JEFFERY W. KITCHENS
ACTING DIRECTOR

KAY IVEY
GOVERNOR

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

JUN 3 0 2025

MR JIM KOTSMITH
VP GLOBAL EHS
3M CHEMICAL OPERATIONS LLC
3M CENTER BLDG 225-1N-22
ST PAUL MN 55144

RE: REVISED DRAFT PERMIT
NPDES PERMIT NUMBER AL0084489
3M CR 41 REMEDIATION SITE

Dear Mr. Kotsmith:

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 revised draft permit, we are also requesting comments within the same time frame from EPA.

Our records indicate that you 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 Theo Pinson by e-mail at **tpinson@adem.alabama.gov** or by phone at **(334) 274-4202.**

Sincerely,

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

Enclosure: Revised Draft Permit

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

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

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

Coastal Office
1615 South Broad Street
Mobile, AL 36605
(251) 450-3400
(251) 479-2593 (FAX)

Alabama Department of Environmental Management

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE: 3M CHEMICAL OPERATIONS, LLC

FACILITY LOCATION: 3M CR 41 REMEDIATION SITE
APPROXIMATELY 3851 DANVILLE ROAD SW
DECATUR, ALABAMA 35603
MORGAN COUNTY

PERMIT NUMBER: AL0084489

RECEIVING WATERS: UNNAMED TRIBUTARY TO BIG DITCH

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

ISSUANCE DATE:

EFFECTIVE DATE:

EXPIRATION DATE:

DRAFT

Alabama Department of Environmental Management

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PART I: DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

DSN 0011: Wastewaters associated with remediation activities 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) 4/ Effluent Gross Value	*****	*****	*****	(Report) Minimum Daily	*****	(Report) Maximum Daily	S.U.	Continuous	Continuous	All Months
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	mg/l	Weekly	Grab	All Months
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	15.0 Maximum Daily	mg/l	Weekly	Grab	All Months
Nitrogen, Ammonia Total (As N) (00610) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	mg/l	Weekly	Composite	All Months
Carbon, Tot Organic (TOC) (00680) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	mg/l	Weekly	Composite	All Months
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Daily	Totalizer	All Months
BOD, Carbonaceous 05 Day, 20C (80082) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	mg/l	Weekly	Composite	All Months
Chemical Oxygen Demand (COD) (81017) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	mg/l	Weekly	Composite	All Months
pH Range Excursions, > 60 Minutes (82581) 4/ Effluent Gross Value	*****	0 Maximum Daily	occur/month	*****	*****	*****	*****	Continuous	Calculated	All Months
pH Range Excursions, Monthly Total Accumulation (82582) 4/ Effluent Gross Value	*****	446 Monthly Total	min	*****	*****	*****	*****	Continuous	Calculated	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/ Where the pH of the wastewater is measured continuously, the total time during which the pH is outside of the range of 6.0 to 8.5 standard units (S.U.) shall not exceed 7 hours 26 minutes in any calendar month, and no individual excursion shall exceed 60 minutes in duration.

DSN 001P: Wastewaters associated with remediation activities 3/ 4/

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
Perfluorooctanoic Acid (51521) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
Perfluorobutanoic Acid (51522) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
Perfluorooctanesulfonamide (51525) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
Perfluoropentanoic Acid (51623) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
Perfluorohexanoic Acid (51624) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
Perfluoroheptanoic Acid (51625) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
Perfluorononanoic acid (51626) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
Perfluorodecanoic Acid (51627) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
Perfluoroundecanoic Acid (51628) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months

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

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

4/ EPA Method 1633, or alternative methods specifically approved by the Department, shall be used for the analyses of Per- and Polyfluorinated Alkyl Substances (PFAS).

DSN 001P (Continued): Wastewaters associated with remediation activities 3/ 4/

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
Perfluorododecanoic acid (51629) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
Perfluorotridecanoic Acid (51630) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
Perfluorotetradecanoic Acid (51631) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
N-ethyl perfluorooctanesulfonamidoethanol (51641) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
N-methyl perfluorooctanesulfonamidoethanol (51642) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
2-(N-ethyl-PFOSA) acetic acid (51643) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
2-(N-methyl-PFOSA) acetic acid (51644) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
Perfluorobutanesulfonic acid (52602) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
Perfluorodecanesulfonic acid (52603) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months

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DSN 001P (Continued): Wastewaters associated with remediation activities 3/ 4/

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
Perfluoroheptanesulfonic acid (52604) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
Perfluorohexanesulfonic acid (52605) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
Perfluorooctanesulfonic acid (52606) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid (52607) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (52608) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (52609) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
Perfluoropentansulfonic acid (52610) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
Perfluorononanesulfonic acid (52611) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
Hexafluoropropylene oxide dimer acid (52612) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months

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DSN 001P (Continued): Wastewaters associated with remediation activities 3/ 4/

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
Nonafluoro-3,6-dioxaheptanoic acid (52626) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
Perfluoro(2-ethoxyethane)sulfonic acid (52629) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
Perfluorododecanesulfonic acid (52632) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
4,8-Dioxa-3H-perfluorononanoic acid (52636) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
N-methyl perfluorooctanesulfonamide (52641) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
N-ethyl perfluorooctanesulfonamide (52642) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
3-Perfluoropropyl propanoic acid (PF001) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
Perfluoro-3-methoxypropanoic acid (PF002) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (PF003) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months

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

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

4/ EPA Method 1633, or alternative methods specifically approved by the Department, shall be used for the analyses of Per- and Polyfluorinated Alkyl Substances (PFAS).

DSN 001P (Continued): Wastewaters associated with remediation activities 3/ 4/

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
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (PF004) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
3-Perfluoroheptyl propanoic acid (PF005) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
Perfluoro-4-methoxybutanoic acid (PF006) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months
2H,2H,3H,3H-Perfluorooctanoic acid (PF007) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months

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

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

4/ EPA Method 1633, or alternative methods specifically approved by the Department, shall be used for the analyses of Per- and Polyfluorinated Alkyl Substances (PFAS).

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. The Permittee shall complete and submit an EPA NPDES Application Form 2C no later than 180 days after the date that discharges begin.

3. 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 301(c), 301(g), 301(h), 301(k), or 316(a) of the FWPCA or for fundamentally different factors;

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

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

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

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

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

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

5. Permit Termination

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

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

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

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

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

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

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

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

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

6. Permit Suspension

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

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

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

F. Compliance with Toxic Pollutant Standard or Prohibition

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

G. Discharge of Wastewater Generated by Others

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

PART III: OTHER PERMIT CONDITIONS

A. Civil and Criminal Liability

1. Tampering

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

2. False Statements

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

3. Permit Enforcement

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

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

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

(2) An action for damages;

(3) An action for injunctive relief; or

(4) An action for penalties.

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

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

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

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

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

4. Relief from Liability

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

B. Oil and Hazardous Substance Liability

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

C. Property and Other Rights

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

D. AVAILABILITY OF REPORTS

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

E. EXPIRATION OF PERMITS FOR NEW OR INCREASED DISCHARGES

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

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

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

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

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

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

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

F. COMPLIANCE WITH WATER QUALITY STANDARDS

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

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

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

G. GROUNDWATER

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

H. DEFINITIONS

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

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

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

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

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

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

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

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

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

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

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

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

13. Director - means the Director of the Department.

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

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

16. DO – means dissolved oxygen.

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

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

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

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

19. FC – means the pollutant parameter fecal coliform.

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

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

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

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

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

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

26. MGD – means million gallons per day.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

41. TRC – means Total Residual Chlorine.

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

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

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

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

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

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

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

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

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

I. SEVERABILITY

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

PART IV: ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS

A. BEST MANAGEMENT PRACTICES (BMP) PLAN REQUIREMENTS

1. BMP Plan

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

2. Plan Content

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

a. Establish specific objectives for the control of pollutants:

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

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

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

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

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

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

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

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

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

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

j. Provide for the disposal of all used oils, hydraulic fluids, 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.

ADEM PERMIT RATIONALE

PREPARED DATE: May 29, 2024
REVISED DATE: November 25, 2024
REVISED DATE: June 16, 2025
PREPARED BY: Theo Pinson

Permittee Name: 3M Chemical Operations, LLC

Facility Name: 3M CR 41 Remediation Site

Permit Number: AL0084489

PERMIT IS AN INITIAL ISSUANCE

DISCHARGE SERIAL NUMBERS (DSN) & DESCRIPTIONS:

001 Wastewaters associated with remediation activities

INDUSTRIAL CATEGORY: NON-CATEGORICAL

MAJOR: No

STREAM INFORMATION:

Receiving Stream:	Unnamed Tributary to Big Ditch
Classification:	Fish and Wildlife
River Basin:	Tennessee
7Q10:	0 cfs
7Q2:	0 cfs
1Q10:	0 cfs
Annual Average Flow:	0.26 cfs
303(d) List:	No
Impairment:	No
TMDL:	No

DISCUSSION:
The 3M CR 41 Remediation Site is identified in Interim Consent Order No. 20-086-CWP/AP/GW/HW/DW/SW as having previously received waste materials containing Per-and Polyfluoroalkyl Substances (PFAS). The Interim Consent Order requires 3M to conduct investigative and remedial actions at the site which are being overseen by the Department's Land Division. The Permittee has proposed to conduct interim treatment measures at the site aimed at reducing the discharge PFAS to surface waters through capture and treatment.

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. Please see the attached Antidegradation Rationale.

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.

DSN 0011: Wastewaters associated with remediation activities

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq	Sample Type	Seasonal	Basis
pH (00400) Effluent Gross Value	*****	*****	*****	(Report) Minimum Daily	*****	(Report) Maximum Daily	S.U.	Continuous	Continuous	All Months	WQBEL
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	mg/l	Weekly	Grab	All Months	BPJ
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	15.0 Maximum Daily	mg/l	Weekly	Grab	All Months	BPJ
Nitrogen, Ammonia Total (As N) (00610) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	mg/l	Weekly	Composite	All Months	BPJ
Carbon, Tot Organic (TOC) (00680) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	mg/l	Weekly	Composite	All Months	BPJ
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Daily	Totalizer	All Months	BPJ
BOD, Carbonaceous 05 Day, 20C (80082) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	mg/l	Weekly	Composite	All Months	BPJ
Chemical Oxygen Demand (COD) (81017) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	mg/l	Weekly	Composite	All Months	BPJ
pH Range Excursions, > 60 Minutes (82581) Effluent Gross Value	*****	0 Maximum Daily	occur/month	*****	*****	*****	*****	Continuous	Calculated	All Months	EGL
pH Range Excursions, Monthly Total Accumulation (82582) Effluent Gross Value	*****	446 Monthly Total	min	*****	*****	*****	*****	Continuous	Calculated	All Months	EGL

DSN 001P: Wastewaters associated with remediation activities

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency	Sample Type	Seasonal	Basis
Perfluorooctanoic Acid (51521) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Perfluorobutanoic Acid (51522) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Perfluorooctanesulfonamide (51525) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Perfluoropentanoic Acid (51623) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Perfluorohexanoic Acid (51624) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Perfluoroheptanoic Acid (51625) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Perfluorononanoic acid (51626) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Perfluorodecanoic Acid (51627) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Perfluoroundecanoic Acid (51628) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Perfluorododecanoic acid (51629) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Perfluorotridecanoic Acid (51630) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Perfluorotetradecanoic Acid (51631) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
N-ethyl perfluorooctanesulfonamidoethanol (51641) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
N-methyl perfluorooctanesulfonamidoethanol (51642) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
2-(N-ethyl-PFOSA) acetic acid (51643) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
2-(N-methyl-PFOSA) acetic acid (51644) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
3-Perfluoroheptyl propanoic acid (PF005) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (PF004) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (PF003) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Perfluoro-3-methoxypropanoic acid (PF002) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
3-Perfluoropropyl propanoic acid (PF001) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
N-ethyl perfluorooctanesulfonamide (52642) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency	Sample Type	Seasonal	Basis
N-methyl perfluorooctanesulfonamide (52641) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
4,8-Dioxa-3H-perfluorononanoic acid (52636) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Perfluorododecanesulfonic acid (52632) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Perfluoro(2-ethoxyethane)sulfonic acid (52629) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Nonafluoro-3,6-dioxaheptanoic acid (52626) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Perfluorohexanesulfonic acid (52605) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Perfluorononanesulfonic acid (52611) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Perfluoropentansulfonic acid (52610) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (52609) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (52608) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid (52607) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Perfluorooctanesulfonic acid (52606) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Perfluoro-4-methoxybutanoic acid (PF006) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Perfluoroheptanesulfonic acid (52604) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Perfluorodecanesulfonic acid (52603) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Perfluorobutanesulfonic acid (52602) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
Hexafluoropropylene oxide dimer acid (52612) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ
2H,2H,3H,3H-Perfluorooctanoic acid (PF007) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Single Sample	ng/l	Quarterly	Grab	All Months	BPJ

*Basis for Permit Limitation

- BPJ – Best Professional Judgment
- WQBEL – Water Quality Based Effluent Limits
- EGL – Federal Effluent Guideline Limitations

Best Professional Judgment (BPJ)

The parameters of concern for this site are based on the parameters of concern listed in the permit application. These parameters are consistent with similar facilities in the state and should be reflective of the proposed operations at the site.

Oil & Grease

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

Monitor Only Parameters

Monitoring has been proposed to evaluate the effectiveness of the treatment system and the impact of the discharge on the receiving stream.

Water Quality Based Effluent Limits (WQBEL)

The Department performed a Reasonable Potential Analysis (RPA) of the proposed discharge based on the estimated characteristics of discharge provided in the permit application. Based on the RPA, mercury has demonstrated a reasonable potential to exceed water quality criteria; therefore, water quality based criteria have been proposed.

pH

ADEM Administrative Code, Division 6 Regulations, specifically 335-6-10-.09(5) – Specific Water Quality for Fish and Wildlife classified streams states: "Sewage, industrial waste or other wastes shall not cause the pH to deviate more than one unit from then normal or natural pH, nor be less than 6.0, nor greater than 8.5 standard units." In accordance with the provisions of 40 CFR Part 401.17 for pH limitations under continuous monitoring, the total time during which the pH is outside of the range of 6.0 S.U. to 8.5 S.U. shall not exceed 7 hours and 26 minutes in any calendar month, and no individual excursion shall exceed 60 minutes in duration.

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.

Per- and Polyfluoroalkyl Substances (PFAS)

The Department has proposed PFAS monitoring using EPA Method 1633. The site has been identified as previously having received waste containing PFAS. The Permittee has provided the following description of the proposed operations and treatment process:

> "Seep water containing per and polyfluoroalkyl substances (PFAS) will be collected and pumped to an on-site treatment system. The treatment system consists of collection tanks for equalization, multimedia filters for suspended solids removal, granular activated carbon (GAC) primarily for removal of total organic carbon (TOC), an ion exchange resin for removing additional TOC that passes through the GAC and some PFAS removal, bag filters for additional suspended solids removal and ion exchange resin for further PFAS removal. The treated water will then be discharged to the on-site surface water conveyance in accordance with an NPDES permit. Solids collected from the filters and spent treatment media will be disposed of at an appropriate off-site disposal facility based on waste analyses results. The spent granular activated carbon will be sent off-site for thermal reactivation to destroy the PFAS. The ion exchange resin will be disposed of at an appropriate off-site disposal facility based on waste characterization results.
>
> The treatment system uses integrated transfer pumps and equipment which will be monitored on site and can be monitored remotely. Continuous water flow measurements will be recorded, and water samples will be collected between the GAC and ion exchange treatment units and analyzed for PFAS to monitor performance of the treatment equipment. Water samples will be collected from the system effluent and analyzed in accordance with the NPDES permit."

Schedule of Compliance

Since this Permit has been proposed based on estimates of the characteristics of discharge reported on an EPA NPDES Application Form 2D, the Permittee shall complete and submit an EPA NPDES Application Form 2C no later than 180 days after the date that discharges begin.

Revision November 25, 2024

The Department has revised the proposed draft permit based on preliminary comments from the Environmental Protection Agency (EPA). The Department has proposed to increase the monitoring frequency for PFAS parameters from semi-annual to quarterly. Additionally, the Department has revised the schedule of compliance to require submittal of EPA Form 2C no later than 180 days after the date that discharges begin. The originally proposed schedule provided a two-year schedule of compliance.

Revision June 16, 2025

The proposed permit has been revised based on comments received from the Permittee to remove the proposed limitations and monitoring requirements for mercury. Mercury was the only parameter on monitoring point 001Q so 001Q has been removed from the proposed permit. The Department initially proposed mercury limitations based on a numeric Reasonable Potential Analysis (RPA) performed on the characteristics of discharge submitted in the permit application which demonstrated that mercury had a reasonable potential to exceed water quality criteria. The Permittee indicated that the values for mercury submitted in the application were based on samples collected for untreated seep water collected at the site. The Permittee specified that the proposed treatment system includes filtration via multimedia (sand, small gravel and anthracite), granular activated carbon (GAC) and synthetic ion exchange resin. which is expected to reduce mercury concentrations in the final discharge by filtering particulate and removing dissolved forms through adsorption and chemisorption. Additionally, the Permittee provided a more recent analysis of the untreated seep water using USEPA Method 1631E. The Department performed an updated numeric RPA using this analysis and determined that there is no longer a reasonable potential for mercury to exceed water quality criteria. It should be noted that the proposed permit requires submission of an EPA Form 2C no later than 180 days after the date that discharges begin. The Department will evaluate the submission and the permit may be reopened if required to address any new information.

Facility Name: **3M CR 41 Remediation Site**

NPDES No.: **AL0084489**

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

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	0	0	0.574
3	Berylium		Metals	0	0	0	0	0	0	-
4	Cadmium**		Metals	0	0	0	0	0	0	0.236
5	Chromium / Chromium III**		Metals	0	0	0	0	0	0	0.210
6	Chromium / Chromium VI**		Metals	0	0	0	0	0	0	
7	Copper**		Metals	0	0	0	0	2.42	2.42	0.388
8	Lead**		Metals	0	0	0	0	0	0	0.206
9	Mercury**		Metals	0	0	0	0	0.00051	0.00051	0.302
10	Nickel**		Metals	0	0	0	0	0.699	0.699	0.505
11	Selenium		Metals	0	0	0	0	0	0	-
12	Silver		Metals	0	0	0	0	0	0	-
13	Thallium		Metals	0	0	0	0	0	0	-
14	Zinc**		Metals	0	0	0	0	0	0	0.330
15	Cyanide		Metals	0	0	0	0	0	0	-
16	Total Phenolic Compounds		Metals	0	0	0	0	0	0	-
17	Hardness (As CaCO3)		Metals	0	0	0	0	0	0	-
18	Acrolein		VOC	0	0	0	0	0	0	-
19	Acrylonitrile*	YES	VOC	0	0	0	0	0	0	-
20	Aldrin	YES	VOC	0	0	0	0	0	0	-
21	Benzene*	YES	VOC	0	0	0	0	0	0	-
22	Bromoform*	YES	VOC	0	0	0	0	0	0	-
23	Carbon Tetrachloride*	YES	VOC	0	0	0	0	0	0	-
24	Chlordane	YES	VOC	0	0	0	0	0	0	-
25	Clorobenzene		VOC	0	0	0	0	0	0	-
26	Chlorodibromo-Methane*	YES	VOC	0	0	0	0	0	0	-
27	Chloroethane		VOC	0	0	0	0	0	0	-
28	2-Chloro-Ethylvinyl Ether		VOC	0	0	0	0	0	0	-
29	ChloroForm*	YES	VOC	0	0	0	0	0	0	-
30	4,4'-DDD	YES	VOC	0	0	0	0	0	0	-
31	4,4'-DDE	YES	VOC	0	0	0	0	0	0	-
32	4.4'-DDT	YES	VOC	0	0	0	0	0	0	-
33	Dichlorobromo-Methane*	YES	VOC	0	0	0	0	0	0	-
34	1, 1-Dichloroethane		VOC	0	0	0	0	0	0	-
35	1, 2-Dichloroethane*	YES	VOC	0	0	0	0	0	0	-
36	Trans-1, 2-Dichloro-Ethylene		VOC	0	0	0	0	0	0	-
37	1, 1-Dichloroethylene*	YES	VOC	0	0	0	0	0	0	-
38	1, 2-Dichloropropane		VOC	0	0	0	0	0	0	-
39	1, 3-Dichloro-Propylene		VOC	0	0	0	0	0	0	-
40	Dieldrin	YES	VOC	0	0	0	0	0	0	-
41	Ethylbenzene		VOC	0	0	0	0	0	0	-
42	Methyl Bromide		VOC	0	0	0	0	0	0	-
43	Methyl Chloride		VOC	0	0	0	0	0	0	-
44	Methylene Chloride*	YES	VOC	0	0	0	0	0	0	-
45	1, 1, 2, 2-Tetrachloro-Ethane*	YES	VOC	0	0	0	0	0	0	-
46	Tetrachloro-Ethylene*	YES	VOC	0	0	0	0	0	0	-
47	Toluene		VOC	0	0	0	0	0	0	-
48	Toxaphene	YES	VOC	0	0	0	0	0	0	-
49	Tributyltine (TBT)	YES	VOC	0	0	0	0	0	0	-
50	1, 1, 1-Trichloroethane		VOC	0	0	0	0	0	0	-
51	1, 1, 2-Trichloroethane*	YES	VOC	0	0	0	0	0	0	-
52	Trichlorethylene*	YES	VOC	0	0	0	0	0	0	-
53	Vinyl Chloride*	YES	VOC	0	0	0	0	0	0	-
54	P-Chloro-M-Cresol		Acids	0	0	0	0	0	0	-
55	2-Chlorophenol		Acids	0	0	0	0	0	0	-
56	2, 4-Dichlorophenol		Acids	0	0	0	0	0	0	-
57	2, 4-Dimethylphenol		Acids	0	0	0	0	0	0	-
58	4, 6-Dinitro-O-Cresol		Acids	0	0	0	0	0	0	-
59	2, 4-Dinitrophenol		Acids	0	0	0	0	0	0	-
60	4,6-Dintro-2-methylophenol	YES	Acids	0	0	0	0	0	0	-
61	Dioxin (2,3,7,8-TCDD)	YES	Acids	0	0	0	0	0	0	-
62	2-Nitrophenol		Acids	0	0	0	0	0	0	-
63	4-Nitrophenol		Acids	0	0	0	0	0	0	-
64	Pentachlorophenol*	YES	Acids	0	0	0	0	0	0	-
65	Phenol		Acids	0	0	0	0	0	0	-
66	2, 4, 6-Trichlorophenol*	YES	Acids	0	0	0	0	0	0	-
67	Acenaphthene		Bases	0	0	0	0	0	0	-
68	Acenaphthylene		Bases	0	0	0	0	0	0	-
69	Anthracene		Bases	0	0	0	0	0	0	-
70	Benzidine		Bases	0	0	0	0	0	0	-
71	Benzo(A)Anthracene*	YES	Bases	0	0	0	0	0	0	-
72	Benzo(A)Pyrene*	YES	Bases	0	0	0	0	0	0	-
73	3, 4 Benzo-Fluoranthene		Bases	0	0	0	0	0	0	-
74	Benzo(GHI)Perylene		Bases	0	0	0	0	0	0	-
75	Benzo(K)Fluoranthene		Bases	0	0	0	0	0	0	-
76	Bis (2-Chloroethoxy) Methane		Bases	0	0	0	0	0	0	-
77	Bis (2-Chloroethyl)-Ether*	YES	Bases	0	0	0	0	0	0	-
78	Bis (2-Chloroiso-Propyl) Ether		Bases	0	0	0	0	0	0	-
79	Bis (2-Ethylhexyl) Phthalate*	YES	Bases	0	0	0	0	0	0	-
80	4-Bromophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
81	Butyl Benzyl Phthalate		Bases	0	0	0	0	0	0	-
82	2-Chloronaphthalene		Bases	0	0	0	0	0	0	-
83	4-Chlorophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
84	Chrysene*	YES	Bases	0	0	0	0	0	0	-
85	Di-N-Butyl Phthalate		Bases	0	0	0	0	0	0	-
86	Di-N-Octyl Phthalate		Bases	0	0	0	0	0	0	-
87	Dibenzo(A,H)Anthracene*	YES	Bases	0	0	0	0	0	0	-
88	1, 2-Dichlorobenzene		Bases	0	0	0	0	0	0	-
89	1, 3-Dichlorobenzene		Bases	0	0	0	0	0	0	-
90	1, 4-Dichlorobenzene		Bases	0	0	0	0	0	0	-
91	3, 3-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	Heptochlor	YES	Bases	0	0	0	0	0	0	-
105	Heptachlor Epoxide	YES	Bases	0	0	0	0	0	0	-
106	Hexachlorobenzene*	YES	Bases	0	0	0	0	0	0	-
107	Hexachlorobutadiene*	YES	Bases	0	0	0	0	0	0	-
108	Hexachlorocyclohexan (alpa)	YES	Bases	0	0	0	0	0	0	-
109	Hexachlorocyclohexan (beta)	YES	Bases	0	0	0	0	0	0	-
110	Hexachlorocyclohexan (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	-

