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KAY IVEY
GOVERNOR

JAN 21 2026

Tony Kennon
Mayor
City of Orange Beach
Post Office Box 458
Orange Beach, AL 36561

RE: Draft Permit
NPDES Permit No. AL0081124
City of Orange Beach Wastewater Treatment Facility
Baldwin County, Alabama

Dear Mayor Kennon:

Transmitted herein is a draft of the referenced permit.

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

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

Please be aware that Parts I.C.1.c and I.C.2.e of your permit require participation in the Department's Alabama Environmental Permitting and Compliance System (AEPACS) for submittal of DMRs and SSOs upon issuance of this permit unless valid justification as to why you cannot participate is submitted in writing. SSO hotline notifications and hard copy Form 415 SSO reports may be used only with the written approval from the Department. AEPACS allows ADEM to electronically validate and acknowledge receipt of the data. This improves the accuracy of reported compliance data and reduces costs to both the regulated community and ADEM. Please note that all AEPACS users can create the electronic DMRs and SSOs; however, only AEPACS users with certifier permissions will be able to submit the electronic DMRs and SSOs to ADEM.

Please also be aware that Part IV. of your permit requires that you develop, implement, and maintain a Sanitary Sewer Overflow Response Plan.



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
Moulltrie, AL 36605
(251) 450-3400
(251) 479-2593 (FAX)

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 Stephanie Ammons at sammons@adem.alabama.gov or (334) 274-4151.

Sincerely,



Stephanie Ammons
Municipal Section
Water Division

Enclosure

cc: Environmental Protection Agency Email
U.S. Fish and Wildlife Service
Alabama Historical Commission
Advisory Council on Historic Preservation
Department of Conservation and Natural Resources



NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE: CITY OF ORANGE BEACH
POST OFFICE BOX 458
ORANGE BEACH, AL 36561

FACILITY LOCATION: CITY OF ORANGE BEACH WASTEWATER TREATMENT FACILITY (10 MGD)
3900 WILLIAM SILVERS PARKWAY
ORANGE BEACH, ALABAMA
BALDWIN COUNTY

PERMIT NUMBER: AL0081124

RECEIVING WATERS: INTRACOASTAL WATERWAY

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
Water Division Chief

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PART I: DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

1. DSN 0011: Treated Domestic Wastewater

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 Outfall 001, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq See note (1)	Sample Type	Seasonal See note (2)
Oxygen, Dissolved (DO) (00300) Effluent Gross Value	*****	*****	*****	6.0 Minimum Daily	*****	*****	mg/l	5X Weekly	Grab	Not Seasonal
pH (00400) Effluent Gross Value	*****	*****	*****	6.0 Minimum Daily	*****	9.0 Maximum Daily	S.U.	5X Weekly	Grab	Not Seasonal
Solids, Total Suspended (00530) Effluent Gross Value	2502 Monthly Average	3753 Weekly Average	lbs/day	*****	30.0 Monthly Average	45.0 Weekly Average	mg/l	5X Weekly	24-Hr Composite	Not Seasonal
Solids, Total Suspended (00530) Raw Sew/Influent	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	(Report) Monthly Average	(Report) Weekly Average	mg/l	5X Weekly	24-Hr Composite	Not Seasonal
Nitrogen, Ammonia Total (As N) (00610) Effluent Gross Value	58.3 Monthly Average	87.5 Weekly Average	lbs/day	*****	0.7 Monthly Average	1.0 Weekly Average	mg/l	5X Weekly	24-Hr Composite	Not Seasonal
Nitrogen, Kjeldahl Total (As N) (00625) Effluent Gross Value	183.4 Monthly Average	275.2 Weekly Average	lbs/day	*****	2.2 Monthly Average	3.3 Weekly Average	mg/l	5X Weekly	24-Hr Composite	Not Seasonal
Nitrite Plus Nitrate Total 1 Det. (As N) (00630) Effluent Gross Value	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	(Report) Monthly Average	(Report) Weekly Average	mg/l	Monthly	24-Hr Composite	Not Seasonal
Phosphorus, Total (As P) (00665) Effluent Gross Value	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	(Report) Monthly Average	(Report) Weekly Average	mg/l	Monthly	24-Hr Composite	Not Seasonal
Zinc Total Recoverable (01094) Effluent Gross Value	*****	*****	*****	*****	140 Monthly Average	140 Maximum Daily	ug/l	Monthly	Grab	Not Seasonal

See Part II.C.1. for Bypass and Part II.C.2. for Upset conditions.

(1) Sample Frequency – See also Part I.B.2

See Permit Requirements for Effluent Toxicity Testing in Part IV.B.

(2) S = Summer (April – October)

W = Winter (November - March)

ECS = E. coli Summer (May - October)

ECW = E. coli Winter (November - April)

(3) See Part IV.C. for Total Residual Chlorine (TRC). Monitoring for TRC is applicable if chlorine is utilized for disinfection purposes. If monitoring is not applicable during the monitoring period, enter “*9” on the monthly DMR.

(4) A measurement of TRC below 0.05 mg/L shall be considered in compliance with the permit limitations above and should be reported as “*B” on the monthly DMR.

DSN 0011 (Continued): Treated Domestic Wastewater

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 Outfall 001, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq See note (1)	Sample Type	Seasonal See note (2)
Enterococci: Group D MF Trans, M-E, EIA (31639) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	275 Maximum Daily	col/100mL	5X Weekly	Grab	ECW
Enterococci: Group D MF Trans, M-E, EIA (31639) Effluent Gross Value	*****	*****	*****	*****	35.0 Monthly Average	158 Maximum Daily	col/100mL	5X Weekly	Grab	ECS
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Daily	Continuous	Not Seasonal
Chlorine, Total Residual (50060) See notes (3, 4) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	.02 Maximum Daily	mg/l	5X Weekly	Grab	Not Seasonal
BOD, Carbonaceous 05 Day, 20C (80082) Effluent Gross Value	241.8 Monthly Average	362.7 Weekly Average	lbs/day	*****	2.9 Monthly Average	4.3 Weekly Average	mg/l	5X Weekly	24-Hr Composite	Not Seasonal
BOD, Carbonaceous 05 Day, 20C (80082) Raw Sew/Influent	(Report) Monthly Average	(Report) Weekly Average	lbs/day	*****	(Report) Monthly Average	(Report) Weekly Average	mg/l	5X Weekly	24-Hr Composite	Not Seasonal
BOD, Carb-5 Day, 20 Deg C, Percent Remvl (80091) Percent Removal	*****	*****	*****	85.0 Monthly Average Minimum	*****	*****	%	Monthly	Calculated	Not Seasonal
Solids, Suspended Percent Removal (81011) Percent Removal	*****	*****	*****	85.0 Monthly Average Minimum	*****	*****	%	Monthly	Calculated	Not Seasonal

See Part II.C.1. for Bypass and Part II.C.2. for Upset conditions.

(1) Sample Frequency – See also Part I.B.2

See Permit Requirements for Effluent Toxicity Testing in Part IV.B.

(2) S = Summer (April – October)

W = Winter (November - March)

ECS = Enterococci Summer (May - October)

ECW = Enterococci Winter (November - April)

(3) See Part IV.C. for Total Residual Chlorine (TRC). Monitoring for TRC is applicable if chlorine is utilized for disinfection purposes. If monitoring is not applicable during the monitoring period, enter “*9” on the monthly DMR.

(4) A measurement of TRC below 0.05 mg/L shall be considered in compliance with the permit limitations above and should be reported as “*B” on the monthly DMR.

2. DSN 001Q: Quarterly

This is an administrative outfall designation. Outfall 001Q is the same physical outfall as Outfall 0011. Discharge from this outfall shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration		Units	Sample Freq See note (1)	Sample Type	Seasonal See note (2)	
Cyanide, Total Recoverable (78248) See note (3) Effluent Gross Value	*****	*****	*****	*****	(Report) Monthly Average	(Report) Maximum Daily	ug/l	Monthly	Grab	Not Seasonal

See Part II.C.1. for Bypass and Part II.C.2. for Upset conditions.

(1) Sample Frequency – See also Part I.B.2

See Permit Requirements for Effluent Toxicity Testing in Part IV.B.

(2) S = Summer (April – October)

W = Winter (November - March)

ECS = E. coli Summer (May - October)

ECW = E. coli Winter (November - April)

(3) For the purpose of demonstration of compliance with this parameter “Free Available” may be considered equivalent to “Total Recoverable.”

3. DSN 001T: Toxicity

This is an administrative outfall designation. Outfall 001T is the same physical outfall as Outfall 0011. Discharge from this outfall shall be monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq See note (1)	Sample Type	Seasonal See note (2)
P/F Stare 7 Day Chr Mysid. Bahia (TGP3E) Effluent Gross Value	****	****	****	****	****	0 Single Sample	pass=0;fail=1	See Permit Requirements	24-Hr Composite	Oct
P/F Stare 7 Day Chr Menidia (TGP6B) Effluent Gross Value	****	****	****	****	****	0 Single Sample	pass=0;fail=1	See Permit Requirements	24-Hr Composite	Oct

See Part II.C.1. for Bypass and Part II.C.2. for Upset conditions.

- (1) Sample Frequency – See also Part I.B.2
See Permit Requirements for Effluent Toxicity Testing in Part IV.B.
- (2) S = Summer (April – October)
W = Winter (November - March)
ECS = E. coli Summer (May - October)
ECW = E. coli Winter (November - April)

B. DISCHARGE MONITORING AND RECORD KEEPING REQUIREMENTS

1. Representative Sampling

Sample collection and measurement actions shall be representative of the volume and nature of the monitored discharge and shall be in accordance with the provisions of this permit. The effluent sampling point shall be at the nearest accessible location just prior to discharge and after final treatment, unless otherwise specified in the permit.

2. Measurement Frequency

Measurement frequency requirements found in Provision I.A. shall mean:

- a. Seven days per week shall mean daily.
- b. Five days per week shall mean any five days of discharge during a calendar weekly period of Sunday through Saturday.
- c. Three days per week shall mean any three days of discharge during a calendar week.
- d. Two days per week shall mean any two days of discharge during a calendar week.
- e. One day per week shall mean any day of discharge during a calendar week.
- f. Two days per month shall mean any two days of discharge during the month that are no less than seven days apart. However, if discharges occur only during one seven-day period in a month, then two days per month shall mean any two days of discharge during that seven day period.
- g. One day per month shall mean any day of discharge during the calendar month.
- h. Quarterly shall mean any day of discharge during each calendar quarter.
- i. The Permittee may increase the frequency of sampling, listed in Provisions I.B.2.a through I.B.2.h; however, all sampling results are to be reported to the Department.

3. 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" or "*B" 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" or "*B" 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. 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.

4. 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.

5. Records Retention and Production

- a. 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 should not be submitted unless requested.
- b. 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.

6. Reduction, Suspension or Termination of Monitoring and/or Reporting

- a. The Director may, with respect to any point source identified in Provision I.A. of this permit, authorize the permittee to reduce, suspend or terminate the monitoring and/or reporting required by this permit upon the submission of a written request for such reduction, suspension or termination by the permittee, supported by sufficient data which demonstrates to the satisfaction of the Director that the discharge from such point source will continuously meet the discharge limitations specified in Provision I.A. of this permit.
- b. It remains the responsibility of the permittee to comply with the monitoring and reporting requirements of this permit until written authorization to reduce, suspend or terminate such monitoring and/or reporting is received by the permittee from the Director.

7. 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. At a minimum, flow measurement devices shall be calibrated at least once every 12 months.

C. DISCHARGE REPORTING REQUIREMENTS

1. Reporting of Monitoring Requirements

- a. The permittee shall conduct the required monitoring in accordance with the following schedule:
 - (1) **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.
 - (2) **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 should be reported on the last DMR due for the quarter (i.e., March, June, September and December DMRs).

- (3) **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 reported on the last DMR due for the month of the semiannual period (i.e., June and December DMRs).
 - (4) **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 reported on the December DMR.
- b. The permittee shall submit discharge monitoring reports (DMRs) in accordance with the following schedule:
- (1) **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 the month following the month the permit becomes effective. 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, unless otherwise directed by the Department.
 - (2) **REPORTS OF QUARTERLY TESTING** shall be submitted on a quarterly basis. The first report is due on the 28th day of the month following the first complete calendar quarter the permit becomes effective. 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, unless otherwise directed by the Department.
 - (3) **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, unless otherwise directed by the Department.
 - (4) **REPORTS OF ANNUAL TESTING** shall be submitted on an annual basis. Unless specified elsewhere in the permit, 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, unless otherwise directed by the Department.
- 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 five 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 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.
 - (3) A permittee 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.

- (4) 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.
- (5) 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.
- (6) 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 and Regulations, shall be electronically signed (or, if allowed by the Department, traditionally signed) by a "responsible official" of the permittee as defined in ADEM Administrative Code Rule 335-6-6-.09 or a "duly authorized representative" of such official as defined in ADEM Administrative Code Rule 335-6-6-.09 and shall bear the following certification:

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

- e. 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
Office of Water Services, Water Division
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
Office of Water Services, Water Division
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
Municipal Section, Water Division
Post Office Box 301463
Montgomery, Alabama 36130-1463**

Certified and Registered Mail shall be addressed to:

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

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

2. Noncompliance Notifications and Reports

- a. The Permittee shall notify the Department if, for any reason, the Permittee's discharge:
- (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) Potentially threatens human health or welfare;

- (3) Threatens fish or aquatic life;
- (4) Causes an in-stream water quality criterion to be exceeded;
- (5) 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);
- (6) Contains a quantity of a hazardous substance that may be harmful to public health or welfare under Section 311(b)(4) of the FWPCA, 33 U.S.C. Section 1321(b)(4);
- (7) Exceeds any discharge limitation for an effluent parameter listed in Part I.A. as a result of an unanticipated bypass or upset; or
- (8) Is an unpermitted direct or indirect discharge of a pollutant to a water of the state. (Note that unpermitted discharges properly reported to the Department under any other requirement are not required to be reported under this provision.)

The Permittee shall orally or electronically provide notification of any of the above occurrences, describing the circumstances and potential effects, to the Director or Designee within 24-hours after the Permittee becomes aware of the occurrence of such discharge. In addition to the oral or electronic notification, the Permittee shall submit a report to the Director or Designee, as provided in Provision I.C.2.c. or I.C.2.e., no later than five days after becoming aware of the occurrence of such discharge or occurrence.

- b. If, for any reason, the Permittee's discharge does not comply with any limitation of this permit, then the Permittee shall submit a written report to the Director or Designee, as provided in Provision I.C.2.c below. This report must be submitted with the next Discharge Monitoring Report required to be submitted by Provision I.C.1 of this permit after becoming aware of the occurrence of such noncompliance.
- c. Except for notifications and reports of notifiable SSOs which shall be submitted in accordance with the applicable Provisions of this permit, the Permittee shall submit the reports required under Provisions I.C.2.a. and b. to the Director or Designee on ADEM Form 421, available on the Department's website (<http://www.adem.state.al.us/DeptForms/Form421.pdf>). The completed Form must document the following information:
 - (1) A description of the discharge and cause of noncompliance;
 - (2) The period of noncompliance, including exact dates, times, and duration of the noncompliance. If the noncompliance is not corrected by the due date of the written report, then the Permittee shall provide an estimated date by which the noncompliance will be corrected; and
 - (3) A description of the steps taken by the Permittee and the steps planned to be taken by the Permittee to reduce or eliminate the noncompliant discharge and to prevent its recurrence.
- d. Immediate notification

The Permittee shall provide notification to the Director, the public, the county health department, and any other affected entity such as public water systems, as soon as possible upon becoming aware of any notifiable sanitary sewer overflow. Notification to the Director shall be completed utilizing the Department's web-based electronic environmental SSO reporting system in accordance with Provision I.C.2.e.

- e. The Department is utilizing an electronic system for notification and submittal of SSO reports. Except as noted below, the Permittee must submit all SSO reports electronically in the Department's electronic system. If requested, waivers from utilization of the electronic system shall be submitted in accordance with ADEM Admin. Code 335-6-1-.04(6). The Department's electronic reporting system shall be utilized unless a written waiver has been granted. A waiver is not effective until receipt of written approval from the Department. Utilization of verbal notifications and hard copy SSO report submittals is allowed only if approved in writing by the Department. The Permittee shall include in the SSO reports the information requested by ADEM Form 415. In addition, the Permittee shall include the latitude and longitude of the SSO in the report except when the SSO is a result of an extreme weather event (e.g., hurricane). To participate in the electronic system for SSO reports, an account may be created at <https://aepacs.adem.alabama.gov/nviro/ncore/external/home>. If the electronic system is down (i.e., electronic submittal of SSO data cannot be completed due to technical problems originating with the Department's system), the Permittee is not relieved of its obligation to notify the Department or submit SSO reports to the Department by the required submittal date, and the Permittee shall submit the data in an alternate manner and format acceptable to the Department. Preapproved alternate acceptable methods include verbal reports, reports submitted via the SSO hotline, or reports submitted via fax, e-mail, mail, or hand-delivery such that they are

received by the required reporting date. Within five calendar days of the electronic system resuming operation, the Permittee shall enter the data into the electronic system, unless an alternate timeframe is approved by the Department. For any alternate notification, records of the date, time, notification method, and person submitting the notification should be maintained by the Permittee. If a Permittee is allowed to submit SSO reports via an alternate method, the SSO report must be in a format approved by the Department and must be legible.

- f. The Permittee shall maintain a record of all known wastewater discharge points that are not authorized as permitted outfalls, including but not limited to SSOs. The Permittee shall include this record in its **Municipal Water Pollution Prevention (MWPP) Annual Reports**, which shall be submitted to the Department each year by May 31st for the prior calendar year period beginning January 1st and ending December 31st. The MWPP Annual Reports shall contain a list of all known wastewater discharge points that are not authorized as permitted outfalls and any discharges that occur prior to the headworks of the wastewater treatment plant covered by this permit. The Permittee shall also provide in the MWPP Annual Reports a list of any discharges reported during the applicable time period in accordance with Provision I.C.2.a. The Permittee shall include in its MWPP Annual Reports the following information for each known unpermitted discharge that occurred:
- (1) The cause of the discharge;
 - (2) Date, duration and volume of discharge (estimate if unknown);
 - (3) Description of the source (e.g., manhole, lift station);
 - (4) Location of the discharge, by latitude and longitude (or other appropriate method as approved by the Department);
 - (5) The ultimate destination of the flow (e.g., surface waterbody, municipal separate storm sewer to surface waterbody); and
 - (6) Corrective actions taken and/or planned to eliminate future discharges.

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 or 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.

E. SCHEDULE OF COMPLIANCE

1. Compliance with discharge limits

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. Schedule

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. Certified Operator

The permittee shall not operate any wastewater treatment plant unless the competency of the operator to operate such plant has been duly certified by the Director pursuant to AWPCA, and meets the requirements specified in ADEM Administrative Code, Rule 335-10-1.

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

- a. 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:
 - (1) 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;
 - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permits;
 - (3) Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the permit; and
 - (4) 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, 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 or negate the Permittee's responsibility to apply for, obtain, or comply with other Federal, State, or Local Government permits, certifications, or licenses or to preclude from obtaining other federal, state, or local approvals, including those applicable to other ADEM programs and regulations.

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 Boulevard Montgomery, Alabama 36110-2059.
- 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

Prior to any facility expansion, process modification or any significant change in the method of operation of the permittee's treatment works, the permittee shall provide the Director with information concerning the planned expansion, modification or change. The permittee shall apply for a permit modification at least 180 days prior to any facility expansion, process modification, significant change in the method of operation of the permittee's treatment works, or other actions that could result in the discharge of additional pollutants or increase the quantity of a discharged pollutant or could result in an additional discharge point. This condition 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.

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; or

5. 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.
- h. Any other cause allowed by the ADEM Administrative Code, Chapter 335-6-6.

6. **Suspension**

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

7. **Stay**

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. NOTICE TO DIRECTOR OF INDUSTRIAL USERS

1. The permittee shall not allow the introduction of wastewater, other than domestic wastewater, from a new indirect discharger prior to approval and permitting, if applicable, of the discharge by the Department.
2. The permittee shall not allow an existing indirect discharger to increase the quantity or change the character of its wastewater, other than domestic wastewater, prior to approval and permitting, if applicable, of the increased discharge by the Department.
3. The permittee shall report to the Department any adverse impact caused or believed to be caused by an indirect discharger on the treatment process, quality of discharged water or quality of sludge. Such report shall be submitted within seven days of the permittee becoming aware of the adverse impacts.

H. PROHIBITIONS

The permittee shall not allow, and shall take effective enforcement action to prevent and terminate, the introduction of any of the following into its treatment works by industrial users:

1. Pollutants which may create a fire or explosive hazard, including, but not limited to, waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;
2. Pollutants which may cause corrosive structural damage to the treatment works, but in no case discharges with a pH lower than 5.0;
3. Solid or viscous pollutants in amounts which may cause obstruction to the flow in sewers, or other interference in the treatment works;
4. Any pollutant, including oxygen demanding pollutants (BOD, etc.) of such volume or strength as to cause interference in the treatment works;

5. Heat in amounts which may inhibit biological activity in the treatment plant resulting in interference but in no case in such quantities that the temperature of the influent, at the treatment plant, exceeds 40 degrees centigrade or 104 degrees Fahrenheit;
6. Pollutants which may result in the presence of toxic gases, vapors, or fumes within the treatment works in a quantity that may cause acute worker health and safety problems;
7. Unless specifically authorized by this permit, any pollutants not generated at the facility for which this permit was issued; or
8. Petroleum oil, biodegradable cutting oil, or products of mineral oil origin in amounts that will cause pass through or interference.

PART III: ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS

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, 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 are 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 this paragraph.
4. Final plans and specifications for a waste treatment facility at a new source or new discharger, or a modification to an existing waste treatment facility must be submitted to and examined by the Department prior to initiating construction of such treatment facility by the permittee.
5. Upon completion of construction of waste treatment facilities and prior to operation of such facilities, the permittee shall submit to the Department a certification from a registered professional engineer, licensed to practice in the State of Alabama, that the treatment facilities have been built according to plans and specifications submitted to and examined by the Department.

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 waste into waters of the state". Code of Alabama 1975, Section 22-22-1(b)(9).
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 8 equal volume samples collected at constant time intervals of not more than 1 hour 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 the arithmetic mean of all the composite or grab samples taken for the daily discharges collected in 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. **Notifiable sanitary sewer overflow** - means an overflow, spill, release or diversion of wastewater from a sanitary sewer system that:
 - a) Reaches a surface water of the State; or
 - b) May imminently and substantially endanger human health based on potential for public exposure including but not limited to close proximity to public or private water supply wells or in areas where human contact would be likely to occur.
31. **Permit application** - means forms and additional information that is required by ADEM Administrative Code Rule 335-6-6-.08 and applicable permit fees.
32. **Point source** - means "any discernible, confined and discrete conveyance, including but not limited to any pipe, channel, ditch, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, . . . from which pollutants are or may be discharged." Section 502(14) of the FWPCA, 33 U.S.C. Section 1362(14).
33. **Pollutant** - includes for purposes of this permit, but is not limited to, those pollutants specified in Code of Alabama 1975, Section 22-22-1(b)(3) and those effluent characteristics specified in Provision I. A. of this permit.
34. **Privately Owned Treatment Works** – means any devices or system which is used to treat wastes from any facility whose operator is not the operator of the treatment works, and which is not a “POTW”.
35. **Publicly Owned Treatment Works (POTW)** – means a wastewater collection and treatment facility owned by the State, municipality, regional entity composed of two or more municipalities, or another entity created by the State or local authority for the purpose of collecting and treating municipal wastewater.
36. **Receiving Stream** – means the “waters” receiving a “discharge” from a “point source”.
37. **Severe property damage** - means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
38. **Significant Source** – means a source which discharges 0.025 MGD or more to a POTW or greater than five percent of the treatment work’s capacity, or a source which is a primary industry as defined by the U.S. EPA or which discharges a priority or toxic pollutant.
39. **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:
- The mixing of at least 8 equal volume samples collected at constant time intervals of not more than 2 hours over a period of 24 hours;
 - 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;
 - 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: SPECIFIC REQUIREMENTS, CONDITIONS, AND LIMITATIONS

A. SLUDGE MANAGEMENT PRACTICES

1. Applicability

- a. Provisions of Provision IV.A. apply to a sewage sludge generated or treated in treatment works that is applied to agricultural and non-agricultural land, or that is otherwise distributed, marketed, incinerated, or disposed in landfills or surface disposal sites.
- b. Provisions of Provision IV.A. do not apply to:
 - (1) Sewage sludge generated or treated in a privately owned treatment works operated in conjunction with industrial manufacturing and processing facilities and which receive no domestic wastewater.
 - (2) Sewage sludge that is stored in surface impoundments located at the treatment works prior to ultimate disposal.

2. Submitting Information

- a. If applicable, the Permittee must submit annually with its Municipal Water Pollution Prevention (MWPP) report the following:
 - (1) Type of sludge stabilization/digestion method;
 - (2) Daily or annual sludge production (dry weight basis);
 - (3) Ultimate sludge disposal practice(s).
- b. The Permittee shall provide sludge inventory data to the Director as requested. These data may include, but are not limited to, sludge quantity and quality reported in Provision IV.A.2.a as well as other specific analyses required to comply with State and Federal laws regarding solid and hazardous waste disposal.
- c. The Permittee shall give prior notice to the Director of at least 30 days of any change planned in the Permittee's sludge disposal practices.

3. Reopener or Modification

- a. Upon review of information provided by the Permittee as required by Provision IV.A.2. or, based on the results of an on-site inspection, the permit shall be subject to modification to incorporate appropriate requirements.
- b. If an applicable "acceptable management practice" or if a numerical limitation for a pollutant in sewage sludge promulgated under Section 405 of FWPCA is more stringent than the sludge pollutant limit or acceptable management practice in this permit. This permit shall be modified or revoked or reissued to conform to requirements promulgated under Section 405. The Permittee shall comply with the limitations no later than the compliance deadline specified in applicable regulations as required by Section 405 of FWPCA.

B. EFFLUENT TOXICITY LIMITATIONS AND BIOMONITORING REQUIREMENTS FOR CHRONIC TOXICITY

1. Chronic Toxicity Test

- a. The permittee shall perform short-term chronic toxicity tests on the wastewater at Outfall 0011.
- b. The samples shall be diluted using appropriate control water to the Instream Waste Concentration (IWC) which is **4 percent** effluent. The IWC is the actual concentration of effluent at the edge of the mixing zone based on the most recent Mixing Zone Analysis.
- c. Any test result that shows a statistically significant reduction in survival, growth, or reproduction between the control and test samples at the 95% confidence level indicates chronic toxicity and shall constitute noncompliance with this permit.

2. General Test Requirements

- a. A minimum of three (3) 24-hour composite samples shall be obtained for use in the above biomonitoring tests. Samples shall be collected every other day so that the laboratory receives water samples on the first, third, and fifth day of the seven-day test period. The holding time for each composite sample shall not exceed 36 hours. The control water shall be a water prepared in the laboratory in accordance with the EPA procedure described in EPA

821-R-02-014 (most current edition) or another control water selected by the Permittee and approved by the Department.

- b. Test results shall be deemed unacceptable and the Permittee shall rerun the tests as soon as practical within the monitoring period for the following:
 - (1) For testing with *Menidia beryllina* (inland silverside): effluent toxicity tests with control survival of less than 80%, or the mean dry weight per surviving larvae is less than 0.50 mg;
 - (2) For testing with *Mysidopsis bahia* (mysid):, effluent toxicity tests with control survival of less than 80%, or if the mean dry weight of survivors is less than 0.20 mg; or
 - (3) If the other requirements of the EPA Test Procedure are not met.
- c. In the event of an invalid test, upon subsequent completion of a valid test, the results of all tests, valid and invalid, are to be reported to the Department along with an explanation of the tests performed and the test results.
- d. Toxicity tests shall be conducted for the duration of this permit in the month of October. Should results from the Annual Toxicity test indicate that Outfall 0011 exhibits chronic toxicity, then the Permittee must conduct the follow-up testing described in Part IV.C.4.a. In addition, the Permittee may then also be required to conduct toxicity testing in the months of JANUARY, APRIL, JULY, and OCTOBER.

3. Reporting Requirements

- a. The Permittee shall notify the Department in writing within 48 hours after toxicity has been demonstrated by the scheduled test(s).
- b. Biomonitoring test results obtained during each monitoring period shall be summarized and reported using the appropriate Discharge Monitoring Report (DMR) form approved by the Department. In accordance with Section 2 of this part, an effluent toxicity report containing the information in Sections 2 and 6 shall be included with the DMR. Two copies of the test results must be submitted to the Department no later than 28 days after the month that tests were performed.

4. Additional Testing Requirements

- a. If chronic toxicity is indicated (i.e., noncompliance with permit limit), then the Permittee must perform two additional valid chronic toxicity tests in accordance with these procedures to determine the extent and duration of the toxic condition. The toxicity tests shall run consecutively beginning on the first calendar week following the date that the Permittee became aware of the permit noncompliance. The results of these follow-up tests shall be submitted to the Department no later than 28 days following the month the tests were performed.
- b. After evaluation of the results of the follow-up tests, the Department will determine if additional action is appropriate and may require additional testing and/or toxicity reduction measures. The permittee may be required to perform a Toxicity Identification Evaluation (TIE) and/or a Toxicity Reduction Evaluation (TRE). The TIE/TRE shall be performed in accordance with the most recent protocols and guidance outlined by EPA (e.g., EPA/600/2-88/062, EPA/600/R-92/080, EPA/600/R-91-003, EPA/600/R-92/081, EPA/833/B-99/022, and/or EPA/600/6-91/005F).

5. Test Methods

The tests shall be performed in accordance with the latest edition of the "EPA Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms." The Larval Survival and Growth Test, Method 1006.0, described in Section 13, shall be used for the *Menidia beryllina* (inland silverside) test and the Survival, Growth, and Fecundity Test Method 1007.0, described in Section 14, shall be used for the *Mysidopsis bahia* (mysid) test.

6. Effluent Toxicity Testing Reports

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

- a. Introduction
 - (1) Facility name, location and county
 - (2) Permit number

- (3) Toxicity testing requirements of permit
 - (4) Name of receiving water body
 - (5) Contract laboratory information (if tests are performed under contract)
 - (i) Name of firm
 - (ii) Telephone number
 - (iii) Address
 - (6) Objective of test
- b. Plant Operations
- (1) Discharge Operating schedule (if other than continuous)
 - (2) Volume of discharge during sample collection to include Mean daily discharge on sample collection dates (MGD, CFS, GPM)
 - (3) Design flow of treatment facility at time of sampling
- c. Source of Effluent and Dilution Water
- (1) Effluent samples
 - (i) Sampling point
 - (ii) Sample collection dates and times (to include composite sample start and finish times)
 - (iii) Sample collection method
 - (iv) Physical and chemical data of undiluted effluent samples (water temperature, pH, alkalinity, hardness, specific conductance, total residual chlorine (if applicable), etc.)
 - (v) Lapsed time from sample collection to delivery
 - (vi) Lapsed time from sample collection to test initiation
 - (vii) Sample temperature when received at the laboratory
 - (2) Dilution Water
 - (i) Source
 - (ii) Collection/preparation date(s) and time(s)
 - (iii) Pretreatment (if applicable)
 - (iv) Physical and chemical characteristics (water temperature, pH, alkalinity, hardness, specific conductance, etc.)
- d. Test Conditions
- (1) Toxicity test method utilized
 - (2) End point(s) of test
 - (3) Deviations from referenced method, if any, and reason(s)
 - (4) Date and time test started
 - (5) Date and time test terminated
 - (6) Type and volume of test chambers
 - (7) Volume of solution per chamber
 - (8) Number of organisms per test chamber
 - (9) Number of replicate test chambers per treatment
 - (10) Test temperature, pH, and dissolved oxygen as recommended by the method (to include ranges)
 - (11) Specify if aeration was needed

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

Adapted from "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms", Fourth Edition, October 2002 (EPA 821-R-02-013), Section 10, Report Preparation.

C. TOTAL RESIDUAL CHLORINE (TRC) REQUIREMENTS

1. If chlorine is not utilized for disinfection purposes, TRC monitoring under Part I of this Permit is not required. If TRC monitoring is not required (conditional monitoring), "*9" should be reported on the DMR forms.
2. Testing for TRC shall be conducted according to either the amperometric titration method or the DPD colorimetric method as specified in Section 408(C) or (E), Standards Methods for the Examination of Water and Wastewater, 18th edition. If the analytical result is less than the detection level or a value otherwise indicated in this permit, the Permittee shall report on the DMR form "*B" or "0". The Permittee shall then be considered to be in compliance with the daily maximum concentration limit for TRC.
3. This permit contains a maximum allowable TRC level in the effluent. The Permittee is responsible for determining the minimum TRC level needed in the chlorine contact chamber to comply with E.coli limits. The effluent shall be dechlorinated if necessary to meet the maximum allowable effluent TRC level.
4. The sample collection point for effluent TRC shall be at a point downstream of the chlorine contact chamber (downstream of dechlorination, if applicable). The exact location is to be approved by the Director.

D. PLANT CLASSIFICATION

The Permittee shall report to the Director within 30 days of the effective date of this permit, the name, address and operator number of the certified wastewater operator in responsible charge of the facility. Unless specified elsewhere in this permit, this facility shall be classified in accordance with ADEM Admin. Code R. 335-10-1-.03.

E. SANITARY SEWER OVERFLOW RESPONSE PLAN

1. SSO Response Plan

Within 120 days of the effective date of this Permit, the Permittee shall develop a Sanitary Sewer Overflow (SSO) Response Plan to establish timely and effective methods for responding to notifiable sanitary sewer overflows. The SSO Response Plan shall address each of the following:

a. General Information

- (1) Approximate population of City/Town, if applicable
- (2) Approximate number of customers served by the Permittee
- (3) Identification of any subbasins designated by the Permittee, if applicable
- (4) Identification of estimated linear feet of sanitary sewers
- (5) Number of Pump/Lift Stations in the collection system

b. Responsibility Information

- (1) The title(s) and contact information of key position(s) who will coordinate the SSO response, including information for a backup coordinator in the event that the primary SSO coordinator is unavailable. The SSO coordinator is the person responsible for assessing the SSO and initiating a series of response actions based on the type, severity, and destination of the SSO, except for routine SSOs for which the coordinator may pre-approve written procedures. Routine SSOs are those for which the corrective action procedures are generally consistent.
- (2) The title(s), and contact information of key position(s) who will respond to SSOs, including information for backup responder(s) in the event the primary responder(s) are unavailable (i.e., position(s) who provide notification to the Department, the public, the county health department, and other affected entities such as public water systems; position(s) responsible for organizing crews for response; position(s) responsible for addressing public inquiries)

c. SSO and Surface Water Assessment

- (1) Identification of locations within the collection system at which an SSO is likely to occur (e.g., based upon historical SSOs, lift stations where electricity may be lost, etc.)
- (2) A map of the general collection system area, including identification of surface waterbodies and the location(s) of public drinking water source(s). Mapping of all collection system piping, pump stations, etc. is not required; however, if this information is already available, it should be included.
- (3) Identification of surface waterbodies within the collection system area which are classified as Swimming according to ADEM Admin. Code chap. 335-6-11. References available to assist in this requirement include the following: <http://adem.alabama.gov/alEnviroRegLaws/files/Division6Vol1.pdf> and <http://adem.alabama.gov/wqmap>.
- (4) Identification of surface waterbodies within the collection system area which are not classified as Swimming as indicated in paragraph c above, but are known locally as areas where swimming occurs or as areas that are heavily recreated

d. Public Reporting of SSOs

- (1) Contact information for the public to report an SSO to the Permittee, during both normal and outside of normal business hours (e.g., telephone number, website, email address, etc.)
- (2) Information requested from the person reporting an SSO to assist the Permittee in identifying the SSO (e.g., date, time, location, contact information)

- (3) Procedures for communication of the SSO report to the appropriate positions for follow-up investigation and response, if necessary
- e. Procedures to immediately notify the Department, the county health department, and other affected entities (such as public water systems) upon becoming aware of notifiable SSOs
- f. Public Notification Methods for SSOs
 - (1) A listing of methods that are feasible, as determined by the Permittee, for public notifications (e.g., flyers distributed to nearby residents; signs posted at the location of the SSO, where the SSO enters a water of the state, and/or at a central public location; signs posted at fishing piers, boat launches, parks, swimming waterbodies, etc.; website and/or social media notifications; local print or radio and broadcast media notifications; "opt in" email, text message, or automated phone message notifications)
 - (i) If signage is a feasible method for public notification, procedures for use and removal of signage (e.g., availability and maintenance of signs, appropriate duration of postings)
 - (2) Minimum information to be included in public notifications (e.g., identification that an SSO has occurred, date, duration if known, estimated volume if known, location of the SSO by street address or other appropriate method, initial destination of the SSO)
 - (3) Procedures developed by the Permittee for determining the appropriate public notification method(s) based upon the potential for public exposure to health risks associated with the SSO
- g. Standard Procedures shall be developed by the Permittee and shall include, at a minimum
 - (1) General SSO Response Procedures (e.g., procedures for dispatching staff to assess/correct an SSO; procedures for routine SSO corrective actions such as those for sewer blockages, overflowing manholes, line breakages, pump station power failure, etc.; procedures for disinfection of affected area, if applicable);
 - (2) Procedures for collection and proper disposal of the SSO, if feasible.
 - (3) General procedures for coordinating instream water quality monitoring, including, but not limited to, procedures for mobilizing staff, collecting samples, and typical test methods should the Department or the Permittee determine monitoring is appropriate following an SSO. Identification of a contractor who will collect and analyze the sample(s) may be listed in lieu of the procedures.
 - (4) References to other documents (such as Standard Operating Procedures for SSO Responses) may be acceptable for this section; however, the referenced document shall be identified and shall be reviewed at a frequency of at least that required by the Administrative Procedures Section.
- h. Date of the SSO Response Plan, dates of all modifications and/or reviews, the title and signature of the reviewer(s) for each date and the signature of the responsible official or the appropriate designee.

2. SSO Response Plan Implementation

Except as otherwise required by this Permit, the Permittee shall fully implement the SSO Response Plan as soon as practicable, but no later than 180 days after the effective date of this Permit.

3. Department Review of the SSO Response Plan

- a. When requested by the Director or his designee, the Permittee shall make the SSO Response Plan available for review by the Department.
- b. Upon review, the Director or his designee may notify the Permittee that the SSO Response Plan is deficient and require modification of the Plan.
- c. Within thirty days of receipt of notification, or an alternate timeframe as approved by the Department, the Permittee shall modify any SSO Response Plan deficiency identified by the Director or his designee and shall certify to the Department that the modification has been made.

4. SSO Response Plan Administrative Procedures

- a. The Permittee shall maintain a copy of the SSO Response Plan at the permitted facility or an alternate location approved by the Department in writing and shall make it available for inspection by the Department.

- b. The Permittee shall make a copy of the SSO Response Plan available to the public upon written request within 30 days of such request. The Permittee may redact information which may present security issues, such as location of public water supplies, identification of specific details of vulnerabilities, employee information, etc.
- c. The Permittee shall provide training for any personnel required to implement the SSO Response Plan and shall retain at the facility documentation of such training. This documentation shall be available for inspection by the Department. Training shall be provided for existing personnel prior to the date by which implementation of the SSO Response Plan is required and for new personnel as soon as possible. Should significant revisions be made to the SSO Response Plan, training regarding the revisions shall be conducted as soon as possible.
- d. The Permittee shall complete a review and evaluation of the SSO Response Plan at least once every three years. Documentation of the SSO Response Plan review and evaluation shall be signed and dated by the responsible official or the appropriate designee as part of the SSO Response Plan.

F. POLLUTANT SCANS

The Permittee shall sample and analyze for the pollutants listed in 40 CFR 122 Appendix J Table 2. The Permittee shall provide data from a minimum of three samples collected within the four and one-half years prior to submitting a permit application. Samples must be representative of the seasonal variation in the discharge from each outfall.

G. DISCHARGE INFORMATION ZONE (DIZ) REQUIREMENTS

1. Prior to permit renewal, the Permittee shall perform a background sediment and benthic community characterization study at sampling locations defined in a DIZ Study Plan that has been approved by the Department. The DIZ Study Plan shall be prepared in accordance with the ADEM Administrative Rule 335-8-2-.12.
2. The Permittee shall, upon request for a permit renewal perform a sediment and benthic community characterization at the sampling locations approved in the original DIZ Study Plan, unless a modified study plan is approved by the Department. Monitoring shall be conducted during the same season as the original characterization and shall conform to the DIZ study plan, unless otherwise approved by the Department. The DIZ monitoring shall be repeated if the Permittee fails accelerated testing and if it is required to initiate a Toxicity Reduction Evaluation (TRE) pursuant to Part IV.B. of this permit. Monitoring results shall be submitted to the Department along with the application for permit renewal.
3. The Permittee shall not cause biological damage or adverse water quality impacts at the perimeter or outside the boundaries of the original characterization area. If the biological monitoring shows evidence of biological damage or adverse water quality impacts at the perimeter or outside the boundaries of the original characterization area, the Permittee will be in violation of this permit, unless the Permittee can demonstrate that the cause of adverse impacts is due to a source other than the Permittee's discharge. Within 30 days after becoming aware of such violation, the Permittee is to submit a plan for correcting and eliminating the biological damage and adverse water quality impacts caused by the discharge.
4. The Department may suspend or otherwise modify the monitoring requirements of this rule if:
 - a. The Department determines, through review of discharger information and/or its own monitoring efforts, that the discharge is having no significant impact to coastal resources beyond 400 feet of the discharge point; or
 - b. The Department determines, through review of the discharger information and/or its own monitoring efforts, that the discharge monitoring is inadequate to detect significant impacts to coastal resources beyond 400 feet of the discharge point; or
 - c. The Department determines, based on available biological and chemical data that, due to the nature of the discharge, no significant impacts to coastal resources will occur beyond 400 feet of the discharge point; or
 - d. The Department deems that further actions are required to ensure protection of coastal resources.

EDWARD F. POOLOS
DIRECTOR

JEFFERY W. KITCHENS
DEPUTY DIRECTOR



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

KAY IVEY
GOVERNOR

FACT SHEET

**APPLICATION FOR
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT TO DISCHARGE POLLUTANTS TO WATERS OF
THE STATE OF ALABAMA**

Date Prepared: October 20, 2025

By: Stephanie Ammons

NPDES Permit No. AL0081124

1. Name and Address of Applicant:

City of Orange Beach
Post Office Box 458
Orange Beach, AL 36561

2. Name and Address of Facility:

City of Orange Beach Wastewater Treatment Facility
3900 William Silvers Parkway
Orange Beach, AL 36561

3. Description of Applicant's Type of Facility and/or Activity Generating the Discharge:

Discharge Type(s): Surface Water
Treatment Method(s): Mechanical (WWTP)

4. Applicant's Receiving Waters

Feature ID	Receiving Water	Classification
001	Intracoastal Waterway	Fish and Wildlife (F&W)

For the Outfall latitude and longitude see the permit application.

5. Permit Conditions:

See attached Rationale and Draft Permit.

6. PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS

a. Comment Period

The Alabama Department of Environmental Management proposes to issue this NPDES permit subject to the limitations and special conditions outlined above. This determination is tentative.

