LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

Alabama Department of Environmental Management
adem.alabama.gov
1400 Coliseum Blvd. 36110-2400 ▪ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ▪ FAX (334) 271-7950

OCTOBER 27, 2023

JOSH PATTERSON
PROGRAM DIRECTOR
GREENFIELD ENVIRONMENTAL MULTISTATE TRUST, LLC
7300 RANGELINE ROAD
THEODORE, AL 36582

RE: REVISED DRAFT PERMIT
NPDES PERMIT NUMBER AL0026328

Dear Mr. Patterson:

Transmitted herein is a revised draft of the referenced permit.

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

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

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

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

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

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

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

Sincerely,

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

Enclosure: Draft Permit

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

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

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

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

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

Alabama Department of Environmental Management

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE: GREENFIELD ENVIRONMENTAL MULTISTATE TRUST LLC
TRUSTEE FOR THE MULTISTATE ENVIRONMENTAL TRUST FUND

FACILITY LOCATION: MULTISTATE ENVIRONMENTAL RESPONSE TRUST – THEODORE FACILITY
7300 RANGELINE RD
THEODORE, ALABAMA 36582
MOBILE COUNTY

PERMIT NUMBER: AL0026328

RECEIVING WATERS: DSN001 – DSN003: MIDDLE FORK DEER RIVER

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

ISSUANCE DATE:

EFFECTIVE DATE:

EXPIRATION DATE:

REVISED 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

DSN0011: Treated groundwater from the extraction well system, treated overflow from the storage impoundments, and stormwater from former processing areas. **3/**

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

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency[2]	Sample Type[1]	Seasonal
Oxygen, Dissolved (DO) (00300) Effluent Gross Value	*****	*****	*****	(Report) Minimum Daily	*****	*****	mg/l	Monthly	Grab	All Months
pH (00400) **4/** Effluent Gross Value	*****	*****	*****	(Report) Minimum Daily	*****	(Report) Maximum Daily	S.U.	Daily	Recorder	All Months
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Composite	All Months
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	*****	15.0 Maximum Daily	mg/l	Monthly	Grab	All Months
Chloride (As Cl) (00940) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Composite	All Months
Sulfate, Total (As SO4) (00945) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Composite	All Months
Alpha, Total (01501) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	pCi/L	Monthly	Composite	All Months
Radium 226, Total (09501) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	pCi/L	Monthly	Composite	All Months
Radium 228, Total (11501) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	pCi/L	Monthly	Composite	All Months

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

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

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

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

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

DSN0011 (Continued): Treated groundwater from the extraction well system, treated overflow from the storage impoundments, and stormwater from former processing areas. **3/**

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

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency[2]	Sample Type[1]	Seasonal
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Daily	Totalizer	All Months
Solids, Total Dissolved (TDS) (70296) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Composite	All Months
Chemical Oxygen Demand (COD) (81017) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Composite	All Months
pH Range Excursions, > 60 **4/** Minutes (82581) Effluent Gross Value	*****	0 Maximum Monthly	occurrences/ month	*****	*****	*****	*****	Monthly	Measured	All Months
pH Range Excursions, **4/** Monthly Total Accum (82582) Effluent Gross Value	*****	446.0 Maximum Monthly	min	*****	*****	*****	*****	Monthly	Measured	All Months

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

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

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

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

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

DSN001S: Treated groundwater from the extraction well system, treated overflow from the storage impoundments, and stormwater from former processing areas. **3/**

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

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency[2]	Sample Type[1]	Seasonal
Iron Total Recoverable (00980) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Composite	All Months
Selenium, Total Recoverable (00981) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Composite	All Months
Thallium, Total Recoverable (00982) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Composite	All Months
Barium, Total Recoverable (01009) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Composite	All Months
Aluminum, Total Recoverable (01104) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Composite	All Months
Copper Total Recoverable (01119) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Composite	All Months
Antimony, Total Recoverable (01268) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Composite	All Months
Manganese, Total Recoverable (11123) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Composite	All Months

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

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

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

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

DSN001T: Treated groundwater from the extraction well system, treated overflow from the storage impoundments, and stormwater from former processing areas. **3/**

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

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency[2]	Sample Type[1]	Seasonal
P/F Statre 7 Day Chr Mysid. Bahia (TGP3E) Effluent Gross Value	*****	*****	*****	*****	*****	0 Maximum Daily	pass=0;fail=1	Annually	Composite	All Months
P/F Statre 7 Day Chr Cyprinodon (TGP6A) Effluent Gross Value	*****	*****	*****	*****	*****	0 Maximum Daily	pass=0;fail=1	Annually	Composite	All Months

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

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

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

3/ See Part IV.C. for Effluent Toxicity Limitations and Biomonitoring Requirements.

DSN001Y: Treated groundwater from the extraction well system, treated overflow from the storage impoundments, and stormwater from former processing areas.

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

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency[2]	Sample Type[1]	Seasonal
Annual Certification 3/ 4/ Statement (51930) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	Yes=0;No=1	Annually	Not Applicable	All Months

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

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

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

3/ See Part IV.D. for Groundwater Monitoring Requirements.

4/ The Permittee shall electronically submit a Certification Statement on the eDMR. To submit a certification statement, the annual certification statement parameter should be marked "0" to certify that all groundwater monitoring conducted during the monitoring period was in accordance with the conditions of the permit.

DSN002S: Stormwater runoff from the area surrounding the storage impoundments. **3/**

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

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency[2]	Sample Type[1]	Seasonal
pH (00400) Effluent Gross Value	*****	*****	*****	(Report) Minimum Daily	*****	(Report) Maximum Daily	S.U.	Semi-Annually	Grab	All Months
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	*****	15.0 Maximum Daily	mg/l	Semi-Annually	Grab	All Months
Chloride (As Cl) (00940) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months
Iron Total Recoverable (00980) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months
Manganese, Total Recoverable (11123) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	*****	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Semi-Annually	Instantaneous **4/**	All Months
Solids, Total Dissolved (TDS) (70296) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months

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

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

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

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

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

DSN003S: Stormwater runoff from plant access roads, employee parking areas, administrative buildings, former manufacturing areas and warehouses. **3/**

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

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency[2]	Sample Type[1]	Seasonal
pH (00400) Effluent Gross Value	*****	*****	*****	(Report) Minimum Daily	*****	(Report) Maximum Daily	S.U.	Semi-Annually	Grab	All Months
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	*****	15.0 Maximum Daily	mg/l	Semi-Annually	Grab	All Months
Chloride (As Cl) (00940) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months
Iron Total Recoverable (00980) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months
Chromium Total Recoverable (01118) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months
Manganese, Total Recoverable (11123) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	*****	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Semi-Annually	Instantaneous **4/**	All Months
Solids, Total Dissolved (TDS) (70296) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months
Chemical Oxygen Demand (COD) (81017) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months

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

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

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

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

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

B. Discharge Monitoring and Record Keeping Requirements

1. Representative Sampling

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

2. Test Procedures

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

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

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

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

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

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

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

3. Recording of Results

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

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

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

c. The dates and times the analyses were performed;

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

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

f. The results of all required analyses.

4. Records Retention and Production

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the above reports or the application for this permit, for a period of at least three years from the date of the sample measurement, report or application. This period may be extended by request of the Director at any time. If litigation or other enforcement action, under the AWPCA and/or the FWPCA, is ongoing which involves any of the above records, the records shall be kept until the litigation is resolved. Upon the written request of the Director or his designee, the

permittee shall provide the Director with a copy of any record required to be retained by this paragraph. Copies of these records shall not be submitted unless requested.

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

5. Monitoring Equipment and Instrumentation

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

C. DISCHARGE REPORTING REQUIREMENTS

1. Reporting of Monitoring Requirements

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Certified and Registered Mail shall be addressed to:

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

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

2. Noncompliance Notification

a. 24-Hour Noncompliance Reporting

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

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

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

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

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

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

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

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

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

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

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

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

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

D. OTHER REPORTING AND NOTIFICATION REQUIREMENTS

1. Anticipated Noncompliance

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

2. Termination of Discharge

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

3. Updating Information

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

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

4. Duty to Provide Information

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

5. Cooling Water and Boiler Water Additives

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

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

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

(3) quantities to be used;

(4) frequencies of use;

(5) proposed discharge concentrations; and

(6) EPA registration number, if applicable.

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

application for this permit or not exempted from notification under this permit is prohibited, prior to a determination by the Department that permit modification to control discharge of the additive is not required or prior to issuance of a permit modification controlling discharge of the additive.

6. Permit Issued Based on Estimated Characteristics

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

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

E. SCHEDULE OF COMPLIANCE

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

COMPLIANCE SHALL BE ATTAINED ON THE EFFECTIVE DATE OF THIS PERMIT

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

PART II: OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES

A. OPERATIONAL AND MANAGEMENT REQUIREMENTS

1. Facilities Operation and Maintenance

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

2. Best Management Practices

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

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

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

3. Spill Prevention, Control, and Management

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

B. OTHER RESPONSIBILITIES

1. Duty to Mitigate Adverse Impacts

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

2. Right of Entry and Inspection

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

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

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

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

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

C. BYPASS AND UPSET

1. Bypass

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

b. A bypass is not prohibited if:

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

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

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

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

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

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

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

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

2. Upset

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

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

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

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

D. Duty to Comply with Permit, Rules, and Statutes

1. Duty to Comply

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

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

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

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

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

2. Removed Substances

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

3. Loss or Failure of Treatment Facilities

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

4. Compliance with Statutes and Rules

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

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

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

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

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

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

2. Change in Discharge

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

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

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

(i) one hundred micrograms per liter;

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

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

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

(i) five hundred micrograms per liter;

(ii) one milligram per liter for antimony;

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

3. Transfer of Permit

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

4. Permit Modification and Revocation

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

5. Permit Termination

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

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

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

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

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

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

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

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

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

6. Permit Suspension

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

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

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

F. Compliance with Toxic Pollutant Standard or Prohibition

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

G. Discharge of Wastewater Generated by Others

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

PART III: OTHER PERMIT CONDITIONS

A. CIVIL AND CRIMINAL LIABILITY

1. Tampering

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

2. False Statements

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

3. Permit Enforcement

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

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

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

(2) An action for damages;

(3) An action for injunctive relief; or

(4) An action for penalties.

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

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

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

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

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

4. Relief from Liability

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

B. OIL AND HAZARDOUS SUBSTANCE LIABILITY

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

C. PROPERTY AND OTHER RIGHTS

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

D. AVAILABILITY OF REPORTS

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

E. EXPIRATION OF PERMITS FOR NEW OR INCREASED DISCHARGES

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

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

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

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

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

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

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

F. COMPLIANCE WITH WATER QUALITY STANDARDS

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

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

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

G. GROUNDWATER

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

H. DEFINITIONS

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

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

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

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

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

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

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

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

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

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

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

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

13. Director - means the Director of the Department.

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

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

16. DO – means dissolved oxygen.

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

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

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

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

19. FC – means the pollutant parameter fecal coliform.

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

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

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

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

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

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

26. MGD – means million gallons per day.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

41. TRC – means Total Residual Chlorine.

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

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

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

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

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

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

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

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

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

I. SEVERABILITY

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

PART IV: ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS

A. BEST MANAGEMENT PRACTICES (BMP) PLAN REQUIREMENTS

1. BMP Plan

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

2. Plan Content

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

a. Establish specific objectives for the control of pollutants:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

p. Bear the signature of the plant manager.

3. Compliance Schedule

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

4. Department Review

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

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

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

5. Administrative Procedures

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

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

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

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

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

B. STORMWATER FLOW MEASUREMENT AND SAMPLING REQUIREMENTS

1. Stormwater Flow Measurement

a. All stormwater samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches.

b. The total volume of stormwater discharged for the event must be monitored, including the date and duration (in hours) and rainfall (in inches) for storm event(s) sampled. The duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event must be a minimum of 72 hours. This information must be recorded as part of the sampling procedure and records retained according to Part I.B. of this permit.

c. The volume may be measured using flow measuring devices, or estimated based on a modification of the Rational Method using total depth of rainfall, the size of the drainage area serving a stormwater outfall, and an estimate of the runoff coefficient of the drainage area. This information must be recorded as part of the sampling procedure and records retained according to Part I.B. of this permit.

2. **Stormwater Sampling**

   a. A grab sample, if required by this permit, shall be taken during the first thirty minutes of the discharge (or as soon thereafter as practicable); and a flow-weighted composite sample, if required by this permit, shall be taken for the entire event or for the first three hours of the event.

   b. All test procedures will be in accordance with part I.B. of this permit.

C. 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 3.0% 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, or reproduction between the control and the test at the 95% confidence level indicate chronic toxicity and constitute noncompliance with this permit.

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%, C. variegatus dry weight per surviving control organism is less than 0.60 mg, Ceriodaphnia number of young per surviving control organism is less than 15, M. bahia dry weight per surviving control organism is less than 0.20 mg and less than 50% of the females in the controls produce eggs (Fecundity) 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.)

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 to Effluents and Receiving Water to Marine and Estuarine Organisms". The Larval Survival and Growth Test, Methods 1004.0, Section 11, shall be used for the sheepshead minnow (*Cyprinodon Variegatus*) test and the Fertilization Test, Method 1007.0, Section 14, shall be used for the mysid (*Mysidopsis bahia*) 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

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

(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.)

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

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

D. GROUNDWATER MONITORING REQUIREMENTS

The Permittee shall perform all groundwater monitoring activities in accordance with a Groundwater Monitoring Plan approved by the Department. The plan shall include a table of the groundwater monitoring well network which includes the Well ID/name, ground elevation, top of casing elevation, total well depth, and well location. The plan shall be modified, if necessary, as soon as possible subsequent to the receipt of comments from the Department.

All groundwater monitoring wells identified in the most recently approved Groundwater Monitoring Plan at the time of sampling shall be monitored for groundwater elevation, turbidity, conductivity, pH, temperature, chlorides, Total Dissolved Solids, Total Beryllium, Total Cadmium, Total Chromium, Total Iron, Total Lead, Total Manganese, Total Nickel, Total Aluminum and Total Zinc. Monitoring shall be performed at the frequency specified in the most recently approved Groundwater Monitoring Plan at the time of monitoring.

Groundwater samples shall be analyzed utilizing EPA approved analytical methods.

The permittee must submit groundwater monitoring reports at the frequency specified in the most recently approved Groundwater Monitoring Plan. If an annual report is required, the report shall be submitted in the month of April summarizing the routine sampling results for the previous calendar year. The annual report shall address the rate and extent of contamination, include contour maps showing the area of the plume and groundwater flow direction, and provide an evaluation of the effectiveness of any corrective actions. If a semi-annual report is required, the report shall be submitted in the month of September summarizing the sampling results from the first half of the current year. The semi-annual report, if required, shall also include contour maps showing the area of the plume and groundwater flow direction. Reports required for submittal by the Groundwater Monitoring Plan shall be prepared by and bear the signature and license number of a professional geologist registered in the State of Alabama.

The permittee must determine whether there is a statistically significant increase over background levels at each well. The statistical data shall be submitted in the month of April summarizing the data collected for the previous calendar year. The statistical data should be submitted as part of the annual groundwater monitoring report if an annual report is required in the Groundwater Monitoring Plan. If a statistically significant increase is determined at any of the monitoring wells, then further action may be warranted by the Department.

ADEM PERMIT RATIONALE

PREPARED DATE: August 30, 2023
REVISED DATE: October 26, 2023
PREPARED BY: Scott Jackson

Permittee Name: Greenfield Environmental Multistate Trust LLC,
Trustee For The Multistate Environmental Trust Fund

Facility Name: Multistate Environmental Response Trust - Theodore Facility

Permit Number: AL0026328

PERMIT IS REISSUANCE DUE TO EXPIRATION

DISCHARGE SERIAL NUMBERS (DSN) & DESCRIPTIONS:

DSN001: Treated groundwater from the extraction well system, treated overflow from the storage impoundments, and stormwater from former processing areas

DSN002: Stormwater runoff from the area surrounding the storage impoundments

DSN003: Stormwater runoff from plant access roads, employee parking areas, administrative buildings, former manufacturing areas and warehouses

INDUSTRIAL CATEGORY: NON-CATEGORICAL

MAJOR: **N**

STREAM INFORMATION:

Receiving Stream:	Middle Fork Deer River
Classification:	Fish & Wildlife
River Basin:	Mobile
7Q10:	*
1Q10:	*
Annual Average Flow:	*
303(d) List:	YES
Impairment:	Organic enrichment (BOD)
TMDL:	NO

*Critical flows are indeterminate in coastal locations since it is below the ten-foot contour line and due to tidal effects. Based on BPJ, there is some dilution available because of the large volume of water at the point of discharge.

DISCUSSION:
Greenfield Environmental Multistate Trust LLC performs remediation activities for the former Kerr-McGee Titanium Dioxide Beneficiation Plant (former Tronox LLC facility). The plant operated from 1973 to 2003. The site was historically used to process titanium-bearing ores to produce feedstock used in the manufacturing of titanium dioxide white pigment. This production resulted in a byproduct primarily consisting of iron oxide (IOX) fines which has historically been stored in three impoundments located onsite (10-acre landfill, 19-acre impoundment, and 27-acre impoundment). The site currently consists of post-manufacturing processing areas, office and maintenance buildings, three ore storage impoundments, and a waste water treatment plant.

The IOX impoundments include a leachate collection system beneath the 10-acre landfill and 27-acre impoundment and an interceptor trench surrounding portions of the 19-acre impoundment and 10-acre landfill. The WWTP treats overflow from the IOX storage impoundments, former processing area, and groundwater recovered from the extraction well system.

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

EPA has not promulgated specific guidelines for the discharges covered under the proposed permit. Proposed permit limits are based on Best Professional Judgment. The proposed frequencies are based on a review of site specific conditions and an evaluation of similar facilities.

DSN0011: Treated groundwater from the extraction well system, treated overflow from the storage impoundments, and stormwater from former processing areas.

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency	Sample Type	Seasonal	Basis
Oxygen, Dissolved (DO) (00300) Effluent Gross Value	*****	*****	*****	(Report) Minimum Daily	*****	*****	mg/l	Monthly	Grab	All Months	BPJ
pH (00400) Effluent Gross Value	*****	*****	*****	(Report) Minimum Daily	*****	(Report) Maximum Daily	S.U.	Daily	Recorder	All Months	WQBEL/ BPJ
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Composite	All Months	BPJ
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	*****	15.0 Maximum Daily	mg/l	Monthly	Grab	All Months	BPJ
Chloride (As Cl) (00940) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Composite	All Months	BPJ
Sulfate, Total (As SO4) (00945) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Composite	All Months	BPJ
Alpha, Total (01501) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	pCi/L	Monthly	Composite	All Months	BPJ
Radium 226, Total (09501) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	pCi/L	Monthly	Composite	All Months	BPJ
Radium 228, Total (11501) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	pCi/L	Monthly	Composite	All Months	BPJ
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Daily	Totalizer	All Months	BPJ
Solids, Total Dissolved (TDS) (70296) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Composite	All Months	BPJ
Chemical Oxygen Demand (COD) (81017) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Composite	All Months	BPJ
pH Range Excursions, > 60 Minutes (82581) Effluent Gross Value	*****	0 Maximum Monthly	occur/month	*****	*****	*****	*****	Monthly	Measured	All Months	EGL
pH Range Excursions, Monthly Total Accum (82582) Effluent Gross Value	*****	446.0 Maximum Monthly	min	*****	*****	*****	*****	Monthly	Measured	All Months	EGL

DSN001S: Treated groundwater from the extraction well system, treated overflow from the storage impoundments, and stormwater from former processing areas.

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency	Sample Type	Seasonal	Basis
Iron Total Recoverable (00980) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Composite	All Months	BPJ
Selenium, Total Recoverable (00981) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Composite	All Months	BPJ
Thallium, Total Recoverable (00982) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Composite	All Months	BPJ
Barium, Total Recoverable (01009) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Composite	All Months	BPJ
Aluminum, Total Recoverable (01104) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Composite	All Months	BPJ
Copper Total Recoverable (01119) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Composite	All Months	BPJ
Antimony, Total Recoverable (01268) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Composite	All Months	BPJ
Manganese, Total Recoverable (11123) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Composite	All Months	BPJ

DSN001T: Treated groundwater from the extraction well system, treated overflow from the storage impoundments, and stormwater from former processing areas.

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency	Sample Type	Seasonal	Basis
P/F Statre 7 Day Chr Mysid. Bahia (TGP3E) Effluent Gross Value	*****	*****	*****	*****	*****	0 Maximum Daily	pass=0; fail=1	Annually	Composite	All Months	WQBEL
P/F Statre 7 Day Chr Cyprinodon (TGP6A) Effluent Gross Value	*****	*****	*****	*****	*****	0 Maximum Daily	pass=0; fail=1	Annually	Composite	All Months	WQBEL

DSN001Y: Treated groundwater from the extraction well system, treated overflow from the storage impoundments, and stormwater from former processing areas.

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency	Sample Type	Seasonal	Basis
Annual Certification Statement (51930) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	Yes=0; No=1	Annually	Not Applicable	All Months	BPJ

DSN002S: Stormwater runoff from the area surrounding the storage impoundments.

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency	Sample Type	Seasonal	Basis
pH (00400) Effluent Gross Value	*****	*****	*****	(Report) Minimum Daily	*****	(Report) Maximum Daily	S.U.	Semi-Annually	Grab	All Months	BPJ
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months	BPJ
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	*****	15.0 Maximum Daily	mg/l	Semi-Annually	Grab	All Months	BPJ
Chloride (As Cl) (00940) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months	BPJ
Iron Total Recoverable (00980) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months	BPJ
Manganese, Total Recoverable (11123) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months	BPJ
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	*****	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Semi-Annually	Instantaneous	All Months	BPJ
Solids, Total Dissolved (TDS) (70296) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months	BPJ

DSN003S: Stormwater runoff from plant access roads, employee parking areas, administrative buildings, former manufacturing areas and warehouses.

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency	Sample Type	Seasonal	Basis
pH (00400) Effluent Gross Value	*****	*****	*****	(Report) Minimum Daily	*****	(Report) Maximum Daily	S.U.	Semi-Annually	Grab	All Months	BPJ
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months	BPJ
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	*****	15.0 Maximum Daily	mg/l	Semi-Annually	Grab	All Months	BPJ
Chloride (As Cl) (00940) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months	BPJ
Iron Total Recoverable (00980) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months	BPJ
Chromium Total Recoverable (01118) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months	BPJ
Manganese, Total Recoverable (11123) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months	BPJ
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	*****	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Semi-Annually	Instantaneous	All Months	BPJ
Solids, Total Dissolved (TDS) (70296) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months	BPJ
Chemical Oxygen Demand (COD) (81017) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Semi-Annually	Grab	All Months	BPJ

*Basis for Permit Limitation

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

Discussion (continued)

DSN001: Treated groundwater from the extraction well system, treated overflow from the storage impoundments, and stormwater from former processing areas

Best Professional Judgement (BPJ)

Flow

Flow monitoring at DSN001 is proposed to continue as totalized daily readings.

Oil & Grease

The daily maximum limit of 15 mg/l for Oil and Grease should prevent the occurrence of a visible sheen in the stream and has been shown to be achievable through the use of proper BMPs.

Chemical Oxygen Demand (COD), Chloride, Total Dissolved Solids (TDS), Total Sulfate, Total Suspended Solids (TSS)

Based on the current and previous operations onsite, historical DMR data, and data submitted in the facility's reissuance application, monitoring without limitations for COD, Chlorides, TDS, Total Sulfate, and TSS is proposed to continue in this permit issuance. The data collected from the facility's monitoring of these pollutants will be useful in evaluating the levels discharged and to determine future permit limitations, if necessary. Monitoring for these parameters is proposed to continue at a monthly frequency.

Total Recoverable Aluminum, Total Recoverable Antimony, Total Recoverable Barium, Total Recoverable Copper, Total Recoverable Iron, Total Recoverable Manganese, Total Recoverable Selenium, Total Recoverable Thallium

Based on the current and previous operations onsite, historical DMR data, and data submitted in the facility's reissuance application, monitoring without limitations for these parameters is proposed to continue in this permit issuance. The data collected from the facility's monitoring of these pollutants will be useful in evaluating the levels discharged and to determine future permit limitations, if necessary. Monitoring for these parameters is proposed to continue at a semi-annual frequency.

Water Quality Based Effluent Limits (WQBEL)

Dissolved Oxygen (D.O.)

Historically, the facility's receiving stream, Middle Fork Deer River, has been shown to have recurring water quality issues with low dissolved oxygen levels. EPA evaluated this area to see if the low D.O. levels were caused by tidal effects in the canal. This facility was not included as a source of oxygen-demanding pollutants in the model. Based on historical DMR data submitted by the facility, the low volume of discharge, and the low levels of organics in the wastewater, it is not expected that the facility's discharge is causing or will cause any significant adverse impacts to the water quality in the receiving stream. Monitoring for D.O. is proposed to continue without limitations at a monthly frequency.

pH

ADEM Administrative Code, Division 6 Regulations, specifically 335-6-10-.09(5)(e)2. – Specific Water Quality for Fish and Wildlife classified streams states: "Sewage, industrial waste or other wastes shall not cause the pH to deviate more than one unit from then normal or natural pH, nor be less than 6.0, nor greater than 8.5 standard units." Based on the low effluent to stream flow ratio, the discharge is not expected to adversely impact the instream pH; therefore, any pH measurements other than from continuous monitoring shall comply with pH limitations within 6.0 to 9.0 S.U.

The facility monitors pH continuously at DSN001. Based on 40 CFR 401.17, when a Permittee continuously measures the pH, the total time during which pH values are outside the required range of 6.0 to 9.0 S.U. shall not exceed 7 hours and 26 minutes in any calendar month, and no individual excursion outside the required range of 6.0 to 9.0 S.U shall exceed 60 minutes in duration.

Radioactivity

The iron oxide fines stored in the impoundments onsite contain low levels of radioactivity. The Alabama Department of Public Health (ADPH) has criteria for which the handling of such material requires a permit, thus, the ADPH regulates these activities at the site. ADEM Administrative Code, Division 6 Regulations, specifically 335-6-10-.09(5)(e)8. – Specific Water Quality for Fish and Wildlife classified streams states: "Radioactivity: the concentrations of radioactive materials present shall not exceed the requirements of the State Department of Public Health." The Radionuclides Rule issued by EPA in 2000 retains MCLs in drinking water for gross Alpha particles and combined Radium 226- and 228. These MCLs align with the Department's drinking water standards for radiation; however, the facility's receiving stream is not classified as a Public Water Supply. Using the levels reported by the facility in EPA Form 2C and historical DMR data, after mixing with the receiving stream flow during low flow conditions, the levels of radioactivity would be expected to be well below the drinking water MCLs. Based on the above, monitoring for Total Alpha, Total Radium 226, and Total Radium 228 is proposed to continue without limitations at a monthly frequency in this permit issuance. Should the results from the facility's radionuclide monitoring indicate excessive levels, the results will be provided to the ADPH.

Biomonitoring Requirements

In order to evaluate the whole effluent toxicity and based on the nature of the facility's discharge and potential for toxicity from synergistic effects, chronic toxicity monitoring is proposed to continue in this permit issuance. Chronic toxicity monitoring for marine species is appropriate based on the receiving stream's water use classification and the ratio of flow in the receiving stream at low flow conditions to the effluent flow being less than 100:1.

According to EPA Form 2C submitted by the facility in the reissuance application, the long-term average daily discharge flow rate is 0.534 MGD. Based on historical modeling efforts performed by the nearby facility Evonik Corporation, which also discharges to Middle Fork Deer River, the receiving stream has an assumed 7Q10 of 34.92 cfs. The instream waste concentration (IWC) is calculated using the facility's effluent flow rate and the 7Q10 of the receiving stream and is shown below:

Facility's Effluent Flow Rate = 0.534 MGD
Receiving Stream 7Q10 = 34.92 cfs = 22.56 MGD

$$\text{IWC \%} = \frac{Effluent\ Flow}{7Q10 + Effluent\ Flow} \times 100 = \frac{0.534\ MGD}{22.56\ MGD + 0.534\ MGD} \times 100 = 2.31\%$$

Using this approach, an IWC of 2.31% was calculated. To be consistent with toxicity monitoring protocols, the proposed IWC is rounded up to 3%. Annual chronic toxicity testing is proposed in this permit issuance at an IWC of 3%.

Numeric Reasonable Potential Analysis (RPA)

A numeric RPA (see attached) was performed using analytical data submitted by the facility on EPA Form 2C for Outfall DSN001. No parameters included in the analysis showed a reasonable potential to violate water quality standards; therefore, no additional limitations are proposed to be included in this permit issuance.

Total Recoverable Mercury

The facility has requested to remove Mercury monitoring from this permit issuance. In the current permit, Mercury was identified on the RPA to potentially violate water quality standards and was given limitations based on marine fish & wildlife water quality based criteria. Using the data submitted by the facility in the reissuance application, the numeric RPA performed did not identify Mercury as a potential parameter which could violate water quality standards. Based upon the RPA and the facility's historical DMR data for Mercury, it is proposed to remove monitoring for Mercury in this permit issuance.

303(d) List of Impaired Waters/Total Maximum Daily Load (TMDL)
The facility's receiving stream, Middle Fork Deer River, is listed on the 303(d) List of Impaired Waters for organic enrichment (BOD – CBOD & NBOD). The sources of this impairment are from collection system failures and urban runoff/storm sewers. As of this time, a TMDL has not been developed for this receiving stream. Based on the current nature of the operations onsite and the very low levels of BOD and Ammonia (as N) reported on EPA Form 2C in the facility's renewal application, the facility's discharge is not expected to contribute to this impairment. There is no BOD or Ammonia (as N) monitoring proposed in this permit issuance.

Groundwater Monitoring Requirements
Part IV.D. of the permit details groundwater monitoring requirements at the site. The Permittee shall perform all groundwater monitoring activities in accordance with a Groundwater Monitoring Plan approved by the Department. The plan shall be modified, if necessary, as soon as possible subsequent to the receipt of comments from the Department.

The facility is required to sample all groundwater monitoring wells at the frequency specified in the most recently approved Groundwater Monitoring Plan for conductivity, temperature, turbidity, water level elevation, pH, chlorides, total aluminum, total beryllium, total cadmium, total chromium, total iron, total lead, total manganese, total nickel, total zinc, and total dissolved solids. To show compliance with the groundwater monitoring requirements, the permittee will be required to indicate, through a certification statement on the discharge monitoring report, that such monitoring was conducted as required by the permit.