0.144	Enter Q_d = wastewater discharge flow from facility (MGD)
0.22280098	Q_d = wastewater discharge flow (cfs) (this value is caluclated 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)
0	Enter 7Q10, Q_s = background stream flow in cfs above point of discharge
0	Enter or estimated, 1Q10, Q_s = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of 7Q10)
0.26	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)
100	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

June 16, 2025

Facility Name: 3M CR 41 Remediation Site

NPDES No.: AL0064483

						Freshwater F&W classification.					Freshwater Acute (µg/l) Q_s =1Q10					Freshwater Chronic (µg/l) Q_s = 7Q10					Human Health Consumption Fish only (µg/l) Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10			
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_s)	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_s)	Draft Permit Limit (C_{max})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_s)	Draft Permit Limit (C_{max})	20% of Draft Permit Limit	RP?
1	Antimony			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.73E+02	7.47E+01	No
2	Arsenic		YES	0	0	592.334	592.334	118.467	No	0	0	261.324	261.324	52.265	No	3.03E-01	6.57E-01	1.31E-01	No
3	Beryllium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
4	Cadmium			0	0	8.533	8.533	1.707	No	0	0	1.042	1.042	0.208	No	-	-	-	-
5	Chromium/ Chromium III			0	0	2713.159	2713.159	542.632	No	0	0	352.926	352.926	70.585	No	-	-	-	-
6	Chromium/ Chromium VI			0	0	16.000	16.000	3.200	No	0	0	11.000	11.000	2.200	No	-	-	-	-
7	Copper			0	2.42	34.637	34.637	6.927	No	0	2.42	23.082	23.082	4.616	No	-	-	-	-
8	Lead			0	0	313.502	313.502	62.700	No	0	0	12.217	12.217	2.443	No	-	-	-	-
9	Mercury			0	0.00051	2.400	2.400	0.480	No	0	0.00051	0.012	0.012	0.002	No	4.24E-02	4.24E-02	8.48E-03	No
10	Nickel			0	0.699	927.200	927.200	185.440	No	0	0.699	102.983	102.983	20.597	No	9.93E+02	9.93E+02	1.99E+02	No
11	Selenium			0	0	20.000	20.000	4.000	No	0	0	5.000	5.000	1.000	No	[illegible]	2.43E+03	4.86E+02	No
12	Silver			0	0	3.217	3.217	0.643	No	0	0	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.74E-01	5.47E-02	No
14	Zinc			0	0	355.092	355.092	71.018	No	0	0	357.997	357.997	71.599	No	1.49E+04	1.49E+04	2.98E+03	No
15	Cyanide			0	0	22.000	22.000	4.400	No	0	0	5.200	5.200	1.040	No	[illegible]	9.33E+03	1.87E+03	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
18	Acrolein			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	5.43E+00	1.09E+00	No
19	Acrylonitrile		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.12E-01	8.24E-02	No
20	Aldrin		YES	0	0	3.000	3.000	0.600	No	0	0	-	-	-	-	[illegible]	6.37E-05	1.27E-05	No
21	Benzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.35E+01	8.71E+00	No
22	Bromoform		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.71E+02	3.41E+01	No
23	Carbon Tetrachloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.07E+00	4.15E-01	No
24	Chlordane		YES	0	0	2.400	2.400	0.480	No	0	0	0.0043	0.004	0.001	No	[illegible]	1.02E-03	2.05E-04	No
25	Clorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	9.08E+02	1.81E+02	No
26	Chlorodibromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.61E+01	3.21E+00	No
27	Chloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
28	2-Chloro-Ethylvinyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
29	ChloroForm		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.21E+02	4.42E+01	No
30	4,4' - DDD		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.93E-04	7.86E-05	No
31	4,4' - DDE		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.77E-04	5.55E-05	No
32	4,4' - DDT		YES	0	0	1.100	1.100	0.220	No	0	0	0.001	0.001	0.000	No	[illegible]	2.77E-04	5.55E-05	No
33	Dichlorobromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.17E+01	4.35E+00	No
34	1, 1-Dichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
35	1, 2-Dichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	4.63E+01	9.26E+00	No
36	Trans-1, 2-Dichloro-Ethylene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	5.91E+03	1.18E+03	No
37	1, 1-Dichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	9.03E+03	1.81E+03	No
38	1, 2-Dichloropropane			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	8.49E+00	1.70E+00	No
39	1, 3-Dichloro-Propylene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.23E+01	2.46E+00	No
40	Dieldrin		YES	0	0	0.240	0.240	0.048	No	0	0	0.056	0.056	0.011	No	[illegible]	6.77E-05	1.35E-05	No
41	Ethylbenzene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.24E+04	2.49E+02	No
42	Methyl Bromide			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	8.71E+02	1.74E+02	No
43	Methyl Chloride			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
44	Methylene Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	7.48E+02	1.50E+02	No
45	1, 1, 2, 2-Tetrachloro-Ethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	5.08E+00	1.01E+00	No
46	Tetrachloro-Ethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	4.15E+00	8.31E-01	No
47	Toluene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	8.72E+03	1.74E+03	No
48	Toxaphene		YES	0	0	0.730	0.730	0.146	No	0	0	0.000	0.000	0.000	No	[illegible]	3.51E-04	7.02E-05	No
49	Tributyltin (TBT)		YES	0	0	0.460	0.460	0.092	No	0	0	0.072	0.072	0.014	No	-	-	-	-
50	1, 1, 1-Trichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
51	1, 1, 2-Trichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.97E+01	3.94E+00	No
52	Trichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.79E+01	7.57E+00	No
53	Vinyl Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.09E+00	6.17E-01	No
54	P-Chloro-M-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
55	2-Chlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	8.71E+01	1.74E+01	No
56	2, 4-Dichlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.72E+02	3.44E+01	No
57	2, 4-Dimethylphenol			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	4.98E+02	9.95E+01	No
58	4, 6-Dinitro-O-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
59	2, 4-Dinitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.11E+03	6.22E+02	No
60	4,6-Dinitro-2-methylphenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.59E+02	7.17E+01	No
61	Dioxin (2,3,7,8-TCDD)		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	5.78E-08	1.16E-08	No
62	2-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
63	4-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
64	Pentachlorophenol		YES	0	0	8.723	8.723	1.745	No	0	0	6.693	6.693	1.339	No	[illegible]	3.83E+00	7.66E-01	No
65	Phenol			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	5.00E+05	1.00E+05	No
66	2, 4, 6-Trichlorophenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.08E+00	6.13E-01	No
67	Acenaphthene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	5.79E+02	1.16E+02	No
68	Acenaphthylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
69	Anthracene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.33E+04	4.67E+03	No
70	Benzidine			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.16E-04	2.32E-05	No
71	Benzo(A)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.31E-02	4.62E-03	No
72	Benzo(A)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.31E-02	4.62E-03	No
73	Benzo(b)fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.07E-02	2.13E-03	No
74	Benzo(GHI)Perylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
75	Benzo(K)Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.07E-02	2.13E-03	No
76	Bis (2-Chloroethoxy) Methane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
77	Bis (2-Chloroethyl)-Ether		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	6.66E-01	1.33E-01	No
78	Bis (2-Chloroiso-Propyl) Ether			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.78E+04	7.56E+03	No
79	Bis (2-Ethylhexyl) Phthalate		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.78E+00	5.56E-01	No
80	4-Bromophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
81	Butyl Benzyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.13E+03	2.25E+02	No
82	2-Chloronaphthalene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	9.24E+02	1.85E+02	No
83	4-Chlorophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
84	Chrysene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.31E-02	4.62E-03	No
85	Di-N-Butyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.62E+03	5.24E+02	No
86	Di-N-Octyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
87	Dibenzo(A,H)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.31E-02	4.62E-03	No
88	1, 2-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	7.56E+02	1.51E+02	No
89	1, 3-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	5.62E+02	1.12E+02	No
90	1, 4-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.12E+02	2.25E+01	No
91	3, 3-Dichlorobenzidine		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.80E-02	7.20E-03	No
92	Diethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.56E+04	5.11E+03	No
93	Dimethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	6.46E+05	1.30E+05	No
94	2, 4-Dinitrotoluene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	4.29E+00	8.56E-01	No
95	2, 6-Dinitrotoluene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
96	1,2-Diphenylhydrazine			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.17E-01	2.34E-02	No
97	Endosulfan (alpha)		YES	0	0	0.220	0.220	0.044	No	0	0	0.056	0.056	0.011	No	[illegible]	1.12E+02	2.25E+01	No
98	Endosulfan (beta)		YES	0	0	0.220	0.220	0.044	No	0	0	0.056	0.056	0.011	No	[illegible]	1.12E+02	2.25E+01	No
99	Endosulfan sulfate		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.12E+02	2.25E+01	No
100	Endrin		YES	0	0	0.086	0.086	0.017	No	0	0	0.036	0.036	0.007	No	[illegible]	7.64E-02	1.53E-02	No
101	Endrin Aldeyhde		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.82E-01	7.64E-02	No
102	Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	8.12E+01	1.62E+01	No
103	Fluorene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.11E+03	6.22E+02	No
104	Heptochlor		YES	0	0	0.520	0.520	0.104	No	0	0	0.004	0.004	0.001	No	[illegible]	1.00E-04	2.01E-05	No
105	Heptachlor Epoxide		YES	0	0	0.520	0.520	0.104	No	0	0	0.004	0.004	0.001	No	[illegible]	4.98E-05	9.92E-06	No
106	Hexachlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.64E-04	7.27E-05	No
107	Hexachlorobutadiene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.33E+01	4.66E+00	No
108	Hexachlorocyclohexan (alpha)		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	8.17E-03	1.23E-03	No
109	Hexachlorocyclohexan (beta)		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.18E-02	4.32E-03	No
110	Hexachlorocyclohexan (gamma)		YES	0	0	0.950	0.950	0.190	No	0	0	-	-	-	-	[illegible]	2.33E+00	4.67E-01	No
111	HexachlorocycloPentadiene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	6.45E+02	1.29E+02	No
112	Hexachloroethane			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	1.92E+00	3.84E-01	No
113	Indeno(1, 2, 3-CK)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.31E-02	4.62E-03	No
114	Isophorone			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	5.61E+02	1.12E+02	No
115	Naphthalene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
116	Nitrobenzene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	4.04E+02	8.07E+01	No
117	N-Nitrosodi-N-Propylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	8.39E-01	1.28E-01	No
118	N-Nitrosodimethylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	3.81E+00	7.63E-01	No
119	N-Nitrosodiphenylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	7.59E+00	1.52E+00	No
120	PCB-1016		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.003	No	[illegible]	8.10E-05	1.62E-05	No
121	PCB-1221		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.003	No	[illegible]	8.10E-05	1.62E-05	No
122	PCB-1232		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.003	No	[illegible]	8.10E-05	1.62E-05	No
123	PCB-1242		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.003	No	[illegible]	8.10E-05	1.62E-05	No
124	PCB-1248		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.003	No	[illegible]	8.10E-05	1.62E-05	No
125	PCB-1254		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.003	No	[illegible]	8.10E-05	1.62E-05	No
126	PCB-1260		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.003	No	[illegible]	8.10E-05	1.62E-05	No
127	Phenanthrene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
128	Pyrene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	2.33E+03	4.67E+02	No
129	1, 2, 4-Trichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	[illegible]	4.09E+01	8.19E+00	No

ANTIDEGRADATION RATIONALE

Permit Number:	AL0084489
Facility Name:	3M CR 41 Remediation Site
Receiving water:	Unnamed Tributary to Big Ditch
Stream Category:	Tier 2 as defined by ADEM Admin. Code 335-6-10-.12
Discharge Description:	Wastewaters associated with remediation activities

The following preliminary determination was prepared in accordance with ADEM Admin. Code 335-6-10-.12 (7) (c):

The Department has reviewed the information submitted by applicant in accordance with ADEM Admin. Code 335-6-10-.12 (9). The applicant has demonstrated that there are no alternative options which are economically feasible or technically viable. In the case of technically viable options, the applicant has shown them to be cost prohibitive through the alternatives analysis required by the permit application.

The permit applicant has indicated that the following economic and/or social benefits will result from the issuance of this permit:

- Reduction in the migration of per- and polyfluoroalkyl substances (PFAS) into the local watershed
- Increase in both temporary and permanent employment within the community. Five temporary staff are anticipated to be employed during the construction phase and two permanent staff are anticipated to be employed for continued system operations for the foreseeable future.
- Approximately $25,000 will be paid in state payroll tax and $50,000 will be paid in state and local sales tax during the first year (construction) of the project. Following construction, approximately $9,000 will be paid in state payroll tax and $10,000 will be paid in state and local sales tax annually.

The Department has determined that the discharge as proposed by the permit applicant is necessary for important economic and social development in the area in which the receiving water is located.

Prepared By: Scott Ramsey
Date: May 29, 2024

3M Global Environment, Health Safety and Product Stewardship
3M Center 225-1N-22
St. Paul, MN 55144-1000

June 5, 2025

ELECTRONIC MAIL

Theo Pinson, Water Division - Industrial Section
Alabama Department of Environmental Management
1400 Coliseum Blvd.
PO Box 301463
Montgomery, Alabama 36130

Subject: Supplemental Information regarding the Mercury Discharge Limit
Revised Draft NPDES Permit No.: AL0084489
3M - CR41 Remediation Site

Dear Mr. Pinson,

This letter is to inform the Department of supplemental data collected in July 2024 in response to review of the initial draft NPDES Permit No. AL0084489 (Permit) dated May 30, 2024, and the inclusion of a discharge limit for mercury of 0.012 micrograms/liter (ug/L) for the CR41 Remediation Site (Site). The analytical methods originally used to test for mercury in seep and surface water samples from the site (results submitted with the original NPDES application) had detection/reporting limits above the proposed mercury discharge concentration limit of 0.012 ug/L. In response to the draft permit mercury discharge limit, an additional untreated seep water sample was collected on July 8, 2024, and analyzed using USEPA Method 1631E with a reporting value of 0.0005 ug/L. The mercury concentration detected in this sample was 0.00051 ug/L (see attached laboratory analytical report), which is slightly above the reporting limit and is less than 5% of the proposed discharge concentration limit for mercury.

The proposed treatment system at the Site includes filtration of seep water via

1. multimedia (sand, small gravel and anthracite),
2. granular activated carbon (GAC) and
3. synthetic ion exchange resin.

All the treatment unit operations have the capacity to reduce mercury concentrations in seep water by filtering particulate and removing dissolved forms through adsorption and chemisorption. Granular activated carbon has been identified and is well established by the USEPA as an effective treatment for mercury in water (USEPA, July 1997 – see attached document, pages 3-2 and 3-3).

In light of the above, 3M is requesting the removal of the mercury discharge limit from the revised draft Permit (dated April 30, 2025) based on (1) the Department's consideration of the above-described supplemental analytical data with resulting mercury concentrations in untreated seep water less than 5% of the proposed discharge concentration limit and (2) the proposed

treatment technologies which can remove forms of mercury in the seep water if a transitory increase of mercury were to occur in the influent water.

If you have any questions regarding this information. please email me at kblomquist@mmm.com or call (612) 414-3374.

Sincerely,

Karie Blomquist
Senior Manager, Global Remediation

Attachments: 2
cc:
3MADEMConsentOrder@mmm.com
ADEMConnsentOrder3M@adem.alabama.gov

Pinson, Theo

From: Karie Blomquist <kblomquist@mmm.com>
Sent: Friday, November 22, 2024 8:48 AM
To: Pinson, Theo; Guy Kaminski
Cc: John DiZinno; Pat Carr
Subject: RE: 3M CR 41

Hi Theo,
The treatment system will process water at an average flow rate of 30 gpm. Except during heavy rain events, the base flow is typically less than 30 gpm so it will be a batch operation much of the time. For example, during dry conditions when the base flow recovered by the system may be as low as 5 GPM, it will take the treatment system 8-10 hours to process/empty water from the influent frac tank (21,000 gals) at 30 GPM. Once the influent frac tank is nearly empty, the treatment process will shut down and wait for the influent frac tank to refill. Refilling the influent frac tank at 5 GPM may take 2 days before the treatment process restarts.

Hope this helps. Let me know if you have any other questions.

Thanks,
Karie

From: Pinson, Theo <tpinson@adem.alabama.gov>
Sent: Thursday, November 21, 2024 4:32 PM
To: Karie Blomquist <kblomquist@mmm.com>; Guy Kaminski <Guy.Kaminski@ghd.com>
Cc: John DiZinno <john.dizinno@ghd.com>; Pat Carr <pcarr@mmm.com>
Subject: [EXTERNAL] RE: 3M CR 41

Karie,

Per our conversation last week, we are working towards getting a revised draft prepared based on the EPA comments. One other question we had is once the system is up and running at steady state is this expected to be a continuous discharge or will it operate more like a batch discharge? In general, will water be generated for treatment most everyday or is more in response to precipitation events where there may be dry periods of no discharge?

Thank you,

Theo

Theo Pinson
Industrial Section
Water Division
Alabama Department of Environmental Management
(334) 274 – 4202

NEW ADEM ELECTRONIC SYSTEM: Alabama Environmental Permitting and Compliance System (AEPACS)

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. For general information about AEPACS, visit http://adem.alabama.gov/egov/AEPACS.cnt. For NPDES and SID program specific information about AEPACS, visit http://adem.alabama.gov/egov/AEPACSwater.cnt.

If you have questions or need assistance with AEPACS, please contact the ADEM Web Portal/AEPACS Help Desk at ademwebportal@adem.alabama.gov. The email box is monitored Monday through Friday, 7:00 am –5:00 pm.

From: Karie Blomquist <kblomquist@mmm.com>
Sent: Thursday, June 27, 2024 3:50 PM
To: Pinson, Theo <tpinson@adem.alabama.gov>; Guy Kaminski <Guy.Kaminski@ghd.com>
Cc: John DiZinno <john.dizinno@ghd.com>; Pat Carr <pcarr@mmm.com>
Subject: RE: 3M CR 41

Hi Theo,
Please see our comments below for your consideration. Let me know if you need any additional information. Thanks!

1. Please forward me a copy of the Consent Order. This will be beneficial in my understanding some of the PFAS-related permit conditions.
2. The new discharge that addresses pump and treatment of PFAS and requires the permittee submit EPA form 2C required within 2 years after commencement of the discharge. Since the equipment/treatment system is already onsite, per the flow schematic, why does the permit allow up to the maximum time to submit the 2C? They should already have effluent values to report sooner than 2 years after the discharge begins.

The CR 41 Interim Treatment system not an existing facility. The system is still under construction. Commencement of the treated discharge is contingent on receipt of the permit.

3. The receiving waterbody (RWB) has a 7Q10 for zero cfs and PFAS are known toxicants to both aquatic life and humans. The permit only require semi-annually monitoring for several PFAS compounds. Since PFAS substances are known toxicants why is sampling so infrequent? In absence of a numerical WQS for PFAS, ADEM should protect the designated use of the RWB based on the following narrative WQS.

(c) State waters shall be free from substances attributable to sewage, industrial wastes or other wastes in concentrations or combinations which are toxic or harmful to human, animal or aquatic life to the extent commensurate with the designated usage of such waters.

4. The draft requires the use of EPA Method 1633 or "other alternative method" approved by the department. Please provide an explanation or an example when or why ADEM might have to use flexibility to use an alternative method than EPA method 1633.
Our intent is to use EPA Method 1633.

5. The permit lacks a limit to ensure there will be a reduction in PFAS to the RWB. For instance, the permit should include a limit for PFAS removal efficiency based on information based on design specs for the proposed treatment train. The Fact Sheet/Rationale states that the permittee "has proposed to conduct interim treatment measures at the site aimed at reducing the discharge PFAS to surface waters through capture and treatment". However, the discussion lacks details regarding operational efficiency pertaining to the treatment train. It is my understanding that Granulated Activated Carbon has been demonstrated to remove 99% of PFAS. What is the expected removal efficiency for PFAS? See the below excerpt from EPA Drinking Water Technical Support document:

See more

2.1 High Removal Efficiency

2.1.1 Have high removal efficiencies that achieve potential MCLs been documented?

Yes. EPA's Drinking Water Treatability Database (USEPA, 2021a; 2021b; 2021c) includes extensive data from the literature on PFAS removal by GAC. Results are available from studies conducted in the laboratory, in the field at pilot scale, and in full-scale application, as shown in Table 4, Table 5, and Table 6. The literature demonstrates PFAS removal efficiencies for many PFAS compounds in the high 90 percent range and to levels below analytical detection limits. For PFOA and PFOS, maximum removal efficiencies are greater than 99 percent, also to below analytical detection limits[5] and lower than the regulatory thresholds currently under consideration.

The expected removal efficiency for PFOA and PFOS is greater than 99%.

6. The permit should require the permittee report on other operational parameters to ensure the equipment is operated as intended. For instance, the permit should require that the "Up Time" for the GAC unit and other unit processes be operational no less than 90 percent of the time.

   The system is designed to meet the PFAS removal efficiencies as indicated above. In accordance with Part II, Section A of the draft NPDES permit, 3M "shall at all times properly operate and maintain all facilities and systems of treatment and control.:"

7. Based on our review of the treatment train and other information on GAC (below), it appears that there is pretreatment (application of bleach) prior to EQ tank feeding water treatment system (circled in red). Please confirm that there is no TRC in the treated final effluent that will cause a violation of the applicable WQS.

   No TRC is expected in the final effluent. The GAC will remove residual chlorine.

From: Pinson, Theo <tpinson@adem.alabama.gov>
Sent: Monday, June 24, 2024 2:01 PM
To: Karie Blomquist <kblomquist@mmm.com>; Guy Kaminski <Guy.Kaminski@ghd.com>
Cc: John DiZinno <john.dizinno@ghd.com>; Pat Carr <pcarr@mmm.com>
Subject: [EXTERNAL] RE: 3M CR 41

Karie,

Please be aware of the attached comments received from EPA concerning the proposed NPDES Permit for CR 41.

Thank you,

Theo

Theo Pinson
Industrial Section
Water Division
Alabama Department of Environmental Management
(334) 274 – 4202

NEW ADEM ELECTRONIC SYSTEM: Alabama Environmental Permitting and Compliance System (AEPACS)

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. For general information about AEPACS, visit http://adem.alabama.gov/egov/AEPACS.cnt. For NPDES and SID program specific information about AEPACS, visit http://adem.alabama.gov/egov/AEPACSwater.cnt.

If you have questions or need assistance with AEPACS, please contact the ADEM Web Portal/AEPACS Help Desk at ademwebportal@adem.alabama.gov. The email box is monitored Monday through Friday, 7:00 am –5:00 pm.

From: Karie Blomquist <kblomquist@mmm.com>
Sent: Thursday, June 20, 2024 7:42 AM
To: Pinson, Theo <tpinson@adem.alabama.gov>; Guy Kaminski <Guy.Kaminski@ghd.com>
Cc: John DiZinno <john.dizinno@ghd.com>; Pat Carr <pcarr@mmm.com>
Subject: RE: 3M CR 41

Hi Theo,
Just one comment on the permit application (Form 187), on page 4 of 9 (page 41 of the PDF), the date of the Consent order is listed as 6/24/2020. The correct date is 7/24/2020.

One request, if you could please shoot me a note before the permit goes out for public comment, that would be much appreciated.