Interested persons are invited to submit written comments on the draft permit to the following address:

**Daphne Y. Lutz, Chief
ADEM-Water Division
1400 Coliseum Blvd
[Mailing Address: Post Office Box 301463; Zip 36130-1463]
Montgomery, Alabama 36110-2400
(334) 271-7823
water-permits@adem.alabama.gov**

All comments received prior to the closure of the public notice period (see public notice for date) will be considered in the formulation of the final determination with regard to this permit.

b. Public Hearing

A written request for a public hearing may be filed within the public notice period and must state the nature of the issues proposed to be raised in the hearing. A request for a hearing should be filed with the Department at the following address:

**Daphne Y. Lutz, Chief
ADEM-Water Division
1400 Coliseum Blvd
[Mailing Address: Post Office Box 301463; Zip 36130-1463]
Montgomery, Alabama 36110-2400
(334) 271-7823
water-permits@adem.alabama.gov**

The Director shall hold a public hearing whenever it is found, on the basis of hearing requests, that there exists a significant degree of public interest in a permit application or draft permit. The Director may hold a public hearing whenever such a hearing might clarify one or more issues involved in the permit decision. Public notice of such a hearing will be made in accordance with ADEM Admin. Code r. 335-6-6-.21.

c. Issuance of the Permit

All comments received during the public comment period shall be considered in making the final permit decision. At the time that any final permit decision is issued, the Department shall prepare a response to comments in accordance with ADEM Admin. Code r. 335-6-6-.21. **The permit record, including the response to comments, will be available to the public via the eFile System <http://app.adem.alabama.gov/eFile/> or an appointment to review the record may be made by writing the Permits and Services Division at the above address.**

Unless a request for a stay of a permit or permit provision is granted by the Environmental Management Commission, the proposed permit contained in the Director's determination

shall be issued and effective, and such issuance will be the final administrative action of the Alabama Department of Environmental Management.

d. Appeal Procedures

As allowed under ADEM Admin. Code chap. 335-2-1, any person aggrieved by the Department's final administrative action may file a request for hearing to contest such action. Such requests should be received by the Environmental Management Commission within thirty days of issuance of the permit. Requests should be filed with the Commission at the following address:

**Alabama Environmental Management Commission
1400 Coliseum Blvd
[Mailing Address: Post Office Box 301463; Zip 36130-1463]
Montgomery, Alabama 36110-2400**

All requests must be in writing and shall contain the information provided in ADEM Admin. Code r. 335-2-1-.04.

NPDES PERMIT RATIONALE

NPDES Permit No: **AL0081124** Date: January 7, 2026

Permit Applicant: City of Orange Beach
Post Office Box 458
Orange Beach, AL 36561

Location: **City of Orange Beach Wastewater Treatment Facility**
3900 William Silvers Parkway
Orange Beach, AL 36561

Draft Permit is: Initial Issuance:
Reissuance due to expiration: **X**
Modification of existing permit:
Revocation and Reissuance:

Basis for Limitations: Water Quality Model: DO, NH3-N, TKN, CBOD5
Reissuance with no modification: DO, pH, TSS, NH3-N, TKN, Enterococci, TRC, CBOD5, TSS% Removal, CBOD5% Removal
Instream calculation at 7Q10: 4.0% (based on CORMIX model)
Toxicity based: TRC
Secondary Treatment Levels: TSS, TSS% Removal, CBOD5% Removal
Other (described below): pH, *Enterococci*, Total Recoverable Zinc

Design Flow (MGD): 10 MGD

Major: Yes

Description of Discharge:

Feature ID	Description	Receiving Water	Waterbody Use Classification	303(d)	TMDL
001	Treated Domestic Wastewater	Intracoastal Waterway	Fish and Wildlife (F&W)	No	No

Discussion: This is a permit reissuance due to expiration. The permit regulates the discharge of treated domestic wastewater to the Intracoastal Waterway. The Intracoastal Waterway is a Tier I stream classified as Fish and Wildlife in the Perdido Basin. The receiving stream is not listed on the most recent 303(d) list, and there are no approved Total Maximum Daily Loads (TMDLs) affecting the discharge. The proposed permit limits are described below.

Limits for Five Day Carbonaceous Biochemical Oxygen Demand (CBOD5), Total Ammonia as Nitrogen (NH3-N), Total Kjeldahl Nitrogen (TKN), and Dissolved Oxygen (DO) were developed based on the findings reported on the December 20, 2016 Memorandum from ADEM's Water Quality Branch. The monthly average CBOD5 limit is 2.9 mg/L. The monthly average NH3-N limit is 0.7 mg/L. The monthly average TKN limit is 2.2 mg/L. The daily minimum DO limit is 6.0 mg/L.

The Municipal Section, in consultation with the Department's Water Quality Branch, has conducted a narrative nutrient reasonable potential analysis. Based on a review of the facility's current levels of nutrients in the discharge and current assessments of the available information, the Permittee is required to monitor and report effluent test results for Nitrite plus Nitrate (NO2+NO3-N) and Total Phosphorus (TP). Monitoring for these nutrient-related parameters is imposed so that sufficient

information will be available regarding the nutrient contribution from this point source, should it be necessary at some later time to impose additional nutrient limits on this discharge.

The pH limits were developed to be supportive of the water-use classification of the receiving stream. The pH limits are 6.0 s.u (daily minimum) and 9.0 s.u. (daily maximum).

The *Enterococci* limits were determined based on the water-use classification of the receiving stream. Since the Intracoastal Waterway is classified as Fish and Wildlife, the limits for May – October are 35.0 col/100mL (monthly average) and 158.0 col/100mL (daily maximum). The limit for November – April (daily maximum) is 275.0 col/100mL. The monthly average values for November – April should be monitored and reported.

The Total Residual Chlorine (TRC) limit and report values are based on calculations to ensure that the acute and chronic toxic concentrations of TRC in the receiving stream are not exceeded. The daily maximum TRC limit is 0.02 mg/L. The monthly average value should be monitored and reported. In accordance with a letter dated August 11, 1998 from EPA Headquarters and a 1991 memorandum from EPA Region 4's Environmental Services Division (ESD), due to testing and method detection limitations, a TRC measurement below 0.05 mg/L shall be considered below detection for compliance purposes. The TRC limit is provisional. If chlorine disinfection is utilized then the imposed TRC limit will apply.

The monthly average Total Suspended Solids (TSS) and TSS percent removal limits of 30.0 mg/L and 85.0 percent, respectively, are based on the requirements of 40 CFR part 133.102. The previous permit did not impose a CBOD5 percent removal limit. The CBOD5 percent removal limit of 85.0 percent is being included with this reissuance to comply with the requirements of 40 CFR part 133.102 regarding Secondary Treatment.

The Department completed a reasonable potential analysis (RPA) of the discharge based on a mixing zone analysis of the receiving stream, in-stream data collected from Monitoring Station IC-3A, and laboratory data provided in the Permittee's application and discharge monitoring reports (DMRs). The RPA indicates whether pollutants in treated effluent have the potential to contribute to excursions of Alabama's in-stream water quality standards. Based on the RPA, it was determined that there is a reasonable potential for in-stream water quality standards for zinc and cyanide to be exceeded. This permit imposes Total Recoverable Zinc limits of 140 µg/L (monthly average) and 140 µg/L (daily maximum). The previous permit imposed more stringent zinc limits. Imposing less stringent zinc limits with this reissuance is not considered backsliding because it is consistent with the Department's antidegradation policy and water quality standards are being attained for this pollutant. Because there are no industrial dischargers to the treatment plant that would be expected to contribute cyanide to the facility and because cyanide tests can be subject to interferences, this permit imposes quarterly Total Recoverable Cyanide monitoring in lieu of a limit. Cyanide monitoring is being imposed so that sufficient information will be available should it be necessary to impose limits on the discharge at some later time. The RPA also indicated the potential for in-stream water quality standards for arsenic and copper to be exceeded; however, the data provided with the permittee's application indicated arsenic and copper levels below the method detection limit. The arsenic and copper background in-stream data appears to cause the reasonable potential. Based on the findings of the RPA, the Department has determined that the treated effluent from this facility is not a significant contributor to excursions of Alabama's in-stream water quality standards. Therefore, monitoring for arsenic and copper will not be required with this permit reissuance.

Because this is a major facility (design capacity greater than 1.0 MGD), chronic toxicity testing with two species, *Menidia beryllina* (inland silverside) and *Mysidopsis bahia* (mysid), is required. Chronic toxicity is to be performed at the Instream Waste Concentration (IWC) of 4 percent.

In the permit application, the Permittee indicated that due to the extremely permeable soils, storm water runoff is not expected to exit the site. Therefore, this permit will not impose storm water monitoring.

The frequency of monitoring for most parameters is five days per week. Flow is to be monitored continuously, seven days per week. Percent removals are to be calculated monthly. Monitoring for NO₂+NO₃-N, TP, and Total Recoverable Zinc is to be conducted monthly. Total Recoverable Cyanide is to be conducted quarterly. Toxicity testing is to be conducted in the month of October.

This permit imposes Discharge Information Zone (DIZ) requirements. DIZ requirements are described more fully in Part IV.G of the permit.

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

Prepared by: Stephanie Ammons

Instream Waste Concentration (IWC) at the Zone of Dilution (ZID) = 62.7%
IWC at the Mixing Zone (MZ) = 4.03%

Total Residual Chlorine (TRC) Marine Acute Water Quality Criteria = 0.013 mg/L
TRC Marine Chronic Water Quality Criteria = 0.0075 mg/L

Proposed Daily Maximum permit limitation based on Marine Acute Water Criteria:

$$\text{Acute Water Quality Criteria} = \frac{0.013 \mu\text{g/L}}{0.627} = 0.0207 \text{ mg/L}$$

ZID IWC

Proposed Monthly Average permit limitation based on Marine Chronic Water Criteria:

$$\text{Chronic Water Quality Criteria} = \frac{0.0075 \mu\text{g/L}}{0.0403} = 0.186 \text{ mg/L}$$

MZ IWC

The permit imposes a Total Residual Chlorine daily maximum limit of 0.02 mg/L. Because the more stringent daily maximum limit will be protective of water quality, a monthly average REPORT value is imposed in the permit.

Facility Name: **City of Orange Beach WWTF**

NPDES No.: **AL0081124**

$Q_d * C_d + Q_{d2} * C_{d2} + Q_s * C_s = Q_r * C_r$								Enter Max Daily Discharge as reported by Applicant (C _d) Max	Enter Avg Daily Discharge as reported by Applicant (C _d) Ave
ID	Pollutant	Carcinogen "yes"	Type	Background from upstream source (C _{d1}) Daily Max	Background from upstream source (C _{d2}) Monthly Ave	Background Instream (C _s) Daily Max	Background Instream (C _s) Monthly Ave	ug/l	ug/l
1	Antimony		Metals	0	0	0	0	0	0
2	Arsenic**	YES	Metals	0	0	14	3.71	0	0
3	Beryllium		Metals	0	0	0	0	0	0
4	Cadmium**		Metals	0	0	0	0	0	0
5	Chromium / Chromium III**		Metals	0	0	0.765	0.262	0	0
6	Chromium / Chromium VI**		Metals	0	0	0	0	0	0
7	Copper**		Metals	0	0	58.1	20.49	0	0
8	Lead**		Metals	0	0	0	0	0	0
9	Mercury**		Metals	0	0	0	0	0.19	0.017807
10	Nickel**		Metals	0	0	3.15	0.437	0	0
11	Selenium		Metals	0	0	39.6	16	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	4.42	0.927	79	46.08
15	Cyanide		Metals	0	0	0	0	18	6
16	Total Phenolic Compounds		Metals	0	0	0	0	0	0
17	Hardness (As CaCO3)		Metals	0	0	2990000	1704000	120000	110000
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	Chlorobenzene		VOC	0	0	0	0	0	0
26	Chlorodibromo-Methane*	YES	VOC	0	0	0	0	0	0
27	Chloroethane		VOC	0	0	0	0	0	0
28	2-Chloro-Ethylvinyl Ether		VOC	0	0	0	0	0	0
29	Chloroform*	YES	VOC	0	0	0	0	0	0
30	4,4'-DDD	YES	VOC	0	0	0	0	0	0
31	4,4'-DDE	YES	VOC	0	0	0	0	0	0
32	4,4'-DDT	YES	VOC	0	0	0	0	0	0
33	Dichlorobromo-Methane*	YES	VOC	0	0	0	0	0	0
34	1,1-Dichloroethane		VOC	0	0	0	0	0	0
35	1,2-Dichloroethane*	YES	VOC	0	0	0	0	0	0
36	Trans-1,2-Dichloro-Ethylene		VOC	0	0	0	0	0	0
37	1,1-Dichloroethylenes*	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	1,1,1,2-Tetrachloro-Ethane*	YES	VOC	0	0	0	0	0	0
46	Tetrachloro-Ethylene*	YES	VOC	0	0	0	0	0	0
47	Toluene		VOC	0	0	0	0	0	0
48	Toxaphene	YES	VOC	0	0	0	0	0	0
49	Tributyltine (TBT)	YES	VOC	0	0	0	0	0	0
50	1,1,1-Trichloroethane		VOC	0	0	0	0	0	0
51	1,1,2-Trichloroethane*	YES	VOC	0	0	0	0	0	0
52	Trichloroethylene*	YES	VOC	0	0	0	0	0	0
53	Vinyl Chloride*	YES	VOC	0	0	0	0	0	0
54	p-Chloro-m-Cresol		Acids	0	0	0	0	0	0
55	2-Chlorophenol		Acids	0	0	0	0	0	0
56	4-Chlorophenol		Acids	0	0	0	0	0	0
57	2,4-Dimethylphenol		Acids	0	0	0	0	0	0
58	4,6-Dinitro-O-Cresol		Acids	0	0	0	0	0	0
59	2,4-Dinitrophenol		Acids	0	0	0	0	0	0
60	4,6-Dinitro-2-methylphenol	YES	Acids	0	0	0	0	0	0
61	Dioxin (2,3,7,8-TCDD)	YES	Acids	0	0	0	0	0	0
62	2-Nitrophenol		Acids	0	0	0	0	0	0
63	4-Nitrophenol		Acids	0	0	0	0	0	0
64	Pentachlorophenol*	YES	Acids	0	0	0	0	0	0
65	Phenol		Acids	0	0	0	0	0	0
66	2,4,6-Trichlorophenol*	YES	Acids	0	0	0	0	0	0
67	Acenaphthene		Bases	0	0	0	0	0	0
68	Acenaphthylene		Bases	0	0	0	0	0	0
69	Anthracene		Bases	0	0	0	0	0	0
70	Benzo(a)Anthracene*	YES	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(b)Fluoranthene		Bases	0	0	0	0	0	0
75	Benzo(k)Fluoranthene		Bases	0	0	0	0	0	0
76	Bis (2-Chloroethoxy) Methane		Bases	0	0	0	0	0	0
77	Bis (2-Chloroethyl)-Ether*	YES	Bases	0	0	0	0	0	0
78	Bis (2-Chloro-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	Dibenz(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-Dinitrobenzene*	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 Aldehyde	YES	Bases	0	0	0	0	0	0
102	Fluoranthene		Bases	0	0	0	0	0	0
103	Fluorene		Bases	0	0	0	0	0	0
104	Heptachlor	YES	Bases	0	0	0	0	0	0
105	Heptachlor Epoxide	YES	Bases	0	0	0	0	0	0
106	Hexachlorobenzene*	YES	Bases	0	0	0	0	0	0
107	Hexachlorobutadiene*	YES	Bases	0	0	0	0	0	0
108	Hexachlorocyclohexan (alpha)	YES	Bases	0	0	0	0	0	0
109	Hexachlorocyclohexan (beta)	YES	Bases	0	0	0	0	0	0
110	Hexachlorocyclohexan (gamma)	YES	Bases	0	0	0	0	0	0
111	Hexachlorocyclopentadiene		Bases	0	0	0	0	0	0
112	Hexachloroethane		Bases	0	0	0	0	0	0
113	Indeno[1,2,3-c]Pyrene*	YES	Bases	0	0	0	0	0	0
114	Isoflurone		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

0.627	ZID IWC
0.0403	MZ IWC
1	Total Instream Concentration
0.373	ZID background (1 - ZID IWC)
0.9597	MZ background (1 - MZ IWC)

January 20, 2028

ID	Pollutant	RP?	Carcinogen yes	Background from upstream source (C _{max}) Daily Max	Max Daily Discharge as reported by Applicant (C _{max})	Marine Acute (µg/l)				Background from upstream source (C ₂) Monthly Ave	Avg Daily Discharge as reported by Applicant (C _{max})	Marine Chronic (µg/l)				Human Health Consumption Fish only (µg/l)			
						Water Quality Criteria (C ₁)	Draft Permit Limit (C _{max})	20% of Draft Permit Limit	RP?			Water Quality Criteria (C ₁)	Draft Permit Limit (C _{max})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C ₁)	Draft Permit Limit (C _{max})	20% of Draft Permit Limit	RP?
1	Arsimony			0	0					0	0					3.73E+02	9.28E+03	1.80E+03	No
2	Arsenic	YES	YES	0	0	89	101.719	20.3438566	No	0	0	38	604.951	160.960139	No	3.03E-01	-8.08E+01	-1.62E+01	Yes
3	Barylum			0	0					0	0								
4	Cadmium			0	0	40	63.795	12.7591707	No	0	0	6.8	218.362	43.6724566	No				
5	Chromium/ Chromium III			0	0					0	0								
6	Chromium/ Chromium VI			0	0	1100	1754.386	350.877193	No	0	0	50	1240.695	248.138958	No				
7	Copper	YES		0	0	4.8	-25.718	-1.1436364	Yes	0	0	3.1	-411.024	-82.20473	Yes				
8	Lead			0	0	210	334.928	66.9856459	No	0	0	8.1	200.993	40.1985112	No				
9	Mercury			0	0.19	2.1	3.349	0.66985646	No	0	0.017807	0.025	0.620	0.12409948	No	4.24E-02	1.05E+00	2.11E-01	No
10	Nickel			0	0	74	116.148	23.229691	No	0	0	8.2	163.067	38.6134546	No	9.93E+02	2.49E+01	4.93E+03	No
11	Selenium			0	0	290	438.982	87.7924083	No	0	0	71	1380.764	276.152954	No	2.43E+03	5.99E+04	1.20E+04	No
12	Silver			0	0	1.9	3.030	0.60606061	No	0	0								
13	Thallium			0	0					0	0					2.74E-01	6.79E+00	1.36E+00	No
14	Zinc	YES		0	79	80	140.911	28.1822458	Yes	0	48.06	81	1967.850	397.570015	No	1.48E+04	3.70E+05	7.39E+04	No
15	Cyanide	YES		0	18	1.0	1.565	0.31897927	Yes	0	6	1.0	24.814	4.98277916	Yes	9.33E+03	2.32E+05	4.63E+04	No
16	Total Phenolic Compounds			0	0					0	0								
17	Hardness (As CaCO3)			0	120000					0	110000								
18	Acrocin			0	0					0	0					5.43E+00	1.35E+02	2.69E+01	No
19	Acrylonitrile	YES		0	0					0	0					1.44E-01	3.57E+00	7.15E-01	No
20	Adrin	YES		0	0	1.3	2.073	0.41467305	No	0	0					2.94E-05	7.29E-04	1.48E-04	No
21	Benzene	YES		0	0					0	0					1.55E+01	3.84E+02	7.89E+01	No
22	Bromoform	YES		0	0					0	0					7.89E+01	1.95E+03	3.91E+02	No
23	Carbon Tetrachloride	YES		0	0					0	0					9.57E-01	2.38E+01	4.75E+00	No
24	Chlordane	YES		0	0	0.09	0.144	0.02870813	No	0	0	0.004	0.069	0.01985112	No	4.73E-04	1.17E-02	2.35E-03	No
25	Chlorobenzene			0	0					0	0					9.09E+02	2.25E+04	4.50E+03	No
26	Chlorodibromo-Methane	YES		0	0					0	0					7.41E+00	1.84E+02	3.68E+01	No
27	Chloroethane			0	0					0	0								
28	2-Chloro-Ethylvinyl Ether			0	0					0	0								
29	Chloroform	YES		0	0					0	0					1.02E+02	2.53E+03	5.09E+02	No
30	4,4'- DDD	YES		0	0					0	0					1.81E-04	4.50E-03	9.00E-04	No
31	4,4'- DDE	YES		0	0					0	0					1.28E-04	3.19E-03	6.35E-04	No
32	4,4'- DDT	YES		0	0	0.13	0.207	0.0414873	No	0	0	0.001	0.025	0.00489278	No	1.28E-04	3.19E-03	6.35E-04	No
33	Dichlorobromo-Methane	YES		0	0					0	0					1.00E+01	2.49E+02	4.98E+01	No
34	1, 1-Dichloroethane			0	0					0	0								
35	1, 2-Dichloroethane	YES		0	0					0	0					2.14E+01	5.30E+02	1.07E+02	No
36	Trans-1, 2-Dichloro-Ethylene			0	0					0	0					5.91E+03	1.47E+05	2.93E+04	No
37	1, 1-Dichloroethylene	YES		0	0					0	0					4.17E+03	1.03E+05	2.07E+04	No
38	1, 2-Dichloropropane			0	0					0	0					6.49E+00	2.11E+02	4.22E+01	No
39	1, 3-Dichloro-Propylene			0	0					0	0					1.23E+01	3.05E+02	6.09E+01	No
40	Dieldrin	YES		0	0	0.71	1.132	0.22847528	No	0	0	0.0019	0.047	0.00942928	No	3.12E-05	7.75E-04	1.55E-04	No
41	Ethylbenzene			0	0					0	0					1.24E+03	3.08E+04	6.18E+03	No
42	Methyl Bromide			0	0					0	0					8.71E+02	2.16E+04	4.32E+03	No
43	Methyl Chloride			0	0					0	0								
44	Methylene Chloride	YES		0	0					0	0					3.49E-02	8.59E+03	1.72E+03	No
45	1, 1, 2, 2-Tetrachloro-Ethane	YES		0	0					0	0					2.33E+00	5.79E+01	1.16E+01	No
46	Tetrachloro-Ethylene	YES		0	0					0	0					1.92E+00	4.78E+01	9.51E+00	No
47	Toluene	YES		0	0					0	0					6.72E+03	2.18E+05	4.33E+04	No
48	Toxaphene	YES		0	0	0.21	0.335	0.06698565	No	0	0	0.0002	0.005	0.00089256	No	1.62E-04	4.02E-03	8.04E-04	No
49	Tributyltin (TBT)	YES		0	0	0.42	0.670	0.1397129	No	0	0	0.0074	0.164	0.03872457	No				
50	1, 1, 1-Trichloroethane	YES		0	0					0	0								
51	1, 1, 2-Trichloroethane	YES		0	0					0	0					9.10E+00	2.28E+02	4.51E+01	No
52	Trichloroethylene	YES		0	0					0	0					1.75E+01	4.34E+02	8.67E+01	No
53	Vinyl Chloride	YES		0	0					0	0					1.42E+00	3.53E+01	7.07E+00	No
54	p-Chloro-M-Cresol			0	0	13	20.734	4.14673046	No	0	0	7.9	196.030	39.2059553	No				
55	2-Chlorophenol			0	0					0	0					8.71E+01	2.16E+03	4.32E+02	No
56	2, 4-Dichlorophenol			0	0					0	0					1.72E+02	4.27E+03	8.54E+02	No
57	2, 4-Dimethylphenol			0	0					0	0					4.98E+02	1.23E+04	2.47E+03	No
58	4, 6-Dinitro-O-Cresol			0	0					0	0								
59	2, 4-Dinitrophenol			0	0					0	0					3.11E+03	7.72E+04	1.54E+04	No
60	4,6-Dinitro-2-methylphenol	YES		0	0					0	0					1.69E+02	4.11E+03	8.21E+02	No
61	Dioxin (2,3,7,8-TCDD)	YES		0	0					0	0					2.67E-08	6.62E-07	1.32E-07	No
62	2-Nitrophenol			0	0					0	0								
63	4-Nitrophenol			0	0					0	0								
64	Pentachlorophenol	YES		0	0	13	20.734	4.14673046	No	0	0	7.9	196.030	39.2059553	No	1.77E+00	4.39E+01	8.77E+00	No
65	Phenol			0	0					0	0					5.00E+05	1.24E+07	2.48E+06	No
66	2, 4, 6-Trichlorophenol	YES		0	0					0	0					1.41E+00	3.51E+01	7.02E+00	No
67	Acenaphthene			0	0					0	0					5.79E+02	1.44E+04	2.87E+03	No
68	Acenaphthylene			0	0					0	0								
69	Anthracene			0	0					0	0					2.33E+04	5.79E+05	1.16E+05	No
70	Benzo(a)Anthracene	YES		0	0					0	0					1.16E-04	2.89E-03	5.75E-04	No
71	Benzo(a)Fluoranthene	YES		0	0					0	0					1.07E-02	2.64E-01	5.29E-02	No
72	Benzo(b)Fluoranthene			0	0					0	0					1.07E-02	2.64E-01	5.29E-02	No
73	Benzo(k)Fluoranthene			0	0					0	0					1.07E-02	2.64E-01	5.29E-02	No
74	Benzo(ghi)Perylene			0	0					0	0								
75	Benzo(k)Fluoranthene			0	0					0	0					1.07E-02	2.64E-01	5.29E-02	No
76	Bis (2-Chloroethoxy) Methane			0	0					0	0								
77	Bis (2-Chloroethyl)-Ether	YES		0	0					0	0					3.07E-01	7.63E+00	1.53E+00	No
78	Bis (2-Chloroiso-Propyl) Ether			0	0					0	0					3.78E+04	9.39E+05	1.88E+05	No
79	Bis (2-Ethylhexyl) Phthalate	YES		0	0					0	0					1.29E+00	3.18E+01	6.39E+00	No
80	4-Bromophenyl Phenyl Ether			0	0					0	0								
81	Butyl Benzyl Phthalate			0	0					0	0					1.13E+03	2.80E+04	5.59E+03	No
82	2-Chloronaphthalene			0	0					0	0					9.24E+02	2.29E+04	4.59E+03	No
83	4-Chlorophenyl Phenyl Ether			0	0					0	0								
84	Chrysene			0	0					0	0					1.07E-02	2.64E-01	5.29E-02	No
85	Di-N-Butyl Phthalate			0	0					0	0					2.62E+03	6.51E+04	1.30E+04	No
86	Di-N-Octyl Phthalate			0	0					0	0								
87	Dibenz(a,h)Anthracene	YES		0	0					0	0					1.07E-02	2.64E-01	5.29E-02	No
88	1, 2-Dichlorobenzene			0	0					0	0					7.55E+02	1.87E+04	3.75E+03	No
89	1, 3-Dichlorobenzene			0	0														

City of Orange Beach WWTF

AL0081124

Total Recoverable Mercury DMR Data and Application Data

Monitoring Period

<u>End Date</u>	<u>Monthly Average</u>	<u>Maximum Daily</u>	<u>Unit</u>
6/30/21	0.0009	0.0009	ug/l
9/30/21	0.19	0.19	ug/l
12/31/21	0.0016	0.0016	ug/l
3/31/22	0.001	0.001	ug/l
6/30/22	0.002	0.002	ug/l
9/30/22	0.0008	0.0008	ug/l
12/31/22	0.008	0.008	ug/l
3/31/23	0.0005	0.0005	ug/l
6/30/23	0.0009	0.0009	ug/l
9/30/23	0.0008	0.0008	ug/l
12/31/23	0.0098	0.0098	ug/l
3/31/24	0.0017	0.0017	ug/l
6/30/24	0.003	0.003	ug/l
9/30/24	0.002	0.002	ug/l
12/31/24	0.089	0.089	ug/l
3/31/25	0.026	0.026	ug/l
6/30/25	0.002	0.002	ug/l
9/30/25	0.00096	0.00096	ug/l
12/31/25	0.0005	0.0005	ug/l
8/5/24	0.031	0.031	ug/l
8/13/24	0.01	0.01	ug/l
8/20/24	0.0093	0.0093	ug/l

Average = 0.017807 ug/L

Maximum = 0.19 ug/L

City of Orange Beach WWTF

AL0081124

Total Recoverable Zinc DMR and Permit Application Data

Monitoring Period

<u>End Date</u>	<u>Monthly Average</u>	<u>Maximum Daily</u>	<u>Unit</u>
6/30/21	43	43	ug/l
7/31/21	58	58	ug/l
8/31/21	48	48	ug/l
9/30/21	79	79	ug/l
10/31/21	49	49	ug/l
11/30/21	42	42	ug/l
12/31/21	44	44	ug/l
1/31/22	29	29	ug/l
2/28/22	41	41	ug/l
3/31/22	46	46	ug/l
4/30/22	53	53	ug/l
5/31/22	40	40	ug/l
6/30/22	44	44	ug/l
7/31/22	46	46	ug/l
8/31/22	69	69	ug/l
9/30/22	59	59	ug/l
10/31/22	67	67	ug/l
11/30/22	44	44	ug/l
12/31/22	79	79	ug/l
1/31/23	47	47	ug/l
2/28/23	47	47	ug/l
3/31/23	47	47	ug/l
4/30/23	61	61	ug/l
5/31/23	60	60	ug/l
6/30/23	54	54	ug/l
7/31/23	66	66	ug/l
8/31/23	71	71	ug/l
9/30/23	41	41	ug/l
10/31/23	36	36	ug/l
11/30/23	49	49	ug/l
12/31/23	30	30	ug/l
1/31/24	42	42	ug/l
2/29/24	31	31	ug/l
3/31/24	35	35	ug/l
4/30/24	30	30	ug/l
5/31/24	34	34	ug/l
6/30/24	32	32	ug/l
7/31/24	33	33	ug/l
8/31/24	43	43	ug/l
9/30/24	61	61	ug/l
10/31/24	43	43	ug/l
11/30/24	35	35	ug/l
12/31/24	34	34	ug/l
1/31/25	36	36	ug/l
2/28/25	37	37	ug/l
3/31/25	39	39	ug/l
4/30/25	42	42	ug/l
5/31/25	37	37	ug/l
6/30/25	49	49	ug/l
7/31/25	49	49	ug/l
8/31/25	40	40	ug/l
9/30/25	40	40	ug/l
10/31/25	28	28	ug/l
11/30/25	25	25	ug/l
12/31/25	26	26	ug/l
8/5/24	59	59	ug/l
8/13/24	65	65	ug/l
8/20/24	59	59	ug/l

Average = 46.08 ug/L
 Maximum = 79 ug/L

City of Orange Beach WWTF
 Permit No. AL0081124
 Summary of Permit Application Data

Below is a summary of data provided in the permit application. This is not a complete list of parameters analyzed. For a more complete review, please reference the permit application.

Parameter	Number of Samples	Average of Samples	Maximum of Samples	Sample Collection Date					
				8/5/2024	8/13/2024	8/20/2024	11/6/2025	11/18/2025	11/12/2025
Cyanide (Total Recoverable)	3	0.0033 mg/L	0.010 mg/L	0.010 mg/L	*B	*B	---	---	---
Cyanide (Free Available)	3	0.006 mg/L	0.018 mg/L	---	---	---	0.018 mg/L	*B	*B
Hardness	3	110 mg/L	120 mg/L	120 mg/L	100 mg/L	110 mg/L	---	---	---

*B = below method detection limit



Alabama Department of Environmental Management
adem.alabama.gov

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

December 20, 2016

MEMORANDUM

TO: Stephanie Ammons
From: Justin Rigdon, WQ
RE: City of Orange Beach Wastewater Treatment Facility (AL0081124)

A run of the Mobile Bay Model was performed to verify that the current limits for the above-referenced facility are protective of water quality. One additional facility, the Gulf Shores Water Reclamation Facility (AL0055841), was identified as possibly impacting the area affected by the Orange Beach WWTF discharge. The EFDC model was modified to set the Orange Beach facility at its design flow of 10 MGD and the Gulf Shores facility at its design flow of 4 MGD. The WASP model was altered to set the facilities to the following discharge concentrations:

	Orange Beach WWTF	Gulf Shores WRF
CBOD Ultimate (mg/l)	4.35	6
Ammonia Nitrogen (mg/l)	0.7	1
Total Organic Nitrogen (mg/l)	1.5	2
Dissolved Oxygen (mg/l)	6	6

The CBOD Ultimate inputs were calculated by multiplying the current permitted CBOD₅ limit for each facility by an f ratio of 1.5. The Total Organic Nitrogen inputs were derived by subtracting the current permitted Ammonia-Nitrogen limit from the Total Kjeldahl Nitrogen limit for the subject facilities. The Ammonia Nitrogen and Dissolved Oxygen inputs are the current limits for the facilities.

At no time does the WASP simulation of the area affected by these discharges indicate a violation of the dissolved oxygen criteria or show any levels of ammonia that would be toxic. As such, the WASP model indicates that the currently permitted limits for these facilities (listed in the table below) are protective of water quality.

	Orange Beach WWTF (10 MGD)	Gulf Shores WRF (4 MGD)
CBOD ₅ (mg/l)	2.9	4
Ammonia Nitrogen (mg/l)	0.7	1
Total Kjeldahl Nitrogen (mg/l)	2.2	3
Minimum Dissolved Oxygen (mg/l)	6	6

JBR



Mixing Zone Analysis Summary

Page 1

REQUEST INFORMATION

request number: 3399

From: (Responsible Engineer) Stephanie Ammons In Branch/Section Municipal
Date Submitted 2/8/2017 Date Required 3/10/2017 FUND Code 605
Receiving Waterbody Intracoastal Waterway Date Permit application received by NPDES program 9/6/2016
Previous Stream Name _____
Facility Name City of Orange Beach WWTF (Name of Discharger-WQ will use to file)
Previous Discharger Name _____
River Basin Perdido Outfall Latitude 30.29069 (decimal degrees)
*County Baldwin Outfall Longitude -87.63761 (decimal degrees)
Permit Number AL0081124 Permit Type Permit Reissuance
Permit Status Active
Type of Discharger MUNICIPAL

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

If yes, impacting dischargers names.

Impacting dischargers permit numbers.

Existing Discharge Design Flow 10 MGD
Proposed Discharge Design Flow 10 MGD

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

Seasonal limits requested? Yes No

If not seasonal, only the summer sections will be used

Comments included

Yes No

Information Verified By JBR

Year File Was Started 2017

12 Digit HUC Code 031401070204

Date of MZ Response 5/24/2017

Use Classification F&W

Site Visit Completed? Yes No

Date of Site Visit 3/1/2017

Hydrology

Method Used to Calculate

Drainage Area _____ sq mi

Stream 7Q10 _____ cfs

Stream 1Q10 _____ cfs

Stream 7Q2 _____ cfs

Annual Average _____ cfs

Coastal Area

Coastal Area

Coastal Area

Coastal Area

Date of MZ Analysis 5/24/2017

Model Completed by JBR

Pollutant Category

Whole Effluent Toxicity (WET) Thermal Pathogens

Mixing Zone Analysis Summary

WET Parameters

Summer

Ambient Streamflow cfs
 ZID Length Meters
 ZID IWC %

Chronic

Ambient Streamflow cfs
 Mixing Zone Length 38.65 Meters
 Mixing Zone IWC 4.03 %

Winter

Acute

Ambient Streamflow cfs
 ZID Length Meters
 ZID IWC %

Chronic

Ambient Streamflow cfs
 Mixing Zone Length 38.65 Meters
 Mixing Zone IWC %

Thermal Parameters

Summer

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

Winter

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

Pathogen Parameters

Summer

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

Winter

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

Comments
 and/or
 Notations

**ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (ADEM)
 NPDES INDIVIDUAL PERMIT APPLICATION
 SUPPLEMENTARY INFORMATION FOR PUBLICLY-OWNED TREATMENT WORKS (POTW), OTHER TREATMENT
 WORKS TREATING DOMESTIC SEWAGE (TWTDS), AND PUBLIC WATER SUPPLY TREATMENT PLANTS**

Instructions: This form should be used to submit the required supplementary information for an application for an NPDES individual permit for Publicly Owned Treatment Works (POTW) and other Treatment Works Treating Domestic Sewage (TWTDS). The completed application should be submitted to ADEM in duplicate. If insufficient space is available to address any item, please continue on an attached sheet of paper. Please mark "N/A" in the appropriate box when an item is not applicable to the applicant. Please type or print legibly in blue or black ink. Mail the completed application to:

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

APR 18 2022

MUNICIPAL SECTION

PURPOSE OF THIS APPLICATION

- Initial Permit Application for New Facility* Initial Permit Application for Existing Facility*
 Modification of Existing Permit Reissuance of Existing Permit
 Revocation & Reissuance of Existing Permit * An application for participation in the ADEM's Electronic Environmental (E2) Reporting must be submitted to allow permittee to electronically submit reports as required.

SECTION A – GENERAL INFORMATION

1. Facility Name: City of Orange Beach WWTF Facility County: Baldwin

a. Operator Name: The City of Orange Beach

b. Is the operator identified in A.1.a, the owner of the facility? Yes No

If No, provide the following information:

Operator Name: _____

Operator Address (Street or PO Box): _____

City: _____ AL _____ Zip: _____

Phone Number: _____ Email Address: _____

Operator Status:

Public-federal Public-state Public-other (please specify): _____

Private Other (please specify): _____

Describe the operator's scope of responsibility for the facility:

c. Name of Permittee* if different than Operator: _____

**Permittee will be responsible for compliance with the conditions of the permit*

2. NPDES Permit Number: AL0081124 (Not applicable if initial permit application)

3. Facility Location (Front Gate): Latitude: 30 18 58°N Longitude: 87 37 17°W

4. Responsible Official (as described on last page of this application):

Name and Title: Tony Kennon, Mayor

Address: P.O. Box 458

City: Orange Beach State: AL Zip: 36561

Phone Number: 251-981-6979 Email Address: tkennon@orangebeachal.gov

5. Designated Facility/DMR Contact:

Name: Jeff Hartley Title: Utilities Director
 Phone Number: 251-974-5617 Email Address: _____

6. Designated Emergency Contact:

Name: Robert Stalcup Title: Plant Superintendent
 Phone Number: 251-974-5617 Email Address: rstalcup@cityoforangebeach.com

7. Please complete this section if the Applicant's business entity is a Proprietorship or Limited Liability Company (LLC) with a responsible official not listed in A.4.

Name: _____ Title: _____
 Address: _____
 City: _____ State: _____ Zip: _____
 Phone Number: _____ Email Address: _____

8. Identify all Administrative Complaints, Notices of Violation, Directives, or Administrative Orders, Consent Decrees, or Litigation, concerning water pollution or other permit violations, if any against the Applicant within the State of Alabama in the past five years (attach additional sheets if necessary):

<u>Facility Name</u>	<u>Permit Number</u>	<u>Type of Action</u>	<u>Date of Action</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

SECTION B – WASTEWATER DISCHARGE INFORMATION

1. Attach a process flow schematic of the treatment process, including the size of each unit operation and sample collection locations.

2. Do you share an outfall with another facility? Yes No (If no, continue to B.3)

For each shared outfall, provide the following:

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

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

- | | | | | |
|-----------------|--------------------|-----------------------------------------|----------------------------------------|------------------------------|
| Current: | Flow Metering | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| | Sampling Equipment | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| Planned: | Flow Metering | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | <input type="checkbox"/> N/A |
| | Sampling Equipment | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | <input type="checkbox"/> N/A |

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

Influent and Effluent parshall flumes, influent and effluent composite samplers

4. Are any wastewater collection or treatment modifications or expansions planned during the next three years that could alter wastewater volumes or characteristics (Note: Permit Modification may be required)? Yes No

If Yes, briefly describe these changes and any potential or anticipated effects on the wastewater quality and quantity: (Attach additional sheets if needed.)

SECTION C – WASTE STORAGE AND DISPOSAL INFORMATION

Describe the location of all sites used for the storage of solids or liquids that have any potential for accidental discharge to a water of the state, either directly or indirectly via storm sewer, municipal sewer, municipal wastewater treatment plants, or other collection or distribution systems that are located at or operated by the subject existing or proposed NPDES- permitted facility. Indicate the location of any potential release areas and provide a map or detailed narrative description of the areas of concern as an attachment to this application:

Description of Waste	Description of Storage Location
N/A	

*Indicate any wastes disposed at an off-site treatment facility and any wastes that are disposed on-site

SECTION D – INDUSTRIAL INDIRECT DISCHARGE CONTRIBUTORS

1. List the existing and proposed industrial source wastewater contributions to the municipal wastewater treatment system (Attach other sheets if necessary)

Company Name	Description of Industrial Wastewater	Existing or Proposed	Flow (MGD)	Subject to SID Permit?
N/A	No industrial Wastewater			<input type="checkbox"/> Yes <input type="checkbox"/> No
				<input type="checkbox"/> Yes <input type="checkbox"/> No
				<input type="checkbox"/> Yes <input type="checkbox"/> No
				<input type="checkbox"/> Yes <input type="checkbox"/> No
				<input type="checkbox"/> Yes <input type="checkbox"/> No
				<input type="checkbox"/> Yes <input type="checkbox"/> No
				<input type="checkbox"/> Yes <input type="checkbox"/> No
				<input type="checkbox"/> Yes <input type="checkbox"/> No

2. Are industrial wastewater contributions regulated via a locally approved sewer use ordinance? Yes No

If yes, please attach a copy of the ordinance.

SECTION E – COASTAL ZONE INFORMATION

Is the discharge(s) located within the 10-foot elevation contour and within the limits of Mobile or Baldwin County? Yes No
 If yes, complete items E.1 – E.12 below:

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

SECTION F – ANTI-DEGRADATION EVALUATION

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

- Is this a new or increased discharge that began after April 3, 1991? Yes No
 If yes, complete F.2 below. If no, go to Section G.
- Has an Anti-Degradation Analysis been previously conducted and submitted to the Department for the new or increased discharge referenced in F.1? Yes No

If yes, do not complete this section.

If no and the discharge is to a Tier II waterbody as defined in ADEM Admin. Code r. 335-6-10-.12(4), complete F.2.A – F.2.F 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 at <http://adem.alabama.gov/DeptForms/>.

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

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

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

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

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

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

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

SECTION G – EPA Application Forms

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

1. Applicants for new or existing discharges of sanitary wastewater from Publicly-Owned Treatment Works (POTW) and Other Treatment Works Treating Domestic Sewage (TWTDS) must submit Form 2A. If the facility design capacity is equal to or greater than 1 MGD, Form 2F is also required.
2. Applicants for new or existing land application of sanitary wastewater must submit Form 2A and Form 2F.
3. Applicants for new and existing discharges of process wastewater from water treatment facilities (i.e. public water supply treatment plants) must submit Form 1 and Form 2C.
4. Applicants that generate sewage sludge, derive a material from sewage sludge, or dispose of sewage sludge must submit Part 2 of Form 2S.

