LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

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

DEC 0 1 2020

JAMES DIXON, MANAGER
THE WATER WORKS AND SEWER BOARD OF THE CITY OF GENEVA
POST OFFICE BOX 370
GENEVA, AL 36340

RE: Draft Permit
NPDES Permit No. AL0020273
Geneva WWTP
Geneva County, Alabama

Dear Mr. Dixon:

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 Part I.C.1.c of your permit requires participation in the Department's web-based Electronic Environmental (E2) Reporting System Program for submittal of DMRs upon issuance of this permit unless valid justification as to why you cannot participate is submitted in writing. Please also be aware that Part I.C.2.e of your permit requires participation in the Department's web-based electronic environmental (E2) reporting system for submittal of **SSOs** 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. The E2 Program allows ADEM to electronically validate, acknowledge receipt, and upload data to the state's central wastewater database. This improves the accuracy of reported compliance data and reduces costs to both the regulated community and ADEM. The Permittee Participation Package may be downloaded online at **https://e2.adem.alabama.gov/npdes** or you may obtain a hard copy by submitting a written request or by emailing e2admin@adem.alabama.gov.

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

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.

Should you have any questions, please contact the undersigned by email at sammons@adem.alabama.gov or by phone at (334) 274-4151.

Sincerely,

Stephanie Ammons

Stephanie Ammons
Municipal Section
Water Division

SBA/mfc
Enclosure

cc: Environmental Protection Agency Email
Ms. Elaine Snyder/U.S. Fish and Wildlife Service
Ms. Elizabeth Brown/Alabama Historical Commission
Advisory Council on Historic Preservation
Department of Conservation and Natural Resources
Ms. Elizabeth Orr/Florida Department of Environmental Protection

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

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

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

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

ADEM
Alabama Department of Environmental Management

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE:	The Water Works and Sewer Board of the City of Geneva Post Office Box 370 Geneva, Alabama 36340	
FACILITY LOCATION:	Geneva WWTP 623 West Mulkey Street Geneva, Alabama Geneva County	(0.95 MGD)
PERMIT NUMBER:	AL0020273	
RECEIVING WATERS:	Pea River	

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

ISSUANCE DATE:

EFFECTIVE DATE:

EXPIRATION DATE:

Draft

Alabama Department of Environmental Management

MUNICIPAL SECTION
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

TABLE OF CONTENTS

PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

1. Outfall 0012 Discharge Limits

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 0012, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations*							Monitoring Requirements**			
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Minimum	Daily Maximum	Percent Removal	(1) Sample Location	(2) Sample Type	(3) Measurement Frequency	(4) Seasonal
Oxygen, Dissolved (DO) 00300 1 0 0	*****	*****	*****	*****	2.0 mg/l	*****	*****	E	GRAB	D	*****
pH 00400 1 0 0	*****	*****	*****	*****	6.0 S.U.	9.0 S.U.	*****	E	GRAB	D	*****
Solids, Total Suspended 00530 1 0 0	237 lbs/day	356 lbs/day	30.0 mg/l	45.0 mg/l	*****	*****	*****	E	COMP24	D	*****
Solids, Total Suspended 00530 G 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	I	COMP24	D	*****
Nitrogen, Ammonia Total (As N) 00610 1 0 0	158 lbs/day	237 lbs/day	20.0 mg/l	30.0 mg/l	*****	*****	*****	E	COMP24	D	*****
Nitrogen, Kjeldahl Total (As N) 00625 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	E	COMP24	G	GS
Nitrite Plus Nitrate Total 1 Det. (As N) 00630 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	E	COMP24	G	GS
Phosphorus, Total (As P) 00665 1 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	E	COMP24	G	GS
Flow, In Conduit or Thru Treatment Plant 50050 1 0 0	REPORT MGD	*****	*****	*****	*****	REPORT MGD	*****	E	CONTIN	A	*****
Chlorine, Total Residual See note (5) (6) 50060 1 0 0	*****	*****	*****	*****	*****	1.0 mg/l	*****	E	GRAB	D	*****
E. Coli 51040 1 0 0	*****	*****	126 col/100mL	*****	*****	298 col/100mL	*****	E	GRAB	D	ECS
E. Coli 51040 1 0 0	*****	*****	548 col/100mL	*****	*****	2507 col/100mL	*****	E	GRAB	D	ECW
BOD, Carbonaceous 05 Day, 20C 80082 1 0 0	198 lbs/day	297 lbs/day	25.0 mg/l	37.5 mg/l	*****	*****	*****	E	COMP24	D	*****
BOD, Carbonaceous 05 Day, 20C 80082 G 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	I	COMP24	D	*****
BOD, Carb-5 Day, 20 Deg C, Percent Remvl 80091 K 0 0	*****	*****	*****	*****	*****	*****	85.0%	K	CALCTD	G	*****
Solids, Suspended Percent Removal 81011 K 0 0	*****	*****	*****	*****	*****	*****	85.0%	K	CALCTD	G	*****

* See Part II.C.1. (Bypass); Part II.C.2. (Upset)

** Monitoring Requirements

(1) Sample Location
I – Influent
E – Effluent
X – End Chlorine Contact Chamber
K - Percent Removal of the Monthly Avg. Influent Concentration from the Monthly Avg. Effluent Concentration.
RS - Receiving Stream
SW – Storm Water

(2) Sample Type:
CONTIN - Continuous
INSTAN - Instantaneous
COMP-8 - 8-Hour Composite
COMP24 - 24-Hour Composite
GRAB – Grab
CALCTD - Calculated

(3) Measurement Frequency: See also Part I.B.2.
A - 7 days per week
B - 5 days per week
C - 3 days per week
D - 2 days per week
E - 1 day per week
F - 2 days per month
G - 1 day per month
H - 1 day per quarter
J - Annual
Q - For Effluent Toxicity Testing, see Provision IV.B.

(4) Seasonal Limits:
S = Summer (May – November)
W = Winter (December - April)
ECS = E. coli Summer (May – October)
ECW = E. coli Winter (November – April)
GS = Growing Season (April – October)

(5) 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" or "NODI=9" (if hard copy) on the monthly DMR.
(6) 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" or "NODI=B" (if hard copy) on the discharge monitoring reports.

2. Outfall 012A Discharge Limits

This is an administrative outfall designation. Outfall 012A is the same physical outfall as Outfall 0012. Discharge from this outfall shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge. Limitations*							Monitoring Requirements**			
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Minimum	Daily Maximum	Percent Removal	(1) Sample Location	(2) Sample Type	(3) Measurement Frequency	(4) Seasonal
Mercury Total Recoverable (5) 71901 1 0 0	*****	*****	REPORT ug/l	*****	*****	REPORT ug/l	*****	E	GRAB	J	*****

* See Part II.C.1. (Bypass); Part II.C.2. (Upset)
** Monitoring Requirements

(1) Sample Location
I – Influent
E – Effluent
X – End Chlorine Contact Chamber
K - Percent Removal of the Monthly Avg. Influent Concentration from the Monthly Avg. Effluent Concentration.
RS - Receiving Stream
US – Upstream
DS – Downstream
MW – Monitoring Well
SW – Storm Water

(2) Sample Type:
CONTIN - Continuous
INSTAN - Instantaneous
COMP-8 - 8-Hour Composite
COMP24 - 24-Hour Composite
GRAB – Grab
CALCTD - Calculated

(3) Measurement Frequency: See also Part I.B.2.
A - 7 days per week
B - 5 days per week
C - 3 days per week
D - 2 days per week
E - 1 day per week
F - 2 days per month
G - 1 day per month
H - 1 day per quarter
J - Annual
Q - For Effluent Toxicity Testing, see Provision IV.B.

(4) Seasonal Limits:
S = Summer (May – November)
W = Winter (December - April)
ECS = E. coli Summer (May – October)
ECW = E. coli Winter (November – April)

(5) Mercury monitoring is required annually using EPA approved methods 1631E/1669 or an alternative method specifically approved by the Department.

3. Outfall 012T Discharge Limits

This is an administrative outfall designation. Outfall 012T is the same physical outfall as Outfall 0012. Discharge from this outfall shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations*							Monitoring Requirements**			
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Minimum	Daily Maximum	Percent Removal	(1) Sample Location	(2) Sample Type	(3) Measurement Frequency	(4) Seasonal
Toxicity, Ceriodaphnia Chronic 61426 1 0 0	*****	Pass = 0 Fail = 1	*****	*****	*****	*****	*****	E	COMP24	Q	*****
Toxicity, Pimephales Chronic 61428 1 0 0	*****	Pass = 0 Fail = 1	*****	*****	*****	*****	*****	E	COMP24	Q	*****

* See Part II.C.1. (Bypass); Part II.C.2. (Upset)
** Monitoring Requirements

(1) Sample Location
I – Influent
E – Effluent
X – End Chlorine Contact Chamber
K - Percent Removal of the Monthly Avg. Influent Concentration from the Monthly Avg. Effluent Concentration.
RS - Receiving Stream
US – Upstream
DS – Downstream
MW – Monitoring Well
SW – Storm Water

(2) Sample Type:
CONTIN - Continuous
INSTAN - Instantaneous
COMP-8 - 8-Hour Composite
COMP24 - 24-Hour Composite
GRAB – Grab
CALCTD - Calculated

(3) Measurement Frequency: See also Part I.B.2.
A - 7 days per week
B - 5 days per week
C - 3 days per week
D - 2 days per week
E - 1 day per week
F - 2 days per month
G - 1 day per month
H - 1 day per quarter
J - Annual
Q - For Effluent Toxicity Testing, see Provision IV.B.

(4) Seasonal Limits:
S = Summer (May – November)
W = Winter (December - April)
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" for values below the ML. Test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 and guidelines published pursuant to Section 304(h) of the FWPCA, 33 U.S.C. Section 1314(h). If more than one method for analysis of a substance is approved for use, a method having a minimum level lower than the permit limit shall be used. If the minimum level of all methods is higher than the permit limit, the method having the lowest minimum level shall be used and a report of less than the minimum level shall be reported as zero and will constitute compliance, however should EPA approve a method with a lower minimum level during the term of this permit the Permittee shall use the newly approved method.

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

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

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

   c. For parameters without an EPA established ML, interim ML, or matrix-specific ML, a report of less than the detection limit shall constitute compliance if the detection limit of all analytical methods is higher than the permit limit. 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) on the forms approved by the Department and 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. by utilizing the Department's web-based Electronic Environmental (E2) Reporting System.

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

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

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.

