	Value n/a		Value n/a		Value n/a		n/a	°C		Value n/a		n/a
i. pH	Minimum 7.4	Maximum 8.3	Minimum 7.4	Maximum 8.3			537	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 limitation 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'		2. EFFLUENT							3. UNITS (specify if blank)		4. 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 ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
b. Chlorine, Total Residual	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.1	<1.0	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
c. Color	<input type="checkbox"/>	<input checked="" type="checkbox"/>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
d. Fecal Coliform	<input type="checkbox"/>	<input checked="" type="checkbox"/>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
e. Fluoride (16984-48-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.67	4.6	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
f. Nitrate-Nitrite (as N)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.053	0.36	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		2. EFFLUENT						3. UNITS (specify if blank)		4. 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 ANALYSIS	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)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1.5	14.9	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
h. Oil and Grease	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5.0	<34	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
i. Phosphorus (as P), Total (7723-14-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	20	199	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
j. Radioactivity														
(1) Alpha, Total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
(2) Bets, Total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
(3) Radium, Total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
(4) Radium 226, Total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
k. Sulfate (as SO ₄) (14808-79-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3400	23,337	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
l. Sulfide (as S)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0.10	0.94	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
m. Sulfite (as SO ₃) (14265-45-3)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5.0	<34	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
n. Surfactants	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.10	<0.67	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
o. Aluminum, Total (7429-90-5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.20	<1.37	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
p. Barium, Total (7440-39-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.015	0.103	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
q. Boron, Total (7440-42-8)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.05	<0.343	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
r. Cobalt, Total (7440-48-4)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.01	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
s. Iron, Total (7439-89-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.079	0.542	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
t. Magnesium, Total (7439-95-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2.4	16.5	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
u. Molybdenum, Total (7439-98-7)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.01	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
v. Manganese, Total (7439-96-5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.01	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
w. Tin, Total (7440-31-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.014	0.096	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
x. Titanium, Total (7440-32-6)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.01	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a

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 non-required 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 NO. (if available)	2. MARK 'X'			2. EFFLUENT						d. NO. OF ANALYSES	3. UNITS (specify if blank)		4. 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)			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)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.020	<0.137	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
2M. Arsenic, Total (7440-38-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
3M. Beryllium, Total (7440-41-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.004	<0.028	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
4M. Cadmium, Total (7440-43-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
5M Chromium, Total (7440-47-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
6M Copper, Total (7440-50-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.020	<0.137	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
7M lead, Total (7439-92-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.009	0.062	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
8M Mercury, Total (7439-97-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.0002	<0.001	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
9M Nickel, Total (7440-02-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.040	<0.275	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
10M Selenium, Total (7782-49-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
11M Silver, Total (7440-22-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
12M Thallium, Total (7440-28-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
13M Zinc, Total (7440-66-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.029	0.199	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
14M Cyanide, Total (57-12-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.020	<0.240	<0.020	<0.164	<0.020	<0.133	40	Mg/l	Lbs/da	n/a	n/a	n/a
15M Phenols, Total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
DIOXIN															
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1764-01-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DESCRIBE RESULTS											

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT						3. UNITS (specify if blank)		4. 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 - VOLATILE COMPOUNDS															
1V Acrolein (107-02-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.100	<0.686	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
2V Acrylonitrile (107-13-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.100	<0.686	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
3V Benzene (71-43-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
4V Bis (Chloromethyl) Ether (542-88-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5V Bromoform (75-25-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
6V Carbon Tetrachloride (56-23-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
7V Chlorobenzene (108-90-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
8V Chlorodibromomethane (124-48-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
9V Chloroethane (75-00-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
10V 2-Chloroethylvinyl Ether (110-75-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
11V Chloroform (67-66-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
12V Dichlorobromoethane (75-71-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
13V Dichlorodifluoromethane (75-71-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
14V 1,1-Dichloroethane (75-34-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
15V 1,2-Dichloroethane (107-06-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
16V 1,1-Dichloroethylene (75335-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
17V 1,2-Dichloropropane (78-87-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
18V 1,3-Dichloropropylene (542-76-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
19V Ethylbenzene (100-41-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
20V Methyl Bromide (74-83-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
21V Methyl Chloride (74-87-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT						3. UNITS (specify if blank)		4. 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 - VOLATILE COMPOUNDS (continued)															
22 V Methylene Chloride (75-09-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
23V 1,1,2,2-Tetra-Chloroethane (79-34-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
24V Tetrachloro-ethylene (127-18-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
25V Toluene (108-88-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
26V 1,2-Trans-Dichloroethylene (156-60-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
27V 1,1,1-Trichloroethane (71-55-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
28V 1,1,2-Trichloroethane (79-00-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
29V Trichloro-ethylene (79-01-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.005	<0.034	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
30V Trichloro-fluoromethane (75-69-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
31V Vinyl Chloride (75-01-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
GC/MS FRACTION - ACID COMPOUNDS															
1A 2-Chlorophenol (95-57-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
2A 2,4-Dichlorophenol (120-83-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
3A 2,4-Dimethylphenol (105-67-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
4A 4,6-Dinitro-O-cresol (534-52-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.050	<0.343	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
5A 2,4-Dinitrophenol (51-28-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
6A 2-Nitrophenol (88-75-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
7A 4-Nitrophenol (100-02-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.050	<0.343	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
8A P-Chloro-M-Cresol (59-50-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
9A Penta-chlorophenol (87-86-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.050	<0.343	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
10A Phenol (101-95-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
11A 2,4,6-Trichlorophenol (88-06-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a