SECTION H– ENGINEERING REPORT/BMP PLAN REQUIREMENTS

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

SECTION I – RECEIVING WATERS

Outfall No.	Receiving Water(s)	303(d) Segment?	Included in TMDL?*
001	Intercoastal Waterway	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

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

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

SECTION J – APPLICATION CERTIFICATION

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

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

Signature of Responsible Official: _____

Date Signed: 04-13-22

Name: Tony Kennon

Title: Mayor

If the Responsible Official signing this application is not identified in Section A.4 or A.7, provide the following information:

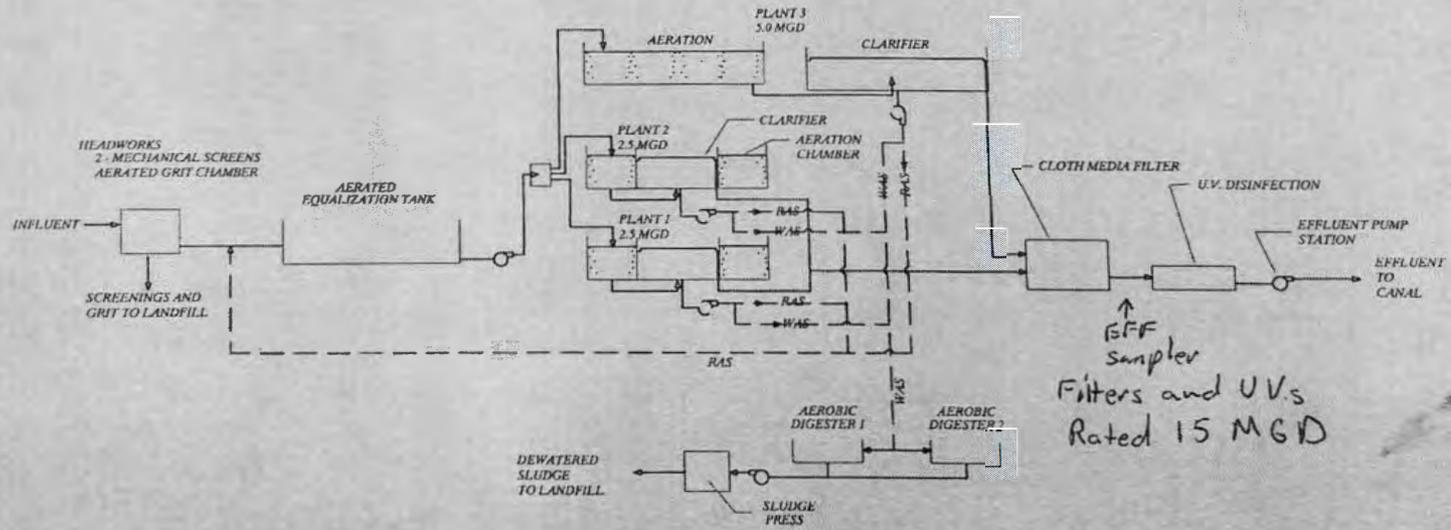
Mailing Address: _____

City: _____ State: _____ Zip: _____

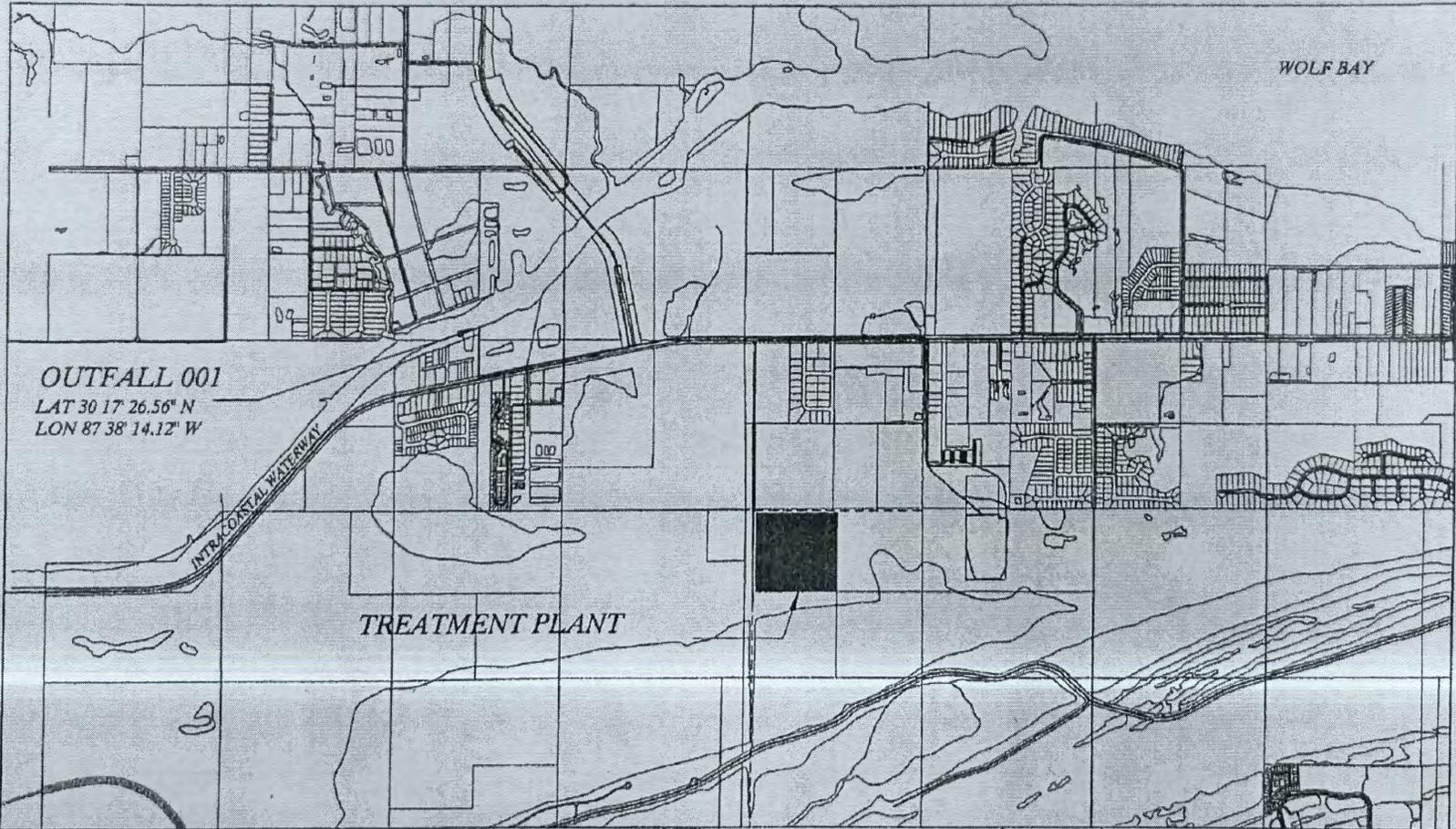
Phone Number: _____ Email Address: _____

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

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



10.0 MGD ORANGE BEACH WWTP FLOW SCHEMATIC



MCMILLAN ENGINEERING SERVICES

25980 Fols Road
 Florence, AL 36530

TELEPHONE: (251) 767-0868
 EMAIL: pmcmillan@ymail.com

THE CITY OF ORANGE BEACH

SCALE N.T.S.	DRAWN CHRISTOPHER CASH
DATE January, 2017	CHECKED BY SHEET 1 OF 3

EPA Identification Number		NPDES Permit Number AI00081124	Facility Name OBWWTF	Form Approved 03/05/19 OMB No. 2040-0004		
Form 2A NPDES		U.S. Environmental Protection Agency Application for NPDES Permit to Discharge Wastewater NEW AND EXISTING PUBLICLY OWNED TREATMENT WORKS				
SECTION 1. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS (40 CFR 122.21(j)(1) and (9))						
Facility Information	1.1	Facility name City of Orange Beach Wastewater Treatment Facility				
		Mailing address (street or P.O. box) P.O. Box 458				
		City or town Orange Beach	State Alabama	ZIP code 36561		
		Contact name (first and last) Robert Stalcup	Title Utilities Director	Phone number (251) 974-5617	Email address rstalcup@orangebeachal.gov	
		Location address (street, route number, or other specific identifier) <input type="checkbox"/> Same as mailing address 3900 William Silvers Blvd.				
		City or town Orange Beach	State Alabama	ZIP code 36561		
	1.2	Is this application for a facility that has yet to commence discharge? <input type="checkbox"/> Yes → See instructions on data submission requirements for new dischargers. <input checked="" type="checkbox"/> No				
Applicant Information	1.3	Is applicant different from entity listed under Item 1.1 above? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 1.4.				
		Applicant name				
		Applicant address (street or P.O. box)				
		City or town	State	ZIP code		
		Contact name (first and last)	Title	Phone number	Email address	
	1.4	Is the applicant the facility's owner, operator, or both? (Check only one response.) <input type="checkbox"/> Owner <input type="checkbox"/> Operator <input checked="" type="checkbox"/> Both				
	1.5	To which entity should the NPDES permitting authority send correspondence? (Check only one response.) <input checked="" type="checkbox"/> Facility <input type="checkbox"/> Applicant <input type="checkbox"/> Facility and applicant (they are one and the same)				
Existing Environmental Permits	1.6	Indicate below any existing environmental permits. (Check all that apply and print or type the corresponding permit number for each.)				
		Existing Environmental Permits				
		<input checked="" type="checkbox"/> NPDES (discharges to surface water) AI00081124	<input type="checkbox"/> RCRA (hazardous waste)	<input type="checkbox"/> UIC (underground injection control)		
		<input type="checkbox"/> PSD (air emissions)	<input type="checkbox"/> Nonattainment program (CAA)	<input type="checkbox"/> NESHAPs (CAA)		
	<input type="checkbox"/> Ocean dumping (MPRSA)	<input type="checkbox"/> Dredge or fill (CWA Section 404)	<input type="checkbox"/> Other (specify)			

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Collection System and Population Served	1.7	Provide the collection system information requested below for the treatment works.				
		Municipality Served	Population Served	Collection System Type (indicate percentage)		Ownership Status
		City of Orange Beach and ..	10,000- 50,000	<u>100</u> % separate sanitary sewer	<input checked="" type="checkbox"/> Own	<input checked="" type="checkbox"/> Maintain
				___ % combined storm and sanitary sewer	<input type="checkbox"/> Own	<input type="checkbox"/> Maintain
				<input type="checkbox"/> Unknown	<input type="checkbox"/> Own	<input type="checkbox"/> Maintain
				___ % separate sanitary sewer	<input type="checkbox"/> Own	<input type="checkbox"/> Maintain
				___ % combined storm and sanitary sewer	<input type="checkbox"/> Own	<input type="checkbox"/> Maintain
				<input type="checkbox"/> Unknown	<input type="checkbox"/> Own	<input type="checkbox"/> Maintain
			___ % separate sanitary sewer	<input type="checkbox"/> Own	<input type="checkbox"/> Maintain	
			___ % combined storm and sanitary sewer	<input type="checkbox"/> Own	<input type="checkbox"/> Maintain	
			<input type="checkbox"/> Unknown	<input type="checkbox"/> Own	<input type="checkbox"/> Maintain	
			___ % separate sanitary sewer	<input type="checkbox"/> Own	<input type="checkbox"/> Maintain	
			___ % combined storm and sanitary sewer	<input type="checkbox"/> Own	<input type="checkbox"/> Maintain	
			<input type="checkbox"/> Unknown	<input type="checkbox"/> Own	<input type="checkbox"/> Maintain	
	Total Population Served	Fluctuates				
	Total percentage of each type of sewer line (in miles)		Separate Sanitary Sewer System		Combined Storm and Sanitary Sewer	
			100 %		0 %	

Indian Country	1.8	Is the treatment works located in Indian Country?	
		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	1.9	Does the facility discharge to a receiving water that flows through Indian Country?	
		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Design and Actual Flow Rates	1.10	Provide design and actual flow rates in the designated spaces.		Design Flow Rate	
				10.0 mgd	
		Annual Average Flow Rates (Actual)			
		Two Years Ago	Last Year	This Year	
		2.31 mgd	2.27 mgd	2.56 mgd	
		Maximum Daily Flow Rates (Actual)			
	Two Years Ago	Last Year	This Year		
	4.3 mgd	4.4 mgd	5.1 mgd		

Discharge Points by Type	1.11	Provide the total number of effluent discharge points to waters of the United States by type.				
		Total Number of Effluent Discharge Points by Type				
		Treated Effluent	Untreated Effluent	Combined Sewer Overflows	Bypasses	Constructed Emergency Overflows
	1	0	0	0	0	

Outfalls Other Than to Waters of the United States

1.12 Does the POTW discharge wastewater to basins, ponds, or other surface impoundments that do not have outlets for discharge to waters of the United States?
 Yes No → SKIP to Item 1.14.

1.13 Provide the location of each surface impoundment and associated discharge information in the table below.

Surface Impoundment Location and Discharge Data

Location	Average Daily Volume Discharged to Surface Impoundment	Continuous or Intermittent (check one)
	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent

1.14 Is wastewater applied to land?
 Yes No → SKIP to Item 1.16.

1.15 Provide the land application site and discharge data requested below.

Land Application Site and Discharge Data

Location	Size	Average Daily Volume Applied	Continuous or Intermittent (check one)
	acres	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
	acres	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
	acres	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent

1.16 Is effluent transported to another facility for treatment prior to discharge?
 Yes No → SKIP to Item 1.21.

1.17 Describe the means by which the effluent is transported (e.g., tank truck, pipe).

1.18 Is the effluent transported by a party other than the applicant?
 Yes No → SKIP to Item 1.20.

1.19 Provide information on the transporter below.

Transporter Data

Entity name		Mailing address (street or P.O. box)	
City or town		State	ZIP code
Contact name (first and last)		Title	
Phone number		Email address	

Outfalls and Other Discharge or Disposal Methods

Outfalls and Other Discharge or Disposal Methods Continued

1.20 In the table below, indicate the name, address, contact information, NPDES number, and average daily flow rate of the receiving facility.

Receiving Facility Data				
Facility name		Mailing address (street or P.O. box)		
City or town		State	ZIP code	
Contact name (first and last)		Title		
Phone number		Email address		
NPDES number of receiving facility (if any) <input type="checkbox"/> None		Average daily flow rate mgd		

1.21 Is the wastewater disposed of in a manner other than those already mentioned in Items 1.14 through 1.21 that do not have outlets to waters of the United States (e.g., underground percolation, underground injection)?
 Yes No → SKIP to Item 1.23.

1.22 Provide information in the table below on these other disposal methods.

Information on Other Disposal Methods				
Disposal Method Description	Location of Disposal Site	Size of Disposal Site	Annual Average Daily Discharge Volume	Continuous or Intermittent (check one)
		acres	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
		acres	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
		acres	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent

Variance Requests

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

Discharges into marine waters (CWA Section 301(h)) Water quality related effluent limitation (CWA Section 302(b)(2))

Not applicable

Contractor Information

1.24 Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor?
 Yes No → SKIP to Section 2.

1.25 Provide location and contact information for each contractor in addition to a description of the contractor's operational and maintenance responsibilities.

Contractor Information			
	Contractor 1	Contractor 2	Contractor 3
Contractor name (company name)			
Mailing address (street or P.O. box)			
City, state, and ZIP code			
Contact name (first and last)			
Phone number			
Email address			
Operational and maintenance responsibilities of contractor			

SECTION 2. ADDITIONAL INFORMATION (40 CFR 122.21(j)(1) and (2))

Design Flow	Outfalls to Waters of the United States					
	2.1	Does the treatment works have a design flow greater than or equal to 0.1 mgd? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Section 3.				
Inflow and Infiltration	2.2	Provide the treatment works' current average daily volume of inflow and infiltration.			Average Daily Volume of Inflow and Infiltration 2.56 gpd	
	Indicate the steps the facility is taking to minimize inflow and infiltration. The collections system is pressurized					
Topographic Map	2.3	Have you attached a topographic map to this application that contains all the required information? (See instructions for specific requirements.) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
Flow Diagram	2.4	Have you attached a process flow diagram or schematic to this application that contains all the required information? (See instructions for specific requirements.) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
Scheduled Improvements and Schedules of Implementation	2.5	Are improvements to the facility scheduled? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 3.				
	Briefly list and describe the scheduled improvements.					
	1.					
	2.					
	3.					
	4.					
	2.6	Provide scheduled or actual dates of completion for improvements.				
Scheduled or Actual Dates of Completion for Improvements						
	Scheduled Improvement (from above)	Affected Outfalls (list outfall number)	Begin Construction (MM/DD/YYYY)	End Construction (MM/DD/YYYY)	Begin Discharge (MM/DD/YYYY)	Attainment of Operational Level (MM/DD/YYYY)
	1.					
	2.					
	3.					
	4.					
2.7	Have appropriate permits/clearances concerning other federal/state requirements been obtained? Briefly explain your response. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None required or applicable					
Explanation:						

SECTION 3. INFORMATION ON EFFLUENT DISCHARGES (40 CFR 122.21(j)(3) to (5))

Description of Outfalls	3.1	Provide the following information for each outfall. (Attach additional sheets if you have more than three outfalls.)		
		Outfall Number 001	Outfall Number	Outfall Number
	State	Alabama		
	County	Baldwin		
	City or town	Orange Beach		
	Distance from shore	10.0 ft.	ft.	ft.
	Depth below surface	2.0 ft.	ft.	ft.
	Average daily flow rate	2.56 mgd	mgd	mgd
	Latitude	30° 17' 27"	° ' "	° ' "
Longitude	87° 38' 14"	° ' "	° ' "	
Seasonal or Periodic Discharge Data	3.2	Do any of the outfalls described under Item 3.1 have seasonal or periodic discharges? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 3.4.		
	3.3	If so, provide the following information for each applicable outfall.		
		Outfall Number	Outfall Number	Outfall Number
	Number of times per year discharge occurs			
	Average duration of each discharge (specify units)			
Average flow of each discharge	mgd	mgd	mgd	
Months in which discharge occurs				
Diffuser Type	3.4	Are any of the outfalls listed under Item 3.1 equipped with a diffuser? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 3.6.		
	3.5	Briefly describe the diffuser type at each applicable outfall.		
		Outfall Number	Outfall Number	Outfall Number
Waters of the U.S.	3.6	Does the treatment works discharge or plan to discharge wastewater to waters of the United States from one or more discharge points? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Section 6.		

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Receiving Water Description	3.7	Provide the receiving water and related information (if known) for each outfall.			
		Outfall Number 0012	Outfall Number	Outfall Number	
	Receiving water name	Intercoastal Waterway			
	Name of watershed, river, or stream system	Perdido Pass			
	U.S. Soil Conservation Service 14-digit watershed code	HU 031401070204			
	Name of state management/river basin	Perdido Pass-Frontal Gulf of Mex			
	U.S. Geological Survey 8-digit hydrologic cataloging unit code	031401			
	Critical low flow (acute)	0.0 cfs	cfs	cfs	
	Critical low flow (chronic)	0.0 cfs	cfs	cfs	
Total hardness at critical low flow	mg/L of CaCO ₃	mg/L of CaCO ₃	mg/L of CaCO ₃		
Treatment Description	3.8	Provide the following information describing the treatment provided for discharges from each outfall.			
		Outfall Number 001	Outfall Number	Outfall Number	
	Highest Level of Treatment (check all that apply per outfall)	<input type="checkbox"/> Primary <input type="checkbox"/> Equivalent to secondary <input type="checkbox"/> Secondary <input checked="" type="checkbox"/> Advanced <input type="checkbox"/> Other (specify)	<input type="checkbox"/> Primary <input type="checkbox"/> Equivalent to secondary <input type="checkbox"/> Secondary <input type="checkbox"/> Advanced <input type="checkbox"/> Other (specify)	<input type="checkbox"/> Primary <input type="checkbox"/> Equivalent to secondary <input type="checkbox"/> Secondary <input type="checkbox"/> Advanced <input type="checkbox"/> Other (specify)	
	Design Removal Rates by Outfall	001			
	BOD ₅ or CBOD ₅	85 %	%	%	
	TSS	85 %	%	%	
	Phosphorus	<input checked="" type="checkbox"/> Not applicable	<input type="checkbox"/> Not applicable	<input type="checkbox"/> Not applicable	
	Nitrogen	<input checked="" type="checkbox"/> Not applicable	<input type="checkbox"/> Not applicable	<input type="checkbox"/> Not applicable	
Other (specify)	<input checked="" type="checkbox"/> Not applicable	<input type="checkbox"/> Not applicable	<input type="checkbox"/> Not applicable		

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Treatment Description Continued	3.9	Describe the type of disinfection used for the effluent from each outfall in the table below. If disinfection varies by season, describe below. Ultra Violet Lights					
		Outfall Number 001	Outfall Number		Outfall Number		
		Disinfection type	Ultra Violet lights				
		Seasons used	Summer, Fall, Winter, Spring				
		Dechlorination used?	<input checked="" type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No		

Effluent Testing Data	3.10	Have you completed monitoring for all Table A parameters and attached the results to the application package? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
	3.11	Have you conducted any WET tests during the 4.5 years prior to the date of the application on any of the facility's discharges or on any receiving water near the discharge points? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 3.13.					
	3.12	Indicate the number of acute and chronic WET tests conducted since the last permit reissuance of the facility's discharges by outfall number or of the receiving water near the discharge points.					
		Outfall Number 001	Outfall Number		Outfall Number		
			Acute	Chronic	Acute	Chronic	
		Number of tests of discharge water	5	5			
		Number of tests of receiving water					
	3.13	Does the treatment works have a design flow greater than or equal to 0.1 mgd? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 3.16.					
	3.14	Does the POTW use chlorine for disinfection, use chlorine elsewhere in the treatment process, or otherwise have reasonable potential to discharge chlorine in its effluent? <input type="checkbox"/> Yes → Complete Table B, including chlorine. <input checked="" type="checkbox"/> No → Complete Table B, omitting chlorine.					
	3.15	Have you completed monitoring for all applicable Table B pollutants and attached the results to this application package? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
3.16	Does one or more of the following conditions apply? <ul style="list-style-type: none"> • The facility has a design flow greater than or equal to 1 mgd. • The POTW has an approved pretreatment program or is required to develop such a program. • The NPDES permitting authority has informed the POTW that it must sample for the parameters in Table C, must sample other additional parameters (Table D), or submit the results of WET tests for acute or chronic toxicity for each of its discharge outfalls (Table E). <input checked="" type="checkbox"/> Yes → Complete Tables C, D, and E as applicable. <input type="checkbox"/> No → SKIP to Section 4.						
3.17	Have you completed monitoring for all applicable Table C pollutants and attached the results to this application package? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
3.18	Have you completed monitoring for all applicable Table D pollutants required by your NPDES permitting authority and attached the results to this application package? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No additional sampling required by NPDES permitting authority.						

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EPA Identification Number

NPDES Permit Number

Facility Name
OBWWTFForm Approved 03/05/19
OMB No. 2040-0004

A100081124

Effluent Testing Data Continued

- 3.19 Has the POTW conducted either (1) minimum of four quarterly WET tests for one year preceding this permit application or (2) at least four annual WET tests in the past 4.5 years?
 Yes No → Complete tests and Table E and SKIP to Item 3.26.
- 3.20 Have you previously submitted the results of the above tests to your NPDES permitting authority?
 Yes No → Provide results in Table E and SKIP to Item 3.26.
- 3.21 Indicate the dates the data were submitted to your NPDES permitting authority and provide a summary of the results.
- | Date(s) Submitted
(MM/DD/YYYY) | Summary of Results |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11-20-19, 02-04-21 | Received a Pass on Acute and Chronic tests on both Species, 2019, 2020, 2021, 2022, and 2024 test. In 2023 there was an anomaly with the C Variegatus species causing the Chronic test to test outside the standard deviation. Test was redone and passed. |
| 12-13-22, 11-22-22 | |
| 11-28-23, 11-26-24 | |
- 3.22 Regardless of how you provided your WET testing data to the NPDES permitting authority, did any of the tests result in toxicity?
 Yes No → SKIP to Item 3.26.
- 3.23 Describe the cause(s) of the toxicity:
- 3.24 Has the treatment works conducted a toxicity reduction evaluation?
 Yes No → SKIP to Item 3.26.
- 3.25 Provide details of any toxicity reduction evaluations conducted.
- 3.26 Have you completed Table E for all applicable outfalls and attached the results to the application package?
 Yes Not applicable because previously submitted information to the NPDES permitting authority.

SECTION 4. INDUSTRIAL DISCHARGES AND HAZARDOUS WASTES (40 CFR 122.21(j)(6) and (7))

Industrial Discharges and Hazardous Wastes

- 4.1 Does the POTW receive discharges from SIUs or NSCIUs?
 Yes No → SKIP to Item 4.7.
- 4.2 Indicate the number of SIUs and NSCIUs that discharge to the POTW.
- | Number of SIUs | Number of NSCIUs |
|----------------|------------------|
| | |
- 4.3 Does the POTW have an approved pretreatment program?
 Yes No
- 4.4 Have you submitted either of the following to the NPDES permitting authority that contains information substantially identical to that required in Table F: (1) a pretreatment program annual report submitted within one year of the application or (2) a pretreatment program?
 Yes No → SKIP to Item 4.6.
- 4.5 Identify the title and date of the annual report or pretreatment program referenced in Item 4.4. SKIP to Item 4.7.
- 4.6 Have you completed and attached Table F to this application package?
 Yes No

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Industrial Discharges and Hazardous Wastes Continued	4.7	Does the POTW receive, or has it been notified that it will receive, by truck, rail, or dedicated pipe, any wastes that are regulated as RCRA hazardous wastes pursuant to 40 CFR 261? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 4.9.			
	4.8	If yes, provide the following information:			
	Hazardous Waste Number	Waste Transport Method (check all that apply)	Annual Amount of Waste Received	Units	
		<input type="checkbox"/> Truck <input type="checkbox"/> Dedicated pipe	<input type="checkbox"/> Rail <input type="checkbox"/> Other (specify) _____		
		<input type="checkbox"/> Truck <input type="checkbox"/> Dedicated pipe	<input type="checkbox"/> Rail <input type="checkbox"/> Other (specify) _____		
		<input type="checkbox"/> Truck <input type="checkbox"/> Dedicated pipe	<input type="checkbox"/> Rail <input type="checkbox"/> Other (specify) _____		
	4.9	Does the POTW receive, or has it been notified that it will receive, wastewaters that originate from remedial activities, including those undertaken pursuant to CERCLA and Sections 3004(7) or 3008(h) of RCRA? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 5.			
	4.10	Does the POTW receive (or expect to receive) less than 15 kilograms per month of non-acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e)? <input type="checkbox"/> Yes → SKIP to Section 5. <input type="checkbox"/> No			
	4.11	Have you reported the following information in an attachment to this application: identification and description of the site(s) or facility(ies) at which the wastewater originates; the identities of the wastewater's hazardous constituents; and the extent of treatment, if any, the wastewater receives or will receive before entering the POTW? <input type="checkbox"/> Yes <input type="checkbox"/> No			

SECTION 5. COMBINED SEWER OVERFLOWS (40 CFR 122.21(j)(8))

CSO Map and Diagram	5.1	Does the treatment works have a combined sewer system? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 6.		
	5.2	Have you attached a CSO system map to this application? (See instructions for map requirements.) <input type="checkbox"/> Yes <input type="checkbox"/> No		
	5.3	Have you attached a CSO system diagram to this application? (See instructions for diagram requirements.) <input type="checkbox"/> Yes <input type="checkbox"/> No		

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CSO Outfall Description	5.4	For each CSO outfall, provide the following information. (Attach additional sheets as necessary.)					
		CSO Outfall Number	CSO Outfall Number	CSO Outfall Number	CSO Outfall Number	CSO Outfall Number	CSO Outfall Number
		City or town					
		State and ZIP code					
		County					
		Latitude	" ' "	" ' "	" ' "	" ' "	" ' "
		Longitude	" ' "	" ' "	" ' "	" ' "	" ' "
		Distance from shore	ft.	ft.	ft.	ft.	ft.
	Depth below surface	ft.	ft.	ft.	ft.	ft.	
CSO Monitoring	5.5	Did the POTW monitor any of the following items in the past year for its CSO outfalls?					
		CSO Outfall Number	CSO Outfall Number	CSO Outfall Number	CSO Outfall Number	CSO Outfall Number	CSO Outfall Number
		Rainfall	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
		CSO flow volume	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
		CSO pollutant concentrations	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
		Receiving water quality	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
		Number of storm events	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
CSO Events in Past Year	5.6	Provide the following information for each of your CSO outfalls.					
		CSO Outfall Number	CSO Outfall Number	CSO Outfall Number	CSO Outfall Number	CSO Outfall Number	CSO Outfall Number
		Number of CSO events in the past year	events	events	events	events	events
		Average duration per event	hours <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	hours <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated			
		Average volume per event	million gallons <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	million gallons <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	million gallons <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	million gallons <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	million gallons <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated
	Minimum rainfall causing a CSO event in last year	inches of rainfall <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	inches of rainfall <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	inches of rainfall <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	inches of rainfall <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	inches of rainfall <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	

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CSO Receiving Waters	5.7	Provide the information in the table below for each of your CSO outfalls.			
		CSO Outfall Number ____	CSO Outfall Number ____	CSO Outfall Number ____	
		Receiving water name			
		Name of watershed/ stream system			
		U.S. Soil Conservation Service 14-digit watershed code (if known)	<input type="checkbox"/> Unknown	<input type="checkbox"/> Unknown	<input type="checkbox"/> Unknown
		Name of state management/river basin			
		U.S. Geological Survey 8-Digit Hydrologic Unit Code (if known)	<input type="checkbox"/> Unknown	<input type="checkbox"/> Unknown	<input type="checkbox"/> Unknown
		Description of known water quality impacts on receiving stream by CSO (see instructions for examples)			

SECTION 6. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))

Checklist and Certification Statement	6.1	In Column 1 below, mark the sections of Form 2A 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		
		<input checked="" type="checkbox"/> Section 1: Basic Application Information for All Applicants	<input type="checkbox"/> w/ variance request(s)	<input type="checkbox"/> w/ additional attachments	
		<input checked="" type="checkbox"/> Section 2: Additional Information	<input checked="" type="checkbox"/> w/ topographic map <input type="checkbox"/> w/ additional attachments	<input checked="" type="checkbox"/> w/ process flow diagram	
		<input checked="" type="checkbox"/> Section 3: Information on Effluent Discharges	<input type="checkbox"/> w/ Table A <input type="checkbox"/> w/ Table B <input type="checkbox"/> w/ Table C	<input type="checkbox"/> w/ Table D <input type="checkbox"/> w/ Table E <input type="checkbox"/> w/ additional attachments	
		<input type="checkbox"/> Section 4: Industrial Discharges and Hazardous Wastes	<input type="checkbox"/> w/ SIU and NSCIU attachments <input type="checkbox"/> w/ additional attachments	<input type="checkbox"/> w/ Table F	
		<input type="checkbox"/> Section 5: Combined Sewer Overflows	<input checked="" type="checkbox"/> w/ CSO map <input checked="" type="checkbox"/> w/ CSO system diagram	<input type="checkbox"/> w/ additional attachments	
		<input checked="" type="checkbox"/> Section 6: Checklist and Certification Statement	<input type="checkbox"/> w/ attachments		
		6.2	Certification Statement		
			<p><i>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i></p>		
		Name (print or type first and last name)	Official title		
		Jeff Hartley	Utilities Director		
		Signature	Date signed		
			4-12-22		

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TABLE A. EFFLUENT PARAMETERS FOR ALL POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method ¹	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Biochemical oxygen demand <input type="checkbox"/> BOD ₅ or <input checked="" type="checkbox"/> CBOD ₅ (report one)	6.3	mg/l	2.19	mg/L	261	SM5210B	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Fecal coliform	256	col/100ml	11.9	col/100ml	261	1600	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Design flow rate	10.0	MGD	2.56	MGD	365		
pH (minimum)	6.9	S.U.					
pH (maximum)	7.8	S.U.					
Temperature (winter)	23	Celsius	20.9	Celsius	109		
Temperature (summer)	27	Celsius	24.73	Celsius	152		
Total suspended solids (TSS)	14.2	mg/L	2.64	mg/L	261	SM2540D	<input type="checkbox"/> ML <input type="checkbox"/> MDL

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

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TABLE B. EFFLUENT PARAMETERS FOR ALL POTWS WITH A FLOW EQUAL TO OR GREATER THAN 0.1 MGD

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method ¹	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Ammonia (as N)	1.08	mg/L	.16	mg/L	261	HACH 10205	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Chlorine (total residual, TRC) ²							<input type="checkbox"/> ML <input type="checkbox"/> MDL
Dissolved oxygen	9.7	mg/L	8.0	mg/L	261	Hach 10360	<input checked="" type="checkbox"/> ML <input type="checkbox"/> MDL
Nitrate/nitrite	6.2	mg/L	1.87	mg/L	12	351.2	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Kjeldahl nitrogen	5.3	mg/L	1.31	mg/L	261	HACH 10242	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Oil and grease	3.8	mg/L	3.8	mg/L	3	64B-HEM and SGT-HI	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Phosphorus	8.8	mg/L	4.2	mg/L	12	365.2/365.3/365	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Total dissolved solids	280	mg/L	280	mg/L	3	SM 2540C	<input type="checkbox"/> ML <input type="checkbox"/> MDL

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).

² Facilities that do not use chlorine for disinfection, do not use chlorine elsewhere in the treatment process, and have no reasonable potential to discharge chlorine in their effluent are not required to report data for chlorine.

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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Metals, Cyanide, and Total Phenols							
Hardness (as CaCO ₃)	120	mg/L	110	mg/L	3	SM 2340C-2011	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Antimony, total recoverable	<.02	mg/L	<.02	mg/L	3	EPA 200.7	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Arsenic, total recoverable	<.02	mg/L	<.02	mg/L	3	EPA 200.7	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Beryllium, total recoverable	<.004	mg/L	<.004	mg/L	3	EPA 200.7	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Cadmium, total recoverable	<.005	mg/L	<.005	mg/L	3	EPA 200.7	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Chromium, total recoverable	<.01	mg/L	<.01	mg/L	3	EPA 200.7	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Copper, total recoverable	<.02	mg/L	<.02	mg/L	3	EPA 200.7	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Lead, total recoverable	<.01	mg/L	<.01	mg/L	3	EPA 200.7	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Mercury, total recoverable	31	ug/L	16.76	ug/L	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Nickel, total recoverable	<.04	mg/L	<.04	mg/L	3	EPA 200.7	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Selenium, total recoverable	<.02	mg/L	<.02	mg/L	3	EPA 200.7	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Silver, total recoverable	<.01	mg/L	<.01	mg/L	3	EPA 200.7	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Thallium, total recoverable	<.025	mg/L	<.025	mg/L	3	EPA 200.7	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Zinc, total recoverable	.065	mg/L	.061	mg/L	3	EPA 200.7	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Cyanide	<.005	mg/L	<.005	mg/L	3	SM 4500 CN E	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Total phenolic compounds	<.005	mg/L	<.005	mg/L	3	EPA 420.4	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Volatile Organic Compounds							
Acrolein	<20	ug/l	<20	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Acrylonitrile	<10	ug/l	<10	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Benzene	<1.0	ug/l	<1.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Bromoform	<5.0	ug/l	<5.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL

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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method ¹	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Carbon tetrachloride	<1.0	ug/l	<1.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Chlorobenzene	<1.0	ug/l	<1.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Chlorodibromomethane	<1.0	ug/l	<1.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Chloroethane	<1.0	ug/l	<1.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
2-chloroethylvinyl ether	<5.0	ug/l	<5.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Chloroform	<1.0	ug/l	<1.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Dichlorobromomethane	<1.0	ug/l	<1.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,1-dichloroethane	<1.0	ug/l	<1.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,2-dichloroethane	<1.0	ug/l	<1.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
trans-1,2-dichloroethylene	<5.0	ug/l	<5.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,1-dichloroethylene	<1.0	ug/l	<1.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,2-dichloropropane	<1.0	ug/l	<1.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,3-dichloropropylene	<5.0	ug/l	<5.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Ethylbenzene	<1.0	ug/l	<1.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Methyl bromide	<1.0	ug/l	<1.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Methyl chloride	<1.0	ug/l	<1.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Methylene chloride	<5.0	ug/l	<5.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,1,1,2-tetrachloroethane	<1.0	ug/l	<1.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Tetrachloroethylene	<1.0	ug/l	<1.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Toluene	<1.0	ug/l	<1.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,1,1-trichloroethane	<1.0	ug/l	<1.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,1,2-trichloroethane	<5.0	ug/l	<5.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL

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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method ¹	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Trichloroethylene	<1	ug/l	<1	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Vinyl chloride	<1	ug/l	<1	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Acid-Extractable Compounds							
p-chloro-m-cresol	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
2-chlorophenol	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
2,4-dichlorophenol	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
2,4-dimethylphenol	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
4,6-dinitro-o-cresol	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
2,4-dinitrophenol	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
2-nitrophenol	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
4-nitrophenol	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Pentachlorophenol	<19	ug/l	<19	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Phenol	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
2,4,6-trichlorophenol	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Base-Neutral Compounds							
Acenaphthene	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Acenaphthylene	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Anthracene	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Benzidine	<23	ug/l	<23	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Benzo(a)anthracene	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Benzo(a)pyrene	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
3,4-benzofluoranthene	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL

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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method ¹	ML or MDL (Include units)
	Value	Units	Value	Units	Number of Samples		
Benzo(ghi)perylene	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Benzo(k)fluoranthene	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Bis (2-chloroethoxy) methane	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Bis (2-chloroethyl) ether	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Bis (2-chloroisopropyl) ether	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Bis (2-ethylhexyl) phthalate	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
4-bromophenyl phenyl ether	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Butyl benzyl phthalate	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
2-chloronaphthalene	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
4-chlorophenyl phenyl ether	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Chrysene	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
di-n-butyl phthalate	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
di-n-octyl phthalate	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Dibenzo(a,h)anthracene	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,2-dichlorobenzene	<1.0	ug/l	<1.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,3-dichlorobenzene	<1.0	ug/l	<1.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,4-dichlorobenzene	<1.0	ug/l	<1.0	ug/l	3	EPA 624.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
3,3-dichlorobenzidine	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Diethyl phthalate	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Dimethyl phthalate	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
2,4-dinitrotoluene	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
2,6-dinitrotoluene	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL

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EPA Identification Number	NPDES Permit Number AI00081124	Facility Name OBWWTF	Outfall Number 001
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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method ¹	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
1,2-diphenylhydrazine	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Fluoranthene	<9.5	ug/l	<9.46	ug/L	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Fluorene	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Hexachlorobenzene	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Hexachlorobutadiene	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Hexachlorocyclo-pentadiene	<19	ug/l	<19	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Hexachloroethane	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Indeno(1,2,3-cd)pyrene	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Isophorone	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Naphthalene	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Nitrobenzene	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
N-nitrosodi-n-propylamine	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
N-nitrosodimethylamine	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
N-nitrosodiphenylamine	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Phenanthrene	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
Pyrene	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL
1,2,4-trichlorobenzene	<9.5	ug/l	<9.46	ug/l	3	EPA 625.1	<input type="checkbox"/> ML <input type="checkbox"/> MDL

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

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EPA Identification Number	NPDES Permit Number A100081124	Facility Name OBWWTF	Outfall Number
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TABLE E. EFFLUENT MONITORING FOR WHOLE EFFLUENT TOXICITY

The table provides response space for one whole effluent toxicity sample. Copy the table to report additional test results.

Test Information			
	Test Number _____	Test Number _____	Test Number _____
Test species			
Age at initiation of test			
Outfall number			
Date sample collected			
Date test started			
Duration			
Toxicity Test Methods			
Test method number			
Manual title			
Edition number and year of publication			
Page number(s)			
Sample Type			
Check one:	<input type="checkbox"/> Grab <input type="checkbox"/> 24-hour composite	<input type="checkbox"/> Grab <input type="checkbox"/> 24-hour composite	<input type="checkbox"/> Grab <input type="checkbox"/> 24-hour composite
Sample Location			
Check one:	<input type="checkbox"/> Before Disinfection <input type="checkbox"/> After Disinfection <input type="checkbox"/> After Dechlorination	<input type="checkbox"/> Before Disinfection <input type="checkbox"/> After Disinfection <input type="checkbox"/> After Dechlorination	<input type="checkbox"/> Before disinfection <input type="checkbox"/> After disinfection <input type="checkbox"/> After dechlorination
Point in Treatment Process			
Describe the point in the treatment process at which the sample was collected for each test.			
Toxicity Type			
Indicate for each test whether the test was performed to assess acute or chronic toxicity, or both. (Check one response.)	<input type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Both	<input type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Both	<input type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Both

EPA Identification Number	NPDES Permit Number A100081124	Facility Name OBWWTF	Outfall Number
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TABLE E. EFFLUENT MONITORING FOR WHOLE EFFLUENT TOXICITY

The table provides response space for one whole effluent toxicity sample. Copy the table to report additional test results.

	Test Number _____	Test Number _____	Test Number _____
Test Type			
Indicate the type of test performed. (Check one response.)	<input type="checkbox"/> Static <input type="checkbox"/> Static-renewal <input type="checkbox"/> Flow-through	<input type="checkbox"/> Static <input type="checkbox"/> Static-renewal <input type="checkbox"/> Flow-through	<input type="checkbox"/> Static <input type="checkbox"/> Static-renewal <input type="checkbox"/> Flow-through
Source of Dilution Water			
Indicate the source of dilution water. (Check one response.)	<input type="checkbox"/> Laboratory water <input type="checkbox"/> Receiving water	<input type="checkbox"/> Laboratory water <input type="checkbox"/> Receiving water	<input type="checkbox"/> Laboratory water <input type="checkbox"/> Receiving water
If laboratory water, specify type.			
If receiving water, specify source.			
Type of Dilution Water			
Indicate the type of dilution water. If salt water, specify "natural" or type of artificial sea salts or brine used.	<input type="checkbox"/> Fresh water <input type="checkbox"/> Salt water (specify)	<input type="checkbox"/> Fresh water <input type="checkbox"/> Salt water (specify)	<input type="checkbox"/> Fresh water <input type="checkbox"/> Salt water (specify)
Percentage Effluent Used			
Specify the percentage effluent used for all concentrations in the test series.			
Parameters Tested			
Check the parameters tested.	<input type="checkbox"/> pH <input type="checkbox"/> Salinity <input type="checkbox"/> Temperature	<input type="checkbox"/> Ammonia <input type="checkbox"/> Dissolved oxygen	<input type="checkbox"/> pH <input type="checkbox"/> Ammonia <input type="checkbox"/> Salinity <input type="checkbox"/> Dissolved oxygen <input type="checkbox"/> Temperature
			<input type="checkbox"/> Ammonia <input type="checkbox"/> Dissolved oxygen
Acute Test Results			
Percent survival in 100% effluent		%	%
LC ₅₀			
95% confidence interval		%	%
Control percent survival		%	%

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TABLE E. EFFLUENT MONITORING FOR WHOLE EFFLUENT TOXICITY

The table provides response space for one whole effluent toxicity sample. Copy the table to report additional test results.

	Test Number _____	Test Number _____	Test Number _____
Acute Test Results Continued			
Other (describe)			
Chronic Test Results			
NOEC	%	%	%
IC ₂₅	%	%	%
Control percent survival	%	%	%
Other (describe)			
Quality Control/Quality Assurance			
Is reference toxicant data available?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes
			<input type="checkbox"/> No
Was reference toxicant test within acceptable bounds?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes
			<input type="checkbox"/> No
What date was reference toxicant test run (MM/DD/YYYY)?			
Other (describe)			

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TABLE F. INDUSTRIAL DISCHARGE INFORMATION

Response space is provided for three SIUs. Copy the table to report information for additional SIUs.