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

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

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

d. All reports and forms required to be submitted by this permit, the AWPCA and the Department's Rules 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
Environmental Data Section, Permits & Services 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
Environmental Data Section, Permits & Services 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 a web-based electronic environmental (E2) reporting system for notification and submittal of SSO reports. **If the Permittee is not already participating in the E2 Reporting System for SSO reports, the Permittee must apply for participation in the system within 30 days of coverage under this permit unless the Permittee submits in writing valid justification as to why it cannot participate and the Department approves in writing utilization of verbal notifications and hard copy SSO report submittals.** Once the Permittee is enrolled in the E2 Reporting System for SSO reports, the Permittee must utilize the system for notification and submittal of all SSO reports unless otherwise allowed by this permit. The Permittee shall include in the SSO reports the information requested by ADEM Form 415. In addition, the Permittee shall include the latititude 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 E2 Reporting System for SSO reports, the Permittee Participation Package may be downloaded online at **https://e2.adem.alabama.gov/npdes**. If the E2 Reporting 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 E2 Reporting System resuming operation, the Permittee shall enter the data into the E2 Reporting System, unless an alternate timeframe is approved by the Department. 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). Location should be shown on a USGS quad sheet or copy thereof; 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 (BMP)

   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 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

   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, for permit termination, revocation and reissuance, suspension, modification, or denial of a permit renewal application.

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

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

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

e. Nothing in this permit shall be construed to preclude 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, any 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 30l(c), 30l(g), 30l(h), 30l(k), or 3l6(a) of the FWPCA or for fundamentally different factors;

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

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

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

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

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

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

5. Termination

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

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

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

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

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

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

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

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

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

6. 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 direct 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 create a fire or explosion hazard in the treatment works;
2. Pollutants which will cause corrosive structural damage to the treatment works, or dischargers with a pH lower than 5.0 s.u., unless the works are specifically designed to accommodate such discharges;
3. Solid or viscous pollutants in amounts which will cause obstruction of flow in sewers, or other interference with the treatment works;
4. Pollutants, including oxygen demanding pollutants, released in a discharge of such volume or strength as to cause interference in the treatment works;
5. Heat in amounts which will inhibit biological activity in the treatment plant resulting in interference or in such quantities that the temperature of the treatment plant influent exceeds 40°C (104° F) unless the treatment plant is designed to accommodate such heat; and
6. Pollutants in amounts which exceed any applicable pretreatment standard under Section 307 of FWPCA or any approved revisions thereof.

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. From which the discharge of pollutants did not commence 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 – 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:

    a. 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;

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

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

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

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

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

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

I. SEVERABILITY

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

PART IV 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 003.

   b. The samples shall be diluted using appropriate control water to the Instream Waste Concentration (IWC) which is **1.0 percent** effluent. The IWC is the actual concentration of effluent, after mixing, in the receiving stream during a 7-day, 10-year low flow period.

   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-02-013 (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 P. promelas:, effluent toxicity tests with control survival of less than 80% or if dry weight per surviving control organism is less than 0.25 mg;

(2) For testing with C. dubia:, if the number of young per surviving control organism is less than 15 or if less than 60% of surviving control females produce three broods; 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 **November**. Should results from the Annual Toxicity test indicate that Outfall 003 exhibits chronic toxicity, then the Permittee must conduct the follow-up testing described in Part IV.B.4.a. In addition, the Permittee may then also be required to conduct toxicity testing in the months of FEBRUARY, MAY, AUGUST, and NOVEMBER.

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 Freshwater Organisms." The Larval Survival and Growth Test, Method 1000.0, shall be used for the fathead minnow (Pimephales promelas) test and the Survival and Reproduction Test, Method 1002.0, shall be used for the cladoceran (Ceriodaphnia dubia) 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)
  (a) Name of firm
  (b) Telephone number
  (c) Address
(6) Objective of test

b. Plant Operations

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

c. Source of Effluent and Dilution Water

(1) Effluent samples

(a) Sampling point
(b) Sample collection dates and times (to include composite sample start and finish times)
(c) Sample collection method
(d) Physical and chemical data of undiluted effluent samples (water temperature, pH, alkalinity, hardness, specific conductance, total residual chlorine (if applicable), etc.)
(e) Lapsed time from sample collection to delivery
(f) Lapsed time from sample collection to test initiation
(g) Sample temperature when received at the laboratory

(2) Dilution Water

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

d. Test Conditions

(1) Toxicity test method utilized
(2) End point(s) of test
(3) Deviations from referenced method, if any, and reason(s)
(4) Date and time test started
(5) Date and time test terminated
(6) Type and volume of test chambers
(7) Volume of solution per chamber
(8) Number of organisms per test chamber
(9) Number of replicate test chambers per treatment
(10) Test temperature, pH, and dissolved oxygen as recommended by the method (to include ranges)
(11) Specify if aeration was needed
(12) Feeding frequency, amount, and type of food
(13) Specify if (and how) pH control measures were implemented
(14) Light intensity (mean)

e. Test Organisms

(1) Scientific name
(2) Life stage and age
(3) Source
(4) Disease(s) treatment (if applicable)

f. Quality Assurance

(1) Reference toxicant utilized and source
(2) Date and time of most recent chronic reference toxicant test(s), raw data, and current control chart(s). (The most recent chronic reference toxicant test shall be conducted within 30 days of the routine.)
(3) Dilution water utilized in reference toxicant test
(4) Results of reference toxicant test(s) (NOEC, IC25, 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

1/ Adapted from "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater 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" or "NODI = 9" (if hard copy) 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 chlorine is not detected prior to actual discharge to the receiving stream using one of these methods (i.e., the analytical result is less than the detection level), the Permittee shall report on the DMR form "*B", "NODI = B" (if hard copy), 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. 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.

F. 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: http://www.adem.alabama.gov/alEnviroRegLaws/files/Division6Vol1.pdf and http://gis.adem.alabama.gov/ADEM_Dash/use_class/index.html

(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)

(a) 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.

NPDES PERMIT RATIONALE

NPDES Permit No:	**AL0020273**	Date: November 10, 2020
Permit Applicant:	The Water Works and Sewer Board of the City of Geneva Post Office Box 370 Geneva, Alabama 36340	
Location:	Geneva WWTP 623 West Mulkey Street Geneva, Alabama 36340	
Basis for Limitations:	Water Quality Model:	CBOD5, NH3-N, DO
	Reissuance with no modification:	N/A
	Instream calculation:	1%
	Toxicity based:	TRC
	Secondary Treatment Levels:	TSS, CBOD5, TSS Percent Removal, CBOD5 Percent Removal
	Other (described below):	pH, E. coli
Design Flow in Million Gallons per Day:	0.95 MGD	
Major:	No	
Description of Discharge:	Outfall Number 001; The effluent discharges to Pea River which is classified as Fish and Wildlife.	

Discussion: This is a permit reissuance due to expiration. The permittee has indicated that construction to decrease the design capacity of the Geneva WWTP from 1.215 MGD to 0.95 MGD was completed on March 23, 2020. Therefore, Outfall 0011 which permits the effluent discharge to Pea River for the 1.215 MGD plant is not included in this permit reissuance. Outfall 0012 which permits the effluent discharge to Pea River for the 0.95 MGD plant is being added to the permit with this reissuance. The discharge location remains unchanged.

The Geneva WWTP discharge is located in close proximity to a Florida water body. The Florida Department of Environmental Protection has been notified of this permit reissuance to determine if the discharge will have potential impacts to the water quality of any Florida water bodies. The proposed permit limits are described below.

The permit regulates the discharges of treated domestic wastewater to Pea River, a Tier I water body classified as Fish and Wildlife in the Choctawhatchee River Basin. The Permittee asserts that there are two significant industrial dischargers (i.e., two SID permits) to the treatment plant. The section of Pea River that includes this discharge is listed on the most recent 303(d) list of impaired waters for Mercury. A section of Pea River upstream of the discharge is listed on the most recent 303(d) list for Pathogens. There currently is no Total Maximum Daily Load (TMDL) established for this waterbody. The proposed permit limits are described below.

The Department completed a reasonable potential analysis (RPA) of the discharge based on the receiving stream's historical low flows and data provided in the permittee's application and discharge monitoring reports (DMRs). The Department also considers background data upstream of the point of discharge in RPAs; however, there is no available background data for this discharge. The mercury data provided in the permittee's application was not analyzed using a

sufficient method detection level for the Department to determine the impact on instream water quality standards. However, the DMR data provided by the permittee was analyzed using Low Level Mercury EPA test method 1631E which is a sufficient test method for analysis. The Department considered only the mercury data provided by the DMRs in the RPA. The RPA indicates whether pollutants in treated effluent have the potential to contribute to excursions of Alabama's instream water quality standards. Based on the RPA, it was determined that there is not a reasonable potential for instream water quality standards to be exceeded.

Mercury limits will not be included in this permit reissuance; however, the permit does impose Total Recoverable Mercury monitoring so that sufficient information will be available for TMDL development. The frequency of monitoring has been reduced from quarterly to annual monitoring. Revision of the Mercury monitoring is not considered backsliding because the revision is consistent with the Department's antidegradation policy, and water quality standards are being attained for this pollutant.

The Department has revised bacteriological criteria in ADEM Administrative Code R.335-6-10-.09. As a result, this draft permit includes *Escherichia coli* (E. coli) limits and seasons that are consistent with the revised regulations. The E. coli limits were determined based on the water-use classification of the receiving stream. Since Pea River is classified as Fish and Wildlife, the limits for May – October are 126 col/100mL (monthly average) and 298 col/100mL (daily maximum), while the limits for November – April are 548 col/100mL (monthly average) and 2507 col/100mL (daily maximum).

Limits for Dissolved Oxygen (DO), Five Day Carbonaceous Biochemical Oxygen Demand (CBOD5), and Total Ammonia as Nitrogen (NH3-N) were developed based on a Waste Load Allocation (WLA) model completed by ADEM's Water Quality Branch on April 10, 2020. The monthly average CBOD5 limit is 25.0 mg/L. The monthly average NH3-N limit is 20.0 mg/L. The daily minimum DO limit is 2.0 mg/L.

In addition to NH3-N, the Permittee is required to monitor and report effluent test results for Total Phosphorus (TP), Total Kjeldahl Nitrogen (TKN), and Nitrite plus Nitrate-Nitrogen (NO2+NO3-N). 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 nutrient limits on this discharge.

The pH limits were developed in accordance with 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 Total Residual Chlorine (TRC) limit is 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 1.0 mg/L. 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) limit is established at 30.0 mg/L in accordance with 40 CFR 133.102. A minimum percent removal limit of 85.0 percent is imposed for TSS in accordance with 40 CFR 133.102. A minimum percent removal limit of 85.0 percent is imposed for CBOD5 in accordance with 40 CFR 133.102.

Chronic toxicity with two species (*Ceriodaphnia* and *Pimephales*) is being imposed in this permit. Toxicity testing is imposed for both survival and life-cyle impairment (i.e., growth and reproduction). Chronic toxicity testing is required on an annual basis at the calculated Instream Waste Concentration (IWC) of 1 percent.