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	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B Acenaphthene (83-32-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
2B Acenaphthylene (208-96-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
3B Anthracene (120-12-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
4B Benzidine (92-87-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.080	<0.549	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
5B Benzo (a) Anthracene (56-55-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
6B Benzo (a) Pyrene (50-32-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
7B 3,4-Benzo-fluoranthene (205-99-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
8B Benzo (ghi) Perylene (191-24-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
9B Benzo (k) Fluoranthene (207-08-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
10B Bis (2-Chloroethoxy) Methane (111-91-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
11B Bis (2-Chloroethyl) Ether (111-44-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
12B Bis (2-Chloroisopropyl) Ether (102-00-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
13B Bis (2-Ethylhexyl) Phthalate (117-81-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.029	0.199	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
14 B 4-Bromophenyl Phenyl Ether (101-55-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
15B Butyl Benzyl Phthalate (85-68-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
16B 2-Chloronaphthalene (91-68-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
17B 4-Chlorophenyl Phenyl Ether (7005-72-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
18B Chrysene (218-01-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
19B Dibenzo (a,h) Anthracene (53-70-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
20B 1,2-Dichlorobenzene (95-50-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
21B 1,3-Dichlorobenzene (541-73-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a

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GC/MS - BASE/NEUTRAL COMPOUNDS (continued)															
22B 1,4-Dichlorobenzene (106-46-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
23B 3,3'-Dichlorobenzidine (91-94-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.020	<0.137	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
24B Diethyl Phthalate (84-66-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
25B Dimethyl Phthalate (131-11-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
26B Di-N-Butyl Phthalate (131-11-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
27B 2,4-Dinitrotoluene (121-14-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
28B 2,6-Dinitrotoluene (606-20-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
29B Di-N-Octyl Phthalate (117-84-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
30B 1,2-Diphenylhydrazine (as Azo-benzene) (122-66-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
31B Fluoranthene (206-44-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
32B Fluorene (86-73-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
33B Hexachlorobenzene (118-74-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
34B Hexachlorobutadiene (87-68-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
35B Hexachlorocyclopentadiene (77-47-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
36B Hexachloroethane (67-72-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
37B Indeno (1,2,3-cd) Pyrene (193-39-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
38B Isophorone (78-59-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
39B Naphthalene (91-20-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
40B Nitrobenzene (98-95-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
41B N-Nitrosodimethylamine (62-75-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
42B N-Nitrosdi-N-Propylamine (621-64-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a

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(DSN001B)