In addition, the facility is required to submit periodic groundwater monitoring reports as specified in the most recently approved Groundwater Monitoring Plan. These reports shall include a summary of the routine sampling results along with the rates and extents of contamination, contour maps showing the area of the plume and groundwater flow direction, and an evaluation of the effectiveness of any corrective actions.

DSN002: Stormwater runoff from the area surrounding the storage impoundments & DSN003: Stormwater runoff from plant access roads, employee parking areas, administrative buildings, former manufacturing areas and warehouses

Best Professional Judgment (BPJ)
The parameters of concern for Outfalls DSN002 and DSN003 are based on the parameters of concern listed in EPA Form 2F and from the current permit. These parameters are consistent with similar facilities in the state and have been proven to be reflective of the operations at this facility. Monitoring for all parameters at Outfalls DSN002 and DSN003 are proposed to continue at a semi-annual frequency.

Flow
Flow at both DSN002 and DSN003 will continue to be monitored to evaluate the volume of storm water discharging to the receiving stream. The facility uses the rational method to determine the amount of stormwater discharged.

Oil & Grease
The daily maximum limit of 15 mg/l for Oil and Grease should prevent the occurrence of a visible sheen in the stream and has been shown to be achievable through the use of proper BMPs.

Chloride, pH, Total Dissolved Solids (TDS), Total Suspended Solids (TSS), Total Recoverable Iron, Total Recoverable Manganese
Monitoring without limitations for Chloride, pH, TDS, TSS, Total Recoverable Iron, and Total Recoverable Manganese is proposed to continue in this permit issuance at DSN002 and DSN003. The information gathered from the facility's monitoring of these parameters will be useful in determining the effectiveness of the facility's BMPs.

Chemical Oxygen Demand (COD) and Total Recoverable Chromium

Monitoring without limitations for COD and Total Recoverable Chromium is proposed to continue in this permit issuance at DSN003. The information gathered from the facility's monitoring of these parameters will be useful in determining the effectiveness of the facility's BMPs.

Best Management Practices Plan

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

October 26, 2023 Revision

The facility submitted comments on the draft permit to the Department on October 3, 2023 (see attached). Based on internal discussions and the comments from the facility, the following revisions are being made to the permit:

- DSN001Q is being updated to DSN001Y. This change coincides with an update from a quarterly certification statement to an annual certification statement.

- Groundwater monitoring requirements found in Parts IV.D. and IV.E. in the draft permit are being consolidated into one section under Part IV.D.

- The groundwater language in Part IV.D. has been revised to provide flexibility in reference to the Groundwater Monitoring Plan (GWMP) which is frequently modified and updated by the facility. The proposed revised language should allow the facility to make periodic changes and updates to the GWMP without having to modify the NPDES permit each time the GWMP is updated.

- The discussion under the groundwater monitoring requirements in the above rationale has been updated to reflect the revisions being made. The preceding original discussion can be found in the September 6, 2023 draft permit.

Facility Name: **Greenfield Environmental Multistate Trust LLC**

NPDES No.: **AL0026328**

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

ID	Pollutant	Carcinogen "yes"	Type	Background from upstream source (C_{d2}) Daily Max	Background from upstream source (C_{d2}) Monthly Ave	Background Instream (C_s) Daily Max	Background Instream (C_s) Monthly Ave	Enter Max Daily Discharge as reported by Applicant (C_d) Max	Enter Avg Daily Discharge as reported by Applicant (C_d) Ave	Partition Coefficient (Stream / Lake)
				µg/l	µg/l	µg/l	µg/l	µg/l	µg/l	
1	Antimony		Metals	0	0	0	0	0	0	-
2	**Arsenic*,****	YES	Metals	0	0	0	0	2	2	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	4.5	4.5	0.210
6	Chromium / Chromium VI**		Metals	0	0	0	0	0	0	
7	Copper**		Metals	0	0	0	0	0.67	0.67	0.368
8	Lead**		Metals	0	0	0	0	0	0	0.206
9	Mercury**		Metals	0	0	0	0	0.00096	0.00096	0.302
10	Nickel**		Metals	0	0	0	0	0	0	0.505
11	Selenium		Metals	0	0	0	0	0.41	0.41	-
12	Silver		Metals	0	0	0	0	0.19	0.19	-
13	Thallium		Metals	0	0	0	0	0.611	0.611	-
14	Zinc**		Metals	0	0	0	0	13	13	0.330
15	Cyanide		Metals	0	0	0	0	0	0	-
16	Total Phenolic Compounds		Metals	0	0	0	0	0	0	-
17	Hardness (As CaCO3)		Metals	0	0	0	0	0	0	-
18	Acrolein		VOC	0	0	0	0	0	0	-
19	**Acrylonitrile***	YES	VOC	0	0	0	0	0	0	-
20	**Aldrin**	YES	VOC	0	0	0	0	0	0	-
21	**Benzene***	YES	VOC	0	0	0	0	0	0	-
22	**Bromoform***	YES	VOC	0	0	0	0	0	0	-
23	**Carbon Tetrachloride***	YES	VOC	0	0	0	0	0	0	-
24	**Chlordane**	YES	VOC	0	0	0	0	0	0	-
25	Clorobenzene		VOC	0	0	0	0	0	0	-
26	**Chlorodibromo-Methane***	YES	VOC	0	0	0	0	0	0	-
27	Chloroethane		VOC	0	0	0	0	0	0	-
28	2-Chloro-Ethylvinyl Ether		VOC	0	0	0	0	0	0	-
29	**ChloroForm***	YES	VOC	0	0	0	0	0	0	-
30	**4,4'-DDD**	YES	VOC	0	0	0	0	0	0	-
31	**4,4'-DDE**	YES	VOC	0	0	0	0	0	0	-
32	**4,4'-DDT**	YES	VOC	0	0	0	0	0	0	-
33	**Dichlorobromo-Methane***	YES	VOC	0	0	0	0	0	0	-
34	1, 1-Dichloroethane		VOC	0	0	0	0	0	0	-
35	**1, 2-Dichloroethane***	YES	VOC	0	0	0	0	0	0	-
36	Trans-1, 2-Dichloro-Ethylene		VOC	0	0	0	0	0	0	-
37	**1, 1-Dichloroethylene***	YES	VOC	0	0	0	0	0	0	-
38	1, 2-Dichloropropane		VOC	0	0	0	0	0	0	-
39	1, 3-Dichloro-Propylene		VOC	0	0	0	0	0	0	-
40	**Dieldrin**	YES	VOC	0	0	0	0	0	0	-
41	Ethylbenzene		VOC	0	0	0	0	0	0	-
42	Methyl Bromide		VOC	0	0	0	0	0	0	-
43	Methyl Chloride		VOC	0	0	0	0	0	0	-
44	**Methylene Chloride***	YES	VOC	0	0	0	0	0	0	-
45	**1, 1, 2, 2-Tetrachloro-Ethane***	YES	VOC	0	0	0	0	0	0	-
46	**Tetrachloro-Ethylene***	YES	VOC	0	0	0	0	0	0	-
47	Toluene		VOC	0	0	0	0	0	0	-
48	**Toxaphene**	YES	VOC	0	0	0	0	0	0	-
49	**Tributyltine (TBT)**	YES	VOC	0	0	0	0	0	0	-
50	1, 1, 1-Trichloroethane		VOC	0	0	0	0	0	0	-
51	**1, 1, 2-Trichloroethane***	YES	VOC	0	0	0	0	0	0	-
52	**Trichloroethylene***	YES	VOC	0	0	0	0	0	0	-
53	**Vinyl Chloride***	YES	VOC	0	0	0	0	0	0	-
54	4-Chloro-M-Cresol		Acids	0	0	0	0	0	0	-
55	2-Chlorophenol		Acids	0	0	0	0	0	0	-
56	2, 4-Dichlorophenol		Acids	0	0	0	0	0	0	-
57	2, 4-Dimethylphenol		Acids	0	0	0	0	0	0	-
58	4, 6-Dinitro-O-Cresol		Acids	0	0	0	0	0	0	-
59	2, 4-Dinitrophenol		Acids	0	0	0	0	0	0	-
60	**4,6-Dinitro-2-methylphenol**	YES	Acids	0	0	0	0	0	0	-
61	**Dioxin (2,3,7,8-TCDD)**	YES	Acids	0	0	0	0	0	0	-
62	2-Nitrophenol		Acids	0	0	0	0	0	0	-
63	4-Nitrophenol		Acids	0	0	0	0	0	0	-
64	**Pentachlorophenol***	YES	Acids	0	0	0	0	0	0	-
65	Phenol		Acids	0	0	0	0	0	0	-
66	**2, 4, 6-Trichlorophenol***	YES	Acids	0	0	0	0	0	0	-
67	Acenaphthene		Bases	0	0	0	0	0	0	-
68	Acenaphthylene		Bases	0	0	0	0	0	0	-
69	Anthracene		Bases	0	0	0	0	0	0	-
70	Benzidine		Bases	0	0	0	0	0	0	-
71	**Benzo(A)Anthracene***	YES	Bases	0	0	0	0	0	0	-
72	**Benzo(A)Pyrene***	YES	Bases	0	0	0	0	0	0	-
73	3, 4 Benzo-Fluoranthene		Bases	0	0	0	0	0	0	-
74	Benzo(GHI)Perylene		Bases	0	0	0	0	0	0	-
75	Benzo(K)Fluoranthene		Bases	0	0	0	0	0	0	-
76	Bis (2-Chloroethoxy) Methane		Bases	0	0	0	0	0	0	-
77	**Bis (2-Chloroethyl)-Ether***	YES	Bases	0	0	0	0	0	0	-
78	Bis (2-Chloroiso-Propyl) Ether		Bases	0	0	0	0	0	0	-
79	**Bis (2-Ethylhexyl) Phthalate***	YES	Bases	0	0	0	0	0	0	-
80	4-Bromophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
81	Butyl Benzyl Phthalate		Bases	0	0	0	0	0	0	-
82	2-Chloronaphthalene		Bases	0	0	0	0	0	0	-
83	4-Chlorophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
84	**Chrysene***	YES	Bases	0	0	0	0	0	0	-
85	Di-N-Butyl Phthalate		Bases	0	0	0	0	0	0	-
86	Di-N-Octyl Phthalate		Bases	0	0	0	0	0	0	-
87	**Dibenzo(A,H)Anthracene***	YES	Bases	0	0	0	0	0	0	-
88	1, 2-Dichlorobenzene		Bases	0	0	0	0	0	0	-
89	1, 3-Dichlorobenzene		Bases	0	0	0	0	0	0	-
90	1, 4-Dichlorobenzene		Bases	0	0	0	0	0	0	-
91	**3, 3-Dichlorobenzidine***	YES	Bases	0	0	0	0	0	0	-
92	Diethyl Phthalate		Bases	0	0	0	0	0	0	-
93	Dimethyl Phthalate		Bases	0	0	0	0	0	0	-
94	**2, 4-Dinitrotoluene***	YES	Bases	0	0	0	0	0	0	-
95	2, 6-Dinitrotoluene		Bases	0	0	0	0	0	0	-
96	1,2-Diphenylhydrazine		Bases	0	0	0	0	0	0	-
97	**Endosulfan (alpha)**	YES	Bases	0	0	0	0	0	0	-
98	**Endosulfan (beta)**	YES	Bases	0	0	0	0	0	0	-
99	**Endosulfan sulfate**	YES	Bases	0	0	0	0	0	0	-
100	**Endrin**	YES	Bases	0	0	0	0	0	0	-
101	**Endrin Aldeyhide**	YES	Bases	0	0	0	0	0	0	-
102	Fluoranthene		Bases	0	0	0	0	0	0	-
103	Fluorene		Bases	0	0	0	0	0	0	-
104	Heptachlor	YES	Bases	0	0	0	0	0	0	-
105	Heptachlor Epoxide	YES	Bases	0	0	0	0	0	0	-
106	**Hexachlorobenzene***	YES	Bases	0	0	0	0	0	0	-
107	**Hexachlorobutadiene***	YES	Bases	0	0	0	0	0	0	-
108	**Hexachlorocyclohexan (alpa)**	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-CK)Pyrene***	YES	Bases	0	0	0	0	0	0	-
114	Isophorone		Bases	0	0	0	0	0	0	-
115	Naphthalene		Bases	0	0	0	0	0	0	-
116	Nitrobenzene		Bases	0	0	0	0	0	0	-
117	**N-Nitrosodi-N-Propylamine***	YES	Bases	0	0	0	0	0	0	-
118	**N-Nitrosodi-N-Methylamine***	YES	Bases	0	0	0	0	0	0	-
119	**N-Nitrosodi-N-Phenylamine***	YES	Bases	0	0	0	0	0	0	-
120	**PCB-1016**	YES	Bases	0	0	0	0	0	0	-
121	**PCB-1221**	YES	Bases	0	0	0	0	0	0	-
122	**PCB-1232**	YES	Bases	0	0	0	0	0	0	-
123	**PCB-1242**	YES	Bases	0	0	0	0	0	0	-
124	**PCB-1248**	YES	Bases	0	0	0	0	0	0	-
125	**PCB-1254**	YES	Bases	0	0	0	0	0	0	-
126	**PCB-1260**	YES	Bases	0	0	0	0	0	0	-
127	Phenanthrene		Bases	0	0	0	0	0	0	-
128	Pyrene		Bases	0	0	0	0	0	0	-
129	1, 2, 4-Trichlorobenzene		Bases	0	0	0	0	0	0	-

0.534	Enter Q_d = wastewater discharge flow from facility (MGD)
0.826	Q_d = wastewater discharge flow (cfs) (this value is calculated from the MGD)
0	Enter flow from upstream discharge Qd2 = background stream flow in MGD above point of discharge
0	Qd2 = background stream flow from upstream source (cfs)
34.92	Enter 7Q10, Q_s = background stream flow in cfs above point of discharge
26.91	Enter or estimated, 1Q10, Q_s = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of 7Q10)
34.92	Enter Mean Annual Flow, Q_s = background stream flow in cfs above point of discharge
0	Enter 7Q2, Q_s = background stream flow in cfs above point of discharge (For LWF class streams)
Enter to Left	Enter C_s = background in-stream pollutant concentration in µg/l (assuming this is zero "0" unless there is data)
Q_d +Qd2+Q_s	Q_r = resultant in-stream flow, after discharge
Calculated on other	C_r = resultant in-stream pollutant concentration in µg/l in the stream (after complete mixing occurs)
50.00	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

July 27, 2023

Facility Name: Greenfield Environmental Multistate Trust LLC

NPDES No.: AL0026328

Marine F&W classification						Marine Acute (µg/l) 1Q10 for F&W up						Marine Chronic (µg/l) 7Q10				Human Health Consumption Fish only (µg/l) Carcinogen C_w = Annual Average Non-Carcinogen C_w = 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_c)	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_{ave})	Water Quality Criteria (C_c)	Draft Permit Limit (C_{max})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_c)	Draft Permit Limit (C_{max})	20% of Draft Permit Limit	RP?
1	Antimony			0	0	-	-	-	-	0	0	-	-	-	-	5.73E+02	1.62E+04	3.23E+03	No
2	Arsenic		YES	0	2	69	2316.330	463.266088	No	0	2	34	1557.531	311.506254	No	3.03E-01	1.31E+01	2.62E+00	No
3	Beryllium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
4	Cadmium			0	0	40	1342.800	268.560051	No	0	0	8.8	360.730	76.1458731	No	-	-	-	-
5	Chromium/ Chromium III			0	4.5	-	-	-	-	0	4.5	-	-	-	-	-	-	-	-
6	Chromium/ Chromium VI			0	0	1100	36927.007	7385.40141	No	0	0	50	2163.238	432.647575	No	-	-	-	-
7	Copper			0	0.67	4.8	161.136	32.2272061	No	0	0.67	3.1	134.121	26.8241496	No	-	-	-	-
8	Lead			0	0	210	7049.701	1409.94027	No	0	0	8.1	350.445	70.0889071	No	-	-	-	-
9	Mercury			0	0.00096	2.1	70.497	14.0994027	No	0	0.00096	0.025	1.082	0.21632379	No	4.24E-02	1.84E+00	3.67E-01	No
10	Nickel			0	0	74	2484.180	496.836095	No	0	0	8.2	354.771	70.9542022	No	9.93E+02	4.30E+04	8.59E+03	No
11	Selenium			0	0.41	290	9735.302	1947.06037	No	0	0.41	71	3071.798	614.359556	No	2.43E+03	1.05E+05	2.10E+04	No
12	Silver			0	0.19	1.9	63.783	12.7566024	No	0	0.19	-	-	-	-	-	-	-	-
13	Thallium			0	0.611	-	-	-	-	0	0.611	-	-	-	-	2.74E-01	1.18E+01	2.37E+00	No
14	Zinc			0	13	90	3021.301	604.260115	No	0	13	81	3504.445	700.889071	No	1.49E+04	6.44E+05	1.29E+05	No
15	Cyanide			0	0	1.0	33.570	6.71400128	No	0	0	1.0	43.265	8.65295149	No	5.33E+03	4.04E+05	8.08E+04	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
18	Acrolein			0	0	-	-	-	-	0	0	-	-	-	-	5.43E+00	2.35E+02	4.70E+01	No
19	Acrylonitrile		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.44E-01	6.23E+00	1.25E+00	No
20	Aldrin		YES	0	0	1.3	43.641	8.72820166	No	0	0	-	-	-	-	2.04E-05	1.27E-03	2.54E-04	No
21	Benzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.55E+04	6.69E+02	1.34E+02	No
22	Bromoform		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.58E+01	3.41E+03	6.82E+02	No
23	Carbon Tetrachloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.57E-01	4.14E+01	8.28E+00	No
24	Chlordane		YES	0	0	0.09	3.021	0.60426012	No	0	0	0.004	0.173	0.03461181	No	4.73E-04	2.05E-02	4.09E-03	No
25	Clorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.90E+02	3.92E+04	7.84E+03	No
26	Chlorodibromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.41E+00	3.20E+02	6.41E+01	No
27	Chloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
28	2-Chloro-Ethylvinyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
29	ChloroForm		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.02E+02	4.41E+03	8.83E+02	No
30	4,4' - DDD		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.83E-04	7.85E-03	1.57E-03	No
31	4,4' - DDE		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.29E-04	5.54E-03	1.11E-03	No
32	4,4' - DDT		YES	0	0	0.13	4.364	0.87282017	No	0	0	0.001	0.043	0.00865295	No	1.29E-04	5.54E-03	1.11E-03	No
33	Dichlorobromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.00E+01	4.34E+02	8.68E+01	No
34	1, 1-Dichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
35	1, 2-Dichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.14E+01	9.24E+02	1.85E+02	No
36	Trans-1, 2-Dichloro-Ethylene			0	0	-	-	-	-	0	0	-	-	-	-	5.91E+03	2.56E+05	5.11E+04	No
37	1, 1-Dichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.17E+03	1.80E+05	3.61E+04	No
38	1, 2-Dichloropropane			0	0	-	-	-	-	0	0	-	-	-	-	8.46E+00	3.67E+02	7.35E+01	No
39	1, 3-Dichloro-Propylene			0	0	-	-	-	-	0	0	-	-	-	-	1.23E+01	5.31E+02	1.06E+02	No
40	Dieldrin		YES	0	0	0.71	23.835	4.76694091	No	0	0	0.0019	0.082	0.01644061	No	3.12E-05	1.35E-03	2.70E-04	No
41	Ethylbenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.24E+03	5.38E+04	1.08E+04	No
42	Methyl Bromide			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+02	3.77E+04	7.54E+03	No
43	Methyl Chloride			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
44	Methylene Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.48E+02	1.50E+04	2.99E+03	No
45	1, 1, 2, 2-Tetrachloro-Ethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.30E+00	1.01E+02	2.02E+01	No
46	Tetrachloro-Ethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	8.29E+01	1.66E+01	No
47	Toluene			0	0	-	-	-	-	0	0	-	-	-	-	8.72E+03	3.77E+05	7.55E+04	No
48	Toxaphene		YES	0	0	0.21	7.050	1.40994027	No	0	0	0.0002	0.009	0.00173059	No	1.68E-04	7.01E-03	1.40E-03	No
49	Tributyltin (TBT)		YES	0	0	0.42	14.099	2.81988054	No	0	0	0.0074	0.320	0.06403184	No	-	-	-	-
50	1, 1, 1-Trichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
51	1, 1, 2-Trichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.39E+00	3.94E+02	7.87E+01	No
52	Trichlorethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.79E+01	7.56E+02	1.51E+02	No
53	Vinyl Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.42E+00	6.16E+01	1.23E+01	No
54	P-Chloro-M-Cresol			0	0	15	436.410	87.2820166	No	0	0	7.9	341.792	68.3583168	No	-	-	-	-
55	2-Chlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+01	3.77E+03	7.53E+02	No
56	2, 4-Dichlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	1.72E+02	7.44E+03	1.49E+03	No
57	2, 4-Dimethylphenol			0	0	-	-	-	-	0	0	-	-	-	-	4.08E+02	2.15E+04	4.30E+03	No
58	4, 6-Dinitro-O-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
59	2, 4-Dinitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	3.71E+03	1.35E+05	2.69E+04	No
60	4,6-Dinitro-2-methylphenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.65E+02	7.16E+03	1.43E+03	No
61	Dioxin (2,3,7,8-TCDD)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.07E-06	1.15E-06	2.31E-07	No
62	2-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
63	4-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
64	Pentachlorophenol		YES	0	0	13	436.410	87.2820166	No	0	0	7.9	341.792	68.3583168	No	1.77E+00	7.65E+01	1.53E+01	No
65	Phenol			0	0	-	-	-	-	0	0	-	-	-	-	8.06E+05	2.16E+07	4.33E+06	No
66	2, 4, 6-Trichlorophenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.41E+00	6.12E+01	1.22E+01	No
67	Acenaphthene			0	0	-	-	-	-	0	0	-	-	-	-	5.79E+02	2.50E+04	5.01E+03	No
68	Acenaphthylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
69	Anthracene			0	0	-	-	-	-	0	0	-	-	-	-	2.30E+04	1.01E+06	2.02E+05	No
70	Benzidine			0	0	-	-	-	-	0	0	-	-	-	-	1.16E-04	5.02E-03	1.00E-03	No
71	Benzo(A)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	4.61E-01	9.22E-02	No
72	Benzo(A)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	4.61E-01	9.22E-02	No
73	Benzo(b)fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	4.61E-01	9.22E-02	No
74	Benzo(GHI)Perylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
75	Benzo(K)Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	4.61E-01	9.22E-02	No
76	Bis (2-Chloroethoxy) Methane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
77	Bis (2-Chloroethyl)-Ether		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.07E-01	1.33E+01	2.66E+00	No
78	Bis (2-Chloroiso-Propyl) Ether			0	0	-	-	-	-	0	0	-	-	-	-	3.76E+04	1.63E+06	3.27E+05	No
79	Bis (2-Ethylhexyl) Phthalate		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E+00	5.55E+01	1.11E+01	No
80	4-Bromophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
81	Butyl Benzyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	1.13E+03	4.88E+04	9.75E+03	No
82	2-Chloronaphthalene			0	0	-	-	-	-	0	0	-	-	-	-	9.24E+02	4.00E+04	8.00E+03	No
83	4-Chlorophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
84	Chrysene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	4.61E-01	9.22E-02	No
85	Di-N-Butyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.62E+03	1.13E+05	2.27E+04	No
86	Di-N-Octyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
87	Dibenzo(A,H)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	4.61E-01	9.22E-02	No
88	1, 2-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	7.55E+02	3.27E+04	6.54E+03	No
89	1, 3-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	5.62E+02	2.43E+04	4.87E+03	No
90	1, 4-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.12E+02	4.87E+03	9.73E+02	No
91	3, 3-Dichlorobenzidine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.66E-02	7.19E-01	1.44E-01	No
92	Diethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.56E+04	1.11E+06	2.21E+05	No
93	Dimethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	6.46E+06	2.80E+07	5.61E+06	No
94	2, 4-Dinitrotoluene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.98E+00	8.57E+01	1.71E+01	No
95	2, 6-Dinitrotoluene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
96	1,2-Diphenylhydrazine			0	0	-	-	-	-	0	0	-	-	-	-	1.17E-01	5.07E+00	1.01E+00	No
97	Endosulfan (alpha)		YES	0	0	0.034	1.141	0.22827604	No	0	0	0.0087	0.376	0.07528068	No	5.19E+01	2.24E+03	4.49E+02	No
98	Endosulfan (beta)		YES	0	0	0.034	1.141	0.22827604	No	0	0	0.0087	0.376	0.07528068	No	5.19E+01	2.24E+03	4.49E+02	No
99	Endosulfan sulfate		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.19E+01	2.24E+03	4.49E+02	No
100	Endrin		YES	0	0	0.037	1.242	0.24841805	No	0	0	0.0023	0.100	0.01990179	No	3.53E-02	1.53E+00	3.05E-01	No
101	Endrin Aldeyhde		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.78E-01	7.63E+00	1.53E+00	No
102	Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	8.12E+01	3.51E+03	7.02E+02	No
103	Fluorene			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	1.35E+05	2.69E+04	No
104	Heptochlor		YES	0	0	0.053	1.779	0.35584207	No	0	0	0.0038	0.156	0.03115063	No	4.63E-05	2.00E-03	4.01E-04	No
105	Heptachlor Epoxide		YES	0	0	0.053	1.779	0.35584207	No	0	0	0.0038	0.156	0.03115063	No	2.29E-05	9.90E-04	1.98E-04	No
106	Hexachlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.66E-04	7.26E-03	1.45E-03	No
107	Hexachlorobutadiene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.08E+01	4.66E+02	9.31E+01	No
108	Hexachlorocyclohexan (alpha)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.85E-03	1.23E-01	2.47E-02	No
109	Hexachlorocyclohexan (beta)		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.97E-03	4.31E-01	8.63E-02	No
110	Hexachlorocyclohexan (gamma)		YES	0	0	0.16	5.371	1.0742402	No	0	0	-	-	-	-	1.08E+00	4.66E+01	9.32E+00	No
111	HexachlorocycloPentadiene			0	0	-	-	-	-	0	0	-	-	-	-	6.45E+02	2.79E+04	5.58E+03	No
112	Hexachloroethane			0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	8.30E+01	1.66E+01	No
113	Indeno(1, 2, 3-CK)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	4.61E-01	9.22E-02	No
114	Isophorone			0	0	-	-	-	-	0	0	-	-	-	-	5.61E+02	2.43E+04	4.85E+03	No
115	Naphthalene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
116	Nitrobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.04E+02	1.75E+04	3.49E+03	No
117	N-Nitrosodi-N-Propylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.95E-01	1.28E+01	2.55E+00	No
118	N-Nitrosodimethylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E+00	7.61E+01	1.52E+01	No
119	N-Nitrosodiphenylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.50E+00	1.51E+02	3.03E+01	No
120	PCB-1016		YES	0	0	-	-	-	-	0	0	0.03	1.298	0.25958854	No	3.74E-05	1.62E-03	3.24E-04	No
121	PCB-1221		YES	0	0	-	-	-	-	0	0	0.03	1.298	0.25958854	No	3.74E-05	1.62E-03	3.24E-04	No
122	PCB-1232		YES	0	0	-	-	-	-	0	0	0.03	1.298	0.25958854	No	3.74E-05	1.62E-03	3.24E-04	No
123	PCB-1242		YES	0	0	-	-	-	-	0	0	0.03	1.298	0.25958854	No	3.74E-05	1.62E-03	3.24E-04	No
124	PCB-1248		YES	0	0	-	-	-	-	0	0	0.03	1.298	0.25958854	No	3.74E-05	1.62E-03	3.24E-04	No
125	PCB-1254		YES	0	0	-	-	-	-	0	0	0.03	1.298	0.25958854	No	3.74E-05	1.62E-03	3.24E-04	No
126	PCB-1260		YES	0	0	-	-	-	-	0	0	0.03	1.298	0.25958854	No	3.74E-05	1.62E-03	3.24E-04	No
127	Phenanthrene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
128	Pyrene			0	0	-	-	-	-	0	0	-	-	-	-	2.30E+03	1.01E+05	2.02E+04	No
129	1, 2, 4-Trichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.09E+01	1.77E+03	3.54E+02	No

Jackson, Scott A

Subject: RE: Greenfield Multistate - NPDES Permit AL0026328 - Draft Permit

From: Joshua T. Patterson <jtp@g-etg.com>
Sent: Tuesday, October 3, 2023 12:36 PM
To: Jackson, Scott A <scott.jackson@adem.alabama.gov>
Cc: Kelly Moody <KMoody@BrwnCald.com>; Jeff Strand <js@g-etg.com>; Wilson, J Jason <JWilson@adem.alabama.gov>; Cynthia Brooks <cb@g-etg.com>; Holden, Charles B <cbholden@adem.alabama.gov>; Wascher, Billie Jean <billiejean.wascher@adem.alabama.gov>; Hamner, Richard P <richard.hamner@adem.alabama.gov>; Richard Elliott <re@g-etg.com>; Gene Guarnere <gguarnere@brwncald.com>
Subject: Re: Greenfield Multistate - NPDES Permit AL0026328 - Draft Permit

Good afternoon, Scott-

Based on our recent discussion(s) and initial review of the draft NPDES Permit AL002638 dated September 6, 2023, I've attached formal comments to the draft, as described in the attached response.

Please let me know if you or your team would like to discuss in more detail.

Best-

Josh T. Patterson, P.G., CHMM
Program Director
Greenfield Environmental Multistate Trust LLC,
Trustee of the Multistate Environmental Response Trust
Greenfield Environmental Trust Group, Inc., Member
Cell: (904) 557-5252
Email: jtp@g-etg.com
Website: www.greenfieldenvironmental.com

GREENFIELD
ENVIRONMENTAL TRUST GROUP

Greenfield Environmental Multistate Trust, LLC
Trustee of the Multistate Environmental Response Trust
Greenfield Environmental Trust Group, Inc., Member
203 3rd Street, Saint Augustine, FL 32080
(904) 557-5252
jtp@g-etg.com

October 3, 2023

Mr. Scott Jackson
Industrial Section, Water Division
Alabama Department of Environmental Management
Post Office Box 301463
Montgomery, Alabama 36130-1463

Re: Draft Permit Comments
Former Kerr-McGee Synthetic Rutile Beneficiation Plant Site, Mobile, Alabama
NPDES Permit No. AL0026328

Dear Mr. Jackson:

Greenfield Environmental Multistate Trust, LLC, Trustee of the Multistate Environmental Response Trust (the Multistate Trust), submitted its application for renewal of the Former Kerr-McGee Synthetic Rutile Beneficiation Plant's NPDES Permit No. AL0026328, along with the required application fee, to the Alabama Department of Environmental Management (ADEM) on April 3, 2023. A draft of Permit No. AL00026328 was received from ADEM on September 6, 2023.