The frequency of monitoring for most parameters is two days per week. Monitoring for NO2+NO3-N, TKN, and TP is to be conducted monthly during the growing season (April – October). Monitoring for mercury is to be conducted annually. Percent removals are to be calculated monthly. Flow is to be monitored continuously, seven days per week. Toxicity testing is to be conducted during the month of November.

This permit imposes Sewer Overflow Response Plan (SORP) requirements. SORP requirements are described more fully in Part IV.F 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

TOXICITY AND DISINFECTION RATIONALE

Facility Name:	**Geneva WWTP**	
NPDES Permit Number:	**AL0020273**	
Receiving Stream:	**Pea River**	
Facility Design Flow (Q_w):	**0.950 MGD**	
Receiving Stream $7Q_{10}$:	**141.740 cfs**	
Receiving Stream $1Q_{10}$:	**106.310 cfs**	
Winter Headwater Flow (WHF):	**302.63 cfs**	
Summer Temperature for CCC:	**30 deg. Celsius**	
Winter Temperature for CCC:	**30 deg. Celsius**	
Headwater Background NH_3-N Level:	**0.11 mg/l**	
Receiving Stream pH:	**7.0 s.u.**	
Headwater Background FC Level (summer):	**N./A.**	**(Only applicable for facilities with diffusers.)**
(winter)	**N./A.**	

The Stream Dilution Ration (SDR) is calculated using the 7Q10 for all stream classifications.

$$\text{Stream Dilution Ration (SDR)} = \frac{Qw}{7Q10 + Qw} = \textbf{1.03\%}$$

AMMONIA TOXICITY LIMITATIONS

Toxicity-based ammonia limits are calculated in accordance with the *Ammonia Toxicity Protocol* and the *General Guidance for Writing Water Quality Based Toxicity Permits.*

If the Limiting Dilution is less than 1%, the waterbody is considered stream-dominated and the CMC applies.
If the Limiting Dilution is greater than 1%, the waterbody is considered effluent-dominated and the CCC applies.

$$\text{Limiting Dilution} = \frac{Q_w}{7Q_{10} + Q_w}$$

= **1.03%** **Effluent-Dominated, CCC Applies**

Criterion Maximum Concentration (CMC): $CMC=0.411/(1+10^{(7.204-pH)}) + 58.4/(1+10^{(pH-7.204)})$

Criterion Continuous Concentration (CCC): $CCC=[0.0577/(1+10^{(7.688-pH)}) + 2.487/(1+10^{(pH-7.688)})] * Min[2.85,1.45*10^{(0.028*(25-T))}]$

	CMC	CCC
Allowable Summer Instream NH_3-N:	**36.09 mg/l**	**2.18 mg/l**
Allowable Winter Instream NH_3-N:	**36.09 mg/l**	**2.18 mg/l**

$$\text{Summer } NH_3\text{-N Toxicity Limit} = \frac{[(\text{Allowable Instream } NH_3\text{-N}) * (7Q_{10} + Q_w)] - [(\text{Headwater } NH_3\text{-N}) * (7Q_{10})]}{Q_w}$$

= **201.7 mg/l NH3-N at 7Q10**

$$\text{Winter } NH_3\text{-N Toxicity Limit} = \frac{[(\text{Allowable Instream } NH_3\text{-N}) * (WHF + Q_w)] - [(\text{Headwater } NH_3\text{-N}) * (WHF)]}{Q_w}$$

= **N./A.**

The ammonia limits established in the permit will be the lesser of the DO-based ammonia limit (from the wasteload allocation model) or the toxicity limits calculated above.

	DO-based NH3-N limit	Toxicity-based NH3-N limit
Summer	**20.00 mg/l NH3-N**	**201.70 mg/l NH3-N**
Winter	**N./A.**	**N./A.**

Summer: The DO based limit of 20.00 mg/l NH3-N applies.
Winter limits are not applicable.

TOXICITY TESTING REQUIREMENTS (REFERENCE: MUNICIPAL BRANCH TOXICITY PERMITTING STRATEGY)

The following factors trigger toxicity testing requirements:

1. Facility design flow is equal to or greater than 1.0 MGD (major facility).
2. There are significant industrial contributors (SID permits).

Acute toxicity testing is specified for A&I receiving streams, or for stream dilution ratios of 1% or less.
Chronic toxicity testing is specified for all other situations requiring toxicity testing.

Chronic toxicity testing is required

Instream Waste Concentration (IWC) = $\frac{Qw}{7Q10 + Qw}$ = **1.0%**

Note: This number will be rounded up for toxicity testing purposes.

DISINFECTION REQUIREMENTS

Bacteria limits are required, and will be the water quality limit for the receiving stream, except where diffusers are used the limit may be adjusted for the dilution provided by the diffuser.

See the attached Disinfection Guidance for applicable stream standards.

(Non-coastal limits apply)
Applicable Stream Classification: **Fish & Wildlife**
Disinfection Type: **Chlorination**
Limit calculation method: **Limits based on meeting stream standards at the point of discharge.**

	Stream Standard (colonies/100ml)	Effluent Limit (colonies/100ml)
E. Coli (applies to Non-coastal and Shellfish Harvesting Coastal)		
Monthly limit as monthly average (November through April):	548	**548**
Monthly limit as monthly aveage (May through October):	126	**126**
Daily Max (November through April):	2507	**2507**
Daily Max (May through October):	298	**298**
Enterococci (applies to Coastal)		
Monthly limit as geometric mean (November through April):	Not applicable	**Not applicable**
Monthly limit as geometric mean (May through October):	Not applicable	**Not applicable**
Daily Max (November through April):	Not applicable	**Not applicable**
Daily Max (May through October):	Not applicable	**Not applicable**

MAXIMUM ALLOWABLE CHLORINATION LIMITS

Toxicity-based chlorine limits are calculated in accordance with the General Guidance for Writing Water Quality Based Toxicity Permits.

Chlorine has been shown to be acutely toxic at 0.019 mg/l and chronically toxic at 0.011 mg/l.

Maximum allowable TRC in effluent:	1.072	(0.011)/(SDR)
Maximum allowable TRC in effluent:	1.851	(0.019)/(SDR)

NOTE: A maximum chlorine limit will be imposed such that the instream concentration will not exceed acutely toxic concentrations in A & I streams and chronically toxic concentrations in all other streams, but may not exceed 1.0 mg/l.