Thanks again,
Karie

From: Pinson, Theo <tpinson@adem.alabama.gov>
Sent: Thursday, May 30, 2024 12:52 PM
To: Guy Kaminski <Guy.Kaminski@ghd.com>
Cc: Karie Blomquist <kblomquist@mmm.com>; John DiZinno <john.dizinno@ghd.com>
Subject: [EXTERNAL] RE: 3M CR 41

Guy,

Please find the proposed draft permit for the CR 41 Remediation Site. It appears that we still need the fee of $5615 for this permit, and also the fee for the Johnson Remediation Site of $3850. The fees can be paid through the AEPACS account for each site or via check through the mail. Please let me know if you need me to create a fee letter to work as an invoice to generate payment.

Thank you,

Theo

Theo Pinson
Industrial Section
Water Division
Alabama Department of Environmental Management
(334) 274 – 4202

NEW ADEM ELECTRONIC SYSTEM: Alabama Environmental Permitting and Compliance System (AEPACS)

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If you have questions or need assistance with AEPACS, please contact the ADEM Web Portal/AEPACS Help Desk at ademwebportal@adem.alabama.gov. The email box is monitored Monday through Friday, 7:00 am –5:00 pm.

From: Guy Kaminski <Guy.Kaminski@ghd.com>
Sent: Friday, May 10, 2024 9:06 AM
To: Pinson, Theo <tpinson@adem.alabama.gov>
Cc: Karie Blomquist <kblomquist@mmm.com>; John DiZinno <John.DiZinno@ghd.com>
Subject: RE: 3M CR 41

Hello Theo,
Apologize for this taking awhile. The antidegradation analysis is attached. It includes forms 311 and 313. Also attached is an aerial photo you requested. Finally, a brief description of the treatment system is provided below.

Treatment System

Seep water containing per and polyfluoroalkyl substances (PFAS) will be collected and pumped to an on-site treatment system. The treatment system consists of collection tanks for equalization, multimedia filters for suspended solids removal, granular activated carbon (GAC) primarily for removal of total organic carbon (TOC), an ion exchange resin for removing additional TOC that passes through the GAC and some PFAS removal, bag filters for additional suspended solids removal and ion exchange resin for further PFAS removal. The treated water will then be discharged to the on-site

surface water conveyance in accordance with an NPDES permit. Solids collected from the filters and spent treatment media will be disposed of at an appropriate off-site disposal facility based on waste analyses results. The spent granular activated carbon will be sent off-site for thermal reactivation to destroy the PFAS. The ion exchange resin will be disposed of at an appropriate off-site disposal facility based on waste characterization results.

The treatment system uses integrated transfer pumps and equipment which will be monitored on site and can be monitored remotely. Continuous water flow measurements will be recorded, and water samples will be collected between the GAC and ion exchange treatment units and analyzed for PFAS to monitor performance of the treatment equipment. Water samples will be collected from the system effluent and analyzed in accordance with the NPDES permit.

Let me know if you have further questions. Could you let me know if you have everything you need on Johnson Remediation Site SID Application?
Thank you.

Warmest Regards

GUY T KAMINSKI, PE
Senior Engineer

Proudly employee owned | ghd.com
5904 Hampton Oaks Parkway Suite F Tampa FL 33610 USA
D 813 257 0657 **M** 813 340 3869 **E** guy.kaminski@ghd.com

The Power of Commitment

Connect

From: Pinson, Theo <tpinson@adem.alabama.gov>
Sent: Friday, March 29, 2024 2:53 PM
To: Guy Kaminski <Guy.Kaminski@ghd.com>
Subject: Re: 3M CR 41

From: Pinson, Theo <tpinson@adem.alabama.gov>
Sent: Monday, March 11, 2024 10:36 AM
To: Guy Kaminski <Guy.Kaminski@ghd.com>
Subject: 3M CR 41

Guy,

Good talking with you last week. For the antidegradation analysis, Option 1 – Land Application, Option 2 – Discharge to POTW, and Option 3 – Relocation of Discharge could be considered technically viable in that they could be engineered. You will need to complete a Form 313 for your chosen proposed direct discharge and one for each option 1, 2, and 3. If option 1, 2, and/or 3 are less than 110% of the total annualized project cost for your chosen method, then it would be considered a viable alternative since it would be both technically and economically viable. My understanding is that you will need to revise the Form 311 to show that options 1, 2, and 3 could technically be completed, and then demonstrate through Form 313 whether each option is viable based on the cost analysis. You could also update your attachment to provide clarification on why each alternative ultimately is viable or not based on the cost analyses.

It would be helpful if you could provide a brief narrative description of the proposed treatment system that we can incorporate into the rationale.

It would also be helpful if you could provide a satellite imagery map of the site outlining the property boundary and providing the approximate locations of where the treatment systems and outfall will be located. This will provide context to the public on what exactly we are proposing to be permitted.

Please let me know if you have any questions.

Thank you,

Theo

Theo Pinson
Industrial Section
Water Division
Alabama Department of Environmental Management
(334) 274 – 4202

NEW ADEM ELECTRONIC SYSTEM: Alabama Environmental Permitting and Compliance System (AEPACS)

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Pinson, Theo

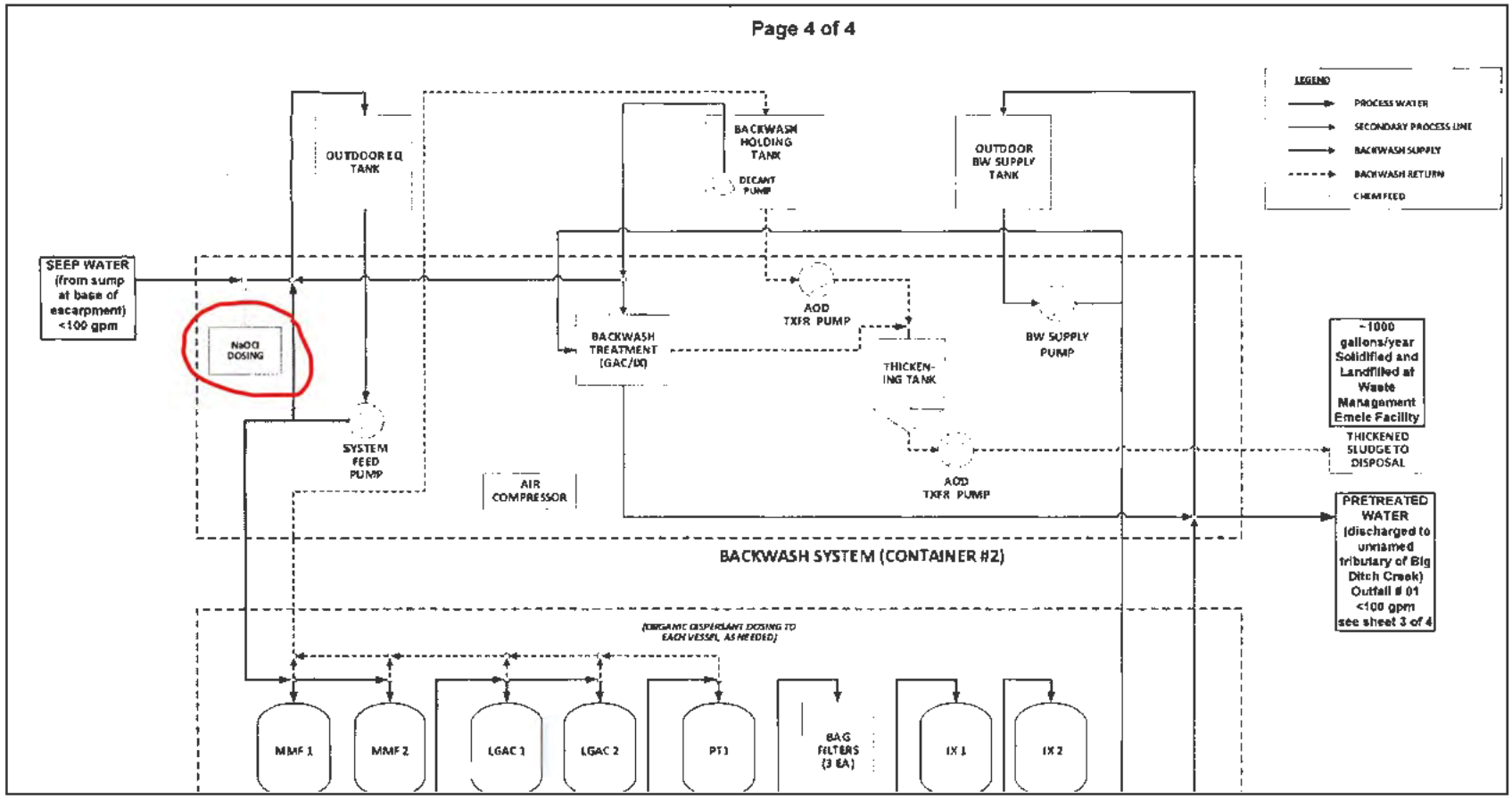
From: Shell, Karrie-Jo <Shell.Karrie-Jo@epa.gov>
Sent: Friday, June 21, 2024 9:32 AM
To: Pinson, Theo
Cc: Ramsey, S Scott; Holliman, Daniel; Teiken, Kevin; Jackson, Scott A
Subject: RE: EPA Review of AL0084489

Theo, we have another comment regarding the absence of TRC monitoring in the permit.

Based on our review of the treatment train and other information on GAC (below), it appears that there is pretreatment (application of bleach) prior to EQ tank feeding water treatment system (circled in **red).**

Please confirm that there is no TRC in the treated final effluent that will cause a violation of the applicable WQS.

Pg. 58 of Draft Permit AL0084489



GAC Installation Guide from NY

https://www.health.ny.gov/environmental/water/drinking/docs/interim_recommendations_for_granular_activated_carbon_installations_v_1.pdf

Summary: *Regular application of chlorinated water to GAC will shorten the lifespan of the GAC media. Minimize chlorine concentration prior to reaching GAC media.*

GAC Fact Sheet

2016_GAC.pdf (wqa.org)

Summary: *Reduction of chlorine using GAC is highly effective. Produces NaCl. Chloramine reduction (being used by DW communities to reduce TTHMs) requires a different GAC filter size.*

Karrie-Jo Robinson Shell, P.E.

Environmental Engineer
US EPA Region 4
Water Division
61 Forsyth Street
Atlanta, GA 30303
(404) 562-9308

From: Pinson, Theo <tpinson@adem.alabama.gov>
Sent: Tuesday, June 18, 2024 2:45 PM
To: Shell, Karrie-Jo <Shell.Karrie-Jo@epa.gov>
Cc: Ramsey, S Scott <sramsey@adem.alabama.gov>; Holliman, Daniel <Holliman.Daniel@epa.gov>; Teiken, Kevin <Teiken.Kevin@epa.gov>; Jackson, Scott A <scott.jackson@adem.alabama.gov>
Subject: RE: EPA Review of AL0084489

Karrie-Jo,

I have attached a copy of the consent order as requested. We will review your comments and follow up soon.

Thank you,

Theo

Theo Pinson
Industrial Section
Water Division
Alabama Department of Environmental Management
(334) 274 – 4202

NEW ADEM ELECTRONIC SYSTEM: Alabama Environmental Permitting and Compliance System (AEPACS)

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If you have questions or need assistance with AEPACS, please contact the ADEM Web Portal/AEPACS Help Desk at ademwebportal@adem.alabama.gov. The email box is monitored Monday through Friday, 7:00 am –5:00 pm.

From: Shell, Karrie-Jo <Shell.Karrie-Jo@epa.gov>
Sent: Tuesday, June 18, 2024 9:57 AM
To: Pinson, Theo <tpinson@adem.alabama.gov>
Cc: Ramsey, S Scott <SRamsey@adem.alabama.gov>; Holliman, Daniel <Holliman.Daniel@epa.gov>; Teiken, Kevin <Teiken.Kevin@epa.gov>
Subject: EPA Review of AL0084489

Hi Theo,

I am reviewing the draft permit for the 3M Remediation project. Below are my preliminary comments.

1. Please forward me a copy of the Consent Order. This will be beneficial in my understanding some of the PFAS-related permit conditions.
2. The new discharge that addresses pump and treatment of PFAS and requires the permittee submit EPA form 2C required within 2 years after commencement of the discharge. Since the equipment/treatment system is already onsite, per the flow schematic, why does the permit allow up to the maximum time to submit the 2C? They should already have effluent values to report sooner than 2 years after the discharge begins.
3. The receiving waterbody (RWB) has a 7Q10 for zero cfs and PFAS are known toxicants to both aquatic life and humans. The permit only require semi-annually monitoring for several PFAS compounds. Since PFAS substances are known toxicants why is sampling so infrequent? In absence of a numerical WQS for PFAS, ADEM should protect the designated use of the RWB based on the following narrative WQS.

> (c) State waters shall be free from substances attributable to sewage, industrial wastes or other wastes in concentrations or combinations which are toxic or harmful to human, animal or aquatic life to the extent commensurate with the designated usage of such waters.

4. The draft requires the use of EPA Method 1633 or "other alternative method" approved by the department. Please provide an explanation or an example when or why ADEM might have to use flexibility to use an alternative method than EPA method 1633.
5. The permit lacks a limit to ensure there will be a reduction in PFAS to the RWB. For instance, the permit should include a limit for PFAS removal efficiency based on information based on design specs for the proposed treatment train. The Fact Sheet/Rationale states that the permittee "has proposed to conduct interim treatment measures at the site aimed at reducing the discharge PFAS to surface waters through capture and treatment". However, the discussion lacks details regarding operational efficiency pertaining to the treatment train. It is my understanding that Granulated Activated Carbon has been demonstrated to remove 99% of PFAS. What is the expected removal efficiency for PFAS? See the below excerpt from EPA Drinking Water Technical Support document:

2.1 High Removal Efficiency

See more

2.1.1 Have high removal efficiencies that achieve potential MCLs been documented?

Yes. EPA's Drinking Water Treatability Database (USEPA, 2021a; 2021b; 2021c) includes extensive data from the literature on PFAS removal by GAC. Results are available from studies conducted in the laboratory, in the field at pilot scale, and in full-scale application, as shown in Table 4, Table 5, and Table 6. The literature demonstrates PFAS removal efficiencies for many PFAS compounds in the high 90 percent range and to levels below analytical detection limits. For PFOA and PFOS, maximum removal efficiencies are greater than 99 percent, also to below analytical detection limits[5] and lower than the regulatory thresholds currently under consideration.

6. The permit should require the permittee report on other operational parameters to ensure the equipment is operated as intended. For instance, the permit should require that the "Up Time" for the GAC unit and other unit processes be operational no less than 90 percent of the time.

Please let me know if you would like a video call to discuss my questions and concerns.

Thanks,
Karrie-Jo Robinson Shell, P.E.
Environmental Engineer
US EPA Region 4
Water Division
61 Forsyth Street
Atlanta, GA 30303
(404) 562-9308

NPDES Individual Permit Application (Form 187) - Initial Issuance for Industrial Facilities

version 2.7

(Submission #: HPX-MH52-GJTKR, version 1)

Details

Submission ID HPX-MH52-GJTKR

Form Input

General Instructions

This form should be used to submit the required information for an Initial Issuance of an NPDES individual permit for Industrial Individual NPDES facilities.

Do NOT continue this form if you are applying for a Modification or Reissuance of an existing permit. If you have begun this form in error, please close this form and then delete the draft. If you need assistance to find the correct Mod/Reissue form, please contact your assigned permit contact.

Incomplete or incorrect answers or missing signatures will delay processing. Attach additional comments or information as needed. Commencement of activities applied for as detailed in this application are not authorized until permit coverage has been issued by the Department.

Please complete all required sections of the form.
For assistance, please click here to determine the permit staff responsible for the site or call (334) 271-7943

Processing Information

Form Submission Reason
New

Are you applying for a modification or reissuance of an EXISTING permit for industrial activity?
No

General Information

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

NPDES or General Permit Numbers (if applicable, please list all permit numbers):
ALR10C196 NPDES General Construction

Select all discharge types that are applicable for this site/facility:
Stormwater Only Discharge

Permittee Information

Permittee

Permittee Name
3M Chemical Operations, LLC

Mailing Address

3M Center BLDG 223-2N-30

St. Paul, MN 55144

Per ADEM Admin. Code r. 335-6-6-.09 (1), a Responsible Official is defined as CEO, President, any position at a level of Vice President or higher, Owner, Partner, Managing Member (LLC), or ranking elected official. Please provide the contact information for the person meeting this definition.

Do NOT enter information for a person that is/will be a Duly Authorized Representative (DAR) (i.e. a person that has been delegated signatory permissions by a Responsible Official). A person that is a Duly Authorized Representative is NOT considered a RESPONSIBLE OFFICIAL.

Responsible Official

Prefix
Mr.

First Name	Last Name
Jim	*Kotsmith*

Title
VP Global EHS

Organization Name
3M

Phone Type	Number	Extension
Business	16513812519	

Email
jrkotsmith@mmm.com

Mailing Address

3M Center BLDG 225-1N-22

St. Paul, MN 55144

Does the Responsible Official intend to delegate signatory authority for DMRs or other compliance reports to an individual as a duly authorized representative (DAR) for this site?
No

Facility/Site Information

Facility/Site Name
CR 41

Organization/Ownership Type
LLC

Facility/Site Address or Location Description

~3851 Danville Road, SW

Decatur, AL 35603

Facility/Site County
Morgan

Detailed Directions to the Facility/Site
From Moulton St SW take Memorial Dr SW (Danville Road) south approximately 6 miles to the intersection of Lake Cove Dr and Danville Rd SW. The Site is west of the intersection.

Facility Map

1_CR41_Fig 1.pdf - 11/20/2023 08:27 AM

Comment

Facility Location

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

Map Instruction Help

Facility/Site Front Gate Latitude and Longitude

34.53369000853719,-87.01664016100167

Lake Cove Dr and Danville Rd SW, Decatur, AL

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

2899-Chemicals and Chemical Preparations
3081-Unsupported Plastics Film and Sheet

NAICS Code(s) [Please enter Primary NAICS Code first followed by any additional applicable NAICS Codes]

562910-Remediation Services

Facility/Site Contact

Prefix
Mr.

First Name	Last Name
Pat	*Carr*

Title
Senior Environmental Engineer

Organization Name
3M Company

Phone Type	Number	Extension
Business	16513993963	

Email
pcarr@mmm.com

Address

3M Center BLDG 225-1N-22

St. Paul, MN 55144

DMR Contact(s) (1 of 1)

DMR Contact

Prefix
Mr.

First Name	Last Name
Pat	*Carr*

Title
Senior Environmental Engineer

Phone Type	Number	Extension
Business	16513993963	

Email
pcarr@mmm.com

Address

3M Center BLDG 225-1N-22

St. Paul, MN 55144

Applicant Business Entity Information

Address of Incorporation
N/A

Agent Designated by the Corporation for Purposes of Service

Name	Address
N/A	N/A

Please provide all corporate officers

Name	Title	Address
N/A	N/A	N/A

Does the applicant applying for coverage have a Parent Corporation?
No

Does the applicant applying for coverage have Subsidiary Corporations?
No

Enforcement History

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

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

Facility/Site Name	Permit Number, If Applicable	Type of Action	Date of Action
The Decatur Facility	AL0000205	Consent Order	06/24/2020

Business Activity

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

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

Give a brief description of all operations at this facility including primary products or services:
Site collects and treats surface water to reduce fluoroalkyls entering waters of the state.

Stormwater Outfalls (1 of 1)

SW01

Outfall Identifier
SW01

Receiving Water
Big Ditch

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

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

Monitoring/Sampling Point Location
34.53335276531032,-87.01707011560671

Anti-Degradation Evaluation

Is this a new or increased discharge that began after April 3, 1991?
Yes

Has an Anti-Degradation Analysis been previously conducted and submitted to the Department for the new or increased discharge referenced above?
No

NOTE

If the discharge is to a Tier II waterbody as defined in ADEM Admin. Code r. 335-6-10-.12(4), complete questions below, ADEM Form 311-Alternatives Analysis, and either ADEM Form 312 or ADEM Form 313- Calculation of Total Annualized Project Costs (Public-Sector or Private-Sector Projects, whichever is applicable). ADEM Form 312 or ADEM Form 313, whichever is applicable, must be provided for each treatment discharge alternative considered technically viable.
ADEM forms can be found on the Department's website here.

What environmental or public health problem will the discharger be correcting?
The discharger will reduce the migration of per- and polyfluoroalkyl substances (PFAS) into the environment and local watersheds.

How much will the discharger be increasing employment (at its existing facility or as the result of locating a new facility)?
The project will increase both temporary and permanent employment within the community. Five temporary staff are anticipated to be employed during the construction phase and two permanent staff are anticipated to be employed for continued system operations for the foreseeable future.

How much reduction in employment will the discharger be avoiding?
The project will not reduce employment within the community.

How much additional state or local taxes will the discharger be paying?
Approximately $25,000 will be paid in state payroll tax and $50,000 will be paid in state and local sales tax during the first year (construction) of the project. Following construction, approximately $9,000 will be paid in state payroll tax and $10,000 will be paid in state and local sales tax annually.

What public service to the community will the discharger be providing?
The public service achieved will be a reduction in the migration of PFAS into the environment and local watersheds.

What economic or social benefit will the discharger be providing to the community?
The social benefit achieved will be a reduction in the migration of PFAS into the environment and local watersheds and the economic benefit achieved will be the addition of skilled jobs in the community and the generation of tax revenue during construction and subsequent operation of the treatment system.

Attach Form 311, Form 312, or Form 313
2_CR41_Form 311_Att 1.pdf - 11/20/2023 08:47 AM
Comment
Form 311 - Alternatives Analysis

Additional Information

Do you share an outfall with another facility?
No

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

this facility:

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

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

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

Please describe the equipment below:
Totalizing flow meter at discharge of the effluent transfer pump on site (see Attachment 2).

Please attach the process schematic with sampling equipment locations.
3_CR41_Att 2 - Process Schematics.pdf - 11/20/2023 08:54 AM
Comment
Site Plan, Equipment Location, Outfall Details & Process Flow Diagram

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

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

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

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

List of Biocides

Please list biocides below:
Sodium hypochlorite

Safety Data Sheets (SDS)
4_CR41_Table 1-Chemical Use.pdf - 11/20/2023 09:14 AM
Comment
Potential chemical use for water treatment.

Treatment

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

Treatment devices or processes used or proposed for treating wastewater or sludge (check as many as appropriate).
Chlorination
Filtration
Ion exchange
Sump
Flow equalization
Other physical treatment

Other physical treatment:
Carbon adsorption

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

Facility Operational Characteristics

Indicate whether the facility discharge is:
Continuous through the year

Comments:
Discharge rate to vary between wet and dry season.

Non-Discharged Wastes

Are any waste liquids or sludges generated and not disposed of in the sanitary sewer system?
Yes

Waste Generated	Quantity (lbs/day)	Disposal Method	On-Site or Off-Site?	If Off-Site, Identify the Facility:
Solids from filter backwash	10	landfill	Off-Site	CWM Emelle facility
Spent media solids	200	landfill	Off-Site	CWM Emelle facility
Solids from system cleaning	1	landfill	Off-Site	CWM Emelle facility

Does any outside firm remove any of the above checked wastes?
Yes

Hauler Information

Name	Address	City	State	Zip
Robbie D. Wood, Inc.	1051 Old Warrior River Rd	Hueytown	AL	35023

EPA Application Forms

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

Form 1 - General Information Form required for all applications

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

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

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

Form 2F - Should be submitted for all discharges of storm water associated with an industrial activity.

The EPA application forms are found on the Department's website here.

EPA Form 1

5_CR41_EPA- Application Form 1_Signed.pdf - 12/04/2023 03:49 PM

Comment

EPA Form 1, signed.

Additional EPA Forms (EPA Form 2C, 2D, 2E and/or 2F)

6_CR41_EPA Application Form 2d_Signed.pdf - 12/04/2023 03:50 PM

Comment

EPA Form 2d, signed.

Other attachments (as needed)

NONE PROVIDED

Comment

NONE PROVIDED

Additional Attachments

Please attach any additional information as needed.

NONE PROVIDED

Comment

NONE PROVIDED

Application Preparer

Application Preparer

Prefix

Mr.

First Name	Last Name
Guy	*Kaminski*

Title

Senior Engineer

Organization Name

GHD Services, Inc.