As requested, the Multistate Trust has reviewed the draft Permit No. AL00026328 and offers the attached minor technical and administrative comments (Review Comments).

If you have any questions or information regarding Permit No. AL0026328 or the Review Comments, attached, please contact me at (904) 557-5252 or jtp@g-etg.com.

Sincerely,

Greenfield Environmental Multistate Trust LLC
Trustee of the Multistate Environmental Response Trust
By: Greenfield Environmental Trust Group, Inc., Member
By: Josh Patterson, Program Director

Electronic cc:
Jason Wilson, ADEM
Jared Kelly, ADEM
Cynthia Brooks, Multistate Trust
Jeff Strand, Multistate Trust
Kelly Moody, Brown and Caldwell
Blake Holden, ADEM
Billie Jean Wascher, ADEM
Richard Elliott, Multistate Trust
Gene Guarnere, Brown and Caldwell

NPDES PERMIT NUMBER AL0026328
Draft Permit (September 6, 2023)
Review Comments

Part I.A – Discharge Limitations and Monitoring Requirements

- **Quarterly Certification** (Page 3 of 29) – as noted below in the requested changes to Part IV.D Groundwater Monitoring Requirements, the Multistate Trust requests that ADEM modify this certification requirement to allow the frequency to match the requirements in the approved Groundwater Monitoring Plan, which may be modified over the permit term. This will alleviate the Multistate Trust needing to modify the NPDES permit each time the Groundwater Monitoring Plan is updated. The suggested changes are noted below:
  - ~~Quarterly~~ **Certification 3/ 4/** - delete Quarterly from the parameter description
  - Under Sample Frequency - delete Quarterly; replace with footnote reference "**4/**"
  - **Footnote 4/** - modify as follows: "The Permittee shall electronically submit a ~~Quarterly~~ Certification Statement on the eDMR. To submit a certification statement, the ~~quarterly~~ certification statement parameter should be marked "'O" to certify that all groundwater monitoring conducted during the monitoring period was in accordance with the conditions of the permit."

Part IV.D/E Groundwater Monitoring Requirements and **Groundwater Monitoring Plan** (page 29)

- The Multistate Trust requests that ADEM combine Parts IV.D and E into one section as modified below.

D. GROUNDWATER MONITORING REQUIREMENTS

The Permittee shall perform all groundwater monitoring activities in accordance with a Groundwater Monitoring Plan approved by the Department. The plan shall include a table of the groundwater monitoring well network which includes the Well ID/name, ground elevation, top of casing elevation, total well depth, and well location. The plan shall be modified, if necessary, as soon as possible subsequent to the receipt of comments from the Department.

The groundwater monitoring wells identified in the approved version of the Groundwater Monitoring Plan current at the time of sampling shall be monitored for groundwater elevation, Turbidity, Conductivity, pH, Chlorides, Total Dissolved Solids, Total Beryllium, Total Cadmium, Total Chromium, Total Iron, Total Lead, Total Manganese, Total Nickel, Total Aluminum and Total Zinc. Monitoring shall be performed at the frequency specified in the approved version of the Groundwater Monitoring Plan current at the time of monitoring.

Groundwater samples shall be analyzed utilizing EPA approved analytical methods.

The permittee must submit Groundwater Monitoring Reports at the frequency specified in the approved Groundwater Monitoring Plan. If Annual Reports are specified, they will be submitted in the month of April summarizing the routine sampling results for the previous calendar year. The Annual Report shall address the rate and extent of contamination, include contour maps showing the area of the plume and groundwater flow direction, and provide an evaluation of the effectiveness of any corrective actions. If Semi-Annual Reports are specified, they will be submitted in the month of September and summarize the sampling results from the first half of the current year, and include contour maps showing the area of the plume and groundwater flow direction. Reports required for submittal by the Groundwater Monitoring Plan shall be prepared by and bear the signature and license number of a professional geologist registered in the State of Alabama. The permittee must determine whether there is a statistically significant increase over background levels at each well. The statistical data shall be submitted in the month of April in the annual groundwater monitoring report. If a statistically significant increase is determined at any of the monitoring wells, then further action may be warranted by the Department.

Greenfield Environmental Multistate Trust, LLC
Trustee of the Multistate Environmental Response Trust
Greenfield Environmental Trust Group, Inc., Member
203 3rd Street, Saint Augustine, FL 32080
(904) 557-5252
jtp@g-etg.com

April 3, 2023

Mr. Scott Jackson
Environmental Engineer Specialist, Sr.
Industrial Section, Water Division
Alabama Department of Environmental Management
Post Office Box 301463
Montgomery, Alabama 36130-1463

Re: Application for Permit Renewal
Former Kerr-McGee Synthetic Rutile Beneficiation Plant Site, Mobile, Alabama
NPDES Permit No. AL0026328

Dear Mr. Jackson:

Greenfield Environmental Multistate Trust, LLC, Trustee of the Multistate Environmental Response Trust (the Multistate Trust), is permitted for discharge of treated groundwater, treated overflow, and stormwater from the Former Kerr-McGee Synthetic Rutile Beneficiation Plant located at 7300 Rangeline Road in Mobile, Alabama (Site) via NPDES Permit No. AL0026328. The permit authorizes discharge from three (3) outfalls to the Middle Fork Deer River. The authorized discharges for each outfall are provided below:

- Outfall DSN001: treated groundwater from the extraction well system, treated overflow from the storage impoundments, and site stormwater,
- Outfall DSN002S: stormwater runoff from the area surrounding the storage impoundments, and
- Outfall DSN003S: stormwater runoff from plant access roads, employee parking areas, administrative buildings, former manufacturing areas, and warehouses.

The permit expires on September 30, 2023. As required by permit condition Part II E.1.a, the enclosed application for renewal is submitted to the Alabama Department of Environmental Management (ADEM) by April 4, 2023 (at least 180 days prior to permit expiration). The enclosed application is based on current operations with no proposed operational changes to the facility at this time. The following forms, along with the water balance diagram and required attachments, are included in the application:

- ADEM Form 187
- EPA Form 1
- EPA Form 2C
- EPA Form 2F

Please note that the Site was awaiting a qualifying storm event to provide for sufficient discharge to obtain samples from outfalls DSN001, DSN002, and DSN003. Outfall 001 was sampled on February 15, 2023, and that data is reflected in Form 2C of the application. Outfalls DSN002 and 003 were sampled on

March 9, 2023, and the data has not yet been received from the laboratory. The lab has indicated that the results will not be ready until April 11, 2023. Therefore, the analytical data provided in Tables A and B of EPA Form 2F for Outfalls 002 and 003 reflects the previous NPDES permit application sampling event. An updated Form 2F for each outfall will be submitted to ADEM as soon as possible upon receipt of the analytical data.

A Reasonable Potential (RP) analysis was prepared based on the 2020-2022 DMR data and the application data for Outfall 001, in which no new limits were triggered. Mercury was triggered in the RP analysis for the previous NPDES permit application and when the DMR is used due to the analytical method and corresponding detection limit. As such, the Site used low-level EPA Method 1631 for mercury analysis during the most recent application sample. Form 2C includes the low level analytical result for mercury (0.96 nanograms/liter) which does not indicate RP; the lab report is also provided with this submittal following Form 2C. *Therefore, the Multistate Trust requests that mercury monitoring be removed from the permit.*

The updated Groundwater Monitoring Plan (GWMP) was submitted for ADEM review on November 18, 2022; the GWMP was approved by ADEM on February 27, 2023. The GWMP is attached to this application for reference. *The Multistate Trust requests that ADEM consider modifying Part IV.D (Groundwater Monitoring Requirements) to reference the most current GWMP, in lieu of listing the specific wells and parameters included in the GWMP.* This would alleviate the need to modify the NPDES permit if changes are made to the GWMP during the NPDES permit cycle. If the specific monitoring requirements need to remain in the NPDES permit the Multistate Trust understands that Part IV.D will be updated to reflect the most current GWMP.

We appreciate the opportunity to submit this application for renewal of permit coverage. To this end, we will proactively reach out to ADEM through our consultant, Brown and Caldwell, to verify your receipt of the application, answer any questions you may have, and provide additional information as quickly as possible.

If you have any questions or information regarding Permit No. AL0026328, please contact me at (904) 557-5252 or jtp@g-etg.com.

Sincerely,

Greenfield Environmental Multistate Trust LLC
Trustee of the Multistate Environmental Response Trust
By: Greenfield Environmental Trust Group, Inc., Member
By: Josh Patterson, Program Director

Electronic cc:

Jason Wilson, ADEM
Jared Kelly, ADEM
Cynthia Brooks, Multistate Trust
Jeff Strand, Multistate Trust
Kelly Moody, Brown and Caldwell
Blake Holden, ADEM
Brandy Tiblier, ADEM
Billie Jean Wascher, ADEM
Richard Elliott, Multistate Trust
Gene Guarnere, Brown and Caldwell

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

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

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

PURPOSE OF THIS APPLICATION

- ☐ Initial Permit Application for New Facility*
- ☐ Initial Permit Application for Existing Facility*
- ☐ Modification of Existing Permit
- ■ Reissuance of Existing Permit
- ☐ Revocation & Reissuance of Existing Permit

* *An application for participation in the ADEM's Electronic Environmental (E2) Reporting must be submitted to allow permittee to electronically submit reports as required.*

SECTION A – GENERAL INFORMATION

1. Permittee Name: Greenfield Environmental Multistate Trust, LLC, Trustee for the Multistate Environmental Trust Fund
2. NPDES Permit Number: AL 0026328 (not applicable if initial permit application)
3. SID Permit Number (if applicable): IU_____
4. NPDES General Permit Number (if applicable): ALG_____
5. Facility Location (Front Gate): Latitude: 30.540729 Longitude: -88.124967
6. Responsible Official (as described on the last page of this application):

   Name: Josh T. Patterson Title: Program Director

   Address: 7300 Rangeline Road

   City: Theodore State: AL Zip: 36582

   Phone Number: (904)-557-5252 Email Address: jtp@g-etg.com
7. Designated Discharge Monitoring Report (DMR) Contact:

   Name: Josh T. Patterson Title: Program Director

   Phone Number: (904)-557-5252 Email Address: jtp@g-etg.com
8. Type of Business Entity:

   ☐ Corporation ☐ General Partnership ☐ Limited Partnership ☒ Limited Liability Company ☐ Sole Proprietorship

   ☒ Other (Please Specify) Trust
8. Complete this section if the Applicant's business entity is a Corporation

   a) Location of Incorporation:

   Address: Not applicable.

   City:_____ County:_____ State:_____ Zip:_____

   b) Parent Corporation of Applicant:

   Name: Not applicable.

   Address:_____

   City:_____ State:_____ Zip:_____

c) Subsidiary Corporation(s) of Applicant:

Name: Not applicable.

Address:

City: State: Zip:

d) Corporate Officers:

Name: Not applicable.

Address:

City: State: Zip:

Name:

Address:

City: State: Zip:

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

Name: Not applicable.

Address:

City: State: Zip:

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

Name: Not applicable. Name:

Address: Address:

City: State: Zip: City: State: Zip:

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

Name: Not applicable.

Address:

City: State: Zip:

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

Facility Name	Permit Number	Type of Action	Date of Action
None.			

SECTION B – BUSINESS ACTIVITY

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

Industrial Categories

- ☐ Aluminum Forming
- ☐ Asbestos Manufacturing
- ☐ Battery Manufacturing
- ☐ Can Making
- ☐ Canned and Preserved Fruit and Vegetables
- ☐ Canned and Preserved Seafood
- ☐ Cement Manufacturing
- ☐ Centralized Waste Treatment
- ☐ Carbon Black
- ☐ Coal Mining
- ☐ Coil Coating
- ☐ Copper Forming
- ☐ Electric and Electronic Components Manufacturing
- ☐ Electroplating
- ☐ Explosives Manufacturing
- ☐ Feedlots
- ☐ Ferroalloy Manufacturing
- ☐ Fertilizer Manufacturing
- ☐ Foundries (Metal Molding and Casting)
- ☐ Glass Manufacturing
- ☐ Grain Mills
- ☐ Gum and Wood Chemicals Manufacturing
- ☐ Inorganic Chemicals
- ☐ Iron and Steel
- ☐ Leather Tanning and Finishing
- ☐ Metal Finishing
- ☐ Meat Products
- ☐ Metal Molding and Casting
- ☐ Metal Products
- ☐ Nonferrous Metals Forming
- ☐ Nonferrous Metals Manufacturing
- ☐ Oil and Gas Extraction
- ☐ Organic Chemicals Manufacturing
- ☐ Paint and Ink Formulating
- ☐ Paving and Roofing Manufacturing
- ☐ Pesticides Manufacturing
- ☐ Petroleum Refining
- ☐ Phosphate Manufacturing
- ☐ Photographic
- ☐ Pharmaceutical
- ☐ Plastic & Synthetic Materials
- ☐ Plastics Processing Manufacturing
- ☐ Porcelain Enamel
- ☐ Pulp, Paper, and Fiberboard Manufacturing
- ☐ Rubber
- ☐ Soap and Detergent Manufacturing
- ☐ Steam and Electric
- ☐ Sugar Processing
- ☐ Textile Mills
- ☐ Timber Products
- ☐ Transportation Equipment Cleaning
- ☐ Waste Combustion
- ☒ Other (specify) Former manufacturing facility undergoing remediation with no active manufacturing, mining, or other operations

A facility with processes inclusive in these business areas may be covered by Environmental Protection (EPA) categorical standards. These facilities are termed "categorical users".

SECTION C – WASTEWATER DISCHARGE INFORMATION

1. Do you share an outfall with another facility? ☐ Yes ☒ No (If no, continue to C.2)

   For each shared outfall, provide the following:

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

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

Current:	Flow Metering	☒ Yes	☐ No	☐ N/A
	Sampling Equipment	☒ Yes	☐ No	☐ N/A
Planned:	Flow Metering	☐ Yes	☐ No	☐ N/A
	Sampling Equipment	☐ Yes	☐ No	☐ N/A

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

Flow meter with continuous recorder is in use at Outfall DSN001.
An automatic composite sampler is used at Outfall DSN001.

3. Are any process changes or expansions planned during the next three years that could alter wastewater volumes or characteristics?

☒ Yes ☐ No (If no, continue to C.4)

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

Capping/closure of the IOX impoundments is being designed and anticipated to be complete in the next 3 years. This will reduce the amount of impacted water. Considerations for alternative treatment options correlating to the impoundments' capping/closure are also being considered.

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

Trade Name	Chemical Composition
None.	

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

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

SECTION D – WATER SUPPLY

Water Sources (check as many as are applicable):

☐ Private Well
☒ Municipal Water Utility (Specify City): Mobile
☐ Surface Water
☐ Other (Specify): _____

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

City: 0.0005 MGD* Well: _____ 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 D.1 and D.2 if your water supply is provided by an outside source and not by an onsite water intake structure? (e.g., another industry, municipality, etc...)

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

   a) Name of Provider: Mobile Area Water & Sewer System b) Location of Provider: Mobile, AL

   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 D.6 – D.17)

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

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

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

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

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

10. What is the actual intake flow (AIF) as defined in 40 CFR §125.92(a)? _____MGD

11. How is the intake operated? (e.g., continuously, intermittently, batch) _____

12. What is the mesh size of the screen on your intake?_____

13. What is the intake screen flow-through area?_____

14. What is the through-screen design intake flow velocity? _____ft/sec

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

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

17. Do you have any additional fish detraction technology on your intake? ☐ Yes ☐ No

18. Have there been any studies to determine the impact of the intake on aquatic organisms? ☐ Yes ☐ No (If yes, please provide.)

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

SECTION E – WASTE STORAGE AND DISPOSAL INFORMATION

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

Description of Waste	Description of Storage Location
Iron oxide	19-acre, 27-acre, and 2-acre impoundments; 10-acre landfill
Miscellaneous solid wastes	10 acre landfill

SECTION F – COASTAL ZONE INFORMATION

Is the discharge(s) located within the 10-foot elevation contour and within the limits of Mobile or Baldwin County? ☐ Yes ☒ No

If yes, complete items F.1 – F.12:

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

SECTION G – ANTI-DEGRADATION EVALUATION

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

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

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

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

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

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

Not applicable.

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

Not applicable.

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

Not applicable.

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

Not applicable.

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

Not applicable.

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

Not applicable.

SECTION H – EPA Application Forms

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

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

SECTION I – ENGINEERING REPORT/BMP PLAN REQUIREMENTS

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

SECTION J– RECEIVING WATERS

Outfall No.	Receiving Water(s)	303(d) Segment?		Included in TMDL?*	
DSN001	Middle Fork Deer River	☒ Yes	☐ No	☐ Yes	☒ No
DSN002	Middle Fork Deer River	☒ Yes	☐ No	☐ Yes	☒ No
DSN003	Middle Fork Deer River	☒ Yes	☐ No	☐ Yes	☒ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No

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

(1) Justification for the requested Compliance Schedule (e.g. time for design and installation of control equipment, etc.);

(2) Monitoring results for the pollutant(s) of concern which have not previously been submitted to the Department (sample collection dates, analytical results (mass and concentration), methods utilized, MDL/ML, etc. should be submitted as available);

(3) Requested interim limitations, if applicable;

(4) Date of final compliance with the TMDL limitations; and,

(5) Any other additional information available to support requested compliance schedule.

SECTION K – APPLICATION CERTIFICATION

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

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

Signature of Responsible Official: _____ Date Signed: 3/31/2023

Name: Josh T. Patterson Title: Program Director

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

Mailing Address: 7300 Rangeline Road

City: Theodore State: AL Zip: 36582

Phone Number: (904)-557-5252 Email Address: jtp@g-etg.com

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

(1) The application for an NPDES permit shall be signed by a responsible official, as indicated below:

(a) In the case of a corporation, by a principal executive officer of at least the level of vice president, or a manager assigned or delegated in accordance with corporate procedures, with such delegation submitted in writing if required by the Department, who is responsible for manufacturing, production, or operating facilities and is authorized to make management decisions which govern the operation of the regulated facility;

(b) In the case of a partnership, by a general partner;

(c) In the case of a sole proprietorship, by the proprietor; or

(d) In the case of a municipal, state, federal, or other public entity, by either a principal executive officer, or ranking elected official.

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
ALD071937890	AL0026328	Multistate Environmental Response Trust - Theodore Facility	

Form 1 NPDES

EPA

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

GENERAL INFORMATION

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

Activities Requiring an NPDES Permit

1.1 Applicants *Not Required* to Submit Form 1

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

1.2 Applicants *Required* to Submit Form 1

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

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

Name, Mailing Address, and Location

2.1 Facility Name

Multistate Environmental Response Trust - Theodore Facility

2.2 EPA Identification Number

ALD071937890

2.3 Facility Contact

Name (first and last)	Title	Phone number
Josh Patterson	Program Director	(904) 557-5252

Email address
jtp@g-etg.com

2.4 Facility Mailing Address

Street or P.O. box
7300 Rangeline Road

City or town	State	ZIP code
Theodore	AL	36582

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
ALD071937890	AL0026328	Multistate Environmental Response Trust - Theodore Facility	

Name, Mailing Address, and Location Continued

2.5	Facility Location		
	Street, route number, or other specific identifier: 7300 Rangeline Road		
	County name: Mobile	County code (if known): 097	
	City or town: Theodore	State: AL	ZIP code: 36582

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

SIC and NAICS Codes

3.1	SIC Code(s)	Description (optional)
	2816	Inorganic pigments (facility is not operational and has been demolished)

3.2	NAICS Code(s)	Description (optional)
	325130	Inorganic pigments (facility is not operational and has been demolished)

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

Operator Information

4.1	Name of Operator
	Greenfield Environmental Multistate Trust LLC

4.2	Is the name you listed in Item 4.1 also the owner?
	☑ Yes ☐ No

4.3	Operator Status
	☐ Public—federal ☐ Public—state ☐ Other public (specify)_____ ☐ Private ☑ Other (specify) Trust

4.4	Phone Number of Operator
	(904) 557-5252

Operator Information Continued

4.5	Operator Address		
	Street or P.O. Box: 7300 Rangeline Road		
	City or town: Theodore	State: AL	ZIP code: 36582
	Email address of operator: jtp@g-etg.com		

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

Indian Land

5.1	Is the facility located on Indian Land?
	☐ Yes ☑ No

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

Existing Environmental Permits

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

☑ NPDES (discharges to surface water) AL0026328	☐ RCRA (hazardous wastes)	☐ UIC (underground injection of fluids)
☐ PSD (air emissions)	☐ Nonattainment program (CAA)	☐ NESHAPs (CAA)
☐ Ocean dumping (MPRSA)	☐ Dredge or fill (CWA Section 404)	☑ Other (specify) See Attached

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

Map

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

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

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

Nature of Business

8.1 Describe the nature of your business.

Greenfield Environmental Multistate Trust LLC, as Trustee of the Multistate Environmental Response Trust is performing remediation activities for the former Kerr-McGee Titanium Dioxide Beneficiation Plant (Former Tronox LLC Facility) in Mobile, Alabama. The plant operated from 1973 - 2003. The Site was used to process titanium-bearing ores to produce feedstock used in the manufacturing of titanium dioxide white pigment. By-products of the manufacturing process included an iron oxide (IOX) waste stream, which is stored in three IOX Impoundments (the 10-acre landfill, 19-acre impoundment, and 27-acre impoundment) located in the northern portion of the Site. The IOX contains impurities such as various metals and radium. The site currently consists of post-manufacturing processing areas, office and maintenance buildings, three ore storage impoundments, and a WWTP. The IOX Impoundments were constructed approximately 20 to 25 ft above adjacent grade and include leachate collection systems beneath the 10-acre landfill and 27-acre impoundment and a French drain system and interceptor trench surrounding portions of the 19-acre impoundment and the 10-acre landfill. The WWTP treats overflow from the Iron Oxide storage impoundments, former processing area, and groundwater recovered from the extraction well system.

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

Cooling Water Intake Structures

9.1 Does your facility use cooling water?

☐ Yes ☑ No → SKIP to Item 10.1.

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

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

Variance Requests

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

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

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
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SECTION 11. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))

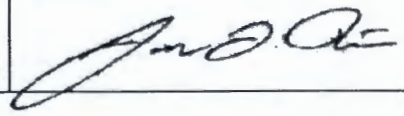
Checklist and Certification Statement

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

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

11.2 **Certification Statement**

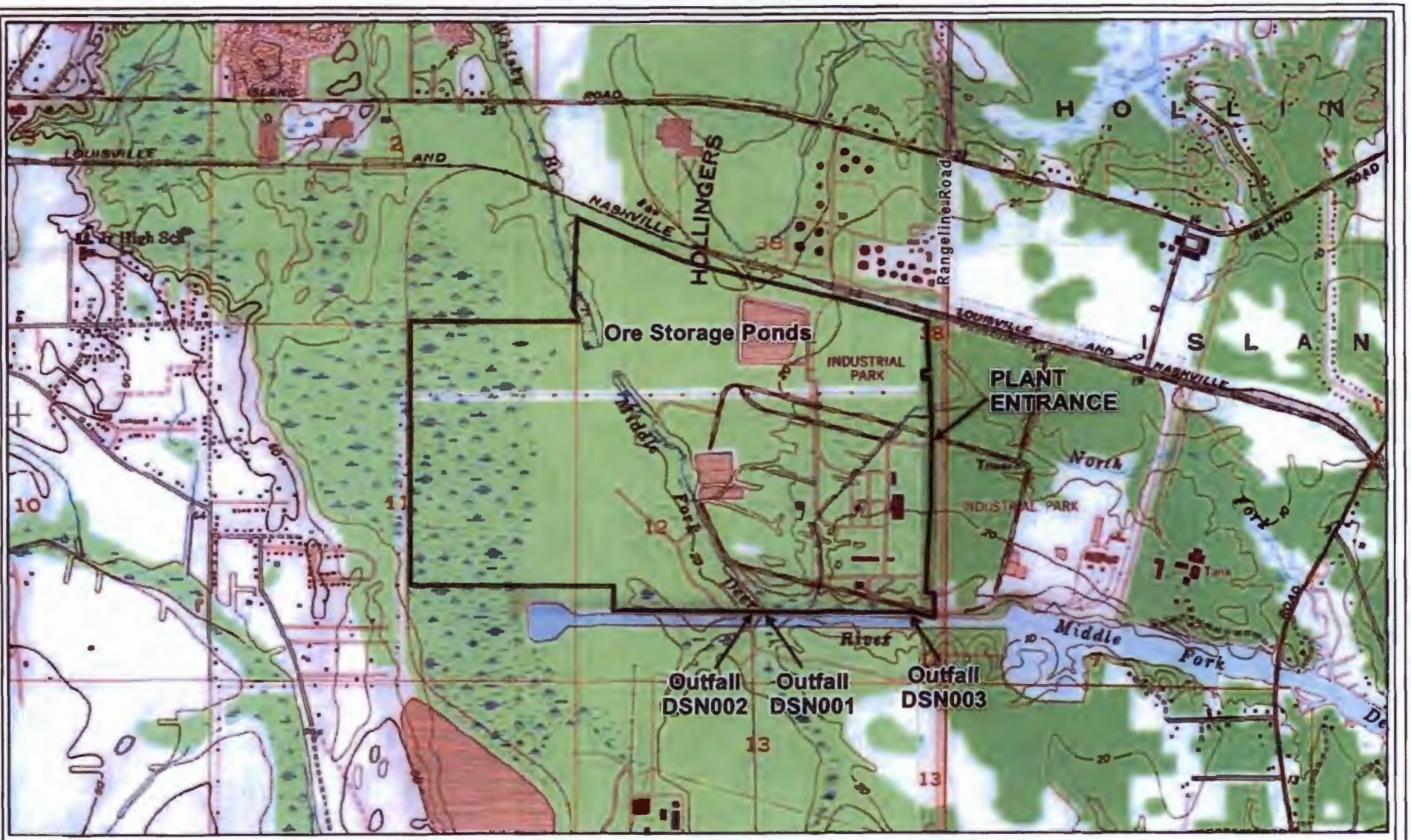
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage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

Name (print or type first and last name)	Official title
Josh T. Patterson	Program Director
Signature	**Date signed**
	3/31/2023

Multistate Environmental Response Trust - Theodore Facility
NPDES Permit No. AL0026328
Permit Renewal Application, 2023

Attachment for EPA Form 1 Section 6. Existing Environmental Permits

- Nationwide Permit 38 - Cleanup of Hazardous and Toxic Waste for Parcel 2
- Solid Waste Landfill Permit AL 49-32
- Radioactive Material License (RML) No. 1501 issued by the Alabama Department of Public Health (ADPH)



LEGEND

Property Boundary

NOT A SURVEY - For representation purposes only.

N

thompson ENGINEERING

GREENFIELD ENVIRONMENTAL
MULTISTATE TRUST L.L.C
THEODORE, MOBILE COUNTY, ALABAMA

2,000 0 2,000 Feet

FIGURE 1
TOPOGRAPHIC MAP

PROJECT NO.: 17-1101-0028

DATE: AUGUST 2017

P:\2017\Projects\17-1101-0028 Greenfield Env Multistate\GIS\MXD\FIG1.mxd

LEGEND

- Railroad Track
- NHDFlowline

1:24,000

0 2,000 4,000 Feet

1 inch = 2,000 feet

N

City of Mobile 2010 Imagery - 1Ft. Resolution
*NOT A SURVEY - Approximate property boundary.

FORMER KERR-McGEE SYNTHETIC RUTILE BENEFICIATION PLANT	thompson ENGINEERING	FIGURE 1 MAP OF FORMER KERR-McGEE PROPERTY AND SURROUNDING AREAS
PREPARED FOR: GREENFIELD ENVIRONMENTAL MULTISTATE TRUST LLC		PROJECT NO.: 22-1101-0014 / DATE: OCTOBER 2022

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19
ALD071937890	AL0026328	Multistate Environmental Response Trust - Theodore Facility	OMB No. 2040-0004

Form 2C NPDES | **EPA**

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

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

Outfall Location

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

Outfall Number	Receiving Water Name	Latitude	Longitude
DSN001	Middle Fork Deer River	30° 32′ 19″ N	-88° 8′ 5″ W
		° ′ ″	° ′ ″
		° ′ ″	° ′ ″

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

Line Drawing

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

☑ Yes ☐ No

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

Average Flows and Treatment

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

****Outfall Number**** DSN001

Operations Contributing to Flow

Operation	Average Flow
Treated groundwater from the extraction well system	0.04 mgd
Treated leachate from IOX impoundments	0.05 mgd
Treated stormwater from IOX impoundments	0.44 mgd
Stormwater from WWT pond system	0.05 mgd

Treatment Units

Description (include size, flow rate through each treatment unit, retention time, etc.)	Code from Table 2C-1	Final Disposal of Solid or Liquid Wastes Other Than by Discharge
Flocculation, pH Adjustment	1G, 2K	
Sedimentation	1U	
Gravity Thickening Sludge Lagoons	5L, 5T	Clarifier sludge is recycled into the 27-acre impoundment.
pH Sedimentation	2K, 1U	

Average Flows and Treatment Continued

3.1 cont.

****Outfall Number**** _____

Operations Contributing to Flow

Operation	Average Flow
	mgd
	mgd
	mgd
	mgd

Treatment Units

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

****Outfall Number**** _____

Operations Contributing to Flow

Operation	Average Flow
	mgd
	mgd
	mgd
	mgd

Treatment Units

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

System Users

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

☐ Yes ☑ No ➔ SKIP to Section 4.

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

☐ Yes ☐ No

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

Intermittent Flows

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

☑ Yes ☐ No ➔ SKIP to Section 5.