Prepared By: Stephanie Ammons Date: 11/10/2020

Facility Name: **Geneva WWTP**

NPDES No.: **AL0020273**

8/13/2017

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

ID	Pollutants	Carcinogen "yes"	Type	Background from upstream source (C_{d2}) Daily Max	Background from upstream source (C_{d2}) Monthly Avg	Background Instream (C_s) Daily Max	Background Instream (C_s) Monthly Avg	Enter Max Daily Discharge as reported by Applicant (C_d) Max	Enter Avg Daily Discharge as reported by Applicant (C_d) Ave	Partition Coefficient (Stream / Lake)
				µg/l	µg/l	µg/l	µg/l	µg/l	µg/l	
1	Antimony		Metals	0	0	0	0	0	0	-
2	**Arsenic*,****	YES	Metals	0	0	0	0	0	0	0.574
3	Beryllium		Metals	0	0	0	0	0	0	-
4	Cadmium**		Metals	0	0	0	0	0	0	0.236
5	Chromium / Chromium III**		Metals	0	0	0	0	0	0	0.210
6	Chromium / Chromium VI**		Metals	0	0	0	0	0	0	
7	Copper**		Metals	0	0	0	0	5.51	4.843	0.388
8	Lead**		Metals	0	0	0	0	1.2	0.4	0.206
9	Mercury**		Metals	0	0	0	0	0.0667	0.013675	0.302
10	Nickel**		Metals	0	0	0	0	1.58	0.91	0.505
11	Selenium		Metals	0	0	0	0	0	0	-
12	Silver		Metals	0	0	0	0	0	0	-
13	Thallium		Metals	0	0	0	0	0	0	-
14	Zinc**		Metals	0	0	0	0	37.9	28.86	0.330
15	Cyanide		Metals	0	0	0	0	0	0	-
16	Total Phenolic Compounds		Metals	0	0	0	0	0	0	-
17	Hardness (As CaCO3)		Metals	0	0	0	0	46400	45300	-
18	Acrolein		VOC	0	0	0	0	0	0	-
19	**Acrylonitrile***	YES	VOC	0	0	0	0	0	0	-
20	**Aldrin**	YES	VOC	0	0	0	0	0	0	-
21	**Benzene***	YES	VOC	0	0	0	0	0	0	-
22	**Bromoform***	YES	VOC	0	0	0	0	0	0	-
23	**Carbon Tetrachloride***	YES	VOC	0	0	0	0	0	0	-
24	**Chlordane**	YES	VOC	0	0	0	0	0	0	-
25	Clorobenzene		VOC	0	0	0	0	0	0	-
26	**Chlorodibromo-Methane***	YES	VOC	0	0	0	0	0	0	-
27	Chloroethane		VOC	0	0	0	0	0	0	-
28	2-Chloro-Ethylvinyl Ether		VOC	0	0	0	0	0	0	-
29	**Chloro Form***	YES	VOC	0	0	0	0	8.26	2.753	-
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	2.49	1.396	-
34	1, 1-Dichloroethane		VOC	0	0	0	0	0	0	-
35	**1, 2-Dichloroethane***	YES	VOC	0	0	0	0	0	0	-
36	Trans-1, 2-Dichloro-Ethylene		VOC	0	0	0	0	0	0	-
37	**1, 1-Dichloroethylene***	YES	VOC	0	0	0	0	0	0	-
38	1, 2-Dichloropropane		VOC	0	0	0	0	0	0	-
39	1, 3-Dichloro-Propylene		VOC	0	0	0	0	0	0	-
40	**Dieldrin**	YES	VOC	0	0	0	0	0	0	-
41	Ethylbenzene		VOC	0	0	0	0	0	0	-
42	Methyl Bromide		VOC	0	0	0	0	0	0	-
43	Methyl Chloride		VOC	0	0	0	0	0	0	-
44	**Methylene Chloride***	YES	VOC	0	0	0	0	0	0	-
45	**1, 1, 2, 2-Tetrachloro-Ethane***	YES	VOC	0	0	0	0	0	0	-
46	**Tetrachloro-Ethylene***	YES	VOC	0	0	0	0	0	0	-
47	Toluene		VOC	0	0	0	0	0	0	-
48	**Toxaphene**	YES	VOC	0	0	0	0	0	0	-
49	**Tributyltine (TBT)**	YES	VOC	0	0	0	0	0	0	-
50	1, 1, 1-Trichloroethane		VOC	0	0	0	0	0	0	-
51	**1, 1, 2-Trichloroethane***	YES	VOC	0	0	0	0	0	0	-
52	**Trichloroethylene***	YES	VOC	0	0	0	0	0	0	-
53	**Vinyl Chloride***	YES	VOC	0	0	0	0	0	0	-
54	P-Chloro-M-Cresol		Acids	0	0	0	0	0	0	-
55	2-Chlorophenol		Acids	0	0	0	0	0	0	-
56	2, 4-Dichlorophenol		Acids	0	0	0	0	0	0	-
57	2, 4-Dimethylphenol		Acids	0	0	0	0	0	0	-
58	4, 6-Dinitro-O-Cresol		Acids	0	0	0	0	0	0	-
59	2, 4-Dinitrophenol		Acids	0	0	0	0	0	0	-
60	**4,6-Dinitro-2-methylephenol**	YES	Acids	0	0	0	0	0	0	-
61	**Dioxin (2,3,7,8-TCDD)**	YES	Acids	0	0	0	0	0	0	-
62	2-Nitrophenol		Acids	0	0	0	0	0	0	-
63	4-Nitrophenol		Acids	0	0	0	0	0	0	-
64	**Pentachlorophenol***	YES	Acids	0	0	0	0	0	0	-
65	Phenol		Acids	0	0	0	0	0	0	-
66	**2, 4, 6-Trichlorophenol***	YES	Acids	0	0	0	0	0	0	-
67	Acenaphthene		Bases	0	0	0	0	0	0	-
68	Acenaphthylene		Bases	0	0	0	0	0	0	-
69	Anthracene		Bases	0	0	0	0	0	0	-
70	Benzidine		Bases	0	0	0	0	0	0	-
71	**Benzo(A)Anthracene***	YES	Bases	0	0	0	0	0	0	-
72	**Benzo(A)Pyrene***	YES	Bases	0	0	0	0	0	0	-
73	3, 4 Benzo-Fluoranthene		Bases	0	0	0	0	0	0	-
74	Benzo(GHI)Perylene		Bases	0	0	0	0	0	0	-
75	Benzo(K)Fluoranthene		Bases	0	0	0	0	0	0	-
76	Bis (2-Chloroethoxy) Methane		Bases	0	0	0	0	0	0	-
77	**Bis (2-Chloroethyl)-Ether***	YES	Bases	0	0	0	0	0	0	-
78	Bis (2-Chloroiso-Propyl) Ether		Bases	0	0	0	0	0	0	-
79	**Bis (2-Ethylhexyl) Phthalate***	YES	Bases	0	0	0	0	0	0	-
80	4-Bromophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
81	Butyl Benzyl Phthalate		Bases	0	0	0	0	0	0	-
82	2-Chloronaphthalene		Bases	0	0	0	0	0	0	-
83	4-Chlorophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
84	**Chrysene***	YES	Bases	0	0	0	0	0	0	-
85	Di-N-Butyl Phthalate		Bases	0	0	0	0	0	0	-
86	Di-N-Octyl Phthalate		Bases	0	0	0	0	0	0	-
87	**Dibenzo(A,H)Anthracene***	YES	Bases	0	0	0	0	0	0	-
88	1, 2-Dichlorobenzene		Bases	0	0	0	0	0	0	-
89	1, 3-Dichlorobenzene		Bases	0	0	0	0	0	0	-
90	1, 4-Dichlorobenzene		Bases	0	0	0	0	0	0	-
91	**3, 3-Dichlorobenzidine***	YES	Bases	0	0	0	0	0	0	-
92	Diethyl Phthalate		Bases	0	0	0	0	0	0	-
93	Dimethyl Phthalate		Bases	0	0	0	0	0	0	-
94	**2, 4-Dinitrotoluene***	YES	Bases	0	0	0	0	0	0	-
95	2, 6-Dinitrotoluene		Bases	0	0	0	0	0	0	-
96	1,2-Diphenylhydrazine		Bases	0	0	0	0	0	0	-
97	**Endosulfan (alpha)**	YES	Bases	0	0	0	0	0	0	-
98	**Endosulfan (beta)**	YES	Bases	0	0	0	0	0	0	-
99	**Endosulfan sulfate**	YES	Bases	0	0	0	0	0	0	-
100	**Endrin**	YES	Bases	0	0	0	0	0	0	-
101	**Endrin Aldeyhide**	YES	Bases	0	0	0	0	0	0	-
102	Fluoranthene		Bases	0	0	0	0	0	0	-
103	Fluorene		Bases	0	0	0	0	0	0	-
104	Heptochlor	YES	Bases	0	0	0	0	0	0	-
105	Heptachlor Epoxide	YES	Bases	0	0	0	0	0	0	-
106	**Hexachlorobenzene***	YES	Bases	0	0	0	0	0	0	-
107	**Hexachlorobutadiene***	YES	Bases	0	0	0	0	0	0	-
108	**Hexachlorocyclohexan (alpe)**	YES	Bases	0	0	0	0	0	0	-
109	**Hexachlorocyclohexan (beta)**	YES	Bases	0	0	0	0	0	0	-
110	**Hexachlorocyclohexan (gamma)**	YES	Bases	0	0	0	0	0	0	-
111	HexachlorocycloPentadiene		Bases	0	0	0	0	0	0	-
112	Hexachloroethane		Bases	0	0	0	0	0	0	-
113	**Indeno(1, 2, 3-CK)Pyrene***	YES	Bases	0	0	0	0	0	0	-
114	Isophorone		Bases	0	0	0	0	0	0	-
115	Naphthalene		Bases	0	0	0	0	0	0	-
116	Nitrobenzene		Bases	0	0	0	0	0	0	-
117	**N-Nitrosodi-N-Propylamine***	YES	Bases	0	0	0	0	0	0	-
118	**N-Nitrosodi-N-Methylamine***	YES	Bases	0	0	0	0	0	0	-
119	**N-Nitrosodi-N-Phenylamine***	YES	Bases	0	0	0	0	0	0	-
120	**PCB-1016**	YES	Bases	0	0	0	0	0	0	-
121	**PCB-1221**	YES	Bases	0	0	0	0	0	0	-
122	**PCB-1232**	YES	Bases	0	0	0	0	0	0	-
123	**PCB-1242**	YES	Bases	0	0	0	0	0	0	-
124	**PCB-1248**	YES	Bases	0	0	0	0	0	0	-
125	**PCB-1254**	YES	Bases	0	0	0	0	0	0	-
126	**PCB-1260**	YES	Bases	0	0	0	0	0	0	-
127	Phenanthrene		Bases	0	0	0	0	0	0	-
128	Pyrene		Bases	0	0	0	0	0	0	-
129	1, 2, 4-Trichlorobenzene		Bases	0	0	0	0	0	0	-

0.95	Enter Q_d = wastewater discharge flow from facility (MGD)
1.46986755	Q_d = wastewater discharge flow (cfs) (this value is caluclated from the MGD)
0	Enter flow from upstream discharge Qd2 = background stream flow in MGD above point of discharge
0	Qd2 = background stream flow from upstream source (cfs)
141.74	Enter 7Q10, Q_s = background stream flow in cfs above point of discharge
106.31	Enter or estimated, 1Q10, Q_s = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of 7Q10)
2158.55	Enter Mean Annual Flow, Q_s = background stream flow in cfs above point of discharge
302.63	Enter 7Q2, Q_s = background stream flow in cfs above point of discharge (For LWF class streams)
Enter to Lab	Enter C_s = background in-stream pollutant concentration in µg/l (assuming this is zero "0" unless there is data)
Q_s +Qd2+Q_d	Q_r = resultant in-stream flow, after discharge
Calculated on other	C_r = resultant in-stream pollutant concentration in µg/l in the stream (after complete mixing occurs)
50	Enter, Background Hardness above point of discharge (assumed 50 South of Birmingham and 100 North of
7.00 s.u.	Enter, Background pH above point of discharge
YES	Enter, is discharge to a stream? "YES" Other option would be to a Lake. (This changes the partition coefficients for the metals)