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)															
43B N-Nitrosodiphenylamine (86-30-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
44B Phenanthrene (85-01-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
45B Pyrene (129-00-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
46B 1,2,4-Trichlorobenzene (120-82-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.010	<0.069	n/a	n/a	n/a	n/a	1	Mg/l	Lbs/da	n/a	n/a	n/a
GC/MS FRACTION - PESTICIDES															
1P Aldrin (309-00-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.050	<0.0005	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
2P β-Bhc (319-85-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.050	<0.0005	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
4P γ-BHC (58-89-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.050	<0.0005	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
5P δ-BHC (319-86-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.050	<0.0005	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
6P Chlordane (57-74-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.5	<0.005	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
7P 4,4'-DDT (50-29-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.10	<0.0009	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
8P 4,4'-DDE (72-55-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.10	<0.0009	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
9P 4,4'-DDD (72-54-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.10	<0.0009	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
10P Dieldrin (60-57-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.10	<0.0009	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
11P α-Endosulfan (115-29-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.050	<0.0005	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
12P β-Endosulfan (115-29-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.10	<0.0009	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
13P Endosulfan Sulfate (1031-07-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.10	<0.0009	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
14P Endrin (72-20-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.10	<0.0009	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
15P Endrin Aldehyde (7421-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.10	<0.0009	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
16P Heptachlor (76-44-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.050	<0.0005	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a

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				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS - PESTICIDES (continued)															
17P Heptachlor Epoxide (1024-57-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<0.050	<0.0005	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
18P PCB-1242 (53469-21-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<1.0	<0.009	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
19P PCB-1254 (11097-69-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<1.0	<0.009	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
20P PCB-1221 (11104-28-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<2.0	<0.018	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
21P PCB-1232 (11141-16-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<1.0	<0.009	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
22P PCB-1248 (12672-29-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<1.0	<0.009	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
23P PCB-1260 (11096-82-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<1.0	<0.009	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
24P PCB-1016 (12674-11-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<1.0	<0.009	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a
25P Toxaphene (8001-35-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<5.0	<0.045	n/a	n/a	n/a	n/a	1	Ug/l	Lbs/da	n/a	n/a	n/a

TREATABILITY TESTING OF PROPOSED NEW BASF WASTEWATER

Prepared for:

Evonik Corporation
Theodore, AL

Prepared by:

Stein Environmental LLC
Charlotte, NC

FISS Environmental Solutions, Inc.
Charlotte, NC

JANUARY 2015

SECTION 1.0 INTRODUCTION

Evonik Corporation (Evonik) operates a specialty chemical manufacturing facility in Theodore, Alabama. The wastewaters from the Evonik facility are treated in two oxidation ditch activated sludge systems and discharged into the Theodore Barge Canal under an NPDES permit. The wastewater discharge is covered under the organic chemicals, plastics, and synthetic fibers (OCPSF) Federal categorical standards.

1.1 BACKGROUND

The current Evonik wastewater treatment facility includes wastewater equalization followed by two 2.77 MG activated sludge oxidation ditch systems. One system is called the CMAS system while the other system is called the Oxiditch. The effluents from these systems pass through an artificial wetlands process (Rock Reed Filter) and are discharged to the Theodore Barge Canal.

This discharge is regulated under the NPDES permitting system. A summary of the NPDES criteria are presented in Table 1. These criteria require an average effluent BOD₅ of 4 mg/l.

**TABLE 1
SUMMARY OF EVONIK-DEGUSSA NPDES PERMIT LIMITS**

PARAMETER	MONTHLY AVERAGE (lbs./day)	DAILY MAXIMUM (lbs./day)	MONTHLY AVERAGE (mg/l)	DAILY MAXIMUM (mg/l)
BOD ₅	141.14	380.34	4	8
TSS	1,042.56	2,718.63		
NH ₃ -N	45	68		
TKN	125	175		
NO ₂ /NO ₃	102	167		
Total P	528	688		
TOC	670	1,260		
Chlorides			6,100	9,000
Cyanide	0.154	0.154		
Total Cu	1.13	1.32		

There are several new chemical production facilities that are proposed for the Theodore plant. Evonik has requested that Stein Environmental LLC (Stein) in conjunction with Fiss Environmental Solutions, Inc (FISS) perform treatability studies (BKD tests) to determine how these new wastewaters can be treated at the plant to meet NPDES discharge criteria. Stein and FISS have conducted these studies. This report presents the results and the conclusions from these investigations.

1.2 OBJECTIVES OF THE INVESTIGATION

The overall objectives of this investigation were to determine the characteristics and treatability of the potential new wastewaters. Specifically, the main goals of this study were to:

1. Review the influent characteristics of the production wastewaters;
2. Conduct a preliminary evaluation of the Oxiditch system to treat these wastewaters;
3. Conduct treatability testing to confirm treatment capacity for the new production wastewaters;
4. Recommend specific criteria for individual waste streams; and
5. Confirm the compliance of these discharges with effluent criteria.