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

Outfall Number	Operation (list)	Frequency		Flow Rate		Duration
		Average Days/Week	Average Months/Year	Long-Term Average	Maximum Daily	
DSN001	WWTP	3 days/week	12 months/year	0.6 mgd	5.6 mgd	1 days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days
		days/week	months/year	mgd	mgd	days

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

Applicable ELGs

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

☐ Yes ☑ No ➔ SKIP to Section 6.

5.2 Provide the following information on applicable ELGs.

ELG Category	ELG Subcategory	Regulatory Citation

Production-Based Limitations

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

☐ Yes ☐ No ➔ SKIP to Section 6.

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

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

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

Upgrades and Improvements

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

☐ Yes ☑ No ➔ SKIP to Item 6.3.

6.2 Briefly identify each applicable project in the table below.

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

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

☐ Yes ☑ No ☐ Not applicable

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

Effluent and Intake Characteristics

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

Table A. Conventional and Non-Conventional Pollutants

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

☐ Yes ☑ No ➔ SKIP to Item 7.3.

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

Outfall Number _____ Outfall Number _____ Outfall Number _____

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

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

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

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

☐ Yes ☑ No ➔ SKIP to Item 7.8.

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

☑ Yes ☐ No

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

Primary Industry Category	Required GC/MS Fraction(s) (Check applicable boxes.)
Not applicable.	☐ Volatile ☐ Acid ☐ Base/Neutral ☐ Pesticide
	☐ Volatile ☐ Acid ☐ Base/Neutral ☐ Pesticide
	☐ Volatile ☐ Acid ☐ Base/Neutral ☐ Pesticide

Effluent and Intake Characteristics Continued

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

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

Used or Manufactured Toxics

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

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

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

Biological Toxicity Tests

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

☑ Yes ☐ No ➔ SKIP to Section 10.

9.2 Identify the tests and their purposes below.

Test(s)	Purpose of Test(s)	Submitted to NPDES Permitting Authority?	Date Submitted
P/F Statre 7 Day Chr Mysid. Bahia	Annual monitoring requirement for treated groundwater	☑ Yes ☐ No	02/01/2023
P/F Statre 7 Day Chr Cyprinodon	Annual monitoring requirement for treated groundwater	☑ Yes ☐ No	02/01/2023
		☐ Yes ☐ No	

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

Contract Analyses

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

☑ Yes ☐ No ➔ SKIP to Section 11.

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

	Laboratory Number 1	Laboratory Number 2	Laboratory Number 3
Name of laboratory/firm	Eurofins Testamerica	Knl Laboratory Service	
Laboratory address	3355 McLemore Drive Pensacola, FL 32514	3202 N Florida Ave Tampa, FL 33603	
Phone number	(850) 474-1001	(813) 229-2879	
Pollutant(s) analyzed	All pollutants Tables A, B, and C except for radiological	Radiological	

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

Additional Information

11.1 Has the NPDES permitting authority requested additional information?

☐ Yes ☑ No ➔ SKIP to Section 12.

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

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

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

Checklist and Certification Statement

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

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

12.2 **Certification Statement**

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

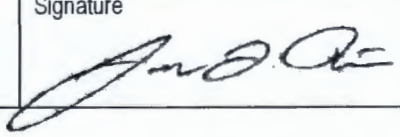
Name (print or type first and last name)	Official title
Josh Patterson	Program Director
Signature	**Date signed**
	3/31/2023

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

	Pollutant	Waiver Requested (if applicable)	Units (specify)		Effluent: Maximum Daily Discharge (required)	Effluent: Maximum Monthly Discharge (if available)	Effluent: Long-Term Average Daily Discharge (if available)	Effluent: Number of Analyses	Intake (Optional): Long-Term Average Value	Intake (Optional): Number of Analyses
☐	Check here if you have applied to your NPDES permitting authority for a waiver for *all* of the pollutants listed on this table for the noted outfall.									
1.	Biochemical oxygen demand (BOD_5)	☐	Concentration	mg/L	<2.0			1		
			Mass	lbs/day	<11.5			1		
2.	Chemical oxygen demand (COD)	☐	Concentration	mg/L	25.0	25.0	15.82	33		
			Mass	lbs/day	475.1	475.1	77.05	33		
3.	Total organic carbon (TOC)	☐	Concentration	mg/L	3.1			1		
			Mass	lbs/day	17.76			1		
4.	Total suspended solids (TSS)	☐	Concentration	mg/L	5.0	5.0	3.4	32		
			Mass	lbs/day	73	73	17.8	32		
5.	Ammonia (as N)	☐	Concentration	mg/L	0.3			1		
			Mass	lbs/day	1.7			1		
6.	Flow	☐	Rate	MGD	5.26	1.38	0.534	348		
7.	Temperature (winter)	☐	°C	°C	20.7			1		
	Temperature (summer)	☐	°C	°C	20.7			1		
8.	pH (minimum)	☐	Standard units	s.u.	6.8			62		
	pH (maximum)	☐	Standard units	s.u.	8.2			62		

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

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

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
☐	Check here if you qualify as a small business per the instructions to Form 2C and, therefore, do not need to submit quantitative data for any of the organic toxic pollutants in Sections 2 through 5 of this table. Note, however, that you must still indicate in the appropriate column of this table if you believe any of the pollutants listed are present in your discharge.											
Section 1. Toxic Metals, Cyanide, and Total Phenols												
1.1	Antimony, total (7440-36-0)	☑	☑	☐	Concentration	mg/L	<0.005	<0.005	<0.003	33		
					Mass	lbs/day	<0.091	<0.091	<0.015	33		
1.2	Arsenic, total (7440-38-2)	☑	☑	☐	Concentration	mg/L	0.002	0.002	0.001	33		
					Mass	lbs/day	0.024	0.024	0.005	33		
1.3	Beryllium, total (7440-41-7)	☐	☑	☐	Concentration	ug/L	<0.17			1		
					Mass	lbs/day	<0.00097			1		
1.4	Cadmium, total (7440-43-9)	☐	☑	☐	Concentration	mg/L	<0.0028	<0.0028	<0.020	33		
					Mass	lbs/day	<0.091	<0.091	<0.011	33		
1.5	Chromium, total (7440-47-3)	☐	☑	☐	Concentration	mg/L	0.0045	0.0045	0.003	33		
					Mass	lbs/day	0.024	0.024	0.016	33		
1.6	Copper, total (7440-50-8)	☑	☑	☐	Concentration	ug/L	0.67	0.67	< 3	33		
					Mass	lbs/day	0.000414	0.000414	< 0.015	33		
1.7	Lead, total (7439-92-1)	☐	☑	☐	Concentration	ug/L	<0.003	<0.003	<0.002	33		
					Mass	lbs/day	<0.048	<0.048	<0.008	33		
1.8	Mercury, total (7439-97-6)	☑	☑	☐	Concentration	ug/L	0.00096			1		
					Mass	lbs/day	0.0000055			1		
1.9	Nickel, total (7440-02-0)	☐	☑	☐	Concentration	ug/L	<1.5			1		
					Mass	lbs/day	<0.0086			1		
1.10	Selenium, total (7782-49-2)	☑	☑	☐	Concentration	ug/L	0.41	0.41	0.205	33		
					Mass	lbs/day	0.00025	0.00025	0.004	33		
1.11	Silver, total (7440-22-4)	☐	☑	☐	Concentration	ug/L	0.19			1		
					Mass	lbs/day	0.001			1		

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	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
1.12	Thallium, total (7440-28-0)	☑	☑	☐	Concentration	ug/L	0.611	0.611	0.440	33		
					Mass	lbs/day	0.0036	0.0036	0.003	33		
1.13	Zinc, total (7440-66-6)	☐	☑	☐	Concentration	ug/L	13			1		
					Mass	lbs/day	0.074			1		
1.14	Cyanide, total (57-12-5)	☐	☐	☑	Concentration							
					Mass							
1.15	Phenols, total	☐	☐	☑	Concentration							
					Mass							
Section 2. Organic Toxic Pollutants (GC/MS Fraction—Volatile Compounds)												
2.1	Acrolein (107-02-8)	☐	☐	☑	Concentration							
					Mass							
2.2	Acrylonitrile (107-13-1)	☐	☐	☑	Concentration							
					Mass							
2.3	Benzene (71-43-2)	☐	☐	☑	Concentration							
					Mass							
2.4	Bromoform (75-25-2)	☐	☐	☑	Concentration							
					Mass							
2.5	Carbon tetrachloride (56-23-5)	☐	☐	☑	Concentration							
					Mass							
2.6	Chlorobenzene (108-90-7)	☐	☐	☑	Concentration							
					Mass							
2.7	Chlorodibromomethane (124-48-1)	☐	☐	☑	Concentration							
					Mass							
2.8	Chloroethane (75-00-3)	☐	☐	☑	Concentration							
					Mass							

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

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

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

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

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	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
4.7	3,4-benzofluoranthene (205-99-2)	☐	☐	☑	Concentration							
					Mass							
4.8	Benzo (ghi) perylene (191-24-2)	☐	☐	☑	Concentration							
					Mass							
4.9	Benzo (k) fluoranthene (207-08-9)	☐	☐	☑	Concentration							
					Mass							
4.10	Bis (2-chloroethoxy) methane (111-91-1)	☐	☐	☑	Concentration							
					Mass							
4.11	Bis (2-chloroethyl) ether (111-44-4)	☐	☐	☑	Concentration							
					Mass							
4.12	Bis (2-chloroisopropyl) ether (102-80-1)	☐	☐	☑	Concentration							
					Mass							
4.13	Bis (2-ethylhexyl) phthalate (117-81-7)	☐	☐	☑	Concentration							
					Mass							
4.14	4-bromophenyl phenyl ether (101-55-3)	☐	☐	☑	Concentration							
					Mass							
4.15	Butyl benzyl phthalate (85-68-7)	☐	☐	☑	Concentration							
					Mass							
4.16	2-chloronaphthalene (91-58-7)	☐	☐	☑	Concentration							
					Mass							
4.17	4-chlorophenyl phenyl ether (7005-72-3)	☐	☐	☑	Concentration							
					Mass							
4.18	Chrysene (218-01-9)	☐	☐	☑	Concentration							
					Mass							
4.19	Dibenzo (a,h) anthracene (53-70-3)	☐	☐	☑	Concentration							
					Mass							

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	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
4.20	1,2-dichlorobenzene (95-50-1)	☐	☐	☑	Concentration							
					Mass							
4.21	1,3-dichlorobenzene (541-73-1)	☐	☐	☑	Concentration							
					Mass							
4.22	1,4-dichlorobenzene (106-46-7)	☐	☐	☑	Concentration							
					Mass							
4.23	3,3-dichlorobenzidine (91-94-1)	☐	☐	☑	Concentration							
					Mass							
4.24	Diethyl phthalate (84-66-2)	☐	☐	☑	Concentration							
					Mass							
4.25	Dimethyl phthalate (131-11-3)	☐	☐	☑	Concentration							
					Mass							
4.26	Di-n-butyl phthalate (84-74-2)	☐	☐	☑	Concentration							
					Mass							
4.27	2,4-dinitrotoluene (121-14-2)	☐	☐	☑	Concentration							
					Mass							
4.28	2,6-dinitrotoluene (606-20-2)	☐	☐	☑	Concentration							
					Mass							
4.29	Di-n-octyl phthalate (117-84-0)	☐	☐	☑	Concentration							
					Mass							
4.30	1,2-Diphenylhydrazine (as azobenzene) (122-66-7)	☐	☐	☑	Concentration							
					Mass							
4.31	Fluoranthene (206-44-0)	☐	☐	☑	Concentration							
					Mass							
4.32	Fluorene (86-73-7)	☐	☐	☑	Concentration							
					Mass							

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	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
4.33	Hexachlorobenzene (118-74-1)	☐	☐	☑	Concentration							
					Mass							
4.34	Hexachlorobutadiene (87-68-3)	☐	☐	☑	Concentration							
					Mass							
4.35	Hexachlorocyclopentadiene (77-47-4)	☐	☐	☑	Concentration							
					Mass							
4.36	Hexachloroethane (67-72-1)	☐	☐	☑	Concentration							
					Mass							
4.37	Indeno (1,2,3-cd) pyrene (193-39-5)	☐	☐	☑	Concentration							
					Mass							
4.38	Isophorone (78-59-1)	☐	☐	☑	Concentration							
					Mass							
4.39	Naphthalene (91-20-3)	☐	☐	☑	Concentration							
					Mass							
4.40	Nitrobenzene (98-95-3)	☐	☐	☑	Concentration							
					Mass							
4.41	N-nitrosodimethylamine (62-75-9)	☐	☐	☑	Concentration							
					Mass							
4.42	N-nitrosodi-n-propylamine (621-64-7)	☐	☐	☑	Concentration							
					Mass							
4.43	N-nitrosodiphenylamine (86-30-6)	☐	☐	☑	Concentration							
					Mass							
4.44	Phenanthrene (85-01-8)	☐	☐	☑	Concentration							
					Mass							
4.45	Pyrene (129-00-0)	☐	☐	☑	Concentration							
					Mass							

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALD071937890	AL0026328	Multistate Environmental Response Trust - Theodore Facility	DSN001

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

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

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
			Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
4.46	1,2,4-trichlorobenzene (120-82-1)	☐	☐	☑	Concentration							
					Mass							
Section 5. Organic Toxic Pollutants (GC/MS Fraction—Pesticides)												
5.1	Aldrin (309-00-2)	☐	☐	☑	Concentration							
					Mass							
5.2	α-BHC (319-84-6)	☐	☐	☑	Concentration							
					Mass							
5.3	β-BHC (319-85-7)	☐	☐	☑	Concentration							
					Mass							
5.4	γ-BHC (58-89-9)	☐	☐	☑	Concentration							
					Mass							
5.5	δ-BHC (319-86-8)	☐	☐	☑	Concentration							
					Mass							
5.6	Chlordane (57-74-9)	☐	☐	☑	Concentration							
					Mass							
5.7	4,4'-DDT (50-29-3)	☐	☐	☑	Concentration							
					Mass							
5.8	4,4'-DDE (72-55-9)	☐	☐	☑	Concentration							
					Mass							
5.9	4,4'-DDD (72-54-8)	☐	☐	☑	Concentration							
					Mass							
5.10	Dieldrin (60-57-1)	☐	☐	☑	Concentration							
					Mass							
5.11	α-endosulfan (115-29-7)	☐	☐	☑	Concentration							
					Mass							

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))[1]

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

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALD071937890	AL0026328	Multistate Environmental Response Trust - Theodore Facility	DSN001

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

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

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

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALD071937890	AL0026328	Multistate Environmental Response Trust - Theodore Facility	DSN001

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

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

	Pollutant	Presence or Absence (check one)		Units (specify)		Effluent				Intake (Optional)	
		Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
☐	Check here if you believe all pollutants on Table C to be ***present*** in your discharge from the noted outfall. You need *not* complete the "Presence or Absence" column of Table C for *each* pollutant.										
☐	Check here if you believe all pollutants on Table C to be ***absent*** in your discharge from the noted outfall. You need *not* complete the "Presence or Absence" column of Table C for *each* pollutant.										
1.	Bromide (24959-67-9)	☐	☑	Concentration							
				Mass							
2.	Chlorine, total residual	☐	☑	Concentration							
				Mass							
3.	Color	☐	☑	Concentration	CU	7					
				Mass	NA	NA					
4.	Fecal coliform	☐	☑	Concentration							
				Mass							
5.	Fluoride (16984-48-8)	☐	☑	Concentration							
				Mass							
6	Nitrate-nitrite	☐	☑	Concentration							
				Mass							
7.	Nitrogen, total organic (as N)	☐	☑	Concentration							
				Mass							
8.	Oil and grease	☑	☐	Concentration	mg/L	6.6	6.6	0.75	33		
				Mass	lbs/day	24	24	1.87	33		
9.	Phosphorus (as P), total (7723-14-0)	☐	☑	Concentration	mg/L	< 0.049			1		
				Mass	lb/d	<0.28					
10.	Sulfate (as SO_4) (14808-79-8)	☑	☐	Concentration	mg/L	17.0	17.0	6.57	33		
				Mass	lbs/day	168.12	168.12	34.08	32		
11.	Sulfide (as S)	☐	☑	Concentration							
				Mass							

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALD071937890	AL0026328	Multistate Environmental Response Trust - Theodore Facility	DSN001

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

	Pollutant	Presence or Absence (check one)		Units (specify)		Effluent				Intake (Optional)	
		Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
12.	Sulfite (as SO_3) (14265-45-3)	☐	☑	Concentration							
				Mass							
13.	Surfactants	☐	☑	Concentration							
				Mass							
14.	Aluminum, total (7429-90-5)	☑	☐	Concentration	mg/L	0.49	0.49	0.14	33		
				Mass	lbs/day	4.02	4.02	0.80	33		
15.	Barium, total (7440-39-3)	☑	☐	Concentration	mg/L	1.0	1.0	0.70	33		
				Mass	lbs/day	23.39	23.39	3.46	33		
16.	Boron, total (7440-42-8)	☑	☐	Concentration	ug/L	180			1		
				Mass	lb/d	1.03			1		
17.	Cobalt, total (7440-48-4)	☐	☑	Concentration	ug/L	<0.56			1		
				Mass	lb/d	<0.00321					
18.	Iron, total (7439-89-6)	☑	☐	Concentration	mg/L	0.51	0.51	0.16	33		
				Mass	lbs/day	3.78	3.78	0.93	33		
19.	Magnesium, total (7439-95-4)	☑	☐	Concentration	ug/L	3900			1		
				Mass	lb/d	22.3			1		
20.	Molybdenum, total (7439-98-7)	☐	☑	Concentration	ug/L	< 4.5			1		
				Mass	lb/d	<0.026			1		
21.	Manganese, total (7439-96-5)	☑	☐	Concentration	mg/L	0.42	0.42	0.11	33		
				Mass	lbs/day	6.58	6.58	0.68	33		
22.	Tin, total (7440-31-5)	☑	☐	Concentration	ug/L	18			1		
				Mass	lb/d	0.103			1		
23.	Titanium, total (7440-32-6)	☑	☐	Concentration	ug/L	<1.8			1		
				Mass	lb/d	< 0.0103			1		

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALD071937890	AL0026328	Multistate Environmental Response Trust - Theodore Facility	DSN001

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

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

	Pollutant	Presence or Absence (check one)		Units (specify)		Effluent				Intake (Optional)	
		Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
24.	**Radioactivity**										
	Alpha, total	☑	☐	Concentration	pCi/L		35.90	21.02	33		33
				Mass							
	Beta, total	☑	☐	Concentration	pCi/L	14.7			1		
				Mass							
	Radium, total	☑	☐	Concentration		4.25			1		
				Mass							
	Radium 226, total	☑	☐	Concentration	pCi/L	14.4	14.4	7.0	33		
				Mass							

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

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALD071937890	AL0026328	Multistate Environmental Response Trust - Theodore Facility	DSN001

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

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

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

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALD071937890	AL0026328	Multistate Environmental Response Trust - Theodore Facility	D$N001

Form Approved 03/05/19
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TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))[1]

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

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

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

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

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
58.	Phenolsulfonate	☐	☑		
59.	Phosgene	☐	☑		
60.	Propargite	☐	☑		
61.	Propylene oxide	☐	☑		
62.	Pyrethrins	☐	☑		
63.	Quinoline	☐	☑		
64.	Resorcinol	☐	☑		
65.	Strontium	☐	☑		
66.	Strychnine	☐	☑		
67.	Styrene	☐	☑		
68.	2,4,5-T (2,4,5-trichlorophenoxyacetic acid)	☐	☑		
69.	TDE (tetrachlorodiphenyl ethane)	☐	☑		
70.	2,4,5-TP [2-(2,4,5-trichlorophenoxy) propanoic acid]	☐	☑		
71.	Trichlorofon	☐	☑		
72.	Triethanolamine	☐	☑		
73.	Triethylamine	☐	☑		
74.	Trimethylamine	☐	☑		
75.	Uranium	☐	☑		
76.	Vanadium	☑	☐	Monitoring results	10 ug/L

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

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

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

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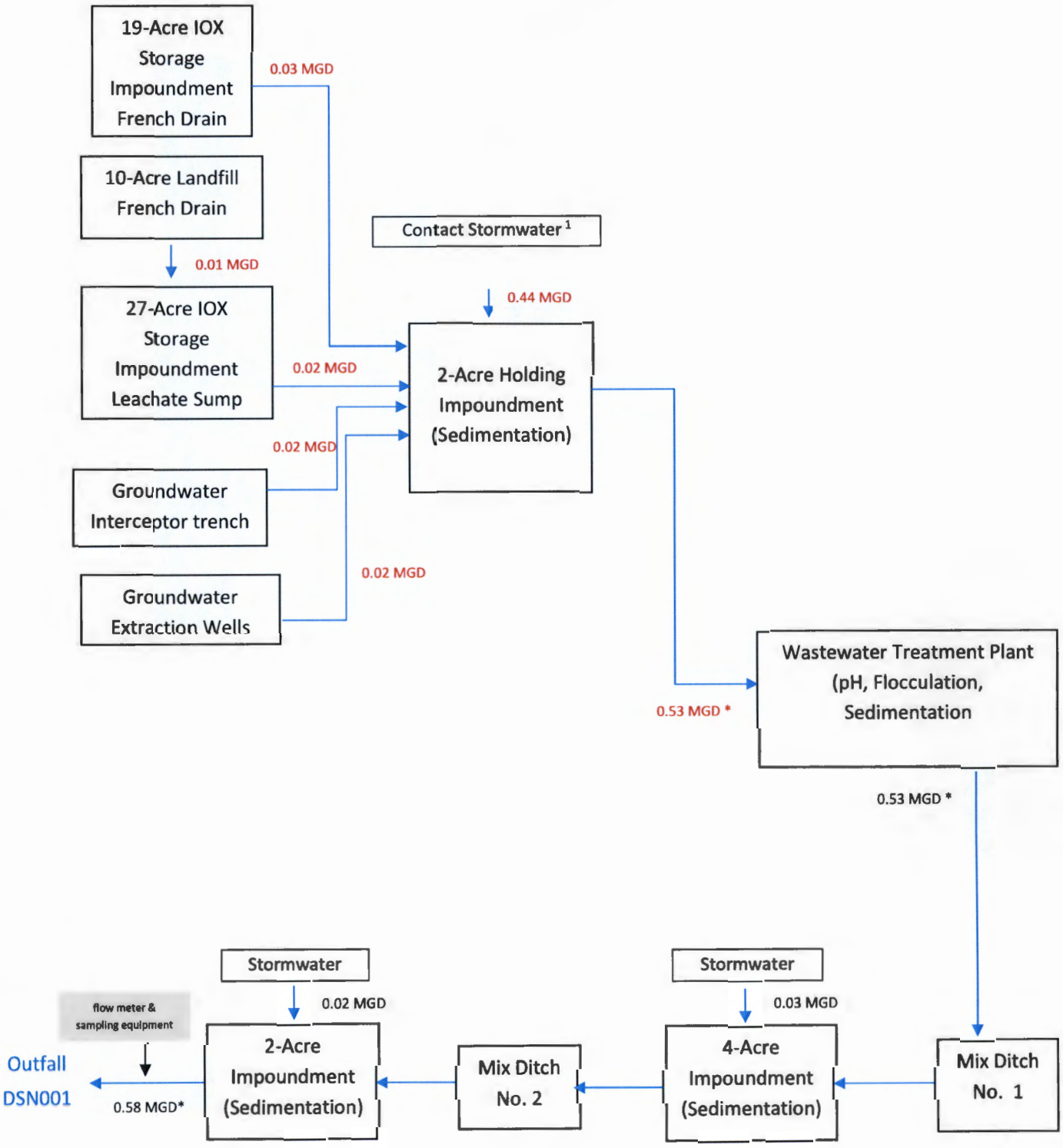
TABLE E. 2,3,7,8 TETRACHLORODIBENZO P DIOXIN (2,3,7,8 TCDD) (40 CFR 122.21(g)(7)(viii))

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

UPDATED WATER BALANCE/LINE DIAGRAM: OUTFALL DSN001
2023



Notes: * Intermittent flow (batch treatment)

1. Includes stormwater from site impoundments (19-acre IOX impoundment, 27-acre IOX impoundment, 400K impoundment, 125K impoundment), former process areas and the10-acre landfill.

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ty Griffith
Greenfield Environmentl Multistate Trust
7300 Rangeline Rd.
Mobile, Alabama 36582
Generated 3/16/2023 9:21:33 AM

JOB DESCRIPTION

Tronox -NPDES Renewal

JOB NUMBER

400-233299-1

Eurofins Pensacola
3355 McLemore Drive
Pensacola FL 32514

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet all NELAP requirements for accredited parameters, unless otherwise noted, and relate only to the referenced samples. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval from the laboratory. For questions please contact the Project Manager at the e-mail address listed on this page, or the telephone number at the bottom of the page. Eurofins Environment Testing Southeast LLC, Pensacola Certifications and Approvals: Alabama (40150), Arizona (AZ0710), Arkansas (88-0689), Florida (E81010), Illinois (200041), Iowa (367), Kansas (E-10253), Kentucky UST (53), Louisiana (30748), Maryland (233), Massachusetts (M-FL094), Michigan (9912), New Hampshire (250510), New Jersey (FL006), North Carolina (314), Oklahoma (9810), Pennsylvania (68-00467), Rhode Island (LAO00307), South Carolina (96026), Tennessee (TN02907), Texas (T104704286-10-2), Virginia (00008), Washington (C2043), West Virginia (136), USDA Foreign Soil Permit (P330-08-00006).

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization

Mark Swafford

Generated
3/16/2023 9:21:33 AM

Authorized for release by
Mark Swafford, Project Manager II
Mark.Swafford@et.eurofinsus.com
(850)471-6207

Definitions/Glossary

Client: Greenfield Environmentl Multistate Trust
Job ID: 400-233299-1
Project/Site: Tronox -NPDES Renewal

Qualifiers

Metals

Qualifier	Qualifier Description
^-	Continuing Calibration Verification (CCV) is outside acceptance limits, low biased.
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
F3	Duplicate RPD exceeds the control limit
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Rad

Qualifier	Qualifier Description
F	Duplicate RPD exceeds the control limit
F1	MS and/or MSD recovery exceeds control limits.
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 400-233299-1

Laboratory: Eurofins Pensacola

Narrative

Job Narrative
400-233299-1

Comments
No additional comments.

Receipt
The samples were received on 2/15/2023 3:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.3° C.

HPLC/IC
Method 300.0: The following sample was diluted due to the abundance of non-target analytes: DSN001 (400-233299-1). Elevated reporting limits (RLs) are provided.

Method 300.0: The following sample was diluted due to the abundance of non-target analytes: DSN001 (400-233299-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RAD
Method 900.0: Gross Alpha and Gross Beta batch 602560:The matrix spike (MS) recoveries for Gross Alpha were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. (860-44045-C-1-B MS)

Method 900.0: Gross Alpha and Gross Beta batch 602560:The detection goal was not met for the following samples due to a reduction of the sample size attributed to high residual mass: DSN001 (400-233299-1), (860-44045-C-1-A) and (860-44045-C-1-D DU). Analytical results are reported with the detection limit achieved.

Method 900.0: Gross Alpha and Gross Beta batch 602560:Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
DSN001 (400-233299-1), (LCS 160-602560/2-A), (LCSB 160-602560/3-A), (MB 160-602560/1-A), (860-44045-C-1-A), (860-44045-C-1-D DU), (860-44045-C-1-B MS) and (860-44045-C-1-C MSBT)

Methods 903.0, RA-06-RC: Radium-226 batch 600973:Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
DSN001 (400-233299-1), (LCS 160-600973/2-A), (MB 160-600973/1-A), (160-48910-D-5-A), (160-48910-D-5-B MS) and (160-48910-F-5-A MSD)

Method 903.0: Total Alpha Radium batch 601547:The precision was outside the established QC limits. The samples were recounted and the results confirmed. Matrix interference is suspected. (680-230504-C-1-A DU)

Method 903.0: Total Alpha Radium batch 601547:Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
DSN001 (400-233299-1), (LCS 160-601547/2-A), (MB 160-601547/1-A), (680-230504-B-1-A) and (680-230504-C-1-A DU)

Methods 904.0, RA-06-RC: Radium-228 batch 600981:The LCS (LCS 160-600981/2-A) recovered at (126%). The limits in our LIMS system at 75-125 reflect the requirements of a regulatory agency that represents a large amount of our work. However the samples associated with this LCS are not from this agency and are therefore held to our in-house statistical limits of (62-148%) per method requirements. The LCS passes, no further action is required

Methods 904.0, RA-06-RC: Radium-228 batch 600981: Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry

Job ID: 400-233299-1 (Continued)

Laboratory: Eurofins Pensacola (Continued)

sample results are reported with the count date/time applied as the Activity Reference Date.
DSN001 (400-233299-1), (LCS 160-600981/2-A), (MB 160-600981/1-A), (160-48910-D-5-C), (160-48910-D-5-D MS) and (160-48910-F-5-B MSD)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method 200.8 : The ICV for batch 400-612877 passed recovery/accuracy criteria which serves the ICV purpose of verifying the calibration standards. The replicate RPDs for the elements were outside of the criteria for standards but within the criteria for field samples. Data has therefore been reported and narrated accordingly.

Method 200.8: The method blank for preparation batch 400-612701 and analytical batch 400-612877 contained Copper and Nickel above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 1631E: The matrix spike duplicate (MSD) recoveries for preparation batch 400-613168 and analytical batch 400-613267 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
Method SM 2540C: The sample duplicate (DUP) precision for analytical batch 400-612792 was outside control limits. Sample non-homogeneity is suspected.