Phone Type	Number	Extension
Business	18132570657	
Mobile	18133403869	

Email

guy.kaminski@ghd.com

Address

5904 Hampton Oaks Parkway, Suite F

Tampa, Florida 33615

Agreements and Signature(s)

SUBMISSION AGREEMENTS

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

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

"I further certify under penalty of lawthat all analyses reported as less than detectable in this application or attachments thereto were performed using the EPA approved test method having the lowest detection limit for the substance tested."

NOTE: 335-6-5-.14 SIGNATORIES TO PERMIT APPLICATIONS AND REPORTS.
The application for a permit shall be signed by a responsible official, a request for variance from categorical pretreatment standards, and a category determination request shall be signed b a responsible official, as indicated below.

- *In the case of a corporation, by a principal executive officer of at least the level of vice president;*
- *In the case of a partnership, by a general partner;*
- *In the case of a sole proprietorship, by the proprietor; or*
- *In the case of a municipal, state, federal, or other public entity, by either a principal executive officer, or ranking elected official*

Signed By James Kotsmith on 12/15/2023 at 7:43 AM

Pinson, Theo

From: Guy Kaminski <Guy.Kaminski@ghd.com>
Sent: Friday, May 10, 2024 9:06 AM
To: Pinson, Theo
Cc: Karie Blomquist; John DiZinno
Subject: RE: 3M CR 41
Attachments: CR41 RFI - ADEM Forms 311 & 313.pdf; CR41 AERIAL.pdf

Hello Theo,
Apologize for this taking awhile. The antidegradation analysis is attached. It includes forms 311 and 313. Also attached is an aerial photo you requested. Finally, a brief description of the treatment system is provided below.

Treatment System

Seep water containing per and polyfluoroalkyl substances (PFAS) will be collected and pumped to an on-site treatment system. The treatment system consists of collection tanks for equalization, multimedia filters for suspended solids removal, granular activated carbon (GAC) primarily for removal of total organic carbon (TOC), an ion exchange resin for removing additional TOC that passes through the GAC and some PFAS removal, bag filters for additional suspended solids removal and ion exchange resin for further PFAS removal. The treated water will then be discharged to the on-site surface water conveyance in accordance with an NPDES permit. Solids collected from the filters and spent treatment media will be disposed of at an appropriate off-site disposal facility based on waste analyses results. The spent granular activated carbon will be sent off-site for thermal reactivation to destroy the PFAS. The ion exchange resin will be disposed of at an appropriate off-site disposal facility based on waste characterization results.

The treatment system uses integrated transfer pumps and equipment which will be monitored on site and can be monitored remotely. Continuous water flow measurements will be recorded, and water samples will be collected between the GAC and ion exchange treatment units and analyzed for PFAS to monitor performance of the treatment equipment. Water samples will be collected from the system effluent and analyzed in accordance with the NPDES permit.

Let me know if you have further questions. Could you let me know if you have everything you need on Johnson Remediation Site SID Application?
Thank you.

Warmest Regards

GUY T KAMINSKI, PE
Senior Engineer

Proudly employee owned | ghd.com
5904 Hampton Oaks Parkway Suite F Tampa FL 33610 USA
D 813 257 0657 **M** 813 340 3869 **E** guy.kaminski@ghd.com

Please consider our environment before printing this email

From: Pinson, Theo <tpinson@adem.alabama.gov>
Sent: Friday, March 29, 2024 2:53 PM
To: Guy Kaminski <Guy.Kaminski@ghd.com>
Subject: Re: 3M CR 41

You don't often get email from tpinson@adem.alabama.gov. Learn why this is important

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From: Pinson, Theo <tpinson@adem.alabama.gov>
Sent: Monday, March 11, 2024 10:36 AM
To: Guy Kaminski <Guy.Kaminski@ghd.com>
Subject: 3M CR 41

Guy,

Good talking with you last week. For the antidegradation analysis, Option 1 – Land Application, Option 2 – Discharge to POTW, and Option 3 – Relocation of Discharge could be considered technically viable in that they could be engineered. You will need to complete a Form 313 for your chosen proposed direct discharge and one for each option 1, 2, and 3. If option 1, 2, and/or 3 are less than 110% of the total annualized project cost for your chosen method, then it would be considered a viable alternative since it would be both technically and economically viable. My understanding is that you will need to revise the Form 311 to show that options 1, 2, and 3 could technically be completed, and then demonstrate through Form 313 whether each option is viable based on the cost analysis. You could also update your attachment to provide clarification on why each alternative ultimately is viable or not based on the cost analyses.

It would be helpful if you could provide a brief narrative description of the proposed treatment system that we can incorporate into the rationale.

It would also be helpful if you could provide a satellite imagery map of the site outlining the property boundary and providing the approximate locations of where the treatment systems and outfall will be located. This will provide context to the public on what exactly we are proposing to be permitted.

Please let me know if you have any questions.

Thank you,

Theo

Theo Pinson
Industrial Section
Water Division
Alabama Department of Environmental Management
(334) 274 – 4202

NEW ADEM ELECTRONIC SYSTEM: Alabama Environmental Permitting and Compliance System (AEPACS)

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. For general information about AEPACS, visit http://adem.alabama.gov/egov/AEPACS.cnt. For NPDES and SID program specific information about AEPACS, visit http://adem.alabama.gov/egov/AEPACSwater.cnt.

If you have questions or need assistance with AEPACS, please contact the ADEM Web Portal/AEPACS Help Desk at ademwebportal@adem.alabama.gov. The email box is monitored Monday through Friday, 7:00 am –5:00 pm.

Attachment 1 to Supplementary Form
ADEM Form 311

Alternatives Analysis

Applicant/Project: County Road 41 Remediation Site

All new or expanded discharges (except discharges eligible for coverage under general permits) covered by the NPDES permitting program are subject to the provisions of ADEM's antidegradation policy. Applicants for such discharges to Tier 2 waters are required to demonstrate "... that the proposed discharge is necessary for important economic or social development." As a part of this demonstration, the applicant must complete an evaluation of the discharge alternatives listed below, including a calculation of the total annualized project costs for each technically feasible alternative (using ADEM Form 312 for public-sector projects and ADEM Form 313 for private-sector projects). Alternatives with total annualized project costs that are less than 110% of the total annualized project costs for the Tier 2 discharge proposal are considered viable alternatives.

Alternative	Viable	Non-Viable	Comment
1 Land Application		X	Total annualized cost is more than 700% of the NPDES discharge
2 Pretreatment/Discharge to POTW		X	Total annualized cost is nearly 800% of the NPDES discharge
3 Relocation of Discharge		X	Total annualized cost is nearly 500% of the NPDES discharge
4 Reuse/Recycle		X	No available demand
5 Process/Treatment Alternatives		X	No other treatment demonstrated to be more efficient/effective.
6 On-site/Sub-surface Disposal			Not feasible given karst geology and administratively undesirable.
(other project-specific alternatives considered by the applicant; attach additional sheets if necessary)			
7			
8			
9			

Pursuant to ADEM Administrative Code Rule 335-6-3-.04, I certify on behalf of the applicant that I have completed an evaluation of the discharge alternatives identified above, and reached the conclusions indicated.

Signature: _____ *(Professional Engineer)*

Date: 5/10/2024

(Supporting documentation to be attached, referenced, or otherwise handled as appropriate.)

Addendum 1 to ADEM Form 311

Alternative 1 – Land Application is not a viable solution for discharging treated effluent because the total annualized cost is more than 700% of the total annualized cost of the null (0) alternative [Direct NPDES Discharge on site]. Land application would require a significant amount of vacant land offsite to irrigate with the discharge water. The property would require a soil and geophysical investigation to confirm it is suitable for land application (ensure land applied discharge will infiltrate soil, i.e. soil is not clay, and will not short circuit to surface water or groundwater). This would delay water treatment as it will likely take several years of additional investigation and tests to confirm the property is suitable for land application. If it was not deemed suitable, a new parcel would have to be identified for testing, furthering the delay of water treatment. Cost analysis of this alternative assumed a vacant parcel within a mile of the site would be found suitable for land application; however, the cost analysis indicates the total annualized cost is more than 700% of the null (0) alternative (direct discharge on site).

Alternative 2 – Pretreatment/Discharge to POTW is not a viable solution for discharging treated effluent to the POTW because the total annualized cost is nearly 800% of the total annualized cost of the null (0) alternative. This alternative cost analysis considered construction of nearly 1.5 miles of force main to Decatur Utilities (DU) POTW sewer system at the corner of Danville Road and Stone River Drive. The number of utilities in Danville Road presents considerable challenges to installing a new force main. Time required to achieve this could be considerable and delay the opportunity to begin water treatment.

Alternative 3 – Relocation of Discharge is not a viable solution for discharging treated effluent because the total annualized cost is nearly 500% of the total annualized cost of the null (0) alternative. This cost analysis assumed an acceptable alternate discharge location would be West Flint Creek at County Road 41, approximately 3 miles south of the site. At this location, the Creek has higher flow and would presumably provide considerable mixing for the discharge. Other alternate discharge locations outside the sites' watershed are considered less feasible than the assumption used here as the distances water would need to be pumped outside the watershed would be far greater than the assumption used in this cost analysis.

Alternative 4 – Reuse/Recycle of discharge is not feasible as there is no water demand within practical proximity of the site that could use the design flow rate. Nor would it be likely that one would want a water source that could fluctuate significantly in flow rate based on seasonal conditions.

Alternative 5 – Process/Treatment Alternatives other than the unit operations proposed (physical, chemical, and/or biological) have not been demonstrated to be more effective and reliable than the unit operations proposed in this treatment strategy.

Alternative 6 – On-site/Sub-surface Disposal or use of a Class V underground injection well is generally not feasible at this site due to the local geology/hydrogeology. The karst nature of the local geology makes it difficult to control the injection/application of water below the surface reliably.

ADEM Form 313

Calculation of Total Annualized Project Costs

Project: County Road 41 Remediation Site

Alternative: (0) Direct Discharge - NPDES

Description	Unit	Amount	Items
Capital Costs to be Financed (Supplied by applicant)	$	$ 29,908	(1)
Interest rate for Financing (Expressed as a decimal)		0.05	(i)
Time Period	years	10	(n)
Annualization Factor (annual to future)		0.07950	(2)
Annualized Capital Cost (1) x (2)		$ 2,378	(3)
Annual Cost of Operation and Maintenance		$ 37,081	(4)
Total Annual Cost of Pollution Control Project (3) + (4)		**$ 39,459**	(5)

Alternative: (1) Land Application

Description	Unit	Amount	Items
Capital Costs to be Financed (Supplied by applicant)	$	$ 2,149,526	(1)
Interest rate for Financing (Expressed as a decimal)		0.05	i
Time Period	years	10	n
Annualization Factor (annual to future)		0.07950	(2)
Annualized Capital Cost (1) x (2)		$ 170,897	(3)
Annual Cost of Operation and Maintenance		$ 125,879	(4)
Total Annual Cost of Pollution Control Project (3) + (4)		**$ 296,776**	(5)

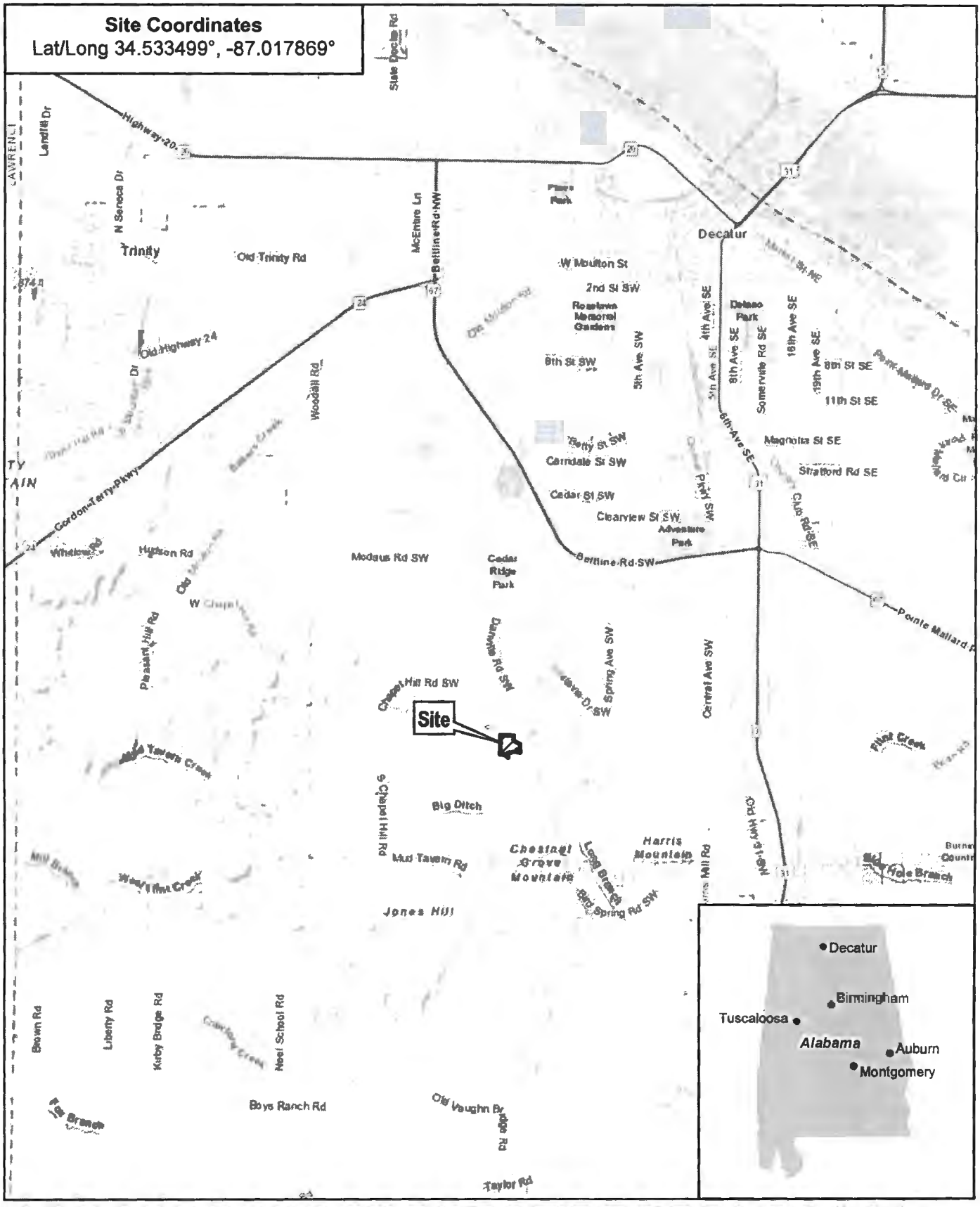
Alternative: (2) Indirect Discharge to DU

Description	Unit	Amount	Items
Capital Costs to be Financed (Supplied by applicant)	$	$ 791,088	(1)
Interest rate for Financing (Expressed as a decimal)		0.05	i
Time Period	years	10	n
Annualization Factor (annual to future)		0.07950	(2)
Annualized Capital Cost (1) x (2)		$ 62,895	(3)
Annual Cost of Operation and Maintenance		$ 249,530	(4)
Total Annual Cost of Pollution Control Project (3) + (4)		**$ 312,425**	(5)

Alternative: (3) Relocation of Discharge

Description	Unit	Amount	Item
Capital Costs to be Financed (Supplied by applicant)	$	$ 1,510,044	(1)
Interest rate for Financing (Expressed as a decimal)		0.05	i
Time Period	years	10	n
Annualization Factor (annual to future)		0.07950	(2)
Annualized Capital Cost (1) x (2)		$ 120,055	(3)
Annual Cost of Operation and Maintenance		$ 74,690	(4)
Total Annual Cost of Pollution Control Project (3) + (4)		**$ 194,745**	(5)


NORTH
~ 300 FEET
SCALE
PROPERTY BOUNDARY
TREATMENT EQUIPMENT
OUTFALL LOCATION
Danville Rd SW
Lake Cove Dr SW
Timberlake Ct SW
San Souci Cave Rd SW
COUNTY ROAD 41 REMEDIATION SITE



Paper Size ANSI A

0 0.25 0.5 0.75 1

Miles

Map Projection: Transverse Mercator
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane Alabama West FIPS 0102 Feet

N

GHD

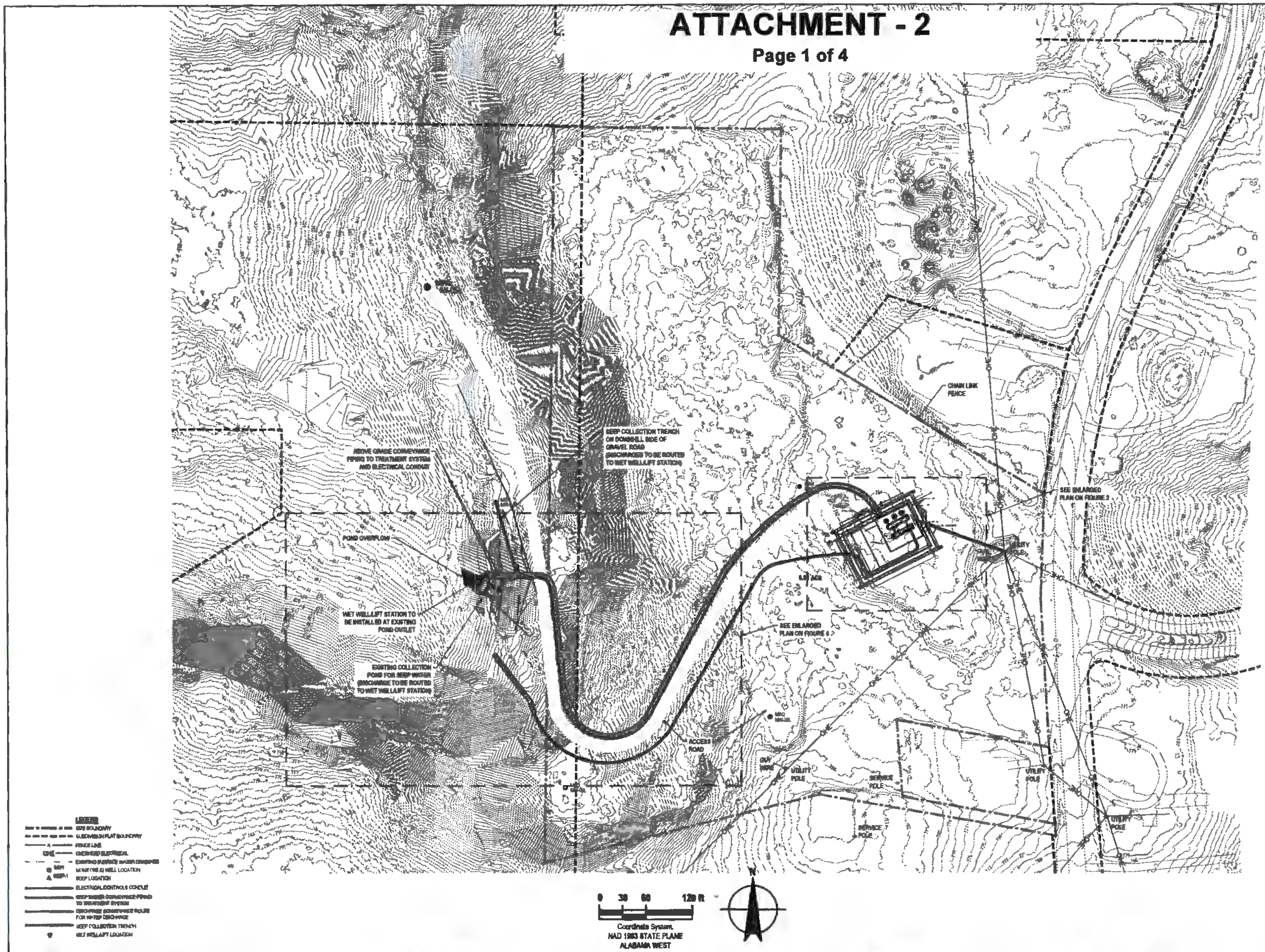
3M Chemical Operations LLC
CR41 Remediation Site

Facility Location Map

Project No. 11226896
Revision No. -
Date Sep 20, 2022

FIGURE 1

ATTACHMENT - 2



Bar is one inch on original size sheet

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Conditions of Use

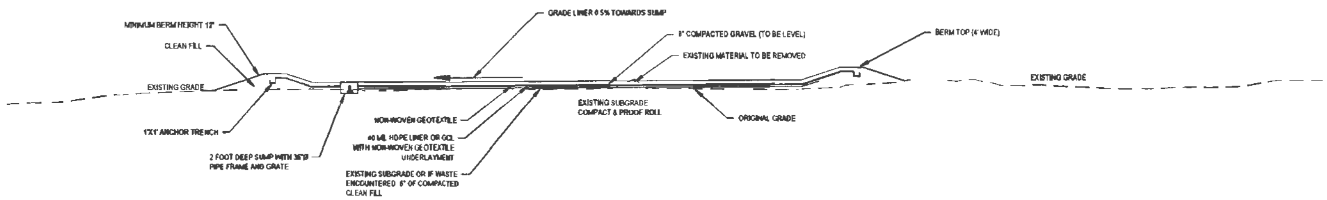
Client **3M CHEMICAL OPERATIONS LLC**
COUNTY ROAD 41
Project **REMEDIATION SITE IM DESIGN**

Title **CONCEPTUAL SITE PLAN**

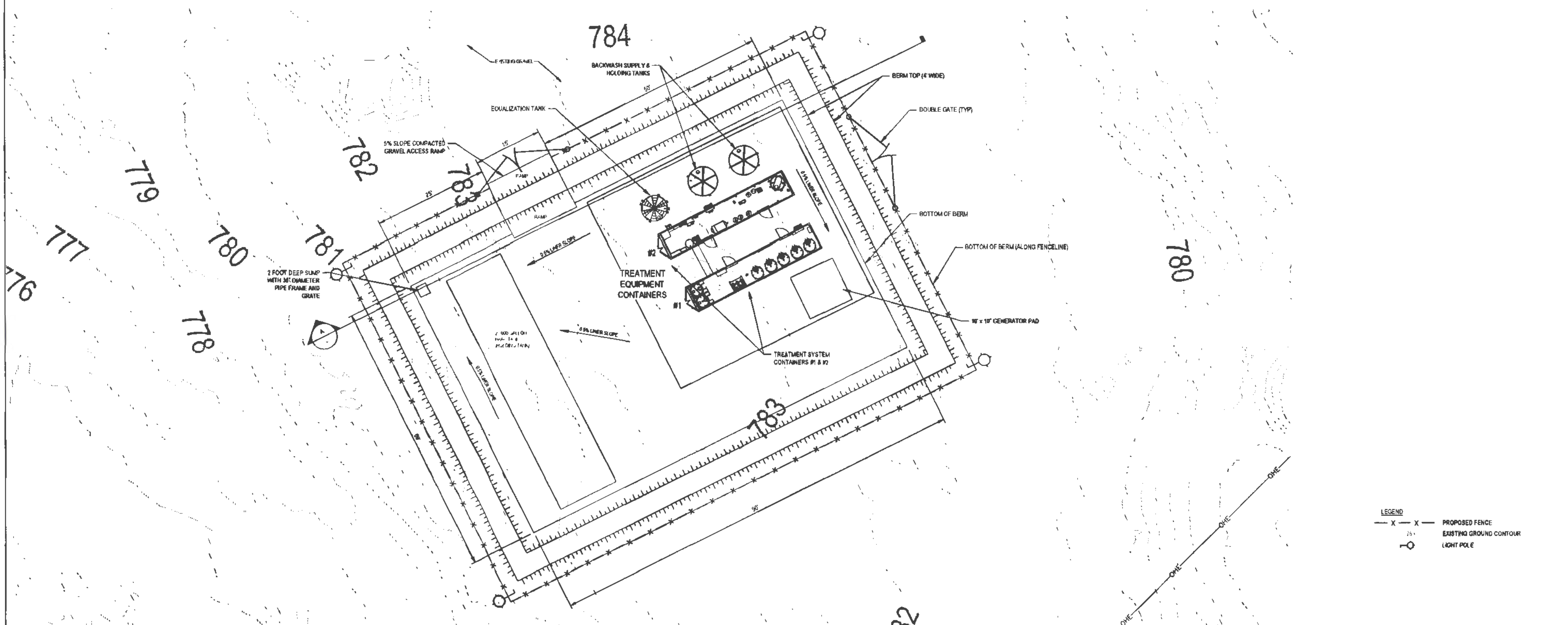
Project No.	Date	Scale
12612279	OCTOBER 2023	AS SHOWN