1.3 SCOPE OF INVESTIGATION

The studies were conducted using mixed liquor seed from the Oxiditch treatment system. During all phases of the study, the following parameters were periodically monitored:

1. Organic removal efficiency,
2. Nitrogenous removal,
3. Oxygen uptake rates,
4. Excess sludge production, and
5. Wastewater settleability.

The treatability study was performed at the offices of FISS Environmental Solutions in Charlotte, NC.

SECTION 2.0 WASTE CHARACTERIZATION

Evonik is evaluating the addition of new production units at the Theodore facility. These include additional Evonik production units and a new BASF plant. The specific new waste streams being evaluated are:

- BASF Project Terrier (BASF 100 and 200)
- Mepron

An initial analysis of these waste streams and the capabilities of the Oxiditch system to treat these wastewaters were conducted. Based on this analysis, treatment concepts for the individual streams were developed.

2.1 OXIDITCH SYSTEM-INITIAL TEST PROGRAM

The new waste streams have low TDS loads and these were selected for treatment in the Oxiditch. Table 2 summarizes existing waste loads to the Oxiditch along with the initial information on the proposed wasteloads from the new streams.

**TABLE 2
WASTELOADS TO THE OXIDITCH SYSTEM**

STREAM	FLOW (m ³ /hr)	BOD ₅ (mg/l)	COD (mg/l)	NH ₃ -N (mg/l)	TKN (mg/l)
Present Oxiditch	86.3	611	972	21	49
Terrier-BASF 100	4.4	14,000	13,000	1000	1,200
Mepron	1.5	200	380	0	10

An initial analysis of the Oxiditch system indicated that with these wasteloads over 80 percent of the treatment capacity of the system would be allotted with regard to hydraulic, BOD₅ and COD capacity. The ammonia nitrogen (NH₃-N) waste loads are equal to approximately 115 percent of the design ammonia nitrogen removal capacity of the Oxiditch system.

BASF prepared samples of the anticipated wastewater for use by Evonik in the BKD studies. The samples as received by Evonik were analyzed for the primary environmental constituents. These data are presented in Table 3. These data indicated that the NH₃-N concentration in the BASF 100 streams, as received, was less than the 1,000 mg/l NH₃-N proposed by BASF. In addition, there seems to be an inconsistency between the design BOD₅ and COD, and the anticipated methanol concentration of the wastestream. Lab analysis of the BASF 100 wastewater showed a methanol (CH₃OH) concentration of 3,100 mg/l, and this is the majority of the organic waste load. The anticipated BOD₅ of the BASF 100 waste stream is 14,000 mg/l with a COD of 13,000 mg/l, but since the methanol:BOD₅ ratio is 1:1, and the methanol:COD ratio is about 1:1.4, the anticipated BOD₅ and COD concentrations are not consistent with the measured methanol concentration.

TABLE 3

**CHARACTERIZATION OF BASF WASTEWATER –
BASED ON EVONIK ANALYSIS OF SAMPLES PREPARED BY BASF**

STREAM	pH	CH3OH (mg/l)	CH2O (mg/l)	TDS (mg/l)	TOC (mg/l)	COD (mg/l)	NH3-N (mg/l)	TKN (mg/l)
BASF 100	10.2	3,100	8.3	160	1,200	4,900	580	560
BASF 200	10.3	5,300	9.1	220	2,100	8,900	1,200	1,200

2.2 OXIDITICH SYSTEM-REVISED TEST PROGRAM

The basis for the BKD study was adjusted as additional information on the waste streams was obtained. The flow, ammonia and MGDA waste loads are based on Dan Coleman's November 21, 2013 email to Bill Klutz. The other parameters are based on the Contract – Appendix B-6 concentrations. The revised BASF discharge characteristics are presented in Table 4.