Method SM 5220D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-613069 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method SM 5210B: The USB dilution water D.O. depletion was greater than 0.2 mg/L. The associated sample results in batch 400-612868 are qualified and reported.Actual method blank recovery was at 0.27 mg/L.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Greenfield Environmentl Multistate Trust
Job ID: 400-233299-1
Project/Site: Tronox -NPDES Renewal

Client Sample ID: DSN001
Lab Sample ID: 400-233299-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate Nitrite as N	0.28		0.20	0.13	mg/L	2		300.0	Total/NA
Sulfate	10		2.0	0.74	mg/L	2		300.0	Total/NA
Mercury	0.96		0.50	0.20	ng/L	1		1631E	Total/NA
Aluminum	0.11		0.025	0.014	mg/L	5		200.8	Total/NA
Arsenic	0.00039	J	0.0013	0.00039	mg/L	5		200.8	Total/NA
Barium	0.49		0.0025	0.00070	mg/L	5		200.8	Total/NA
Boron	180		50	18	ug/L	5		200.8	Total/NA
Iron	0.14		0.13	0.079	mg/L	5		200.8	Total/NA
Magnesium	3900		130	41	ug/L	5		200.8	Total/NA
Manganese	0.038		0.013	0.0035	mg/L	5		200.8	Total/NA
Silver	0.19	J	1.3	0.12	ug/L	5		200.8	Total/NA
Thallium	0.29	J	0.50	0.12	ug/L	5		200.8	Total/NA
Tin	18		2.5	1.6	ug/L	5		200.8	Total/NA
Zinc	13	J	20	8.8	ug/L	5		200.8	Total/NA
pH	6.7	HF			SU	1		150.1	Total/NA
Temperature	20.7	HF			Degrees C	1		150.1	Total/NA
Oil & Grease	1.5	J	4.2	1.5	mg/L	1		1664A	Total/NA
Ammonia	0.30		0.050	0.024	mg/L	1		350.1	Total/NA
Nitrogen, Kjeldahl	0.32	J	0.50	0.26	mg/L	1		351.2	Total/NA
Oxygen, Dissolved	9.8	HF B	0.20	0.20	mg/L	1		360.1	Total/NA
Color	7.0		5.0	5.0	Color Units	1		SM 2120B	Total/NA
pH at time of analysis	6.6		0.010	0.010	SU	1		SM 2120B	Total/NA
Total Dissolved Solids	1500		25	25	mg/L	1		SM 2540C	Total/NA
Chemical Oxygen Demand	7.3	J	10	6.4	mg/L	1		SM 5220D	Total/NA
Total Organic Carbon	3.1		1.0	0.50	mg/L	1		SM 5310B	Total/NA

Client Sample ID: FIELD BLANK
Lab Sample ID: 400-233299-2

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Pensacola

Sample Summary

Client: Greenfield Environmentl Multistate Trust
Project/Site: Tronox -NPDES Renewal

Job ID: 400-233299-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-233299-1	DSN001	Water	02/15/23 08:30	02/15/23 15:00
400-233299-2	FIELD BLANK	Water	02/15/23 08:30	02/15/23 15:00

Client Sample Results

Client: Greenfield Environmentl Multistate Trust
Job ID: 400-233299-1
Project/Site: Tronox -NPDES Renewal

Client Sample ID: DSN001
Lab Sample ID: 400-233299-1
Date Collected: 02/15/23 08:30
Matrix: Water
Date Received: 02/15/23 15:00

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	**0.28**		0.20	0.13	mg/L			02/16/23 15:08	2
Sulfate	**10**		2.0	0.74	mg/L			02/16/23 15:08	2

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.96**		0.50	0.20	ng/L		02/16/23 16:45	02/20/23 15:08	1

Method: EPA 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**0.11**		0.025	0.014	mg/L		02/16/23 10:34	02/16/23 22:37	5
Antimony	<1.5		2.5	1.5	ug/L		02/16/23 10:34	02/16/23 22:37	5
Arsenic	**0.00039**	**J**	0.0013	0.00039	mg/L		02/16/23 10:34	02/16/23 22:37	5
Barium	**0.49**		0.0025	0.00070	mg/L		02/16/23 10:34	02/16/23 22:37	5
Beryllium	<0.17		2.5	0.17	ug/L		02/16/23 10:34	02/16/23 22:37	5
Boron	**180**		50	18	ug/L		02/16/23 10:34	02/17/23 18:06	5
Cadmium	<0.00028		0.0025	0.00028	mg/L		02/16/23 10:34	02/16/23 22:37	5
Chromium	<0.0010		0.0025	0.0010	mg/L		02/16/23 10:34	02/16/23 22:37	5
Cobalt	<0.56		2.5	0.56	ug/L		02/16/23 10:34	02/16/23 22:37	5
Copper	<1.0		2.5	1.0	ug/L		02/16/23 10:34	02/16/23 22:37	5
Iron	**0.14**		0.13	0.079	mg/L		02/16/23 10:34	02/16/23 22:37	5
Lead	<0.00029		0.0013	0.00029	mg/L		02/16/23 10:34	02/16/23 22:37	5
Magnesium	**3900**		130	41	ug/L		02/16/23 10:34	02/17/23 18:06	5
Manganese	**0.038**		0.013	0.0035	mg/L		02/16/23 10:34	02/16/23 22:37	5
Molybdenum	<4.5		15	4.5	ug/L		02/16/23 10:34	02/16/23 22:37	5
Nickel	<1.5		2.5	1.5	ug/L		02/16/23 10:34	02/16/23 22:37	5
Selenium	<0.82		1.3	0.82	ug/L		02/16/23 10:34	02/17/23 18:06	5
Silver	**0.19**	**J**	1.3	0.12	ug/L		02/16/23 10:34	02/16/23 22:37	5
Thallium	**0.29**	**J**	0.50	0.12	ug/L		02/16/23 10:34	02/16/23 22:37	5
Tin	**18**		2.5	1.6	ug/L		02/16/23 10:34	02/16/23 22:37	5
Titanium	<1.8		2.5	1.8	ug/L		02/16/23 10:34	02/16/23 22:37	5
Zinc	**13**	**J**	20	8.8	ug/L		02/16/23 10:34	02/16/23 22:37	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (EPA 150.1)	**6.7**	**HF**			SU			02/16/23 08:00	1
Temperature (EPA 150.1)	**20.7**	**HF**			Degrees C			02/16/23 08:00	1
Oil & Grease (40CFR136A 1664A)	**1.5**	**J**	4.2	1.5	mg/L		03/01/23 14:49	03/02/23 07:55	1
Ammonia (EPA 350.1)	**0.30**		0.050	0.024	mg/L			03/08/23 14:50	1
Nitrogen, Kjeldahl (EPA 351.2)	**0.32**	**J**	0.50	0.26	mg/L		03/06/23 11:41	03/07/23 13:28	1
Oxygen, Dissolved (EPA 360.1)	**9.8**	**HF B**	0.20	0.20	mg/L			02/17/23 11:00	1
Phosphorus, Total (EPA 365.4)	<0.049		0.10	0.049	mg/L		03/06/23 11:43	03/07/23 10:32	1
Color (SM 2120B)	**7.0**		5.0	5.0	Color Units			02/16/23 20:30	1
pH at time of analysis (SM 2120B)	**6.6**		0.010	0.010	SU			02/16/23 20:30	1
Total Dissolved Solids (SM 2540C)	**1500**		25	25	mg/L			02/16/23 13:58	1
Total Suspended Solids (SM 2540D)	<5.0		5.0	5.0	mg/L			02/16/23 14:05	1
Biochemical Oxygen Demand (SM 5210B)	<2.0		2.0	2.0	mg/L			02/15/23 17:48	1
Chemical Oxygen Demand (SM 5220D)	**7.3**	**J**	10	6.4	mg/L			02/18/23 16:30	1
Total Organic Carbon (SM 5310B)	**3.1**		1.0	0.50	mg/L			03/01/23 07:35	1

Client Sample ID: DSN001
Lab Sample ID: 400-233299-1

Date Collected: 02/15/23 08:30
Matrix: Water
Date Received: 02/15/23 15:00

Method: EPA 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	9.46	U G	8.23	8.30	3.00	12.6	pCi/L	03/06/23 13:02	03/10/23 07:07	1
Gross Beta	**14.7**	**G**	4.04	4.29	4.00	4.71	pCi/L	03/06/23 13:02	03/10/23 07:07	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**4.27**		0.336	0.510	1.00	0.0882	pCi/L	02/20/23 09:50	03/14/23 07:57	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.1*		*30 - 110*	*02/20/23 09:50*	*03/14/23 07:57*	*1*

Method: EPA 903.0 - Total Alpha Radium (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Total Alpha Radium	**4.25**		0.464	0.601	1.00	0.167	pCi/L	02/24/23 11:21	03/06/23 10:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.5*		*30 - 110*	*02/24/23 11:21*	*03/06/23 10:02*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**11.9**		1.11	1.56	1.00	0.604	pCi/L	02/20/23 11:17	02/24/23 12:08	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.1*		*30 - 110*	*02/20/23 11:17*	*02/24/23 12:08*	*1*
Y Carrier	*80.0*		*30 - 110*	*02/20/23 11:17*	*02/24/23 12:08*	*1*

Client Sample ID: FIELD BLANK
Lab Sample ID: 400-233299-2

Date Collected: 02/15/23 08:30
Matrix: Water
Date Received: 02/15/23 15:00

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L		02/16/23 16:45	02/20/23 15:15	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-612744/17
Matrix: Water
Analysis Batch: 612744

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<0.37		1.0	0.37	mg/L			02/16/23 13:37	1

Lab Sample ID: LCS 400-612744/18
Matrix: Water
Analysis Batch: 612744

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	10.0	10.3		mg/L		103	90 - 110

Lab Sample ID: LCSD 400-612744/19
Matrix: Water
Analysis Batch: 612744

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	10.0	10.3		mg/L		103	90 - 110	1	15

Lab Sample ID: 400-233299-1 MS
Matrix: Water
Analysis Batch: 612744

Client Sample ID: DSN001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	10		25.0	34.7		mg/L		98	80 - 120

Lab Sample ID: 400-233299-1 MSD
Matrix: Water
Analysis Batch: 612744

Client Sample ID: DSN001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	10		25.0	35.5		mg/L		101	80 - 120	2	20

Lab Sample ID: MB 400-612745/17
Matrix: Water
Analysis Batch: 612745

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	<0.063		0.10	0.063	mg/L			02/16/23 13:37	1

Lab Sample ID: LCS 400-612745/18
Matrix: Water
Analysis Batch: 612745

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	5.30	5.47		mg/L		103	90 - 110

Lab Sample ID: LCSD 400-612745/19
Matrix: Water
Analysis Batch: 612745

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate Nitrite as N	5.30	5.42		mg/L		102	90 - 110	1	15

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 400-233299-1 MS
Matrix: Water
Analysis Batch: 612745

Client Sample ID: DSN001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	0.28		13.3	12.8		mg/L		94	80 - 120

Lab Sample ID: 400-233299-1 MSD
Matrix: Water
Analysis Batch: 612745

Client Sample ID: DSN001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate Nitrite as N	0.28		13.3	13.2		mg/L		97	80 - 120	3	20

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 400-613168/3-A
Matrix: Water
Analysis Batch: 613267

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 613168

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L		02/19/23 16:30	02/20/23 12:58	1

Lab Sample ID: LCS 400-613168/4-A
Matrix: Water
Analysis Batch: 613267

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 613168

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.26		ng/L		85	79 - 121

Lab Sample ID: LCSD 400-613168/5-A
Matrix: Water
Analysis Batch: 613267

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 613168

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.33		ng/L		87	79 - 121	2	20

Lab Sample ID: 860-43314-P-1-A MSD
Matrix: Water
Analysis Batch: 613267

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 613168

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	33		5.00	36.0	4	ng/L		68	71 - 125	1	24

Lab Sample ID: 860-43314-Q-1-A MS
Matrix: Water
Analysis Batch: 613267

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 613168

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	33		5.00	36.5	4	ng/L		78	71 - 125

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 400-612701/1-A ^5
Matrix: Water
Analysis Batch: 612877

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 612701

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.014		0.025	0.014	mg/L		02/16/23 10:34	02/16/23 22:02	5
Antimony	<1.5		2.5	1.5	ug/L		02/16/23 10:34	02/16/23 22:02	5
Arsenic	<0.00039		0.0013	0.00039	mg/L		02/16/23 10:34	02/16/23 22:02	5
Barium	<0.00070		0.0025	0.00070	mg/L		02/16/23 10:34	02/16/23 22:02	5
Beryllium	<0.17		2.5	0.17	ug/L		02/16/23 10:34	02/16/23 22:02	5
Cadmium	<0.00028		0.0025	0.00028	mg/L		02/16/23 10:34	02/16/23 22:02	5
Chromium	<0.0010		0.0025	0.0010	mg/L		02/16/23 10:34	02/16/23 22:02	5
Cobalt	<0.56		2.5	0.56	ug/L		02/16/23 10:34	02/16/23 22:02	5
Copper	1.03	J	2.5	1.0	ug/L		02/16/23 10:34	02/16/23 22:02	5
Iron	<0.079		0.13	0.079	mg/L		02/16/23 10:34	02/16/23 22:02	5
Lead	<0.00029		0.0013	0.00029	mg/L		02/16/23 10:34	02/16/23 22:02	5
Manganese	<0.0035		0.013	0.0035	mg/L		02/16/23 10:34	02/16/23 22:02	5
Molybdenum	<4.5		15	4.5	ug/L		02/16/23 10:34	02/16/23 22:02	5
Nickel	2.47	J	2.5	1.5	ug/L		02/16/23 10:34	02/16/23 22:02	5
Silver	<0.12		1.3	0.12	ug/L		02/16/23 10:34	02/16/23 22:02	5
Thallium	<0.12		0.50	0.12	ug/L		02/16/23 10:34	02/16/23 22:02	5
Tin	<1.6		2.5	1.6	ug/L		02/16/23 10:34	02/16/23 22:02	5
Titanium	<1.8		2.5	1.8	ug/L		02/16/23 10:34	02/16/23 22:02	5
Zinc	<8.8		20	8.8	ug/L		02/16/23 10:34	02/16/23 22:02	5

Lab Sample ID: MB 400-612701/1-A ^5
Matrix: Water
Analysis Batch: 613042

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 612701

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<18		50	18	ug/L		02/16/23 10:34	02/17/23 17:56	5
Magnesium	<41		130	41	ug/L		02/16/23 10:34	02/17/23 17:56	5
Selenium	<0.82		1.3	0.82	ug/L		02/16/23 10:34	02/17/23 17:56	5

Lab Sample ID: LCS 400-612701/2-A ^5
Matrix: Water
Analysis Batch: 612877

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 612701

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	0.500	0.506		mg/L		101	85 - 115
Antimony	50.0	50.8		ug/L		102	85 - 115
Arsenic	0.0500	0.0473		mg/L		95	85 - 115
Barium	0.0500	0.0479		mg/L		96	85 - 115
Beryllium	50.0	49.4		ug/L		99	85 - 115
Cadmium	0.0500	0.0492		mg/L		98	85 - 115
Chromium	0.0500	0.0490		mg/L		98	85 - 115
Cobalt	50.0	48.7		ug/L		97	85 - 115
Copper	50.0	50.6		ug/L		101	85 - 115
Iron	5.00	4.70		mg/L		94	85 - 115
Lead	0.0500	0.0485		mg/L		97	85 - 115
Manganese	0.500	0.493		mg/L		99	85 - 115
Molybdenum	50.0	49.5		ug/L		99	85 - 115
Nickel	50.0	50.5		ug/L		101	85 - 115
Selenium	50.0	52.4		ug/L		105	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 400-612701/2-A ^5
Matrix: Water
Analysis Batch: 612877

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 612701

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	50.0	49.0		ug/L		98	85 - 115
Thallium	10.0	9.42		ug/L		94	85 - 115
Tin	50.0	48.8		ug/L		98	85 - 115
Titanium	50.0	50.6		ug/L		101	85 - 115
Zinc	50.0	49.1		ug/L		98	85 - 115

Lab Sample ID: LCS 400-612701/2-A ^5
Matrix: Water
Analysis Batch: 613042

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 612701

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	100	104		ug/L		104	85 - 115
Magnesium	5000	4910		ug/L		98	85 - 115

Lab Sample ID: 400-233293-C-2-B MS ^5
Matrix: Water
Analysis Batch: 612877

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 612701

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	0.032	B	0.500	0.511		mg/L		96	70 - 130
Antimony	<1.5		50.0	52.3		ug/L		105	70 - 130
Arsenic	0.035		0.0500	0.0829		mg/L		96	70 - 130
Barium	0.049		0.0500	0.102		mg/L		104	70 - 130
Beryllium	<0.17		50.0	48.0		ug/L		96	70 - 130
Boron	200	^- F1 F2	100	389	^- F1	ug/L		190	70 - 130
Cadmium	<0.00028		0.0500	0.0489		mg/L		98	70 - 130
Chromium	0.0025		0.0500	0.0508		mg/L		97	70 - 130
Cobalt	<0.56		50.0	47.1		ug/L		94	70 - 130
Copper	1.7	J B	50.0	52.2		ug/L		101	70 - 130
Iron	<0.079		5.00	4.66		mg/L		93	70 - 130
Lead	<0.00029		0.0500	0.0476		mg/L		95	70 - 130
Magnesium	7200	^-	5000	11900	^-	ug/L		94	70 - 130
Manganese	0.035		0.500	0.527	E	mg/L		98	70 - 130
Molybdenum	57		50.0	106		ug/L		100	70 - 130
Nickel	<1.5		50.0	49.0		ug/L		98	70 - 130
Selenium	5.1	B ^2	50.0	52.7		ug/L		95	70 - 130
Silver	<0.12		50.0	49.5		ug/L		99	70 - 130
Thallium	<0.12		10.0	9.67		ug/L		97	70 - 130
Tin	<1.6		50.0	46.7		ug/L		93	70 - 130
Titanium	<1.8		50.0	50.3		ug/L		101	70 - 130
Zinc	20		50.0	66.1		ug/L		92	70 - 130

Lab Sample ID: 400-233293-C-2-C MSD ^5
Matrix: Water
Analysis Batch: 612877

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 612701

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aluminum	0.032	B	0.500	0.474		mg/L		88	70 - 130	8	20
Antimony	<1.5		50.0	47.1		ug/L		94	70 - 130	11	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-233293-C-2-C MSD ^5
Matrix: Water
Analysis Batch: 612877

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 612701

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	0.035		0.0500	0.0796		mg/L		89	70 - 130	4	20
Barium	0.049		0.0500	0.0958		mg/L		93	70 - 130	6	20
Beryllium	<0.17		50.0	43.7		ug/L		87	70 - 130	9	20
Boron	200	^- F1 F2	100	315	F2 ^+	ug/L		115	70 - 130	21	20
Cadmium	<0.00028		0.0500	0.0455		mg/L		91	70 - 130	7	20
Chromium	0.0025		0.0500	0.0483		mg/L		92	70 - 130	5	20
Cobalt	<0.56		50.0	45.2		ug/L		90	70 - 130	4	20
Copper	1.7	J B	50.0	49.1		ug/L		95	70 - 130	6	20
Iron	<0.079		5.00	4.28		mg/L		86	70 - 130	9	20
Lead	<0.00029		0.0500	0.0454		mg/L		91	70 - 130	5	20
Magnesium	7200	^-	5000	11500	^-	ug/L		85	70 - 130	4	20
Manganese	0.035		0.500	0.489		mg/L		91	70 - 130	7	20
Molybdenum	57		50.0	102		ug/L		90	70 - 130	5	20
Nickel	<1.5		50.0	47.1		ug/L		94	70 - 130	4	20
Selenium	5.1	B ^2	50.0	53.9		ug/L		98	70 - 130	2	20
Silver	<0.12		50.0	45.4		ug/L		91	70 - 130	9	20
Thallium	<0.12		10.0	8.96		ug/L		90	70 - 130	8	20
Tin	<1.6		50.0	45.6		ug/L		91	70 - 130	3	20
Titanium	<1.8		50.0	46.2		ug/L		92	70 - 130	8	20
Zinc	20		50.0	65.3		ug/L		90	70 - 130	1	20

Method: 150.1 - pH (Electrometric)

Lab Sample ID: 400-233299-1 DU
Matrix: Water
Analysis Batch: 612733

Client Sample ID: DSN001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	6.7	HF	6.7		SU		0.3	5
Temperature	20.7	HF	20.7		Degrees C		0	30

Method: 1664A - Oil and Grease

Lab Sample ID: MB 400-614519/1-A
Matrix: Water
Analysis Batch: 614561

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 614519

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil & Grease	<1.4		4.0	1.4	mg/L		03/01/23 14:48	03/02/23 07:55	1

Lab Sample ID: LCS 400-614519/2-A
Matrix: Water
Analysis Batch: 614561

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 614519

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Oil & Grease	40.3	35.40		mg/L		88	78 - 114

Method: 1664A - Oil and Grease (Continued)

Lab Sample ID: 400-233713-C-1-A MS
Matrix: Water
Analysis Batch: 614561

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 614519

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Oil & Grease	4.2		40.8	38.70		mg/L		85	78 - 114

Lab Sample ID: 400-233713-D-1-A MSD
Matrix: Water
Analysis Batch: 614561

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 614519

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Oil & Grease	4.2		41.0	37.61		mg/L		81	78 - 114	3	18

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 400-615567/20
Matrix: Water
Analysis Batch: 615567

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.024		0.050	0.024	mg/L			03/08/23 14:46	1

Lab Sample ID: LCS 400-615567/21
Matrix: Water
Analysis Batch: 615567

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	2.07		mg/L		103	90 - 110

Lab Sample ID: MRL 400-615567/15
Matrix: Water
Analysis Batch: 615567

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	0.0500	0.0440	J	mg/L		88	50 - 150

Lab Sample ID: 400-234044-C-4 MS
Matrix: Water
Analysis Batch: 615567

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	0.44		1.00	1.39		mg/L		95	90 - 110

Lab Sample ID: 400-234044-C-4 MSD
Matrix: Water
Analysis Batch: 615567

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia	0.44		1.00	1.34		mg/L		90	90 - 110	4	11

Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 400-615106/1-A
Matrix: Water
Analysis Batch: 615349

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 615106

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	<0.26		0.50	0.26	mg/L		03/06/23 11:41	03/07/23 13:25	1

Lab Sample ID: LCS 400-615106/2-A
Matrix: Water
Analysis Batch: 615349

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 615106

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	10.0	10.7		mg/L		107	90 - 110

Lab Sample ID: 400-233299-1 MS
Matrix: Water
Analysis Batch: 615349

Client Sample ID: DSN001
Prep Type: Total/NA
Prep Batch: 615106

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	0.32	J	4.00	4.62		mg/L		107	90 - 110

Lab Sample ID: 400-233299-1 MSD
Matrix: Water
Analysis Batch: 615349

Client Sample ID: DSN001
Prep Type: Total/NA
Prep Batch: 615106

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrogen, Kjeldahl	0.32	J	4.00	4.52		mg/L		105	90 - 110	2	22

Lab Sample ID: MRL 400-615349/11
Matrix: Water
Analysis Batch: 615349

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	0.500	0.485	J	mg/L		97	50 - 150

Method: 360.1 - Oxygen, Dissolved

Lab Sample ID: MB 400-612933/1
Matrix: Water
Analysis Batch: 612933

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oxygen, Dissolved	4.59		0.20	0.20	mg/L			02/17/23 11:00	1

Lab Sample ID: 400-233299-1 DU
Matrix: Water
Analysis Batch: 612933

Client Sample ID: DSN001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Oxygen, Dissolved	9.8	HF B	9.87		mg/L		0.9	20

Method: 365.4 - Phosphorus, Total

Lab Sample ID: MB 400-615109/1-A
Matrix: Water
Analysis Batch: 615304

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 615109

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus, Total	<0.049		0.10	0.049	mg/L		03/06/23 11:43	03/07/23 10:30	1

Lab Sample ID: LCS 400-615109/2-A
Matrix: Water
Analysis Batch: 615304

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 615109

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus, Total	1.98	2.18		mg/L		110	75 - 113

Lab Sample ID: 400-233299-1 MS
Matrix: Water
Analysis Batch: 615304

Client Sample ID: DSN001
Prep Type: Total/NA
Prep Batch: 615109

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus, Total	<0.049		0.400	0.386		mg/L		97	72 - 120

Lab Sample ID: 400-233299-1 MSD
Matrix: Water
Analysis Batch: 615304

Client Sample ID: DSN001
Prep Type: Total/NA
Prep Batch: 615109

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phosphorus, Total	<0.049		0.400	0.360		mg/L		90	72 - 120	7	27

Lab Sample ID: MRL 400-615304/10
Matrix: Water
Analysis Batch: 615304

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus, Total	0.100	0.101		mg/L		101	50 - 150

Method: SM 2120B - Color, Colorimetric

Lab Sample ID: MB 400-613116/1
Matrix: Water
Analysis Batch: 613116

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Color	<5.0		5.0	5.0	Color Units			02/16/23 20:30	1
pH at time of analysis	6.72		0.010	0.010	SU			02/16/23 20:30	1

Lab Sample ID: LCS 400-613116/3
Matrix: Water
Analysis Batch: 613116

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Color	35.0	35.0		Color Units		100	90 - 110

Method: SM 2120B - Color, Colorimetric (Continued)

Lab Sample ID: 400-233299-1 DU
Matrix: Water
Analysis Batch: 613116

Client Sample ID: DSN001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Color	7.0		7.00		Color Units		0	6
pH at time of analysis	6.6		6.62		SU		0	30

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-612792/1
Matrix: Water
Analysis Batch: 612792

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<5.0		5.0	5.0	mg/L			02/16/23 13:58	1

Lab Sample ID: LCS 400-612792/2
Matrix: Water
Analysis Batch: 612792

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	293	276		mg/L		94	78 - 122

Lab Sample ID: 400-233234-A-1 DU
Matrix: Water
Analysis Batch: 612792

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	44		40.0	F3	mg/L		10	5

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 400-612794/1
Matrix: Water
Analysis Batch: 612794

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<0.50		0.50	0.50	mg/L			02/16/23 14:05	1

Lab Sample ID: LCS 400-612794/2
Matrix: Water
Analysis Batch: 612794

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	319	278		mg/L		87	79 - 124

Lab Sample ID: 400-233214-A-1 DU
Matrix: Water
Analysis Batch: 612794

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	29		29.0		mg/L		0	5

Method: SM 5210B - BOD, 5-Day

Lab Sample ID: USB 400-612868/1
Matrix: Water
Analysis Batch: 612868

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	<2.0		2.0	2.0	mg/L			02/16/23 15:57	1

Lab Sample ID: LCS 400-612868/2
Matrix: Water
Analysis Batch: 612868

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Biochemical Oxygen Demand	198	180		mg/L		91	85 - 115

Method: SM 5220D - COD

Lab Sample ID: MB 400-613069/4
Matrix: Water
Analysis Batch: 613069

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	<6.4		10	6.4	mg/L			02/18/23 16:30	1

Lab Sample ID: LCS 400-613069/5
Matrix: Water
Analysis Batch: 613069

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	50.0	53.6		mg/L		107	90 - 110

Lab Sample ID: MRL 400-613069/2
Matrix: Water
Analysis Batch: 613069

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	30.0	36.1		mg/L		120	50 - 150

Lab Sample ID: 400-233201-F-1 MS
Matrix: Water
Analysis Batch: 613069

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	8.7	J F1 F2	50.0	64.9	F1	mg/L		113	90 - 110

Lab Sample ID: 400-233201-F-1 MSD
Matrix: Water
Analysis Batch: 613069

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chemical Oxygen Demand	8.7	J F1 F2	100	128	F1 F2	mg/L		119	90 - 110	65	13

Method: SM 5310B - Organic Carbon, Total (TOC)

Lab Sample ID: MB 400-614493/36
Matrix: Water
Analysis Batch: 614493

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.50		1.0	0.50	mg/L			03/01/23 03:17	1

Lab Sample ID: LCS 400-614493/37
Matrix: Water
Analysis Batch: 614493

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	20.0	20.4		mg/L		102	85 - 115

Lab Sample ID: LCSD 400-614493/38
Matrix: Water
Analysis Batch: 614493

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	20.0	20.4		mg/L		102	85 - 115	0	30

Lab Sample ID: MRL 400-614493/3
Matrix: Water
Analysis Batch: 614493

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	1.00	0.692	J	mg/L		69	50 - 150

Lab Sample ID: 400-233717-A-7 MS
Matrix: Water
Analysis Batch: 614493

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	5.7	F1	1000	10.8	F1	mg/L		0.5	76 - 117

Lab Sample ID: 400-233717-A-7 MSD
Matrix: Water
Analysis Batch: 614493

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	5.7	F1	1000	10.9	F1	mg/L		0.5	76 - 117	0	16

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Lab Sample ID: MB 160-602560/1-A
Matrix: Water
Analysis Batch: 603187

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 602560

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	0.01927	U	0.394	0.394	3.00	0.785	pCi/L	03/06/23 13:02	03/10/23 07:05	1
Gross Beta	0.1633	U	0.561	0.561	4.00	0.974	pCi/L	03/06/23 13:02	03/10/23 07:05	1

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity (Continued)

Lab Sample ID: LCS 160-602560/2-A
Matrix: Water
Analysis Batch: 603187

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 602560

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Gross Alpha	50.5	56.01		8.16	3.00	2.03	pCi/L	111	75 - 125

Lab Sample ID: LCSB 160-602560/3-A
Matrix: Water
Analysis Batch: 603187

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 602560

Analyte	Spike Added	LCSB Result	LCSB Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Gross Beta	73.6	74.70		8.00	4.00	0.898	pCi/L	102	75 - 125

Lab Sample ID: 860-44045-C-1-B MS
Matrix: Water
Analysis Batch: 603188

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 602560

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Gross Alpha	5.80	G	50.5	29.00	F1	6.62	3.00	5.24	pCi/L	46	60 - 140

Lab Sample ID: 860-44045-C-1-C MSBT
Matrix: Water
Analysis Batch: 603188

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 602560

Analyte	Sample Result	Sample Qual	Spike Added	MSBT Result	MSBT Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Gross Beta	3.20		73.6	90.69		10.1	4.00	1.70	pCi/L	119	60 - 140

Lab Sample ID: 860-44045-C-1-D DU
Matrix: Water
Analysis Batch: 603188

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 602560

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Gross Alpha	5.80	G	7.294	G	4.14	3.00	5.55	pCi/L	0.20	1
Gross Beta	3.20		2.534		1.43	4.00	1.96	pCi/L	0.24	1

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-600973/1-A
Matrix: Water
Analysis Batch: 603598

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 600973

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.01571	U	0.0197	0.0197	1.00	0.0648	pCi/L	02/20/23 09:50	03/14/23 07:49	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.7*		*30 - 110*	*02/20/23 09:50*	*03/14/23 07:49*	*1*

Method: 903.0 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCS 160-600973/2-A
Matrix: Water
Analysis Batch: 603598

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 600973

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	11.50		1.17	1.00	0.0984	pCi/L	101	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*89.4*		*30 - 110*