Author	Drafting Check B. WOLFER	Project Manager
Designer C. FLANDERS	Design Check	Project Director C. FLANDERS

ATTACHMENT - 2



A SECTION
SCALE: 1" = 10'



PLAN
SCALE: 1" = 10'

PRELIMINARY

Client	3M CHEMICAL OPERATIONS LLC
Project	COUNTY ROAD 41 IM DESIGN
Title	TREATMENT EQUIPMENT COMPOUND
Project No.	12612279
Date	OCTOBER 2023
Scale	AS SHOWN
Sheet No.	2 of 4

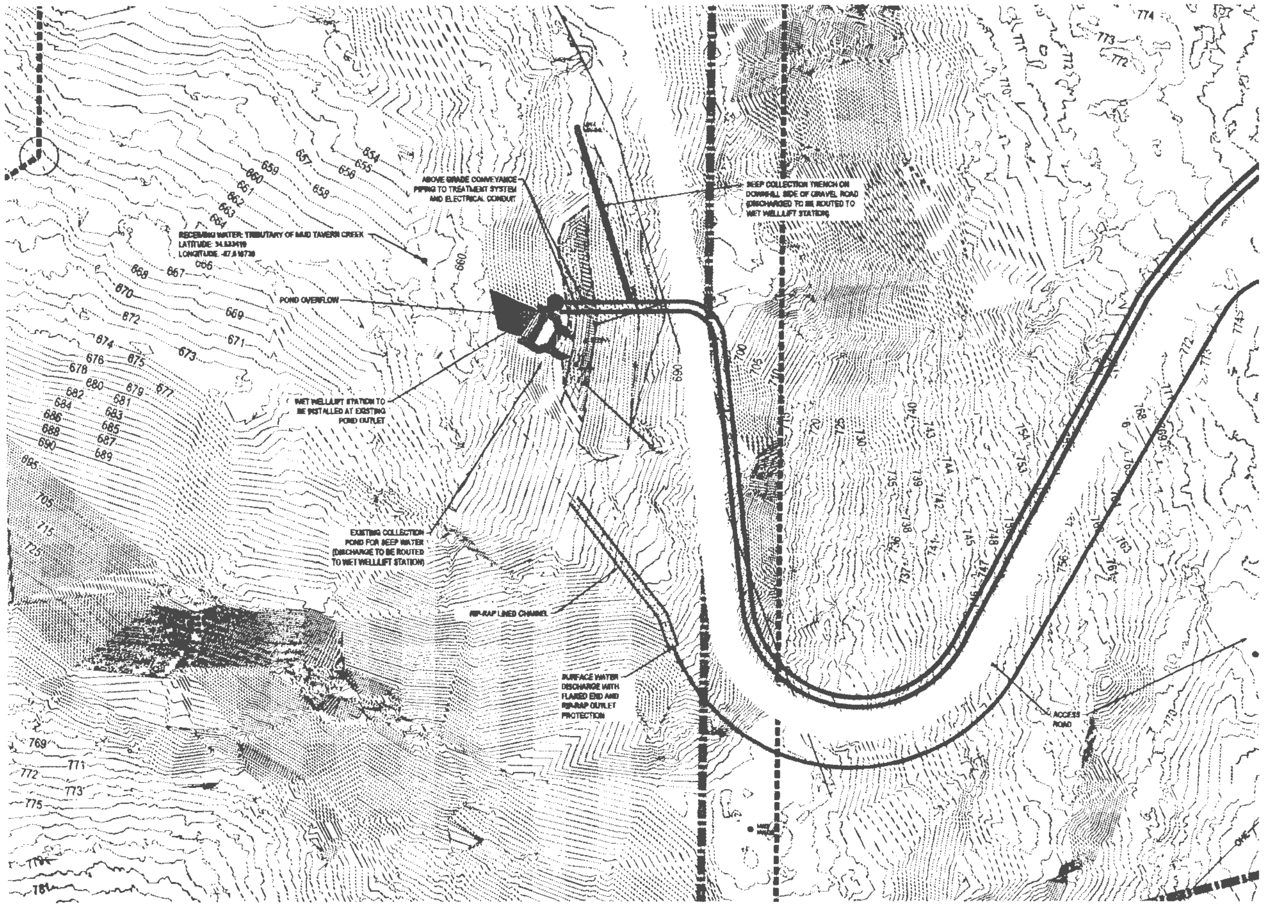
GHD Services, Inc.
2500 Clean Water Court, Suite 301
Buford GA 30519 USA
T 1 678 280 2150 F 1 678 280 2128 W www.ghd.com

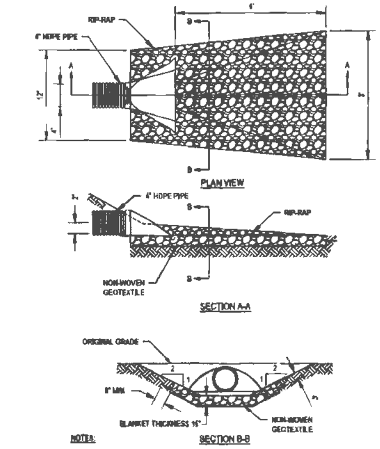
Bar is one inch on original size sheet

Author	Drafting Check	Project Manager	J. DIZINNO
Designer	Design Check	Project Director	C. FLANDERS

ARCH D

ATTACHMENT - 2



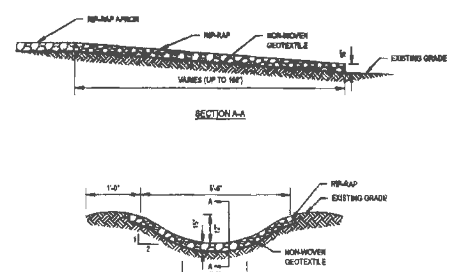


NOTES:

1. NON-WOVEN GEOTEXTILE SHOULD MEET REQUIREMENTS FOUND IN AASHTO M288 FOR A CLASS 2 SEPARATION GEOTEXTILE (E.G. MIRAFI 140N OR EQUIVALENT)
2. CLASS 1 RIP-RAP

OUTFALL WITH FLARED-END AND RIP-RAP OUTLET PROTECTION

SCALE: NTS



NOTES:

1. NON-WOVEN GEOTEXTILE SHOULD MEET REQUIREMENTS FOUND IN AASHTO M288 FOR A CLASS 2 SEPARATION GEOTEXTILE (E.G. MIRAFI 140N OR EQUIVALENT)
2. CLASS 1 RIP-RAP
3. MATCH EXISTING SLOPE AND PLACE IMMEDIATELY ADJACENT TO RIP-RAP OUTLET PROTECTION

RIP-RAP LINE CHANNEL CROSS SECTION

SCALE: NTS

Coordinate System
NAD 1983 STATE PLANE
ALABAMA WEST

Bar is one inch on original size sheet

GHD Services, Inc.

Conditions of Use

Client: 3M CHEMICAL OPERATIONS LLC
COUNTY ROAD 41

Project: REMEDIATION SITE IM DESIGN

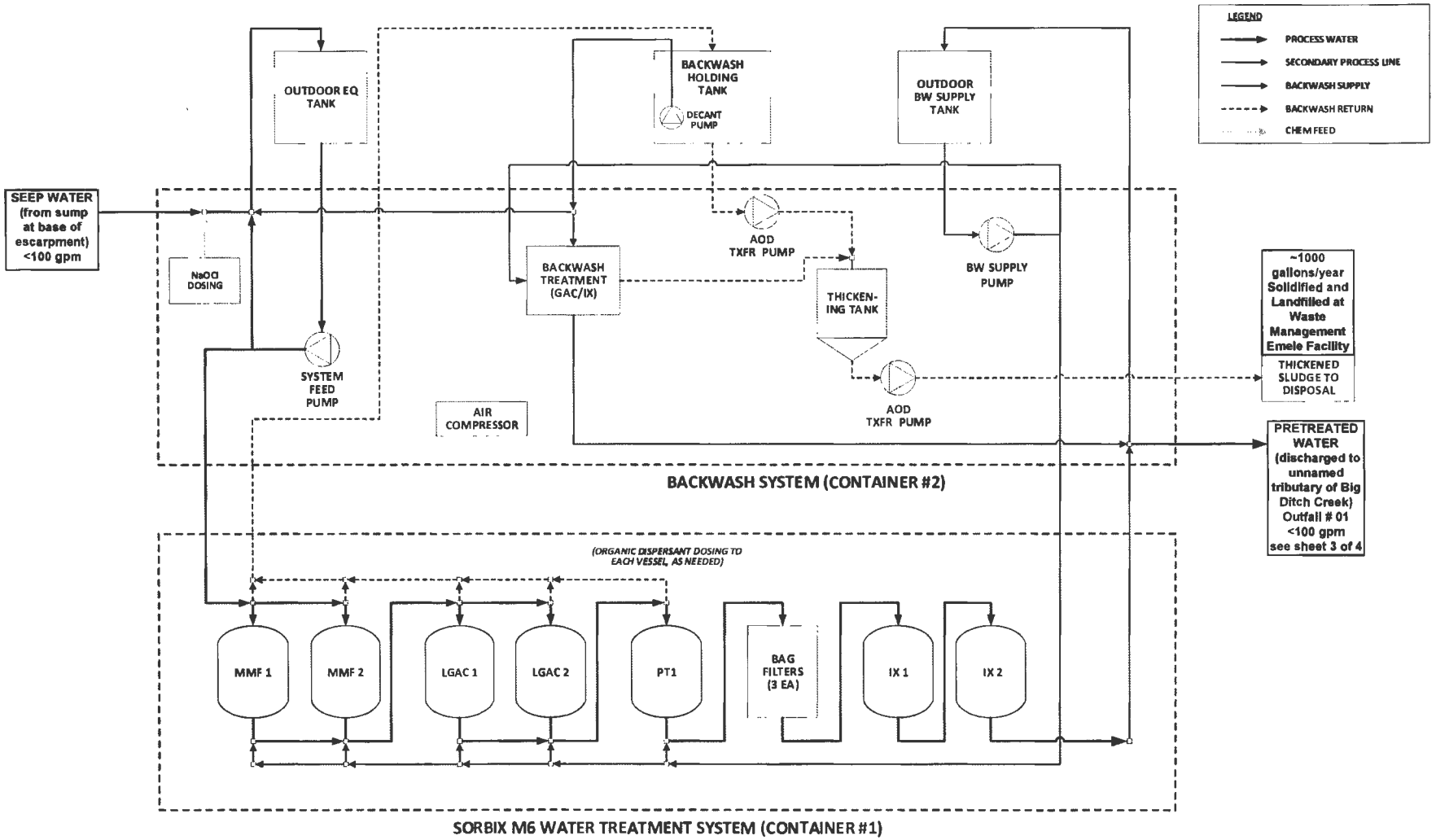
Title: SURFACE WATER DISCHARGE OUTFALL

Project No.	Date	Scale
12612279	OCTOBER 2023	AS SHOWN

Designer: C. FLANDERS
Drafting Check: M. WOLFER
Project Manager: J. CEZERO
Project Director: C. FLANDERS

ATTACHMENT - 2

Page 4 of 4



NOTES

1. EXTERIOR EQUIPMENT AND PIPING NOT WITHIN FABRICATION SCOPE ONLY INCLUDED IN THIS PACKAGE AS A REFERENCE.

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PORTLAND, ME 04103
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REV.	DATE	DESCRIPTION	DRAWN BY	CHKD BY
4	08/07/2023	CLIENT SUBMITTAL	IAC	JTH
3	03/31/2023	ISSUED FOR FABRICATION	IAC	JTH
2	01/20/2023	ISSUED FOR BID	TT	JHB
1	11/16/2023	ISSUED FOR REVIEW	IAC	JHB

PROJECT NO. 021474
SCALE
DATE 7 JUNE 2023
DRAWN BY IAC
DESIGNED BY JHB
CHECKED BY AJS
APPROVED BY MMS
STAMP

ISSUED FOR FABRICATION

CLIENT
3M COMPANY

PROJECT
3M-M6-P-R

TITLE
PROCESS FLOW DIAGRAM

P-010

Sheet 4 of 17

Table 1. Potential Chemical Use for Water Treatment at the County Road 41 Remediation Site

Product	Description	Application Method	Data for Biocide and Corrosion Inhibitors					
			Tolerence Limit (mg/L)	Basis*	Organism	Quantity	Frequency	Proposed Discharge Concentration (mg/L)
Sodium Hypochlorite**	Disinfection and oxidation of metals	Dosing	0.08	LC50	fathead minnow			Nondetect
			0.04	EC50	water flea			
Antiscalant** - Phosphate based	Antiscalant to prevent scale formation in pipes/tanks/media	Dosing	No data					
Ferric Sulfate	Potentially used as a coagulant to remove solids from pond water	Dosing	N/A					
Ferric Chloride	Potentially used as a coagulant to remove solids from pond water							
ACH	Potentially used as a coagulant to remove solids from pond water							
Sodium Bisulfite	Potentially used to restore PT1 media	As needed batch application						
Sodium Bisulfite	free chlorine quenching	Dosing						
Super Iron Out	Potentially used to restore PT1 media	As needed batch application						
Sodium Chloride	Used to regenerate PT1 media	As needed batch application						
Bio-IX solve	Potentially used to treat GAC, PT1 or IX media if they become bio-fouled	As needed batch application						
Sulfuric Acid	to reduce pH to minimize scaling							
Sodium Hydroxide	to raise pH if needed							

Notes: * LC50 (leathal concentration), EC (effective concentration).

** Sodium Hypochlorite = Biocide and Phosphate based antiscalant = Corrosion Inhibitor

Material Handling Procedures
Chemical Storage: Chemicals are located inside the equipment cargo containers which are located within the bermed equipment compound. Small quanties of unused chemical maybe stored onsite in prior to use. All storgage is within the bermed/lined equipment compound.
Chemical Transfer: Chemicals are generally dosed into the system from containers (typically drums) provided by suppier and placed on secondary containment skid. The metering equipment is located above secondary containement pan to capture drips or leaks.
Solids Storage and Transfer: Backwash solids are thickened in a 500 gallon tank and transferred to a 55-gallon drum for off-site disposal. Both the thickening tank and storage drum are located within the bermed/lined equipment compound.
Treatment Media Storage and Transfer: Unused treametment media is brought to the site when needed. Spent media is typical removed from treatment vessel directly to transport vehicle. Occasionaly it maybe transffered to a dsiposal drum within the bermed/lined equipment compound.
Spills: Within the bermed equipment compound, spills will be collected via a sump and transferred to the back wash tank, which is also within the bermed/lined equipment compound.

United States Environmental Protection Agency | Office of Water Washington, D.C. | EPA Form 3510-1 Revised March 2019

Water Permits Division

Application Form 1
General Information
NPDES Permitting Program

Note: All applicants to the National Pollutant Discharge Elimination System (NPDES) permits program, with the exception of publicly owned treatment works and other treatment works treating domestic sewage, must complete Form 1. Additionally, all applicants must complete one or more of the following forms: 2B, 2C, 2D, 2E, or 2F. To determine the specific forms you must complete, consult the "General Instructions" for this form.

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
		County Road 41 Remediation Site	

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.
☐ Yes ☑ 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.
☐ Yes ☑ 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

County Road 41 Remediation Site

2.2 EPA Identification Number

2.3 Facility Contact

Name (first and last)	Title	Phone number
Pat Carr	Senior Environmental Engineer	(651) 399-3963

Email address
pcarr@mmm.com

2.4 Facility Mailing Address

Street or P.O. box
3M Center, BLDG 225-1N-22

City or town	State	ZIP code
St. Paul	MN	55144-1000

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
		County Road 41 RemediationSite	

Name, Mailing Address, and Location Continued

2.5 **Facility Location**

Street, route number, or other specific identifier
3907 Danville Road

County name	County code (if known)	
Morgan		
City or town	**State**	**ZIP code**
Decatur	AL	35603

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

SIC and NAICS Codes

3.1

SIC Code(s)	Description (optional)
N/A	N/A

3.2

NAICS Code(s)	Description (optional)
562910	Remediation

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

Operator Information

4.1 **Name of Operator**

3M Chemical Operations LLC

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

☑ Yes ☐ No

4.3 **Operator Status**

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

☑ Private ☐ Other (specify) _____

4.4 **Phone Number of Operator**

(651) 399-3963

Operator Information Continued

4.5 **Operator Address**

Street or P.O. Box
3M Center, BLDG 225-1N-22

City or town	State	ZIP code
St. Paul	MN	55144-1000

Email address of operator
pcarr@mmm.com

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

Indian Land

5.1 Is the facility located on Indian Land?

☐ Yes ☑ No

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
		County Road 41 RemediationSite	

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) ALR10C196 General Const.	☐ RCRA (hazardous wastes)	☐ UIC (underground injection of fluids)
☐ PSD (air emissions)	☐ Nonattainment program (CAA)	☐ NESHAPs (CAA)
☐ Ocean dumping (MPRSA)	☐ Dredge or fill (CWA Section 404)	☐ Other (specify)

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

Map

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

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

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

Nature of Business

8.1 Describe the nature of your business.

Investigation and remediation of former waste disposal site.

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
		County Road 41 RemediationSite	

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
James R. Kotsmith	VP Global EHS
Signature	**Date signed**
Jo R. Ktith	12/4/23

United States Environmental Protection Agency | Office of Water Washington, D.C. | EPA Form 3510-2D Revised March 2019

Water Permits Division

EPA

Application Form 2D

New Manufacturing, Commercial, Mining, and Silvicultural Operations That Have Not Yet Commenced Discharge of Process Wastewater

NPDES Permitting Program

Note: Complete this form ***and*** Form 1 if your facility is a new manufacturing, commercial, mining, or silvicultural facility that has yet to commence discharge of process wastewater.

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
		County Road 41 Remediation Site	

Form 2D NPDES

EPA

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

NEW MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURAL OPERATIONS THAT HAVE NOT YET COMMENCED DISCHARGE OF PROCESS WASTEWATER

SECTION 1. EXPECTED OUTFALL LOCATION (40 CFR 122.21(k)(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
01	Unnamed tributary of Bi	34° 31′ 58″ N	87° 01′ 06″ W
Stop 1	Big Ditch	° ′ ″	° ′ ″
		° ′ ″	° ′ ″

SECTION 2. EXPECTED DISCHARGE DATE (40 CFR 122.21(k)(2))

Expected Discharge Date

2.1

Month	Day	Year
March	31	2024

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

Average Flows and Treatment

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

****Outfall Number**** 01

Operations Contributing to Flow

Operation	Average Flow
PFAS reduction of actively recovered ground and surface water	<0.144 mgd
	mgd
	mgd
	mgd
	mgd

Treatment Units

Description (include size, flow rate through each treatment unit, retention time, etc.)	Code from Exhibit 2D-1	Final Disposal of Solid or Liquid Wastes Other Than by Discharge
Multimedia filter, 840 gallons, 100 gpm, 4.8 minutes	1-Q	Landfill spent media*
Carbon adsorption, 840 gallons, 100 gpm, 4.8 minutes	2-A	Landfill or regenerate spent media*
Ion exchange, 1260 gallons, 100 gpm, 3.8 minutes	2-J	Landfill or regenerate spent media*
Discharge to surface water, 100 gpm	4-A	N/A
Gravity thickening, 500 gallons, > 1 month	5-L	Landfill*

Note: * - All landfill and regeneration activity are conducted off site at licensed facilities.

Average Flows and Treatment Continued

3.1 Cont.

****Outfall Number**** _____

Operations Contributing to Flow

Operation	Average Flow
	mgd
	mgd
	mgd
	mgd
	mgd

Treatment Units

Description (include size, flow rate through each treatment unit, retention time, etc.)	Code from Exhibit 2D-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
	mgd

Treatment Units

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

SECTION 4. LINE DRAWING (40 CFR 122.21(k)(3)(ii))

Line Drawing

4.1 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 2D–2 at end of instructions for example.)

☑ Yes ☐ No

SECTION 5. INTERMITTENT OR SEASONAL FLOWS (40 CFR 122.21(k)(3)(iii))

Intermittent or Seasonal Flows

5.1 Except for stormwater runoff, leaks, or spills, are any expected discharges described in Sections 1 and 3 intermittent or seasonal?

☐ Yes ☑ No → SKIP to Section 6.

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

Outfall Number	Operations (list)	Frequency		Rate and Volume		Duration
		Average Days/Week	Average Months/Year	Maximum Daily Discharge	Maximum Total Volume	
		days/week	months/year	mgd	gallons	days
		days/week	months/year	mgd	gallons	days
		days/week	months/year	mgd	gallons	days
Outfall Number	**Operations (list)**	**Frequency**		**Rate and Volume**		**Duration**
		Average Days/Week	**Average Months/Year**	**Maximum Daily Discharge**	**Maximum Total Volume**	
		days/week	months/year	mgd	gallons	days
		days/week	months/year	mgd	gallons	days
		days/week	months/year	mgd	gallons	days
Outfall Number	**Operations (list)**	**Frequency**		**Rate and Volume**		**Duration**
		Average Days/Week	**Average Months/Year**	**Maximum Daily Discharge**	**Maximum Total Volume**	
		days/week	months/year	mgd	gallons	days
		days/week	months/year	mgd	gallons	days
		days/week	months/year	mgd	gallons	days

SECTION 6. PRODUCTION (40 CFR 122.21(k)(4))

Production

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

☐ Yes ☑ No → SKIP to Section 7.

6.2 Provide the following information on applicable ELGs.

ELG Category	ELG Subcategory	Regulatory Citation

Production Continued

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

☐ Yes ☐ No ➔ SKIP to Section 7.

6.4 Provide an expected measure of average daily production expressed in terms and units of applicable ELGs.

Expected Actual Average Daily Production for First Three Years				
Outfall Number	Year	Operation, Product, or Material	Quantity per Day (note basis if applicable)	Unit of Measure
	Year 1			
	Year 2			
	Year 3			
	Year 1			
	Year 2			
	Year 3			
	Year 1			
	Year 2			
	Year 3			

SECTION 7. EFFLUENT CHARACTERISTICS (40 CFR 122.21(k)(5))

Effluent Characteristics

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

Table A. Conventional and Non-Conventional Parameters

7.1 Are you requesting a waiver from your NPDES permitting authority for one or more of the Table A parameters 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 have provided estimates or actual data for all Table A parameters for 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 parameters at all outfalls.

Table B. Certain Conventional and Non-Conventional Pollutants

7.4 Have you checked "Believed Present" for all pollutants listed in Table B that are limited directly or indirectly by an applicable ELG?

☑ Yes ☐ No

7.5 Have you checked "Believed Present" or "Believed Absent" for all remaining pollutants listed in Table B?

☑ Yes ☐ No

7.6 Have you provided estimated data for those Table B pollutants for which you have indicated are "Believed Present" in your discharge?

☑ Yes ☐ No

Effluent Characteristics Continued

Table C. Toxic Metals, Total Cyanide, and Total Phenols

7.7	Have you indicated whether pollutants are "Believed Present" or "Believed Absent" for all pollutants listed on Table C for all outfalls?	☑ Yes ☐ No
7.8	Have you completed Table C by providing estimated data for pollutants you indicated are "Believed Present," including the source of the information, for each applicable outfall?	☑ Yes ☐ No

Table D. Organic Toxic Pollutants (GC/MS Fractions)

7.9	Do you qualify for a small business exemption under the criteria specified in the Instructions?	☐ Yes → Note that you qualify at the top of Table D, then SKIP to Item 7.12. ☑ No
7.10	Have you indicated whether pollutants are "Believed Present" or "Believed Absent" for all pollutants listed on Table D for all outfalls?	☑ Yes ☐ No
7.11	Have you completed Table D by providing estimated data for pollutants you indicated are "Believed Present," including the source of the information, for each applicable outfall?	☑ Yes ☐ No

2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD)

7.12	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 effluent from any of your outfalls?	☐ Yes ☑ No

Table E. Certain Hazardous Substances and Asbestos

7.13	Have you indicated whether pollutants are "Believed Present" or "Believed Absent" for all pollutants listed in Table E for all outfalls?	☑ Yes ☐ No
7.14	Have you completed Table E by reporting the reason the pollutants are expected to be present and available quantitative data for pollutants you indicated are "Believed Present" for each applicable outfall?	☑ Yes ☐ No

Intake Credits, Tables A through E

7.15	Are you applying for net credits for the presence of any of the pollutants on Tables A through E for any of your outfalls?	☐ Yes → Consult with your NPDES permitting authority. ☑ No

SECTION 8. ENGINEERING REPORT (40 CFR 122.21(k)(6))

Engineering Report

8.1	Do you have any technical evaluations of your wastewater treatment, including engineering reports or pilot plant studies?	☑ Yes ☐ No → SKIP to Item 8.3.
8.2	Have you provided the technical evaluation and all related documents to this application package?	☐ Yes ☑ No
8.3	Are you aware of any existing plant(s) that resemble production processes, wastewater constituents, or wastewater treatment at your facility?	☐ Yes ☑ No → SKIP to Section 9.