** Using Partition Coefficients

November 10, 2020

Facility Name: Geneva WWTP

NPDES No.: AL0020273

					Freshwater Acute (µg/l) Q_s =1010					Freshwater Chronic (µg/l) Q_s = 7010				Human Health Consumption Fish only (µg/l)			
	Freshwater E&W classification:													Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10			
ID	Pollutant	RP?	Carcinogen (yes	Background from upstream source (C$_{BS}$) Daily Max	Max Daily Discharge as reported by Applicant (C_{Daily})	Water Quality Criteria (C_d)	Draft Permit Limit (C_{Daily})	30% of Draft Permit Limit	RP?	Background from upstream source (C$_{BS}$) Monthly Avg	Avg Daily Discharge as reported by Applicant (C_{Daily})	Water Quality Criteria (C_c)	Draft Permit Limit (C_{Daily})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_c)	Draft Permit Limit (C_{Daily})	20% of Draft Permit Limit	RP?
1	Antimony			0	0	-	-	-	-	0	0	-	-	-	-	3.75E+02	3.64E+04	7.27E+03	No
2	Arsenic		YES	0	0	340.154	43433.664	8686.733	No	0	0	261.226	25460.921	5092.184	No	3.03E-01	4.45E+02	8.91E-01	No
3	Beryllium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
4	Cadmium			0	0	0.747	318.759	63.752	No	0	0	0.544	62.707	12.541	No	-	-	-	-
5	Chromium/ Chromium III			0	0	1597.513	112769.378	22553.876	No	0	0	259.051	19491.048	3898.210	No	-	-	-	-
6	Chromium/ Chromium VI			0	0	15.000	1173.220	234.644	No	0	0	11.000	1071.735	214.347	No	-	-	-	-
7	Copper			0	5.51	18.005	1321.808	264.361	No	0	4.843	12.786	1243.755	248.751	No	-	-	-	-
8	Lead			0	1.2	148.261	10726.958	2145.392	No	0	0.4	5.721	555.426	111.085	No	-	-	-	-
9	Mercury			0	0.0887	2.400	175.983	35.197	No	0	0	0.013875	0.012	1.169	0.234	No	4.24E-02	4.13E+00	8.27E-01	No
10	Nickel			0	1.58	915.824	37823.463	7564.693	No	0	0.91	87.592	5562.001	1116.400	No	4.30E+02	9.67E+04	1.93E+04	No
11	Selenium			0	0	20.000	1468.525	293.305	No	0	0	5.000	487.152	97.430	No	1.70E+02	2.37E+05	4.74E+04	No
12	Silver			0	0	0.806	71.599	14.320	No	0	0	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	2.74E-01	2.67E+01	5.33E+00	No
14	Zinc			0	37.9	147.386	14472.314	2894.463	No	0	28.86	144.668	19387.032	3877.406	No	1.46E+04	1.45E+06	2.90E+05	No
15	Cyanide			0	0	22.000	1813.177	322.635	No	0	0	5.200	508.638	101.328	No	4.20E+02	9.09E+05	1.82E+05	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	46400	-	-	-	-	0	45300	-	-	-	-	-	-	-	-
18	Acrolein			0	0	-	-	-	-	0	0	-	-	-	-	5.43E+00	5.29E+02	1.08E+02	No
19	Acrylonitrile		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.44E-01	2.12E+02	4.23E+01	No
20	Aldrin		YES	0	0	3.000	219.979	43.996	No	0	0	-	-	-	-	2.94E-05	4.32E-02	8.64E-03	No
21	Benzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.15E+01	2.27E+04	4.55E+03	No
22	Bromoform		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.85E+01	1.18E+05	2.31E+04	No
23	Carbon Tetrachloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.57E-01	1.41E+03	2.81E+02	No
24	Chlordane		YES	0	0	2.400	175.983	35.197	No	0	0	0.0043	0.419	0.084	No	4.73E-04	6.95E-01	1.39E-01	No
25	Clorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	5.05E+02	8.83E+04	1.77E+04	No
26	Chlorodibromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.51E+00	1.09E+04	2.18E+03	No
27	Chloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
28	2-Chloro-Ethylvinyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
29	Chloro-Form		YES	0	8.28	-	-	-	-	0	2.753	-	-	-	-	1.02E+02	1.50E+05	3.00E+04	No
30	4,4' - DDD		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.51E-04	2.67E-01	5.33E-02	No
31	4,4' - DDE		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.20E-04	1.88E-01	3.76E-02	No
32	4,4' - DDT		YES	0	0	1.100	80.659	16.132	No	0	0	0.001	0.097	0.019	No	3.20E-04	1.88E-01	3.76E-02	No
33	Dichlorobromo-Methane		YES	0	2.49	-	-	-	-	0	1.398	-	-	-	-	1.00E+01	1.47E+04	2.95E+03	No
34	1, 1-Dichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
35	1, 2-Dichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.14E+01	3.14E+04	6.28E+03	No
36	Trans-1, 2-Dichloro-Ethylene			0	0	-	-	-	-	0	0	-	-	-	-	3.97E+00	5.76E+05	1.15E+05	No
37	1, 1-Dichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.17E+00	6.12E+06	1.22E+06	No
38	1, 2-Dichloropropane			0	0	-	-	-	-	0	0	-	-	-	-	5.70E+01	8.28E+02	1.66E+02	No
39	1, 3-Dichloro-Propylene			0	0	-	-	-	-	0	0	-	-	-	-	1.20E+01	1.20E+03	2.39E+02	No
40	Dieldrin		YES	0	0	0.240	17.596	3.520	No	0	0	0.0056	5.456	1.091	No	3.12E-05	4.59E-02	9.18E-03	No
41	Ethylbenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.24E+02	1.21E+05	2.42E+04	No
42	Methyl Bromide			0	0	-	-	-	-	0	0	-	-	-	-	5.71E+02	8.49E+04	1.70E+04	No
43	Methyl Chloride			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
44	Methylene Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.89E+02	5.08E+05	1.02E+05	No
45	1, 1, 2, 2-Tetrachloro-Ethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.33E+00	3.43E+03	6.86E+02	No
46	Tetrachloro-Ethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.62E+01	2.82E+03	5.63E+02	No
47	Toluene			0	0	-	-	-	-	0	0	-	-	-	-	4.72E+03	8.50E+05	1.70E+05	No
48	Toxaphene		YES	0	0	0.730	53.528	10.706	No	0	0	0.0002	0.019	0.004	No	1.60E-04	2.36E-01	4.76E-02	No
49	Tributyltin (TBT)		YES	0	0	0.46	33.730	6.746	No	0	0	0.072	7.015	1.403	No	-	-	-	-
50	1, 1, 1-Trichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
51	1, 1, 2-Trichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.42E+00	1.34E+04	2.67E+03	No
52	Trichloroethene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.75E+01	2.57E+04	5.13E+03	No
53	Vinyl Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.42E+00	2.09E+03	4.19E+02	No
54	P-Chloro-M-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
55	2-Chlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	5.71E+01	8.48E+03	1.70E+03	No
56	2, 4-Dichlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	1.72E+02	1.68E+04	3.35E+03	No
57	2, 4-Dimethylphenol			0	0	-	-	-	-	0	0	-	-	-	-	1.15E+03	4.85E+04	9.69E+03	No
58	4, 6-Dinitro-O-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
59	2, 4-Dinitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	6.91E+03	3.03E+05	6.06E+04	No
60	4,6-Dinitro-2-methylphenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.66E+02	2.43E+05	4.86E+04	No
61	Dioxin (2,3,7,8-TCDD)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.07E-08	3.92E-05	7.84E-06	No
62	2-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
63	4-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
64	Pentachlorophenol		YES	0	0	4.72	639.648	127.930	No	0	0	3.000	652.061	130.412	No	1.71E+01	2.60E+03	5.20E+02	No
65	Phenol			0	0	-	-	-	-	0	0	-	-	-	-	5.89E+05	4.87E+07	9.74E+06	No
66	2, 4, 6-Trichlorophenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.41E+01	2.08E+03	4.18E+02	No
67	Acenaphthene			0	0	-	-	-	-	0	0	-	-	-	-	8.75E+02	5.84E+04	1.13E+04	No
68	Acenaphthylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
69	Anthracene			0	0	-	-	-	-	0	0	-	-	-	-	3.53E+04	2.27E+06	4.55E+05	No
70	Benzidine			0	0	-	-	-	-	0	0	-	-	-	-	1.19E-04	1.13E-02	2.26E-03	No
71	Benzo(A)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.97E-02	1.57E+01	3.13E+00	No
72	Benzo(A)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.97E-02	1.57E+01	3.13E+00	No
73	Benzo(B)fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.97E-02	1.04E+00	2.08E-01	No
74	Benzo(GHI)Perylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
75	Benzo(K)Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.97E-02	1.04E+00	2.08E-01	No
76	Bis (2-Chloroethoxy) Methane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
77	Bis (2-Chloroethyl) Ether		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.37E-01	4.52E+02	9.04E+01	No
78	Bis (2-Chloroiso-Propyl) Ether			0	0	-	-	-	-	0	0	-	-	-	-	3.78E+04	3.68E+06	7.36E+05	No
79	Bis (2-Ethylhexyl) Phthalate		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.20E+00	1.86E+03	3.77E+02	No
80	4-Bromophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
81	Butyl Benzyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	1.73E+03	1.10E+05	2.20E+04	No
82	2-Chloronaphthalene			0	0	-	-	-	-	0	0	-	-	-	-	1.24E+03	9.00E+04	1.80E+04	No
83	4-Chlorophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
84	Chrysene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.97E-02	1.57E+01	3.13E+00	No
85	Di-N-Butyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.42E+03	2.55E+05	5.11E+04	No
86	Di-N-Octyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
87	Dibenzo(A,H)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.97E-02	1.57E+01	3.13E+00	No
88	1, 2-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.69E+03	7.36E+04	1.47E+04	No
89	1, 3-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	5.52E+02	5.48E+04	1.10E+04	No
90	1, 4-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.12E+03	1.10E+04	2.19E+03	No
91	3, 3-Dichlorobenzidine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.08E-02	2.44E+01	4.88E+00	No
92	Diethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	3.56E+04	2.49E+06	4.98E+05	No
93	Dimethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	8.44E+05	6.31E+07	1.26E+07	No
94	2, 4-Dinitrotoluene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.24E+01	2.91E+03	5.82E+02	No
95	2, 6-Dinitrotoluene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
96	1,2-Diphenylhydrazine			0	0	-	-	-	-	0	0	-	-	-	-	1.17E-01	1.14E+01	2.28E+00	No
97	Endosulfan (alpha)		YES	0	0	0.22	16.132	3.226	No	0	0	0.056	5.456	1.091	No	5.93E+01	7.62E+04	1.52E+04	No
98	Endosulfan (beta)		YES	0	0	0.22	16.132	3.226	No	0	0	0.056	5.456	1.091	No	5.93E+01	7.62E+04	1.52E+04	No
99	Endosulfan sulfate		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.93E+01	7.62E+04	1.52E+04	No
100	Endrin		YES	0	0	0.086	6.306	1.261	No	0	0	0.036	3.507	0.701	No	3.05E-02	5.18E+01	1.04E+01	No
101	Endrin Aldehyde		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.75E+01	2.56E+02	5.18E+01	No
102	Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	6.12E+02	7.91E+03	1.58E+03	No
103	Fluorene			0	0	-	-	-	-	0	0	-	-	-	-	3.91E+03	3.03E+05	6.06E+04	No
104	Heptachlor		YES	0	0	0.52	38.130	7.626	No	0	0	0.0008	0.370	0.074	No	4.82E-05	6.90E-02	1.38E-02	No
105	Heptachlor Epoxide		YES	0	0	0.52	38.130	7.626	No	0	0	0.0004	0.370	0.074	No	2.36E-05	3.36E-02	6.73E-03	No
106	Hexachlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.24E-04	2.47E-01	4.93E-02	No
107	Hexachlorobutadiene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E+01	1.56E+04	3.18E+03	No
108	Hexachlorocyclohexan (alpha)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.65E-02	4.19E+00	8.37E-01	No
109	Hexachlorocyclohexan (beta)		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.01E-02	1.47E+01	2.93E+00	No
110	Hexachlorocyclohexan (gamma)		YES	0	0	0.95	69.660	13.932	No	0	0	-	-	-	-	1.80E+00	1.56E+03	3.17E+02	No
111	Hexachlorocyclopentadiene			0	0	-	-	-	-	0	0	-	-	-	-	5.45E+02	6.29E+04	1.26E+04	No
112	Hexachloroethane			0	0	-	-	-	-	0	0	-	-	-	-	3.30E+01	1.87E+02	3.74E+01	No
113	Indeno(1, 2, 3-CD)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.97E-02	1.57E+01	3.13E+00	No
114	Isophorone			0	0	-	-	-	-	0	0	-	-	-	-	9.61E+03	5.48E+04	1.09E+04	No
115	Naphthalene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
116	Nitrobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.04E+02	3.93E+04	7.87E+03	No
117	N-Nitrosodi-N-Propylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.05E-01	4.33E+02	8.67E+01	No
118	N-Nitrosodimethylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.79E+00	2.56E+03	5.17E+02	No
119	N-Nitrosodiphenylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.30E+01	5.15E+03	1.03E+03	No
120	PCB-1016		YES	0	0	-	-	-	-	0	0	0.014	1.364	0.273	No	3.74E-05	5.50E-02	1.10E-02	No
121	PCB-1221		YES	0	0	-	-	-	-	0	0	0.014	1.364	0.273	No	3.74E-05	5.50E-02	1.10E-02	No
122	PCB-1232		YES	0	0	-	-	-	-	0	0	0.014	1.364	0.273	No	3.74E-05	5.50E-02	1.10E-02	No
123	PCB-1242		YES	0	0	-	-	-	-	0	0	0.014	1.364	0.273	No	3.74E-05	5.50E-02	1.10E-02	No
124	PCB-1248		YES	0	0	-	-	-	-	0	0	0.014	1.364	0.273	No	3.74E-05	5.50E-02	1.10E-02	No
125	PCB-1254		YES	0	0	-	-	-	-	0	0	0.014	1.364	0.273	No	3.74E-05	5.50E-02	1.10E-02	No
126	PCB-1260		YES	0	0	-	-	-	-	0	0	0.014	1.364	0.273	No	3.74E-05	5.50E-02	1.10E-02	No
127	Pterantrvene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
128	Pyrene			0	0	-	-	-	-	0	0	-	-	-	-	2.58E+03	2.27E+05	4.55E+04	No
129	1, 2, 4-Trichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	9.09E+01	3.99E+03	7.98E+02	No