**TABLE 4
SUMMARY OF BASF DISCHARGE BASED ON BASF DOCUMENTS**

Parameter	Average Discharge	Daily Maximum
Flow	2.54 m ³ /hr	<4.46 m ³ /hr
COD	6,255 mg/l	10,205 mg/l
TOC	1,478 mg/l	2,431 mg/l
TKN	1,200 mg/l	2,000 mg/l
NH ₃ -N	1,001 mg/l	1,813 mg/l
TDS	1,000 mg/l	2,000 mg/l
Copper		< 0.143 mg/l
Total CN		< 0.15 mg/l
Trilon M		<75 mg/l
pH		>2 - <11
Methanol	3,918 mg/l	6,445 mg/l
MGDA	86 mg/l	129 mg/l

NOTE - COD and TOC based on ratio of TOC and COD to methanol concentration

Table 5 presents a summary of the existing waste loads to the Oxiditch along with the anticipated wasteloads from the new streams. An analysis of the Oxiditch system indicated that with these allocations, over 80 percent of the capacity of the system was allocated with regard to hydraulic, BOD₅ and COD. These waste loads are also equal to approximately 100 percent of the NH₃-N design removal capacity of the Oxiditch system.

**TABLE 5
AVERAGE DESIGN WASTELOADS TO THE OXIDITCH SYSTEM**

STREAM	FLOW (m ³ /hr)	BOD ₅ (mg/l)	COD (mg/l)	NH ₃ -N (mg/l)	TKN (mg/l)
Present Oxiditch	86.3	611	972	21	49
Terrier-BASF 100	2.54	6,255	6,255	1,001	1,200
Mepron	1.5	200	380	0	10
Composite	90.34	763	1,110	48.2	81
Composite, lbs/day	NA	3,640	5,295	230	390

2.3 FINAL DESIGN BASF WASTE LOAD

There were a number of inconsistencies in the waste loads projected by BASF for the treatment plant design based on a review of all documents and analysis. BASF prepared a composite of their wastewater to conduct the BKD studies. Therefore, the composite sample prepared by BASF was used as a basis for methanol, formaldehyde, TOC and COD concentrations. BASF revised their estimates of NH₃-N and TKN above those measured in the composite sample. Therefore, the NH₃-N, TKN, TDS, copper, total cyanide (CN) and Trilon M concentrations are based on the contract Appendix B-6 average concentrations. The peak flow in Appendix B-6 (4.46 m³/hr) was utilized to determine maximum waste loads. These loadings are summarized in Table 6.

**TABLE 6
SUMMARY OF BASF 100 DESIGN WASTE LOAD**

Parameter	Concentration	Daily Maximum Loading
COD	4,800 mg/l	1,155 lbs/day
TOC	1,200 mg/l	283 lbs/day
TKN	1,200 mg/l	283 lbs/day
NH ₃ -N	1,001 mg/l	236 lbs/day
TDS	1,000 mg/l	236 lbs/day
Copper		< 0.143 mg/l
Total CN		< 0.15 mg/l
Trilon M		<75 mg/l
pH		2 su - 11su
Methanol	3,100 mg/l	730.5 lbs/day
Formaldehyde		< 10 mg/l

SECTION 3.0 EXPERIMENTAL PROCEDURES

The biological and physical-chemical studies and related tests performed throughout the laboratory stages of the project conformed to established techniques and procedures. The laboratory scale study was conducted at the offices of FISS Environmental Solutions Inc.

3.1 INITIAL TREATABILITY TESTING

The objective of this study was to confirm the feasibility of the wastewater treatment scenario defined in Section 2.0. A single BKD reactor was set up to simulate the treatment of the Oxiditch waste streams. The BKD reactor was initially operated to simulate treatment of the existing Oxiditch wastewaters in combination with the BASF 100, and Mepron wastewaters.

The anticipated influent composition and characteristics were:

- FLOW: 4.5 l/d
- BOD₅: 691 mg/l
- NH₃-N: 74 mg/l
- TKN: 110 mg/l
- TDS: 5,000 mg/l
- COD: 1,584 mg/l

The unit was operated as a continuous-flow, oxidation-ditch activated sludge system with a 4 hour/day anoxic operation to allow denitrification to be performed. The existing Oxiditch and BASF 100 wastewaters were continuously fed into the BKD unit, while the Mepron wastewaters were fed only during anoxic operation to stimulate denitrification. The operating objectives were:

- Detention Time: 4.4 Days
- F/M: 0.03 lbs BOD/lb MLSS/Day
- MLSS: 5,500 mg/l
- AB Temperature: 20°C
- AB Volume: 20 l
- Unit pH: 6.5-8.5
- Aeration Basin DO: 2-4 mg/l AEROBIC and LT 0.5 mg/l ANOXIC

The treatment objectives were:

- Effluent BOD₅: 4 mg/l average
- Effluent TSS: 30 mg/l average
- Effluent NH₃-N: 1.5 mg/l average
- Effluent NO₃-N: 5 mg/l average

SECTION 4.0

EXPERIMENTAL RESULTS

The results of the biological and physical-chemical tests indicated that the projected BASF 100 wastewaters, as received, were amenable to aerobic/anoxic biological treatment in the Oxiditch system. It was possible to treat these wastewaters in the Oxiditch and achieve nitrification/denitrification and comply with 4 mg/l effluent BOD₅ criteria. The results of the treatability testing are summarized in this section. The BKD data is presented in Attachment A.