	SIU ____	SIU ____	SIU ____
Name of SIU			
Mailing address (street or P.O. box)			
City, state, and ZIP code			
Description of all industrial processes that affect or contribute to the discharge.			
List the principal products and raw materials that affect or contribute to the SIU's discharge.			
Indicate the average daily volume of wastewater discharged by the SIU.	gpd	gpd	gpd
How much of the average daily volume is attributable to process flow?	gpd	gpd	gpd
How much of the average daily volume is attributable to non-process flow?	gpd	gpd	gpd
Is the SIU subject to local limits?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is the SIU subject to categorical standards?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

EPA Identification Number

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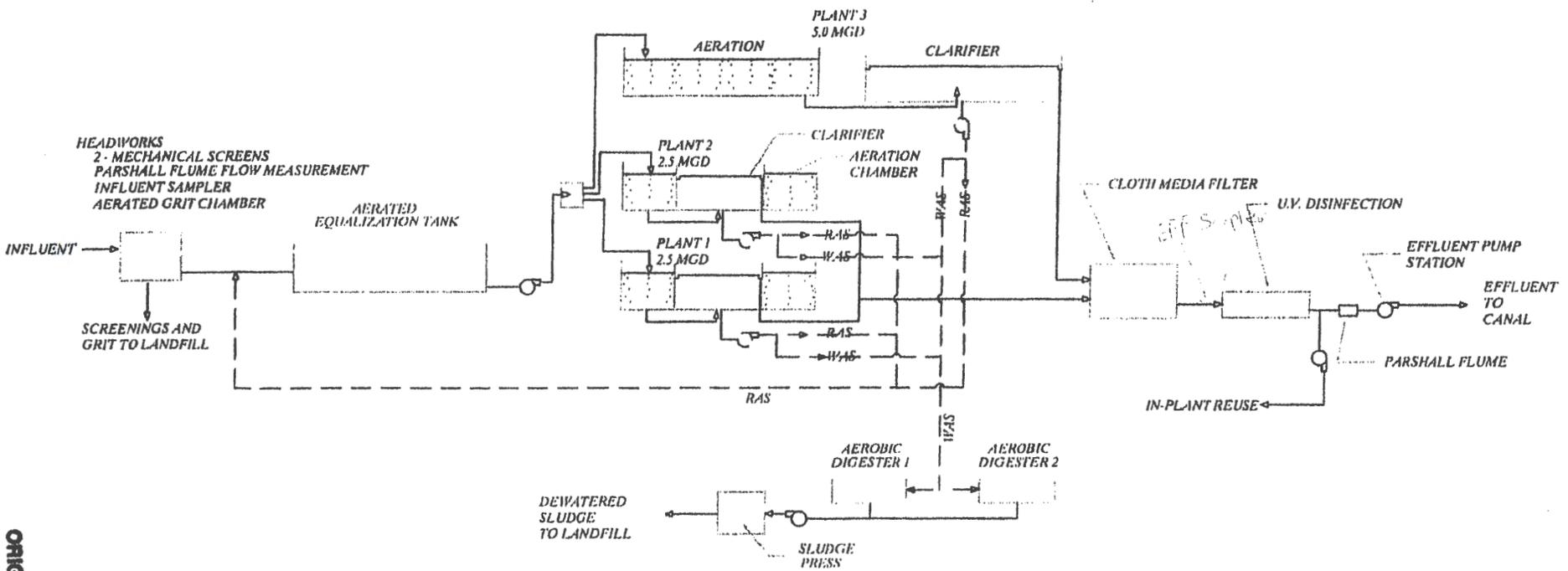
OMB No. 2040-0004

TABLE F. INDUSTRIAL DISCHARGE INFORMATION

Response space is provided for three SIUs. Copy the table to report information for additional SIUs.

	SIU ____	SIU ____	SIU ____
Under what categories and subcategories is the SIU subject?			
Has the POTW experienced problems (e.g., upsets, pass-through interferences) in the past 4.5 years that are attributable to the SIU?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
If yes, describe.			

NOTE:
 FULLY REDUNDANT PUMPS ARE PROVIDED AT ALL PUMP LOCATIONS
 SPARE BLOWER IS PROVIDED AT ALL BLOWER LOCATIONS
 GENERATORS WITH AUTOMATIC TRANSFER SWITCHES
 ARE PROVIDED FOR FULLY OPERATIONAL EMERGENCY POWER



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NPDES FORM 2F - ATTACHMENT

The City of Orange Beach Wastewater Treatment Facility is on a portion of a 40 acre site located along the top of a sandy ridge parallel to the coast at an elevation of approximately 25' above sea level. The plant is constructed on land that is higher in elevation than the surrounding land and therefore receives no stormwater runoff from off site. The soil where the plant is located is classified as Lakeland Sands by the U.S Department of Agriculture soils mapping. This soil type is described as having a percolation rate in excess of 10" per hour. Soil borings as well as soils encountered during excavations confirmed this as highly permeable sand to the full depth of the excavation with a normal water table of about 15' below the ground surface.

All treatment tanks are open top and will collect and treat any direct rainfall and therefore will not contribute to stormwater runoff.

Due to the extremely permeable soils, no runoff has ever been observed exiting the site. This includes plant construction, where large volumes of flow from well points and other dewatering methods were generated for extended periods to allow excavation below the water table. Typically, these discharges would form small localized ponds where the flow was quickly absorbed by percolation.

The grading of the site promotes drainage to open areas for stormwater percolation both in and around the developed area of the site. Any excess runoff collects in on-site retention areas that allow for any required extended percolation time. Average percolation rates for each drainage area within the plant including all impervious surfaces will exceeds rainfall statistics for a 100 year, 24 hour storm. No significant off-site runoff is anticipated. However, in the event of a very extreme storm event, any additional runoff will enter wetlands north-east and south of the treatment plant. These wetlands eventually drain into Little Lake which is over ¼ mile south east of the treatment plant site.

EPA Identification Number	NPDES Permit Number AL00081124	Facility Name City of Orange Beach WWTP	Form Approved 03/05/19 OMB No. 2040-0004		
PART 2		PERMIT APPLICATION INFORMATION (40 CFR 122.21(q))			
Complete this part if you have an effective NPDES permit or have been directed by the NPDES permitting authority to submit a full permit application. In other words, complete this part if your facility has, or is applying for, an NPDES permit. Part 2 is divided into five sections. Section 1 pertains to all applicants. The applicability of Sections 2 to 5 depends on your facility's sewage sludge use or disposal practices. See the instructions to determine which sections you are required to complete.					
PART 2, SECTION 1. GENERAL INFORMATION (40 CFR 122.21(q)(1-7) AND (q)(13))					
General Information	All Part 2 applicants must complete this section.				
	Facility Information				
	1.1	Facility name City of Orange Beach Wastewater Treatment Plant			
		Mailing address (street or P.O. box) P.O. Box 458			
		City or town Orange Beach	State AL	ZIP code 36561	Phone number (251) 974-5617
		Contact name (first and last) Jeff Hartley	Title Utilities Director	Email address jhartley@orangebeachal.gov	
		Location address (street, route number, or other specific identifier) 3900 William Silvers			<input type="checkbox"/> Same as mailing address
		City or town Orange Beach	State AL	ZIP code 36561	
	1.2	Is this facility a Class I sludge management facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
	1.3	Facility Design Flow Rate	10.0 million gallons per day (mgd)		
	1.4	Total Population Served	10,000-50,000		
	1.5	Ownership Status			
		<input type="checkbox"/> Public—federal	<input type="checkbox"/> Public—state	<input checked="" type="checkbox"/> Other public (specify) <u>Municipal</u>	
		<input type="checkbox"/> Private	<input type="checkbox"/> Other (specify) _____		
	Applicant Information				
	1.6	Is applicant different from entity listed under Item 1.1 above? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 1.8 (Part 2, Section 1).			
	1.7	Applicant name			
		Applicant mailing address (street or P.O. box)			
		City or town	State	ZIP code	
		Contact name (first and last)	Title	Phone number	Email address
1.8	Is the applicant the facility's owner, operator, or both? (Check only one response.) <input type="checkbox"/> Operator <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Both				
1.9	To which entity should the NPDES permitting authority send correspondence? (Check only one response.) <input type="checkbox"/> Facility <input type="checkbox"/> Applicant <input checked="" type="checkbox"/> Facility and applicant (they are one and the same)				

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1.10	Facility's NPDES permit number <input type="checkbox"/> Check here if you do not have an NPDES permit but are otherwise required to submit Part 2 of Form 2S.	AL00081124
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1.11	Indicate all other federal, state, and local permits or construction approvals received or applied for that regulate this facility's sewage sludge management practices below.
------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<input type="checkbox"/> RCRA (hazardous wastes)	<input type="checkbox"/> Nonattainment program (CAA)	<input type="checkbox"/> NESHAPs (CAA)
<input type="checkbox"/> PSD (air emissions)	<input type="checkbox"/> Dredge or fill (CWA Section 404)	<input type="checkbox"/> Other (specify) _____ _____
<input type="checkbox"/> Ocean dumping (MPRSA)	<input type="checkbox"/> UIC (underground injection of fluids)	

Indian Country

1.12	Does any generation, treatment, storage, application to land, or disposal of sewage sludge from this facility occur in Indian Country? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 1.14 (Part 2, Section 1) below.
------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

1.13	Provide a description of the generation, treatment, storage, land application, or disposal of sewage sludge that occurs.
------	--------------------------------------------------------------------------------------------------------------------------

Topographic Map

1.14	Have you attached a topographic map containing all required information to this application? (See instructions for specific requirements.) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Line Drawing

1.15	Have you attached a line drawing and/or a narrative description that identifies all sewage sludge practices that will be employed during the term of the permit containing all the required information to this application? (See instructions for specific requirements.) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Contractor Information

1.16	Do contractors have any operational or maintenance responsibilities related to sewage sludge generation, treatment, use, or disposal at the facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 1.18 (Part 2, Section 1) below.
------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

1.17	Provide the following information for each contractor. <input type="checkbox"/> Check here if you have attached additional sheets to the application package.
------	------------------------------------------------------------------------------------------------------------------------------------------------------------------

	Contractor 1	Contractor 2	Contractor 3
Contractor company name	Greensouth Solutions LLC		
Mailing address (street or P.O. box)	30043 Edwards Road		
City, state, and ZIP code	Floral, AL 36442		
Contact name (first and last)	Dale Powell		
Telephone number	(334) 858-2622		
Email address			

General Information Continued

1.17 cont.	Responsibilities of contractor	Contractor 1 De-watering, treatment and hauling of Class A, EQ sludge	Contractor 2	Contractor 3
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Pollutant Concentrations

Using the table below or a separate attachment, provide sewage sludge monitoring data for the pollutants for which limits in sewage sludge have been established in 40 CFR 503 for this facility's expected use or disposal practices. All data must be based on three or more samples taken at least one month apart and must be no more than 4.5 years old.

Check here if you have attached additional sheets to the application package.

1.18	Pollutant	Average Monthly Concentration (mg/kg dry weight)	Analytical Method	Detection Level
	Arsenic			
	Cadmium			
	Chromium			
	Copper			
	Lead			
	Mercury			
	Molybdenum			
	Nickel			
	Selenium			
	Zinc			

Checklist and Certification Statement

1.19	In Column 1 below, mark the sections of Form 2S, Part 2, that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing. Note that not all applicants are required to complete all sections or provide attachments. See Exhibit 2S-2 in the Instructions.												
	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width:60%;">Column 1</th> <th style="width:40%;">Column 2</th> </tr> <tr> <td><input checked="" type="checkbox"/> Section 1 (General Information)</td> <td><input checked="" type="checkbox"/> w/ attachments</td> </tr> <tr> <td><input checked="" type="checkbox"/> Section 2 (Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge)</td> <td><input type="checkbox"/> w/ attachments</td> </tr> <tr> <td><input type="checkbox"/> Section 3 (Land Application of Bulk Sewage Sludge)</td> <td><input type="checkbox"/> w/ attachments</td> </tr> <tr> <td><input type="checkbox"/> Section 4 (Surface Disposal)</td> <td><input type="checkbox"/> w/ attachments</td> </tr> <tr> <td><input type="checkbox"/> Section 5 (Incineration)</td> <td><input type="checkbox"/> w/ attachments</td> </tr> </table>	Column 1	Column 2	<input checked="" type="checkbox"/> Section 1 (General Information)	<input checked="" type="checkbox"/> w/ attachments	<input checked="" type="checkbox"/> Section 2 (Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge)	<input type="checkbox"/> w/ attachments	<input type="checkbox"/> Section 3 (Land Application of Bulk Sewage Sludge)	<input type="checkbox"/> w/ attachments	<input type="checkbox"/> Section 4 (Surface Disposal)	<input type="checkbox"/> w/ attachments	<input type="checkbox"/> Section 5 (Incineration)	<input type="checkbox"/> w/ attachments
Column 1	Column 2												
<input checked="" type="checkbox"/> Section 1 (General Information)	<input checked="" type="checkbox"/> w/ attachments												
<input checked="" type="checkbox"/> Section 2 (Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge)	<input type="checkbox"/> w/ attachments												
<input type="checkbox"/> Section 3 (Land Application of Bulk Sewage Sludge)	<input type="checkbox"/> w/ attachments												
<input type="checkbox"/> Section 4 (Surface Disposal)	<input type="checkbox"/> w/ attachments												
<input type="checkbox"/> Section 5 (Incineration)	<input type="checkbox"/> w/ attachments												

1.20	<p>Certification Statement</p> <p><i>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i></p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;">Name (print or type first and last name) Jeff Hartley <i>Jeff Hartley</i></td> <td style="width:40%;">Official title Utilities Director <i>Utilities Director</i></td> </tr> <tr> <td>Signature <i>[Signature]</i></td> <td>Date signed <i>4-22-22</i></td> </tr> <tr> <td>Telephone number (281) 974-5617</td> <td></td> </tr> </table>	Name (print or type first and last name) Jeff Hartley <i>Jeff Hartley</i>	Official title Utilities Director <i>Utilities Director</i>	Signature <i>[Signature]</i>	Date signed <i>4-22-22</i>	Telephone number (281) 974-5617	
Name (print or type first and last name) Jeff Hartley <i>Jeff Hartley</i>	Official title Utilities Director <i>Utilities Director</i>						
Signature <i>[Signature]</i>	Date signed <i>4-22-22</i>						
Telephone number (281) 974-5617							

Upon the request of the NPDES permitting authority, you must submit any other information the authority deems necessary to assess sewage sludge use or disposal practices at your facility and identify appropriate permitting requirements.

PART 2, SECTION 2. GENERATION OF SEWAGE SLUDGE OR PREPARATION OF A MATERIAL DERIVED FROM SEWAGE SLUDGE (40 CFR 122.21(q)(8) THROUGH (12))

- 2.1 Does your facility generate sewage sludge or derive a material from sewage sludge?
 Yes No → SKIP to Part 2, Section 3.

Amount Generated Onsite

- 2.2 Total dry metric tons per 365-day period generated at your facility: 751

Amount Received from Off Site Facility

- 2.3 Does your facility receive sewage sludge from another facility for treatment use or disposal?
 Yes No → SKIP to Item 2.7 (Part 2, Section 2) below.

- 2.4 Indicate the total number of facilities from which you receive sewage sludge for treatment, use, or disposal:

Provide the following information for each of the facilities from which you receive sewage sludge.

- Check here if you have attached additional sheets to the application package.

- 2.5 Name of facility
- Mailing address (street or P.O. box)
- City or town State ZIP code
- Contact name (first and last) Title Phone number Email address
- Location address (street, route number, or other specific identifier) Same as mailing address
- City or town State ZIP code
- County County code Not available

- 2.6 Indicate the amount of sewage sludge received, the applicable pathogen class and reduction alternative, and the applicable vector reduction option provided at the offsite facility.

Amount (dry metric tons)	Pathogen Class and Reduction Alternative	Vector Attraction Reduction Option
	<input type="checkbox"/> Not applicable <input type="checkbox"/> Class A, Alternative 1 <input type="checkbox"/> Class A, Alternative 2 <input type="checkbox"/> Class A, Alternative 3 <input type="checkbox"/> Class A, Alternative 4 <input type="checkbox"/> Class A, Alternative 5 <input type="checkbox"/> Class A, Alternative 6 <input type="checkbox"/> Class B, Alternative 1 <input type="checkbox"/> Class B, Alternative 2 <input type="checkbox"/> Class B, Alternative 3 <input type="checkbox"/> Class B, Alternative 4 <input type="checkbox"/> Domestic septage, pH adjustment	<input type="checkbox"/> Not applicable <input type="checkbox"/> Option 1 <input type="checkbox"/> Option 2 <input type="checkbox"/> Option 3 <input type="checkbox"/> Option 4 <input type="checkbox"/> Option 5 <input type="checkbox"/> Option 6 <input type="checkbox"/> Option 7 <input type="checkbox"/> Option 8 <input type="checkbox"/> Option 9 <input type="checkbox"/> Option 10 <input type="checkbox"/> Option 11

- 2.7 Identify the treatment process(es) that are known to occur at the offsite facility, including blending activities and treatment to reduce pathogens or vector attraction properties. (Check all that apply.)

- | | |
|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Preliminary operations (e.g., sludge grinding and degritting) | <input type="checkbox"/> Thickening (concentration) |
| <input type="checkbox"/> Stabilization | <input type="checkbox"/> Anaerobic digestion |
| <input type="checkbox"/> Composting | <input type="checkbox"/> Conditioning |
| <input type="checkbox"/> Disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization) | <input type="checkbox"/> Dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons) |
| <input type="checkbox"/> Heat drying | <input type="checkbox"/> Thermal reduction |
| <input type="checkbox"/> Methane or biogas capture and recovery | <input type="checkbox"/> Other (specify) _____ |

Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge

Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge Continued

Treatment Provided at Your Facility

2.8 For each sewage sludge use or disposal practice, indicate the applicable pathogen class and reduction alternative and the applicable vector attraction reduction option provided at your facility. Attach additional pages, as necessary.

Use or Disposal Practice (check one)	Pathogen Class and Reduction Alternative	Vector Attraction Reduction Option
<input type="checkbox"/> Land application of bulk sewage	<input type="checkbox"/> Not applicable	<input type="checkbox"/> Not applicable
<input checked="" type="checkbox"/> Land application of biosolids (bulk)	<input type="checkbox"/> Class A, Alternative 1	<input type="checkbox"/> Option 1
<input type="checkbox"/> Land application of biosolids (bags)	<input checked="" type="checkbox"/> Class A, Alternative 2	<input type="checkbox"/> Option 2
<input type="checkbox"/> Surface disposal in a landfill	<input type="checkbox"/> Class A, Alternative 3	<input type="checkbox"/> Option 3
<input type="checkbox"/> Other surface disposal	<input type="checkbox"/> Class A, Alternative 4	<input type="checkbox"/> Option 4
<input type="checkbox"/> Incineration	<input type="checkbox"/> Class A, Alternative 5	<input type="checkbox"/> Option 5
	<input type="checkbox"/> Class A, Alternative 6	<input checked="" type="checkbox"/> Option 6
	<input type="checkbox"/> Class B, Alternative 1	<input type="checkbox"/> Option 7
	<input type="checkbox"/> Class B, Alternative 2	<input type="checkbox"/> Option 8
	<input type="checkbox"/> Class B, Alternative 3	<input type="checkbox"/> Option 9
	<input type="checkbox"/> Class B, Alternative 4	<input type="checkbox"/> Option 10
	<input type="checkbox"/> Domestic septage, pH adjustment	<input type="checkbox"/> Option 11

2.9 Identify the treatment process(es) used at your facility to reduce pathogens in sewage sludge or reduce the vector attraction properties of sewage sludge? (Check all that apply.)

<input type="checkbox"/> Preliminary operations (e.g., sludge grinding and dewatering)	<input checked="" type="checkbox"/> Thickening (concentration)
<input checked="" type="checkbox"/> Stabilization	<input type="checkbox"/> Anaerobic digestion
<input type="checkbox"/> Composting	<input type="checkbox"/> Conditioning
<input type="checkbox"/> Disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization)	<input checked="" type="checkbox"/> Dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons)
<input type="checkbox"/> Heat drying	<input type="checkbox"/> Thermal reduction
<input type="checkbox"/> Methane or biogas capture and recovery	

2.10 Describe any other sewage sludge treatment or blending activities not identified in Items 2.8 and 2.9 (Part 2, Section 2) above.

Check here if you have attached the description to the application package.

Preparation of Sewage Sludge Meeting Ceiling and Pollutant Concentrations, Class A Pathogen Requirements, and One of Vector Attraction Reduction Options 1 to 8

2.11 Does the sewage sludge from your facility meet the ceiling concentrations in Table 1 of 40 CFR 503.13, the pollutant concentrations in Table 3 of 40 CFR 503.13, Class A pathogen reduction requirements at 40 CFR 503.32(a), and one of the vector attraction reduction requirements at 40 CFR 503.33(b)(1)-(8) and is it land applied?

Yes No → SKIP to Item 2.14 (Part 2, Section 2) below.

2.12 Total dry metric tons per 365-day period of sewage sludge subject to this subsection that is applied to the land: 751

2.13 Is sewage sludge subject to this subsection placed in bags or other containers for sale or give-away for application to the land?

Yes No

Check here once you have completed Items 2.11 to 2.13, then → SKIP to Item 2.32 (Part 2, Section 2) below.

Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge Continued

Sale or Give-Away in a Bag or Other Container for Application to the Land				
2.14	Do you place sewage sludge in a bag or other container for sale or give-away for land application? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 2.17 (Part 2, Section 2) below.			
2.15	Total dry metric tons per 365-day period of sewage sludge placed in a bag or other container at your facility for sale or give-away for application to the land:			
2.16	Attach a copy of all labels or notices that accompany the sewage sludge being sold or given away in a bag or other container for application to the land. <input type="checkbox"/> Check here to indicate that you have attached all labels or notices to this application package.			
<input type="checkbox"/> Check here once you have completed Items 2.14 to 2.16, then → SKIP to Part 2, Section 2, Item 2.32.				
Shipment Off Site for Treatment or Blending				
2.17	Does another facility provide treatment or blending of your facility's sewage sludge? (This question does not pertain to dewatered sludge sent directly to a land application or surface disposal site.) <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 2.32 (Part 2, Section 2) below.			
2.18	Indicate the total number of facilities that provide treatment or blending of your facility's sewage sludge. Provide the information in Items 2.19 to 2.26 (Part 2, Section 2) below for each facility. <input type="checkbox"/> Check here if you have attached additional sheets to the application package.			
2.19	Name of receiving facility			
	Mailing address (street or P.O. box)			
	City or town		State	ZIP code
	Contact name (first and last)	Title	Phone number	Email address
	Location address (street, route number, or other specific identifier)			<input type="checkbox"/> Same as mailing address
	City or town		State	ZIP code
2.20	Total dry metric tons per 365-day period of sewage sludge provided to receiving facility:			
2.21	Does the receiving facility provide additional treatment to reduce pathogens in sewage sludge from your facility or reduce the vector attraction properties of sewage sludge from your facility? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 2.24 (Part 2, Section 2) below.			
2.22	Indicate the pathogen class and reduction alternative and the vector attraction reduction option met for the sewage sludge at the receiving facility.			
	Pathogen Class and Reduction Alternative	Vector Attraction Reduction Option		
<input type="checkbox"/> Not applicable <input type="checkbox"/> Class A, Alternative 1 <input type="checkbox"/> Class A, Alternative 2 <input type="checkbox"/> Class A, Alternative 3 <input type="checkbox"/> Class A, Alternative 4 <input type="checkbox"/> Class A, Alternative 5 <input type="checkbox"/> Class A, Alternative 6 <input type="checkbox"/> Class B, Alternative 1 <input type="checkbox"/> Class B, Alternative 2 <input type="checkbox"/> Class B, Alternative 3 <input type="checkbox"/> Class B, Alternative 4 <input type="checkbox"/> Domestic septage, pH adjustment		<input type="checkbox"/> Not applicable <input type="checkbox"/> Option 1 <input type="checkbox"/> Option 2 <input type="checkbox"/> Option 3 <input type="checkbox"/> Option 4 <input type="checkbox"/> Option 5 <input type="checkbox"/> Option 6 <input type="checkbox"/> Option 7 <input type="checkbox"/> Option 8 <input type="checkbox"/> Option 9 <input type="checkbox"/> Option 10 <input type="checkbox"/> Option 11		

Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge Continued

2.23	Which treatment process(es) are used at the receiving facility to reduce pathogens in sewage sludge or reduce the vector attraction properties of sewage sludge from your facility? (Check all that apply.)	
	<input type="checkbox"/> Preliminary operations (e.g., sludge grinding and dewatering)	<input type="checkbox"/> Thickening (concentration)
	<input type="checkbox"/> Stabilization	<input type="checkbox"/> Anaerobic digestion
	<input type="checkbox"/> Composting	<input type="checkbox"/> Conditioning
	<input type="checkbox"/> Disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization)	<input type="checkbox"/> Dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons)
	<input type="checkbox"/> Heat drying	<input type="checkbox"/> Thermal reduction
	<input type="checkbox"/> Methane or biogas capture and recovery	<input type="checkbox"/> Other (specify) _____
2.24	Attach a copy of any information you provide the receiving facility to comply with the "notice and necessary information" requirement of 40 CFR 503.12(g). <input type="checkbox"/> Check here to indicate that you have attached material.	
2.25	Does the receiving facility place sewage sludge from your facility in a bag or other container for sale or give-away for application to the land? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 2.32 (Part 2, Section 2) below.	
2.26	Attach a copy of all labels or notices that accompany the product being sold or given away. <input type="checkbox"/> Check here to indicate that you have attached material.	
<input type="checkbox"/> Check here once you have completed Items 2.17 to 2.26 (Part 2, Section 2), then → SKIP to Item 2.32 (Part 2, Section 2) below.		
Land Application of Bulk Sewage Sludge		
2.27	Is sewage sludge from your facility applied to the land? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 2.32 (Part 2, Section 2) below.	
2.28	Total dry metric tons per 365-day period of sewage sludge applied to all land application sites:	
2.29	Did you identify all land application sites in Part 2, Section 3 of this application? <input type="checkbox"/> Yes <input type="checkbox"/> No → Submit a copy of the land application plan with your application.	
2.30	Are any land application sites located in states other than the state where you generate sewage sludge or derive a material from sewage sludge? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 2.32 (Part 2, Section 2) below.	
2.31	Describe how you notify the NPDES permitting authority for the states where the land application sites are located. Attach a copy of the notification. <input type="checkbox"/> Check here if you have attached the explanation to the application package. <input type="checkbox"/> Check here if you have attached the notification to the application package.	
Surface Disposal		
2.32	Is sewage sludge from your facility placed on a surface disposal site? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 2.39 (Part 2, Section 2) below.	
2.33	Total dry metric tons of sewage sludge from your facility placed on all surface disposal sites per 365-day period:	
2.34	Do you own or operate all surface disposal sites to which you send sewage sludge for disposal? <input type="checkbox"/> Yes → SKIP to Item 2.39 (Part 2, Section 2) below. <input type="checkbox"/> No	
2.35	Indicate the total number of surface disposal sites to which you send your sewage sludge. (Provide the information in Items 2.36 to 2.38 of Part 2, Section 2, for each facility.) <input type="checkbox"/> Check here if you have attached additional sheets to the application package.	

Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge Continued

2.36	Site name or number of surface disposal site you do not own or operate			
	Mailing address (street or P.O. box)			
	City or Town		State	ZIP Code
	Contact Name (first and last)	Title	Phone Number	Email Address
2.37	Site Contact (Check all that apply.) <input type="checkbox"/> Owner <input type="checkbox"/> Operator			
2.38	Total dry metric tons of sewage sludge from your facility placed on this surface disposal site per 365-day period:			
Incineration				
2.39	Is sewage sludge from your facility fired in a sewage sludge incinerator? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 2.46 (Part 2, Section 2) below.			
2.40	Total dry metric tons of sewage sludge from your facility fired in all sewage sludge incinerators per 365-day period:			
2.41	Do you own or operate all sewage sludge incinerators in which sewage sludge from your facility is fired? <input type="checkbox"/> Yes → SKIP to Item 2.46 (Part 2, Section 2) below. <input type="checkbox"/> No			
2.42	Indicate the total number of sewage sludge incinerators used that you do not own or operate. (Provide the information in Items 2.43 to 2.45 directly below for each facility.) <input type="checkbox"/> Check here if you have attached additional sheets to the application package.			
2.43	Incinerator name or number			
	Mailing address (street or P.O. box)			
	City or town		State	ZIP code
	Contact name (first and last)	Title	Phone number	Email address
	Location address (street, route number, or other specific identifier)			<input type="checkbox"/> Same as mailing address
	City or town		State	ZIP code
2.44	Contact (check all that apply) <input type="checkbox"/> Incinerator owner <input type="checkbox"/> Incinerator operator			
2.45	Total dry metric tons of sewage sludge from your facility fired in this sewage sludge incinerator per 365-day period:			
Disposal in a Municipal Solid Waste Landfill				
2.46	Is sewage sludge from your facility placed on a municipal solid waste landfill? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Part 2, Section 3.			
2.47	Indicate the total number of municipal solid waste landfills used. (Provide the information in Items 2.48 to 2.52 directly below for each facility.) <input type="checkbox"/> Check here if you have attached additional sheets to the application package.			

Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge Continued	2.48	Name of landfill			
		Mailing address (street or P.O. box)			
		City or town		State	ZIP code
		Contact name (first and last)	Title	Phone number	Email address
		Location address (street, route number, or other specific identifier)			<input type="checkbox"/> Same as mailing address
		County	County code		<input type="checkbox"/> Not available
		City or town	State	ZIP code	
	2.49	Total dry metric tons of sewage sludge from your facility placed in this municipal solid waste landfill per 365-day period:			
	2.50	List the numbers of all other federal, state, and local permits that regulate the operation of this municipal solid waste landfill.			
		Permit Number	Type of Permit		
2.51	Attach to the application information to determine whether the sewage sludge meets applicable requirements for disposal of sewage sludge in a municipal solid waste landfill (e.g., results of paint filter liquids test and TCLP test). <input type="checkbox"/> Check here to indicate you have attached the requested information.				
2.52	Does the municipal solid waste landfill comply with applicable criteria set forth in 40 CFR 258? <input type="checkbox"/> Yes <input type="checkbox"/> No				

PART 2, SECTION 3 LAND APPLICATION OF BULK SEWAGE SLUDGE (40 CFR 122.21(q)(9))

Land Application of Bulk Sewage Sludge

3.1	Does your facility apply sewage sludge to land? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Part 2, Section 4.
3.2	Do any of the following conditions apply? <ul style="list-style-type: none"> The sewage sludge meets the ceiling concentrations in Table 1 of 40 CFR 503.12, the pollutant concentrations in Table 3 of 40 CFR 503.13, Class A pathogen reduction requirements at 40 CFR 503.32(a), and one of the vector attraction reduction requirements at 40 CFR 503.33(b)(1)–(8); The sewage sludge is sold or given away in a bag or other container for application to the land; or You provide the sewage sludge to another facility for treatment or blending. <input checked="" type="checkbox"/> Yes → SKIP to Part 2, Section 4. <input type="checkbox"/> No
3.3	Complete Section 3 for every site on which the sewage sludge is applied. <input type="checkbox"/> Check here if you have attached sheets to the application package for one or more land application sites.
Identification of Land Application Site	
3.4	Site name or number
	Location address (street, route number, or other specific identifier) <input type="checkbox"/> Same as mailing address
	County <input type="checkbox"/> Not available
	County code <input type="checkbox"/> Not available
	City or town State ZIP code
	Latitude/Longitude of Land Application Site (see instructions)
	Latitude Longitude
	Method of Determination
	<input type="checkbox"/> USGS map <input type="checkbox"/> Field survey <input type="checkbox"/> Other (specify) _____
3.5	Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location. <input type="checkbox"/> Check here to indicate you have attached a topographic map for this site.
Owner Information	
3.6	Are you the owner of this land application site? <input type="checkbox"/> Yes → SKIP to Item 3.8 (Part 2, Section 3) below. <input type="checkbox"/> No
3.7	Owner name
	Mailing address (street or P.O. box)
	City or town State ZIP code
	Contact name (first and last) Title Phone number Email address
Applier Information	
3.8	Are you the person who applies, or who is responsible for application of, sewage sludge to this land application site? <input type="checkbox"/> Yes → SKIP to Item 3.10 (Part 2, Section 3) below. <input type="checkbox"/> No
3.9	Applier's name
	Mailing address (street or P.O. box)
	City or town State ZIP code
	Contact name (first and last) Title Phone number Email address

Site Type

- 3.10 Type of land application:
- Agricultural land Forest
- Reclamation site Public contact site
- Other (describe)

Crop or Other Vegetation Grown on Site

3.11 What type of crop or other vegetation is grown on this site?

3.12 What is the nitrogen requirement for this crop or vegetation?

Vector Attraction Reduction

3.13 Are the vector attraction reduction requirements at 40 CFR 503.33(b)(9) and (b)(10) met when sewage sludge is applied to the land application site?

Yes No → SKIP to Item 3.16 (Part 2, Section 3) below.

3.14 Indicate which vector attraction reduction option is met. (Check only one response.)

Option 9 (injection below land surface) Option 10 (incorporation into soil within 6 hours)

3.15 Describe any treatment processes used at the land application site to reduce vector attraction properties of sewage sludge.

Check here if you have attached your description to the application package.

Cumulative Loadings and Remaining Allotments

3.16 Is the sewage sludge applied to this site since July 20, 1993, subject to the cumulative pollutant loading rates (CPLRs) in 40 CFR 503.13(b)(2)?

Yes No → SKIP to Part 2, Section 4.

3.17 Have you contacted the NPDES permitting authority in the state where the bulk sewage sludge subject to CPLRs will be applied to ascertain whether bulk sewage sludge subject to CPLRs has been applied to this site on or since July 20, 1993?

Yes No → Sewage sludge subject to CPLRs may not be applied to this site. SKIP to Part 2, Section 4.

3.18 Provide the following information about your NPDES permitting authority:

NPDES permitting authority name

Contact person

Telephone number

Email address

3.19 Based on your inquiry, has bulk sewage sludge subject to CPLRs been applied to this site since July 20, 1993?

Yes No → SKIP to Part 2, Section 4.

3.20 Provide the following information for every facility other than yours that is sending, or has sent, bulk sewage sludge subject to CPLRs to this site since July 20, 1993. If more than one such facility sends sewage sludge to this site, attach additional pages as necessary.

Check here to indicate that additional pages are attached.

Facility name

Mailing address (street or P.O. box)

City or town

State

ZIP code

Contact name (first and last)

Title

Phone number

Email address

Land Application of Bulk Sewage Sludge Continued

PART 2, SECTION 4 SURFACE DISPOSAL (40 CFR 122.21(q)(10))

Surface Disposal

4.1	Do you own or operate a surface disposal site? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Part 2, Section 5.		
4.2	Complete all items in Section 4 for each active sewage sludge unit that you own or operate. <input type="checkbox"/> Check here to indicate that you have attached material to the application package for one or more active sewage sludge units.		
Information on Active Sewage Sludge Units			
4.3	Unit name or number		
	Mailing address (street or P.O. box)		
	City or town	State	ZIP code
	Contact name (first and last)	Title	Phone number Email address
	Location address (street, route number, or other specific identifier)		<input type="checkbox"/> Same as mailing address
	County	County code	<input type="checkbox"/> Not available
	City or town	State	ZIP code
Latitude/Longitude of Active Sewage Sludge Unit (see instructions)			
	Latitude		Longitude
	. ' "		. ' "
Method of Determination			
	<input type="checkbox"/> USGS map <input type="checkbox"/> Field survey <input type="checkbox"/> Other (specify) _____		
4.4	Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location. <input type="checkbox"/> Check here to indicate that you have completed and attached a topographic map.		
4.5	Total dry metric tons of sewage sludge placed on the active sewage sludge unit per 365-day period:		
4.6	Total dry metric tons of sewage sludge placed on the active sewage sludge unit over the life of the unit:		
4.7	Does the active sewage sludge unit have a liner with a maximum permeability of 1×10^{-7} centimeters per second (cm/sec)? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 4.9 (Part 2, Section 4) below.		
4.8	Describe the liner. <input type="checkbox"/> Check here to indicate that you have attached a description to the application package.		
4.9	Does the active sewage sludge unit have a leachate collection system? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 4.11 (Part 2, Section 4) below.		
4.10	Describe the leachate collection system and the method used for leachate disposal and provide the numbers of any federal, state, or local permit(s) for leachate disposal. <input type="checkbox"/> Check here to indicate that you have attached the description to the application package.		

Surface Disposal Continued

4.11	Is the boundary of the active sewage sludge unit less than 150 meters from the property line of the surface disposal site?		
	<input type="checkbox"/> Yes	<input type="checkbox"/> No → SKIP to Item 4.13 (Part 2, Section 4) below.	
4.12	Provide the actual distance in meters:	_____ meters	
4.13	Remaining capacity of active sewage sludge unit in dry metric tons:	_____ dry metric tons	
4.14	Anticipated closure date for active sewage sludge unit, if known (MM/DD/YYYY): _____		
4.15	Attach a copy of any closure plan that has been developed for this active sewage sludge unit. <input type="checkbox"/> Check here to indicate that you have attached a copy of the closure plan to the application package.		
Sewage Sludge from Other Facilities			
4.16	Is sewage sludge sent to this active sewage sludge unit from any facilities other than your facility?		
	<input type="checkbox"/> Yes	<input type="checkbox"/> No → SKIP to Item 4.21 (Part 2, Section 4) below.	
4.17	Indicate the total number of facilities (other than your facility) that send sewage sludge to this active sewage sludge unit. (Complete Items 4.18 to 4.20 directly below for each such facility.) <input type="checkbox"/> Check here to indicate that you have attached responses for each facility to the application package.		
4.18	Facility name		
	Mailing address (street or P.O. box)		
	City or town	State	ZIP code
	Contact name (first and last)	Title	Phone number Email address
4.19	Indicate the pathogen class and reduction alternative and the vector attraction reduction option met for the sewage sludge before leaving the other facility.		
	Pathogen Class and Reduction Alternative	Vector Attraction Reduction Option	
	<input type="checkbox"/> Not applicable	<input type="checkbox"/> Not applicable	
	<input type="checkbox"/> Class A, Alternative 1	<input type="checkbox"/> Option 1	
	<input type="checkbox"/> Class A, Alternative 2	<input type="checkbox"/> Option 2	
	<input type="checkbox"/> Class A, Alternative 3	<input type="checkbox"/> Option 3	
	<input type="checkbox"/> Class A, Alternative 4	<input type="checkbox"/> Option 4	
	<input type="checkbox"/> Class A, Alternative 5	<input type="checkbox"/> Option 5	
	<input type="checkbox"/> Class A, Alternative 6	<input type="checkbox"/> Option 6	
	<input type="checkbox"/> Class B, Alternative 1	<input type="checkbox"/> Option 7	
	<input type="checkbox"/> Class B, Alternative 2	<input type="checkbox"/> Option 8	
	<input type="checkbox"/> Class B, Alternative 3	<input type="checkbox"/> Option 9	
	<input type="checkbox"/> Class B, Alternative 4	<input type="checkbox"/> Option 10	
	<input type="checkbox"/> Domestic septage, pH adjustment	<input type="checkbox"/> Option 11	
4.20	Which treatment process(es) are used at the other facility to reduce pathogens in sewage sludge or reduce the vector attraction properties of sewage sludge before leaving the other facility? (Check all that apply.)		
	<input type="checkbox"/> Preliminary operations (e.g., sludge grinding and degritting)	<input type="checkbox"/> Thickening (concentration)	
	<input type="checkbox"/> Stabilization	<input type="checkbox"/> Anaerobic digestion	
	<input type="checkbox"/> Composting	<input type="checkbox"/> Conditioning	
	<input type="checkbox"/> Disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization)	<input type="checkbox"/> Dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons)	
	<input type="checkbox"/> Heat drying	<input type="checkbox"/> Thermal reduction	
	<input type="checkbox"/> Methane or biogas capture and recovery	<input type="checkbox"/> Other (specify) _____	

Vector Attraction Reduction

- 4.21 Which vector attraction reduction option, if any, is met when sewage sludge is placed on this active sewage sludge unit?
- Option 9 (Injection below and surface) Option 11 (Covering active sewage sludge unit daily)
- Option 10 (Incorporation into soil within 6 hours) None

- 4.22 Describe any treatment processes used at the active sewage sludge unit to reduce vector attraction properties of sewage sludge.
- Check here if you have attached your description to the application package.

Groundwater Monitoring

- 4.23 Is groundwater monitoring currently conducted at this active sewage sludge unit, or are groundwater monitoring data otherwise available for this active sewage sludge unit?
- Yes No → SKIP to Item 4.26 (Part 2, Section 4) below.

- 4.24 Provide a copy of available groundwater monitoring data.
- Check here to indicate you have attached the monitoring data.

- 4.25 Describe the well locations, the approximate depth to groundwater, and the groundwater monitoring procedures used to obtain these data.
- Check here if you have attached your description to the application package.

- 4.26 Has a groundwater monitoring program been prepared for this active sewage sludge unit?
- Yes No → SKIP to Item 4.28 (Part 2, Section 4) below.

- 4.27 Submit a copy of the groundwater monitoring program with this permit application.
- Check here to indicate you have attached the monitoring program.

- 4.28 Have you obtained a certification from a qualified groundwater scientist that the aquifer below the active sewage sludge unit has not been contaminated?
- Yes No → SKIP to Item 4.30 (Part 2, Section 4) below.

- 4.29 Submit a copy of the certification with this permit application.
- Check here to indicate you have attached the certification to the application package.

Site-Specific Limits

- 4.30 Are you seeking site-specific pollutant limits for the sewage sludge placed on the active sewage sludge unit?
- Yes No → SKIP to Part 2, Section 5.

- 4.31 Submit information to support the request for site-specific pollutant limits with this application.
- Check here to indicate you have attached the requested information.

Surface Disposal Continued

PART 2, SECTION 5 INCINERATION (40 CFR 122.21(q)(11))**Incinerator Information**

5.1	Do you fire sewage sludge in a sewage sludge incinerator? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to END.	
5.2	Indicate the total number of incinerators used at your facility. (Complete the remainder of Section 5 for each such incinerator.) <input type="checkbox"/> Check here to indicate that you have attached information for one or more incinerators.	
5.3	Incinerator name or number	
	Location address (street, route number, or other specific identifier)	
	County	County code <input type="checkbox"/> Not available
	City or town	State ZIP code
	Latitude/Longitude of Incinerator (see instructions)	
	Latitude	Longitude
	° ' "	° ' "
	Method of Determination	
	<input type="checkbox"/> USGS map <input type="checkbox"/> Field survey <input type="checkbox"/> Other (specify) _____	
Amount Fired		
5.4	Dry metric tons per 365-day period of sewage sludge fired in the sewage sludge incinerator:	
Beryllium NESHAP		
5.5	Submit information, test data, and a description of measures taken that demonstrate whether the sewage sludge incinerated is beryllium-containing waste and will continue to remain as such. <input type="checkbox"/> Check here to indicate that you have attached this material to the application package.	
5.6	Is the sewage sludge fired in this incinerator "beryllium-containing waste" as defined at 40 CFR 61.31? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 5.8 (Part 2, Section 5) below.	
5.7	Submit with this application a complete report of the latest beryllium emission rate testing <i>and</i> documentation of ongoing incinerator operating parameters indicating that the NESHAP emission rate limit for beryllium has been and will continue to be met. <input type="checkbox"/> Check here to indicate that you have attached this information.	
Mercury NESHAP		
5.8	Is compliance with the mercury NESHAP being demonstrated via stack testing? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 5.11 (Part 2, Section 5) below.	
5.9	Submit a complete report of stack testing and documentation of ongoing incinerator operating parameters indicating that the incinerator has met and will continue to meet the mercury NESHAP emission rate limit. <input type="checkbox"/> Check here to indicate that you have attached this information.	
5.10	Provide copies of mercury emission rate tests for the two most recent years in which testing was conducted. <input type="checkbox"/> Check here to indicate that you have attached this information.	
5.11	Do you demonstrate compliance with the mercury NESHAP by sewage sludge sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 5.13 (Part 2, Section 5) below.	
5.12	Submit a complete report of sewage sludge sampling and documentation of ongoing incinerator operating parameters indicating that the incinerator has met and will continue to meet the mercury NESHAP emission rate limit. <input type="checkbox"/> Check here to indicate that you have attached this information.	