Lab Sample ID: 160-48910-D-5-B MS
Matrix: Water
Analysis Batch: 603598

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 600973

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226	3.68		11.3	15.86		1.57	1.00	0.0970	pCi/L	108	60 - 140		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*90.6*		*30 - 110*

Lab Sample ID: 160-48910-F-5-A MSD
Matrix: Water
Analysis Batch: 603598

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 600973

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	3.68		11.3	14.65		1.45	1.00	0.0798	pCi/L	97	60 - 140	0.40	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*92.0*		*30 - 110*

Method: 903.0 - Total Alpha Radium (GFPC)

Lab Sample ID: MB 160-601547/1-A
Matrix: Water
Analysis Batch: 602566

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 601547

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Total Alpha Radium	0.01997	U	0.0901	0.0901	1.00	0.176	pCi/L	02/24/23 11:21	03/06/23 10:02	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.2*		*30 - 110*	*02/24/23 11:21*	*03/06/23 10:02*	*1*

Method: 903.0 - Total Alpha Radium (GFPC) (Continued)

Lab Sample ID: LCS 160-601547/2-A
Matrix: Water
Analysis Batch: 602566

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 601547

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Total Alpha Radium	11.3	11.90		1.31	1.00	0.163	pCi/L	105	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*86.2*		*30 - 110*

Lab Sample ID: 680-230504-C-1-A DU
Matrix: Water
Analysis Batch: 603705

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 601547

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Total Alpha Radium	0.776		2.183	F	0.327	1.00	0.0918	pCi/L	2.84	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ba Carrier	*77.1*		*30 - 110*

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-600981/1-A
Matrix: Water
Analysis Batch: 601537

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 600981

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3979	U	0.339	0.341	1.00	0.530	pCi/L	02/20/23 11:17	02/24/23 12:01	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.7*		*30 - 110*	*02/20/23 11:17*	*02/24/23 12:01*	*1*
Y Carrier	*79.6*		*30 - 110*	*02/20/23 11:17*	*02/24/23 12:01*	*1*

Lab Sample ID: LCS 160-600981/2-A
Matrix: Water
Analysis Batch: 601537

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 600981

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	8.17	10.26		1.39	1.00	0.515	pCi/L	126	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*89.4*		*30 - 110*
Y Carrier	*79.6*		*30 - 110*

Method: 904.0 - Radium-228 (GFPC) (Continued)

Lab Sample ID: 160-48910-D-5-D MS
Matrix: Water
Analysis Batch: 601557

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 600981

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	3.29		8.14	12.21		1.57	1.00	0.574	pCi/L	110	60 - 140

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*90.6*		*30 - 110*
Y Carrier	*81.9*		*30 - 110*

Lab Sample ID: 160-48910-F-5-B MSD
Matrix: Water
Analysis Batch: 601557

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 600981

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	3.29		8.15	11.60		1.51	1.00	0.584	pCi/L	102	60 - 140	0.20	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*92.0*		*30 - 110*
Y Carrier	*81.1*		*30 - 110*

QC Association Summary

Client: Greenfield Environmentl Multistate Trust
Project/Site: Tronox -NPDES Renewal

Job ID: 400-233299-1

HPLC/IC

Analysis Batch: 612744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	300.0	
MB 400-612744/17	Method Blank	Total/NA	Water	300.0	
LCS 400-612744/18	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-612744/19	Lab Control Sample Dup	Total/NA	Water	300.0	
400-233299-1 MS	DSN001	Total/NA	Water	300.0	
400-233299-1 MSD	DSN001	Total/NA	Water	300.0	

Analysis Batch: 612745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	300.0	
MB 400-612745/17	Method Blank	Total/NA	Water	300.0	
LCS 400-612745/18	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-612745/19	Lab Control Sample Dup	Total/NA	Water	300.0	
400-233299-1 MS	DSN001	Total/NA	Water	300.0	
400-233299-1 MSD	DSN001	Total/NA	Water	300.0	

Metals

Prep Batch: 612701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	200.8	
MB 400-612701/1-A ^5	Method Blank	Total/NA	Water	200.8	
LCS 400-612701/2-A ^5	Lab Control Sample	Total/NA	Water	200.8	
400-233293-C-2-B MS ^5	Matrix Spike	Total/NA	Water	200.8	
400-233293-C-2-C MSD ^5	Matrix Spike Duplicate	Total/NA	Water	200.8	

Analysis Batch: 612877

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	200.8	612701
MB 400-612701/1-A ^5	Method Blank	Total/NA	Water	200.8	612701
LCS 400-612701/2-A ^5	Lab Control Sample	Total/NA	Water	200.8	612701
400-233293-C-2-B MS ^5	Matrix Spike	Total/NA	Water	200.8	612701
400-233293-C-2-C MSD ^5	Matrix Spike Duplicate	Total/NA	Water	200.8	612701

Analysis Batch: 613042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	200.8	612701
MB 400-612701/1-A ^5	Method Blank	Total/NA	Water	200.8	612701
LCS 400-612701/2-A ^5	Lab Control Sample	Total/NA	Water	200.8	612701

Prep Batch: 613168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	1631E	
400-233299-2	FIELD BLANK	Total/NA	Water	1631E	
MB 400-613168/3-A	Method Blank	Total/NA	Water	1631E	
LCS 400-613168/4-A	Lab Control Sample	Total/NA	Water	1631E	
LCSD 400-613168/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	
860-43314-P-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	1631E	
860-43314-Q-1-A MS	Matrix Spike	Total/NA	Water	1631E	

QC Association Summary

Client: Greenfield Environmentl Multistate Trust
Project/Site: Tronox -NPDES Renewal

Job ID: 400-233299-1

Metals

Analysis Batch: 613267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	1631E	613168
400-233299-2	FIELD BLANK	Total/NA	Water	1631E	613168
MB 400-613168/3-A	Method Blank	Total/NA	Water	1631E	613168
LCS 400-613168/4-A	Lab Control Sample	Total/NA	Water	1631E	613168
LCSD 400-613168/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	613168
860-43314-P-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	1631E	613168
860-43314-Q-1-A MS	Matrix Spike	Total/NA	Water	1631E	613168

General Chemistry

Analysis Batch: 612733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	150.1	
LCS 400-612733/1	Lab Control Sample	Total/NA	Water	150.1	
400-233299-1 DU	DSN001	Total/NA	Water	150.1	

Analysis Batch: 612792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	SM 2540C	
MB 400-612792/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-612792/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-233234-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 612794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	SM 2540D	
MB 400-612794/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 400-612794/2	Lab Control Sample	Total/NA	Water	SM 2540D	
400-233214-A-1 DU	Duplicate	Total/NA	Water	SM 2540D	

Analysis Batch: 612868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	SM 5210B	
USB 400-612868/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 400-612868/2	Lab Control Sample	Total/NA	Water	SM 5210B	

Analysis Batch: 612933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	360.1	
MB 400-612933/1	Method Blank	Total/NA	Water	360.1	
400-233299-1 DU	DSN001	Total/NA	Water	360.1	

Analysis Batch: 613069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	SM 5220D	
MB 400-613069/4	Method Blank	Total/NA	Water	SM 5220D	
LCS 400-613069/5	Lab Control Sample	Total/NA	Water	SM 5220D	
MRL 400-613069/2	Lab Control Sample	Total/NA	Water	SM 5220D	
400-233201-F-1 MS	Matrix Spike	Total/NA	Water	SM 5220D	
400-233201-F-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5220D	

General Chemistry

Analysis Batch: 613116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	SM 2120B	
MB 400-613116/1	Method Blank	Total/NA	Water	SM 2120B	
LCS 400-613116/3	Lab Control Sample	Total/NA	Water	SM 2120B	
400-233299-1 DU	DSN001	Total/NA	Water	SM 2120B	

Analysis Batch: 614493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	SM 5310B	
MB 400-614493/36	Method Blank	Total/NA	Water	SM 5310B	
LCS 400-614493/37	Lab Control Sample	Total/NA	Water	SM 5310B	
LCSD 400-614493/38	Lab Control Sample Dup	Total/NA	Water	SM 5310B	
MRL 400-614493/3	Lab Control Sample	Total/NA	Water	SM 5310B	
400-233717-A-7 MS	Matrix Spike	Total/NA	Water	SM 5310B	
400-233717-A-7 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310B	

Prep Batch: 614519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	1664A	
MB 400-614519/1-A	Method Blank	Total/NA	Water	1664A	
LCS 400-614519/2-A	Lab Control Sample	Total/NA	Water	1664A	
400-233713-C-1-A MS	Matrix Spike	Total/NA	Water	1664A	
400-233713-D-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	1664A	

Analysis Batch: 614561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	1664A	614519
MB 400-614519/1-A	Method Blank	Total/NA	Water	1664A	614519
LCS 400-614519/2-A	Lab Control Sample	Total/NA	Water	1664A	614519
400-233713-C-1-A MS	Matrix Spike	Total/NA	Water	1664A	614519
400-233713-D-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	1664A	614519

Prep Batch: 615106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	351.2	
MB 400-615106/1-A	Method Blank	Total/NA	Water	351.2	
LCS 400-615106/2-A	Lab Control Sample	Total/NA	Water	351.2	
400-233299-1 MS	DSN001	Total/NA	Water	351.2	
400-233299-1 MSD	DSN001	Total/NA	Water	351.2	

Prep Batch: 615109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	365.2/365.3/365	
MB 400-615109/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 400-615109/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	
400-233299-1 MS	DSN001	Total/NA	Water	365.2/365.3/365	
400-233299-1 MSD	DSN001	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 615304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	365.4	615109
MB 400-615109/1-A	Method Blank	Total/NA	Water	365.4	615109

General Chemistry (Continued)

Analysis Batch: 615304 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-615109/2-A	Lab Control Sample	Total/NA	Water	365.4	615109
MRL 400-615304/10	Lab Control Sample	Total/NA	Water	365.4	
400-233299-1 MS	DSN001	Total/NA	Water	365.4	615109
400-233299-1 MSD	DSN001	Total/NA	Water	365.4	615109

Analysis Batch: 615349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	351.2	615106
MB 400-615106/1-A	Method Blank	Total/NA	Water	351.2	615106
LCS 400-615106/2-A	Lab Control Sample	Total/NA	Water	351.2	615106
MRL 400-615349/11	Lab Control Sample	Total/NA	Water	351.2	
400-233299-1 MS	DSN001	Total/NA	Water	351.2	615106
400-233299-1 MSD	DSN001	Total/NA	Water	351.2	615106

Analysis Batch: 615567

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	350.1	
MB 400-615567/20	Method Blank	Total/NA	Water	350.1	
LCS 400-615567/21	Lab Control Sample	Total/NA	Water	350.1	
MRL 400-615567/15	Lab Control Sample	Total/NA	Water	350.1	
400-234044-C-4 MS	Matrix Spike	Total/NA	Water	350.1	
400-234044-C-4 MSD	Matrix Spike Duplicate	Total/NA	Water	350.1	

Rad

Prep Batch: 600973

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	PrecSep-21	
MB 160-600973/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-600973/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
160-48910-D-5-B MS	Matrix Spike	Total/NA	Water	PrecSep-21	
160-48910-F-5-A MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 600981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	PrecSep_0	
MB 160-600981/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-600981/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
160-48910-D-5-D MS	Matrix Spike	Total/NA	Water	PrecSep_0	
160-48910-F-5-B MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep_0	

Prep Batch: 601547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	PrecSep_0	
MB 160-601547/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-601547/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
680-230504-C-1-A DU	Duplicate	Total/NA	Water	PrecSep_0	

Prep Batch: 602560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-233299-1	DSN001	Total/NA	Water	Evaporation	

Rad (Continued)

Prep Batch: 602560 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 160-602560/1-A	Method Blank	Total/NA	Water	Evaporation	
LCS 160-602560/2-A	Lab Control Sample	Total/NA	Water	Evaporation	
LCSB 160-602560/3-A	Lab Control Sample	Total/NA	Water	Evaporation	
860-44045-C-1-B MS	Matrix Spike	Total/NA	Water	Evaporation	
860-44045-C-1-C MSBT	Matrix Spike	Total/NA	Water	Evaporation	
860-44045-C-1-D DU	Duplicate	Total/NA	Water	Evaporation	

Lab Chronicle

Client: Greenfield Environmentl Multistate Trust
Project/Site: Tronox -NPDES Renewal

Job ID: 400-233299-1

Client Sample ID: DSN001

Date Collected: 02/15/23 08:30
Date Received: 02/15/23 15:00

Lab Sample ID: 400-233299-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		2	612744	RS	EET PEN	02/16/23 15:08
Total/NA	Analysis	300.0		2	612745	RS	EET PEN	02/16/23 15:08
Total/NA	Prep	1631E			613168	NET	EET PEN	02/16/23 16:45 - 02/20/23 10:41 [1]
Total/NA	Analysis	1631E		1	613267	NET	EET PEN	02/20/23 15:08
Total/NA	Prep	200.8			612701	ARE	EET PEN	02/16/23 10:34
Total/NA	Analysis	200.8		5	612877	BAW	EET PEN	02/16/23 22:37
Total/NA	Prep	200.8			612701	ARE	EET PEN	02/16/23 10:34
Total/NA	Analysis	200.8		5	613042	NTH	EET PEN	02/17/23 18:06
Total/NA	Analysis	150.1		1	612733	MCC	EET PEN	02/16/23 08:00
Total/NA	Prep	1664A			614519	HA	EET PEN	03/01/23 14:49
Total/NA	Analysis	1664A		1	614561	HA	EET PEN	03/02/23 07:55
Total/NA	Analysis	350.1		1	615567	CAC	EET PEN	03/08/23 14:50
Total/NA	Prep	351.2			615106	ANE	EET PEN	03/06/23 11:41
Total/NA	Analysis	351.2		1	615349	ANE	EET PEN	03/07/23 13:28
Total/NA	Analysis	360.1		1	612933	SRC	EET PEN	02/17/23 11:00
Total/NA	Prep	365.2/365.3/365			615109	ANE	EET PEN	03/06/23 11:43
Total/NA	Analysis	365.4		1	615304	ANE	EET PEN	03/07/23 10:32
Total/NA	Analysis	SM 2120B		1	613116	DEK	EET PEN	02/16/23 20:30
Total/NA	Analysis	SM 2540C		1	612792	VB	EET PEN	02/16/23 13:58
Total/NA	Analysis	SM 2540D		1	612794	VB	EET PEN	02/16/23 14:05
Total/NA	Analysis	SM 5210B		1	612868	SRC	EET PEN	02/15/23 17:48 - 02/21/23 10:01 [1]
Total/NA	Analysis	SM 5220D		1	613069	DN1	EET PEN	02/18/23 16:30
Total/NA	Analysis	SM 5310B		1	614493	DEK	EET PEN	03/01/23 07:35
Total/NA	Prep	Evaporation			602560	MST	EET SL	03/06/23 13:02
Total/NA	Analysis	900.0		1	603187	FLC	EET SL	03/10/23 07:07
Total/NA	Prep	PrecSep_0			601547	DJP	EET SL	02/24/23 11:21
Total/NA	Analysis	903.0		1	602566	SCB	EET SL	03/06/23 10:02
Total/NA	Prep	PrecSep-21			600973	BMP	EET SL	02/20/23 09:50
Total/NA	Analysis	903.0		1	603601	FLC	EET SL	03/14/23 07:57
Total/NA	Prep	PrecSep_0			600981	BMP	EET SL	02/20/23 11:17
Total/NA	Analysis	904.0		1	601556	FLC	EET SL	02/24/23 12:08

Client Sample ID: FIELD BLANK

Date Collected: 02/15/23 08:30
Date Received: 02/15/23 15:00

Lab Sample ID: 400-233299-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1631E			613168	NET	EET PEN	02/16/23 16:45 - 02/20/23 10:41 [1]
Total/NA	Analysis	1631E		1	613267	NET	EET PEN	02/20/23 15:15

[1] Completion dates and times are reported or not reported per method requirements or individual lab discretion.

Laboratory References:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: Greenfield Environmentl Multistate Trust
Job ID: 400-233299-1
Project/Site: Tronox -NPDES Renewal

Laboratory: Eurofins Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-23
ANAB	ISO/IEC 17025	L2471	02-22-26
Arkansas DEQ	State	88-0689	09-01-23
California	State	2510	06-30-23
Florida	NELAP	E81010	06-30-23
Georgia	State	E81010(FL)	06-30-23
Illinois	NELAP	200041	10-09-23
Kansas	NELAP	E-10253	10-31-23
Kentucky (UST)	State	53	06-30-23
Louisiana (All)	NELAP	30976	06-30-23
Louisiana (DW)	State	LA017	12-31-23
Maryland	State	233	09-30-23
Michigan	State	9912	06-30-23
North Carolina (WW/SW)	State	314	12-31-23
Oklahoma	NELAP	9810	08-31-23
Pennsylvania	NELAP	68-00467	01-31-24
South Carolina	State	96026	06-30-23
Tennessee	State	TN02907	06-30-23
Texas	NELAP	T104704286	09-30-23
US Fish & Wildlife	US Federal Programs	A22340	06-30-23
USDA	US Federal Programs	FLGNV23001	01-08-26
USDA	US Federal Programs	P330-21-00056	05-17-24
Virginia	NELAP	460166	06-14-23
West Virginia DEP	State	136	03-31-24

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-23
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-23
Kentucky (DW)	State	KY90125	12-31-23
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-23
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-23
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Greenfield Environmentl Multistate Trust
Job ID: 400-233299-1
Project/Site: Tronox -NPDES Renewal

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23
North Carolina (DW)	State	29700	07-31-23
North Dakota	State	R-207	06-30-23
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-24
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	06-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	10-31-23

Method Summary

Client: Greenfield Environmentl Multistate Trust
Project/Site: Tronox -NPDES Renewal

Job ID: 400-233299-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET PEN
1631E	Mercury, Low Level (CVAFS)	EPA	EET PEN
200.8	Metals (ICP/MS)	EPA	EET PEN
150.1	pH (Electrometric)	EPA	EET PEN
1664A	Oil and Grease	40CFR136A	EET PEN
350.1	Nitrogen, Ammonia	EPA	EET PEN
351.2	Nitrogen, Total Kjeldahl	EPA	EET PEN
360.1	Oxygen, Dissolved	EPA	EET PEN
365.4	Phosphorus, Total	EPA	EET PEN
SM 2120B	Color, Colorimetric	SM	EET PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET PEN
SM 2540D	Solids, Total Suspended (TSS)	SM	EET PEN
SM 5210B	BOD, 5-Day	SM	EET PEN
SM 5220D	COD	SM	EET PEN
SM 5310B	Organic Carbon, Total (TOC)	SM	EET PEN
900.0	Gross Alpha and Gross Beta Radioactivity	EPA	EET SL
903.0	Radium-226 (GFPC)	EPA	EET SL
903.0	Total Alpha Radium (GFPC)	EPA	EET SL
904.0	Radium-228 (GFPC)	EPA	EET SL
1631E	Preparation, Mercury, Low Level	EPA	EET PEN
1664A	HEM and SGT-HEM (Aqueous)	1664A	EET PEN
200.8	Preparation, Total Metals	EPA	EET PEN
351.2	Nitrogen, Total Kjeldahl	EPA	EET PEN
365.2/365.3/365	Phosphorus, Total	EPA	EET PEN
Evaporation	Preparation, Evaporation	None	EET SL
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Will Ehlert	Lab PM: Swafford, Mark H	Carrier Tracking No(s):	COC No: 400-117216-40586.1
Client Contact: Josh Patterson	Phone: (251)751-2637	E-Mail: Mark.Swafford@et.eurofinsus.com		Page: Page 1 of 1
Company: Greenfield Environmental Multistate Trust LLC				Job #:

Address: 7300 Rangeline Road	Due Date Requested:	
City: Mobile	TAT Requested (days):	
State, Zip: AL, 36582		
Phone: (425)281-9185	PO #: Purchase Order not required	
Email: JP@G-ETG.com; wehlert@GeoTerraEng.com	WO #:	
Project Name: NPDES Renewal	Project #: 40003893	
Site: Former Tronox - Mobile, AL	SSOW#:	

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify), Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0; 903.0_TAR	900.0 - Gross Alpha/Beta	350.1; 351.2; 365.4	5220D - COD	2120B - Color, Colorimetric	300_ORGFM_28D; 300_ORGFMS	200.8_CWA - Table 3-1 Metals	SM5310B - TOC	5210B - BOD, 5-Day	360.1 - DO	2540D - Solids, Total Suspended (TSS)	2540C - TDS	150.1 - pH & Temperature	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	D	D	S	S	N	N	D	S	N	N	N	N	N	X	
DSN001	2/15/23	8:30	24HC	Water	N	N	2	1	1	1	1	1	1	3	1	1	1	1	1	16	Field pH= su @ °C ATC

TEST AMERICA INC.
700 - MOBILE

400-233299 COC

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Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: Will Ehlert	Date/Time: 2/15/23 1258	Company: GeoTerra	Received by: M Podgett	Date/Time: 2/15/23 12:58	Company
Relinquished by: M Podgett	Date/Time: 2/15/23 1500	Company	Received by:	Date/Time: 2-15-23 1500	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.3 °C IR

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Will Ehlert	Lab PM: Swafford, Mark H	Carrier Tracking No(s):	COC No: 400-117216-40586.1
Client Contact: Josh Patterson	Phone: (251)751-2637	E-Mail: Mark.Swafford@et.eurofinsus.com		Page: Page 1 of 1
Company: Greenfield Environmental Multistate Trust LLC				Job #:

Address: 7300 Rangeline Road	Due Date Requested:
City: Mobile	TAT Requested (days):
State, Zip: AL, 36582	
Phone: (425)281-9185	PO #: Purchase Order not required
Email: JP@G-ETG.com; wehlert@GeoTerraEng.com	WO #:
Project Name: NPDES Renewal	Project #: 40003893
Site: Former Tronox - Mobile, AL	SSOW#:

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify), Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1664A - Oil & Grease	1631E - Mercury, Low Level (CVAFS)	1631E - Mercury LL Filtered Blank	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	N			
DSN001	2/15/23	8:30	G	Water	N	N	2	2	2	5	

TEST AMERICA INC.
700 - MOBILE

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Will Ehlert	2/15/23 1258	GeoTerra	M. Padgett	2/15/23 1258	
Relinquished by: M. Padgett	Date/Time: 2/15/23 1500	Company	Received by: M	Date/Time: 2-15-23 1500	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 0.3 CF

Eurofins Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone: 850-474-1001 Fax: 850-478-2671

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Swafford, Mark H	Carrier Tracking No(s):	COC No: 400-313890.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Mark.Swafford@et.eurofinsus.com	State of Origin: Alabama	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 400-233299-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 3/15/2023			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Tronox -NPDES Renewal	Project #: 40003893			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 Radium 226	903.0_TAR/PrecSep_0 Total Radium	900.0/Evaporation Gross Alpha/Beta	904.0/PrecSep_0 Radium 228	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
DSN001 (400-233299-1)	2/15/23	08:30 Central		Water			X	X	X	X	3	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 2/16/23 17[illegible]	Company	Received by: FEDEX	Date/Time:	Company
Relinquished by: FEDEX	Date/Time:	Company	Received by: Brianna Sharkey-Gonzales	Date/Time: 2/17/23 0910	Company ETAS FL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Greenfield Environmentl Multistate Trust

Job Number: 400-233299-1

Login Number: 233299
List Number: 1
Creator: Whitley, Adrian

List Source: Eurofins Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.3°C IR11
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Greenfield Environmentl Multistate Trust

Job Number: 400-233299-1

Login Number: 233299
List Number: 2
Creator: Sharkey-Gonzalez, Briana L

List Source: Eurofins St. Louis
List Creation: 02/17/23 12:20 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19
ALD071937890	AL0026328	Multistate Environmental Response Trust - Theodore Facility	OMB No. 2040-0004

Form 2F NPDES

EPA

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

STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY

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

Outfall Location

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

Outfall Number	Receiving Water Name	Latitude	Longitude
DSN001	Middle Fork Deer River	30° 32′ 19″ N	-88° 8′ 5″ W
DSN002	Middle Fork Deer River	30° 32′ 2″ N	-88° 7′ 55″ W
DSN003	Middle Fork Deer River	30° 32′ 3″ N	-88° 7′ 30″ W
		° ′ ″	° ′ ″
		° ′ ″	° ′ ″
		° ′ ″	° ′ ″

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

Improvements

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

☐ Yes ☑ No ➔ SKIP to Section 3.

2.2 Briefly identify each applicable project in the table below.

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

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

☐ Yes ☑ No

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

Site Drainage Map

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

☑ Yes ☐ No

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

Pollutant Sources

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

Outfall Number	Impervious Surface Area (within a mile radius of the facility)		Total Surface Area Drained (within a mile radius of the facility)	
DSN001	3	*specify units* Acres	100	*specify units* Acres
DSN002	2	*specify units* Acres	240	*specify units* Acres
DSN003	6	*specify units* Acres	90	*specify units* Acres
		specify units		*specify units*
		specify units		*specify units*
		specify units		*specify units*

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

Stormwater runoff is discharged from 3 outfalls. Outfalls DSN002 and DSN003 are only associated with stormwater. Outfall DSN001 is associated with wastewater and stormwater. Stormwater originating from impoundments, where spent ore materials are contained and some process area runoff is treated at the wastewater treatment plant and is discharged from Outfall DSN001. Stormwater originating outside the three impoundment area is gathered in ditches that flow to a sedimentation pond before discharge through Outfall DSN002. The site drainage infrastructure incorporates a diversion gate that directs water from DSN002 into two mix ditches and two settling ponds and into DSN001 should it be needed. This diversion provides a means for pH correction as well as settling of solids The mix ditches are equipped with automated/manual acid caustic metering pumps to maintain the discharge water within permit limits. Stormwater originating from the administration offices and maintenance buildings is directed to ditches with flow to Outfall DSN003. The facility used to be titanium dioxide plant, which has been demolished. The only remaining facility on site is the wastewater treatment plant along with the extraction wells and impoundments.

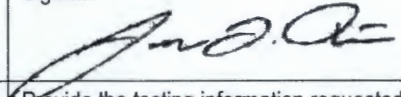
4.3 Provide the location and a description of existing structural and non-structural control measures to reduce pollutants in stormwater runoff. (See instructions for specific guidance.)

Stormwater Treatment		
Outfall Number	**Control Measures and Treatment**	**Codes from Exhibit 2F–1 (list)**
DSN001	Settling ponds, WWTP (see section 4.2)	1U, 1G, 2K, 5L, 5T
DSN002	Settling ponds (see section 4.2)	1U
DSN003	Settling through earthen ditches (see section 4.2)	1U

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

Non-Stormwater Discharges

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

Name (print or type first and last name)	Official title
Josh Patterson	Program Director
Signature	**Date signed**
	3/31/2023

5.2 Provide the testing information requested in the table below.

Outfall Number	Description of Testing Method Used	Date(s) of Testing	Onsite Drainage Points Directly Observed During Test
DSN001	dry weather inspection performed and all observed flows were confirmed through analysis of accurate schematics. All non-stormwater flows are listed in form 2C.	02/28/2023	All
DSN002	No flow during dry weather inspection.	2/28/2023	All
DSN003	No flow during dry weather inspection.	2/28/2023	All

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

Significant Leaks or Spills

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

None.

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

Discharge Information

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

7.1 Is this a new source or new discharge?

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

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

Tables A, B, C, and D

7.2 Have you completed Table A for each outfall?

☑ Yes ☐ No

Discharge Information Continued

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

Discharge Information Continued

Used or Manufactured Toxics

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

☐ Yes ☑ No ➔ SKIP to Section 8.

7.19 List the pollutants below, including TCDD if applicable.

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

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

Biological Toxicity Testing Data

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

☑ Yes ☐ No ➔ SKIP to Section 9.

8.2 Identify the tests and their purposes below.

Test(s)	Purpose of Test(s)	Submitted to NPDES Permitting Authority?	Date Submitted
P/F Statre 7 Day Chr Mysid. Bahia	Annual Monitoring Requirement (DSN001)	☑ Yes ☐ No	02/01/2023
P/F Statre 7 Day Chr Mysid Cyprinodon	Annual Monitoring Requirement (DSN001)	☑ Yes ☐ No	02/01/2023
		☐ Yes ☐ No	

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

Contract Analysis Information

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

☑ Yes ☐ No ➔ SKIP to Section 10.

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

	Laboratory Number 1	Laboratory Number 2	Laboratory Number 3
Name of laboratory/firm	Eurofins TestAmerica		
Laboratory address	3355 McLemore Drive Pensacola, FL 32514		
Phone number	(850) 474-1001		
Pollutant(s) analyzed	See Tables A and B.		

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

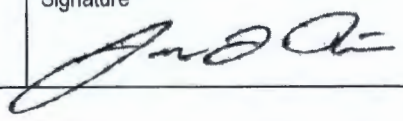
Checklist and Certification Statement

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

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

10.2 **Certification Statement**

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

Name (print or type first and last name)	Official title
Josh Patterson	Program Director
Signature 	Date signed 3/31/2023

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALD071937890	AL0026328	Multistate Environmental Response Trust - Theodore Facility	DSN002

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

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

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

	Pollutant or Parameter	Maximum Daily Discharge * (specify units)		Average Daily Discharge * (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
		Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
1.	Oil and grease	< 4.6 mg/L		<4.6 mg/L		1	
2.	Biochemical oxygen demand (BOD_5)	<2.0 mg/L		<2.0 mg/L		1	
3.	Chemical oxygen demand (COD)	<10 mg/L		<10 mg/L		1	
4.	Total suspended solids (TSS)	12 mg/L		12 mg/L		1	
5.	Total phosphorus	<0.10 mg/L		<0.10 mg/L		1	
6.	Total Kjeldahl nitrogen (TKN)	1.7 mg/L		1.7 mg/L		1	
7.	Total nitrogen (as N)	1.8 mg/L		1.8 mg/L		1	
8.	pH (minimum)	6.32		6.32		1	
	pH (maximum)	6.65		6.65		1	

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

*Analytical results provided are from samples collected on 2/28/2017. Updated sample results for DSN002 will be provided to ADEM when facility has qualified precipitation event.