4.1 OXIDITCH at DESIGN WASTELOAD

The BKD test unit was operated to evaluate treatment of the proposed discharges to the Oxiditch. The BASF 100 and Mepron loadings were tested based on their anticipated hydraulic discharge to the Oxiditch system. The BKD system operation was initiated on December 17, 2013. The first 3 weeks of operation were used for acclimation of the system.

A summary of the treatability data for the steady-state operating period, January 5 - January 28, 2014, is presented in Table 7. The COD and TKN influent wasteloads were similar to the average wasteload presented in Table 5. However, the average influent BOD₅ was lower than the projected average, and the NH₃-N concentration was 25 percent higher than the projected average NH₃-N. The system produced a treated effluent which complied with the Evonik NPDES criteria. The effluent BOD₅ averaged 4 mg/l and the effluent NH₃-N averaged 1.24 mg/l.

Evonik conducted bioassay tests on the treated effluent samples using *Arbacia punctulata* (Sea Urchin). The test results indicated that the effluent was not chronically toxic to Sea Urchins. The second part of the BKD test program was to evaluate the performance of the system at 150 percent loading of the BASF 100 wastewater. Therefore the system loads were increased on February 1, 2014.

**TABLE 7
AVERAGE DATA SUMMARY
JANUARY 5-JANUARY 28, 2014**

Source	Analysis	Results
Oxiditch Influent	BOD ₅	486 mg/l
	COD	1,170 mg/l
	TSS	91 mg/l
	NH ₃ -N	61 mg/l
	TDS	5,586 mg/l
	TKN	83 mg/l
	Cyanide	0.0145 mg/l
	Chlorides	2,463 mg/l
	Phosphorus	31.6 mg/l
	TOC	271 mg/l
Aeration Basin	MLSS	6,199 mg/l
	pH	7.5mg/l
	DO	5.3 mg/l
	ORP	-54.9 mv.
	O ₂ uptake	19 mg/l/hr
	SVI	152 ml/gm
	Temperature	21 °C
Oxiditch Effluent	BOD ₅ Total (Soluble)	4 mg/l (<2.0 mg/l)
	COD Soluble	66 mg/l
	TSS	22 mg/l
	Phosphorus	43.5 mg/l
	NH ₃ -N	1.2 mg/l
	TKN	4.1 mg/l
	TDS	5,857 mg/l
	TOC	22.5 mg/l
	Cyanide	<0.005 mg/l
	Amenable Cyanide	0
	Chlorides	2,888 mg/l
	Copper	0.0065 mg/l
	Nitrate N	6.8 mg/l

NOTE – BKD Flow rate – 4.5 l/d; Equivalent to 98 m³/hr for full-scale system

4.2 OXIDITICH at 150 PERCENT OF DESIGN WASTELOAD

The BKD test unit was operated to evaluate treatment of the proposed discharges to the Oxiditch with the BASF 100 loading increased to 150 percent of design loads on February 1, 2014. The initial operation under these conditions resulted in an increase in the effluent NH₃-N concentration, and the waste loading was therefore reduced for seven days to allow time for the system to acclimate to the increased waste loadings.

The available sample volume of BASF 100 was exhausted on February 19, 2014, and the BKD operation was continued using a BASF 200 sample. The BASF 200 had twice the ammonia loading as the BASF 100, and the daily volume of the BASF 200 feed was selected based on applying 150 percent of the BASF 100 design ammonia influent waste load.