Geneva WWTP, Permit No. AL0020273
Mercury DMR Data

Monitor Pd End Date	Monthly Average (ug/L)	Maximum Daily (ug/L)
9/30/2015	0.002	0.002
12/31/2015	0.002	0.002
3/31/2016	0.00478	0.00478
6/30/2016	0.0319	0.0319
9/30/2016	0.0048	0.00488
12/31/2016	0.0023	0.0023
3/31/2017	0.0146	0.0146
6/30/2017	0.00499	0.00499
9/30/2017	0.00161	0.00161
12/31/2017	0.00161	0.00161
3/31/2018	0.00212	0.00212
6/30/2018	0.005	0.005
9/30/2018	0.0048	0.0048
12/31/2018	0.0593	0.0593
3/31/2019	0.0241	0.0241
6/30/2019	0.0199	0.0199
9/30/2019	0.0667	0.0667
12/31/2019	0.0067	0.0067
3/31/2020	0.00621	0.00621
6/30/2020	0.00807	0.00807
	0.013675 ug/L	**0.0667 ug/L**

Geneva WWTP
Permit No. AL0020273
Summary of Permit Application Data

Below is a summary of data provided in the permit application. The summary below does not include parameters in which the data for all sampling events was reported as below the method detection level. Also not included in this summary is mercury data submitted with the permit application. The mercury samples submitted with the applicaton were not analyzed using a sufficient method of detection level; therefore, the Department considered in its analysis only the mercury data submitted with the quarterly DMRs which was analyzed using low level test method 1631E.

Parameter	Number of Samples	Average of Samples (ug/L)	Maximum of Samples (ug/L)
Hardness	3	45300	46400
Copper	3	4.843	5.51
Lead	3	0.4	1.2
Nickel	3	0.91	1.58
Zinc	3	28.86	37.9
Bromodichloromethane	3	1.396	2.49
Chloroform	3	2.753	8.26

Waste Load Allocation Summary

REQUEST INFORMATION

Request Number: 3667

From:	Stephanie Ammons	In Branch/Section	Municipal		
Date Submitted	12/31/2019	Date Required	1/30/2020	FUND Code	605
Date Permit application received by NPDES program	7/31/2018				
Receiving Waterbody	Pea River				
Previous Stream Name	Pea River				
Facility Name	Geneva WWTP	(Name of Discharger-WQ will use to file)			
		Previous Discharger Name			
River Basin	Choctawhatchee	Outfall Latitude	31.036503	(decimal degrees)	
*County	Geneva	Outfall Longitude	-85.893091	(decimal degrees)	
Permit Number	AL0020273	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	1.215 MGD	Note: The flow rates given should be those requested for modeling.			
Proposed Discharge Design Flow	0.95 MGD				
Comments included	☑ Yes ☐ No	Information Verified By	BCH	Year File Was Created	1986
				Response ID Number	1741
		Lat/Long Method	GPS		
12 Digit HUC Code	031402020906				
Use Classification	F&W				
Site Visit Completed?	☑ Yes ☐ No	Date of Site Visit	3/25/2020		
Waterbody Impaired?	☑ Yes ☐ No	Date of WLA Response	4/10/2020		
Antidegradation	☐ Yes ☑ No	Approved TMDL?	☐ Yes ☑ No		
Waterbody Tier Level	Tier I				
Use Support Category	5	Approval Date of TMDL			

Waste Load Allocation Information

Modeled Reach Length	10.94 Miles	Date of Allocation	4/10/2020		
Name of Model Used	SWQM	Allocation Type	Annual		
Model Completed by	Brian Haigler	Type of Model Used	Desk-top		
Allocation Developed by	Water Quality Branch				

Waste Load Allocation Summary

Annual Effluent Limits			Conventional Parameters				Other Parameters			
			Qw	MGD	Qw	MGD	Qw	MGD	Qw	MGD
Qw	0.95	MGD	Season		Season		Season		Season	
			From		From		From		From	
CBOD5	25	mg/L	Through		Through		Through		Through	
NH3-N	20	mg/L	CBOD5		CBOD5		TP		TP	
TKN			NH3-N		NH3-N		TN		TN	
D.O.	2	mg/L	TKN		TKN		TSS		TSS	
			D.O.		D.O.					

"Monitor Only" Parameters for Effluent:	Parameter	Frequency	Parameter	Frequency
	TP	Monthly (Apr-Oct)		
	TKN	Monthly (Apr-Oct)		
	NO2+NO3-N	Monthly (Apr-Oct)		

Water Quality Characteristics Immediately Upstream of Discharge

Parameter	Summer		Winter	
CBODu	2	mg/l		mg/l
NH3-N	0.11	mg/l		mg/l
Temperature	30	°C		°C
pH	7	su		su

Hydrology at Discharge Location

Drainage Area Qualifier				Method Used to Calculate
Exact	Drainage Area	1548.07	sq mi	
	Stream 7Q10	141.74	cfs	ADEM Estimate w/USGS Gage Data
	Stream 1Q10	106.31	cfs	ADEM Estimate w/USGS Gage Data
	Stream 7Q2	302.63	cfs	ADEM Estimate w/USGS Gage Data
	Annual Average	2158.55	cfs	ADEM Estimate w/USGS Gage Data

Comments and/or Notations: This segment of the Pea River is listed on the 2018 303(d) list for Metals (Mercury) due to Atmospheric deposition.

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
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Form 2A NPDES | EPA

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
Geneva WWTP

Mailing address (street or P.O. box)
PO Box 370

City or town	State	ZIP code
Geneva	AL	36340

Contact name (first and last)	Title	Phone number	Email address
James Dixon	Manager	(334) 313-6370	genevawaterworks0622@gma

Location address (street, route number, or other specific identifier) ☐ Same as mailing address
623 W Mulkey Street

City or town	State	ZIP code
Geneva	AL	36340

1.2 Is this application for a facility that has yet to commence discharge?
☐ Yes ➔ See instructions on data submission requirements for new dischargers. ☑ No

Applicant Information

1.3 Is applicant different from entity listed under Item 1.1 above?
☑ Yes ☐ No ➔ SKIP to Item 1.4.

Applicant name
City of Geneva Water Works and Sewer Board

Applicant address (street or P.O. box)
PO Box 370

City or town	State	ZIP code
Geneva	AL	36340

Contact name (first and last)	Title	Phone number	Email address
James Dixon	Manager	(334) 313-6370	genevawaterworks0622@gma

1.4 Is the applicant the facility's owner, operator, or both? (Check only one response.)
☐ Owner ☐ Operator ☑ Both

1.5 To which entity should the NPDES permitting authority send correspondence? (Check only one response.)
☐ Facility ☑ Applicant ☐ 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		
☑ NPDES (discharges to surface water) AL0020213	☐ RCRA (hazardous waste)	☐ UIC (underground injection control)
☐ PSD (air emissions)	☐ Nonattainment program (CAA)	☐ NESHAPs (CAA)
☐ Ocean dumping (MPRSA)	☐ Dredge or fill (CWA Section 404)	☐ 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 Geneva	1454	100 % separate sanitary sewer	☑ Own ☐ Maintain
		____ % combined storm and sanitary sewer	☐ Own ☐ Maintain
		☐ Unknown	☐ Own ☐ Maintain
		____ % separate sanitary sewer	☐ Own ☐ Maintain
		____ % combined storm and sanitary sewer	☐ Own ☐ Maintain
		☐ Unknown	☐ Own ☐ Maintain
		____ % separate sanitary sewer	☐ Own ☐ Maintain
		____ % combined storm and sanitary sewer	☐ Own ☐ Maintain
		☐ Unknown	☐ Own ☐ Maintain
		____ % separate sanitary sewer	☐ Own ☐ Maintain
		____ % combined storm and sanitary sewer	☐ Own ☐ Maintain
		☐ Unknown	☐ Own ☐ Maintain
Total Population Served			

	Separate Sanitary Sewer System	Combined Storm and Sanitary Sewer
Total percentage of each type of sewer line (in miles)	100 %	%

Indian Country

1.8 Is the treatment works located in Indian Country?

☐ Yes ☑ No

1.9 Does the facility discharge to a receiving water that flows through Indian Country?

☐ Yes ☑ No

Design and Actual Flow Rates

1.10 Provide design *and* actual flow rates in the designated spaces.

Design Flow Rate
0.95 mgd

Annual Average Flow Rates (Actual)		
Two Years Ago	**Last Year**	**This Year**
0.350 mgd	0.275 mgd	0.347 mgd

Maximum Daily Flow Rates (Actual)		
Two Years Ago	**Last Year**	**This Year**
1.215 mgd	1.1215 mgd	0.95 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	3	0	1

Outfalls and Other Discharge or Disposal Methods

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	☐ Continuous ☐ Intermittent
	gpd	☐ Continuous ☐ Intermittent
	gpd	☐ Continuous ☐ 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	☐ Continuous ☐ Intermittent
	acres	gpd	☐ Continuous ☐ Intermittent
	acres	gpd	☐ Continuous ☐ 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 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) ☐ 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	☐ Continuous ☐ Intermittent
		acres	gpd	☐ Continuous ☐ Intermittent
		acres	gpd	☐ Continuous ☐ 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			

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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?

☑ Yes ☐ 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
443 gpd

Indicate the steps the facility is taking to minimize inflow and infiltration.

Cleaned all manholes years ago and correct any problems
Smoke test

Topographic Map

2.3 Have you attached a topographic map to this application that contains all the required information? (See instructions for specific requirements.)

☑ Yes ☐ 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.)

☑ Yes ☐ No

Scheduled Improvements and Schedules of Implementation

2.5 Are improvements to the facility scheduled?

☐ Yes ☑ No ➔ SKIP to Section 3.

Briefly list and describe the scheduled improvements.

1. Improvements to reduce flow were completed last year
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.

☐ Yes ☐ No ☑ None required or applicable

Explanation:

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EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
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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	AL		
County	Geneva		
City or town	Geneva		
Distance from shore	300 ft.	ft.	ft.
Depth below surface	0 ft.	ft.	ft.
Average daily flow rate	0.347 mgd	mgd	mgd
Latitude	31° 02′ 07″	° ′ ″	° ′ ″
Longitude	85° 53′ 30″	° ′ ″	° ′ ″

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Seasonal or Periodic Discharge Data

3.2 Do any of the outfalls described under Item 3.1 have seasonal or periodic discharges?

☐ Yes ☑ 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?