Incineration

Dispersion Factor

5.13	Dispersion factor in micrograms/cubic meter per gram/second:	
5.14	Name and type of dispersion model:	
5.15	Submit a copy of the modeling results and supporting documentation. <input type="checkbox"/> Check here to indicate that you have attached this information.	

Control Efficiency

5.16	Provide the control efficiency, in hundredths, for each of the pollutants listed below.	
	Pollutant	Control Efficiency, in Hundredths
	Arsenic	
	Cadmium	
	Chromium	
	Lead	
	Nickel	
5.17	Attach a copy of the results or performance testing and supporting documentation (including testing dates). <input type="checkbox"/> Check here to indicate that you have attached this information.	

Risk-Specific Concentration for Chromium

5.18	Provide the risk-specific concentration (RSC) used for chromium in micrograms per cubic meter:	
5.19	Was the RSC determined via Table 2 in 40 CFR 503.43? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 5.21 (Part 2, Section 5) below.	
5.20	Identify the type of incinerator used as the basis. <input type="checkbox"/> Fluidized bed with wet scrubber <input type="checkbox"/> Other types with wet scrubber <input type="checkbox"/> Fluidized bed with wet scrubber and wet electrostatic precipitator <input type="checkbox"/> Other types with wet scrubber and wet electrostatic precipitator	
5.21	Was the RSC determined via Table 6 in 40 CFR 503.43 (site-specific determination)? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 5.23 (Part 2, Section 5) below.	
5.22	Provide the decimal fraction of hexavalent chromium concentration to total chromium concentration in stack exit gas:	
5.23	Attach the results of incinerator stack tests for hexavalent and total chromium concentrations, including the date(s) of any test(s), with this application. <input type="checkbox"/> Check here to indicate that you have attached this information. <input type="checkbox"/> Not applicable	

Incinerator Parameters

5.24	Do you monitor total hydrocarbons (THC) in the exit gas of the sewage sludge incinerator? <input type="checkbox"/> Yes <input type="checkbox"/> No	
5.25	Do you monitor carbon monoxide (CO) in the exit gas of the sewage sludge incinerator? <input type="checkbox"/> Yes <input type="checkbox"/> No	
5.26	Indicate the type of sewage sludge incinerator.	
5.27	Incinerator stack height in meters:	
5.28	Indicate whether the value submitted in Item 5.27 is (check only one response): <input type="checkbox"/> Actual stack height <input type="checkbox"/> Creditable stack height	

Incineration Continued

EPA Form 2S – Part 2 Section 1.15 Attachment

Waste sludge is pumped from the clarifiers to one of two aerobic sludge digesters. Sludge is thickened by periodically shutting off air to allow settlement and removal of supernatant. Greensouth Solutions LLC further processes the thickened sludge into Class A, EQ sludge by lime addition and the use of a belt press prior to trucking the sludge off site. Greensouth mobilizes to the Orange Beach Wastewater Treatment Plant to process and remove sludge on an as needed basis.



EPA's sewage sludge regulations require certain publicly owned treatment works (POTWs) and Class I sewage sludge management facilities to submit to a Sewage Sludge (Biosolids) Annual Report (see 40 CFR 503.18 (https://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_118), 503.28 (https://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_128), 503.48 (https://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_148)). Facilities that must submit a Sewage Sludge (Biosolids) Annual Report include POTWs with a design flow rate equal to or greater than one million gallons per day, POTWs that serve 10,000 people or more, Class I Sludge Management Facilities (as defined by 40 CFR 503.9 (https://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_19)), and facilities otherwise required to file this report (e.g., permit condition, enforcement action, state law). This is the electronic form for Sewage Sludge (Biosolids) Annual Report filers to use if they are located in one of the states, tribes, or territories (<https://www.epa.gov/npdes/npdes-state-program-information>) where EPA administers the Federal biosolids program.

For the purposes of this form, the term 'sewage sludge' (https://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_19) also refers to the material that is commonly referred to as 'biosolids'. EPA does not have a regulatory definition for biosolids but this material is commonly referred to as sewage sludge that is placed on, or applied to the land to use the beneficial properties of the material as a soil amendment, conditioner, or fertilizer. EPA's use of the term 'biosolids' in this form is to confirm that information about beneficially used sewage sludge (a.k.a. biosolids) should be reported on this form.

Public Availability of Information Submitted on and with General Permit Reports

EPA may make all the information submitted through this form (including all attachments) available to the public without further notice to you. Do not use this online form to submit personal information (e.g., non-business cell phone number or non-business email address), confidential business information (CBI), or if you intend to assert a CBI claim on any of the submitted information. Pursuant to 40 CFR 2.203(a), EPA is providing you with notice that all CBI claims must be asserted at the time of submission. EPA cannot accommodate a late CBI claim to cover previously submitted information because efforts to protect the information are not administratively practicable since it may already be disclosed to the public. Although we do not foresee a need for persons to assert a claim of CBI based on the types of information requested in this form, if persons wish to assert a CBI claim we direct submitters to contact the NPDES eReporting Help Desk (NPDESereporting@epa.gov (mailto:NPDESereporting@epa.gov)) for further guidance.

Please note that EPA may contact you after you submit this report for more information regarding your sewage sludge management program.

This collection of information is approved by OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. (OMB Control No. 2040-0004). Responses to this collection of information are mandatory in accordance with EPA regulations (40 CFR 503.18, 503.28, and 503.48). An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The public reporting and recordkeeping burden for this collection of information are estimated to average 3 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates and any suggested methods for minimizing respondent burden including through the use of automated collection techniques to the Director, Regulatory Support Division, U.S. Environmental Protection Agency (2621T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

Facility Information

Facility Name: CITY OF ORANGE BEACH

NPDES ID: ALL081124

Program Information

Please select all of the following that apply to your obligation to submit a Sewage Sludge (Biosolids) Annual Report in compliance with 40 CFR part 503. The facility is:

- a POTW with a design flow rate equal to or greater than one million gallons per day

In the reporting period, did you manage your sewage sludge or biosolids using any of the following management practices: land application, surface disposal, or incineration?

YES NO

If your facility is a POTW, please provide the estimated total amount of sewage sludge produced at your facility for the reporting period (in dry metric tons). If your facility is not a POTW, please provide the estimated total amount of biosolids produced at your facility for the reporting period (in dry metric tons).

751.38

Reporting Period Start Date: 01/01/2021

Reporting Period End Date: 12/31/2021

Treatment Processes

Processes to Significantly Reduce Pathogens (PSRP):

Aerobic Digestion

Lime Stabilization

Processes to Further Reduce Pathogens (PFRP):

Physical Treatment Options:

Thickening (e.g., Gravity and/or Flotation Thickening, Centrifugation, Belt Filter Press, Vacuum Filter, Screw Press)

Other Processes to Manage Sewage Sludge:

Analytical Methods

Did you or your facility collect sewage sludge or biosolids samples for laboratory analysis? YES NO

Analytical Methods

- EPA Method 6010 - Arsenic (ICP-OES)
- EPA Method 6010 - Cadmium (ICP-OES)
- EPA Method 6010 - Chromium (ICP-OES)
- EPA Method 6010 - Copper (ICP-OES)
- EPA Method 6010 - Lead (ICP-OES)
- EPA Method 7471 - Mercury (CVAA)
- EPA Method 6010 - Molybdenum (ICP-OES)
- EPA Method 6010 - Nickel (ICP-OES)
- EPA Method 6010 - Selenium (ICP-OES)
- EPA Method 6010 - Zinc (ICP-OES)
- EPA Method 6010 - Beryllium (ICP-OES)
- EPA Method 351.2 - Total Kjeldahl Nitrogen
- Standard Method 4500-NH3 - Ammonia Nitrogen
- Standard Method 2540 - Total Solids
- Standard Method 2540 - Volatile Solids
- EPA Method 9045 - pH (> 7% solids)
- Standard Method 9221 - Fecal coliform

Sludge Management - Land Application

ID: 001

Amount: 751.38

Management Practice Detail: Agricultural Land Application

Bulk or Bag/Container: Bulk

Handler, Preparer, or Applier Type: Off-Site Third-Party Preparer

NPDES ID of handler:

Facility Information:

Greensouth Solutions LLC
30043 Edwards Road
Florala, AL 36442
US

Contact Information:

Dale Powell
Owner
334-858-2622

Pathogen Class: Class A

Sewage Sludge or Biosolids Pathogen Reduction Options:

- Class A-Alternative 2: pH/Temperature/Percent Solids

Sewage Sludge or Biosolids Vector Attraction Reduction Options:

- Option 6 - Alkaline Treatment

Did the facility land apply bulk sewage sludge when one or more pollutants in the sewage sludge exceeded 90 percent or more of any of the cumulative pollutant loading rates in Table 2 of 40 CFR 503.13?

YES NO UNKNOWN

Monitoring Data

INSTRUCTIONS: Pollutants, pathogen densities, and vector attraction reduction must be monitored when sewage sludge or biosolids are applied to the land. Please use the following section to report monitoring data for the land application conducted by you or your facility in the reporting period for this SSUID. These monitoring data should be representative of the sewage sludge or biosolids that was applied to land during the compliance monitoring period for this SSUID (40 CFR 503.8(a) (http://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_18)). All pollutant monitoring data should be reported in milligrams per kilogram (mg/kg), dry weight basis. EPA will be using these data to demonstrate compliance with EPA's land application requirements (40 CFR 503, Subpart B).

Compliance Monitoring Periods

INSTRUCTIONS: Please use the table below to identify the start date and end date for each compliance monitoring period. The number of compliance monitoring periods reported will correspond to the required frequency of monitoring (monthly, quarterly, semi-annually, or annually). For example, if monthly monitoring is required, you should report 12 compliance monitoring periods. The required frequency is determined by the number of metric tons (dry weight basis) of sewage sludge or biosolids land applied in the reporting period for this SSUID (40 CFR 503.16 (http://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_116)).

Compliance Monitoring Event No. 1 Compliance Monitoring Period Start Date: 01/01/2021 Compliance Monitoring Period End Date: 03/31/2021

Do you have analytical results to report for this monitoring period? YES NO

Are you reporting maximum pollutant concentrations that are equivalent to the monthly average pollutant concentrations for this compliance monitoring event? [For example, this will be the case if you only collected and analyzed one sample of sewage sludge or biosolids for this compliance monitoring period.]

YES NO

Maximum Concentration Data for All Sewage Sludge or Biosolids Applied to Land

This section summarizes the maximum pollutant concentrations in the biosolids or sewage sludge that was applied to land during the compliance monitoring period for this SSUID. In accordance with 40 CFR 503.13(a) (http://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_113), EPA's regulations prohibit land application of bulk sewage sludge or sewage sludge sold or gave away sewage sludge in a bag or other container when one or more sewage sludge pollutant concentrations in the sewage sludge exceed a land application ceiling pollutant limit (Table 1 of 40 CFR 503.13 (http://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_113)). EPA will compare the pollutant concentrations in this section against the ceiling concentration limits in Table 1 of 40 CFR 503.13 (http://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_113) to identify noncompliance events. All pollutant monitoring data should be reported in milligrams per kilogram (mg/kg), dry weight basis.

Please only select a "No Data Indicator Code" if you are reporting no data for the sampling period or particular parameter.

Sewage Sludge or Biosolids Parameter	Value Qualifier	Parameter Concentration (mg/kg, dry-weight basis or Pass/Fail)	If No Data, Select One Of The Following
Arsenic	<	4	
Cadmium	<	2	
Copper	=	19.2	
Lead	<	2	
Mercury	=	0.038	
Molybdenum	<	4	
Nickel	<	15.9	
Selenium	<	7.9	
Zinc	=	132	

Pathogen And Vector Attraction Reduction

Report the pathogen densities in the sewage sludge or biosolids that was applied to land during the reporting year for this SSUID. Please report the maximum pathogen density for Class A sewage sludge or biosolids. When using the Class B – Alternative 1 management option, please report the geometric mean of the density of fecal coliform in Class B sewage sludge or biosolids [see 40 CFR 503.32(b)(2)].

Sewage Sludge or Biosolids Parameter	Value Qualifier	Value	If No Data, Select One Of The Following
Fecal Coliform	<	614.54	
Salmonella			B (No Sampling or Analysis Conducted due to Laboratory Error)

Monthly Average Pollutant Concentration Data for All Sewage Sludge or Biosolids Applied to Land

This section summarizes the monthly average pollutant concentrations in the biosolids or sewage sludge that was applied to land during the compliance monitoring period for this SSUID. All pollutant monitoring data should be reported in milligrams per kilogram (mg/kg), dry weight basis.

Sewage Sludge or Biosolids Parameter	Value Qualifier	Parameter Concentration (mg/kg, dry-weight basis or Pass/Fail)	If No Data, Select One Of The Following
Arsenic	<	4	
Cadmium	<	2	
Copper	=	19.2	
Lead	<	2	
Mercury	=	0.038	
Nickel	<	15.9	
Selenium	<	7.9	
Zinc	=	132	

Report the average concentration (mg/kg, dry weight basis) of Total Nitrogen (TKN plus Nitrate-Nitrite, as N) in the sewage sludge or biosolids that was applied to land during the compliance monitoring period for this SSUID.

Sewage Sludge or Biosolids Parameter	Value Qualifier	Parameter Concentration (mg/kg, dry-weight basis)	If No Data, Select One Of The Following
Total Nitrogen (TKN plus Nitrate-Nitrite)	=	7200	

Compliance Monitoring Event No. 2

Compliance Monitoring Period Start Date:
04/01/2021

Compliance Monitoring Period End Date:
06/30/2021

Do you have analytical results to report for this monitoring period? YES NO

Are you reporting maximum pollutant concentrations that are equivalent to the monthly average pollutant concentrations for this compliance monitoring event? [For example, this will be the case if you only collected and analyzed one sample of sewage sludge or biosolids for this compliance monitoring period.]

YES NO

Maximum Concentration Data for All Sewage Sludge or Biosolids Applied to Land

This section summarizes the maximum pollutant concentrations in the biosolids or sewage sludge that was applied to land during the compliance monitoring period for this SSUID. In accordance with 40 CFR 503.13(a) (http://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_113), EPA's regulations prohibit land application of bulk sewage sludge or sewage sludge sold or gave away sewage sludge in a bag or other container when one or more sewage sludge pollutant concentrations in the sewage sludge exceed a land application ceiling pollutant limit (Table 1 of 40 CFR 503.13 (http://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_113)). EPA will compare the pollutant concentrations in this section against the ceiling concentration limits in Table 1 of 40 CFR 503.13 (http://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_113) to identify noncompliance events. All pollutant monitoring data should be reported in milligrams per kilogram (mg/kg), dry weight basis.

Please only select a "No Data Indicator Code" if you are reporting no data for the sampling period or particular parameter.

Sewage Sludge or Biosolids Parameter	Value Qualifier	Parameter Concentration (mg/kg, dry-weight basis or Pass/Fail)	If No Data, Select One Of The Following
Arsenic	<	3	
Cadmium	<	1.5	
-		---	

Copper	=	28.2
Lead	<	1.5
Mercury	=	0.055
Molybdenum	<	3
Nickel	<	12
Selenium	<	6
Zinc	=	150

Pathogen And Vector Attraction Reduction

Report the pathogen densities in the sewage sludge or biosolids that was applied to land during the reporting year for this SSUID. Please report the maximum pathogen density for Class A sewage sludge or biosolids. When using the Class B – Alternative 1 management option, please report the geometric mean of the density of fecal coliform in Class B sewage sludge or biosolids [see 40 CFR 503.32(b)(2)].

Sewage Sludge or Biosolids Parameter	Value Qualifier	Value	If No Data, Select One Of The Following
Fecal Coliform	<	6.8834	
Salmonella			B (No Sampling or Analysis Conducted due to Laboratory Error)

Monthly Average Pollutant Concentration Data for All Sewage Sludge or Biosolids Applied to Land

This section summarizes the monthly average pollutant concentrations in the biosolids or sewage sludge that was applied to land during the compliance monitoring period for this SSUID. All pollutant monitoring data should be reported in milligrams per kilogram (mg/kg), dry weight basis.

Sewage Sludge or Biosolids Parameter	Value Qualifier	Parameter Concentration (mg/kg, dry-weight basis or Pass/Fail)	If No Data, Select One Of The Following
Arsenic	<	3	
Cadmium	<	1.5	
Copper	=	28.2	
Lead	<	1.5	
Mercury	=	0.055	
Nickel	<	12	
Selenium	<	6	
Zinc	=	150	

Report the average concentration (mg/kg, dry weight basis) of Total Nitrogen (TKN plus Nitrate-Nitrite, as N) in the sewage sludge or biosolids that was applied to land during the compliance monitoring period for this SSUID.

Sewage Sludge or Biosolids Parameter	Value Qualifier	Parameter Concentration (mg/kg, dry-weight basis)	If No Data, Select One Of The Following
Total Nitrogen (TKN plus Nitrate-Nitrite)	=	6110	

Compliance Monitoring Event No. 3

Compliance Monitoring Period Start Date:
07/01/2021

Compliance Monitoring Period End Date:
08/30/2021

Do you have analytical results to report for this monitoring period? YES NO

Are you reporting maximum pollutant concentrations that are equivalent to the monthly average pollutant concentrations for this compliance monitoring event? [For example, this will be the case if you only collected and analyzed one sample of sewage sludge or biosolids for this compliance monitoring period.]

YES NO

Maximum Concentration Data for All Sewage Sludge or Biosolids Applied to Land

This section summarizes the maximum pollutant concentrations in the biosolids or sewage sludge that was applied to land during the compliance monitoring period for this SSUID. In accordance with 40 CFR 503.13(a) (http://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_113), EPA's regulations prohibit land application of bulk sewage sludge or sewage sludge sold or gave away sewage sludge in a bag or other container when one or more sewage sludge pollutant concentrations in the sewage sludge exceed a land application ceiling pollutant limit (Table 1 of 40 CFR 503.13 (http://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_113)). EPA will compare the pollutant concentrations in this section against the ceiling concentration limits in Table 1 of 40 CFR 503.13 (http://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_113) to identify noncompliance events. All pollutant monitoring data should be reported in milligrams per kilogram (mg/kg), dry weight basis.

Please only select a "No Data Indicator Code" if you are reporting no data for the sampling period or particular parameter.

Sewage Sludge or Biosolids Parameter	Value Qualifier	Parameter Concentration (mg/kg, dry-weight basis or Pass/Fail)	If No Data, Select One Of The Following
Arsenic	<	12.5	
Cadmium	<	6.2	
Copper	=	62.9	
Lead	<	6.2	
Mercury	=	0.052	
Molybdenum	<	12.5	
Nickel	<	50	
Selenium	<	25	
Zinc	=	453	

Pathogen And Vector Attraction Reduction

Report the pathogen densities in the sewage sludge or biosolids that was applied to land during the reporting year for this SSUID. Please report the maximum pathogen density for Class A sewage sludge or biosolids. When using the Class B – Alternative 1 management option, please report the geometric mean of the density of fecal coliform in Class B sewage sludge or biosolids [see 40 CFR 503.32(b)(2)].

Sewage Sludge or Biosolids Parameter	Value Qualifier	Value	If No Data, Select One Of The Following
Fecal Coliform	<	94.8367	
Salmonella			B (No Sampling or Analysis Conducted due to Laboratory Error)

Monthly Average Pollutant Concentration Data for All Sewage Sludge or Biosolids Applied to Land

This section summarizes the monthly average pollutant concentrations in the biosolids or sewage sludge that was applied to land during the compliance monitoring period for this SSUID. All pollutant monitoring data should be reported in milligrams per kilogram (mg/kg), dry weight basis.

Sewage Sludge or Biosolids Parameter	Value Qualifier	Parameter Concentration (mg/kg, dry-weight basis or Pass/Fail)	If No Data, Select One Of The Following
Arsenic	<	12.5	
Cadmium	<	6.2	
Copper	=	62.9	
Lead	<	6.2	
Mercury	=	0.052	
Nickel	<	50	
Selenium	<	25	
Zinc	=	453	

Report the average concentration (mg/kg, dry weight basis) of Total Nitrogen (TKN plus Nitrate-Nitrite, as N) in the sewage sludge or biosolids that was applied to land during the compliance monitoring period for this SSUID.

Sewage Sludge or Biosolids Parameter	Value Qualifier	Parameter Concentration (mg/kg, dry-weight basis)	If No Data, Select One Of The Following
Total Nitrogen (TKN plus Nitrate-Nitrite)	=	8130	

Compliance Monitoring Event No. 4

Compliance Monitoring Period Start Date:
10/01/2021

Compliance Monitoring Period End Date:
12/31/2021

Do you have analytical results to report for this monitoring period? YES NO

Are you reporting maximum pollutant concentrations that are equivalent to the monthly average pollutant concentrations for this compliance monitoring event? [For example, this will be the case if you only collected and analyzed one sample of sewage sludge or biosolids for this compliance monitoring period.]

YES NO

Maximum Concentration Data for All Sewage Sludge or Biosolids Applied to Land

This section summarizes the maximum pollutant concentrations in the biosolids or sewage sludge that was applied to land during the compliance monitoring period for this SSUID. In accordance with 40 CFR 503.13(a) (http://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_113), EPA's regulations prohibit land application of bulk sewage sludge or sewage sludge sold or gave away sewage sludge in a bag or other container when one or more sewage sludge pollutant concentrations in the sewage sludge exceed a land application ceiling pollutant limit (Table 1 of 40 CFR 503.13 (http://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_113)). EPA will compare the pollutant concentrations in this section against the ceiling concentration limits in Table 1 of 40 CFR 503.13 (http://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_113) to identify noncompliance events. All pollutant monitoring data should be reported in milligrams per kilogram (mg/kg), dry weight basis.

Please only select a "No Data Indicator Code" if you are reporting no data for the sampling period or particular parameter.

Sewage Sludge or Biosolids Parameter	Value Qualifier	Parameter Concentration (mg/kg, dry-weight basis or Pass/Fail)	If No Data, Select One Of The Following
Arsenic	<	4.3	
Cadmium	<	2.2	
Copper	=	21.6	
Lead	=	2.5	
Mercury	=	0.045	
Molybdenum	<	4.3	
Nickel	<	17.2	
Selenium	<	8.6	
Zinc	=	168	

Pathogen And Vector Attraction Reduction

Report the pathogen densities in the sewage sludge or biosolids that was applied to land during the reporting year for this SSUID. Please report the maximum pathogen density for Class A sewage sludge or biosolids. When using the Class B – Alternative 1 management option, please report the geometric mean of the density of fecal coliform in Class B sewage sludge or biosolids [see 40 CFR 503.32(b)(2)].

Sewage Sludge or Biosolids Parameter	Value Qualifier	Value	If No Data, Select One Of The Following
Fecal Coliform	<	69.405	
Salmonella			B (No Sampling or Analysis Conducted due to Laboratory Error)

Monthly Average Pollutant Concentration Data for All Sewage Sludge or Biosolids Applied to Land

This section summarizes the monthly average pollutant concentrations in the biosolids or sewage sludge that was applied to land during the compliance monitoring period for this SSUID. All pollutant monitoring data should be reported in milligrams per kilogram (mg/kg), dry weight basis.

Sewage Sludge or Biosolids Parameter	Value Qualifier	Parameter Concentration (mg/kg, dry-weight basis or Pass/Fail)	If No Data, Select One Of The Following
Arsenic	<	4.3	
Cadmium	<	2.2	
Copper	=	21.6	
Lead	=	2.5	
Mercury	=	0.045	
Nickel	<	17.2	
Selenium	<	8.6	
Zinc	=	168	

Report the average concentration (mg/kg, dry weight basis) of Total Nitrogen (TKN plus Nitrate-Nitrite, as N) in the sewage sludge or biosolids that was applied to land during the compliance monitoring period for this SSUID.

Sewage Sludge or Biosolids Parameter	Value Qualifier	Parameter Concentration (mg/kg, dry-weight basis)	If No Data, Select One Of The Following
Total Nitrogen (TKN plus Nitrate-Nitrite)	=	6640	

Sludge Management - Surface Disposal

Sludge Management - Incineration

Sludge Management - Other Management Practice

Additional Information

Please enter any additional information that you would like to provide in the comment box below.

Additional Attachments

Name	Created Date	Size

Certification Information

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 gathered and evaluated 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 have no personal knowledge that the information

submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprn. for knowing violations. Signing an electronic document on behalf of another person is subject to criminal, civil, administrative, or other lawful action.

Certified By: Gary McMillan (OBSEWER2)

Certified On: 02/15/2022 3:32 PM

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DEC 08 2025

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Robbie Stalcup
City of Orange Beach
PO BOX 458

Orange Beach, Alabama 36561

Generated 11/17/2025 9:16:04 AM

JOB DESCRIPTION

City of Orange Beach - Free CN

JOB NUMBER

400-285396-1

RECEIVED

DEC 08 2025

MUNICIPAL SECTION

Eurofins Pensacola

Job Notes

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

Authorization



Generated
11/17/2025 9:16:04 AM

Authorized for release by
Isabel Enfinger, Project Manager I
isabel.enfinger@et.eurofinsus.com
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Case Narrative

Client: City of Orange Beach
Project: City of Orange Beach - Free CN

Job ID: 400-285396-1

Job ID: 400-285396-1

Eurofins Pensacola

Job Narrative
400-285396-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The sample was received on 11/6/2025 9:45 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.2°C.

General Chemistry

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

Eurofins Pensacola

Method Summary

Client: City of Orange Beach
Project/Site: City of Orange Beach - Free CN

Job ID: 400-285396-1

Method	Method Description	Protocol	Laboratory
OIA-1677	Cyanide, Free (Flow Injection)	OI CORP	ELLE

Protocol References:

OI CORP = OI Corporation Instrument Manual.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: City of Orange Beach
Project/Site: City of Orange Beach - Free CN

Job ID: 400-285396-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
400-285396-1	EFF GRAB	Water	11/06/25 09:45	11/06/25 09:45	Alabama

Client Sample Results

Job ID: 400-285396-1

Client: City of Orange Beach
Project/Site: City of Orange Beach - Free CN

Client Sample ID: EFF GRAB

Lab Sample ID: 400-285396-1

Matrix: Water

Date Collected: 11/06/25 09:45

Date Received: 11/06/25 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Free (OI CORP OIA-1677)	0.018		0.0060		mg/L			11/15/25 11:17	1

Eurofins Pensacola

Definitions/Glossary

Job ID: 400-285396-1

Client: City of Orange Beach
Project/Site: City of Orange Beach - Free CN

Glossary

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

Eurofins Pensacola

QC Association Summary

Client: City of Orange Beach
Project/Site: City of Orange Beach - Free CN

Job ID: 400-285396-1

General Chemistry

Analysis Batch: 730444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-285396-1	EFF GRAB	Total/NA	Water	OIA-1677	
MB 410-730444/17	Method Blank	Total/NA	Water	OIA-1677	
LCS 410-730444/16	Lab Control Sample	Total/NA	Water	OIA-1677	
400-285396-1 MS	EFF GRAB	Total/NA	Water	OIA-1677	
400-285396-1 MSD	EFF GRAB	Total/NA	Water	OIA-1677	

QC Sample Results

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Free CN

Job ID: 400-285396-1

Method: OIA-1677 - Cyanide, Free (Flow Injection)

Lab Sample ID: MB 410-730444/17
 Matrix: Water
 Analysis Batch: 730444

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Free	<0.0060		0.0060		mg/L			11/15/25 11:14	1

Lab Sample ID: LCS 410-730444/16
 Matrix: Water
 Analysis Batch: 730444

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Free	0.0500	0.0426		mg/L		85	82 - 132

Lab Sample ID: 400-285396-1 MS
 Matrix: Water
 Analysis Batch: 730444

Client Sample ID: EFF GRAB
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Free	0.018		0.0500	0.0701		mg/L		104	82 - 130

Lab Sample ID: 400-285396-1 MSD
 Matrix: Water
 Analysis Batch: 730444

Client Sample ID: EFF GRAB
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cyanide, Free	0.018		0.0500	0.0727		mg/L		109	82 - 130	4	11

Lab Chronicle

Client: City of Orange Beach
Project/Site: City of Orange Beach - Free CN

Job ID: 400-285396-1

Client Sample ID: EFF GRAB

Date Collected: 11/06/25 09:45

Date Received: 11/06/25 09:45

Lab Sample ID: 400-285396-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	OIA-1677		1			730444	11/15/25 11:17	NLE3	ELLE

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 410-730444/17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	OIA-1677		1			730444	11/15/25 11:14	NLE3	ELLE

Client Sample ID: Lab Control Sample

Date Collected: N/A

Date Received: N/A

Lab Sample ID: LCS 410-730444/16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	OIA-1677		1			730444	11/15/25 11:11	NLE3	ELLE

Client Sample ID: EFF GRAB

Date Collected: 11/06/25 09:45

Date Received: 11/06/25 09:45

Lab Sample ID: 400-285396-1 MS

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	OIA-1677		1			730444	11/15/25 11:20	NLE3	ELLE

Client Sample ID: EFF GRAB

Date Collected: 11/06/25 09:45

Date Received: 11/06/25 09:45

Lab Sample ID: 400-285396-1 MSD

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	OIA-1677		1			730444	11/15/25 11:22	NLE3	ELLE

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Login Sample Receipt Checklist

Client: City of Orange Beach

Job Number: 400-285396-1

Login Number: 285396

List Source: Eurofins Pensacola

List Number: 1

Creator: Bankston, Victoria K

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.2°C IR8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $< 8\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: City of Orange Beach

Job Number: 400-285396-1

Login Number: 285396

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 2

List Creation: 11/08/25 04:15 PM

Creator: Trzos, Hazel

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WW: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WW: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WW)?	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Robbie Stalcup
City of Orange Beach
PO BOX 458
Orange Beach, Alabama 36561

Generated 11/25/2025 9:13:34 AM

JOB DESCRIPTION

City of Orange Beach - Free CN

JOB NUMBER

400-286017-1

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MUNICIPAL SECTION

Eurofins Pensacola

Job Notes

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Authorized for release by
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(850)471-6237

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Case Narrative

Client: City of Orange Beach
Project: City of Orange Beach - Free CN

Job ID: 400-286017-1

Job ID: 400-286017-1

Eurofins Pensacola

Job Narrative 400-286017-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

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- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The sample was received on 11/18/2025 11:25 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.0°C.

General Chemistry

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

Eurofins Pensacola

Method Summary

Client: City of Orange Beach
Project/Site: City of Orange Beach - Free CN

Job ID: 400-286017-1

Method	Method Description	Protocol	Laboratory
OIA-1677	Cyanide, Free (Flow Injection)	OI CORP	ELLE

Protocol References:

OI CORP = OI Corporation Instrument Manual.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: City of Orange Beach
Project/Site: City of Orange Beach - Free CN

Job ID: 400-286017-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
400-286017-1	EFFLUENT	Water	11/18/25 09:09	11/18/25 11:25	Alabama

Client Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Free CN

Job ID: 400-286017-1

Client Sample ID: EFFLUENT

Lab Sample ID: 400-286017-1

Date Collected: 11/18/25 09:09

Matrix: Water

Date Received: 11/18/25 11:25

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Free (OI CORP OIA-1677)	<0.0060		0.0060		mg/L			11/22/25 13:25	1

Definitions/Glossary

Client: City of Orange Beach
Project/Site: City of Orange Beach - Free CN

Job ID: 400-286017-1

Glossary

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

QC Association Summary

Client: City of Orange Beach
Project/Site: City of Orange Beach - Free CN

Job ID: 400-286017-1

General Chemistry

Analysis Batch: 734309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-286017-1	EFFLUENT	Total/NA	Water	OIA-1677	
MB 410-734309/17	Method Blank	Total/NA	Water	OIA-1677	
LCS 410-734309/16	Lab Control Sample	Total/NA	Water	OIA-1677	

QC Sample Results

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Free CN

Job ID: 400-286017-1

Method: OIA-1677 - Cyanide, Free (Flow Injection)

Lab Sample ID: MB 410-734309/17
 Matrix: Water
 Analysis Batch: 734309

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cyanide, Free	<0.0060		0.0060		mg/L			11/22/25 12:53	1

Lab Sample ID: LCS 410-734309/16
 Matrix: Water
 Analysis Batch: 734309

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

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Cyanide, Free	0.0500	0.0505		mg/L		101	82 - 132

Lab Chronicle

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Free CN

Job ID: 400-286017-1

Client Sample ID: EFFLUENT

Lab Sample ID: 400-286017-1

Date Collected: 11/18/25 09:09

Matrix: Water

Date Received: 11/18/25 11:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	OIA-1677		1			734309	11/22/25 13:25	NLE3	ELLE

Client Sample ID: Method Blank

Lab Sample ID: MB 410-734309/17

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	OIA-1677		1			734309	11/22/25 12:53	NLE3	ELLE

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 410-734309/16

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	OIA-1677		1			734309	11/22/25 12:50	NLE3	ELLE

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Login Sample Receipt Checklist

Client: City of Orange Beach

Job Number: 400-286017-1

Login Number: 286017

List Source: Eurofins Pensacola

List Number: 1

Creator: Beecher (Roberts), Alexis J

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is < 6 mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: City of Orange Beach

Job Number: 400-286017-1

Login Number: 286017
List Number: 2
Creator: Ballard, Megan

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC
List Creation: 11/19/25 04:12 PM

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6C$, not frozen).	True	
Cooler Temperature is recorded.	True	
WW: Container Temp acceptable, where thermal pres is required ($\leq 6C$, not frozen).	N/A	
WW: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WW)?	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Robbie Stalcup
City of Orange Beach
PO BOX 458
Orange Beach, Alabama 36561

Generated 11/21/2025 4:31:37 PM

JOB DESCRIPTION

City of Orange Beach
Free CN

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DEC 15 2025

MUNICIPAL SECTION

JOB NUMBER

400-285713-1

MUNICIPAL SECTION

Eurofins Pensacola

Job Notes

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

Authorization



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Isabel Enfinger, Project Manager |
isabel.enfinger@et.eurofinsus.com
(850)471-6237

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Case Narrative

Client: City of Orange Beach
Project: City of Orange Beach

Job ID: 400-285713-1

Job ID: 400-285713-1

Eurofins Pensacola

Job Narrative 400-285713-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The sample was received on 11/12/2025 10:57 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.9°C.

General Chemistry

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

Eurofins Pensacola

Method Summary

Client: City of Orange Beach
Project/Site: City of Orange Beach

Job ID: 400-285713-1
SDG: Free CN

Method	Method Description	Protocol	Laboratory
OIA-1677	Cyanide, Free (Flow Injection)	OI CORP	ELLE

Protocol References:

OI CORP = OI Corporation Instrument Manual.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: City of Orange Beach
Project/Site: City of Orange Beach

Job ID: 400-285713-1
SDG: Free CN

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Collected</u>	<u>Received</u>	<u>Sample Origin</u>
400-285713-1	EFF GRAB	Water	11/12/25 09:35	11/12/25 10:57	Alabama

Client Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach

Job ID: 400-285713-1
SDG: Free CN

Client Sample ID: EFF GRAB

Lab Sample ID: 400-285713-1
Matrix: Water

Date Collected: 11/12/25 09:35
Date Received: 11/12/25 10:57

General Chemistry	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte			0.0060		mg/L			11/21/25 12:35	1
Cyanide, Free (OI CORP OIA-1677)	<0.0060								

Definitions/Glossary

Client: City of Orange Beach
Project/Site: City of Orange Beach

Job ID: 400-285713-1
SDG: Free CN

Glossary

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

QC Association Summary

Client: City of Orange Beach
Project/Site: City of Orange Beach

Job ID: 400-285713-1
SDG: Free CN

General Chemistry

Analysis Batch: 733875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-285713-1	EFF GRAB	Total/NA	Water	OIA-1677	
MB 410-733875/17	Method Blank	Total/NA	Water	OIA-1677	
LCS 410-733875/16	Lab Control Sample	Total/NA	Water	OIA-1677	

QC Sample Results

Client: City of Orange Beach
 Project/Site: City of Orange Beach

Job ID: 400-285713-1
 SDG: Free CN

Method: OIA-1677 - Cyanide, Free (Flow Injection)

Lab Sample ID: MB 410-733875/17
 Matrix: Water
 Analysis Batch: 733875

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Free	<0.0060	0.0060	0.0060		mg/L			11/21/25 12:20	1

Lab Sample ID: LCS 410-733875/16
 Matrix: Water
 Analysis Batch: 733875

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

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
	Added	Result	Qualifier			Limits	
Cyanide, Free	0.0500	0.0530		mg/L		106	82 - 132

Lab Chronicle

Client: City of Orange Beach
 Project/Site: City of Orange Beach

Job ID: 400-285713-1
 SDG: Free CN

Client Sample ID: EFF GRAB

Lab Sample ID: 400-285713-1

Date Collected: 11/12/25 09:35

Matrix: Water

Date Received: 11/12/25 10:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	OIA-1677		1			733875	11/21/25 12:35	NLE3	ELLE

Client Sample ID: Method Blank

Lab Sample ID: MB 410-733875/17

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	OIA-1677		1			733875	11/21/25 12:20	NLE3	ELLE

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 410-733875/16

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	OIA-1677		1			733875	11/21/25 12:18	NLE3	ELLE

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Login Sample Receipt Checklist

Client: City of Orange Beach

Job Number: 400-285713-1
SDG Number: Free CN

Login Number: 285713

List Number: 1

Creator: Pardonner, Brett

List Source: Eurofins Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.9°C IR8
COC is present.	True	
COC is filled out in Ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with Immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ ($1/4''$).	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: City of Orange Beach

Job Number: 400-285713-1
SDG Number: Free CN

Login Number: 285713
List Number: 2
Creator: Ballard, Megan

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC
List Creation: 11/14/25 05:03 PM

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6C$, not frozen).	True	
Cooler Temperature is recorded.	True	
WW: Container Temp acceptable, where thermal pres is required ($\leq 6C$, not frozen).	N/A	
WW: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WW)?	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Robbie Stalcup
City of Orange Beach
PO BOX 458
Orange Beach, Alabama 36561

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JOB DESCRIPTION

City of Orange Beach - Table C

JOB NUMBER

400-260237-1

RECEIVED

SEP 24 2024

MUNICIPAL SECTION

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Job Notes

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Authorization



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Authorized for release by
Isabel Enfinger, Project Manager I
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Case Narrative

Client: City of Orange Beach
Project: City of Orange Beach - Table C

Job ID: 400-260237-1

Job ID: 400-260237-1

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Job Narrative
400-260237-1

GC/MS VOA

Method 624.1: The preservative used in the sample containers provided is not compatible with the Method 624.1 analytes requested. The following sample was received preserved with hydrochloric acid: EFFLUENT GRAB (400-260237-1). The requested target analyte list contains 2-Chloroethyl vinyl ether which is an acid-labile compound that degrades in an acidic medium.