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALD071937890	AL0026328	Multistate Environmental Response Trust - Theodore Facility	DSN002

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

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

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

Pollutant and CAS Number (if available)	Maximum Daily Discharge * (specify units)		Average Daily Discharge * (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Chlorides	25 mg/L		25 mg/L		1	
Iron, total rec.	4.4 mg/L		4.4 mg/L		1	
Manganese, total rec.	1.2 mg/L		1.2 mg/L		1	
TDS	72 mg/L		72 mg/L		1	
Nitrate - Nitrite	0.13 mg/L		0.13 mg/L		1	

*Analytical results provided are from samples collected on 2/28/2017. Updated sample results for DSN002 will be provided to ADEM when facility has qualified precipitation event.

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

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALD071937890	AL0026328	Multistate Environmental Response Trust - Theodore Facility	DSN002

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

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

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

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
N/A						

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

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EPA Identification Number	NPDES Permit Number	Facility name	Outfall Number
ALD071937890	AL0026328	Multistate Environmental Response Trust - Theodore Facility	DSN002

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

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

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

Date of Storm Event	Duration of Storm Event (in hours)	Total Rainfall During Storm Event (in inches)	Number of Hours Between Beginning of Storm Measured and End of Previous Measurable Rain Event	Maximum Flow Rate During Rain Event (in gpm or specify units)	Total Flow from Rain Event (in gallons or specify units)
06/28/2017	55	0.13	Approx. 76 hours	1,021 GPM	56,155 gal

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

Stream flow meter was used to determine velocity. Depth and width of flow channel on concrete apron were measured on-site (2-1/2" deep X 10 feet wide triangular cross-section). Total rainfall was measured by site rain gauge. Duration of storm event estimated based on field notes.

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALD071937890	AL0026328	Multistate Environmental Response Trust - Theodore Facility	DSN003

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

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

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

	Pollutant or Parameter	Maximum Daily Discharge * (specify units)		Average Daily Discharge * (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
		Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
1.	Oil and grease	< 4.7 mg/L		<4.7 mg/L		1	
2.	Biochemical oxygen demand (BOD_5)	<2.0 mg/L		<2.0 mg/L		1	
3.	Chemical oxygen demand (COD)	<14 mg/L		<14 mg/L		1	
4.	Total suspended solids (TSS)	12 mg/L		12 mg/L		1	
5.	Total phosphorus	<0.10 mg/L		<0.10 mg/L		1	
6.	Total Kjeldahl nitrogen (TKN)	0.88 mg/L		0.88 mg/L		1	
7.	Total nitrogen (as N)	0.98 mg/L		0.98 mg/L		1	
8.	pH (minimum)	6.6		6.6		1	
	pH (maximum)	6.6		6.6		1	

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

*Analytical results provided are from samples collected on 6/28/2017. Updated sample results for DSN003 will be provided to ADEM when facility has qualified precipitation event.

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALD071937890	AL0026328	Multistate Environmental Response Trust - Theodore Facility	DSN003

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

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

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

Pollutant and CAS Number (if available)	Maximum Daily Discharge * (specify units)		Average Daily Discharge * (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Chlorides	21 mg/L		21 mg/L		1	
Iron, total rec.	4.2 mg/L		4.2 mg/L		1	
Manganese, total rec.	0.22 mg/L		0.22 mg/L		1	
TDS	110 mg/L		110 mg/L		1	
Nitrate - Nitrite	0.095 mg/L		0.095 mg/L		1	

*Analytical results provided are from samples collected on 6/28/2017. Updated sample results for DSN003 will be provided to ADEM when facility has qualified precipitation event.

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

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALD071937890	AL0026328	Multistate Environmental Response Trust - Theodore Facility	DSN003

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

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

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

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
N/A						

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

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EPA Identification Number	NPDES Permit Number	Facility name	Outfall Number
ALD071937890	AL0026328	Multistate Environmental Response Trust - Theodore Facility	DSN003

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

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

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

Date of Storm Event	Duration of Storm Event (in hours)	Total Rainfall During Storm Event (in inches)	Number of Hours Between Beginning of Storm Measured and End of Previous Measurable Rain Event	Maximum Flow Rate During Rain Event (in gpm or specify units)	Total Flow from Rain Event (in gallons or specify units)
06/28/2017	55	0.13	Approx. 76 hours	1,021 GPM	56,155 gal

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

Stream flow meter was used to determine velocity. Depth and width of flow channel on concrete apron were measured on-site (2-1/2" deep X 10 feet wide triangular cross-section). Total rainfall was measured by site rain gauge. Duration of storm event estimated based on field notes.

LEGEND

Property Boundary | Drainage Area 1 | Drainage Area 2 | Drainage Area 3

NOT A SURVEY - For representation purposes only.
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

N

thompson ENGINEERING

GREENFIELD ENVIRONMENTAL
MULTISTATE TRUST L.L.C
THEODORE, MOBILE COUNTY, ALABAMA

1,000 0 1,000 Feet

FIGURE 2
DRAINAGE MAP

PROJECT NO.: 17-1101-0028

DATE: AUGUST 2017

P:\2017\Projects\171101\17-1101-0028 Greenfield Env Mon\Working\Environmental\GIS\MXD\FIG2.mxd

Greenfield Environmental Multistate Trust, LLC
Trustee of the Multistate Environmental Response Trust
Greenfield Environmental Trust Group, Inc., Member
jtp@g-etg.com

November 18, 2022

Mr. Richard P. Hamner, Hydrogeologist
Groundwater Branch, Land Division
Alabama Department of Environmental Management
P.O. Box 301463
Montgomery, AL 36130-1463

Re: **Updated Groundwater Monitoring Plan**
Former Kerr-McGee Synthetic Rutile Beneficiation Plant
Mobile, Alabama, NPDES Permit No.: AL0026328

Dear Mr. Hamner,

Greenfield Environmental Multistate Trust, LLC, Trustee of the Multistate Environmental Response Trust (the Multistate Trust) respectfully submits the following documents regarding the Former Kerr-McGee Synthetic Rutile Beneficiation Plant in Mobile, Alabama (Site):

> November 2022 Groundwater Monitoring Plan submitted for review under NPDES Permit No.: AL0026328 for the Multistate Trust's Site in Mobile, Alabama.

Thank you in advance for your review of this information. Once approved by ADEM, as previously discussed, the NPDES Permit No.: AL0026328 will be modified to incorporate the recommended replacement wells and any other applicable updates to the groundwater monitoring program. Please contact me at (904) 557-5252 or jtp@g-etg.com if you have any questions or concerns, or would like me to arrange a conference call to discuss the proposed GWMP in more detail.

Sincerely,

Greenfield Environmental Multistate Trust LLC
Trustee of the Multistate Environmental Response Trust
By: Greenfield Environmental Trust Group, Inc., Member
By: Josh Patterson, Program Director

cc: Jason Wilson—ADEM
Blake Holden—ADEM
Jared Kelly—ADEM
Billie Jean Wascher—ADEM
Brandy Tiblier —ADEM
Cynthia Brooks—Multistate Trust
Richard Elliott—Multistate Trust
Jeff Strand—Multistate Trust
Steve O'Hearn—Thompson Engineering
Melissa Montgomery—Thompson Engineering

thompson
ENGINEERING

GROUNDWATER MONITORING PLAN
FORMER KERR-MCGEE SYNTHETIC RUTILE BENEFICIATION PLANT
MOBILE, ALABAMA

NPDES PERMIT NO.: AL0026328

NOVEMBER 2022

Prepared for:

GREENFIELD ENVIRONMENTAL MULTISTATE TRUST LLC
TRUSTEE OF THE MULTISTATE ENVIRONMENTAL RESPONSE TRUST

PROJECT NO.: 22-1101-0014

Prepared By:
Melissa M. Montgomery, P.G.
Senior Scientist

Reviewed By:
Stephen M. O'Hearn, P.G.
Principal

MELISSA M. MONTGOMERY
ALABAMA LICENSED PROFESSIONAL GEOLOGIST
LIC. #1314

11/16/2022

2970 Cottage Hill Road. Suite 190, Mobile, AL 36606
thompsonengineering.com | 251.666-2443

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APPENDICES

1.0 INTRODUCTION

Greenfield Environmental Multistate Trust LLC, not individually but solely in its representative capacity as Trustee of the Multistate Environmental Response Trust (the Multistate Trust) was issued a modified National Pollutant Discharge Elimination System (NPDES) Permit (#AL0026328) on April 26, 2022 for the former Kerr-McGee Titanium Dioxide Beneficiation Plant (Former Tronox LLC Facility) in Mobile, Alabama (Figure 1) by the Alabama Department of Environmental Management (ADEM). The NPDES Permit requires, among other things, the Multistate Trust to submit the following reports: (1) a Semiannual Groundwater Monitoring Report to be submitted in September which includes the first and second quarter sampling events of the year; and (2) an Annual Groundwater Monitoring Report to be submitted in April of the following year which includes the four quarterly sampling events of the previous year and statistical data determining if there is a statistically significant increase over background levels at each well.

The purpose of this Groundwater Monitoring Plan (GWMP) is to provide details on the installation of nine replacement monitoring wells and to provide the groundwater sampling protocol specific to this facility. This GWMP includes a detailed discussion of methods/procedures for sample collection, sample preservation and shipment, chain-of-custody control, field quality assurance/quality control (QA/QC), field documentation, analytical methods, and laboratory QA/QC.

2.0 GROUNDWATER WELL NETWORK

2.1 Groundwater Extraction Wells and System/Network

A network of nineteen (19) new extraction wells were installed inside the containment wall prior to construction (Figure 2). The extraction wells were installed and screened in the alluvial deposits and extended two (2) feet into the underlying native gray clay later to create a sump. The extraction wells were designed to dewater the materials beneath the IOX impoundments inside the containment wall to maintain an inward hydraulic head. The extraction wells are connected to a force main network to convey extracted groundwater/leachate to a wastewater treatment system.

2.2 Water Level Observation Well Points

A network of twenty (20) water level observation points were installed to document whether the extraction well network is maintaining an inward gradient from outside to inside the containment wall (Figure 2). Ten (10) water level observation well points (WP-1 through WP-10) were installed inside the containment wall and ten (10) observation wells (WP-11 through WP-20) were installed outside the containment wall. The water level observation points were installed to the top of the native gray clay layer and constructed with five (5) foot well screens.

2.3 Existing Monitoring Wells

There are currently twenty-five (25) groundwater monitoring wells in the iron oxide storage impoundment area (Figure 2). Due to the location of the perimeter containment wall system, 37 monitoring wells/piezometers and 1 recovery well were abandoned during construction activities at the facility. Monitoring well SS was damaged during construction activities and is recommended for abandonment in Section 2.5 of this Plan.

2.4 Replacement Monitoring Well Installation Procedures

It is proposed that seven shallow alluvial aquifer and two deep aquifer monitoring wells be installed to replace the monitoring wells that were abandoned during containment wall system construction. The proposed monitoring well locations are provided on Figure 3. Details describing well type, the general locations, installation rationale, and proposed screening intervals for each new installation are provided on Table 1. Monitoring well installation activities will be performed in conformance with elements of the Alabama Environmental Investigation and Remediation Guidance (AEIRG), Revised February 2017.

Prior to performing any intrusive activities, a hand probe and/or hand-auger will be used to clear the first five feet of each boring. Borehole advancement of the proposed monitoring wells will be accomplished by hollow-stem auger and/or rotary vibratory (based on availability) drilling techniques. Soil samples will be obtained in the vadose zone of the shallow aquifer monitoring wells for visual classification only. Following soil sample collections and verification of the groundwater surface, the shallow aquifer monitoring well boreholes will be advanced approximately five (5) feet into the uppermost aquifer. The two deep aquifer replacement well boreholes will be advanced to approximately eighty (80) feet below ground surface to replicate the installation depths of the other deep aquifer monitoring wells.

Subsequent to shallow aquifer borehole completion, a 2-in. diameter PVC monitoring well with continuous slot screen will be constructed (Figure 4), in accordance with ADEM Type II construction criteria. The proposed shallow aquifer monitoring wells will be constructed with a 10-ft. section of 0.010-inch PVC Vee-Wire screen with solid PVC riser to ground surface.

The two deep aquifer boreholes will be converted into ADEM Type III monitoring wells with a proposed 6-in. diameter PVC outer casing, 2-in. diameter PVC inner casing with continuous slot screen (Figure 5). The proposed deep aquifer monitoring wells will also be constructed with a 10-ft. section of 0.010-inch PVC Vee-Wire screen.

The surface completion for all new installations will consist of lockable steel security casing mounted over the PVC casing. A two ft. by two ft. concrete well pad will be installed at the base of the each protective casing. Two protective posts will also be installed around each well pad to protect against traffic. The security casings and protective posts will be painted yellow.

Following monitoring well construction activities, each well will be developed by pumping the well until the groundwater is free of fines and is clear. The top of casing of each well will be surveyed for elevation. Installation activities are anticipated to begin prior to the first quarter sampling event of 2023.

2.5 Monitoring Well Abandonment Procedures

Monitoring well SS (Figure 2) was damaged during construction activities and is recommended for abandonment. Prior to initiation of the well abandonment, a total depth measurement will be obtained. Monitoring well SS will be removed by pulling the well casing from the borehole. The borehole will be grouted via the tremie method by pressure grouting from the bottom to the top with positive displacement. If the monitor well twists or breaks during removal, the casing will be cut off at 3 feet below ground surface and the borehole and remaining material will be tremie grouted. The security casing, protective posts, and well pad will be removed.

3.0 GROUNDWATER MONITORING

Following proposed monitoring well installation and abandonment activities, there will be thirty-three (33) groundwater monitoring wells, nineteen (19) extraction wells, and twenty (20) water level observation points in the iron oxide storage impoundment area. Table 2 is the anticipated groundwater well network inventory and Figure 3 shows their locations. All thirty-three (33) groundwater monitoring wells (labeled with an asterisk (*) on Table 2 will be sampled quarterly.

3.1 Extraction Well Operation and Maintenance

Continuous operation of the nineteen (19) extraction wells will be performed to maintain an inward gradient from outside to inside the containment wall. Maintenance of the extraction well system will be performed as needed.

3.2 Groundwater Surface Elevation Measurement

The twenty (20) water level observation points will be gauged on a bi-weekly basis, at a minimum, to verify an inward gradient from outside to inside the containment wall. The frequency of gauging these water level observation points will be re-evaluated following the closure (capping) of the IOX Impoundments.

During each quarterly sampling event, the depth to groundwater surface within each sampled monitoring well will first be measured to determine groundwater surface elevations. Groundwater surface elevations will be used to evaluate hydrologic characteristics including potentiometric surface, principal direction of flow, and hydraulic gradient. In addition, water depth measurements will be used in the field to calculate the well volume to be purged prior to sampling.

3.3 Monitoring Well Evacuation and Groundwater Sampling

Each monitoring well required to be sampled quarterly will be evacuated (purged) and sampled using dedicated tubing via either submersible or peristaltic pump in accordance with the latest (February 2017) AEIRG document. Each monitoring well will be purged in accordance with the general low flow/low stress method described in the AEIRG, Appendix C, Section C.3.3.

Prior to obtaining samples representative of the underlying groundwater, each NPDES Permit required monitoring well will be evacuated by the removal of groundwater until a minimum of

three to five well volumes of standing water is removed and when the measured field parameters (pH, temperature, and specific conductance, and turbidity) have stabilized. If a well is pumped dry, it will be considered an adequate purge and the well will be sampled following sufficient recovery.

All purged groundwater will be containerized in properly labeled facility provided drums or totes and disposed of by facility personnel through the facility's wastewater treatment system.

Following evacuation procedures, groundwater samples will be obtained from each NPDES Permit required monitoring well using the same type of pump that was used to purge the well. Samples will be collected consistent with AEIRG Appendix C, Section C.4. Groundwater samples will be placed within the appropriate laboratory supplied containers for laboratory test parameters selected, preserved consistent with AEIRG Appendix C, Section C.4.2, sealed with lids and appropriately labeled. Samples will be placed within an insulated chest packed with ice for transport to the laboratory with attendant chain-of-custody documentation.

3.4 Groundwater Analytical Procedures

Groundwater samples will be analyzed for chloride, total dissolved solids, and total metals which includes beryllium, chromium, nickel, zinc, aluminum, cadmium, manganese, lead, and iron via EPA Method 200.7. The groundwater samples will be analyzed on a normal turnaround basis.

Laboratory analysis is currently performed by Eurofins in Pensacola, Florida (NELAP certification #E81010-95).

4.0 SAMPLING REQUIREMENTS

All procedures for sample collection, preservation, and handling, chain of custody, and field equipment operation will be in general conformance with applicable guidance in the latest ADEM AEIRG and EPA Region 4 Environmental Investigations Standard Operating Procedures and Quality Assurance Manual, November 2001 (EISOPQAM). All sampling activities will be completed by an experienced Environmental Field Technician or Staff Geologist under the direct supervision of a State of Alabama licensed Project Engineer or Geologist. Thompson Engineering will supply the required groundwater sampling equipment. Sample containers will be provided by Eurofins in Mobile, Alabama.

Required groundwater sampling equipment:

- Field logbook and monitoring well location map
- Watch
- Peristaltic pump
- Stainless steel submersible pump and controller
- Dedicated sample tubing
- Water level indicator
- Multi-parameter water quality meter
- Turbidity meter
- 5-gallon bucket with gallon markings for purged groundwater
- Nitrile gloves
- Pre-cleaned, labeled, and preserved sample containers from the analytical laboratory
- Chain of custody forms

Documentation of field sampling activities is to be done legibly, completely, and neatly in a bound logbook by the sampling personnel. Field measurements collected during monitoring well excavation will be recorded in a purge table in the field logbook. The measurements recorded in the purge table will include:

- start and finish time of purging,
- field parameter measurements at each well volume,
- final field parameter measurements (to be reported for each quarterly event),
- estimated pumped volumes,

- depth to water,
- total well depth,
- well volume calculations, and
- any notes of unusual conditions.

As soon as a sample is collected, the location and all relative sampling information (including the site-specific sample identification number) will be entered into the field logbook. The sample information will also be immediately entered into the chain-of-custody form to ensure proper sample tracking. Chain-of-custody procedures will be maintained throughout the sampling and analysis and data validation procedures, and will be reviewed by the Project Engineer or Geologist upon receipt of data from both the field operations and from the laboratory. The Project Engineer or Geologist is responsible to ensure that the QA/QC and field sampling methodologies are followed during the execution of field activities. The Project Engineer or Geologist will be responsible for any corrective action deemed necessary during the field sampling. Any deviations and the corrective action associated with it will be noted in the field logbook.

5.0 QUALITY ASSURANCE AND QUALITY CONTROL

5.1 Field Quality Assurance and Quality Control

All procedures for field equipment operation and calibration, decontamination, and preventive maintenance will be in general conformance with applicable guidance in the latest ADEM AEIRG (Appendix D), EPA Region 4 EISOPQAM, and EPA Region 4 Field Branch Quality System and Technical Procedures. All sampling equipment will be inspected and tested for performance and accuracy by the Thompson Engineering field sampling personnel prior to each groundwater sampling event to ensure quality control. All field sampling equipment will be cleaned and decontaminated prior to use and in between monitoring well locations. A rinsate/equipment field blank will be collected once per day that the submersible pump in used. Rinsate/equipment field blanks are not required when using the peristaltic pump. Field equipment will be calibrated at the beginning of each field sampling day using non-expired calibration/verification standards. All decontamination liquids will be containerized and managed with the well purge water and other investigation derived waste.

Required field decontamination equipment:

- Decontamination liquids—isopropyl alcohol, Liqui-Nox® detergent, potable water, and deionized water
- Brushes
- Wash Buckets
- Aluminum Foil

5.2 Laboratory Assurance and Quality Control

Intra-laboratory QA/QC operations used by the Eurofins laboratory are documented in their Laboratory Quality Manual (available upon request). This manual outlines laboratory equipment calibration and preventative maintenance procedures. The manual also references the corrective action taken by Eurofins personnel if acceptance criteria are not met and details the documentation of corrective action recorded if such an occurrence takes place. Also, Eurofins undergoes routine evaluations and audits. Internal QC check samples analyzed and reported in conjunction with the quarterly groundwater sample results will include method blanks, matrix spikes, matrix spike duplicates, and reference material standards.

6.0 HEALTH AND SAFETY

All work performed on this project will comply with all applicable Federal, State of Alabama and Thompson Engineering's General Safety Health Procedures requirements. The Project Engineer or Geologist overseeing field sampling activities will review the Site-Specific Job Safety and Environmental Analysis (JSEA) with field sampling personnel before beginning work. The JSEA is provided in Appendix A and includes the names of personnel responsible for health and safety during site activities, equipment and materials needed to complete the job task, personal protective equipment needed, and identifies potential hazards for each basic step of the job and recommendations for the safest way to complete each step.

All employees have the right and the responsibility to stop work that they consider to be unsafe. Work will resume once the safety officer, supervisor, and employees have all agreed that the unsafe condition has been corrected. All injuries, incidents, or near misses will be reported to the safety officer and the facility representatives immediately.

LEGEND

Railroad Track

NHDFlowline

1:24,000

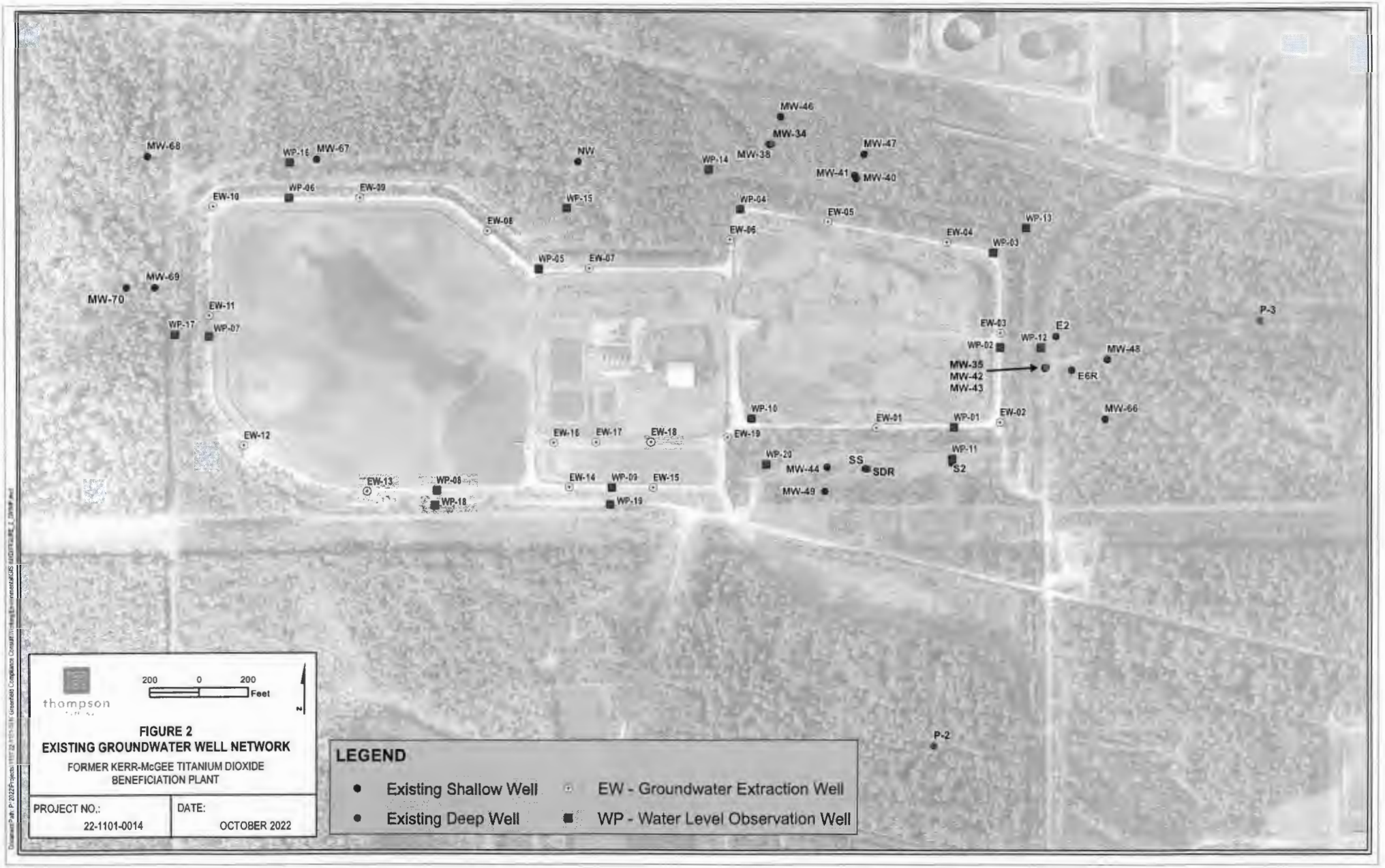
0 2,000 4,000 Feet

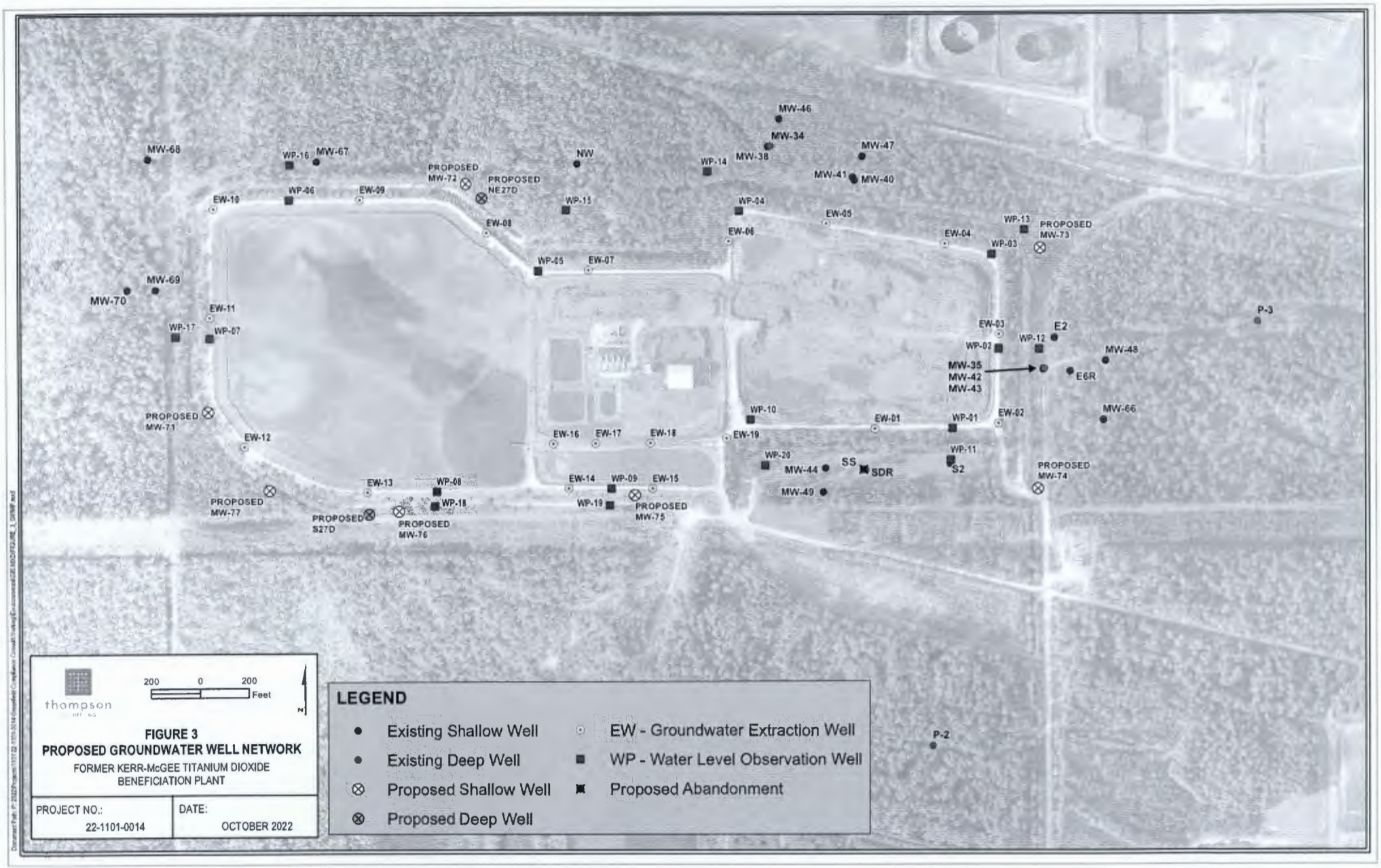
1 inch = 2,000 feet

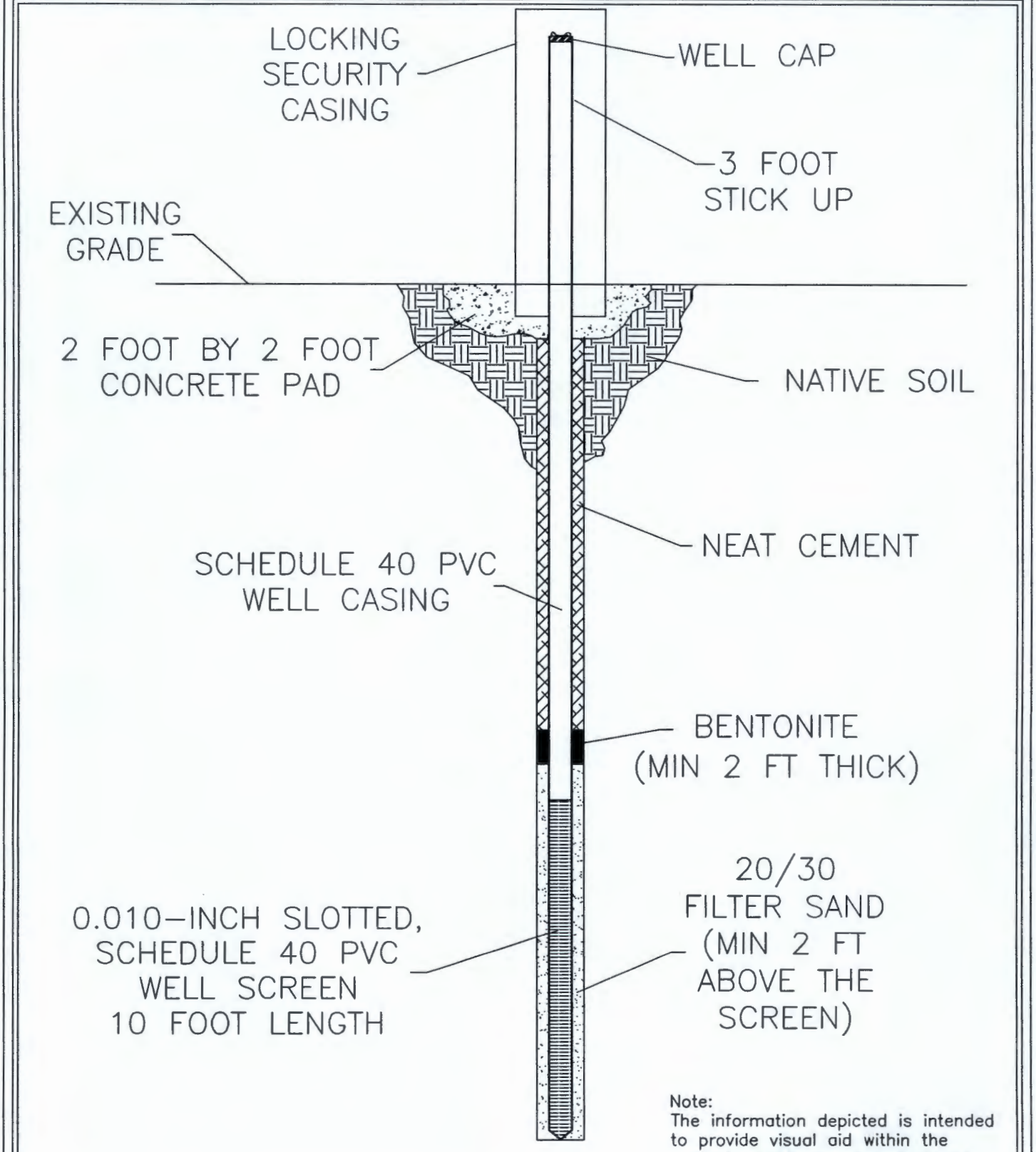
N

City of Mobile 2010 Imagery - 1Ft. Resolution
*NOT A SURVEY - Approximate property boundary.