☐ Yes ☑ 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?

☑ Yes ☐ No → SKIP to Section 6.

Receiving Water Description

3.7 Provide the receiving water and related information (if known) for each outfall.

	Outfall Number 001	Outfall Number _____	Outfall Number _____
Receiving water name	Pea River		
Name of watershed, river, or stream system	Lower Pea River Watershed		
U.S. Soil Conservation Service 14-digit watershed code	031402020906		
Name of state management/river basin	Pea River Basin		
U.S. Geological Survey 8-digit hydrologic cataloging unit code	03140202		
Critical low flow (acute)	cfs	cfs	cfs
Critical low flow (chronic)	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)	☑ Primary ☐ Equivalent to secondary ☐ Secondary ☐ Advanced ☐ Other (specify) _____	☐ Primary ☐ Equivalent to secondary ☐ Secondary ☐ Advanced ☐ Other (specify) _____	☐ Primary ☐ Equivalent to secondary ☐ Secondary ☐ Advanced ☐ Other (specify) _____
Design Removal Rates by Outfall			
BOD_5 or $CBOD_5$	98 %	%	%
TSS	94 %	%	%
Phosphorus	☑ Not applicable %	☐ Not applicable %	☐ Not applicable %
Nitrogen	☑ Not applicable %	☐ Not applicable %	☐ Not applicable %
Other (specify) _____	☑ Not applicable %	☐ Not applicable %	☐ Not applicable %

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.

CL2 year round with SO2

	Outfall Number 001	Outfall Number _____	Outfall Number _____
Disinfection type	CL2 and SO2		
Seasons used	year round		
Dechlorination used?	☐ Not applicable ☑ Yes ☐ No	☐ Not applicable ☐ Yes ☐ No	☐ Not applicable ☐ Yes ☐ No

Effluent Testing Data

3.10 Have you completed monitoring for all Table A parameters and attached the results to the application package?

☑ Yes ☐ 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?

☑ Yes ☐ 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	Acute	Chronic
Number of tests of discharge water		5				
Number of tests of receiving water		5				

3.13 Does the treatment works have a design flow greater than or equal to 0.1 mgd?

☑ Yes ☐ 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?

☑ Yes ➔ Complete Table B, including chlorine. ☐ 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?

☑ Yes ☐ No

3.16 Does one or more of the following conditions apply?

- 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).

☑ Yes ➔ Complete Tables C, D, and E as applicable. ☐ 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?

☑ Yes ☐ 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?

☐ Yes ☑ No additional sampling required by NPDES permitting authority.

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
	See Attached

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:

N/A

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
2	

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.

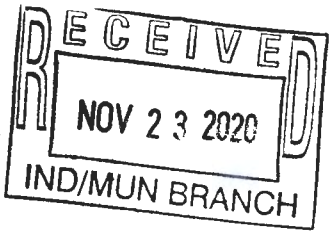
4.5 Identify the title and date of the annual report or pretreatment program referenced in Item 4.4. SKIP to Item 4.7.

4.6 Have you completed and attached Table F to this application package?

☑ Yes ☐ No

3.21 Attachment

Test Date	Received Date	Pass/Fail
11/12/2019	12/9/2019	Pass
10/30/2018	12/9/2019	Pass
10/31/2017	12/9/2019	Pass
11/1/2016	9/2/2020	Pass
11/3/2015	9/2/2020	Pass



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?

☐ Yes ☑ 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
	☐ Truck ☐ Rail ☐ Dedicated pipe ☐ Other (specify) _____		
	☐ Truck ☐ Rail ☐ Dedicated pipe ☐ Other (specify) _____		
	☐ Truck ☐ Rail ☐ Dedicated pipe ☐ 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?

☐ Yes ☑ 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)?

☐ Yes ➔ SKIP to Section 5. ☐ 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?

☑ Yes ☐ 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?

☐ Yes ☑ No ➔ SKIP to Section 6.

5.2 Have you attached a CSO system map to this application? (See instructions for map requirements.)

☐ Yes ☐ No

5.3 Have you attached a CSO system diagram to this application? (See instructions for diagram requirements.)

☐ Yes ☐ No

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 ____
City or town			
State and ZIP code			
County			
Latitude	° ' "	° ' "	° ' "
Longitude	° ' "	° ' "	° ' "
Distance from shore	ft.	ft.	ft.
Depth below surface	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 ____
Rainfall	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
CSO flow volume	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
CSO pollutant concentrations	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Receiving water quality	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
CSO frequency	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Number of storm events	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ 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 ____
Number of CSO events in the past year	events	events	events
Average duration per event	hours ☐ Actual or ☐ Estimated	hours ☐ Actual or ☐ Estimated	hours ☐ Actual or ☐ Estimated
Average volume per event	million gallons ☐ Actual or ☐ Estimated	million gallons ☐ Actual or ☐ Estimated	million gallons ☐ Actual or ☐ Estimated
Minimum rainfall causing a CSO event in last year	inches of rainfall ☐ Actual or ☐ Estimated	inches of rainfall ☐ Actual or ☐ Estimated	inches of rainfall ☐ Actual or ☐ Estimated

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)	☐ Unknown	☐ Unknown	☐ Unknown
Name of state management/river basin			
U.S. Geological Survey 8-Digit Hydrologic Unit Code (if known)	☐ Unknown	☐ Unknown	☐ 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	
☑ Section 1: Basic Application Information for All Applicants	☐ w/ variance request(s)	☐ w/ additional attachments
☑ Section 2: Additional Information	☑ w/ topographic map ☐ w/ additional attachments	☑ w/ process flow diagram
☑ Section 3: Information on Effluent Discharges	☑ w/ Table A ☑ w/ Table B ☑ w/ Table C	☐ w/ Table D ☐ w/ Table E ☑ w/ additional attachments
☑ Section 4: Industrial Discharges and Hazardous Wastes	☑ w/ SIU and NSCIU attachments ☐ w/ additional attachments	☑ w/ Table F
☐ Section 5: Combined Sewer Overflows	☐ w/ CSO map ☐ w/ CSO system diagram	☐ w/ additional attachments
☑ *Section 6: Checklist and* Certification Statement	☐ w/ attachments	

6.2 **Certification Statement**

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

Name (print or type first and last name)	Official title
James Dixon	Manager
Signature: James Dixon	Date signed: 9/2/20

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
110000558708	AL0020273	Geneva WWTP	

Form Approved 03/05/19
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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 ☑ BOD_5 or ☐ $CBOD_5$ (report one)	5	mg/l	3.1	mg/l	2	SM5210b	MG/L ☐ ML ☑ MDL
Fecal coliform	7	cfu/100ml	7	cfu/100ml	2	SM9223b	MG/L ☐ ML ☑ MDL
Design flow rate	0.95	MGD	.350	MGD	1/DAY		
pH (minimum)	6.8	s.u.					
pH (maximum)	7.2	s.u.					
Temperature (winter)	72	degree F			3/wk		
Temperature (summer)	78	degree F					
Total suspended solids (TSS)	15	mg/l	18	mg/l	2	SM2540b	MG/L ☐ ML ☑ 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	Facility Name	Outfall Number
110000558708	AL0020273	Geneva WWTP	001

Form Approved 03/05/19
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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)	.05	mg/l	.08	mg/l	2/week	SM4500	☐ ML ☑ MDL
Chlorine (total residual, TRC)[2]	.01	mg/l	.01	mg/l	2/week	SM4500	☐ ML ☑ MDL
Dissolved oxygen	2.50	PPU	2.50	PPU	3/week	HAP10242	☐ ML ☑ MDL
Nitrate/nitrite	4.2	mg/l	4.2	mg/l	1/month	10206	☐ ML ☑ MDL
Kjeldahl nitrogen	3.10	mg/l	1.10	mg/l	1/month	10242	☐ ML ☑ MDL
Oil and grease	N/A						☐ ML ☑ MDL
Phosphorus	1.68	mg/l	1.68	mg/l	1/month	365.3	☐ ML ☑ MDL
Total dissolved solids	16	mg/l	8	mg/l	3/week	SM254OB	☐ ML ☑ 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[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Metals, Cyanide, and Total Phenols							
Hardness (as $CaCO_3$)	46.4	mg/l	45.3	mg/l	3	130.1	☐ ML ☐ MDL
Antimony, total recoverable	ND	mg/l	ND	mg/l	3	200.8	☐ ML ☐ MDL
Arsenic, total recoverable	ND	mg/l	ND	mg/l	3	200.8	☐ ML ☐ MDL
Beryllium, total recoverable	ND	mg/l	ND	mg/l	3	200.8	☐ ML ☐ MDL
Cadmium, total recoverable	ND	mg/l	ND	mg/l	3	200.8	☐ ML ☐ MDL
Chromium, total recoverable	ND	mg/l	ND	mg/l	3	200.8	☐ ML ☐ MDL
Copper, total recoverable	0.00551	mg/l	0.00484	mg/l	3	200.8	☐ ML ☐ MDL
Lead, total recoverable	0.003	mg/l	ND	mg/l	3	200.8	☐ ML ☐ MDL
Mercury, total recoverable	ND	mg/l	ND	mg/l	3	245.1	☐ ML ☐ MDL
Nickel, total recoverable	0.005	mg/l	ND	mg/l	3	200.8	☐ ML ☐ MDL
Selenium, total recoverable	ND	mg/l	ND	mg/l	3	200.8	☐ ML ☐ MDL
Silver, total recoverable	ND	mg/l	ND	mg/l	3	200.8	☐ ML ☐ MDL
Thallium, total recoverable	ND	mg/l	ND	mg/l	3	200.8	☐ ML ☐ MDL
Zinc, total recoverable	0.03790	mg/l	0.02887	mg/l	3	200.8	☐ ML ☐ MDL
Cyanide	ND	mg/l	ND	mg/l	3	4500CN E-2011	☐ ML ☐ MDL
Total phenolic compounds	ND	mg/l	ND	mg/l	3	420.4	☐ ML ☐ MDL
Volatile Organic Compounds							
Acrolein	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
Acrylonitrile	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
Benzene	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
Bromoform	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ 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	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
Chlorobenzene	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
Chlorodibromomethane	0.00170	mg/l	0.00170	mg/l	3	624.1	☐ ML ☐ MDL
Chloroethane	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
2-chloroethylvinyl ether	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
Chloroform	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
Dichlorobromomethane	2.49	mg/l	1.4	mg/l	3	624.1	☐ ML ☐ MDL
1,1-dichloroethane	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
1,2-dichloroethane	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
trans-1,2-dichloroethylene	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
1,1-dichloroethylene	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
1,2-dichloropropane	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
1,3-dichloropropylene	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
Ethylbenzene	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
Methyl bromide	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
Methyl chloride	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
Methylene chloride	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
1,1,2,2-tetrachloroethane	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
Tetrachloroethylene	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
Toluene	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
1,1,1-trichloroethane	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
1,1,2-trichloroethane	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ 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	ND	mg/l	ND	mg/l	3	624.1	☐ ML ☐ MDL
Vinyl chloride	ND	mg/l	ND	mg/l	3	624.0	☐ ML ☐ MDL
Acid-Extractable Compounds							
p-chloro-m-cresol	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
2-chlorophenol	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
2,4-dichlorophenol	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
2,4-dimethylphenol	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
4,6-dinitro-o-cresol	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
2,4-dinitrophenol	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
2-nitrophenol	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
4-nitrophenol	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Pentachlorophenol	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Phenol	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
2,4,6-trichlorophenol	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Base-Neutral Compounds							
Acenaphthene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Acenaphthylene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Anthracene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Benzidine	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Benzo(a)anthracene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Benzo(a)pyrene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
3,4-benzofluoranthene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ 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	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Benzo(k)fluoranthene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Bis (2-chloroethoxy) methane	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Bis (2-chloroethyl) ether	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Bis (2-chloroisopropyl) ether	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Bis (2-ethylhexyl) phthalate	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
4-bromophenyl phenyl ether	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Butyl benzyl phthalate	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
2-chloronaphthalene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
4-chlorophenyl phenyl ether	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Chrysene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
di-n-butyl phthalate	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
di-n-octyl phthalate	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Dibenzo(a,h)anthracene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
1,2-dichlorobenzene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
1,3-dichlorobenzene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
1,4-dichlorobenzene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
3,3-dichlorobenzidine	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Diethyl phthalate	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Dimethyl phthalate	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
2,4-dinitrotoluene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
2,6-dinitrotoluene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ 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		
1,2-diphenylhydrazine	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Fluoranthene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Fluorene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Hexachlorobenzene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Hexachlorobutadiene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Hexachlorocyclo-pentadiene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Hexachloroethane	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Indeno(1,2,3-cd)pyrene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Isophorone	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Naphthalene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Nitrobenzene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
N-nitrosodi-n-propylamine	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
N-nitrosodimethylamine	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
N-nitrosodiphenylamine	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Phenanthrene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
Pyrene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ MDL
1,2,4-trichlorobenzene	ND	mg/l	ND	mg/l	3	625.1	☐ ML ☐ 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 D. ADDITIONAL POLLUTANTS AS REQUIRED BY NPDES PERMITTING AUTHORITY