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

GC/MS Semi VOA

Method 625.1: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 400-680838 and analytical batch 400-680992 recovered outside control limits for the following analytes: Benzidine, 2,4-Dimethylphenol and Hexachlorocyclopentadiene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

Metals

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

General Chemistry

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

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Method Summary

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260237-1

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	EPA	EET PEN
625.1	Semivolatile Organic Compounds (GC/MS)	EPA	EET PEN
1631E	Mercury, Low Level (CVAFS)	EPA	EET PEN
200.7 Rev 4.4	Metals (ICP)	EPA	EET SAV
2340C-2011	Hardness, Total	SM	EET SAV
420.4	Phenolics, Total Recoverable	EPA	EET PEN
SM 4500 CN E	Cyanide, Total	SM	EET PEN
1631E	Preparation, Mercury, Low Level	EPA	EET PEN
200.7	Preparation, Total Metals	EPA	EET SAV
625	Liquid-Liquid Extraction	EPA	EET PEN
SM 4500 CN C	Cyanide, Distillation	SM	EET PEN

Protocol References:

EPA = US Environmental Protection Agency
 SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
 EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

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Sample Summary

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-260237-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-260237-1	EFFLUENT GRAB	Water	08/05/24 08:00	08/05/24 10:33
400-260237-2	EFFLUENT COMPOSITE	Water	08/05/24 08:00	08/05/24 10:33

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Client Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-260237-1

Client Sample ID: EFFLUENT GRAB

Lab Sample ID: 400-260237-1

Date Collected: 08/05/24 08:00

Matrix: Water

Date Received: 08/05/24 10:33

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Method: EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<1.0		1.0		ug/L			08/08/24 19:59	1
1,1,2,2-Tetrachloroethane	<1.0		1.0		ug/L			08/08/24 19:59	1
1,1,2-Trichloroethane	<5.0		5.0		ug/L			08/08/24 19:59	1
1,1-Dichloroethane	<1.0		1.0		ug/L			08/08/24 19:59	1
1,1-Dichloroethylene	<1.0		1.0		ug/L			08/08/24 19:59	1
1,2-Dichlorobenzene	<1.0		1.0		ug/L			08/08/24 19:59	1
1,2-Dichloroethane	<1.0		1.0		ug/L			08/08/24 19:59	1
1,2-Dichloropropane	<1.0		1.0		ug/L			08/08/24 19:59	1
1,3-Dichlorobenzene	<1.0		1.0		ug/L			08/08/24 19:59	1
1,3-Dichloropropylene	<5.0		5.0		ug/L			08/08/24 19:59	1
1,4-Dichlorobenzene	<1.0		1.0		ug/L			08/08/24 19:59	1
2-Chloroethyl vinyl ether	<5.0		5.0		ug/L			08/08/24 19:59	1
Acrolein	<20		20		ug/L			08/08/24 19:59	1
Acrylonitrile	<10		10		ug/L			08/08/24 19:59	1
Benzene	<1.0		1.0		ug/L			08/08/24 19:59	1
Bromoform	<5.0		5.0		ug/L			08/08/24 19:59	1
Carbon tetrachloride	<1.0		1.0		ug/L			08/08/24 19:59	1
Chlorobenzene	<1.0		1.0		ug/L			08/08/24 19:59	1
Chlorodibromomethane	<1.0		1.0		ug/L			08/08/24 19:59	1
Chloroethane	<1.0		1.0		ug/L			08/08/24 19:59	1
Chloroform	<1.0		1.0		ug/L			08/08/24 19:59	1
Dichlorobromomethane	<1.0		1.0		ug/L			08/08/24 19:59	1
Ethylbenzene	<1.0		1.0		ug/L			08/08/24 19:59	1
Methyl bromide	<1.0		1.0		ug/L			08/08/24 19:59	1
Methyl chloride	<1.0		1.0		ug/L			08/08/24 19:59	1
Methylene Chloride	<5.0		5.0		ug/L			08/08/24 19:59	1
Tetrachloroethylene	<1.0		1.0		ug/L			08/08/24 19:59	1
Toluene	<1.0		1.0		ug/L			08/08/24 19:59	1
Trichloroethylene	<1.0		1.0		ug/L			08/08/24 19:59	1
Vinyl chloride	<1.0		1.0		ug/L			08/08/24 19:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		78 - 118					08/08/24 19:59	1
Dibromofluoromethane	102		81 - 121					08/08/24 19:59	1
Toluene-d8 (Surr)	99		80 - 120					08/08/24 19:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenols, Total (EPA 420.4)	<0.0050		0.0050		mg/L			08/06/24 14:28	1
Cyanide, Total (SM 4500 CN E)	0.010		0.0050		mg/L		08/08/24 12:39	08/08/24 16:10	1

Client Sample ID: EFFLUENT COMPOSITE

Lab Sample ID: 400-260237-2

Date Collected: 08/05/24 08:00

Matrix: Water

Date Received: 08/05/24 10:33

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
1,2-Diphenylhydrazine (as Azobenzene)	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
2,4,6-Trichlorophenol	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1

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Client Sample Results

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260237-1

Client Sample ID: EFFLUENT COMPOSITE

Lab Sample ID: 400-260237-2

Date Collected: 08/05/24 08:00

Matrix: Water

Date Received: 08/05/24 10:33

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
2,4-Dimethylphenol	<9.5	*+	9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
2,4-Dinitrophenol	<28		28		ug/L		08/12/24 11:42	08/13/24 20:22	1
2,4-Dinitrotoluene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
2,6-Dinitrotoluene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
2-Chloronaphthalene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
2-Chlorophenol	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
2-Nitrophenol	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
3,3'-Dichlorobenzidine	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
4,6-Dinitro-2-methylphenol	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
4-Chloro-3-methylphenol	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
4-Chlorophenyl phenyl ether	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
4-Nitrophenol	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Acenaphthene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Acenaphthylene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Anthracene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Benzidine	<24	*+	24		ug/L		08/12/24 11:42	08/13/24 20:22	1
Benzo[a]anthracene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Benzo[a]pyrene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Benzo[b]fluoranthene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Benzo[g,h,i]perylene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Benzo[k]fluoranthene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
bis (2-chloroisopropyl) ether	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Bis(2-chloroethoxy)methane	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Bis(2-chloroethyl)ether	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Bis(2-ethylhexyl) phthalate	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Butyl benzyl phthalate	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Chrysene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Dibenz(a,h)anthracene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Diethyl phthalate	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Dimethyl phthalate	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Di-n-butyl phthalate	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Di-n-octyl phthalate	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Fluoranthene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Fluorene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Hexachlorobenzene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Hexachlorobutadiene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Hexachlorocyclopentadiene	<19	*+	19		ug/L		08/12/24 11:42	08/13/24 20:22	1
Hexachloroethane	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Indeno[1,2,3-cd]pyrene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Isophorone	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Naphthalene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Nitrobenzene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
N-Nitrosodimethylamine	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
N-Nitrosodi-n-propylamine	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
N-Nitrosodiphenylamine	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Pentachlorophenol	<19		19		ug/L		08/12/24 11:42	08/13/24 20:22	1
Phenanthrene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Phenol	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1

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Eurofins Pensacola

Client Sample Results

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260237-1

Client Sample ID: EFFLUENT COMPOSITE

Lab Sample ID: 400-260237-2

Date Collected: 08/05/24 08:00

Matrix: Water

Date Received: 08/05/24 10:33

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyrene	<9.5		9.5		ug/L		08/12/24 11:42	08/13/24 20:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	64		15 - 135				08/12/24 11:42	08/13/24 20:22	1
2-Fluorobiphenyl	54		32 - 109				08/12/24 11:42	08/13/24 20:22	1
2-Fluorophenol	39		10 - 104				08/12/24 11:42	08/13/24 20:22	1
Nitrobenzene-d5	49		31 - 111				08/12/24 11:42	08/13/24 20:22	1
Phenol-d5	30		10 - 110				08/12/24 11:42	08/13/24 20:22	1
Terphenyl-d14	90		30 - 129				08/12/24 11:42	08/13/24 20:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	31		0.50		ng/L		08/05/24 14:50	08/08/24 16:07	1

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.020		0.020		mg/L		08/07/24 05:47	08/07/24 13:05	1
Arsenic	<0.020		0.020		mg/L		08/07/24 05:47	08/07/24 13:05	1
Beryllium	<0.0040		0.0040		mg/L		08/07/24 05:47	08/07/24 13:05	1
Cadmium	<0.0050		0.0050		mg/L		08/07/24 05:47	08/07/24 13:05	1
Chromium	<0.010		0.010		mg/L		08/07/24 05:47	08/07/24 13:05	1
Copper	<0.020		0.020		mg/L		08/07/24 05:47	08/07/24 13:05	1
Lead	<0.010		0.010		mg/L		08/07/24 05:47	08/07/24 13:05	1
Nickel	<0.040		0.040		mg/L		08/07/24 05:47	08/07/24 13:05	1
Selenium	<0.020		0.020		mg/L		08/07/24 05:47	08/07/24 13:05	1
Silver	<0.010		0.010		mg/L		08/07/24 05:47	08/07/24 13:05	1
Thallium	<0.025		0.025		mg/L		08/07/24 05:47	08/07/24 13:05	1
Zinc	0.059		0.020		mg/L		08/07/24 05:47	08/07/24 13:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate (SM 2340C-2011)	120		10		mg/L			08/08/24 11:16	1

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Definitions/Glossary

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260237-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

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QC Association Summary

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260237-1

GC/MS VOA

Analysis Batch: 680465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-260237-1	EFFLUENT GRAB	Total/NA	Water	624.1	
MB 400-680465/4	Method Blank	Total/NA	Water	624.1	
LCS 400-680465/23	Lab Control Sample	Total/NA	Water	624.1	

GC/MS Semi VOA

Prep Batch: 680838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-260237-2	EFFLUENT COMPOSITE	Total/NA	Water	625	
MB 400-680838/1-A	Method Blank	Total/NA	Water	625	
LCS 400-680838/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 400-680838/3-A	Lab Control Sample Dup	Total/NA	Water	625	

Analysis Batch: 680992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-260237-2	EFFLUENT COMPOSITE	Total/NA	Water	625.1	680838
MB 400-680838/1-A	Method Blank	Total/NA	Water	625.1	680838
LCS 400-680838/2-A	Lab Control Sample	Total/NA	Water	625.1	680838
LCSD 400-680838/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	680838

Metals

Prep Batch: 680493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-260237-2	EFFLUENT COMPOSITE	Total/NA	Water	1631E	
MB 400-680493/3-A	Method Blank	Total/NA	Water	1631E	
LCS 400-680493/4-A	Lab Control Sample	Total/NA	Water	1631E	
LCSD 400-680493/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 680545

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-260237-2	EFFLUENT COMPOSITE	Total/NA	Water	1631E	680493
MB 400-680493/3-A	Method Blank	Total/NA	Water	1631E	680493
LCS 400-680493/4-A	Lab Control Sample	Total/NA	Water	1631E	680493
LCSD 400-680493/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	680493

Prep Batch: 850156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-260237-2	EFFLUENT COMPOSITE	Total Recoverable	Water	200.7	
MB 680-850156/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 680-850156/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
400-260237-2 MS	EFFLUENT COMPOSITE	Total Recoverable	Water	200.7	
400-260237-2 MSD	EFFLUENT COMPOSITE	Total Recoverable	Water	200.7	

Analysis Batch: 850341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-260237-2	EFFLUENT COMPOSITE	Total Recoverable	Water	200.7 Rev 4.4	850156
MB 680-850156/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	850156
LCS 680-850156/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	850156
400-260237-2 MS	EFFLUENT COMPOSITE	Total Recoverable	Water	200.7 Rev 4.4	850156
400-260237-2 MSD	EFFLUENT COMPOSITE	Total Recoverable	Water	200.7 Rev 4.4	850156

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QC Association Summary

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260237-1

General Chemistry

Analysis Batch: 680225

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-260237-1	EFFLUENT GRAB	Total/NA	Water	420.4	
MB 400-680225/19	Method Blank	Total/NA	Water	420.4	
LCS 400-680225/20	Lab Control Sample	Total/NA	Water	420.4	
MRL 400-680225/14	Lab Control Sample	Total/NA	Water	420.4	

Prep Batch: 680520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-260237-1	EFFLUENT GRAB	Total/NA	Water	SM 4500 CN C	
MB 400-680520/1-A	Method Blank	Total/NA	Water	SM 4500 CN C	
LCS 400-680520/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN C	

Analysis Batch: 680557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-260237-1	EFFLUENT GRAB	Total/NA	Water	SM 4500 CN E	680520
MB 400-680520/1-A	Method Blank	Total/NA	Water	SM 4500 CN E	680520
LCS 400-680520/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN E	680520
MRL 400-680557/14	Lab Control Sample	Total/NA	Water	SM 4500 CN E	

Analysis Batch: 850483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-260237-2	EFFLUENT COMPOSITE	Total/NA	Water	2340C-2011	
MB 680-850483/1	Method Blank	Total/NA	Water	2340C-2011	
LCS 680-850483/2	Lab Control Sample	Total/NA	Water	2340C-2011	
LCSD 680-850483/3	Lab Control Sample Dup	Total/NA	Water	2340C-2011	

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QC Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-260237-1

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-680465/4
Matrix: Water
Analysis Batch: 680465

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	<1.0		1.0		ug/L			08/08/24 11:55	1
1,1,2,2-Tetrachloroethane	<1.0		1.0		ug/L			08/08/24 11:55	1
1,1,2-Trichloroethane	<5.0		5.0		ug/L			08/08/24 11:55	1
1,1-Dichloroethane	<1.0		1.0		ug/L			08/08/24 11:55	1
1,1-Dichloroethylene	<1.0		1.0		ug/L			08/08/24 11:55	1
1,2-Dichlorobenzene	<1.0		1.0		ug/L			08/08/24 11:55	1
1,2-Dichloroethane	<1.0		1.0		ug/L			08/08/24 11:55	1
1,2-Dichloropropane	<1.0		1.0		ug/L			08/08/24 11:55	1
1,3-Dichlorobenzene	<1.0		1.0		ug/L			08/08/24 11:55	1
1,3-Dichloropropylene	<5.0		5.0		ug/L			08/08/24 11:55	1
1,4-Dichlorobenzene	<1.0		1.0		ug/L			08/08/24 11:55	1
2-Chloroethyl vinyl ether	<5.0		5.0		ug/L			08/08/24 11:55	1
Acrolein	<20		20		ug/L			08/08/24 11:55	1
Acrylonitrile	<10		10		ug/L			08/08/24 11:55	1
Benzene	<1.0		1.0		ug/L			08/08/24 11:55	1
Bromoform	<5.0		5.0		ug/L			08/08/24 11:55	1
Carbon tetrachloride	<1.0		1.0		ug/L			08/08/24 11:55	1
Chlorobenzene	<1.0		1.0		ug/L			08/08/24 11:55	1
Chlorodibromomethane	<1.0		1.0		ug/L			08/08/24 11:55	1
Chloroethane	<1.0		1.0		ug/L			08/08/24 11:55	1
Chloroform	<1.0		1.0		ug/L			08/08/24 11:55	1
Dichlorobromomethane	<1.0		1.0		ug/L			08/08/24 11:55	1
Ethylbenzene	<1.0		1.0		ug/L			08/08/24 11:55	1
Methyl bromide	<1.0		1.0		ug/L			08/08/24 11:55	1
Methyl chloride	<1.0		1.0		ug/L			08/08/24 11:55	1
Methylene Chloride	<5.0		5.0		ug/L			08/08/24 11:55	1
Tetrachloroethylene	<1.0		1.0		ug/L			08/08/24 11:55	1
Toluene	<1.0		1.0		ug/L			08/08/24 11:55	1
Trichloroethylene	<1.0		1.0		ug/L			08/08/24 11:55	1
Vinyl chloride	<1.0		1.0		ug/L			08/08/24 11:55	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene	97		78 - 118		08/08/24 11:55	1
Dibromofluoromethane	100		81 - 121		08/08/24 11:55	1
Toluene-d8 (Surr)	99		80 - 120		08/08/24 11:55	1

Lab Sample ID: LCS 400-680465/23
Matrix: Water
Analysis Batch: 680465

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
1,1,1-Trichloroethane	50.0	55.0		ug/L		110	70 - 130
1,1,2,2-Tetrachloroethane	50.0	44.3		ug/L		89	60 - 140
1,1,2-Trichloroethane	50.0	48.2		ug/L		96	70 - 130
1,1-Dichloroethane	50.0	49.3		ug/L		99	70 - 130
1,1-Dichloroethylene	50.0	51.2		ug/L		102	50 - 150
1,2-Dichlorobenzene	50.0	51.9		ug/L		104	65 - 135
1,2-Dichloroethane	50.0	52.0		ug/L		104	70 - 130

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QC Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-260237-1

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-680465/23
Matrix: Water
Analysis Batch: 680465

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichloropropane	50.0	49.6		ug/L		99	35 - 150
1,3-Dichlorobenzene	50.0	53.8		ug/L		107	70 - 130
1,3-Dichloropropylene	100	103		ug/L		103	25 - 150
1,4-Dichlorobenzene	50.0	52.8		ug/L		106	65 - 135
2-Chloroethyl vinyl ether	50.0	43.3		ug/L		87	10 - 150
Acrolein	500	373		ug/L		75	60 - 140
Acrylonitrile	500	452		ug/L		90	60 - 140
Benzene	50.0	48.7		ug/L		97	65 - 135
Bromoform	50.0	49.0		ug/L		98	70 - 130
Carbon tetrachloride	50.0	58.3		ug/L		117	70 - 130
Chlorobenzene	50.0	50.6		ug/L		101	65 - 135
Chlorodibromomethane	50.0	52.5		ug/L		105	69 - 133
Chloroethane	50.0	39.9		ug/L		80	40 - 150
Chloroform	50.0	51.6		ug/L		103	70 - 135
Dichlorobromomethane	50.0	56.0		ug/L		112	65 - 135
Ethylbenzene	50.0	52.9		ug/L		106	60 - 140
Methyl bromide	50.0	55.3		ug/L		111	15 - 150
Methyl chloride	50.0	34.4		ug/L		69	10 - 150
Methylene Chloride	50.0	44.9		ug/L		90	60 - 140
Tetrachloroethylene	50.0	56.6		ug/L		113	70 - 130
Toluene	50.0	48.3		ug/L		97	70 - 130
Trichloroethylene	50.0	52.2		ug/L		104	65 - 135
Vinyl chloride	50.0	43.9		ug/L		88	10 - 150
cis-1,3-Dichloropropene	50.0	50.9		ug/L		102	25 - 150
trans-1,3-Dichloropropene	50.0	51.8		ug/L		104	50 - 150

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	97		78 - 118
Dibromofluoromethane	110		81 - 121
Toluene-d8 (Surr)	99		80 - 120

Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-680838/1-A
Matrix: Water
Analysis Batch: 680992

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 680838

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trichlorobenzene	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
1,2-Diphenylhydrazine (as Azobenzene)	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
2,4,6-Trichlorophenol	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
2,4-Dichlorophenol	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
2,4-Dimethylphenol	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
2,4-Dinitrophenol	<30		30		ug/L		08/12/24 11:41	08/13/24 17:10	1
2,4-Dinitrotoluene	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
2,6-Dinitrotoluene	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
2-Chloronaphthalene	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
2-Chlorophenol	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1

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QC Sample Results

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260237-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-680838/1-A
 Matrix: Water
 Analysis Batch: 680992

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 680838

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2-Nitrophenol	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
3,3'-Dichlorobenzidine	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
4,6-Dinitro-2-methylphenol	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
4-Chloro-3-methylphenol	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
4-Chlorophenyl phenyl ether	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
4-Nitrophenol	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Acenaphthene	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Acenaphthylene	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Anthracene	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Benzidine	<25		25		ug/L		08/12/24 11:41	08/13/24 17:10	1
Benzo[a]anthracene	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Benzo[a]pyrene	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Benzo[b]fluoranthene	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Benzo[g,h,i]perylene	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Benzo[k]fluoranthene	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
bis (2-chloroisopropyl) ether	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Bis(2-chloroethoxy)methane	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Bis(2-chloroethyl)ether	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Bis(2-ethylhexyl) phthalate	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Butyl benzyl phthalate	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Chrysene	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Dibenz(a,h)anthracene	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Diethyl phthalate	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Dimethyl phthalate	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Di-n-butyl phthalate	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Di-n-octyl phthalate	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Fluoranthene	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Fluorena	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Hexachlorobenzene	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Hexachlorobutadiene	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Hexachlorocyclopentadiene	<20		20		ug/L		08/12/24 11:41	08/13/24 17:10	1
Hexachloroethane	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Indeno[1,2,3-cd]pyrene	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Isophorone	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Naphthalene	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Nitrobenzene	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
N-Nitrosodimethylamine	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
N-Nitrosodi-n-propylamine	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
N-Nitrosodiphenylamine	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Pentachlorophenol	<20		20		ug/L		08/12/24 11:41	08/13/24 17:10	1
Phenanthrene	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Phenol	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1
Pyrene	<10		10		ug/L		08/12/24 11:41	08/13/24 17:10	1

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Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol	56		15 - 135	08/12/24 11:41	08/13/24 17:10	1
2-Fluorobiphenyl	35		32 - 109	08/12/24 11:41	08/13/24 17:10	1
2-Fluorophenol	36		10 - 104	08/12/24 11:41	08/13/24 17:10	1

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QC Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-260237-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-680838/1-A
Matrix: Water
Analysis Batch: 680992

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 680838

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Nitrobenzene-d5	46		31 - 111	08/12/24 11:41	08/13/24 17:10	1
Phenol-d5	28		10 - 110	08/12/24 11:41	08/13/24 17:10	1
Terphenyl-d14	87		30 - 129	08/12/24 11:41	08/13/24 17:10	1

Lab Sample ID: LCS 400-680838/2-A
Matrix: Water
Analysis Batch: 680992

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 680838

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,4-Trichlorobenzene	120	62.6		ug/L		52	44 - 142
1,2-Diphenylhydrazine (as Azobenzene)	120	88.5		ug/L		74	23 - 138
2,4,6-Trichlorophenol	120	83.6		ug/L		70	37 - 144
2,4-Dichlorophenol	120	84.5		ug/L		70	39 - 135
2,4-Dimethylphenol	120	166	*+	ug/L		138	32 - 120
2,4-Dinitrophenol	240	282		ug/L		117	1 - 191
2,4-Dinitrotoluene	120	94.1		ug/L		78	39 - 139
2,6-Dinitrotoluene	120	83.9		ug/L		70	50 - 158
2-Chloronaphthalene	120	76.4		ug/L		64	24 - 132
2-Chlorophenol	120	80.9		ug/L		67	23 - 134
2-Nitrophenol	120	78.6		ug/L		65	29 - 182
3,3'-Dichlorobenzidine	240	266		ug/L		111	1 - 262
4,6-Dinitro-2-methylphenol	240	256		ug/L		107	1 - 181
4-Bromophenyl phenyl ether	120	110		ug/L		92	53 - 127
4-Chloro-3-methylphenol	120	83.6		ug/L		70	22 - 147
4-Chlorophenyl phenyl ether	120	92.1		ug/L		77	25 - 158
4-Nitrophenol	240	219		ug/L		91	1 - 132
Acenaphthene	120	97.8		ug/L		82	47 - 145
Acenaphthylene	120	83.7		ug/L		70	33 - 145
Anthracene	120	104		ug/L		86	27 - 133
Benzidine	240	351	*+	ug/L		146	1 - 73
Benzo[a]anthracene	120	107		ug/L		90	33 - 143
Benzo[a]pyrene	120	125		ug/L		104	17 - 163
Benzo[b]fluoranthene	120	113		ug/L		94	24 - 159
Benzo[g,h,i]perylene	120	133		ug/L		111	1 - 219
Benzo[k]fluoranthene	120	116		ug/L		97	11 - 162
bis (2-chloroisopropyl) ether	120	65.6		ug/L		55	36 - 166
Bis(2-chloroethoxy)methane	120	61.9		ug/L		52	33 - 184
Bis(2-chloroethyl)ether	120	62.6		ug/L		52	12 - 158
Bis(2-ethylhexyl) phthalate	120	101		ug/L		84	8 - 158
Butyl benzyl phthalate	120	96.1		ug/L		80	1 - 152
Chrysene	120	101		ug/L		84	17 - 168
Dibenz(a,h)anthracene	120	146		ug/L		122	1 - 227
Diethyl phthalate	120	106		ug/L		88	1 - 120
Dimethyl phthalate	120	90.6		ug/L		75	1 - 120
Di-n-butyl phthalate	120	104		ug/L		87	1 - 120
Di-n-octyl phthalate	120	104		ug/L		87	4 - 146
Fluoranthene	120	108		ug/L		90	26 - 137
Fluorene	120	102		ug/L		85	59 - 121

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QC Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-260237-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-680838/2-A			Client Sample ID: Lab Control Sample					
Matrix: Water			Prep Type: Total/NA					
Analysis Batch: 680992			Prep Batch: 680838					
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Hexachlorobenzene	120	129		ug/L		108	1 - 152	
Hexachlorobutadiene	120	66.6		ug/L		55	24 - 120	
Hexachlorocyclopentadiene	120	171	*+	ug/L		143	10 - 124	
Hexachloroethane	120	60.7		ug/L		51	40 - 120	
Indeno[1,2,3-cd]pyrene	120	134		ug/L		112	1 - 171	
Isophorone	120	71.0		ug/L		59	21 - 196	
Naphthalene	120	75.2		ug/L		63	21 - 133	
Nitrobenzene	120	66.4		ug/L		55	35 - 180	
N-Nitrosodimethylamine	120	56.2		ug/L		47	10 - 115	
N-Nitrosodi-n-propylamine	120	78.5		ug/L		65	1 - 230	
N-Nitrosodiphenylamine	119	97.7		ug/L		82	29 - 138	
Pentachlorophenol	240	252		ug/L		105	14 - 176	
Phenanthrene	120	109		ug/L		91	54 - 120	
Phenol	120	43.3		ug/L		36	5 - 120	
Pyrene	120	110		ug/L		91	52 - 120	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol	80		15 - 135
2-Fluorobiphenyl	47		32 - 109
2-Fluorophenol	43		10 - 104
Nitrobenzene-d5	59		31 - 111
Phenol-d5	37		10 - 110
Terphenyl-d14	89		30 - 129

Lab Sample ID: LCSD 400-680838/3-A			Client Sample ID: Lab Control Sample Dup						
Matrix: Water			Prep Type: Total/NA						
Analysis Batch: 680992			Prep Batch: 680838						
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	120	62.5		ug/L		52	44 - 142	0	50
1,2-Diphenylhydrazine (as Azobenzene)	120	93.0		ug/L		78	23 - 138	5	40
2,4,6-Trichlorophenol	120	82.9		ug/L		69	37 - 144	1	58
2,4-Dichlorophenol	120	80.6		ug/L		67	39 - 135	5	50
2,4-Dimethylphenol	120	155	*+	ug/L		129	32 - 120	7	58
2,4-Dinitrophenol	240	247		ug/L		103	1 - 191	13	132
2,4-Dinitrotoluene	120	88.4		ug/L		74	39 - 139	6	42
2,6-Dinitrotoluene	120	82.0		ug/L		68	50 - 158	2	48
2-Chloronaphthalene	120	79.2		ug/L		66	24 - 132	4	24
2-Chlorophenol	120	79.7		ug/L		66	23 - 134	2	61
2-Nitrophenol	120	76.7		ug/L		64	29 - 182	2	55
3,3'-Dichlorobenzidine	240	250		ug/L		104	1 - 262	6	108
4,6-Dinitro-2-methylphenol	240	247		ug/L		103	1 - 181	4	203
4-Bromophenyl phenyl ether	120	112		ug/L		93	53 - 127	1	43
4-Chloro-3-methylphenol	120	79.1		ug/L		66	22 - 147	5	73
4-Chlorophenyl phenyl ether	120	86.9		ug/L		72	25 - 158	6	61
4-Nitrophenol	240	195		ug/L		81	1 - 132	11	131
Acenaphthene	120	94.9		ug/L		79	47 - 145	3	48
Acenaphthylene	120	82.5		ug/L		69	33 - 145	1	74

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QC Sample Results

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260237-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-680838/3-A
 Matrix: Water
 Analysis Batch: 680992

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 680838

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Anthracene	120	101		ug/L		84	27 - 133	3	66	
Benzidine	240	316	*+	ug/L		132	1 - 73	10	40	
Benzo[a]anthracene	120	105		ug/L		88	33 - 143	2	53	
Benzo[a]pyrene	120	121		ug/L		101	17 - 163	3	72	
Benzo[b]fluoranthene	120	118		ug/L		98	24 - 159	4	71	
Benzo[g,h,i]perylene	120	131		ug/L		109	1 - 219	2	97	
Benzo[k]fluoranthene	120	107		ug/L		89	11 - 162	8	63	
bis (2-chloroisopropyl) ether	120	65.0		ug/L		54	36 - 166	1	76	
Bis(2-chloroethoxy)methane	120	60.1		ug/L		50	33 - 184	3	54	
Bis(2-chloroethyl)ether	120	71.5		ug/L		60	12 - 158	13	108	
Bis(2-ethylhexyl) phthalate	120	99.7		ug/L		83	8 - 158	1	82	
Butyl benzyl phthalate	120	96.2		ug/L		80	1 - 152	0	60	
Chrysene	120	97.4		ug/L		81	17 - 168	4	87	
Dibenz(a,h)anthracene	120	141		ug/L		118	1 - 227	4	126	
Diethyl phthalate	120	98.7		ug/L		82	1 - 120	7	100	
Dimethyl phthalate	120	89.2		ug/L		74	1 - 120	2	183	
Di-n-butyl phthalate	120	101		ug/L		85	1 - 120	3	47	
Di-n-octyl phthalate	120	103		ug/L		86	4 - 146	1	69	
Fluoranthene	120	99.6		ug/L		83	26 - 137	8	66	
Fluorene	120	94.2		ug/L		78	59 - 121	8	38	
Hexachlorobenzene	120	131		ug/L		109	1 - 152	1	55	
Hexachlorobutadiene	120	66.9		ug/L		56	24 - 120	0	62	
Hexachlorocyclopentadiene	120	157	*+	ug/L		131	10 - 124	9	40	
Hexachloroethane	120	62.0		ug/L		52	40 - 120	2	52	
Indeno[1,2,3-cd]pyrene	120	130		ug/L		108	1 - 171	3	99	
Isophorone	120	69.2		ug/L		58	21 - 196	3	40	
Naphthalene	120	73.4		ug/L		61	21 - 133	2	65	
Nitrobenzene	120	65.8		ug/L		55	35 - 180	1	62	
N-Nitrosodimethylamine	120	56.7		ug/L		47	10 - 115	1	40	
N-Nitrosodi-n-propylamine	120	73.9		ug/L		62	1 - 230	6	87	
N-Nitrosodiphenylamine	119	102		ug/L		85	29 - 138	4	40	
Pentachlorophenol	240	237		ug/L		99	14 - 176	6	86	
Phenanthrene	120	105		ug/L		87	54 - 120	4	39	
Phenol	120	42.1		ug/L		35	5 - 120	3	64	
Pyrene	120	106		ug/L		89	52 - 120	3	49	

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Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol	74		15 - 135
2-Fluorobiphenyl	48		32 - 109
2-Fluorophenol	43		10 - 104
Nitrobenzene-d5	58		31 - 111
Phenol-d5	37		10 - 110
Terphenyl-d14	84		30 - 129

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QC Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-260237-1

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

Lab Sample ID: MB 400-680493/3-A
Matrix: Water
Analysis Batch: 680545

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 680493

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.50		0.50		ng/L		08/07/24 16:00	08/08/24 12:13	1

Lab Sample ID: LCS 400-680493/4-A
Matrix: Water
Analysis Batch: 680545

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 680493

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.10		ng/L		102	79 - 121

Lab Sample ID: LCSD 400-680493/5-A
Matrix: Water
Analysis Batch: 680545

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 680493

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.99		ng/L		100	79 - 121	2	20

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 680-850156/1-A
Matrix: Water
Analysis Batch: 850341

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 850156

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.020		0.020		mg/L		08/07/24 05:47	08/07/24 12:57	1
Arsenic	<0.020		0.020		mg/L		08/07/24 05:47	08/07/24 12:57	1
Beryllium	<0.0040		0.0040		mg/L		08/07/24 05:47	08/07/24 12:57	1
Cadmium	<0.0050		0.0050		mg/L		08/07/24 05:47	08/07/24 12:57	1
Chromium	<0.010		0.010		mg/L		08/07/24 05:47	08/07/24 12:57	1
Copper	<0.020		0.020		mg/L		08/07/24 05:47	08/07/24 12:57	1
Lead	<0.010		0.010		mg/L		08/07/24 05:47	08/07/24 12:57	1
Nickel	<0.040		0.040		mg/L		08/07/24 05:47	08/07/24 12:57	1
Selenium	<0.020		0.020		mg/L		08/07/24 05:47	08/07/24 12:57	1
Silver	<0.010		0.010		mg/L		08/07/24 05:47	08/07/24 12:57	1
Thallium	<0.025		0.025		mg/L		08/07/24 05:47	08/07/24 12:57	1
Zinc	<0.020		0.020		mg/L		08/07/24 05:47	08/07/24 12:57	1

Lab Sample ID: LCS 680-850156/2-A
Matrix: Water
Analysis Batch: 850341

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 850156

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.0500	0.0540		mg/L		108	85 - 115
Arsenic	0.100	0.0966		mg/L		97	85 - 115
Beryllium	0.0500	0.0486		mg/L		97	85 - 115
Cadmium	0.0500	0.0501		mg/L		100	85 - 115
Calcium	5000	4800		ug/L		96	85 - 115
Chromium	0.100	0.0966		mg/L		97	85 - 115
Copper	0.101	0.0948		mg/L		94	85 - 115
Lead	0.500	0.494		mg/L		99	85 - 115
Magnesium	5.00	4.68		mg/L		94	85 - 115

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QC Sample Results

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260237-1

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: LCS 680-850156/2-A
 Matrix: Water
 Analysis Batch: 850341

Client Sample ID: Lab Control Sample
 Prep Type: Total Recoverable
 Prep Batch: 850156

Analyte	Spike Added	LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Nickel	0.100	0.0973		mg/L		97	85 - 115
Selenium	0.100	0.0931		mg/L		93	85 - 115
Silver	0.0500	0.0481		mg/L		96	85 - 115
Thallium	0.0500	0.0476		mg/L		95	85 - 115
Zinc	0.100	0.0975		mg/L		97	85 - 115

Lab Sample ID: 400-260237-2 MS
 Matrix: Water
 Analysis Batch: 850341

Client Sample ID: EFFLUENT COMPOSITE
 Prep Type: Total Recoverable
 Prep Batch: 850156

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec Limits
				Result	Qualifier				
Antimony	<0.020		0.0500	0.0544		mg/L		109	75 - 125
Arsenic	<0.020		0.100	0.102		mg/L		102	75 - 125
Beryllium	<0.0040		0.0500	0.0507		mg/L		101	75 - 125
Cadmium	<0.0050		0.0500	0.0516		mg/L		103	75 - 125
Calcium	9800		5000	14500		ug/L		94	75 - 125
Chromium	<0.010		0.100	0.101		mg/L		101	75 - 125
Copper	<0.020		0.101	0.104		mg/L		102	75 - 125
Lead	<0.010		0.500	0.506		mg/L		101	75 - 125
Magnesium	15		5.00	19.8		mg/L		92	75 - 125
Nickel	<0.040		0.100	0.102		mg/L		102	75 - 125
Selenium	<0.020		0.100	0.0974		mg/L		97	75 - 125
Silver	<0.010		0.0500	0.0509		mg/L		102	75 - 125
Thallium	<0.025		0.0500	0.0492		mg/L		98	75 - 125
Zinc	0.059		0.100	0.159		mg/L		100	75 - 125

Lab Sample ID: 400-260237-2 MSD
 Matrix: Water
 Analysis Batch: 850341

Client Sample ID: EFFLUENT COMPOSITE
 Prep Type: Total Recoverable
 Prep Batch: 850156

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec Limits	RPD	
				Result	Qualifier					RPD	Limit
Antimony	<0.020		0.0500	0.0532		mg/L		106	75 - 125	2	20
Arsenic	<0.020		0.100	0.101		mg/L		101	75 - 125	2	20
Beryllium	<0.0040		0.0500	0.0497		mg/L		99	75 - 125	2	20
Cadmium	<0.0050		0.0500	0.0507		mg/L		101	75 - 125	2	20
Calcium	9800		5000	14700		ug/L		107	75 - 125	1	20
Chromium	<0.010		0.100	0.0996		mg/L		100	75 - 125	1	20
Copper	<0.020		0.101	0.102		mg/L		101	75 - 125	2	20
Lead	<0.010		0.500	0.497		mg/L		99	75 - 125	2	20
Magnesium	15		5.00	20.0		mg/L		103	75 - 125	1	20
Nickel	<0.040		0.100	0.0990		mg/L		99	75 - 125	3	20
Selenium	<0.020		0.100	0.0953		mg/L		95	75 - 125	2	20
Silver	<0.010		0.0500	0.0498		mg/L		100	75 - 125	2	20
Thallium	<0.025		0.0500	0.0492		mg/L		98	75 - 125	0	20
Zinc	0.059		0.100	0.158		mg/L		102	75 - 125	1	20

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QC Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-260237-1

Method: 2340C-2011 - Hardness, Total

Lab Sample ID: MB 680-850483/1
Matrix: Water
Analysis Batch: 850483

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Hardness as calcium carbonate	<10		10		mg/L			08/08/24 11:16	1

Lab Sample ID: LCS 680-850483/2
Matrix: Water
Analysis Batch: 850483

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Lab Sample ID: LCSD 680-850483/3
Matrix: Water
Analysis Batch: 850483

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit

Method: 420.4 - Phenolics, Total Recoverable

Lab Sample ID: MB 400-680225/19
Matrix: Water
Analysis Batch: 680225

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Phenols, Total	<0.0050		0.0050		mg/L			08/06/24 14:26	1

Lab Sample ID: LCS 400-680225/20
Matrix: Water
Analysis Batch: 680225

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Lab Sample ID: MRL 400-680225/14
Matrix: Water
Analysis Batch: 680225

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits

Method: SM 4500 CN E - Cyanide, Total

Lab Sample ID: MB 400-680520/1-A
Matrix: Water
Analysis Batch: 680557

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 680520

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cyanide, Total	<0.0050		0.0050		mg/L		08/08/24 12:39	08/08/24 16:04	1

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QC Sample Results

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260237-1

Method: SM 4500 CN E - Cyanide, Total (Continued)

Lab Sample ID: LCS 400-680520/2-A
 Matrix: Water
 Analysis Batch: 680557

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 680520
 %Rec

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	0.127	0.131		mg/L		103	75 - 125

Lab Sample ID: MRL 400-680557/14
 Matrix: Water
 Analysis Batch: 680557

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	0.00400	0.00344	J	mg/L		86	50 - 150

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Lab Chronicle

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260237-1

Client Sample ID: EFFLUENT GRAB

Lab Sample ID: 400-260237-1

Date Collected: 08/05/24 08:00
 Date Received: 08/05/24 10:33

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	5 mL	5 mL	680465	08/08/24 19:59	IMC	EET PEN
Total/NA	Analysis	420.4		1	10 mL	10 mL	680225	08/06/24 14:28	CAC	EET PEN
Total/NA	Prep	SM 4500 CN C			6 mL	6 mL	680520	08/08/24 12:39	VB	EET PEN
Total/NA	Analysis	SM 4500 CN E		1	100 mL	100 mL	680557	08/08/24 16:10	VB	EET PEN

Client Sample ID: EFFLUENT COMPOSITE

Lab Sample ID: 400-260237-2

Date Collected: 08/05/24 08:00
 Date Received: 08/05/24 10:33

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	625			263.4 mL	1 mL	680838	08/12/24 11:42	BKL	EET PEN
Total/NA	Analysis	625.1		1	0.4 mL	0.4 mL	680992	08/13/24 20:22	S1B	EET PEN
Total/NA	Prep	1631E			40 mL	40 mL	680493	08/05/24 14:50	VLC	EET PEN
Total/NA	Analysis	1631E		1			680545	08/08/24 16:07	VLC	EET PEN
Total Recoverable	Prep	200.7			25 mL	25 mL	850156	08/07/24 05:47	RR	EET SAV
Total Recoverable	Analysis	200.7 Rev 4.4		1			850341	08/07/24 13:05	BCB	EET SAV
Total/NA	Analysis	2340C-2011		1	25 mL	25 mL	850483	08/08/24 11:16	JAS	EET SAV

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Client Sample ID: Method Blank

Lab Sample ID: MB 400-680225/19

Date Collected: N/A
 Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	420.4		1	10 mL	10 mL	680225	08/06/24 14:26	CAC	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-680465/4

Date Collected: N/A
 Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	5 mL	5 mL	680465	08/08/24 11:55	IMC	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-680493/3-A

Date Collected: N/A
 Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			40 mL	40 mL	680493	08/07/24 16:00	VLC	EET PEN
Total/NA	Analysis	1631E		1			680545	08/08/24 12:13	VLC	EET PEN

Eurofins Pensacola

Lab Chronicle

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260237-1

Client Sample ID: Method Blank

Lab Sample ID: MB 400-680520/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SM 4500 CN C			6 mL	6 mL	680520	08/08/24 12:39	VB	EET PEN
Total/NA	Analysis	SM 4500 CN E		1	100 mL	100 mL	680557	08/08/24 16:04	VB	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-680838/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	625			250 mL	1 mL	680838	08/12/24 11:41	BKL	EET PEN
Total/NA	Analysis	625.1		1	0.4 mL	0.4 mL	680992	08/13/24 17:10	S1B	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 680-850156/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.7			25 mL	25 mL	850156	08/07/24 05:47	RR	EET SAV
Total Recoverable	Analysis	200.7 Rev 4.4		1			850341	08/07/24 12:57	BCB	EET SAV

Client Sample ID: Method Blank

Lab Sample ID: MB 680-850483/1

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2340C-2011		1	25 mL	25 mL	850483	08/08/24 11:16	JAS	EET SAV

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-680225/20

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	420.4		1	10 mL	10 mL	680225	08/06/24 14:26	CAC	EET PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-680465/23

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	5 mL	5 mL	680465	08/08/24 10:16	IMC	EET PEN

Eurofins Pensacola

Lab Chronicle

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260237-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-680493/4-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			40 mL	40 mL	680493	08/07/24 16:00	VLC	EET PEN
							Completed:	08/08/24 10:52 ¹		
Total/NA	Analysis	1631E		1			680545	08/08/24 12:20	VLC	EET PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-680520/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SM 4500 CN C			6 mL	6 mL	680520	08/08/24 12:39	VB	EET PEN
Total/NA	Analysis	SM 4500 CN E		1	100 mL	100 mL	680557	08/08/24 16:05	VB	EET PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-680838/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	625			250 mL	1 mL	680838	08/12/24 11:41	BKL	EET PEN
Total/NA	Analysis	625.1		1	0.4 mL	0.4 mL	680992	08/13/24 17:39	S1B	EET PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 680-850156/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.7			25 mL	25 mL	850156	08/07/24 05:47	RR	EET SAV
Total Recoverable	Analysis	200.7 Rev 4.4		1			850341	08/07/24 12:59	BCB	EET SAV

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 680-850483/2

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2340C-2011		1	25 mL	25 mL	850483	08/08/24 11:16	JAS	EET SAV

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 400-680493/5-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			40 mL	40 mL	680493	08/07/24 16:00	VLC	EET PEN
							Completed:	08/08/24 10:52 ¹		
Total/NA	Analysis	1631E		1			680545	08/08/24 12:28	VLC	EET PEN

Eurofins Pensacola

Lab Chronicle

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260237-1

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 400-680838/3-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	625			250 mL	1 mL	680838	08/12/24 11:41	BKL	EET PEN
Total/NA	Analysis	625.1		1	0.4 mL	0.4 mL	680992	08/13/24 18:03	S1B	EET PEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 680-850483/3

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2340C-2011		1	25 mL	25 mL	850483	08/08/24 11:16	JAS	EET SAV

Client Sample ID: Lab Control Sample

Lab Sample ID: MRL 400-680225/14

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	420.4		1	100 mL	100 mL	680225	08/06/24 14:26	CAC	EET PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: MRL 400-680557/14

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 CN E		1	100 mL	100 mL	680557	08/08/24 15:53	VB	EET PEN

Client Sample ID: EFFLUENT COMPOSITE

Lab Sample ID: 400-260237-2 MS

Date Collected: 08/05/24 08:00

Matrix: Water

Date Received: 08/05/24 10:33

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.7			25 mL	25 mL	850156	08/07/24 05:47	RR	EET SAV
Total Recoverable	Analysis	200.7 Rev 4.4		1			850341	08/07/24 13:07	BCB	EET SAV

Client Sample ID: EFFLUENT COMPOSITE

Lab Sample ID: 400-260237-2 MSD

Date Collected: 08/05/24 08:00

Matrix: Water

Date Received: 08/05/24 10:33

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.7			25 mL	25 mL	850156	08/07/24 05:47	RR	EET SAV
Total Recoverable	Analysis	200.7 Rev 4.4		1			850341	08/07/24 13:10	BCB	EET SAV

This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Eurofins Pensacola

Login Sample Receipt Checklist

Client: City of Orange Beach

Job Number: 400-260237-1

Login Number: 260237

List Source: Eurofins Pensacola

List Number: 1

Creator: Earnest, Tamatha

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: City of Orange Beach

Job Number: 400-260237-1

Login Number: 260237
List Number: 2
Creator: Lincoln, Alyssa

List Source: Eurofins Savannah
List Creation: 08/06/24 11:59 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses. incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Robbie Stalcup
City of Orange Beach
PO BOX 458
Orange Beach, Alabama 36561

Generated 8/27/2024 6:32:29 PM

JOB DESCRIPTION

City of Orange Beach - Table C

JOB NUMBER

400-260652-1

RECEIVED

SEP 24 2024

MUNICIPAL SECTION

Eurofins Pensacola

1

Job Notes

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Authorization



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Authorized for release by
Isabel Enfinger, Project Manager I
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(850)471-6237

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Case Narrative

Client: City of Orange Beach
Project: City of Orange Beach - Table C

Job ID: 400-260652-1

Job ID: 400-260652-1

Eurofins Pensacola

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Job Narrative 400-260652-1

Receipt

The samples were received on 8/13/2024 10:21 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.0° C.