As shown in Table 8, the system was operated from February 24, 2014 until March 19, 2014 with treatment performance in compliance with the desired effluent criteria while receiving BASF 100 loadings at 150 percent of the design loads. The combined Oxiditch, BASF and Mepron wasteloads, in terms of BOD₅, COD, NH₃-N and TKN, were at 170 percent of the design waste load (Table 5) during this period. The effluent data indicated that the Oxiditch was at capacity during this operating period. Several daily maximum effluent BOD₅ concentrations were in the 10 to 20 mg/l range. This operating period represented the maximum waste concentration which can be discharged to the Oxiditch and allow the plant effluent to comply with an 8 mg/l Maximum Daily BOD₅ effluent limit. The existing Oxiditch wastewater feed to the BKD unit during this operating period represented approximately thirty five (35) percent of the allowable Total P, Nitrate-N, and TOC monthly average discharge criteria.

Evonik conducted bioassay tests on the treated effluent samples using *Arbacia punctulata* (Sea Urchin). The test results indicated that the effluent was not chronically toxic to Sea Urchins.

4.3 OXIDITICH at 200 PERCENT OF DESIGN WASTELOAD

On March 20, 2014 the loading to the BKD system was increased to 200 percent of design BASF waste loads. The initial operation under these conditions showed deterioration in both BOD₅ and NH₃-N removal. The feed flow to the system was suspended on April 3, to allow the system to recover. On April 4 and 5 the feed to the BKD system was restarted and operated at 1/2 flow, and the system recovered in terms of BOD₅ and NH₃-N removal. The system feed was increased to full flow on April 6 and was operated until April 17, at which time the BKD study was shut down. There continued to be an increase in effluent BOD₅, and NH₃-N during this time frame. A summary of the last weeks' analytical data is presented in Table 9. These data indicate that the capabilities of the Oxiditch treatment system to provide an effluent in compliance with the Evonik NPDES criteria were exceeded under the 200 percent BASF design loading condition.

**TABLE 8
AVERAGE DATA SUMMARY
150% BASF DESIGN WASTELOAD
FEBRUARY 24- MARCH 19, 2014**

Source	Analysis	Results
Oxiditch Influent	BOD ₅	1,066 mg/l
	COD	1,905 mg/l
	TSS	31 mg/l
	NH ₃ -N	81 mg/l
	TDS	5,469 mg/l
	TKN	137 mg/l
	Cyanide	0.01 mg/l
	Chlorides	2,235mg/l
	Phosphorus	33 mg/l
	TOC	578 mg/l
Aeration Basin	MLSS	7,457 mg/l
	pH	7.36 mg/l
	DO	6.6 mg/l
	ORP	-59 mv.
	O ₂ uptake	30 mg/l/hr
	SVI	125 ml/gm
	Temperature	19.4 °C
Oxiditch Effluent	BOD ₅ Total (Soluble)	5.5 mg/l (<3 mg/l)
	COD Soluble	83 mg/l
	TSS	23 mg/l
	Phosphorus	37.5 mg/l
	NH ₃ -N	0.93 mg/l
	TKN	5.2 mg/l
	TDS	6,113 mg/l
	TOC	41 mg/l
	Cyanide	<0.005 mg/l
	Amenable Cyanide	0
	Chlorides	2,270 mg/l
	Copper	0.013 mg/l
	Nitrate N	7.3 mg/l

NOTE – BKD Flow rate – 4.5 l/d; Equivalent to 98 m³/hr for full-scale system

**TABLE 9
AVERAGE DATA SUMMARY
200% BASF DESIGN WASTELOAD
APRIL 10 – APRIL 17, 2014**

Source	Analysis	Results
Oxiditch Influent	BOD ₅	1,410 mg/l
	COD	1,954 mg/l
	TSS	53 mg/l
	NH ₃ -N	104.5 mg/l
	TDS	5,527 mg/l
	TKN	177 mg/l
	Cyanide	0.015 mg/l
	Chlorides	2,000 mg/l
	Phosphorus	3.8 mg/l
	TOC	658 mg/l
Aeration Basin	MLSS	6,772 mg/l
	pH	7.03 mg/l
	DO	4.9 mg/l
	ORP	-123 mv.
	O ₂ uptake	23 mg/l/hr
	SVI	108 ml/gm
	Temperature	20.5 °C
Oxiditch Effluent	BOD ₅ Total (Soluble)	18 mg/l (<3 mg/l)
	COD Soluble	110 mg/l
	TSS	58 mg/l
	Phosphorus	12.5 mg/l
	NH ₃ -N	5.8 mg/l
	TKN	14 mg/l
	TDS	4,224 mg/l
	TOC	42.5 mg/l
	Cyanide	<0.005 mg/l
	Amenable Cyanide	0
	Chlorides	1,420 mg/l
	Copper	0.04 mg/l
	Nitrate N	7.6 mg/l