Engineering Report Continued

8.4 Provide the name and location of the similar plants.

Name of Similar Plants	Location of Similar Plants

SECTION 9. OTHER INFORMATION (40 CFR 122.21(k)(7))

Other Information

9.1 Have you attached any optional information that you would like considered as part of the application review process (i.e., material beyond that which you have already noted in the application as being attached)?

☐ Yes ☑ No ➔ SKIP to Section 10.

9.2 List the additional items and briefly note why you have included them.

1.

2.

3.

4.

5.

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 2D 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 tables, or provide attachments.

Column 1	Column 2
☑ Section 1: Expected Outfall Location	☐ w/ attachments (e.g., responses for additional outfalls)
☑ Section 2: Expected Discharge Date	☐ w/ attachments
☑ Section 3: Average Flows and Treatment	☐ w/ attachments
☑ Section 4: Line Drawing	☑ w/ line drawing ☑ w/ additional attachments
☑ Section 5: Intermittent or Seasonal Flows	☐ w/ attachments
☑ Section 6: Production	☐ w/ attachments
☑ Section 7: Effluent Characteristics	☐ w/ Table A waiver request or approval ☑ Table A ☑ Table B ☑ Table C ☑ Table D ☑ Table E ☑ w/ other attachments
☑ Section 8: Engineering Report	☐ w/ technical evaluations and related attachments
☑ Section 9: Other Information	☐ w/ optional information
☑ Section 10: Checklist and Certification Statement	☐ w/ attachments

Checklist and Certification Statement Continued

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
James R. Kotsmith	VP Global EHS
Signature Jo R. Kotsmith	**Date signed** 12/4/23

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EPA Identification Number	Facility Name	Outfall Number	Form Approved 03/05/19 OMB No. 2040-0004
	County Road 41 Remediation Site	01	

TABLE A. CONVENTIONAL AND NON CONVENTIONAL PARAMETER ESTIMATES (40 CFR 122.21(k)(5)(i))[1]

	Pollutant	Waiver Requested (if applicable)	Units		Effluent Data: Maximum Daily Discharge (required)	Effluent Data: Average Daily Discharge (if available)	Effluent Data: Source of Information (use codes in instructions)	Intake Water: Believed Present? (check only one response per parameter)	
☐	Check here if you have applied to your NPDES authority for a waiver for *all* of the pollutants listed on this table for the noted outfall.								
1.	Biochemical oxygen demand (BOD_5)	☐	Concentration				Analytical Data - See Attachment 3	☑ Yes	☐ No
			Mass						
2.	Chemical oxygen demand (COD)	☐	Concentration				Analytical Data - See Attachment 3	☑ Yes	☐ No
			Mass						
3.	Total organic carbon (TOC)	☐	Concentration				Analytical Data - See Attachment 3	☑ Yes	☐ No
			Mass						
4.	Total suspended solids (TSS)	☐	Concentration				Analytical Data - See Attachment 3	☑ Yes	☐ No
			Mass						
5.	Ammonia (as N)	☐	Concentration				Analytical Data - See Attachment 3	☑ Yes	☐ No
			Mass						
6.	Flow	☐	Rate	MGD	0.144		Maximum design rate	☑ Yes	☐ No
7.	Temperature (winter)	☐	°C	°C			Analytical Data - See Attachment 3	☑ Yes	☐ No
	Temperature (summer)	☐	°C	°C					
8.	pH (minimum)	☐	Standard units	s.u.			Analytical Data - See Attachment 3	☑ Yes	☐ No
	pH (maximum)	☐	Standard units	s.u.					

[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	Facility Name	Outfall Number	Form Approved 03/05/19 OMB No. 2040-0004
	County Road 41 Remediation Site	01	

TABLE B. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(k)(5)(ii))[1]

	Pollutant	Presence or Absence (check one)		Estimated Data for Pollutants Expected to be Present or Limited by an ELG (Provide both concentration and mass estimates for each pollutant.)					
				Effluent					Intake Water
		Believed Present	Believed Absent	Units	Maximum Daily Discharge (required)	Average Daily Discharge (if available)	Source of Information (use codes in instructions)		Believed Present? (check only one response per item)
☐	Check (✓) here if you believe all pollutants listed to be absent from the discharge. You need not complete Table B for the noted outfall *unless* you have quantitative data available.								
1.	Bromide (24959-67-9)	☑	☐	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
2.	Chlorine, total residual	☑	☐	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
3.	Color	☑	☐	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
4.	Fecal coliform	☑	☐	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
5.	Fluoride (16984-48-8)	☐	☑	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
6.	Nitrate-nitrite	☑	☐	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
7.	Nitrogen, total organic (as N)	☑	☐	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
8.	Oil and grease	☑	☐	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
9.	Phosphorus (as P), total (7723-14-0)	☐	☑	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
10.	Sulfate (as SO_4) (14808-79-8)	☑	☐	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
11.	Sulfide (as S)	☐	☑	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					

EPA Identification Number	Facility Name	Outfall Number	Form Approved 03/05/19 OMB No. 2040-0004
	County Road 41 Remediation Site	01	

TABLE B. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(k)(5)(ii))[1]

Pollutant		Presence or Absence (check one)		Estimated Data for Pollutants Expected to be Present or Limited by an ELG (Provide both concentration and mass estimates for each pollutant.)					
				Effluent					Intake Water
		Believed Present	Believed Absent	Units		Maximum Daily Discharge (required)	Average Daily Discharge (if available)	Source of Information (use codes in instructions)	Believed Present? (check only one response per item)
12.	Sulfite (as SO_3) (14265-45-3)	☐	☑	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
13.	Surfactants	☑	☐	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
14.	Aluminum, total (7429-90-5)	☑	☐	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
15.	Barium, total (7440-39-3)	☑	☐	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
16.	Boron, total (7440-42-8)	☑	☐	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
17.	Cobalt, total (7440-48-4)	☐	☑	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
18.	Iron, total (7439-89-6)	☑	☐	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
19.	Magnesium, total (7439-95-4)	☑	☐	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
20.	Molybdenum, total (7439-98-7)	☐	☑	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
21.	Manganese, total (7439-96-5)	☑	☐	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
22.	Tin, total (7440-31-5)	☐	☑	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					

EPA Identification Number	Facility Name	Outfall Number	Form Approved 03/05/19 OMB No. 2040-0004
	County Road 41 Remediation Site	01	

TABLE B. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(k)(5)(ii))[1]

Pollutant		Presence or Absence (check one)		Estimated Data for Pollutants Expected to be Present or Limited by an ELG (Provide both concentration and mass estimates for each pollutant.)					
				Effluent					Intake Water
		Believed Present	Believed Absent	Units		Maximum Daily Discharge (required)	Average Daily Discharge (if available)	Source of Information (use codes in instructions)	Believed Present? (check only one response per item)
23.	Titanium, total (7440-32-6)	☑	☐	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
24.	Radioactivity								
24.1	Alpha, total	☑	☐	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
24.2	Beta, total	☑	☐	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
24.3.	Radium, total	☑	☐	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				Mass					
24.4	Radium 226, total	☐	☑	Concentration				Analytical Data - See Attachment 3	☐ Yes ☐ No
				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	Facility Name	Outfall Number	Form Approved 03/05/19 OMB No. 2040-0004
	County Road 41 Remediation Site	01	

TABLE C. TOXIC METALS, TOTAL CYANIDE, AND TOTAL PHENOLS (40 CFR 122.21(k)(5)(iii)(A))[1]

	Pollutant (CAS Number, if available)	Presence or Absence (check one)		Estimated Data for Pollutants Expected to be Present in Discharge (Provide both concentration and mass estimates for each pollutant.)						
				Effluent					Intake Water	
		Believed Present	Believed Absent	Units	Maximum Daily Discharge (required)	Average Daily Discharge (if available)	Source of Information (Use codes in Instructions.)	Believed Present? (Check only one response per pollutant.)		
☐	Check (✓) here if you believe all pollutants listed to be absent from the discharge. You need not complete Table C for the noted outfall *unless* you have quantitative data available.									
1.	Antimony, Total (7440-36-0)	☐	☑	Concentration Mass				See Attachment 3	☐ Yes	☐ No
2.	Arsenic, Total (7440-38-2)	☐	☑	Concentration Mass				See Attachment 3	☐ Yes	☐ No
3.	Beryllium, Total (7440-41-7)	☐	☑	Concentration Mass				See Attachment 3	☐ Yes	☐ No
4.	Cadmium, Total (7440-43-9)	☐	☑	Concentration Mass				See Attachment 3	☐ Yes	☐ No
5.	Chromium, Total (7440-47-3)	☐	☑	Concentration Mass				See Attachment 3	☐ Yes	☐ No
6.	Copper, Total (7440-50-8)	☑	☐	Concentration Mass				See Attachment 3	☐ Yes	☐ No
7.	Lead, Total (7439-92-1)	☐	☑	Concentration Mass				See Attachment 3	☐ Yes	☐ No
8.	Mercury, Total (7439-97-6)	☑	☐	Concentration Mass				See Attachment 3	☐ Yes	☐ No
9.	Nickel, Total (7440-02-0)	☑	☐	Concentration Mass				See Attachment 3	☐ Yes	☐ No
10.	Selenium, Total (7782-49-2)	☐	☑	Concentration Mass				See Attachment 3	☐ Yes	☐ No
11.	Silver, Total (7440-22-4)	☐	☑	Concentration Mass				See Attachment 3	☐ Yes	☐ No
12.	Thallium, Total (7440-28-0)	☐	☑	Concentration Mass				See Attachment 3	☐ Yes	☐ No
13.	Zinc, Total (7440-66-6)	☐	☑	Concentration Mass				See Attachment 3	☐ Yes	☐ No
14.	Cyanide, Total (57-12-5)	☐	☑	Concentration Mass				See Attachment 3	☐ Yes	☐ No
15.	Phenols, Total	☐	☑	Concentration Mass				See Attachment 3	☐ Yes	☐ No

[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	Facility Name	Outfall Number	Form Approved 03/05/19 OMB No. 2040-0004
	County Road 41 Remediation Site	01	

TABLE D. ORGANIC TOXIC POLLUTANTS (Gas Chromatography/Mass Spectrometry or GC/MS Fractions) (40 CFR 122.21(k)(5)(iii)(B))[1]

Pollutant (CAS Number, if available)	Presence or Absence (check one)		Estimated Data for Pollutants Expected to Be Present in Discharge (provide both concentration and mass estimates for each pollutant)					
	Believed Present	Believed Absent	Units	Effluent			Intake Water	
				Maximum Daily Discharge	Average Daily Discharge	Source of Information (use codes in instructions)	Believed Present? (check only one response per pollutant)	
☑	Check here if all pollutants listed in Table D are expected to be absent from your facility's discharge. **see Attachment 3**							
☐	Check here if the facility believes it is exempt from Table D reporting requirements because it is a qualified small business. See the instructions for exemption criteria and for a list of materials you must attach to the application.							
Note: If you check either of the above boxes, you do not need to complete Table D for the noted outfall *unless* you have quantitative data available.								
1. Organic Toxic Pollutants (GC/MS Fraction—Volatile Compounds)								
1.1 Acrolein (107-02-8)	☐	☐	Concentration				See Attachment 3	☐ Yes ☐ No
			Mass					
1.2 Acrylonitrile (107-13-1)	☐	☐	Concentration					☐ Yes ☐ No
			Mass					
1.3 Benzene (71-43-2)	☐	☐	Concentration					☐ Yes ☐ No
			Mass					
1.4 Bromoform (75-25-2)	☐	☐	Concentration					☐ Yes ☐ No
			Mass					
1.5 Carbon tetrachloride (56-23-5)	☐	☐	Concentration					☐ Yes ☐ No
			Mass					
1.6 Chlorobenzene (108-90-7)	☐	☐	Concentration					☐ Yes ☐ No
			Mass					
1.7 Chlorodibromomethane (124-48-1)	☐	☐	Concentration					☐ Yes ☐ No
			Mass					
1.8 Chloroethane (75-00-3)	☐	☐	Concentration					☐ Yes ☐ No
			Mass					
1.9 2-chloroethylvinyl ether (110-75-8)	☐	☐	Concentration					☐ Yes ☐ No
			Mass					
1.10 Chloroform (67-66-3)	☐	☐	Concentration					☐ Yes ☐ No
			Mass					
1.11 Dichlorobromomethane (75-27-4)	☐	☐	Concentration					☐ Yes ☐ No
			Mass					

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TABLE D. ORGANIC TOXIC POLLUTANTS (Gas Chromatography/Mass Spectrometry or GC/MS Fractions) (40 CFR 122.21(k)(5)(iii)(B))[1]

Pollutant (CAS Number, if available)		Presence or Absence (check one)		Estimated Data for Pollutants Expected to Be Present in Discharge (provide both concentration and mass estimates for each pollutant)					
						Effluent			Intake Water
		Believed Present	Believed Absent	Units		Maximum Daily Discharge	Average Daily Discharge	Source of Information (use codes in instructions)	Believed Present? (check only one response per pollutant)
1.12	1,1-dichloroethane (75-34-3)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
1.13	1,2-dichloroethane (107-06-2)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
1.14	1,1-dichloroethylene (75-35-4)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
1.15	1,2-dichloropropane (78-87-5)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
1.16	1,3-dichloropropylene (542-75-6)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
1.17	Ethylbenzene (100-41-4)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
1.18	Methyl bromide (74-83-9)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
1.19	Methyl chloride (74-87-3)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
1.20	Methylene chloride (75-09-2)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
1.21	1,1,2,2-tetrachloroethane (79-34-5)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
1.22	Tetrachloroethylene (127-18-4)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
1.23	Toluene (108-88-3)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
1.24	1,2-trans-dichloroethylene (156-60-5)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					

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TABLE D. ORGANIC TOXIC POLLUTANTS (Gas Chromatography/Mass Spectrometry or GC/MS Fractions) (40 CFR 122.21(k)(5)(iii)(B))[1]

Pollutant (CAS Number, if available)		Presence or Absence (check one)		Estimated Data for Pollutants Expected to Be Present in Discharge (provide both concentration and mass estimates for each pollutant)					
						Effluent			Intake Water
		Believed Present	Believed Absent	Units		Maximum Daily Discharge	Average Daily Discharge	Source of Information (use codes in instructions)	Believed Present? (check only one response per pollutant)
1.25	1,1,1-trichloroethane (71-55-6)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
1.26	1,1,2-trichloroethane (79-00-5)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
1.27	Trichloroethylene (79-01-6)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
1.28	Vinyl chloride (75-01-4)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
2. Organic Toxic Pollutants (GC/MS Fraction—Acid Compounds)									
2.1	2-chlorophenol (95-57-8)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
2.2	2,4-dichlorophenol (120-83-2)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
2.3	2,4-dimethylphenol (105-67-9)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
2.4	4,6-dinitro-o-cresol (534-52-1)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
2.5	2,4-dinitrophenol (51-28-5)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
2.6	2-nitrophenol (88-75-5)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
2.7	4-nitrophenol (100-02-7)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
2.8	p-chloro-m-cresol (59-50-7)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
2.9	Pentachlorophenol (87-86-5)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					

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TABLE D. ORGANIC TOXIC POLLUTANTS (Gas Chromatography/Mass Spectrometry or GC/MS Fractions) (40 CFR 122.21(k)(5)(iii)(B))[1]

Pollutant (CAS Number, if available)		Presence or Absence (check one)		Estimated Data for Pollutants Expected to Be Present in Discharge (provide both concentration and mass estimates for each pollutant)					
						Effluent			Intake Water
		Believed Present	Believed Absent	Units		Maximum Daily Discharge	Average Daily Discharge	Source of Information (use codes in instructions)	Believed Present? (check only one response per pollutant)
2.10	Phenol (108-95-2)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
2.11	2,4,6-trichlorophenol (88-05-2)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3. Organic Toxic Pollutants (GC/MS Fraction—Base /Neutral Compounds)									
3.1	Acenaphthene (83-32-9)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.2	Acenaphthylene (208-96-8)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.3	Anthracene (120-12-7)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.4	Benzidine (92-87-5)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.5	Benzo (a) anthracene (56-55-3)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.6	Benzo (a) pyrene (50-32-8)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.7	3,4-benzofluoranthene (205-99-2)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.8	Benzo (ghi) perylene (191-24-2)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.9	Benzo (k) fluoranthene (207-08-9)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.10	Bis (2-chloroethoxy) methane (111-91-1)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.11	Bis (2-chloroethyl) ether (111-44-4)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					

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TABLE D. ORGANIC TOXIC POLLUTANTS (Gas Chromatography/Mass Spectrometry or GC/MS Fractions) (40 CFR 122.21(k)(5)(iii)(B))[1]

Pollutant (CAS Number, if available)		Presence or Absence (check one)		Estimated Data for Pollutants Expected to Be Present in Discharge (provide both concentration and mass estimates for each pollutant)					
						Effluent			Intake Water
		Believed Present	Believed Absent	Units		Maximum Daily Discharge	Average Daily Discharge	Source of Information (use codes in instructions)	Believed Present? (check only one response per pollutant)
3.12	Bis (2-chloroisopropyl) ether (102-80-1)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.13	Bis (2-ethylhexyl) phthalate (117-81-7)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.14	4-bromophenyl phenyl ether (101-55-3)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.15	Butyl benzyl phthalate (85-68-7)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.16	2-chloronaphthalene (91-58-7)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.17	4-chlorophenyl phenyl ether (7005-72-3)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.18	Chrysene (218-01-9)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.19	Dibenzo (a,h) anthracene (53-70-3)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.20	1,2-dichlorobenzene (95-50-1)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.21	1,3-dichlorobenzene (541-73-1)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.22	1,4-dichlorobenzene (106-46-7)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.23	3,3-dichlorobenzidine (91-94-1)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.24	Diethyl phthalate (84-66-2)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.25	Dimethyl phthalate (131-11-3)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					

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TABLE D. ORGANIC TOXIC POLLUTANTS (Gas Chromatography/Mass Spectrometry or GC/MS Fractions) (40 CFR 122.21(k)(5)(iii)(B))[1]

	Pollutant (CAS Number, if available)	Presence or Absence (check one)		Estimated Data for Pollutants Expected to Be Present in Discharge (provide both concentration and mass estimates for each pollutant)					
						Effluent			Intake Water
		Believed Present	Believed Absent	Units		Maximum Daily Discharge	Average Daily Discharge	Source of Information (use codes in instructions)	Believed Present? (check only one response per pollutant)
3.26	Di-n-butyl phthalate (84-74-2)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.27	2,4-dinitrotoluene (121-14-2)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.28	2,6-dinitrotoluene (606-20-2)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.29	Di-n-octyl phthalate (117-84-0)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.30	1,2-diphenylhydrazine (as azobenzene) (122-66-7)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.31	Fluoranthene (206-44-0)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.32	Fluorene (86-73-7)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.33	Hexachlorobenzene (118-74-1)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.34	Hexachlorobutadiene (87-68-3)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.35	Hexachlorocyclopentadiene (77-47-4)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.36	Hexachloroethane (67-72-1)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.37.	Indeno (1,2,3-cd) pyrene (193-39-5)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.38	Isophorone (78-59-1)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.39	Naphthalene (91-20-3)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					

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TABLE D. ORGANIC TOXIC POLLUTANTS (Gas Chromatography/Mass Spectrometry or GC/MS Fractions) (40 CFR 122.21(k)(5)(iii)(B))[1]

Pollutant (CAS Number, if available)		Presence or Absence (check one)		Estimated Data for Pollutants Expected to Be Present in Discharge (provide both concentration and mass estimates for each pollutant)					
						Effluent			Intake Water
		Believed Present	Believed Absent	Units		Maximum Daily Discharge	Average Daily Discharge	Source of Information (use codes in instructions)	Believed Present? (check only one response per pollutant)
3.40	Nitrobenzene (98-95-3)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.41	N-nitrosodimethylamine (62-75-9)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.42	N-nitrosodi-n-propylamine (621-64-7)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.43	N-nitrosodiphenylamine (86-30-6)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.44	Phenanthrene (85-01-8)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.45	Pyrene (129-00-0)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
3.46	1,2,4-trichlorobenzene (120-82-1)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4. Organic Toxic Pollutants (GC/MS Fraction—Pesticides)									
4.1.	Aldrin (309-00-2)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4.2	α-BHC (319-84-6)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4.3	β-BHC (319-85-7)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4.4	γ-BHC (58-89-9)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4.5	δ-BHC (319-86-8)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4.6	Chlordane (57-74-9)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					

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TABLE D. ORGANIC TOXIC POLLUTANTS (Gas Chromatography/Mass Spectrometry or GC/MS Fractions) (40 CFR 122.21(k)(5)(iii)(B))[1]

Pollutant (CAS Number, if available)		Presence or Absence (check one)		Estimated Data for Pollutants Expected to Be Present in Discharge (provide both concentration and mass estimates for each pollutant)					
						Effluent			Intake Water
		Believed Present	Believed Absent	Units		Maximum Daily Discharge	Average Daily Discharge	Source of Information (use codes in instructions)	Believed Present? (check only one response per pollutant)
4.7	4,4'-DDT (50-29-3)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4.8	4,4'-DDE (72-55-9)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4.9	4,4'-DDD (72-54-8)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4.10	Dieldrin (60-57-1)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4.11	α-endosulfan (115-29-7)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4.12	β-endosulfan (115-29-7)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4.13	Endosulfan sulfate (1031-07-8)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4.14	Endrin (72-20-8)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4.15	Endrin aldehyde (7421-93-4)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					

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TABLE D. ORGANIC TOXIC POLLUTANTS (Gas Chromatography/Mass Spectrometry or GC/MS Fractions) (40 CFR 122.21(k)(5)(iii)(B))[1]

Pollutant (CAS Number, if available)		Presence or Absence (check one)		Estimated Data for Pollutants Expected to Be Present in Discharge (provide both concentration and mass estimates for each pollutant)					
						Effluent			Intake Water
		Believed Present	Believed Absent	Units		Maximum Daily Discharge	Average Daily Discharge	Source of Information (use codes in instructions)	Believed Present? (check only one response per pollutant)
4.16	Heptachlor (76-44-8)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4.17	Heptachlor epoxide (1024-57-3)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4.18	PCB-1242 (53469-21-9)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4.19	PCB-1254 (11097-69-1)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4.20	PCB-1221 (11104-28-2)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4.21	PCB-1232 (11141-16-5)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4.22	PCB-1248 (12672-29-6)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4.23	PCB-1260 (11096-82-5)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4.24	PCB-1016 (12674-11-2)	☐	☐	Concentration					☐ Yes ☐ No
				Mass					
4.25	Toxaphene (8001-35-2)	☐	☐	Concentration					☐ Yes ☐ No
				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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TABLE E. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(k)(5)(v))[1]

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
☐	Check (✓) here if you believe all pollutants listed to be absent from the discharge. You need not complete Table E for the noted outfall *unless* you have quantitative data available.				
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	☐	☐		

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TABLE E. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(k)(5)(v))[1]

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
19.	Cyclohexane	☐	☑		
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	☐	☑		

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TABLE E. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(k)(5)(v))[1]

Pollutant		Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
38.	Furfural	☐	☐		
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	☐	☐		

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TABLE E. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(k)(5)(v))[1]

	Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
57.	Parathion	☐	☑		
58.	Phenolsulfonate	☐	☐		
59.	Phosgene	☐	☐		
60.	Propargite	☐	☐		
61.	Propylene oxide	☐	☐		
62.	Pyrethrins	☐	☐		
63.	Quinoline	☐	☑		
64.	Resorcinol	☐	☐		
65.	Strontium	☑	☐	Analytical Data - See Attachment 3	0.203 mg/L
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	☑	☐	Analytical Data - See Attachment 3	0.000467 mg/L

EPA Identification Number	Facility Name	Outfall Number
	County Road 41 Remediation Site	01

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

TABLE E. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(k)(5)(v))[1]

Pollutant		Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
76.	Vanadium	☑	☐	Analytical Data - See Attachment 3	0.0005 mg/L
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).