GC/MS VOA

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

GC/MS Semi VOA

Method 625.1: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 400-681790 and analytical batch 400-681981 recovered outside control limits for the following analytes: 2,4-Dimethylphenol and Hexachlorocyclopentadiene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 625.1: The continuing calibration verification (CCV) associated with batch 400-681981 recovered above the upper control limit for 2,4-Dinitrophenol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

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

Metals

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

General Chemistry

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

Organic Prep

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

VOA Prep

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

Eurofins Pensacola

Method Summary

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260652-1

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	EPA	EET PEN
625.1	Semivolatile Organic Compounds (GC/MS)	EPA	EET PEN
1631E	Mercury, Low Level (CVAFS)	EPA	EET PEN
200.7 Rev 4.4	Metals (ICP)	EPA	EET SAV
2340C-2011	Hardness, Total	SM	EET SAV
420.4	Phenolics, Total Recoverable	EPA	EET PEN
SM 4500 CN E	Cyanide, Total	SM	EET PEN
1631E	Preparation, Mercury, Low Level	EPA	EET PEN
200.7	Preparation, Total Metals	EPA	EET SAV
625	Liquid-Liquid Extraction	EPA	EET PEN
SM 4500 CN C	Cyanide, Distillation	SM	EET PEN

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Protocol References:

- EPA = US Environmental Protection Agency
- SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

- EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
- EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Sample Summary

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-260652-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-260652-1	EFFLUENT GRAB	Water	08/13/24 07:00	08/13/24 10:21
400-260652-2	EFFLUENT COMPOSITE	Water	08/13/24 07:00	08/13/24 10:21

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Client Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-260652-1

Client Sample ID: EFFLUENT GRAB

Lab Sample ID: 400-260652-1

Date Collected: 08/13/24 07:00

Matrix: Water

Date Received: 08/13/24 10:21

Method: EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<1.0		1.0		ug/L			08/17/24 19:25	1
1,1,1,2-Tetrachloroethane	<1.0		1.0		ug/L			08/17/24 19:25	1
1,1,2-Trichloroethane	<5.0		5.0		ug/L			08/17/24 19:25	1
1,1-Dichloroethane	<1.0		1.0		ug/L			08/17/24 19:25	1
1,1-Dichloroethylene	<1.0		1.0		ug/L			08/17/24 19:25	1
1,2-Dichlorobenzene	<1.0		1.0		ug/L			08/17/24 19:25	1
1,2-Dichloroethane	<1.0		1.0		ug/L			08/17/24 19:25	1
1,2-Dichloropropane	<1.0		1.0		ug/L			08/17/24 19:25	1
1,3-Dichlorobenzene	<1.0		1.0		ug/L			08/17/24 19:25	1
1,3-Dichloropropylene	<5.0		5.0		ug/L			08/17/24 19:25	1
1,4-Dichlorobenzene	<1.0		1.0		ug/L			08/17/24 19:25	1
2-Chloroethyl vinyl ether	<5.0		5.0		ug/L			08/17/24 19:25	1
Acrolein	<20		20		ug/L			08/17/24 19:25	1
Acrylonitrile	<10		10		ug/L			08/17/24 19:25	1
Benzene	<1.0		1.0		ug/L			08/17/24 19:25	1
Bromoform	<5.0		5.0		ug/L			08/17/24 19:25	1
Carbon tetrachloride	<1.0		1.0		ug/L			08/17/24 19:25	1
Chlorobenzene	<1.0		1.0		ug/L			08/17/24 19:25	1
Chlorodibromomethane	<1.0		1.0		ug/L			08/17/24 19:25	1
Chloroethane	<1.0		1.0		ug/L			08/17/24 19:25	1
Chloroform	<1.0		1.0		ug/L			08/17/24 19:25	1
Dichlorobromomethane	<1.0		1.0		ug/L			08/17/24 19:25	1
Ethylbenzene	<1.0		1.0		ug/L			08/17/24 19:25	1
Methyl bromide	<1.0		1.0		ug/L			08/17/24 19:25	1
Methyl chloride	<1.0		1.0		ug/L			08/17/24 19:25	1
Methylene Chloride	<5.0		5.0		ug/L			08/17/24 19:25	1
Tetrachloroethylene	<1.0		1.0		ug/L			08/17/24 19:25	1
Toluene	<1.0		1.0		ug/L			08/17/24 19:25	1
Trichloroethylene	<1.0		1.0		ug/L			08/17/24 19:25	1
Vinyl chloride	<1.0		1.0		ug/L			08/17/24 19:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	104		78 - 118					08/17/24 19:25	1
Dibromofluoromethane	97		81 - 121					08/17/24 19:25	1
Toluene-d8 (Surr)	101		80 - 120					08/17/24 19:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenols, Total (EPA 420.4)	<0.0050		0.0050		mg/L			08/27/24 17:04	1
Cyanide, Total (SM 4500 CN E)	<0.0050		0.0050		mg/L		08/14/24 14:46	08/15/24 14:18	1

Client Sample ID: EFFLUENT COMPOSITE

Lab Sample ID: 400-260652-2

Date Collected: 08/13/24 07:00

Matrix: Water

Date Received: 08/13/24 10:21

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
1,2-Diphenylhydrazine (as Azobenzene)	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
2,4,6-Trichlorophenol	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1

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Client Sample Results

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260652-1

Client Sample ID: EFFLUENT COMPOSITE

Lab Sample ID: 400-260652-2

Date Collected: 08/13/24 07:00

Matrix: Water

Date Received: 08/13/24 10:21

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
2,4-Dimethylphenol	<9.5	*+	9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
2,4-Dinitrophenol	<28		28		ug/L		08/20/24 13:29	08/21/24 20:30	1
2,4-Dinitrotoluene	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
2,6-Dinitrotoluene	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
2-Chloronaphthalene	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
2-Chlorophenol	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
2-Nitrophenol	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
3,3'-Dichlorobenzidine	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
4,6-Dinitro-2-methylphenol	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
4-Chloro-3-methylphenol	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
4-Chlorophenyl phenyl ether	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
4-Nitrophenol	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Acenaphthene	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Acenaphthylene	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Anthracene	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Benzo[a]anthracene	<24		24		ug/L		08/20/24 13:29	08/21/24 20:30	1
Benzo[a]pyrene	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Benzo[b]fluoranthene	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Benzo[g,h,i]perylene	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Benzo[k]fluoranthene	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
bis (2-chloroisopropyl) ether	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Bis(2-chloroethoxy)methane	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Bis(2-chloroethyl)ether	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Bis(2-ethylhexyl) phthalate	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Butyl benzyl phthalate	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Chrysene	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Dibenz(a,h)anthracene	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Diethyl phthalate	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Dimethyl phthalate	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Di-n-butyl phthalate	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Di-n-octyl phthalate	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Fluoranthene	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Fluorene	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Hexachlorobenzene	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Hexachlorobutadiene	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Hexachlorocyclopentadiene	<19	*+	19		ug/L		08/20/24 13:29	08/21/24 20:30	1
Hexachloroethane	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Indeno[1,2,3-cd]pyrene	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Isophorone	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Naphthalene	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Nitrobenzene	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
N-Nitrosodimethylamine	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
N-Nitrosodi-n-propylamine	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
N-Nitrosodiphenylamine	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Pentachlorophenol	<19		19		ug/L		08/20/24 13:29	08/21/24 20:30	1
Phenanthrene	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Phenol	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1

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Client Sample Results

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260652-1

Client Sample ID: EFFLUENT COMPOSITE

Lab Sample ID: 400-260652-2

Date Collected: 08/13/24 07:00

Matrix: Water

Date Received: 08/13/24 10:21

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyrene	<9.5		9.5		ug/L		08/20/24 13:29	08/21/24 20:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	117		15 - 135				08/20/24 13:29	08/21/24 20:30	1
2-Fluorobiphenyl	68		32 - 109				08/20/24 13:29	08/21/24 20:30	1
2-Fluorophenol	51		10 - 104				08/20/24 13:29	08/21/24 20:30	1
Nitrobenzene-d5	66		31 - 111				08/20/24 13:29	08/21/24 20:30	1
Phenol-d5	42		10 - 110				08/20/24 13:29	08/21/24 20:30	1
Terphenyl-d14	90		30 - 129				08/20/24 13:29	08/21/24 20:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	10		0.50		ng/L		08/13/24 13:07	08/22/24 13:22	1

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.020		0.020		mg/L		08/15/24 06:14	08/15/24 14:16	1
Arsenic	<0.020		0.020		mg/L		08/15/24 06:14	08/15/24 14:16	1
Beryllium	<0.0040		0.0040		mg/L		08/15/24 06:14	08/15/24 14:16	1
Cadmium	<0.0050		0.0050		mg/L		08/15/24 06:14	08/15/24 14:16	1
Chromium	<0.010		0.010		mg/L		08/15/24 06:14	08/15/24 14:16	1
Copper	<0.020		0.020		mg/L		08/15/24 06:14	08/15/24 14:16	1
Lead	<0.010		0.010		mg/L		08/15/24 06:14	08/15/24 14:16	1
Nickel	<0.040		0.040		mg/L		08/15/24 06:14	08/15/24 14:16	1
Selenium	<0.020		0.020		mg/L		08/15/24 06:14	08/15/24 14:16	1
Silver	<0.010		0.010		mg/L		08/15/24 06:14	08/15/24 14:16	1
Thallium	<0.025		0.025		mg/L		08/15/24 06:14	08/15/24 14:16	1
Zinc	0.065		0.020		mg/L		08/15/24 06:14	08/15/24 14:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate (SM 2340C-2011)	100		10		mg/L			08/22/24 12:03	1

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Definitions/Glossary

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260652-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

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QC Association Summary

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260652-1

GC/MS VOA

Analysis Batch: 681495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-260652-1	EFFLUENT GRAB	Total/NA	Water	624.1	
MB 400-681495/38	Method Blank	Total/NA	Water	624.1	
LCS 400-681495/3	Lab Control Sample	Total/NA	Water	624.1	

GC/MS Semi VOA

Prep Batch: 681790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-260652-2	EFFLUENT COMPOSITE	Total/NA	Water	625	
MB 400-681790/1-A	Method Blank	Total/NA	Water	625	
LCS 400-681790/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 400-681790/3-A	Lab Control Sample Dup	Total/NA	Water	625	

Analysis Batch: 681981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-260652-2	EFFLUENT COMPOSITE	Total/NA	Water	625.1	681790
MB 400-681790/1-A	Method Blank	Total/NA	Water	625.1	681790
LCS 400-681790/2-A	Lab Control Sample	Total/NA	Water	625.1	681790
LCSD 400-681790/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	681790

Metals

Prep Batch: 682028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-260652-2	EFFLUENT COMPOSITE	Total/NA	Water	1631E	
MB 400-682028/3-A	Method Blank	Total/NA	Water	1631E	
LCS 400-682028/4-A	Lab Control Sample	Total/NA	Water	1631E	
LCSD 400-682028/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 682111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-260652-2	EFFLUENT COMPOSITE	Total/NA	Water	1631E	682028
MB 400-682028/3-A	Method Blank	Total/NA	Water	1631E	682028
LCS 400-682028/4-A	Lab Control Sample	Total/NA	Water	1631E	682028
LCSD 400-682028/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	682028

Prep Batch: 851461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-260652-2	EFFLUENT COMPOSITE	Total Recoverable	Water	200.7	
MB 680-851461/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 680-851461/2-A	Lab Control Sample	Total Recoverable	Water	200.7	

Analysis Batch: 851730

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-260652-2	EFFLUENT COMPOSITE	Total Recoverable	Water	200.7 Rev 4.4	851461
MB 680-851461/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	851461
LCS 680-851461/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	851461

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QC Association Summary

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260652-1

General Chemistry

Prep Batch: 681151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-260652-1	EFFLUENT GRAB	Total/NA	Water	SM 4500 CN C	
MB 400-681151/1-A	Method Blank	Total/NA	Water	SM 4500 CN C	
LCS 400-681151/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN C	

Analysis Batch: 681304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-260652-1	EFFLUENT GRAB	Total/NA	Water	SM 4500 CN E	681151
MB 400-681151/1-A	Method Blank	Total/NA	Water	SM 4500 CN E	681151
LCS 400-681151/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN E	681151
MRL 400-681304/14	Lab Control Sample	Total/NA	Water	SM 4500 CN E	

Analysis Batch: 682584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-260652-1	EFFLUENT GRAB	Total/NA	Water	420.4	
MB 400-682584/19	Method Blank	Total/NA	Water	420.4	
LCS 400-682584/20	Lab Control Sample	Total/NA	Water	420.4	
MRL 400-682584/13	Lab Control Sample	Total/NA	Water	420.4	
400-260652-1 MS	EFFLUENT GRAB	Total/NA	Water	420.4	
400-260652-1 MSD	EFFLUENT GRAB	Total/NA	Water	420.4	

Analysis Batch: 852700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-260652-2	EFFLUENT COMPOSITE	Total/NA	Water	2340C-2011	
MB 680-852700/1	Method Blank	Total/NA	Water	2340C-2011	
LCS 680-852700/2	Lab Control Sample	Total/NA	Water	2340C-2011	
LCSD 680-852700/3	Lab Control Sample Dup	Total/NA	Water	2340C-2011	
400-260652-2 DU	EFFLUENT COMPOSITE	Total/NA	Water	2340C-2011	

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QC Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-260652-1

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-681495/38
Matrix: Water
Analysis Batch: 681495

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	<1.0		1.0		ug/L			08/17/24 12:05	1
1,1,2,2-Tetrachloroethane	<1.0		1.0		ug/L			08/17/24 12:05	1
1,1,2-Trichloroethane	<5.0		5.0		ug/L			08/17/24 12:05	1
1,1-Dichloroethane	<1.0		1.0		ug/L			08/17/24 12:05	1
1,1-Dichloroethylene	<1.0		1.0		ug/L			08/17/24 12:05	1
1,2-Dichlorobenzene	<1.0		1.0		ug/L			08/17/24 12:05	1
1,2-Dichloroethane	<1.0		1.0		ug/L			08/17/24 12:05	1
1,2-Dichloropropane	<1.0		1.0		ug/L			08/17/24 12:05	1
1,3-Dichlorobenzene	<1.0		1.0		ug/L			08/17/24 12:05	1
1,3-Dichloropropylene	<5.0		5.0		ug/L			08/17/24 12:05	1
1,4-Dichlorobenzene	<1.0		1.0		ug/L			08/17/24 12:05	1
2-Chloroethyl vinyl ether	<5.0		5.0		ug/L			08/17/24 12:05	1
Acrolein	<20		20		ug/L			08/17/24 12:05	1
Acrylonitrile	<10		10		ug/L			08/17/24 12:05	1
Benzene	<1.0		1.0		ug/L			08/17/24 12:05	1
Bromoform	<5.0		5.0		ug/L			08/17/24 12:05	1
Carbon tetrachloride	<1.0		1.0		ug/L			08/17/24 12:05	1
Chlorobenzene	<1.0		1.0		ug/L			08/17/24 12:05	1
Chlorodibromomethane	<1.0		1.0		ug/L			08/17/24 12:05	1
Chloroethane	<1.0		1.0		ug/L			08/17/24 12:05	1
Chloroform	<1.0		1.0		ug/L			08/17/24 12:05	1
Dichlorobromomethane	<1.0		1.0		ug/L			08/17/24 12:05	1
Ethylbenzene	<1.0		1.0		ug/L			08/17/24 12:05	1
Methyl bromide	<1.0		1.0		ug/L			08/17/24 12:05	1
Methyl chloride	<1.0		1.0		ug/L			08/17/24 12:05	1
Methylene Chloride	<5.0		5.0		ug/L			08/17/24 12:05	1
Tetrachloroethylene	<1.0		1.0		ug/L			08/17/24 12:05	1
Toluene	<1.0		1.0		ug/L			08/17/24 12:05	1
Trichloroethylene	<1.0		1.0		ug/L			08/17/24 12:05	1
Vinyl chloride	<1.0		1.0		ug/L			08/17/24 12:05	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene	91		78 - 118		08/17/24 12:05	1
Dibromofluoromethane	95		81 - 121		08/17/24 12:05	1
Toluene-d8 (Surr)	96		80 - 120		08/17/24 12:05	1

Lab Sample ID: LCS 400-681495/3
Matrix: Water
Analysis Batch: 681495

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,2,2-Tetrachloroethane	50.0	50.2		ug/L		100	60 - 140
1,1,2-Trichloroethane	50.0	54.2		ug/L		108	70 - 130
1,1-Dichloroethane	50.0	50.8		ug/L		102	70 - 130
1,1-Dichloroethylene	50.0	51.8		ug/L		104	50 - 150
1,2-Dichlorobenzene	50.0	63.8		ug/L		128	65 - 135
1,2-Dichloroethane	50.0	49.9		ug/L		100	70 - 130

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QC Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-260652-1

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-681495/3 Client Sample ID: Lab Control Sample
Matrix: Water Prep Type: Total/NA
Analysis Batch: 681495

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichloropropane	50.0	54.1		ug/L		108	35 - 150
1,3-Dichlorobenzene	50.0	61.2		ug/L		122	70 - 130
1,3-Dichloropropylene	100	108		ug/L		108	25 - 150
1,4-Dichlorobenzene	50.0	63.2		ug/L		126	65 - 135
2-Chloroethyl vinyl ether	50.0	56.0		ug/L		112	10 - 150
Acrolein	500	459		ug/L		92	60 - 140
Acrylonitrile	500	485		ug/L		97	60 - 140
Benzene	50.0	55.8		ug/L		112	65 - 135
Bromoform	50.0	50.9		ug/L		102	70 - 130
Carbon tetrachloride	50.0	49.8		ug/L		100	70 - 130
Chlorobenzene	50.0	60.0		ug/L		120	65 - 135
Chlorodibromomethane	50.0	55.7		ug/L		111	69 - 133
Chloroethane	50.0	47.4		ug/L		95	40 - 150
Chloroform	50.0	50.0		ug/L		100	70 - 135
Dichlorobromomethane	50.0	55.9		ug/L		112	65 - 135
Ethylbenzene	50.0	57.4		ug/L		115	60 - 140
Methyl bromide	50.0	45.8		ug/L		92	15 - 150
Methyl chloride	50.0	44.8		ug/L		90	10 - 150
Methylene Chloride	50.0	50.3		ug/L		101	60 - 140
Tetrachloroethylene	50.0	63.7		ug/L		127	70 - 130
Toluene	50.0	54.8		ug/L		110	70 - 130
Trichloroethylene	50.0	60.1		ug/L		120	65 - 135
Vinyl chloride	50.0	49.7		ug/L		99	10 - 150
cis-1,3-Dichloropropene	50.0	51.7		ug/L		103	25 - 150
trans-1,3-Dichloropropene	50.0	56.5		ug/L		113	50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	94		78 - 118
Dibromofluoromethane	96		81 - 121
Toluene-d8 (Surr)	100		80 - 120

Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-681790/1-A Client Sample ID: Method Blank
Matrix: Water Prep Type: Total/NA
Analysis Batch: 681981 Prep Batch: 681790

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
1,2-Diphenylhydrazine (as Azobenzene)	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
2,4,6-Trichlorophenol	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
2,4-Dichlorophenol	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
2,4-Dimethylphenol	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
2,4-Dinitrophenol	<7.5		7.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
2,4-Dinitrotoluene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
2,6-Dinitrotoluene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
2-Chloronaphthalene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
2-Chlorophenol	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1

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QC Sample Results

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260652-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-681790/1-A
 Matrix: Water
 Analysis Batch: 681981

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 681790

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2-Nitrophenol	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
3,3'-Dichlorobenzidine	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
4,6-Dinitro-2-methylphenol	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
4-Chloro-3-methylphenol	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
4-Chlorophenyl phenyl ether	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
4-Nitrophenol	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Acenaphthene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Acenaphthylene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Anthracene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Benzidine	<6.3		6.3		ug/L		08/20/24 13:29	08/21/24 16:21	1
Benzo[a]anthracene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Benzo[a]pyrene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Benzo[b]fluoranthene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Benzo[g,h,i]perylene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Benzo[k]fluoranthene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
bis (2-chloroisopropyl) ether	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Bis(2-chloroethoxy)methane	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Bis(2-chloroethyl)ether	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Bis(2-ethylhexyl) phthalate	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Butyl benzyl phthalate	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Chrysene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Dibenz(a,h)anthracene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Diethyl phthalate	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Dimethyl phthalate	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Di-n-butyl phthalate	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Di-n-octyl phthalate	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Fluoranthene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Fluorene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Hexachlorobenzene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Hexachlorobutadiene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Hexachlorocyclopentadiene	<5.0		5.0		ug/L		08/20/24 13:29	08/21/24 16:21	1
Hexachloroethane	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Indeno[1,2,3-cd]pyrene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Isophorone	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Naphthalene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Nitrobenzene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
N-Nitrosodimethylamine	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
N-Nitrosodi-n-propylamine	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
N-Nitrosodiphenylamine	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Pentachlorophenol	<5.0		5.0		ug/L		08/20/24 13:29	08/21/24 16:21	1
Phenanthrene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Phenol	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1
Pyrene	<2.5		2.5		ug/L		08/20/24 13:29	08/21/24 16:21	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol	116		15 - 135	08/20/24 13:29	08/21/24 16:21	1
2-Fluorobiphenyl	64		32 - 109	08/20/24 13:29	08/21/24 16:21	1
2-Fluorophenol	55		10 - 104	08/20/24 13:29	08/21/24 16:21	1

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QC Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-260652-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-681790/1-A
Matrix: Water
Analysis Batch: 681981

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 681790

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Nitrobenzene-d5	69		31 - 111	08/20/24 13:29	08/21/24 16:21	1
Phenol-d5	42		10 - 110	08/20/24 13:29	08/21/24 16:21	1
Terphenyl-d14	88		30 - 129	08/20/24 13:29	08/21/24 16:21	1

Lab Sample ID: LCS 400-681790/2-A
Matrix: Water
Analysis Batch: 681981

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 681790

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	Limits
1,2,4-Trichlorobenzene	30.0	21.1		ug/L		70	44 - 142	
1,2-Diphenylhydrazine (as Azobenzene)	30.0	21.9		ug/L		73	23 - 138	
2,4,6-Trichlorophenol	30.0	26.7		ug/L		89	37 - 144	
2,4-Dichlorophenol	30.0	26.9		ug/L		90	39 - 135	
2,4-Dimethylphenol	30.0	44.4	*+	ug/L		148	32 - 120	
2,4-Dinitrophenol	60.0	95.9		ug/L		160	1 - 191	
2,4-Dinitrotoluene	30.0	26.8		ug/L		89	39 - 139	
2,6-Dinitrotoluene	30.0	24.6		ug/L		82	50 - 158	
2-Chloronaphthalene	30.0	21.9		ug/L		73	24 - 132	
2-Chlorophenol	30.0	24.6		ug/L		82	23 - 134	
2-Nitrophenol	30.0	26.3		ug/L		88	29 - 182	
3,3'-Dichlorobenzidine	60.0	50.3		ug/L		84	1 - 262	
4,6-Dinitro-2-methylphenol	60.0	63.2		ug/L		105	1 - 181	
4-Bromophenyl phenyl ether	30.0	25.1		ug/L		84	53 - 127	
4-Chloro-3-methylphenol	30.0	28.1		ug/L		94	22 - 147	
4-Chlorophenyl phenyl ether	30.0	26.5		ug/L		88	25 - 158	
4-Nitrophenol	60.0	50.8		ug/L		85	1 - 132	
Acenaphthene	30.0	24.4		ug/L		81	47 - 145	
Acenaphthylene	30.0	25.0		ug/L		83	33 - 145	
Anthracene	30.0	26.9		ug/L		90	27 - 133	
Benzidine	168	22.3		ug/L		13	1 - 73	
Benzo[a]anthracene	30.0	25.4		ug/L		85	33 - 143	
Benzo[e]pyrene	30.0	27.3		ug/L		91	17 - 163	
Benzo[b]fluoranthene	30.0	25.1		ug/L		84	24 - 159	
Benzo[g,h,i]perylene	30.0	28.4		ug/L		95	1 - 219	
Benzo[k]fluoranthene	30.0	26.1		ug/L		87	11 - 162	
bis (2-chloroisopropyl) ether	30.0	19.6		ug/L		65	36 - 166	
Bis(2-chloroethoxy)methane	30.0	23.4		ug/L		78	33 - 184	
Bis(2-chloroethyl)ether	30.0	19.2		ug/L		64	12 - 158	
Bis(2-ethylhexyl) phthalate	30.0	22.5		ug/L		75	8 - 158	
Butyl benzyl phthalate	30.0	24.1		ug/L		80	1 - 152	
Chrysene	30.0	25.0		ug/L		83	17 - 168	
Dibenz(a,h)anthracene	30.0	26.6		ug/L		89	1 - 227	
Diethyl phthalate	30.0	26.9		ug/L		90	1 - 120	
Dimethyl phthalate	30.0	24.9		ug/L		83	1 - 120	
Di-n-butyl phthalate	30.0	26.4		ug/L		88	1 - 120	
Di-n-octyl phthalate	30.0	23.8		ug/L		79	4 - 146	
Fluoranthene	30.0	28.4		ug/L		95	26 - 137	
Fluorene	30.0	28.6		ug/L		95	59 - 121	

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QC Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-260652-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-681790/2-A
Matrix: Water
Analysis Batch: 681981

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 681790

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Hexachlorobenzene	30.0	27.0		ug/L		90	1 - 152
Hexachlorobutadiene	30.0	20.7		ug/L		69	24 - 120
Hexachlorocyclopentadiene	30.0	46.2	*+	ug/L		154	10 - 124
Hexachloroethane	30.0	17.0		ug/L		57	40 - 120
Indeno[1,2,3-cd]pyrene	30.0	25.2		ug/L		84	1 - 171
Isophorone	30.0	22.6		ug/L		75	21 - 196
Naphthalene	30.0	22.2		ug/L		74	21 - 133
Nitrobenzene	30.0	22.3		ug/L		74	35 - 180
N-Nitrosodimethylamine	30.0	15.2		ug/L		51	10 - 115
N-Nitrosodi-n-propylamine	30.0	23.7		ug/L		79	1 - 230
N-Nitrosodiphenylamine	29.8	23.2		ug/L		78	29 - 138
Pentachlorophenol	60.0	63.6		ug/L		106	14 - 176
Phenanthrene	30.0	26.5		ug/L		88	54 - 120
Phenol	30.0	15.8		ug/L		53	5 - 120
Pyrene	30.0	23.5		ug/L		78	52 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol	120		15 - 135
2-Fluorobiphenyl	65		32 - 109
2-Fluorophenol	60		10 - 104
Nitrobenzene-d5	80		31 - 111
Phenol-d5	51		10 - 110
Terphenyl-d14	77		30 - 129

Lab Sample ID: LCSD 400-681790/3-A
Matrix: Water
Analysis Batch: 681981

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 681790

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	30.0	21.9		ug/L		73	44 - 142	4	50
1,2-Diphenylhydrazine (as Azobenzene)	30.0	22.8		ug/L		76	23 - 138	4	40
2,4,6-Trichlorophenol	30.0	27.5		ug/L		92	37 - 144	3	58
2,4-Dichlorophenol	30.0	27.4		ug/L		91	39 - 135	2	50
2,4-Dimethylphenol	30.0	45.7	*+	ug/L		152	32 - 120	3	58
2,4-Dinitrophenol	60.0	103		ug/L		172	1 - 191	7	132
2,4-Dinitrotoluene	30.0	27.4		ug/L		91	39 - 139	2	42
2,6-Dinitrotoluene	30.0	25.0		ug/L		83	50 - 158	2	48
2-Chloronaphthalene	30.0	23.0		ug/L		77	24 - 132	5	24
2-Chlorophenol	30.0	25.4		ug/L		85	23 - 134	3	61
2-Nitrophenol	30.0	27.5		ug/L		92	29 - 182	4	55
3,3'-Dichlorobenzidine	60.0	52.3		ug/L		87	1 - 262	4	108
4,6-Dinitro-2-methylphenol	60.0	65.1		ug/L		108	1 - 181	3	203
4-Bromophenyl phenyl ether	30.0	25.7		ug/L		86	53 - 127	2	43
4-Chloro-3-methylphenol	30.0	28.5		ug/L		95	22 - 147	1	73
4-Chlorophenyl phenyl ether	30.0	27.4		ug/L		91	25 - 158	3	61
4-Nitrophenol	60.0	52.6		ug/L		88	1 - 132	3	131
Acenaphthene	30.0	25.4		ug/L		85	47 - 145	4	48
Acenaphthylene	30.0	25.8		ug/L		86	33 - 145	3	74

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QC Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-260652-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-681790/3-A
Matrix: Water
Analysis Batch: 681981

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 681790

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	
								RPD	Limit
Anthracene	30.0	27.4		ug/L		91	27 - 133	2	66
Benzidine	168	24.6		ug/L		15	1 - 73	10	40
Benzo[a]anthracene	30.0	25.8		ug/L		86	33 - 143	1	53
Benzo[a]pyrene	30.0	27.5		ug/L		92	17 - 163	1	72
Benzo[b]fluoranthene	30.0	26.5		ug/L		88	24 - 159	6	71
Benzo[g,h,i]perylene	30.0	28.5		ug/L		95	1 - 219	0	97
Benzo[k]fluoranthene	30.0	25.5		ug/L		85	11 - 162	2	63
bis (2-chloroisopropyl) ether	30.0	20.5		ug/L		68	36 - 166	5	76
Bis(2-chloroethoxy)methane	30.0	24.4		ug/L		81	33 - 184	4	54
Bis(2-chloroethyl)ether	30.0	20.4		ug/L		68	12 - 158	6	108
Bis(2-ethylhexyl) phthalate	30.0	23.0		ug/L		77	8 - 158	2	82
Butyl benzyl phthalate	30.0	24.6		ug/L		82	1 - 152	2	60
Chrysene	30.0	25.7		ug/L		86	17 - 168	3	87
Dibenz(a,h)anthracene	30.0	27.2		ug/L		91	1 - 227	2	126
Diethyl phthalate	30.0	27.5		ug/L		92	1 - 120	2	100
Dimethyl phthalate	30.0	25.6		ug/L		85	1 - 120	3	183
Di-n-butyl phthalate	30.0	26.8		ug/L		89	1 - 120	2	47
Di-n-octyl phthalate	30.0	24.3		ug/L		81	4 - 146	2	69
Fluoranthene	30.0	28.9		ug/L		96	26 - 137	2	66
Fluorene	30.0	29.2		ug/L		97	59 - 121	2	38
Hexachlorobenzene	30.0	27.6		ug/L		92	1 - 152	2	55
Hexachlorobutadiene	30.0	21.0		ug/L		70	24 - 120	2	62
Hexachlorocyclopentadiene	30.0	47.0	*+	ug/L		157	10 - 124	2	40
Hexachloroethane	30.0	17.6		ug/L		59	40 - 120	3	52
Indeno[1,2,3-cd]pyrene	30.0	25.6		ug/L		85	1 - 171	2	99
Isophorone	30.0	23.4		ug/L		78	21 - 196	3	40
Naphthalene	30.0	23.0		ug/L		77	21 - 133	4	65
Nitrobenzene	30.0	23.4		ug/L		78	35 - 180	5	62
N-Nitrosodimethylamine	30.0	13.6		ug/L		45	10 - 115	11	40
N-Nitrosodi-n-propylamine	30.0	25.0		ug/L		83	1 - 230	6	87
N-Nitrosodiphenylamine	29.8	24.1		ug/L		81	29 - 138	4	40
Pentachlorophenol	60.0	65.0		ug/L		108	14 - 176	2	86
Phenanthrene	30.0	27.1		ug/L		90	54 - 120	2	39
Phenol	30.0	16.2		ug/L		54	5 - 120	3	64
Pyrene	30.0	24.3		ug/L		81	52 - 120	4	49

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol	121		15 - 135
2-Fluorobiphenyl	68		32 - 109
2-Fluorophenol	63		10 - 104
Nitrobenzene-d5	83		31 - 111
Phenol-d5	53		10 - 110
Terphenyl-d14	79		30 - 129

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QC Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-260652-1

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

Lab Sample ID: MB 400-682028/3-A
Matrix: Water
Analysis Batch: 682111

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 682028

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.50		0.50		ng/L		08/21/24 16:00	08/22/24 09:48	1

Lab Sample ID: LCS 400-682028/4-A
Matrix: Water
Analysis Batch: 682111

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 682028

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	5.00	4.96		ng/L		99	79 - 121

Lab Sample ID: LCSD 400-682028/5-A
Matrix: Water
Analysis Batch: 682111

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 682028

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Mercury	5.00	4.86		ng/L		97	79 - 121	2	20

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 680-851461/1-A
Matrix: Water
Analysis Batch: 851730

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 851461

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.020		0.020		mg/L		08/15/24 06:14	08/15/24 13:44	1
Arsenic	<0.020		0.020		mg/L		08/15/24 06:14	08/15/24 13:44	1
Beryllium	<0.0040		0.0040		mg/L		08/15/24 06:14	08/15/24 13:44	1
Cadmium	<0.0050		0.0050		mg/L		08/15/24 06:14	08/15/24 13:44	1
Chromium	<0.010		0.010		mg/L		08/15/24 06:14	08/15/24 13:44	1
Copper	<0.020		0.020		mg/L		08/15/24 06:14	08/15/24 13:44	1
Lead	<0.010		0.010		mg/L		08/15/24 06:14	08/15/24 13:44	1
Nickel	<0.040		0.040		mg/L		08/15/24 06:14	08/15/24 13:44	1
Selenium	<0.020		0.020		mg/L		08/15/24 06:14	08/15/24 13:44	1
Silver	<0.010		0.010		mg/L		08/15/24 06:14	08/15/24 13:44	1
Thallium	<0.025		0.025		mg/L		08/15/24 06:14	08/15/24 13:44	1
Zinc	<0.020		0.020		mg/L		08/15/24 06:14	08/15/24 13:44	1

Lab Sample ID: LCS 680-851461/2-A
Matrix: Water
Analysis Batch: 851730

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 851461

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0546		mg/L		109	85 - 115
Arsenic	0.100	0.103		mg/L		103	85 - 115
Beryllium	0.0500	0.0531		mg/L		106	85 - 115
Cadmium	0.0500	0.0554		mg/L		111	85 - 115
Calcium	5000	5180		ug/L		104	85 - 115
Chromium	0.100	0.107		mg/L		107	85 - 115
Copper	0.101	0.107		mg/L		106	85 - 115
Lead	0.500	0.544		mg/L		109	85 - 115
Magnesium	5.00	5.17		mg/L		103	85 - 115

Eurofins Pensacola

QC Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-260652-1

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: LCS 680-851461/2-A
Matrix: Water
Analysis Batch: 851730

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 851461

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nickel	0.100	0.108		mg/L		108	85 - 115
Selenium	0.100	0.105		mg/L		105	85 - 115
Silver	0.0500	0.0515		mg/L		103	85 - 115
Thallium	0.0500	0.0491		mg/L		98	85 - 115
Zinc	0.100	0.106		mg/L		106	85 - 115

Method: 2340C-2011 - Hardness, Total

Lab Sample ID: MB 680-852700/1
Matrix: Water
Analysis Batch: 852700

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Hardness as calcium carbonate	<10		10		mg/L			08/22/24 12:03	1

Lab Sample ID: LCS 680-852700/2
Matrix: Water
Analysis Batch: 852700

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hardness as calcium carbonate	400	421		mg/L		105	75 - 125

Lab Sample ID: LCSD 680-852700/3
Matrix: Water
Analysis Batch: 852700

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hardness as calcium carbonate	400	399		mg/L		100	75 - 125	5	30

Lab Sample ID: 400-260652-2 DU
Matrix: Water
Analysis Batch: 852700

Client Sample ID: EFFLUENT COMPOSITE
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Hardness as calcium carbonate	100		91.7		mg/L		10	30

Method: 420.4 - Phenolics, Total Recoverable

Lab Sample ID: MB 400-682584/19
Matrix: Water
Analysis Batch: 682584

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Phenols, Total	<0.0050		0.0050		mg/L			08/27/24 17:04	1

Lab Sample ID: LCS 400-682584/20
Matrix: Water
Analysis Batch: 682584

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phenols, Total	0.100	0.103		mg/L		103	90 - 110

Eurofins Pensacola

QC Sample Results

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260652-1

Method: 420.4 - Phenolics, Total Recoverable

Lab Sample ID: MRL 400-682584/13
 Matrix: Water
 Analysis Batch: 682584

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Phenols, Total	0.00500	0.00614		mg/L		123	50 - 150

Lab Sample ID: 400-260652-1 MS
 Matrix: Water
 Analysis Batch: 682584

Client Sample ID: EFFLUENT GRAB
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Phenols, Total	<0.0050		0.0200	0.0212		mg/L		94	90 - 110

Lab Sample ID: 400-260652-1 MSD
 Matrix: Water
 Analysis Batch: 682584

Client Sample ID: EFFLUENT GRAB
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phenols, Total	<0.0050		0.0200	0.0211		mg/L		94	90 - 110	1	20

Method: SM 4500 CN E - Cyanide, Total

Lab Sample ID: MB 400-681151/1-A
 Matrix: Water
 Analysis Batch: 681304

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 681151

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0050		0.0050		mg/L		08/14/24 14:45	08/15/24 14:11	1

Lab Sample ID: LCS 400-681151/2-A
 Matrix: Water
 Analysis Batch: 681304

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 681151

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.127	0.125		mg/L		99	75 - 125

Lab Sample ID: MRL 400-681304/14
 Matrix: Water
 Analysis Batch: 681304

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.00400	0.00325	J	mg/L		81	50 - 150

Eurofins Pensacola

Lab Chronicle

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260652-1

Client Sample ID: EFFLUENT GRAB

Lab Sample ID: 400-260652-1

Date Collected: 08/13/24 07:00

Matrix: Water

Date Received: 08/13/24 10:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	5 mL	5 mL	681495	08/17/24 19:25	BPO	EET PEN
Total/NA	Analysis	420.4		1	10 mL	10 mL	682584	08/27/24 17:04	CAC	EET PEN
Total/NA	Prep	SM 4500 CN C			6 mL	6 mL	681151	08/14/24 14:46	VB	EET PEN
Total/NA	Analysis	SM 4500 CN E		1	100 mL	100 mL	681304	08/15/24 14:18	VB	EET PEN

Client Sample ID: EFFLUENT COMPOSITE

Lab Sample ID: 400-260652-2

Date Collected: 08/13/24 07:00

Matrix: Water

Date Received: 08/13/24 10:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	625			263.2 mL	1 mL	681790	08/20/24 13:29	STC	EET PEN
Total/NA	Analysis	625.1		1	0.4 mL	0.4 mL	681981	08/21/24 20:30	S1B	EET PEN
Total/NA	Prep	1631E			40 mL	40 mL	682028	08/13/24 13:07	VLC	EET PEN
Total/NA	Analysis	1631E		1			682111	08/22/24 13:22	VLC	EET PEN
Total Recoverable	Prep	200.7			25 mL	25 mL	851461	08/15/24 06:14	RR	EET SAV
Total Recoverable	Analysis	200.7 Rev 4.4		1			851730	08/15/24 14:16	BJB	EET SAV
Total/NA	Analysis	2340C-2011		1	25 mL	25 mL	852700	08/22/24 12:03	JAS	EET SAV

Client Sample ID: Method Blank

Lab Sample ID: MB 400-681151/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SM 4500 CN C			6 mL	6 mL	681151	08/14/24 14:45	VB	EET PEN
Total/NA	Analysis	SM 4500 CN E		1	100 mL	100 mL	681304	08/15/24 14:11	VB	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-681495/38

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	5 mL	5 mL	681495	08/17/24 12:05	BPO	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-681790/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	625			1000 mL	1 mL	681790	08/20/24 13:29	STC	EET PEN
Total/NA	Analysis	625.1		1	0.4 mL	0.4 mL	681981	08/21/24 16:21	S1B	EET PEN

Eurofins Pensacola

Lab Chronicle

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260652-1

Client Sample ID: Method Blank

Lab Sample ID: MB 400-682028/3-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			40 mL	40 mL	682028	08/21/24 16:00	VLC	EET PEN
							Completed:	08/22/24 08:40		
Total/NA	Analysis	1631E		1			682111	08/22/24 09:48	VLC	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-682584/19

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	420.4		1	10 mL	10 mL	682584	08/27/24 17:04	CAC	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 680-851461/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.7			25 mL	25 mL	851461	08/15/24 06:14	RR	EET SAV
Total Recoverable	Analysis	200.7 Rev 4.4		1			851730	08/15/24 13:44	BJB	EET SAV

Client Sample ID: Method Blank

Lab Sample ID: MB 680-852700/1

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2340C-2011		1	25 mL	25 mL	852700	08/22/24 12:03	JAS	EET SAV

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-681151/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SM 4500 CN C			6 mL	6 mL	681151	08/14/24 14:45	VB	EET PEN
Total/NA	Analysis	SM 4500 CN E		1	100 mL	100 mL	681304	08/15/24 14:12	VB	EET PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-681495/3

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	5 mL	5 mL	681495	08/17/24 11:04	BPO	EET PEN

Eurofins Pensacola

Lab Chronicle

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-260652-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-681790/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	625			1000 mL	1 mL	681790	08/20/24 13:29	STC	EET PEN
Total/NA	Analysis	625.1		1	0.4 mL	0.4 mL	681981	08/21/24 16:44	S1B	EET PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-682028/4-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			40 mL	40 mL	682028	08/21/24 16:00	VLC	EET PEN
							Completed:	08/22/24 08:40		
Total/NA	Analysis	1631E		1			682111	08/22/24 09:56	VLC	EET PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-682584/20

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	420.4		1	10 mL	10 mL	682584	08/27/24 17:04	CAC	EET PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 680-851461/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.7			25 mL	25 mL	851461	08/15/24 06:14	RR	EET SAV
Total Recoverable	Analysis	200.7 Rev 4.4		1			851730	08/15/24 13:47	BJB	EET SAV

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 680-852700/2

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2340C-2011		1	25 mL	25 mL	852700	08/22/24 12:03	JAS	EET SAV

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 400-681790/3-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	625			1000 mL	1 mL	681790	08/20/24 13:29	STC	EET PEN
Total/NA	Analysis	625.1		1	0.4 mL	0.4 mL	681981	08/21/24 17:07	S1B	EET PEN

Eurofins Pensacola

Lab Chronicle

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-260652-1

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 400-682028/5-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			40 mL	40 mL	682028	08/21/24 16:00	VLC	EET PEN
							Completed:	08/22/24 08:40 ¹		
Total/NA	Analysis	1631E		1			682111	08/22/24 10:03	VLC	EET PEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 680-852700/3

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2340C-2011		1	25 mL	25 mL	852700	08/22/24 12:03	JAS	EET SAV

Client Sample ID: Lab Control Sample

Lab Sample ID: MRL 400-681304/14

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 CN E		1	100 mL	100 mL	681304	08/15/24 14:10	VB	EET PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: MRL 400-682584/13

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	420.4		1	100 mL	100 mL	682584	08/27/24 17:04	CAC	EET PEN

Client Sample ID: EFFLUENT GRAB

Lab Sample ID: 400-260652-1 MS

Date Collected: 08/13/24 07:00

Matrix: Water

Date Received: 08/13/24 10:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	420.4		1	10 mL	10 mL	682584	08/27/24 17:04	CAC	EET PEN

Client Sample ID: EFFLUENT GRAB

Lab Sample ID: 400-260652-1 MSD

Date Collected: 08/13/24 07:00

Matrix: Water

Date Received: 08/13/24 10:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	420.4		1	10 mL	10 mL	682584	08/27/24 17:04	CAC	EET PEN

Client Sample ID: EFFLUENT COMPOSITE

Lab Sample ID: 400-260652-2 DU

Date Collected: 08/13/24 07:00

Matrix: Water

Date Received: 08/13/24 10:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2340C-2011		1	25 mL	25 mL	852700	08/22/24 12:03	JAS	EET SAV

¹ This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Eurofins Pensacola

Lab Chronicle

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-260652-1

Laboratory References:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Eurofins Pensacola
 3355 McLemore Drive
 Pensacola, FL 32514
 Phone: 850-474-1001 Fax: 850-478-2671

Chain of Custody Record

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Client Information		Sampler:		Lab PM: Enfinger, Isabel D		Carrier Tracking No(s):		COC No: 400-132556-44272.1			
Client Contact: Mr. Robbie Stalcup		Phone:		E-Mail: isabel.enfinger@et.eurofinsus.com		State of Origin:		Page: Page 1 of 1			
Company: City of Orange Beach				PWSID:		Analysis Requested					
Address: PO BOX 458				Due Date Requested:							
City: Orange Beach				TAT Requested (days):		<div style="display: flex; justify-content: space-between; font-size: 8px;"> <div style="width: 15%;">625.1 - (MDD) PP / TPO Semivolatiles by method 6</div> <div style="width: 15%;">420.4 - Phenolics</div> <div style="width: 15%;">624.1 - (MDD) PPTO Volatiles by 624.1</div> <div style="width: 15%;">1631E - Mercury, Low Level</div> <div style="width: 15%;">4500_CN_E - Cyanide, Total</div> <div style="width: 15%;">200.7_CWA - Metals</div> <div style="width: 15%;">2340C - Hexachlor, Total</div> </div>					
State, Zip: AL, 36561				Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No							
Phone: 251-747-5514(Tel)				PO #							
Email: rstalcup@orangebeachal.gov				PO not required							
Project Name: City of Orange Beach- Permit - Table C				WO #							
Site:				Project #: 40003100							
				SSOW#:		 Other: 400-260652 COC					
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Organic, ST=Tissue, A=Al)	Special Instructions/Note:					
Effluent Grab		08-13-24	0700	G	Water	✓	✓	✓	✓	ee-ved ⁷	
Effluent Composite		08-13-24	0700	C	Water	✓	✓	✓			
					Water						
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)						
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months						
Deliverable Requested: I, II, III, IV, Other (specify)					Special Instructions/QC Requirements:						
Empty Kit Relinquished by:			Date:		Time:		Method of Shipment:				
Relinquished by: Joseph Hawkins			Date/Time: 08-13-24 10:21		Company:		Received by: BS		Date/Time: 8/13/24 10:21		Company:
Relinquished by:			Date/Time:		Company:		Received by:		Date/Time:		Company:
Relinquished by:			Date/Time:		Company:		Received by:		Date/Time:		Company:
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:			Cooler Temperature(s) °C and Other Remarks: 0.0 1210						

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8/27/2024

Eurofins Pensacola
 3355 McLemore Drive
 Pensacola, FL 32514
 Phone: 850-474-1001 Fax: 850-478-2671

Chain of Custody Record



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Client Information (Sub Contract Lab)		Sampler: Enfinger, Isabel D		Lab PM: Enfinger, Isabel D		Carrier Tracking No(s):		COC No: 400-357885.1			
Client Contact: Shipping/Receiving		Phone:		E-Mail: isabel.enfinger@et.eurofinsus.com		State of Origin: Alabama		Page: Page 1 of 1			
Company: Eurofins Environment Testing Southeast L				Accreditations Required (See note):				Job #: 400-260652-1			
Address: 5102 LaRoche Avenue,		Due Date Requested: 8/23/2024		Analysis Requested						Preservation Codes:	
City: Savannah		TAT Requested (days):									
State, Zip: GA, 31404		PO #:									
Phone: 912-354-7858(Tel) 912-352-0165(Fax)		WO #:									
Email:		Project #:									
Project Name: City of Orange Beach Table C		SSOW#:		Total Number of Containers						Other:	
Site:		Project #:									
Site:		SSOW#:		Total Number of Containers						Special Instructions/Note:	
Site:		SSOW#:									
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Inorganic, Sulfid, Oxidizable, BT=Thermal, AA=As)	Field Filtered Sample (Yes or No)	Perform Metals/D (Yes or No)	200.7_CWA/200.7_P_TR Metals	2340C: Hardness, Total		
EFFLUENT COMPOSITE (400-260652-2)		8/13/24	07:00 Central	Water		X	X				
<p>Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analysis & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.</p>											
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Unconfirmed						<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Deliverable Requested: I, II, III, IV, Other (specify)				Primary Deliverable Rank: 2		Special Instructions/QC Requirements:					
Empty Kit Relinquished by:				Date:		Time:		Method of Shipment:			
Relinquished by: <i>[Signature]</i>		Date/Time: 8/13/24 1700		Company: <i>[Signature]</i>		Received by: <i>[Signature]</i>		Date/Time: 08/14/24 0930		Company:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:				Cooler Temperature(s) °C and Other Remarks: 22.8 / 22.8					

Login Sample Receipt Checklist

Client: City of Orange Beach

Job Number: 400-260652-1

Login Number: 260652

List Source: Eurofins Pensacola

List Number: 1

Creator: (Roberts) Beecher, Alexis J

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR10
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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Login Sample Receipt Checklist

Client: City of Orange Beach

Job Number: 400-260652-1

Login Number: 260652
List Number: 2
Creator: Lincoln, Alyssa

List Source: Eurofins Savannah
List Creation: 08/14/24 03:52 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Robbie Stalcup
City of Orange Beach
PO BOX 458
Orange Beach, Alabama 36561
Generated 8/31/2024 7:37:56 AM

JOB DESCRIPTION

City of Orange Beach - Table C

JOB NUMBER

400-261026-1

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MUNICIPAL SECTION

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Job Notes

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

Authorization



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8/31/2024 7:37:56 AM

Authorized for release by
Isabel Enfinger, Project Manager I
isabel.enfinger@et.eurofinsus.com
(850)471-6237

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Case Narrative

Client: City of Orange Beach
Project: City of Orange Beach - Table C

Job ID: 400-261026-1

Job ID: 400-261026-1

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Job Narrative 400-261026-1

Receipt

The samples were received on 8/20/2024 10:50 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.8° C.