NOTE – BKD Flow rate – 4.35 l/d; Equivalent to 95 m³/hr for full-scale system

4.4 BIOMONITORING TEST

A final biomonitoring test was conducted at the conclusion of the BKD test program using effluent from the 200 percent waste load. These tests included a Sperm cell toxicity test, a Cyprinodon Survival Bioassay, and a Cyprinodon Growth Bioassay. There was no significant statistical difference between the control bioassays and the bioassays on the BKD effluent. These data indicate that the waste provided by BASF for the BKD study was not toxic to the Biomonitoring Test organisms.

SECTION 5.0 SUMMARY AND CONCLUSIONS

Evonik Corporation is planning on the addition of several new chemical production facilities at the Theodore, Alabama facility. A number of wastewaters from these new production facilities will be discharged into the existing Evonik wastewater treatment plant for treatment and discharge under the NPDES discharge criteria. Testing was conducted to determine the compatibility of these wastewaters with the existing Evonik wastewater treatment plant and to develop a plan for handling of these wastewaters. The specific new waste streams which were evaluated included:

- Mepron
- BASF 100

The following conclusions were specifically drawn from these studies:

1. There has been confusion regarding the expected waste loading that will be discharged from the BASF Project Terrier production facility. Based on our review of data and documents related to the production facility, we have summarized the expected BASF 100 waste load. This was presented in Table 6 and is summarized in Table 10 below.
2. The BASF 100 wastewater sample was treated in the Oxiditch BKD system at the design loading and produced an effluent which complies with the NPDES discharge criteria. The wastewater treatment system experienced an increase in effluent ammonia nitrogen ($\text{NH}_3\text{-N}$) concentrations when there was a significant increase in the influent $\text{NH}_3\text{-N}$ load. The BASF 100 wastewater alone will be 60 percent of the $\text{NH}_3\text{-N}$ waste load to the Oxiditch. Therefore, equalization of the BASF 100 wastewater is recommended to minimize the variability of the BASF 100 load and $\text{NH}_3\text{-N}$ load. It is expected that the Oxiditch effluent $\text{NH}_3\text{-N}$ concentrations will increase significantly whenever daily $\text{NH}_3\text{-N}$ loadings increase by more than ten (10) percent.
3. The recommended pretreatment discharge criteria for the discharge of the BASF 100 stream into the Evonik wastewater system are presented below in Table 11. The existing contract should be adjusted to include these values which were developed as part of the BKD study.

TABLE 10
SUMMARY OF BASF 100 DESIGN WASTE LOAD

Parameter	Daily Maximum Loading
COD	1,155 lbs/day
TOC	283 lbs/day
TKN	283 lbs/day
NH ₃ -N	236 lbs/day
TDS	236 lbs/day
Copper	< 0.143 mg/l
Total CN	< 0.15 mg/l
Trilon M	<75 mg/l
pH	2 su - 11 su
Methanol	730.5 lbs/day
Formaldehyde	< 10 mg/l

**TABLE 11
RECOMMENDED BASF PRETREATMENT DISCHARGE CRITERIA (SEE NOTE 2)**

Parameter	DAILY MAXIMUM DISCHARGE LIMITATION- NOTE 2
COD	1,155 lbs/day
TOC	283 lbs/day
TKN	283 lbs/day
NH ₃ -N	236 lbs/day
TDS	236 lbs/day
Copper	< 0.143 mg/l
Total CN	< 0.15 mg/l
Trilon M	<75 mg/l
pH	2 su - 11 su
Methanol	730.5 lbs/day
Formaldehyde	<10 mg/l

NOTES:

1. Appendix B-6 indicates that average flow is 2.54 m³/hr with peak flows of 4.46 m³/hr. The daily maximum lbs/day criteria are based on peak flow and average concentrations. The flow in m³/day and pH standard units are based on peak conditions. All other criteria are based on concentrations presented in Table 6.
2. On any day BASF shall not discharge in excess of the mass or concentration shown in Table 11, whichever is more stringent, or outside the allowable pH range. Any exceedance of these criteria will result in Evonik immediately stopping the BASF discharge.
3. The NH₃-N mass discharge shall not increase by more than 10 percent on a daily basis.