Attachment 3

Analytical Results of Surface Water Samples From County Road 41 Remediation Site

Results Represent Untreated Water

Parameters	EPA Form 2d Table #	Units	# of Samples	# of Detects	Minimum Value Detected	Mean Value of Detections	Maximum Value Detected	Maximum Detection Limit	Believed Present
Table A									
Biochemical oxygen demand (BOD)	A - 1	mg/L	2	0	N/A	N/A	N/A	3.33	Yes
Chemical oxygen demand (COD)	A - 2	mg/L	2	0	N/A	N/A	N/A	20	Yes
Total organic carbon (TOC)	A - 3	mg/L	3	2	1.48	3.24	5	1.08	Yes
Total suspended solids (TSS)	A - 4	mg/L	2	0	N/A	N/A	N/A	2.5	Yes
Ammonia-N	A - 5	mg/L	2	0	N/A	N/A	N/A	0.25	Yes
Temperature, field	A - 7	Deg C	2	2	15.6	16.35	17.1	N/A	Yes
pH, field	A - 8	s.u.	3	3	7.09	7.37	7.57	N/A	Yes
Table B									
Bromide	B - 1	mg/L	2	1	2.34	2.34	2.34	1	Yes
Chlorine, residual	B - 2	mg/L	1	0	N/A	N/A	N/A	0.1	Yes
Color	B - 3	PCU	1	1	1	1	1	N/A	Yes
Escherichia coli	B - 4	MPN/100mL	1	1	57.1	57.1	57.1	N/A	Yes
Total coliform bacteria	B - 4	MPN/100mL	1	1	2419.6	2419.6	2419.6	N/A	Yes
Fluoride	B - 5	mg/L	2	0	N/A	N/A	N/A	0.15	No
Nitrite/Nitrate	B - 6	mg/L	2	2	1.79	1.875	1.96	N/A	Yes
Nitrogen	B - 7	mg/L	2	1	0.249	0.249	0.249	0.25	Yes
Oil and grease	B - 8	mg/L	2	1	2.67	2.67	2.67	5.71	Yes
Phosphorus	B - 9	mg/L	2	0	N/A	N/A	N/A	0.1	No
Sulfate	B - 10	mg/L	2	2	12.7	13.95	15.2	N/A	Yes
Sulfide	B - 11	mg/L	1	0	N/A	N/A	N/A	0.05	No
Sulfite	B - 12	mg/L	1	0	N/A	N/A	N/A	3	No
MBAS (foaming agents)	B - 13	mg/L	2	1	0.305	0.305	0.305	0.1	Yes
Aluminum	B - 14	mg/L	5	3	0.164	0.60466667	0.85	0.2	Yes
Barium	B - 15	mg/L	5	2	0.0644	0.06695	0.0695	0.2	Yes
Boron	B - 16	mg/L	2	2	0.0503	0.05645	0.0626	N/A	Yes
Cobalt	B - 17	mg/L	5	0	N/A	N/A	N/A	0.01	No
Iron	B - 18	mg/L	5	3	0.111	0.71033333	1.3	0.2	Yes
Magnesium	B - 19	mg/L	5	3	4.74	6.88333333	11	5	Yes
Molybdenum	B - 20	mg/L	2	0	N/A	N/A	N/A	0.005	No
Manganese	B - 21	mg/L	5	4	0.00371	0.04138	0.14	0.015	Yes
Tin	B - 22	mg/L	2	0	N/A	N/A	N/A	0.004	No
Titanium	B - 23	mg/L	2	1	0.00594	0.00594	0.00594	0.01	Yes
Gross Alpha	B - 24.1	pCi/L	1	1	1.64	1.64	1.64	N/A	Yes
Gross beta analytes	B - 24.2	pCi/L	1	1	1.65	1.65	1.65	N/A	Yes
Radium-228	B - 24.3	pCi/L	1	1	0.324	0.324	0.324	N/A	Yes
Radium-226	B - 24.4	pCi/L	1	0	N/A	N/A	N/A	0.0422	No

Attachment 3

Analytical Results of Surface Water Samples From County Road 41 Remediation Site
Results Represent Untreated Water

Parameters	EPA Form 2d Table #	Units	# of Samples	# of Detects	Minimum Value Detected	Mean Value of Detections	Maximum Value Detected	Maximum Detection Limit	Believed Present
Table C									
Antimony	C - 1	mg/L	5	0	N/A	N/A	N/A	0.02	No
Arsenic	C - 2	mg/L	5	0	N/A	N/A	N/A	0.015	No
Beryllium	C - 3	mg/L	5	0	N/A	N/A	N/A	0.005	No
Cadmium	C - 4	mg/L	5	0	N/A	N/A	N/A	0.005	No
Chromium	C - 5	mg/L	5	0	N/A	N/A	N/A	0.02	No
Copper	C - 6	mg/L	5	1	0.00242	0.00242	0.00242	0.025	Yes
Lead	C - 7	mg/L	5	0	N/A	N/A	N/A	0.01	No
Mercury	C - 8	mg/L	5	1	0.000183	0.000183	0.000183	0.0002	Yes
Nickel	C - 9	mg/L	5	1	0.000699	0.000699	0.000699	0.04	Yes
Selenium	C - 10	mg/L	5	0	N/A	N/A	N/A	0.02	No
Silver	C - 11	mg/L	5	0	N/A	N/A	N/A	0.01	No
Thallium	C - 12	mg/L	5	0	N/A	N/A	N/A	0.02	No
Zinc	C - 13	mg/L	5	0	N/A	N/A	N/A	0.05	No
Cyanide (total)	C - 14	mg/L	4	0	N/A	N/A	N/A	0.01	No
Phenol	C - 15	mg/L	4	0	N/A	N/A	N/A	0.01	No
Table D									
Acrolein	D - 1.1	mg/L	1	0	N/A	N/A	N/A	0.05	No
Acrylonitrile	D - 1.2	mg/L	1	0	N/A	N/A	N/A	0.01	No
Benzene	D - 1.3	mg/L	5	0	N/A	N/A	N/A	0.001	No
Bromoform	D - 1.4	mg/L	5	0	N/A	N/A	N/A	0.001	No
Carbon tetrachloride	D - 1.5	mg/L	5	0	N/A	N/A	N/A	0.001	No
Chlorobenzene	D - 1.6	mg/L	5	0	N/A	N/A	N/A	0.001	No
Dibromochloromethane	D - 1.7	mg/L	5	0	N/A	N/A	N/A	0.001	No
Chloroethane	D - 1.8	mg/L	5	0	N/A	N/A	N/A	0.005	No
2-Chloroethyl vinyl ether	D - 1.9	mg/L	1	0	N/A	N/A	N/A	0.05	No
Chloroform (Trichloromethane)	D - 1.10	mg/L	5	0	N/A	N/A	N/A	0.005	No
Bromodichloromethane	D - 1.11	mg/L	5	0	N/A	N/A	N/A	0.001	No
1,1-Dichloroethane	D - 1.12	mg/L	5	0	N/A	N/A	N/A	0.001	No
1,2-Dichloroethane	D - 1.13	mg/L	5	0	N/A	N/A	N/A	0.001	No
1,1-Dichloroethene	D - 1.14	mg/L	5	0	N/A	N/A	N/A	0.001	No
1,2-Dichloropropane	D - 1.15	mg/L	5	0	N/A	N/A	N/A	0.001	No
cis-1,3-Dichloropropene	D - 1.16	mg/L	5	0	N/A	N/A	N/A	0.001	No
trans-1,3-Dichloropropene	D - 1.16	mg/L	5	0	N/A	N/A	N/A	0.001	No
Ethylbenzene	D - 1.17	mg/L	5	0	N/A	N/A	N/A	0.001	No
Bromomethane (Methyl bromide)	D - 1.18	mg/L	5	0	N/A	N/A	N/A	0.005	No
Chloromethane (Methyl chloride)	D - 1.19	mg/L	5	0	N/A	N/A	N/A	0.0025	No

Attachment 3

Analytical Results of Surface Water Samples From County Road 41 Remediation Site
Results Represent Untreated Water

Parameters	EPA Form 2d Table #	Units	# of Samples	# of Detects	Minimum Value Detected	Mean Value of Detections	Maximum Value Detected	Maximum Detection Limit	Believed Present
Methylene chloride	D - 1.20	mg/L	5	0	N/A	N/A	N/A	0.005	No
1,1,2,2-Tetrachloroethane	D - 1.21	mg/L	5	0	N/A	N/A	N/A	0.001	No
Tetrachloroethene	D - 1.22	mg/L	5	0	N/A	N/A	N/A	0.001	No
Toluene	D - 1.23	mg/L	5	0	N/A	N/A	N/A	0.001	No
trans-1,2-Dichloroethene	D - 1.24	mg/L	5	0	N/A	N/A	N/A	0.001	No
1,1,1-Trichloroethane	D - 1.25	mg/L	5	0	N/A	N/A	N/A	0.001	No
1,1,2-Trichloroethane	D - 1.26	mg/L	5	0	N/A	N/A	N/A	0.001	No
Trichloroethene	D - 1.27	mg/L	5	0	N/A	N/A	N/A	0.001	No
Vinyl chloride	D - 1.28	mg/L	5	0	N/A	N/A	N/A	0.001	No
2-Chlorophenol	D - 2.1	mg/L	4	0	N/A	N/A	N/A	0.01	No
2,4-Dichlorophenol	D - 2.2	mg/L	4	0	N/A	N/A	N/A	0.01	No
2,4-Dimethylphenol	D - 2.3	mg/L	4	0	N/A	N/A	N/A	0.01	No
4,6-Dinitro-2-methylphenol	D - 2.4	mg/L	4	0	N/A	N/A	N/A	0.01	No
2,4-Dinitrophenol	D - 2.5	mg/L	4	0	N/A	N/A	N/A	0.01	No
2-Nitrophenol	D - 2.6	mg/L	4	0	N/A	N/A	N/A	0.01	No
4-Nitrophenol	D - 2.7	mg/L	4	0	N/A	N/A	N/A	0.01	No
4-Chloro-3-methylphenol	D - 2.8	mg/L	4	0	N/A	N/A	N/A	0.01	No
Pentachlorophenol	D - 2.9	mg/L	4	0	N/A	N/A	N/A	0.01	No
Phenol (see specific phenols)	D - 2.10								No
2,4,6-Trichlorophenol	D - 2.11	mg/L	4	0	N/A	N/A	N/A	0.01	No
Acenaphthene	D - 3.1	mg/L	4	0	N/A	N/A	N/A	0.001	No
Acenaphthylene	D - 3.2	mg/L	4	0	N/A	N/A	N/A	0.001	No
Anthracene	D - 3.3	mg/L	4	0	N/A	N/A	N/A	0.001	No
Benzidine	D - 3.4	mg/L	1	0	N/A	N/A	N/A	0.01	No
Benzo(a)anthracene	D - 3.5	mg/L	4	0	N/A	N/A	N/A	0.001	No
Benzo(a)pyrene	D - 3.6	mg/L	4	0	N/A	N/A	N/A	0.001	No
Benzo(b)fluoranthene	D - 3.7	mg/L	4	0	N/A	N/A	N/A	0.001	No
Benzo(g,h,i)perylene	D - 3.8	mg/L	4	0	N/A	N/A	N/A	0.001	No
Benzo(k)fluoranthene	D - 3.9	mg/L	4	0	N/A	N/A	N/A	0.001	No
bis(2-Chloroethoxy)methane	D - 3.10	mg/L	4	0	N/A	N/A	N/A	0.01	No
bis(2-Chloroethyl)ether	D - 3.11	mg/L	4	0	N/A	N/A	N/A	0.01	No
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	D - 3.12	mg/L	4	0	N/A	N/A	N/A	0.01	No
bis(2-Ethylhexyl)phthalate (DEHP)	D - 3.13	mg/L	4	0	N/A	N/A	N/A	0.0048	No
4-Bromophenyl phenyl ether	D - 3.14	mg/L	4	0	N/A	N/A	N/A	0.01	No
Butyl benzylphthalate (BBP)	D - 3.15	mg/L	4	0	N/A	N/A	N/A	0.003	No
2-Chloronaphthalene	D - 3.16	mg/L	4	0	N/A	N/A	N/A	0.001	No

Attachment 3

Analytical Results of Surface Water Samples From County Road 41 Remediation Site
Results Represent Untreated Water

Parameters	EPA Form 2d Table #	Units	# of Samples	# of Detects	Minimum Value Detected	Mean Value of Detections	Maximum Value Detected	Maximum Detection Limit	Believed Present
4-Chlorophenyl phenyl ether	D - 3.17	mg/L	4	0	N/A	N/A	N/A	0.01	No
Chrysene	D - 3.18	mg/L	4	0	N/A	N/A	N/A	0.001	No
Dibenz(a,h)anthracene	D - 3.19	mg/L	4	0	N/A	N/A	N/A	0.001	No
1,2-Dichlorobenzene	D - 3.20	mg/L	5	0	N/A	N/A	N/A	0.001	No
1,3-Dichlorobenzene	D - 3.21	mg/L	5	0	N/A	N/A	N/A	0.001	No
1,4-Dichlorobenzene	D - 3.22	mg/L	5	0	N/A	N/A	N/A	0.001	No
3,3'-Dichlorobenzidine	D - 3.23	mg/L	4	0	N/A	N/A	N/A	0.01	No
Diethyl phthalate	D - 3.24	mg/L	4	0	N/A	N/A	N/A	0.0048	No
Dimethyl phthalate	D - 3.25	mg/L	4	0	N/A	N/A	N/A	0.003	No
Di-n-butylphthalate (DBP)	D - 3.26	mg/L	4	0	N/A	N/A	N/A	0.0048	No
2,4-Dinitrotoluene	D - 3.27	mg/L	4	0	N/A	N/A	N/A	0.01	No
2,6-Dinitrotoluene	D - 3.28	mg/L	4	0	N/A	N/A	N/A	0.01	No
Di-n-octyl phthalate (DnOP)	D - 3.29	mg/L	4	0	N/A	N/A	N/A	0.003	No
1,2-Diphenylhydrazine	D - 3.30	mg/L	1	0	N/A	N/A	N/A	0.01	No
Fluoranthene	D - 3.31	mg/L	4	0	N/A	N/A	N/A	0.001	No
Fluorene	D - 3.32	mg/L	4	0	N/A	N/A	N/A	0.001	No
Hexachlorobenzene	D - 3.33	mg/L	4	0	N/A	N/A	N/A	0.001	No
Hexachlorobutadiene	D - 3.34	mg/L	4	0	N/A	N/A	N/A	0.01	No
Hexachlorocyclopentadiene	D - 3.35	mg/L	4	0	N/A	N/A	N/A	0.01	No
Hexachloroethane	D - 3.36	mg/L	4	0	N/A	N/A	N/A	0.01	No
Indeno(1,2,3-cd)pyrene	D - 3.37	mg/L	4	0	N/A	N/A	N/A	0.001	No
Isophorone	D - 3.38	mg/L	4	0	N/A	N/A	N/A	0.01	No
Naphthalene	D - 3.39	mg/L	4	0	N/A	N/A	N/A	0.001	No
Nitrobenzene	D - 3.40	mg/L	4	0	N/A	N/A	N/A	0.01	No
N-Nitrosodimethylamine	D - 3.41	mg/L	1	0	N/A	N/A	N/A	0.01	No
N-Nitrosodi-n-propylamine	D - 3.42	mg/L	4	0	N/A	N/A	N/A	0.01	No
N-Nitrosodiphenylamine	D - 3.43	mg/L	4	0	N/A	N/A	N/A	0.01	No
Phenanthrene	D - 3.44	mg/L	4	0	N/A	N/A	N/A	0.001	No
Pyrene	D - 3.45	mg/L	4	0	N/A	N/A	N/A	0.001	No
1,2,4-Trichlorobenzene	D - 3.46	mg/L	1	0	N/A	N/A	N/A	0.01	No
Aldrin	D - 4.1	mg/L	4	0	N/A	N/A	N/A	0.00005	No
alpha-BHC	D - 4.2	mg/L	4	0	N/A	N/A	N/A	0.00005	No
beta-BHC	D - 4.3	mg/L	4	0	N/A	N/A	N/A	0.00005	No
gamma-BHC (lindane)	D - 4.4	mg/L	4	0	N/A	N/A	N/A	0.00005	No
delta-BHC	D - 4.5	mg/L	4	0	N/A	N/A	N/A	0.00005	No
Chlordane, technical	D - 4.6	mg/L	4	0	N/A	N/A	N/A	0.005	No
4,4'-DDT	D - 4.7	mg/L	4	0	N/A	N/A	N/A	0.00005	No
4,4'-DDE	D - 4.8	mg/L	4	0	N/A	N/A	N/A	0.00005	No
4,4'-DDD	D - 4.9	mg/L	4	0	N/A	N/A	N/A	0.00005	No

Attachment 3

Analytical Results of Surface Water Samples From County Road 41 Remediation Site
Results Represent Untreated Water

Parameters	EPA Form 2d Table #	Units	# of Samples	# of Detects	Minimum Value Detected	Mean Value of Detections	Maximum Value Detected	Maximum Detection Limit	Believed Present
Dieldrin	D - 4.10	mg/L	4	0	N/A	N/A	N/A	0.00005	No
Endosulfan I	D - 4.11	mg/L	4	0	N/A	N/A	N/A	0.00005	No
Endosulfan II	D - 4.12	mg/L	4	0	N/A	N/A	N/A	0.00005	No
Endosulfan sulfate	D - 4.13	mg/L	4	0	N/A	N/A	N/A	0.00005	No
Endrin	D - 4.14	mg/L	4	0	N/A	N/A	N/A	0.00005	No
Endrin aldehyde	D - 4.15	mg/L	4	0	N/A	N/A	N/A	0.00005	No
Heptachlor	D - 4.16	mg/L	4	0	N/A	N/A	N/A	0.00005	No
Heptachlor epoxide	D - 4.17	mg/L	4	0	N/A	N/A	N/A	0.00005	No
Aroclor-1242 (PCB-1242)	D - 4.18	mg/L	4	0	N/A	N/A	N/A	0.0005	No
Aroclor-1254 (PCB-1254)	D - 4.19	mg/L	4	0	N/A	N/A	N/A	0.0005	No
Aroclor-1221 (PCB-1221)	D - 4.20	mg/L	4	0	N/A	N/A	N/A	0.0005	No
Aroclor-1232 (PCB-1232)	D - 4.21	mg/L	4	0	N/A	N/A	N/A	0.0005	No
Aroclor-1248 (PCB-1248)	D - 4.22	mg/L	4	0	N/A	N/A	N/A	0.0005	No
Aroclor-1260 (PCB-1260)	D - 4.23	mg/L	4	0	N/A	N/A	N/A	0.0005	No
Aroclor-1016 (PCB-1016)	D - 4.24	mg/L	4	0	N/A	N/A	N/A	0.0005	No
Toxaphene	D - 4.25	mg/L	4	0	N/A	N/A	N/A	0.0019	No
Table E									
Asbestos (> 10 um)	E - 1	MFL	1	0	N/A	N/A	N/A	1.7	No
Allyl chloride	E - 4	mg/L	1	0	N/A	N/A	N/A	0.005	No
Aniline	E - 6	mg/L	1	0	N/A	N/A	N/A	0.01	No
Carbon disulfide	E - 14	mg/L	5	0	N/A	N/A	N/A	0.001	No
Chlorpyrifos	E - 15	mg/L	1	0	N/A	N/A	N/A	0.001	No
Coumaphos	E - 16	mg/L	1	0	N/A	N/A	N/A	0.001	No
Cyclohexane	E - 19	mg/L	5	0	N/A	N/A	N/A	0.001	No
2,4-Dichlorophenoxyacetic acid (2,4-D)	E - 20	mg/L	4	0	N/A	N/A	N/A	0.004	No
Diazinon	E - 21	mg/L	1	0	N/A	N/A	N/A	0.001	No
Dichlorvos	E - 26	mg/L	1	0	N/A	N/A	N/A	0.002	No
1,3-Dinitrobenzene	E - 29	mg/L	1	0	N/A	N/A	N/A	0.01	No
Disulfoton	E - 31	mg/L	1	0	N/A	N/A	N/A	0.01	No
1,2-Dibromoethane (Ethylene dibromide)	E - 36	mg/L	5	0	N/A	N/A	N/A	0.001	No
Formaldehyde	E - 37	mg/L	1	0	N/A	N/A	N/A	0.01	No
Kepone	E - 43	mg/L	1	0	N/A	N/A	N/A	0.02	No
Malathion	E - 44	mg/L	1	0	N/A	N/A	N/A	0.001	No
Methoxychlor	E - 46	mg/L	4	0	N/A	N/A	N/A	0.000095	No
Methyl methacrylate	E - 48	mg/L	1	0	N/A	N/A	N/A	0.005	No
Methyl parathion	E - 49	mg/L	1	0	N/A	N/A	N/A	0.001	No
Methyl parathion	E - 49	mg/L	1	0	N/A	N/A	N/A	0.01	No
Mevinphos	E - 50	mg/L	1	0	N/A	N/A	N/A	0.001	No
Naled	E - 54	mg/L	1	0	N/A	N/A	N/A	0.001	No

Attachment 3

Analytical Results of Surface Water Samples From County Road 41 Remediation Site
Results Represent Untreated Water

Parameters	EPA Form 2d Table #	Units	# of Samples	# of Detects	Minimum Value Detected	Mean Value of Detections	Maximum Value Detected	Maximum Detection Limit	Believed Present
Ethyl parathion	E - 57	mg/L	1	0	N/A	N/A	N/A	0.001	No
Ethyl parathion	E - 57	mg/L	1	0	N/A	N/A	N/A	0.01	No
Benzo(b)pyridine (Quinoline)	E - 63	mg/L	1	0	N/A	N/A	N/A	0.05	No
Strontium, stable	E - 65	mg/L	2	2	0.178	0.1905	0.203	N/A	Yes
Styrene	E - 67	mg/L	5	0	N/A	N/A	N/A	0.001	No
2,4,5-T	E - 68	mg/L	4	0	N/A	N/A	N/A	0.002	No
2,4,5-TP (Silvex)	E - 70	mg/L	4	0	N/A	N/A	N/A	0.002	No
Uranium	E - 75	mg/L	2	2	0.000397	0.000432	0.000467	N/A	Yes
Vanadium	E - 76	mg/L	5	1	0.0005	0.0005	0.0005	0.05	Yes
Vinyl acetate	E - 77	mg/L	1	0	N/A	N/A	N/A	0.01	No
Xylenes (total)	E - 78	mg/L	5	0	N/A	N/A	N/A	0.003	No
Other Wet Chemistry									
Calcium		mg/L	5	5	40	75.14	95	N/A	
Chloride		mg/L	2	2	6.32	6.515	6.71	N/A	
Conductivity, field		mS/cm	3	3	0.46	0.57666667	0.67	N/A	
Nitrate (as N)		mg/L	3	2	1.2	1.35	1.5	0.5	
Potassium		mg/L	5	3	1.48	2.72	5.1	5	
Sodium		mg/L	5	2	4.68	4.785	4.89	5	
TOC average duplicates		mg/L	4	4	4.1	6.725	8.2	N/A	
Total kjeldahl nitrogen (TKN)		mg/L	2	1	0.249	0.249	0.249	0.25	
Other Synthetic Chemistry									
0,0,0-Triethylphosphorothioate		mg/L	1	0	N/A	N/A	N/A	0.01	
1,1,1,2-Tetrachloroethane		mg/L	1	0	N/A	N/A	N/A	0.001	
1,1-Dichloropropene		mg/L	1	0	N/A	N/A	N/A	0.001	
1,2,3-Trichlorobenzene		mg/L	4	0	N/A	N/A	N/A	0.001	
1,2,3-Trichloropropane		mg/L	1	0	N/A	N/A	N/A	0.0025	
1,2,3-Trimethylbenzene		mg/L	1	0	N/A	N/A	N/A	0.001	
1,2,4,5-Tetrachlorobenzene		mg/L	1	0	N/A	N/A	N/A	0.01	
1,2,4-Trichlorobenzene		mg/L	5	0	N/A	N/A	N/A	0.001	
1,2,4-Trimethylbenzene		mg/L	1	0	N/A	N/A	N/A	0.001	
1,2-Dibromo-3-chloropropane (DBCP)		mg/L	5	0	N/A	N/A	N/A	0.005	
1,3,5-Trimethylbenzene		mg/L	1	0	N/A	N/A	N/A	0.001	
1,3,5-Trinitrobenzene		mg/L	1	0	N/A	N/A	N/A	0.01	
1,3-Butadiene		mg/L	1	0	N/A	N/A	N/A	0.002	
1,3-Dichloropropane		mg/L	1	0	N/A	N/A	N/A	0.001	
1,4-Dioxane		mg/L	1	0	N/A	N/A	N/A	0.1	
1,4-Naphthoquinone		mg/L	1	0	N/A	N/A	N/A	0.05	
1-Methylnaphthalene		mg/L	1	0	N/A	N/A	N/A	0.01	
1-Naphthylamine		mg/L	1	0	N/A	N/A	N/A	0.01	