GC/MS VOA

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

GC/MS Semi VOA

Method 625.1: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 400-682325 and analytical batch 400-682514 recovered outside control limits for the following analytes: 2,4-Dimethylphenol and Hexachlorocyclopentadiene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

Metals

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

General Chemistry

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

Organic Prep

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

VOA Prep

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

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Method Summary

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-261026-1

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	EPA	EET PEN
625.1	Semivolatile Organic Compounds (GC/MS)	EPA	EET PEN
1631E	Mercury, Low Level (CVAFS)	EPA	EET PEN
200.7 Rev 4.4	Metals (ICP)	EPA	EET SAV
2340C-2011	Hardness, Total	SM	EET SAV
420.4	Phenolics, Total Recoverable	EPA	EET PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET PEN
SM 4500 CN E	Cyanide, Total	SM	EET PEN
1631E	Preparation, Mercury, Low Level	EPA	EET PEN
200.7	Preparation, Total Metals	EPA	EET SAV
625	Liquid-Liquid Extraction	EPA	EET PEN
SM 4500 CN C	Cyanide, Distillation	SM	EET PEN

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

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Sample Summary

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-261026-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-261026-1	EFFLUENT GRAB	Water	08/20/24 07:00	08/20/24 10:50
400-261026-2	EFFLUENT COMPOSITE	Water	08/20/24 07:00	08/20/24 10:50

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Client Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-261026-1

Client Sample ID: EFFLUENT GRAB

Lab Sample ID: 400-261026-1

Date Collected: 08/20/24 07:00

Matrix: Water

Date Received: 08/20/24 10:50

Method: EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<1.0		1.0		ug/L			08/30/24 10:54	1
1,1,2,2-Tetrachloroethane	<1.0		1.0		ug/L			08/30/24 10:54	1
1,1,2-Trichloroethane	<5.0		5.0		ug/L			08/30/24 10:54	1
1,1-Dichloroethane	<1.0		1.0		ug/L			08/30/24 10:54	1
1,1-Dichloroethylene	<1.0		1.0		ug/L			08/30/24 10:54	1
1,2-Dichlorobenzene	<1.0		1.0		ug/L			08/30/24 10:54	1
1,2-Dichloroethane	<1.0		1.0		ug/L			08/30/24 10:54	1
1,2-Dichloropropane	<1.0		1.0		ug/L			08/30/24 10:54	1
1,3-Dichlorobenzene	<1.0		1.0		ug/L			08/30/24 10:54	1
1,3-Dichloropropylene	<5.0		5.0		ug/L			08/30/24 10:54	1
1,4-Dichlorobenzene	<1.0		1.0		ug/L			08/30/24 10:54	1
2-Chloroethyl vinyl ether	<5.0		5.0		ug/L			08/30/24 10:54	1
Acrolein	<20		20		ug/L			08/30/24 10:54	1
Acrylonitrile	<10		10		ug/L			08/30/24 10:54	1
Benzene	<1.0		1.0		ug/L			08/30/24 10:54	1
Bromoform	<5.0		5.0		ug/L			08/30/24 10:54	1
Carbon tetrachloride	<1.0		1.0		ug/L			08/30/24 10:54	1
Chlorobenzene	<1.0		1.0		ug/L			08/30/24 10:54	1
Chlorodibromomethane	<1.0		1.0		ug/L			08/30/24 10:54	1
Chloroethane	<1.0		1.0		ug/L			08/30/24 10:54	1
Chloroform	<1.0		1.0		ug/L			08/30/24 10:54	1
cis-1,3-Dichloropropene	<5.0		5.0		ug/L			08/30/24 10:54	1
Dichlorobromomethane	<1.0		1.0		ug/L			08/30/24 10:54	1
Ethylbenzene	<1.0		1.0		ug/L			08/30/24 10:54	1
Methyl bromide	<1.0		1.0		ug/L			08/30/24 10:54	1
Methyl chloride	<1.0		1.0		ug/L			08/30/24 10:54	1
Methylene Chloride	<5.0		5.0		ug/L			08/30/24 10:54	1
Tetrachloroethylene	<1.0		1.0		ug/L			08/30/24 10:54	1
Toluene	<1.0		1.0		ug/L			08/30/24 10:54	1
trans-1,3-Dichloropropene	<5.0		5.0		ug/L			08/30/24 10:54	1
Trichloroethylene	<1.0		1.0		ug/L			08/30/24 10:54	1
Vinyl chloride	<1.0		1.0		ug/L			08/30/24 10:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		78 - 118					08/30/24 10:54	1
Dibromofluoromethane	96		81 - 121					08/30/24 10:54	1
Toluene-d8 (Surr)	99		80 - 120					08/30/24 10:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenols, Total (EPA 420.4)	<0.0050		0.0050		mg/L			08/27/24 17:04	1
Cyanide, Total (SM 4500 CN E)	<0.0050		0.0050		mg/L		08/22/24 13:54	08/23/24 11:42	1

Client Sample ID: EFFLUENT COMPOSITE

Lab Sample ID: 400-261026-2

Date Collected: 08/20/24 07:00

Matrix: Water

Date Received: 08/20/24 10:50

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1

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Client Sample Results

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-261026-1

Client Sample ID: EFFLUENT COMPOSITE

Lab Sample ID: 400-261026-2

Date Collected: 08/20/24 07:00

Matrix: Water

Date Received: 08/20/24 10:50

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Diphenylhydrazine (as Azobenzene)	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
2,4,6-Trichlorophenol	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
2,4-Dichlorophenol	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
2,4-Dimethylphenol	<9.4	**	9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
2,4-Dinitrophenol	<28		28		ug/L		08/24/24 12:22	08/27/24 15:18	1
2,4-Dinitrotoluene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
2,6-Dinitrotoluene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
2-Chloronaphthalene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
2-Chlorophenol	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
2-Nitrophenol	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
3,3'-Dichlorobenzidine	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
4,6-Dinitro-2-methylphenol	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
4-Chloro-3-methylphenol	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
4-Chlorophenyl phenyl ether	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
4-Nitrophenol	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Acenaphthene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Acenaphthylene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Anthracene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Benzidine	<23		23		ug/L		08/24/24 12:22	08/27/24 15:18	1
Benzo[a]anthracene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Benzo[a]pyrene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Benzo[b]fluoranthene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Benzo[g,h,i]perylene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Benzo[k]fluoranthene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
bis (2-chloroisopropyl) ether	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Bis(2-chloroethoxy)methane	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Bis(2-chloroethyl)ether	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Bis(2-ethylhexyl) phthalate	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Butyl benzyl phthalate	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Chrysene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Dibenz(a,h)anthracene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Diethyl phthalate	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Dimethyl phthalate	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Di-n-butyl phthalate	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Di-n-octyl phthalate	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Fluoranthene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Fluorene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Hexachlorobenzene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Hexachlorobutadiene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Hexachlorocyclopentadiene	<19	**	19		ug/L		08/24/24 12:22	08/27/24 15:18	1
Hexachloroethane	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Indeno[1,2,3-cd]pyrene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Isophorone	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Naphthalene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Nitrobenzene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
N-Nitrosodimethylamine	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
N-Nitrosodi-n-propylamine	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
N-Nitrosodiphenylamine	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Pentachlorophenol	<19		19		ug/L		08/24/24 12:22	08/27/24 15:18	1

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Eurofins Pensacola

Client Sample Results

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-261026-1

Client Sample ID: EFFLUENT COMPOSITE

Lab Sample ID: 400-261026-2

Date Collected: 08/20/24 07:00

Matrix: Water

Date Received: 08/20/24 10:50

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Phenol	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Pyrene	<9.4		9.4		ug/L		08/24/24 12:22	08/27/24 15:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	95		15 - 135				08/24/24 12:22	08/27/24 15:18	1
2-Fluorobiphenyl	76		32 - 109				08/24/24 12:22	08/27/24 15:18	1
2-Fluorophenol	56		10 - 104				08/24/24 12:22	08/27/24 15:18	1
Nitrobenzene-d5	75		31 - 111				08/24/24 12:22	08/27/24 15:18	1
Phenol-d5	42		10 - 110				08/24/24 12:22	08/27/24 15:18	1
Terphenyl-d14	80		30 - 129				08/24/24 12:22	08/27/24 15:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	9.3		0.50		ng/L		08/23/24 14:44	08/27/24 10:28	1

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.020		0.020		mg/L		08/22/24 06:30	08/22/24 14:02	1
Arsenic	<0.020		0.020		mg/L		08/22/24 06:30	08/22/24 14:02	1
Beryllium	<0.0040		0.0040		mg/L		08/22/24 06:30	08/22/24 14:02	1
Cadmium	<0.0050		0.0050		mg/L		08/22/24 06:30	08/22/24 14:02	1
Chromium	<0.010		0.010		mg/L		08/22/24 06:30	08/22/24 14:02	1
Copper	<0.020		0.020		mg/L		08/22/24 06:30	08/22/24 14:02	1
Lead	<0.010		0.010		mg/L		08/22/24 06:30	08/22/24 14:02	1
Nickel	<0.040		0.040		mg/L		08/22/24 06:30	08/22/24 14:02	1
Selenium	<0.020		0.020		mg/L		08/22/24 06:30	08/22/24 14:02	1
Silver	<0.010		0.010		mg/L		08/22/24 06:30	08/22/24 14:02	1
Thallium	<0.025		0.025		mg/L		08/22/24 06:30	08/22/24 14:02	1
Zinc	0.059		0.020		mg/L		08/22/24 06:30	08/22/24 14:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate (SM 2340C-2011)	110		10		mg/L			08/22/24 12:03	1
Total Dissolved Solids (SM 2540C)	280		5.0		mg/L			08/27/24 17:05	1

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Definitions/Glossary

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-261026-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

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QC Association Summary

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-261026-1

GC/MS VOA

Analysis Batch: 682889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-261026-1	EFFLUENT GRAB	Total/NA	Water	624.1	
MB 400-682889/5	Method Blank	Total/NA	Water	624.1	
LCS 400-682889/3	Lab Control Sample	Total/NA	Water	624.1	

GC/MS Semi VOA

Prep Batch: 682325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-261026-2	EFFLUENT COMPOSITE	Total/NA	Water	625	
MB 400-682325/1-A	Method Blank	Total/NA	Water	625	
LCS 400-682325/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 400-682325/3-A	Lab Control Sample Dup	Total/NA	Water	625	

Analysis Batch: 682514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-261026-2	EFFLUENT COMPOSITE	Total/NA	Water	625.1	682325
MB 400-682325/1-A	Method Blank	Total/NA	Water	625.1	682325
LCS 400-682325/2-A	Lab Control Sample	Total/NA	Water	625.1	682325
LCSD 400-682325/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	682325

Metals

Prep Batch: 682499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-261026-2	EFFLUENT COMPOSITE	Total/NA	Water	1631E	
MB 400-682499/3-A	Method Blank	Total/NA	Water	1631E	
LCS 400-682499/4-A	Lab Control Sample	Total/NA	Water	1631E	
LCSD 400-682499/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 682567

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-261026-2	EFFLUENT COMPOSITE	Total/NA	Water	1631E	682499
MB 400-682499/3-A	Method Blank	Total/NA	Water	1631E	682499
LCS 400-682499/4-A	Lab Control Sample	Total/NA	Water	1631E	682499
LCSD 400-682499/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	682499

Prep Batch: 852581

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-261026-2	EFFLUENT COMPOSITE	Total Recoverable	Water	200.7	
MB 680-852581/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 680-852581/2-A	Lab Control Sample	Total Recoverable	Water	200.7	

Analysis Batch: 852825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-261026-2	EFFLUENT COMPOSITE	Total Recoverable	Water	200.7 Rev 4.4	852581
MB 680-852581/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	852581
LCS 680-852581/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	852581

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QC Association Summary

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-261026-1

General Chemistry

Prep Batch: 682105

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-261026-1	EFFLUENT GRAB	Total/NA	Water	SM 4500 CN C	
MB 400-682105/1-A	Method Blank	Total/NA	Water	SM 4500 CN C	
LCS 400-682105/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN C	

Analysis Batch: 682237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-261026-1	EFFLUENT GRAB	Total/NA	Water	SM 4500 CN E	682105
MB 400-682105/1-A	Method Blank	Total/NA	Water	SM 4500 CN E	682105
LCS 400-682105/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN E	682105
MRL 400-682237/14	Lab Control Sample	Total/NA	Water	SM 4500 CN E	

Analysis Batch: 682584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-261026-1	EFFLUENT GRAB	Total/NA	Water	420.4	
MB 400-682584/19	Method Blank	Total/NA	Water	420.4	
LCS 400-682584/20	Lab Control Sample	Total/NA	Water	420.4	
MRL 400-682584/13	Lab Control Sample	Total/NA	Water	420.4	

Analysis Batch: 682585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-261026-2	EFFLUENT COMPOSITE	Total/NA	Water	SM 2540C	
MB 400-682585/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-682585/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 852700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-261026-2	EFFLUENT COMPOSITE	Total/NA	Water	2340C-2011	
MB 680-852700/1	Method Blank	Total/NA	Water	2340C-2011	
LCS 680-852700/2	Lab Control Sample	Total/NA	Water	2340C-2011	
LCSD 680-852700/3	Lab Control Sample Dup	Total/NA	Water	2340C-2011	

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QC Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-261026-1

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-682889/5
Matrix: Water
Analysis Batch: 682889

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	<1.0		1.0		ug/L			08/30/24 08:21	1
1,1,2,2-Tetrachloroethane	<1.0		1.0		ug/L			08/30/24 08:21	1
1,1,2-Trichloroethane	<5.0		5.0		ug/L			08/30/24 08:21	1
1,1-Dichloroethane	<1.0		1.0		ug/L			08/30/24 08:21	1
1,1-Dichloroethylene	<1.0		1.0		ug/L			08/30/24 08:21	1
1,2-Dichlorobenzene	<1.0		1.0		ug/L			08/30/24 08:21	1
1,2-Dichloroethane	<1.0		1.0		ug/L			08/30/24 08:21	1
1,2-Dichloropropane	<1.0		1.0		ug/L			08/30/24 08:21	1
1,3-Dichlorobenzene	<1.0		1.0		ug/L			08/30/24 08:21	1
1,3-Dichloropropylene	<5.0		5.0		ug/L			08/30/24 08:21	1
1,4-Dichlorobenzene	<1.0		1.0		ug/L			08/30/24 08:21	1
2-Chloroethyl vinyl ether	<5.0		5.0		ug/L			08/30/24 08:21	1
Acrolein	<20		20		ug/L			08/30/24 08:21	1
Acrylonitrile	<10		10		ug/L			08/30/24 08:21	1
Benzene	<1.0		1.0		ug/L			08/30/24 08:21	1
Bromoform	<5.0		5.0		ug/L			08/30/24 08:21	1
Carbon tetrachloride	<1.0		1.0		ug/L			08/30/24 08:21	1
Chlorobenzene	<1.0		1.0		ug/L			08/30/24 08:21	1
Chlorodibromomethane	<1.0		1.0		ug/L			08/30/24 08:21	1
Chloroethane	<1.0		1.0		ug/L			08/30/24 08:21	1
Chloroform	<1.0		1.0		ug/L			08/30/24 08:21	1
cis-1,3-Dichloropropene	<5.0		5.0		ug/L			08/30/24 08:21	1
Dichlorobromomethane	<1.0		1.0		ug/L			08/30/24 08:21	1
Ethylbenzene	<1.0		1.0		ug/L			08/30/24 08:21	1
Methyl bromide	<1.0		1.0		ug/L			08/30/24 08:21	1
Methyl chloride	<1.0		1.0		ug/L			08/30/24 08:21	1
Methylene Chloride	<5.0		5.0		ug/L			08/30/24 08:21	1
Tetrachloroethylene	<1.0		1.0		ug/L			08/30/24 08:21	1
Toluene	<1.0		1.0		ug/L			08/30/24 08:21	1
trans-1,3-Dichloropropene	<5.0		5.0		ug/L			08/30/24 08:21	1
Trichloroethylene	<1.0		1.0		ug/L			08/30/24 08:21	1
Vinyl chloride	<1.0		1.0		ug/L			08/30/24 08:21	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene	100		78 - 118		08/30/24 08:21	1
Dibromofluoromethane	98		81 - 121		08/30/24 08:21	1
Toluene-d8 (Surr)	97		80 - 120		08/30/24 08:21	1

Lab Sample ID: LCS 400-682889/3
Matrix: Water
Analysis Batch: 682889

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,2,2-Tetrachloroethane	50.0	52.8		ug/L	106	60 - 140	
1,1,2-Trichloroethane	50.0	49.9		ug/L	100	70 - 130	
1,1-Dichloroethane	50.0	47.5		ug/L	95	70 - 130	
1,1-Dichloroethylene	50.0	45.3		ug/L	91	50 - 150	

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QC Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-261026-1

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-682889/3
Matrix: Water
Analysis Batch: 682889

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichlorobenzene	50.0	48.3		ug/L		97	65 - 135
1,2-Dichloroethane	50.0	43.1		ug/L		86	70 - 130
1,2-Dichloropropane	50.0	54.5		ug/L		109	35 - 150
1,3-Dichlorobenzene	50.0	48.5		ug/L		97	70 - 130
1,3-Dichloropropylene	100	99.2		ug/L		99	25 - 150
1,4-Dichlorobenzene	50.0	47.0		ug/L		94	65 - 135
2-Chloroethyl vinyl ether	25.0	19.9		ug/L		80	10 - 150
Acrolein	250	192		ug/L		77	60 - 140
Acrylonitrile	500	433		ug/L		87	60 - 140
Benzene	50.0	49.7		ug/L		99	65 - 135
Bromoform	50.0	46.3		ug/L		93	70 - 130
Carbon tetrachloride	50.0	43.9		ug/L		88	70 - 130
Chlorobenzene	50.0	47.5		ug/L		95	65 - 135
Chlorodibromomethane	50.0	47.6		ug/L		95	69 - 133
Chloroethane	25.0	18.7		ug/L		75	40 - 150
Chloroform	50.0	43.4		ug/L		87	70 - 135
cis-1,3-Dichloropropene	50.0	50.0		ug/L		100	25 - 150
Dichlorobromomethane	50.0	48.9		ug/L		98	65 - 135
Ethylbenzene	50.0	46.9		ug/L		94	60 - 140
Methyl bromide	25.0	11.2		ug/L		45	15 - 150
Methyl chloride	25.0	18.7		ug/L		75	10 - 150
Methylene Chloride	50.0	47.7		ug/L		95	60 - 140
Tetrachloroethylene	50.0	40.9		ug/L		82	70 - 130
Toluene	50.0	47.7		ug/L		95	70 - 130
trans-1,3-Dichloropropene	50.0	49.2		ug/L		98	50 - 150
Trichloroethylene	50.0	49.0		ug/L		98	65 - 135
Vinyl chloride	25.0	21.1		ug/L		84	10 - 150

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	108		78 - 118
Dibromofluoromethane	90		81 - 121
Toluene-d8 (Surr)	99		80 - 120

Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-682325/1-A
Matrix: Water
Analysis Batch: 682514

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 682325

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trichlorobenzene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
1,2-Diphenylhydrazine (as Azobenzene)	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
2,4,6-Trichlorophenol	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
2,4-Dichlorophenol	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
2,4-Dimethylphenol	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
2,4-Dinitrophenol	<30		30		ug/L		08/24/24 12:21	08/27/24 12:40	1
2,4-Dinitrotoluene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
2,6-Dinitrotoluene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1

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QC Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-261026-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-682325/1-A
Matrix: Water
Analysis Batch: 682514

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 682325

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2-Chloronaphthalene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
2-Chlorophenol	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
2-Nitrophenol	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
3,3'-Dichlorobenzidine	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
4,6-Dinitro-2-methylphenol	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
4-Chloro-3-methylphenol	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
4-Chlorophenyl phenyl ether	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
4-Nitrophenol	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Acenaphthene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Acenaphthylene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Anthracene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Benzidine	<25		25		ug/L		08/24/24 12:21	08/27/24 12:40	1
Benzo[a]anthracene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Benzo[a]pyrene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Benzo[b]fluoranthene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Benzo[g,h,i]perylene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Benzo[k]fluoranthene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
bis (2-chloroisopropyl) ether	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Bis(2-chloroethoxy)methane	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Bis(2-chloroethyl)ether	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Bis(2-ethylhexyl) phthalate	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Butyl benzyl phthalate	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Chrysene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Dibenz(a,h)anthracene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Diethyl phthalate	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Dimethyl phthalate	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Di-n-butyl phthalate	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Di-n-octyl phthalate	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Fluoranthene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Fluorene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Hexachlorobenzene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Hexachlorobutadiene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Hexachlorocyclopentadiene	<20		20		ug/L		08/24/24 12:21	08/27/24 12:40	1
Hexachloroethane	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Indeno[1,2,3-cd]pyrene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Isophorone	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Naphthalene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Nitrobenzene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
N-Nitrosodimethylamine	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
N-Nitrosodi-n-propylamine	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
N-Nitrosodiphenylamine	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Pentachlorophenol	<20		20		ug/L		08/24/24 12:21	08/27/24 12:40	1
Phenanthrene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Phenol	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1
Pyrene	<10		10		ug/L		08/24/24 12:21	08/27/24 12:40	1

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Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol	94		15 - 135	08/24/24 12:21	08/27/24 12:40	1

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QC Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-261026-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-682325/1-A
Matrix: Water
Analysis Batch: 682514

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 682325

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl	69		32 - 109	08/24/24 12:21	08/27/24 12:40	1
2-Fluorophenol	57		10 - 104	08/24/24 12:21	08/27/24 12:40	1
Nitrobenzene-d5	74		31 - 111	08/24/24 12:21	08/27/24 12:40	1
Phenol-d5	40		10 - 110	08/24/24 12:21	08/27/24 12:40	1
Terphenyl-d14	86		30 - 129	08/24/24 12:21	08/27/24 12:40	1

Lab Sample ID: LCS 400-682325/2-A
Matrix: Water
Analysis Batch: 682514

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 682325

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,4-Trichlorobenzene	120	87.8		ug/L		73	44 - 142
1,2-Diphenylhydrazine (as Azobenzene)	120	98.0		ug/L		82	23 - 138
2,4,6-Trichlorophenol	120	102		ug/L		85	37 - 144
2,4-Dichlorophenol	120	94.2		ug/L		78	39 - 135
2,4-Dimethylphenol	120	166	+	ug/L		138	32 - 120
2,4-Dinitrophenol	240	288		ug/L		120	1 - 191
2,4-Dinitrotoluene	120	104		ug/L		87	39 - 139
2,6-Dinitrotoluene	120	96.9		ug/L		81	50 - 158
2-Chloronaphthalene	120	97.8		ug/L		82	24 - 132
2-Chlorophenol	120	97.2		ug/L		81	23 - 134
2-Nitrophenol	120	97.3		ug/L		81	29 - 182
3,3'-Dichlorobenzidine	240	240		ug/L		100	1 - 262
4,6-Dinitro-2-methylphenol	240	221		ug/L		92	1 - 181
4-Bromophenyl phenyl ether	120	105		ug/L		87	53 - 127
4-Chloro-3-methylphenol	120	102		ug/L		85	22 - 147
4-Chlorophenyl phenyl ether	120	108		ug/L		90	25 - 158
4-Nitrophenol	240	169		ug/L		71	1 - 132
Acenaphthene	120	99.6		ug/L		83	47 - 145
Acenaphthylene	120	104		ug/L		87	33 - 145
Anthracene	120	108		ug/L		90	27 - 133
Benzidine	673	114		ug/L		17	1 - 73
Benzo[a]anthracene	120	99.3		ug/L		83	33 - 143
Benzo[a]pyrene	120	114		ug/L		95	17 - 163
Benzo[b]fluoranthene	120	105		ug/L		87	24 - 159
Benzo[g,h,i]perylene	120	124		ug/L		104	1 - 219
Benzo[k]fluoranthene	120	98.1		ug/L		82	11 - 162
bis (2-chloroisopropyl) ether	120	98.2		ug/L		82	36 - 166
Bis(2-chloroethoxy)methane	120	93.5		ug/L		78	33 - 184
Bis(2-chloroethyl)ether	120	103		ug/L		86	12 - 158
Bis(2-ethylhexyl) phthalate	120	91.3		ug/L		76	8 - 158
Butyl benzyl phthalate	120	96.5		ug/L		80	1 - 152
Chrysene	120	96.5		ug/L		80	17 - 168
Dibenz(a,h)anthracene	120	110		ug/L		92	1 - 227
Diethyl phthalate	120	114		ug/L		95	1 - 120
Dimethyl phthalate	120	102		ug/L		85	1 - 120
Di-n-butyl phthalate	120	108		ug/L		90	1 - 120
Di-n-octyl phthalate	120	93.6		ug/L		78	4 - 146

Eurofins Pensacola

QC Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-261026-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-682325/2-A

Matrix: Water

Analysis Batch: 682514

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 682325

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Fluoranthene	120	112		ug/L		94	26 - 137	
Fluorene	120	113		ug/L		94	59 - 121	
Hexachlorobenzene	120	112		ug/L		93	1 - 152	
Hexachlorobutadiene	120	91.6		ug/L		76	24 - 120	
Hexachlorocyclopentadiene	120	196	*+	ug/L		163	10 - 124	
Hexachloroethane	120	78.7		ug/L		66	40 - 120	
Indeno[1,2,3-cd]pyrene	120	105		ug/L		87	1 - 171	
Isophorone	120	89.2		ug/L		74	21 - 196	
Naphthalene	120	91.0		ug/L		76	21 - 133	
Nitrobenzene	120	89.8		ug/L		75	35 - 180	
N-Nitrosodimethylamine	120	69.6		ug/L		58	10 - 115	
N-Nitrosodi-n-propylamine	120	100		ug/L		84	1 - 230	
N-Nitrosodiphenylamine	119	99.5		ug/L		84	29 - 138	
Pentachlorophenol	240	219		ug/L		91	14 - 176	
Phenanthrene	120	106		ug/L		88	54 - 120	
Phenol	120	74.7		ug/L		62	5 - 120	
Pyrene	120	92.1		ug/L		77	52 - 120	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol	112		15 - 135
2-Fluorobiphenyl	72		32 - 109
2-Fluorophenol	62		10 - 104
Nitrobenzene-d5	80		31 - 111
Phenol-d5	53		10 - 110
Terphenyl-d14	77		30 - 129

Lab Sample ID: LCSD 400-682325/3-A

Matrix: Water

Analysis Batch: 682514

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 682325

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	
							Limits		RPD	Limit
1,2,4-Trichlorobenzene	120	81.6		ug/L		68	44 - 142	7	50	
1,2-Diphenylhydrazine (as Azobenzene)	120	90.6		ug/L		76	23 - 138	8	40	
2,4,6-Trichlorophenol	120	95.3		ug/L		79	37 - 144	7	58	
2,4-Dichlorophenol	120	88.3		ug/L		74	39 - 135	6	50	
2,4-Dimethylphenol	120	153	*+	ug/L		127	32 - 120	8	58	
2,4-Dinitrophenol	240	273		ug/L		114	1 - 191	6	132	
2,4-Dinitrotoluene	120	93.5		ug/L		78	39 - 139	11	42	
2,6-Dinitrotoluene	120	85.9		ug/L		72	50 - 158	12	48	
2-Chloronaphthalene	120	84.4		ug/L		70	24 - 132	15	24	
2-Chlorophenol	120	88.0		ug/L		73	23 - 134	10	61	
2-Nitrophenol	120	91.4		ug/L		76	29 - 182	6	55	
3,3'-Dichlorobenzidine	240	226		ug/L		94	1 - 262	6	108	
4,6-Dinitro-2-methylphenol	240	213		ug/L		89	1 - 181	4	203	
4-Bromophenyl phenyl ether	120	96.2		ug/L		80	53 - 127	8	43	
4-Chloro-3-methylphenol	120	95.5		ug/L		80	22 - 147	7	73	
4-Chlorophenyl phenyl ether	120	98.2		ug/L		82	25 - 158	9	61	
4-Nitrophenol	240	147		ug/L		61	1 - 132	14	131	

Eurofins Pensacola

QC Sample Results

Client: City of Orange Beach
Project/Site: City of Orange Beach - Table C

Job ID: 400-261026-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	
								RPD	Limit
Acenaphthene	120	90.1		ug/L		75	47 - 145	10	48
Acenaphthylene	120	94.0		ug/L		78	33 - 145	10	74
Anthracene	120	96.8		ug/L		81	27 - 133	11	66
Benzidine	673	96.4		ug/L		14	1 - 73	17	40
Benzo[a]anthracene	120	89.0		ug/L		74	33 - 143	11	53
Benzo[a]pyrene	120	104		ug/L		87	17 - 163	9	72
Benzo[b]fluoranthene	120	96.0		ug/L		80	24 - 159	9	71
Benzo[g,h,i]perylene	120	111		ug/L		93	1 - 219	11	97
Benzo[k]fluoranthene	120	93.8		ug/L		78	11 - 162	4	63
bis (2-chloroisopropyl) ether	120	90.4		ug/L		75	36 - 166	8	76
Bis(2-chloroethoxy)methane	120	86.1		ug/L		72	33 - 184	8	54
Bis(2-chloroethyl)ether	120	91.4		ug/L		76	12 - 158	12	108
Bis(2-ethylhexyl) phthalate	120	83.7		ug/L		70	8 - 158	9	82
Butyl benzyl phthalate	120	92.3		ug/L		77	1 - 152	4	60
Chrysene	120	89.6		ug/L		75	17 - 168	7	87
Dibenz(a,h)anthracene	120	94.6		ug/L		79	1 - 227	15	126
Diethyl phthalate	120	98.6		ug/L		82	1 - 120	14	100
Dimethyl phthalate	120	90.8		ug/L		76	1 - 120	12	183
Di-n-butyl phthalate	120	95.8		ug/L		80	1 - 120	12	47
Di-n-octyl phthalate	120	80.6		ug/L		67	4 - 146	15	69
Fluoranthene	120	99.3		ug/L		83	26 - 137	12	66
Fluorene	120	102		ug/L		85	59 - 121	10	38
Hexachlorobenzene	120	103		ug/L		86	1 - 152	9	55
Hexachlorobutadiene	120	82.0		ug/L		68	24 - 120	11	62
Hexachlorocyclopentadiene	120	186	+	ug/L		155	10 - 124	5	40
Hexachloroethane	120	71.9		ug/L		80	40 - 120	9	52
Indeno[1,2,3-cd]pyrene	120	91.8		ug/L		77	1 - 171	13	99
Isophorone	120	82.6		ug/L		69	21 - 196	8	40
Naphthalene	120	82.4		ug/L		69	21 - 133	10	65
Nitrobenzene	120	82.8		ug/L		69	35 - 180	8	62
N-Nitrosodimethylamine	120	71.0		ug/L		59	10 - 115	2	40
N-Nitrosodi-n-propylamine	120	91.8		ug/L		77	1 - 230	9	87
N-Nitrosodiphenylamine	119	92.0		ug/L		77	29 - 138	8	40
Pentachlorophenol	240	202		ug/L		84	14 - 176	8	86
Phenanthrene	120	96.6		ug/L		80	54 - 120	9	39
Phenol	120	66.7		ug/L		56	5 - 120	11	64
Pyrene	120	89.1		ug/L		74	52 - 120	3	49

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol	100		15 - 135
2-Fluorobiphenyl	64		32 - 109
2-Fluorophenol	58		10 - 104
Nitrobenzene-d5	73		31 - 111
Phenol-d5	47		10 - 110
Terphenyl-d14	68		30 - 129

Eurofins Pensacola

QC Sample Results

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-261026-1

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

Lab Sample ID: MB 400-682499/3-A
 Matrix: Water
 Analysis Batch: 682567

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 682499

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.50		0.50		ng/L		08/26/24 16:00	08/27/24 09:20	1

Lab Sample ID: LCS 400-682499/4-A
 Matrix: Water
 Analysis Batch: 682567

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 682499

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Mercury	5.00	4.91		ng/L		98	79 - 121

Lab Sample ID: LCSD 400-682499/5-A
 Matrix: Water
 Analysis Batch: 682567

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 682499

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
		Result	Qualifier						
Mercury	5.00	5.04		ng/L		101	79 - 121	3	20

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 680-852581/1-A
 Matrix: Water
 Analysis Batch: 852825

Client Sample ID: Method Blank
 Prep Type: Total Recoverable
 Prep Batch: 852581

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<0.020		0.020		mg/L		08/22/24 06:30	08/22/24 13:22	1
Arsenic	<0.020		0.020		mg/L		08/22/24 06:30	08/22/24 13:22	1
Beryllium	<0.0040		0.0040		mg/L		08/22/24 06:30	08/22/24 13:22	1
Cadmium	<0.0050		0.0050		mg/L		08/22/24 06:30	08/22/24 13:22	1
Chromium	<0.010		0.010		mg/L		08/22/24 06:30	08/22/24 13:22	1
Copper	<0.020		0.020		mg/L		08/22/24 06:30	08/22/24 13:22	1
Lead	<0.010		0.010		mg/L		08/22/24 06:30	08/22/24 13:22	1
Nickel	<0.040		0.040		mg/L		08/22/24 06:30	08/22/24 13:22	1
Selenium	<0.020		0.020		mg/L		08/22/24 06:30	08/22/24 13:22	1
Silver	<0.010		0.010		mg/L		08/22/24 06:30	08/22/24 13:22	1
Thallium	<0.025		0.025		mg/L		08/22/24 06:30	08/22/24 13:22	1
Zinc	<0.020		0.020		mg/L		08/22/24 06:30	08/22/24 13:22	1

Lab Sample ID: LCS 680-852581/2-A
 Matrix: Water
 Analysis Batch: 852825

Client Sample ID: Lab Control Sample
 Prep Type: Total Recoverable
 Prep Batch: 852581

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Antimony	0.0500	0.0517		mg/L		103	85 - 115
Arsenic	0.100	0.0978		mg/L		98	85 - 115
Beryllium	0.0500	0.0502		mg/L		100	85 - 115
Cadmium	0.0500	0.0519		mg/L		104	85 - 115
Calcium	5000	4930		ug/L		99	85 - 115
Chromium	0.100	0.101		mg/L		101	85 - 115
Copper	0.101	0.102		mg/L		101	85 - 115
Lead	0.500	0.514		mg/L		103	85 - 115
Magnesium	5.00	4.90		mg/L		98	85 - 115

Eurofins Pensacola

Lab Chronicle

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-261026-1

Client Sample ID: Method Blank

Lab Sample ID: MB 400-682584/19

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	420.4		1	10 mL	10 mL	682584	08/27/24 17:04	CAC	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-682585/1

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	50 mL	50 mL	682585	08/27/24 17:05	HA	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 400-682889/5

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	5 mL	5 mL	682889	08/30/24 08:21	WPD	EET PEN

Client Sample ID: Method Blank

Lab Sample ID: MB 680-852581/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.7			25 mL	25 mL	852581	08/22/24 06:30	RR	EET SAV
Total Recoverable	Analysis	200.7 Rev 4.4		1			852825	08/22/24 13:22	BJB	EET SAV

Client Sample ID: Method Blank

Lab Sample ID: MB 680-852700/1

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2340C-2011		1	25 mL	25 mL	852700	08/22/24 12:03	JAS	EET SAV

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-682105/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SM 4500 CN C			6 mL	6 mL	682105	08/22/24 13:53	VB	EET PEN
Total/NA	Analysis	SM 4500 CN E		1	100 mL	100 mL	682237	08/23/24 11:33	KWS	EET PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-682325/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	625			250 mL	1 mL	682325	08/24/24 12:21	STC	EET PEN
Total/NA	Analysis	625.1		1	0.4 mL	0.4 mL	682514	08/27/24 13:03	S1B	EET PEN

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Lab Chronicle

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-261026-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-682499/4-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			40 mL	40 mL	682499	08/26/24 16:00	VLC	EET PEN
							Completed: 682567	08/27/24 08:29		
Total/NA	Analysis	1631E		1			682567	08/27/24 09:27	VLC	EET PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-682584/20

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	420.4		1	10 mL	10 mL	682584	08/27/24 17:04	CAC	EET PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-682585/2

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	50 mL	50 mL	682585	08/27/24 17:05	HA	EET PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 400-682889/3

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	5 mL	5 mL	682889	08/30/24 07:37	WPD	EET PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 680-852581/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.7			25 mL	25 mL	852581	08/22/24 06:30	RR	EET SAV
Total Recoverable	Analysis	200.7 Rev 4.4		1			852825	08/22/24 13:24	BJB	EET SAV

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 680-852700/2

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2340C-2011		1	25 mL	25 mL	852700	08/22/24 12:03	JAS	EET SAV

Eurofins Pensacola

Lab Chronicle

Client: City of Orange Beach
 Project/Site: City of Orange Beach - Table C

Job ID: 400-261026-1

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 400-682325/3-A

Date Collected: N/A
 Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	625			250 mL	1 mL	682325	08/24/24 12:21	STC	EET PEN
Total/NA	Analysis	625.1		1	0.4 mL	0.4 mL	682514	08/27/24 13:25	S1B	EET PEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 400-682499/5-A

Date Collected: N/A
 Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			40 mL	40 mL	682499	08/26/24 16:00	VLC	EET PEN
Total/NA	Analysis	1631E		1			682567	08/27/24 09:35	VLC	EET PEN
								Completed: 08/27/24 08:29 *		

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 680-852700/3

Date Collected: N/A
 Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2340C-2011		1	25 mL	25 mL	852700	08/22/24 12:03	JAS	EET SAV

Client Sample ID: Lab Control Sample

Lab Sample ID: MRL 400-682237/14

Date Collected: N/A
 Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 CN E		1	100 mL	100 mL	682237	08/23/24 11:25	KWS	EET PEN

Client Sample ID: Lab Control Sample

Lab Sample ID: MRL 400-682584/13

Date Collected: N/A
 Date Received: N/A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	420.4		1	100 mL	100 mL	682584	08/27/24 17:04	CAC	EET PEN

* This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
 EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Eurofins Pensacola

Login Sample Receipt Checklist

Client: City of Orange Beach

Job Number: 400-261026-1

Login Number: 261026

List Source: Eurofins Pensacola

List Number: 1

Creator: Pardonner, Brett

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.8°C IR11
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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Login Sample Receipt Checklist

Client: City of Orange Beach

Job Number: 400-261026-1

Login Number: 261026

List Number: 2

Creator: Lincoln, Alyssa

List Source: Eurofins Savannah

List Creation: 08/21/24 02:01 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $< 6\text{mm}$ ($1/4''$).	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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