FORMER KERR-McGEE SYNTHETIC RUTILE BENEFICIATION PLANT	thompson ENGINEERING	FIGURE 1 MAP OF FORMER KERR-McGEE PROPERTY AND SURROUNDING AREAS
PREPARED FOR: GREENFIELD ENVIRONMENTAL MULTISTATE TRUST LLC		PROJECT NO.: 22-1101-0014 DATE: OCTOBER 2022

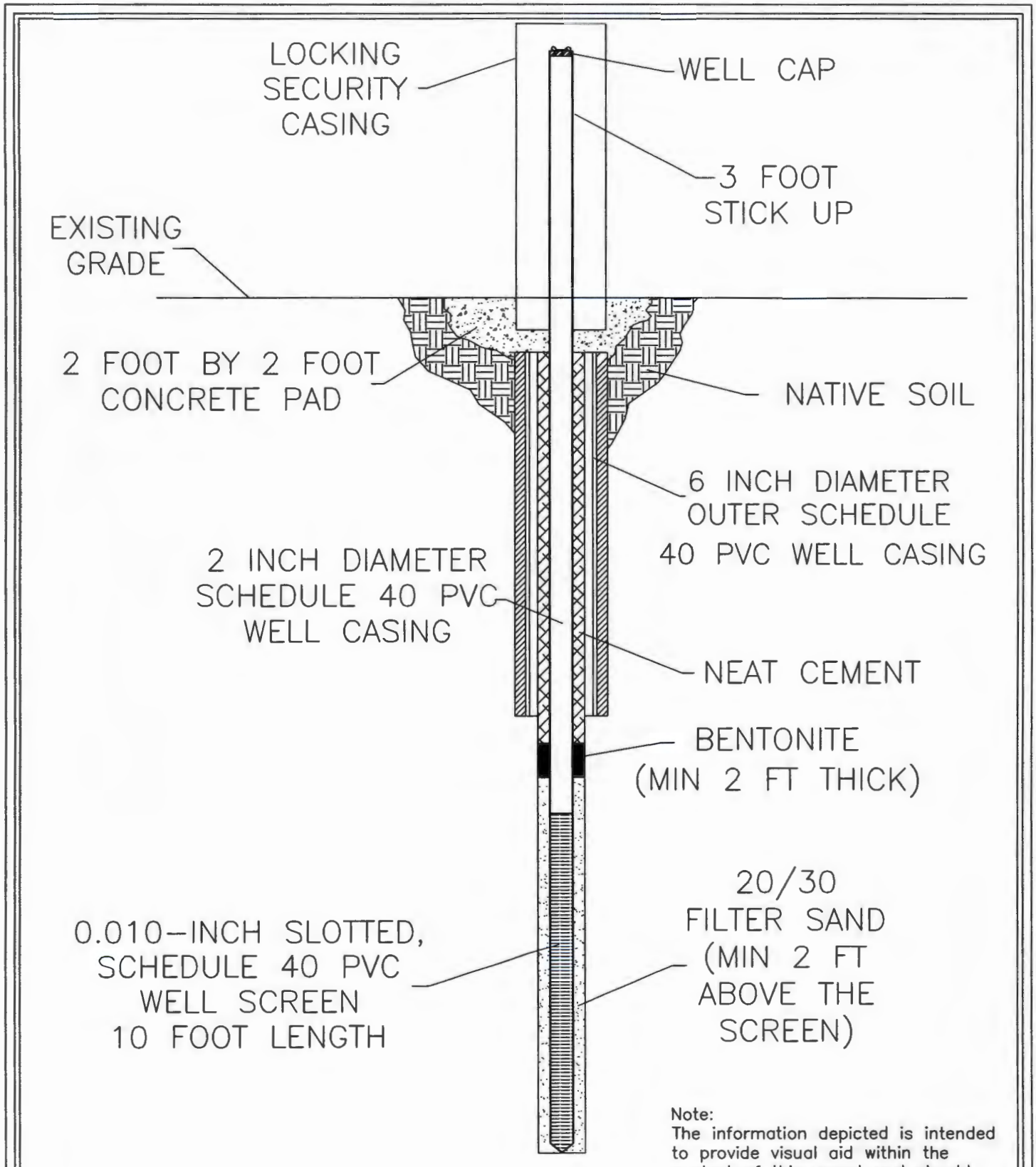

MW-46
MW-34
MW-38
MW-47
MW-41
MW-40
MW-68
WP-16
MW-67
NW
WP-14
EW-10
WP-06
EW-09
WP-15
WP-04
EW-05
EW-08
EW-06
WP-13
EW-04
WP-03
WP-05
EW-07
MW-69
MW-70
EW-11
WP-17
WP-07
EW-03
E2
WP-12
WP-02
MW-48
MW-35
MW-42
MW-43
E6R
P-3
WP-10
EW-01
WP-01
EW-02
MW-66
EW-12
EW-16
EW-17
EW-18
EW-19
WP-20
MW-44
SS
SDR
WP-11
S2
MW-49
EW-13
WP-08
WP-18
EW-14
WP-09
EW-15
WP-19
P-2
200
0
200
Feet
N
thompson
FIGURE 2
EXISTING GROUNDWATER WELL NETWORK
FORMER KERR-McGEE TITANIUM DIOXIDE
BENEFICIATION PLANT
PROJECT NO.:
22-1101-0014
DATE:
OCTOBER 2022
LEGEND
Existing Shallow Well
Existing Deep Well
EW - Groundwater Extraction Well
WP - Water Level Observation Well


MW-68
WP-16
MW-67
PROPOSED MW-72
PROPOSED NE27D
NW
MW-46
MW-34
MW-38
WP-14
MW-47
MW-41
MW-40
EW-10
WP-06
EW-09
WP-15
WP-04
EW-08
EW-05
EW-06
EW-04
WP-13
PROPOSED MW-73
WP-03
WP-05
EW-07
MW-69
MW-70
EW-11
WP-17
WP-07
EW-03
E2
WP-12
WP-02
MW-48
MW-35
MW-42
MW-43
E6R
P-3
PROPOSED MW-71
EW-12
WP-10
EW-01
WP-01
EW-02
MW-66
EW-16
EW-17
EW-18
EW-19
WP-20
SS
MW-44
SDR
WP-11
S2
PROPOSED MW-74
EW-13
WP-08
EW-14
WP-09
EW-15
PROPOSED MW-77
WP-18
WP-19
PROPOSED MW-75
MW-49
PROPOSED S27D
PROPOSED MW-76
P-2
200 0 200 Feet
N
thompson
FIGURE 3
PROPOSED GROUNDWATER WELL NETWORK
FORMER KERR-McGEE TITANIUM DIOXIDE BENEFICIATION PLANT
PROJECT NO.: 22-1101-0014
DATE: OCTOBER 2022
LEGEND
Existing Shallow Well
Existing Deep Well
Proposed Shallow Well
Proposed Deep Well
EW - Groundwater Extraction Well
WP - Water Level Observation Well
Proposed Abandonment



Note:
The information depicted is intended to provide visual aid within the context of this report and should not be used as a sole reference in precise dimensioning of features indicated.

FORMER KERR-MCGEE SYNTHETIC RUTILE BENEFICIATION PLANT	thompson ENGINEERING	FIGURE 4 PROPOSED TYPE II MONITORING WELL SCHEMATIC
PREPARED FOR: GREENFIELD ENVIRONMENTAL MULTISTATE TRUST LLC		PROJECT NO: 22-1101-0014 / DATE: OCTOBER 2022



Note:
The information depicted is intended to provide visual aid within the context of this report and should not be used as a sole reference in precise dimensioning of features indicated.

FORMER KERR-MCGEE SYNTHETIC RUTILE BENEFICIATION PLANT

PREPARED FOR:
GREENFIELD ENVIRONMENTAL MULTISTATE TRUST LLC

thompson ENGINEERING

FIGURE 5
PROPOSED TYPE III
MONITORING WELL SCHEMATIC

PROJECT NO: 22-1101-0014

DATE: OCTOBER 2022

TABLE 1
PROPOSED MONITORING WELL INSTALLATION DETAILS

FORMER KERR-MCGEE SYNTHETIC
RUTILE BENEFICATION PLANT
MOBILE, MOBILE COUNTY, ALABAMA
NPDES PERMIT NO.: AL0026328

Proposed Well ID	Proposed Well Type	General Location	Rational	Anticipated Screen Interval Depth
MW-72	Shallow Aquifer Sentinel Well	Northeast of 27-acre impoundment	Monitor shallow groundwater concentrations in this area.	10 ft to 20 ft
NE27D	Deep Aquifer Sentinel Well	Northeast of 27-acre impoundment	Monitor deep groundwater concentrations in this area.	70 ft to 80 ft
MW-73	Shallow Aquifer Sentinel Well	Northeast of former 19-acre impoundment	Monitor shallow groundwater concentrations in this area. Replacement for monitoring well NE.	10 ft to 20 ft
MW-74	Shallow Aquifer Sentinel Well	Southeast of former 19-acre impoundment	Monitor shallow groundwater concentrations in this area. Replacement for monitoring well SE.	10 ft to 20 ft
ME-75	Shallow Aquifer Sentinel Well	South of former 10-acre impoundment	Monitor shallow groundwater concentrations in this area. Replacement for monitoring well S3A.	10 ft to 20 ft
MW-76	Shallow Aquifer Sentinel Well	South of 27-acre impoundment	Monitor shallow groundwater concentrations in this area. Replacement for monitoring well MW-65.	10 ft to 20 ft
S27D	Deep Aquifer Sentinel Well	South of 27-acre impoundment	Monitor deep groundwater concentrations in this area.	70 ft to 80 ft
MW-77	Shallow Aquifer Sentinel Well	Southwest of 27-acre impoundment	Monitor shallow groundwater concentrations in this area. Replacement for monitoring well MW-64.	10 ft to 20 ft
MW-71	Shallow Aquifer Sentinel Well	Southwest of 27-acre impoundment	Monitor shallow groundwater concentrations in this area. Replacement for monitoring well MW-63.	10 ft to 20 ft

Notes:
1. Anticipated screen interval is the depth in feet below ground surface.
2. Proposed well locations are provided on Figure 3.

TABLE 2
ANTICIPATED GROUNDWATER WELL NETWORK INVENTORY
AROUND THE IRON OXIDE STORAGE IMPOUNDMENTS

FORMER KERR-MCGEE SYNTHETIC
RUTILE BENEFICATION PLANT
MOBILE, MOBILE COUNTY, ALABAMA
NPDES PERMIT NO.: AL0026328

Groundwater Well Network ID	Ground Elevation, ft	Top of Casing Elevation, ft	Total Well Depth, ft
*P-2	^20.97	^23.87	80.43
*P-3	^17.52	^20.34	80.16
*E-6R	20.6	22.41	21.77
*MW-34	^18.22	^21.20	74.77
*MW-35	^19.60	^24.00	82.60
*MW-38	18.2	21.49	15.14
*MW-40	19.2	21.93	15.31
*MW-41	19.2	22.03	19.90
*MW-42	19.8	22.86	22.39
*MW-43	^20.04	^23.20	17.33
*MW-44	^18.00	^21.21	21.40
*MW-46	18.2	21.56	15.65
*MW-47	21.3	24.10	18.34
*MW-48	19.3	22.63	18.34
*MW-49	20.0	21.82	20.68
*MW-66	18.8	20.98	19.72
*MW-67	22.3	25.13	19.83
*MW-68	27.7	30.67	21.64
*MW-69	23.3	26.83	19.53
*MW-70	^22.00	^24.74	17.11
*NW	19.3	21.67	21.05
*E2	^18.81	^19.51	14.18
*S2	18.5	21.23	17.05
*SDR	^18.56	^21.64	80.10
*MW-71	To be determined	To be determined	~20
*MW-72	To be determined	To be determined	~20
*MW-73	To be determined	To be determined	~20
*MW-74	To be determined	To be determined	~20
*MW-75	To be determined	To be determined	~20
*MW-76	To be determined	To be determined	~20
*MW-77	To be determined	To be determined	~20
*NE27D	To be determined	To be determined	~80
*S27D	To be determined	To be determined	~80

TABLE 2 (CONT.)
ANTICIPATED GROUNDWATER WELL NETWORK INVENTORY
AROUND THE IRON OXIDE STORAGE IMPOUNDMENTS

FORMER KERR-MCGEE SYNTHETIC
RUTILE BENEFICATION PLANT
MOBILE, MOBILE COUNTY, ALABAMA
NPDES PERMIT NO.: AL0026328

Groundwater Well Network ID	Ground Elevation, ft	Top of Casing Elevation, ft	Total Well Depth, ft
WP-01	41.8	44.76	43.40
WP-02	43.2	46.12	47.90
WP-03	40.7	44.16	44.30
WP-04	41.7	44.87	48.80
WP-05	41.1	43.92	42.80
WP-06	42.5	45.38	33.90
WP-07	42.8	46.25	33.70
WP-08	42.9	45.93	32.90
WP-09	41.9	44.89	38.00
WP-10	41.3	44.22	43.50
WP-11	18.8	21.97	18.20
WP-12	20.2	23.12	15.00
WP-13	20.7	37.37	18.10
WP-14	17.9	20.80	18.50
WP-15	19.4	22.69	17.20
WP-16	22.7	25.68	17.00
WP-17	22.1	25.08	13.50
WP-18	22.8	22.49	14.43
WP-19	24.7	27.82	14.30
WP-20	19.0	22.21	14.60
EW-01	41.7	43.90	44.60
EW-02	40.8	42.99	43.30
EW-03	42.0	44.30	43.30
EW-04	40.3	42.22	41.60
EW-05	40.5	42.59	42.80
EW-06	41.7	43.86	48.25
EW-07	41.2	43.38	43.90
EW-08	42.2	44.28	44.25
EW-09	42.2	44.27	42.80
EW-10	43.1	45.24	33.00
EW-11	43.2	45.48	35.80
EW-12	43.3	45.63	37.50
EW-13	42.9	44.89	33.20
EW-14	42.4	44.60	35.50
EW-15	41.9	44.01	39.50
EW-16	42.0	44.10	38.25
EW-17	41.9	44.12	40.02
EW-18	41.9	43.88	42.10
EW-19	43.2	45.59	46.80

Notes:
1. * indicates these wells are sampled quarterly for pH, Cl, TDS, Fe(total), Pb, Al, Be, Cd, Cr, Mn, Ni, Zn, specific conductance, temperature, and water level elevation.
2. WP wells are water level observation points and will be gauged bi-weekly for water level elevation.
3. EW wells are extraction wells.
4. Elevations are in NAVD 88 Geoid 12B and were surveyed by Rowe Engineering & Surveying in September 2022.
5. ^ indicates these wells were not surveyed by Rowe Engineering & Surveying therefore historic elevation data was used.

APPENDIX A

SITE SPECIFIC JOB SAFETY AND ENVIRONMENTAL ANALYSIS

thompson ENGINEERING	**Thompson Engineering** **2970 Cottage Hill Rd.** **Mobile, AL 36606** **Phone: 251-666-2443** **FAX: 251-666-6244**	**Thompson Engineering, Inc.** **Environmental** **Groundwater Sampling** **Job Safety and Environmental Analysis (JSEA)**

Equipment Needed for Job Task	Materials Needed	Personal Protective Equipment
Water level indicator, multi-meter with calibration solution, turbidity meter, peristaltic pump, submersible pump with controller	Field notebook, site map, flex tubing, sample tubing, 5 gallon buckets, paper towels, trash bags, potable and di water, isopropyl alcohol, Liqui-Nox® detergent, decon. brushes, aluminum foil, ice chests, ice, sample containers, chain of custody	Level D Safety glasses with side shields, steel toed boots, hard hat, nitrile gloves, high visibility clothing, snake chaps, first aid kit, fire extinguisher, insect repellent, sun screen, drinking water

TASK: Quarterly groundwater sampling

EMERGENCY CONTACTS:

- Ambulance 911
- Hospital Nearest
- Steve O'Hearn, TEI Project Manager/Supervisor Environmental Services 251-665-5440 Office, 251-510-6617 Cell
- Mike Shumaker, TEI Safety Manager 251-644-7362 Cell, 251-666-2443 Office
- Will Elhert, On-site Contact 251-751-2637 Cell
- Gene Guarnere, On-site Company Rep 407-967-1447 Cell

PROCEDURE:

- **Toolbox Safety Meeting** – Will be conducted prior to the start of work.
- **JSEA** – Will be reviewed before the start of work.
- Be aware of your surroundings at all times

REMEMBER:

- You have the right to stop the job if you feel it's unsafe.
- No horseplay, practical jokes or fighting
- Keep all work areas clean and orderly at all times.
- No smoking outside of designated smoking areas.
- Avoid trip hazards by keeping the work area free of work materials and tools.
- Stay alert and out of the line of fire of automobile traffic and construction "heavy equipment"

STEPS	JOB SEQUENCE	POTENTIAL HAZARDS	RECOMMENDED SAFE JOB PROCEDURE
1.	1. Inspect company vehicle as per TEI Fleet Procedure requirements	1. Vehicle breakdown on highway 2. Stopped at a police checkpoint	1. Conduct a thorough inspection of the vehicle before driving. 2. Buckle seat belt 3. Ensure Insurance certificate and vehicle registration are in the glove compartment.
2.	1. Load equipment into vehicle	1. Over exertion/back injuries caused by lifting heavy equipment	1. Size up the load. 2. Use proper lifting techniques. 3. Seek help with large or bulky loads. 4. Use a "dolly" if necessary.
3.	1. Drive to work location	1. Vehicle crash 2. Talking on cell phone, texting, reading text messages, entering numbers 3. Your vehicle struck by vehicular traffic or construction equipment.	1. Drive defensively. Watch out for "the other guy." 2. Comply with Alabama "Rules of the Road." 3. Obey THI fleet procedure and cell phone/driving policy. 4. Remain alert while driving and concentrate on the road. 5. Be aware of your surroundings at all times. 6. Park in designated parking areas only or park away from heavy or congested traffic areas.
4.	1. Prepare for the work day	1. Emergency at the plant/job site (medical, fire, vapor release, etc.) 2. Heat related illness/dehydration 3. Insect bites 4. Over exposure to sunlight	1. Be familiar with medical emergency procedures (Job-site and Thompson's) 2. Be familiar with Emergency Evacuation Procedures. Know where emergency assembly areas are and how to get there. 3. Have a generous supply of drinking water and drink it. 4. Use insect repellant. 5. Use sunscreen.
5.	1. Set-up at monitor well location 2. Open well vault/cover 3. Insert water level/sampling tubing	1. Over exertion/back injury from lifting equipment or bending to open well. 2. Struck by vehicular traffic and construction equipment.	1. Use proper lifting techniques. Bend knees or place knee on ground while opening well covers. 2. Stay out of the "line-of-fire" of vehicles and equipment. Use cones to mark off work area. 3. Be aware of your surroundings at all times.

6.	1. Purge groundwater and collect readings. 2. Sample groundwater per regulations.	1. Exposure to contaminated groundwater. 2. Struck by vehicular traffic and construction equipment	1. Wear all required PPE 2. Use protective gloves at all times when handing tubing and sample containers. Turn pump down to lowest flow while filling sample containers. 3. Use the right tool for the job. 4. Ensure good footing and body stance. 5. Be aware of your surroundings at all times. Use cones to mark off work area.
7.	1. Remove sampling equipment. 2. Reseal well vault/cover	1. Over exertion/back injury from lifting equipment. 2. Exposure to contaminated groundwater. 3. Struck by vehicular traffic and construction equipment.	1. Use proper lifting techniques 2. Wear all required PPE and use protective gloves at all times when handing tubing and sample containers. Dispose of tubing immediately in trash bags. 3. Stay out of the "line-of-fire" of vehicles and equipment. 4. Be aware of your surroundings at all times. Removal of cones used to mark off work area should be the last step taken before moving to a new location or leaving job site.

Greenfield Environmental Multistate Trust, LLC
Trustee of the Multistate Environmental Response Trust
Greenfield Environmental Trust Group, Inc., Member
203 3rd Street, Saint Augustine, FL 32080
(904) 557-5252
jtp@g-etg.com

May 24, 2023

Mr. Scott Jackson
Industrial Section, Water Division
Alabama Department of Environmental Management
Post Office Box 301463
Montgomery, Alabama 36130-1463

Re: Supplemental Information - Application for Permit Renewal
Former Kerr-McGee Synthetic Rutile Beneficiation Plant Site, Mobile, Alabama
NPDES Permit No. AL0026328

Dear Mr. Jackson:

Greenfield Environmental Multistate Trust, LLC, Trustee of the Multistate Environmental Response Trust (the Multistate Trust), submitted its application for renewal of the Former Kerr-McGee Synthetic Rutile Beneficiation Plant's NPDES Permit No. AL0026328, along with the required application fee, to the Alabama Department of Environmental Management (ADEM) on April 3, 2023. The previous submittal included the required forms (ADEM Form 187, EPA Form 1, EPA Form 2C, and EPA Form 2F), with notification from the Multistate Trust that the application included estimated stormwater data for Outfalls 002 and 003 (on Form 2F) due to laboratory delays in receiving analytical results.

A qualifying storm event with sufficient discharge from outfalls DSN002 and DSN003 was sampled on March 9, 2023; this analytical data is provided on the enclosed updated EPA Form 2F data pages as a supplement to the previously submitted permit application. We will proactively reach out to ADEM through our consultant, Brown and Caldwell, to verify your receipt of the updated forms, answer any questions you may have, and provide additional information as quickly as possible.

If you have any questions or information regarding Permit No. AL0026328, please contact me at (904) 557-5252 or jtp@g-etg.com.

Sincerely,

Greenfield Environmental Multistate Trust LLC
Trustee of the Multistate Environmental Response Trust
By: Greenfield Environmental Trust Group, Inc., Member
By: Josh Patterson, Program Director

Electronic cc:
Jason Wilson, ADEM
Jared Kelly, ADEM
Cynthia Brooks, Multistate Trust
Jeff Strand, Multistate Trust
Kelly Moody, Brown and Caldwell
Blake Holden, ADEM
Billie Jean Wascher, ADEM
Richard Elliott, Multistate Trust
Gene Guarnere, Brown and Caldwell

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number	Form Approved 03/05/19
ALD071937890	AL0026328	Multistate Environmental Trust Theodore Facility	002	OMB No. 2040-0004

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

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

	Pollutant or Parameter	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
		Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
1.	Oil and grease	<1.5 mg/L	[redacted]	-	[redacted]	1	-
2.	Biochemical oxygen demand (BOD_5)	< 2.0 mg/L	-	-	-	1	-
3.	Chemical oxygen demand (COD)	11.0 mg/L	-	-	-	1	-
4.	Total suspended solids (TSS)	6.0 mg/L	-	-	-	1	-
5.	Total phosphorus	<0.049 mg/L	-	-	-	1	-
6.	Total Kjeldahl nitrogen (TKN)	<0.26 mg/L	-	-	-	1	-
7.	Total nitrogen (as N)	0.21 mg/L	-	-	-	1	-
8.	pH (minimum)	6.18	[redacted]	-	[redacted]	1	-
	pH (maximum)	6.18		-		1	-

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

Notes
Outfall 002 has >24 hr retention and did not result in enough discharge to collect composite.
BOD result from 02/28/2017.

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALD071937890	AL0026328	Multistate Environmental Trust Theodore Facility	002

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

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

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

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Chloride	16 mg/L	-	-	-	1	-
Total Sulfate	11 mg/L	-	-	-	1	-
Total Alpha	1.3 pCi/L	-	-	-	1	-
Total Radium 226	0.382 pCi/L	-	-	-	1	-
Total Radium 228	< 0.548 pCi/L	-	-	-	1	-
Total Dissolved Solids	100 mg/L	-	-	-	1	-
Dissolved Oxygen	5.09 mg/L	-	-	-	1	-
Iron, Total Recoverable	2.0 mg/L	-	-	-	1	-
Selenium, Total Recoverable	2.2 ug/L	-	-	-	1	-
Thallium, Total Recoverable	< 0.12 ug/L	-	-	-	1	-
Barium, Total Recoverable	0.046 mg/L	-	-	-	1	-
Aluminum, Total Recoverable	0.82 mg/L	-	-	-	1	-
Copper, Total Recoverable	1.8 ug/L	-	-	-	1	-
Antimony, Total Recoverable	< 1.5 ug/L	-	-	-	1	-
Manganese, Total Recoverable	0.79 mg/L	-	-	-	1	-
Mercury, Total Recoverable	2.2 ng/L	-	-	-	1	-

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

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALD071937890	AL0026328	Multistate Environmental Trust Theodore Facility	002

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

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

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

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Chromium, Total	0.0024 mg/L	-	-	-	1	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

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

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALD071937890	AL0026328	Multistate Environmental Trust Theodore Facility	002

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

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

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

Date of Storm Event	Duration of Storm Event (in hours)	Total Rainfall During Storm Event (in inches)	Number of Hours Between Beginning of Storm Measured and End of Previous Measurable Rain Event	Maximum Flow Rate During Rain Event (in gpm or specify units)	Total Flow from Rain Event (in gallons or specify units)
3/9/23	3	0.75	>72	8,000 gpm	1,400,000

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

Rational method

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALD071937890	AL0026328	Multistate Environmental Trust Theodore Facility	003

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

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

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

	Pollutant or Parameter	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
		Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
1.	Oil and grease	<1.5 mg/L	[redacted]	-	[redacted]	1	
2.	Biochemical oxygen demand (BOD_5)	< 2.0 mg/L	-	-	-	1	-
3.	Chemical oxygen demand (COD)	33 mg/L	27 mg/L	-		1	
4.	Total suspended solids (TSS)	99 mg/L	50 mg/L	-	-	1	-
5.	Total phosphorus	0.049 mg/L	<0.049 mg/L	-	-	1	-
6.	Total Kjeldahl nitrogen (TKN)	0.86 mg/L	0.65 mg/L	-	-	1	-
7.	Total nitrogen (as N)	0.21 mg/L	0.92 mg/L	-	-	1	-
8.	pH (minimum)	7.58	[redacted]	-	[redacted]	1	-
	pH (maximum)	7.58		-		1	-

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

Notes
BOD result from 06/28/2017.

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALD071937890	AL0026328	Multistate Environmental Trust Theodore Facility	003

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

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

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

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Chloride	23 mg/L	15 mg/L	-	-	1	-
Total Sulfate	16 mg/L	17 mg/L	-	-	1	-
Total Alpha	<2.27 pCi/L	<1.12 pCi/L	-	-	1	-
Total Radium 226	<0.216 pCi/L	0.275 pCi/L	-	-	1	-
Total Radium 228	<0.784 pCi/L	<0.329 pCi/L	-	-	1	-
Total Dissolved Solids	170 mg/L	170 mg/L	-	-	1	-
Dissolved Oxygen	6.76 mg/L	27 mg/L	-	-	1	-
Iron, Total Recoverable	19 mg/L	7.5 mg/L	-	-	1	-
Selenium, Total Recoverable	4.4 ug/L	1.2 ug/L	-	-	1	-
Thallium, Total Recoverable	< 0.12 ug/L	<0.12 ug/L	-	-	1	-
Barium, Total Recoverable	0.082 mg/L	0.057 mg/L	-	-	1	-
Aluminum, Total Recoverable	1.3 mg/L	0.77 mg/L	-	-	1	-
Copper, Total Recoverable	3.6 ug/L	4.1 ug/L	-	-	1	-
Antimony, Total Recoverable	< 1.5 ug/L	< 1.5 ug/L	-	-	1	-
Manganese, Total Recoverable	0.39 mg/L	0.17 mg/L	-	-	1	-
Mercury, Total Recoverable	10 ng/L	8.3 ng/L	-	-	1	-

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

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALD071937890	AL0026328	Multistate Environmental Trust Theodore Facility	003

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

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

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

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
Chromium, Total	0.0025 mg/L	0.0022 mg/L	-	-	1	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

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

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
ALD071937890	AL0026328	Multistate Environmental Trust Theodore Facility	003

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

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

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

Date of Storm Event	Duration of Storm Event (in hours)	Total Rainfall During Storm Event (in inches)	Number of Hours Between Beginning of Storm Measured and End of Previous Measurable Rain Event	Maximum Flow Rate During Rain Event (in gpm or specify units)	Total Flow from Rain Event (in gallons or specify units)
3/9/23	3	0.75	>72	3,000 gpm	545,000

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

Rational method