Attachment 3

Analytical Results of Surface Water Samples From County Road 41 Remediation Site
Results Represent Untreated Water

Parameters	EPA Form 2d Table #	Units	# of Samples	# of Detects	Minimum Value Detected	Mean Value of Detections	Maximum Value Detected	Maximum Detection Limit	Believed Present
2,2,4-Trimethylpentane		mg/L	1	0	N/A	N/A	N/A	0.001	
2,2-Dichloropropane		mg/L	1	0	N/A	N/A	N/A	0.001	
2,3,4,6-Tetrachlorophenol		mg/L	1	0	N/A	N/A	N/A	0.01	
2,4,5-Trichlorophenol		mg/L	4	0	N/A	N/A	N/A	0.01	
2,6-Dichlorophenol		mg/L	1	0	N/A	N/A	N/A	0.01	
2-Acetylaminofluorene		mg/L	1	0	N/A	N/A	N/A	0.01	
2-Butanone (Methyl ethyl ketone) (MEK)		mg/L	5	0	N/A	N/A	N/A	0.01	
2-Chlorotoluene		mg/L	1	0	N/A	N/A	N/A	0.001	
2-Hexanone		mg/L	5	0	N/A	N/A	N/A	0.01	
2-Methylnaphthalene		mg/L	4	0	N/A	N/A	N/A	0.001	
2-Methylnaphthalene		mg/L	1	0	N/A	N/A	N/A	0.01	
2-Methylphenol		mg/L	4	0	N/A	N/A	N/A	0.01	
2-Naphthylamine		mg/L	1	0	N/A	N/A	N/A	0.01	
2-Nitroaniline		mg/L	4	0	N/A	N/A	N/A	0.01	
2-Nitropropane		mg/L	1	0	N/A	N/A	N/A	0.005	
2-Phenylbutane (sec-Butylbenzene)		mg/L	1	0	N/A	N/A	N/A	0.001	
2-Picoline		mg/L	1	0	N/A	N/A	N/A	0.05	
2-Toluidine		mg/L	1	0	N/A	N/A	N/A	0.01	
3&4-Methylphenol		mg/L	4	0	N/A	N/A	N/A	0.01	
3,3-Dimethyl-1-butanol		mg/L	1	0	N/A	N/A	N/A	0.1	
3,3-Dimethylbenzidine		mg/L	1	0	N/A	N/A	N/A	0.01	
3-Methylcholanthrene		mg/L	1	0	N/A	N/A	N/A	0.01	
3-Nitroaniline		mg/L	4	0	N/A	N/A	N/A	0.01	
4-Aminobiphenyl		mg/L	1	0	N/A	N/A	N/A	0.01	
4-Chloroaniline		mg/L	4	0	N/A	N/A	N/A	0.01	
4-Chlorotoluene		mg/L	1	0	N/A	N/A	N/A	0.001	
4-Dimethylaminoazobenzene		mg/L	1	0	N/A	N/A	N/A	0.01	
4-Ethyl toluene		mg/L	1	0	N/A	N/A	N/A	0.001	
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)		mg/L	5	0	N/A	N/A	N/A	0.01	
4-Nitroaniline		mg/L	4	0	N/A	N/A	N/A	0.01	
4-Nitroquinoline-N-oxide		mg/L	1	0	N/A	N/A	N/A	0.01	
5-Nitro-2-toluidine		mg/L	1	0	N/A	N/A	N/A	0.01	
7,12-Dimethylbenz(a)anthracene		mg/L	1	0	N/A	N/A	N/A	0.01	
a,a-Dimethylphenethylamine		mg/L	0	0	N/A	N/A	N/A	N/A	
Acetone		mg/L	5	0	N/A	N/A	N/A	0.05	
Acetonitrile		mg/L	1	0	N/A	N/A	N/A	0.05	
Acetophenone		mg/L	4	0	N/A	N/A	N/A	0.01	
alpha-Chlordane		mg/L	4	0	N/A	N/A	N/A	0.00005	
Atrazine		mg/L	3	0	N/A	N/A	N/A	0.0019	

Attachment 3

Analytical Results of Surface Water Samples From County Road 41 Remediation Site
Results Represent Untreated Water

Parameters	EPA Form 2d Table #	Units	# of Samples	# of Detects	Minimum Value Detected	Mean Value of Detections	Maximum Value Detected	Maximum Detection Limit	Believed Present
Azinphos-methyl		mg/L	1	0	N/A	N/A	N/A	0.001	
Benzaldehyde		mg/L	3	0	N/A	N/A	N/A	0.0019	
Benzyl alcohol		mg/L	1	0	N/A	N/A	N/A	0.01	
Biphenyl (1,1-Biphenyl)		mg/L	3	0	N/A	N/A	N/A	0.00095	
Bolstar (Sulprofos)		mg/L	1	0	N/A	N/A	N/A	0.001	
Bromobenzene		mg/L	1	0	N/A	N/A	N/A	0.001	
Caprolactam		mg/L	3	0	N/A	N/A	N/A	0.0048	
Carbazole		mg/L	3	0	N/A	N/A	N/A	0.00095	
Chlorobenzilate		mg/L	1	0	N/A	N/A	N/A	0.05	
Chlorobromomethane		mg/L	4	0	N/A	N/A	N/A	0.001	
Chloroprene		mg/L	1	0	N/A	N/A	N/A	0.05	
cis-1,2-Dichloroethene		mg/L	5	0	N/A	N/A	N/A	0.001	
cis-1,4-Dichloro-2-butene		mg/L	1	0	N/A	N/A	N/A	0.025	
Cyclohexanone		mg/L	1	0	N/A	N/A	N/A	0.01	
Cymene (p-Isopropyltoluene)		mg/L	1	0	N/A	N/A	N/A	0.001	
Demeton		mg/L	1	0	N/A	N/A	N/A	0.002	
Diallate		mg/L	1	0	N/A	N/A	N/A	0.01	
Dibenzofuran		mg/L	4	0	N/A	N/A	N/A	0.01	
Dibromomethane		mg/L	1	0	N/A	N/A	N/A	0.001	
Dichlorodifluoromethane (CFC-12)		mg/L	5	0	N/A	N/A	N/A	0.005	
Dichlorofluoromethane		mg/L	1	0	N/A	N/A	N/A	0.005	
Dicyclopentadiene		mg/L	1	0	N/A	N/A	N/A	0.001	
Diisopropyl ether		mg/L	1	0	N/A	N/A	N/A	0.001	
Dimethoate		mg/L	1	0	N/A	N/A	N/A	0.001	
Dimethoate		mg/L	1	0	N/A	N/A	N/A	0.05	
Dinoseb		mg/L	4	0	N/A	N/A	N/A	0.002	
Dinoseb		mg/L	1	0	N/A	N/A	N/A	0.05	
Diphenylamine		mg/L	1	0	N/A	N/A	N/A	0.01	
Disulfoton		mg/L	1	0	N/A	N/A	N/A	0.001	
Endrin ketone		mg/L	4	0	N/A	N/A	N/A	0.00005	
EPN		mg/L	1	0	N/A	N/A	N/A	0.001	
Ethanol		mg/L	1	0	N/A	N/A	N/A	0.1	
Ethoprop		mg/L	1	0	N/A	N/A	N/A	0.001	
Ethyl acetate		mg/L	1	0	N/A	N/A	N/A	0.01	
Ethyl bromide		mg/L	1	0	N/A	N/A	N/A	0.01	
Ethyl ether		mg/L	1	0	N/A	N/A	N/A	0.001	
Ethyl methacrylate		mg/L	1	0	N/A	N/A	N/A	0.005	
Ethyl methanesulfonate		mg/L	1	0	N/A	N/A	N/A	0.01	
Famphur		mg/L	1	0	N/A	N/A	N/A	0.02	

Attachment 3

Analytical Results of Surface Water Samples From County Road 41 Remediation Site
Results Represent Untreated Water

Parameters	EPA Form 2d Table #	Units	# of Samples	# of Detects	Minimum Value Detected	Mean Value of Detections	Maximum Value Detected	Maximum Detection Limit	Believed Present
Fensulfothion		mg/L	1	0	N/A	N/A	N/A	0.002	
Fenthion		mg/L	1	0	N/A	N/A	N/A	0.001	
gamma-Chlordane		mg/L	4	0	N/A	N/A	N/A	0.00005	
Hexachlorobenzene		mg/L	1	0	N/A	N/A	N/A	0.00005	
Hexachlorobutadiene		mg/L	1	0	N/A	N/A	N/A	0.001	
Hexachloroethane		mg/L	1	0	N/A	N/A	N/A	0.001	
Hexachlorophene (HCP)		mg/L	1	0	N/A	N/A	N/A	0.05	
Hexachloropropene		mg/L	1	0	N/A	N/A	N/A	0.05	
Hexane		mg/L	1	0	N/A	N/A	N/A	0.01	
Iodomethane		mg/L	1	0	N/A	N/A	N/A	0.01	
Isobutanol (isobutyl alcohol)		mg/L	1	0	N/A	N/A	N/A	0.1	
Isodrin		mg/L	1	0	N/A	N/A	N/A	0.01	
Isopropyl alcohol		mg/L	1	0	N/A	N/A	N/A	0.005	
Isopropyl benzene		mg/L	5	0	N/A	N/A	N/A	0.001	
Isosafrole		mg/L	1	0	N/A	N/A	N/A	0.01	
Merphos		mg/L	1	0	N/A	N/A	N/A	0.002	
Methapyrilene		mg/L	1	0	N/A	N/A	N/A	0.05	
Methyl acetate		mg/L	5	0	N/A	N/A	N/A	0.02	
Methyl acrylonitrile		mg/L	1	0	N/A	N/A	N/A	0.05	
Methyl cyclohexane		mg/L	5	0	N/A	N/A	N/A	0.001	
Methyl methanesulfonate		mg/L	1	0	N/A	N/A	N/A	0.05	
Methyl tert butyl ether (MTBE)		mg/L	5	0	N/A	N/A	N/A	0.001	
Naphthalene		mg/L	1	0	N/A	N/A	N/A	0.005	
N-Butyl alcohol		mg/L	1	0	N/A	N/A	N/A	0.2	
N-Butylbenzene		mg/L	1	0	N/A	N/A	N/A	0.001	
N-Heptane		mg/L	1	0	N/A	N/A	N/A	0.001	
N-Nitrosodiethylamine		mg/L	1	0	N/A	N/A	N/A	0.01	
N-Nitrosodi-n-butylamine		mg/L	1	0	N/A	N/A	N/A	0.01	
N-Nitrosomethylethylamine		mg/L	1	0	N/A	N/A	N/A	0.01	
N-Nitrosomorpholine		mg/L	1	0	N/A	N/A	N/A	0.01	
N-Nitrosopiperidine		mg/L	1	0	N/A	N/A	N/A	0.01	
N-Nitrosopyrrolidine		mg/L	1	0	N/A	N/A	N/A	0.01	
N-Propylbenzene		mg/L	1	0	N/A	N/A	N/A	0.001	
Octane		mg/L	1	0	N/A	N/A	N/A	0.001	
Pentachlorobenzene		mg/L	1	0	N/A	N/A	N/A	0.01	
Pentachloroethane		mg/L	1	0	N/A	N/A	N/A	0.05	
Pentachloroethane		mg/L	1	0	N/A	N/A	N/A	0.005	
Pentachloronitrobenzene		mg/L	1	0	N/A	N/A	N/A	0.01	
Phenacetin		mg/L	1	0	N/A	N/A	N/A	0.01	

Attachment 3

Analytical Results of Surface Water Samples From County Road 41 Remediation Site
Results Represent Untreated Water

Parameters	EPA Form 2d Table #	Units	# of Samples	# of Detects	Minimum Value Detected	Mean Value of Detections	Maximum Value Detected	Maximum Detection Limit	Believed Present
Phorate		mg/L	1	0	N/A	N/A	N/A	0.001	
Phorate		mg/L	1	0	N/A	N/A	N/A	0.05	
p-Phenylenediamine		mg/L	0	0	N/A	N/A	N/A	N/A	
Pronamide		mg/L	1	0	N/A	N/A	N/A	0.01	
Propionitrile (ethyl cyanide)		mg/L	1	0	N/A	N/A	N/A	0.05	
Propylene (propene)		mg/L	1	0	N/A	N/A	N/A	0.0025	
Pyridine		mg/L	1	0	N/A	N/A	N/A	0.01	
Ronnel		mg/L	1	0	N/A	N/A	N/A	0.001	
Safrole		mg/L	1	0	N/A	N/A	N/A	0.01	
Stirophos		mg/L	1	0	N/A	N/A	N/A	0.001	
Sulfotep		mg/L	1	0	N/A	N/A	N/A	0.001	
Sulfotep		mg/L	1	0	N/A	N/A	N/A	0.05	
t-Amyl alcohol		mg/L	1	0	N/A	N/A	N/A	0.05	
Tepp (Ethyl pyrophosphate)		mg/L	1	0	N/A	N/A	N/A	0.01	
tert-Amyl ethyl ether (TAEE)		mg/L	1	0	N/A	N/A	N/A	0.001	
tert-Amyl methyl ether		mg/L	1	0	N/A	N/A	N/A	0.001	
tert-Butyl alcohol		mg/L	1	0	N/A	N/A	N/A	0.005	
tert-Butyl ethyl ether		mg/L	1	0	N/A	N/A	N/A	0.001	
tert-Butyl formate		mg/L	1	0	N/A	N/A	N/A	0.02	
tert-Butylbenzene		mg/L	1	0	N/A	N/A	N/A	0.001	
trans-1,4-Dichloro-2-butene		mg/L	1	0	N/A	N/A	N/A	0.0025	
Trichlorofluoromethane (CFC-11)		mg/L	5	0	N/A	N/A	N/A	0.005	
Trichloronate		mg/L	1	0	N/A	N/A	N/A	0.001	
Trifluorotrichloroethane (CFC-113)		mg/L	5	0	N/A	N/A	N/A	0.001	
Tetrahydrofuran		mg/L	1	0	N/A	N/A	N/A	0.005	
Thionazin (O,O-diethyl-O-2-pyrazinyl phosphorothioate)		mg/L	1	0	N/A	N/A	N/A	0.01	
Tokuthion		mg/L	1	0	N/A	N/A	N/A	0.001	
m&p-Xylenes		mg/L	1	0	N/A	N/A	N/A	0.002	
o-Xylene		mg/L	1	0	N/A	N/A	N/A	0.001	

Attachment 3

Analytical Results of Surface Water Samples From County Road 41 Remediation Site
Results Represent Untreated Water

Parameters	EPA Form 2d Table #	Units	# of Samples	# of Detects	Minimum Value Detected	Mean Value of Detections	Maximum Value Detected	Maximum Detection Limit	Believed Present
Dioxin/Furans									
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)		mg/L	1	0	N/A	N/A	N/A	9.5E-08	
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)		mg/L	1	0	N/A	N/A	N/A	9.5E-08	
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)		mg/L	1	0	N/A	N/A	N/A	4.8E-08	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)		mg/L	1	0	N/A	N/A	N/A	4.8E-08	
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)		mg/L	1	0	N/A	N/A	N/A	4.8E-08	
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)		mg/L	1	0	N/A	N/A	N/A	4.8E-08	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)		mg/L	1	0	N/A	N/A	N/A	4.8E-08	
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)		mg/L	1	0	N/A	N/A	N/A	4.8E-08	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)		mg/L	1	0	N/A	N/A	N/A	4.8E-08	
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)		mg/L	1	0	N/A	N/A	N/A	4.8E-08	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)		mg/L	1	0	N/A	N/A	N/A	4.8E-08	
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)		mg/L	1	0	N/A	N/A	N/A	4.8E-08	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)		mg/L	1	0	N/A	N/A	N/A	4.8E-08	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)		mg/L	1	0	N/A	N/A	N/A	4.8E-08	
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)		mg/L	1	0	N/A	N/A	N/A	4.8E-08	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)		mg/L	1	0	N/A	N/A	N/A	9.5E-09	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)		mg/L	1	0	N/A	N/A	N/A	9.5E-09	
Total heptachlorodibenzofuran (HpCDF)		mg/L	1	0	N/A	N/A	N/A	4.8E-08	
Total heptachlorodibenzo-p-dioxin (HpCDD)		mg/L	1	0	N/A	N/A	N/A	4.8E-08	
Total hexachlorodibenzofuran (HxCDF)		mg/L	1	0	N/A	N/A	N/A	4.8E-08	
Total hexachlorodibenzo-p-dioxin (HxCDD)		mg/L	1	0	N/A	N/A	N/A	4.8E-08	
Total pentachlorodibenzofuran (PeCDF)		mg/L	1	0	N/A	N/A	N/A	4.8E-08	
Total pentachlorodibenzo-p-dioxin (PeCDD)		mg/L	1	0	N/A	N/A	N/A	4.8E-08	
Total tetrachlorodibenzofuran (TCDF)		mg/L	1	0	N/A	N/A	N/A	9.5E-09	
Total tetrachlorodibenzo-p-dioxin (TCDD)		mg/L	1	0	N/A	N/A	N/A	9.5E-09	

Attachment 3

Analytical Results of Surface Water Samples From County Road 41 Remediation Site
Results Represent Untreated Water

Parameters	EPA Form 2d Table #	Units	# of Samples	# of Detects	Minimum Value Detected	Mean Value of Detections	Maximum Value Detected	Maximum Detection Limit	Believed Present
PFAS									
-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid		mg/L	1	0	N/A	N/A	N/A	0.00017	
1H,1H,2H,2H-Perfluorododecane sulfonate sodium salt		mg/L	1	0	N/A	N/A	N/A	0.00017	
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid		mg/L	1	0	N/A	N/A	N/A	0.00017	
Fluorotelomer sulfonic acid (4:2)		mg/L	0	0	N/A	N/A	N/A	N/A	
Fluorotelomer sulfonic acid (6:2)		mg/L	1	0	N/A	N/A	N/A	0.00043	
Fluorotelomer sulfonic acid (8:2)		mg/L	1	0	N/A	N/A	N/A	0.00017	
Hexafluoropropylene oxide dimer acid (HFPO-DA)		mg/L	1	0	N/A	N/A	N/A	0.00034	
N-Ethyl perfluorooctane sulfonamide (EtFOSE)		mg/L	0	0	N/A	N/A	N/A	N/A	
N-Ethyl perfluorooctane sulfonamido acetic acid (N-EtFOSAA)		mg/L	1	1	0.0023	0.0023	0.0023	N/A	
N-Ethyl perfluorooctane sulfonamido ethanol (N-EtFOSE)		mg/L	1	0	N/A	N/A	N/A	0.00017	
N-Methyl perfluorooctane sulfonamido acetic acid		mg/L	1	1	0.0018	0.0018	0.0018	N/A	
N-Methyl perfluorooctane sulfonamido ethanol (MeFOSE)		mg/L	1	0	N/A	N/A	N/A	0.00034	
N-Methyl-perfluorooctane sulfonamide		mg/L	0	0	N/A	N/A	N/A	N/A	
Perfluoro-3-methoxypropanoic acid (PFMPA)		mg/L	1	0	N/A	N/A	N/A	0.00017	
Perfluoro-4-methoxybutanoic acid (PFMBA)		mg/L	1	0	N/A	N/A	N/A	0.00017	
Perfluorobutane sulfonic acid (PFBS)		mg/L	20	18	0.000085	0.00190417	0.0027	0.005	
Perfluorobutanoic acid (PFBA)		mg/L	1	1	0.0016	0.0016	0.0016	N/A	
Perfluorodecanesulfonic acid (PFDS)		mg/L	1	0	N/A	N/A	N/A	0.00017	
Perfluorodecanoic acid (PFDA)		mg/L	1	0	N/A	N/A	N/A	0.00017	
Perfluorododecane sulfonic acid (PFDoDS)		mg/L	1	0	N/A	N/A	N/A	0.00017	
Perfluorododecanoic acid (PFDoDA)		mg/L	0	0	N/A	N/A	N/A	N/A	
Perfluoroheptane sulfonic acid (PFHpS)		mg/L	1	1	0.001	0.001	0.001	N/A	
Perfluoroheptanoic acid (PFHpA)		mg/L	1	1	0.0034	0.0034	0.0034	N/A	
Perfluorohexadecanoic acid		mg/L	0	0	N/A	N/A	N/A	N/A	
Perfluorohexane sulfonic acid (PFHxS)		mg/L	20	20	0.00017	0.007836	0.015	N/A	
Perfluorohexanoic acid (PFHxA)		mg/L	1	1	0.0082	0.0082	0.0082	N/A	
Perfluorononane sulfonic acid (PFNS)		mg/L	1	0	N/A	N/A	N/A	0.00017	
Perfluorononanoic acid (PFNA)		mg/L	3	2	0.000035	0.0000775	0.00012	0.005	
Perfluorooctadecanoic acid		mg/L	1	0	N/A	N/A	N/A	0.00017	

Attachment 3

Analytical Results of Surface Water Samples From County Road 41 Remediation Site
Results Represent Untreated Water

Parameters	EPA Form 2d Table #	Units	# of Samples	# of Detects	Minimum Value Detected	Mean Value of Detections	Maximum Value Detected	Maximum Detection Limit	Believed Present
Perfluorooctane sulfonamide (FOSA)		mg/L	1	1	0.000084	0.000084	0.000084	N/A	
Perfluorooctane sulfonic acid (PFOS)		mg/L	20	20	0.001	0.08091	0.37	N/A	
Perfluorooctanoic acid (PFOA)		mg/L	20	20	0.0014	0.05701	0.14	N/A	
Perfluoropentane sulfonic acid (PFPeS)		mg/L	1	1	0.0019	0.0019	0.0019	N/A	
Perfluoropentanoic acid (PFPeA)		mg/L	1	1	0.0026	0.0026	0.0026	N/A	
Perfluorotetradecanoic acid (PFTeDA)		mg/L	0	0	N/A	N/A	N/A	N/A	
Perfluorotridecanoic acid (PFTrDA)		mg/L	0	0	N/A	N/A	N/A	N/A	
Perfluoroundecanoic acid (PFUnA)		mg/L	1	0	N/A	N/A	N/A	0.00017	
2,2,3-Trifluoro-3-[1,1,2,2,3,3-hexafluoro-3-(trifluoromethoxy)propoxy]-propanoic acid (DONA)		mg/L	1	0	N/A	N/A	N/A	0.00017	

Footnotes:

mg/L : milligrams/liter

Deg C: degrees celsius

s.u. : standard units

PCU : platinum-cobalt units

MPN/100ml : Most Probable Number in 100 milliliters

pCi/L : picocuries/liter

N/A : Not Applicable - no value detected