Pollutant (list)	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
☑ No additional sampling is required by NPDES permitting authority.							
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
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							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ 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 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 Information			
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:	☐ Grab ☐ 24-hour composite	☐ Grab ☐ 24-hour composite	☐ Grab ☐ 24-hour composite
Sample Location			
Check one:	☐ Before Disinfection ☐ After Disinfection ☐ After Dechlorination	☐ Before Disinfection ☐ After Disinfection ☐ After Dechlorination	☐ Before disinfection ☐ After disinfection ☐ 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 asses acute or chronic toxicity, or both. (Check one response.)	☐ Acute ☐ Chronic ☐ Both	☐ Acute ☐ Chronic ☐ Both	☐ Acute ☐ Chronic ☐ Both

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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.)	☐ Static ☐ Static-renewal ☐ Flow-through	☐ Static ☐ Static-renewal ☐ Flow-through	☐ Static ☐ Static-renewal ☐ Flow-through
Source of Dilution Water			
Indicate the source of dilution water. (Check one response.)	☐ Laboratory water ☐ Receiving water	☐ Laboratory water ☐ Receiving water	☐ Laboratory water ☐ 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.	☐ Fresh water ☐ Salt water (specify)	☐ Fresh water ☐ Salt water (specify)	☐ Fresh water ☐ Salt water (specify)
Percentage Effluent Used			
Specify the percentage effluent used for all concentrations in the test series.			

Parameters Tested						
Check the parameters tested.	☐ pH ☐ Salinity ☐ Temperature	☐ Ammonia ☐ Dissolved oxygen	☐ pH ☐ Salinity ☐ Temperature	☐ Ammonia ☐ Dissolved oxygen	☐ pH ☐ Salinity ☐ Temperature	☐ Ammonia ☐ 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?	☐ Yes	☐ No	☐ Yes	☐ No	☐ Yes	☐ No
Was reference toxicant test within acceptable bounds?	☐ Yes	☐ No	☐ Yes	☐ No	☐ Yes	☐ 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.

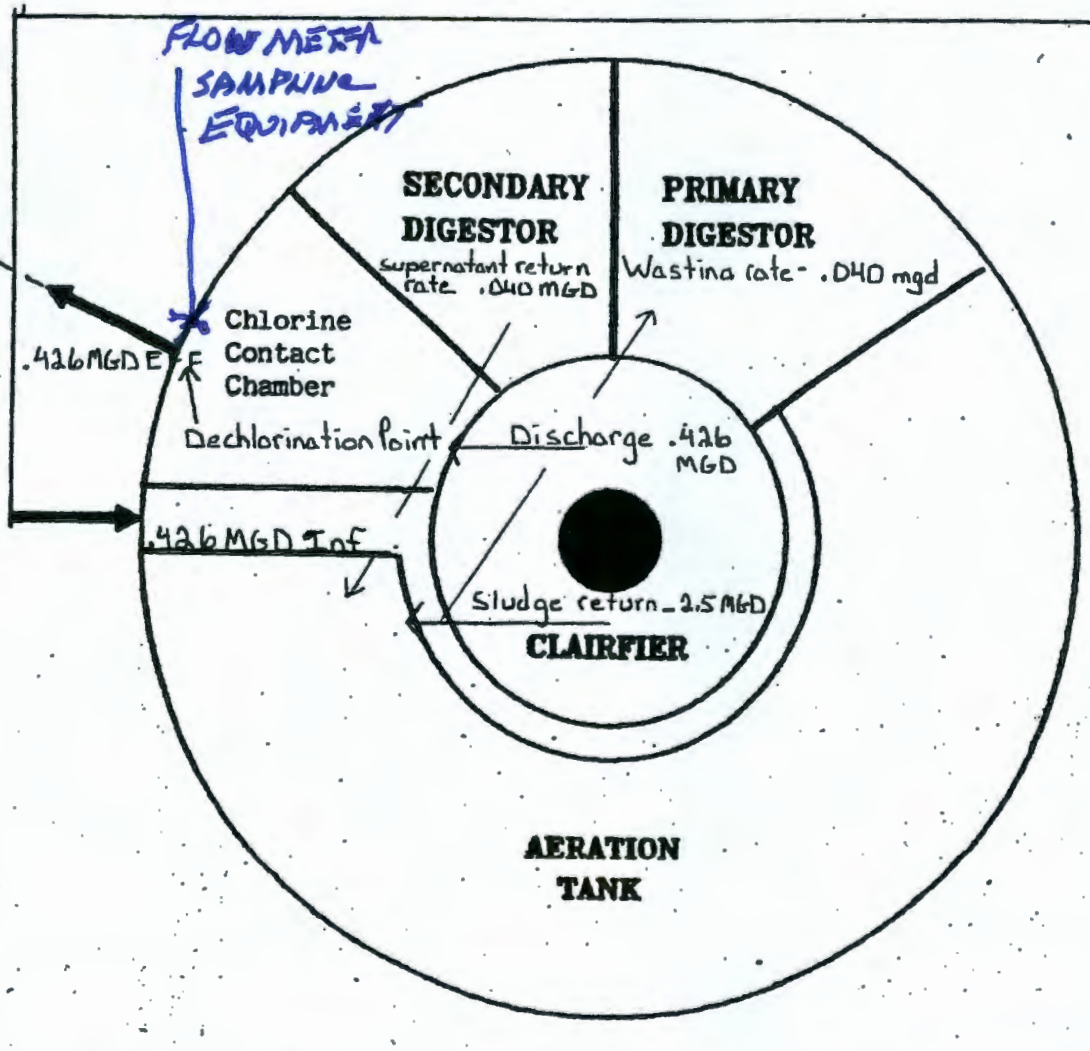
	SIU 1	SIU 2	SIU ___
Name of SIU	Lincoln Fabrics	Reliable Ruskin	-
Mailing address (street or P.O. box)	400 W Promenade Ave	1300 Enterprise Road	
City, state, and ZIP code	Geneva, AL 36340	Geneva, AL 36340	
Description of all industrial processes that affect or contribute to the discharge.	Dye carbon fiber	Anodizes aluminum	
List the principal products and raw materials that affect or contribute to the SIU's discharge.	Dye	Ammonia	
Indicate the average daily volume of wastewater discharged by the SIU.	10,000 gpd	12,000 gpd	gpd
How much of the average daily volume is attributable to process flow?	8,000 gpd	9,600 gpd	gpd
How much of the average daily volume is attributable to non-process flow?	2,000 gpd	2,400 gpd	gpd
Is the SIU subject to local limits?	☑ Yes ☐ No	☑ Yes ☐ No	☐ Yes ☐ No
Is the SIU subject to categorical standards?	☑ Yes ☐ No	☑ Yes ☐ No	☐ Yes ☐ No

TABLE F. INDUSTRIAL DISCHARGE INFORMATION

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

	SIU 1	SIU 2	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?	☐ Yes ☑ No	☑ Yes ☐ No	☐ Yes ☐ No
If yes, describe.		Load POTW with 80-100 ppm ammonia POTW installed a monitoring station on their discharge that eliminated the problem	

GENEVA WWTP



No bypass Piping

backup power source DUAL FED POWER ALSO 350 KW GENERATOR

Pea River

This is an extended aeration activated sludge biological treatment plant. Sludge is gravity fed to sand drying beds where it is dried, removed and disposed of when necessary.


GENEVA STP
Write a description for your map.
Legend
623 W Mulkey Ave
W Mulkey Ave
623 W Mulkey Av
E Mulkey Ave
E Mulkey Ave
Google Earth
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N
300 ft

"Local Map"
From U.S. Geological Survey
Geneva Wastewater Treatment
Facility Geneva, Alabama
Geneva County August 19,

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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 Geneva WWTP			
	Mailing address (street or P.O. box) PO Box 370			
	City or town Geneva	State AL	ZIP code 36340	Phone number (334) 313-6370
	Contact name (first and last) James Dixon	Title Manager	Email address genevawaterworks0622@gmail.com	
	Location address (street, route number, or other specific identifier) 623 W Mulkey Street		☐ Same as mailing address	
	City or town Geneva	State AL	ZIP code 36340	

1.2 Is this facility a Class I sludge management facility?
☐ Yes ☑ No

1.3	**Facility Design Flow Rate**	0.95 million gallons per day (mgd)
1.4	**Total Population Served**	4500

1.5 **Ownership Status**
☐ Public—federal ☐ Public—state ☐ Other public (specify) _____
☐ Private ☑ Other (specify) City Water B

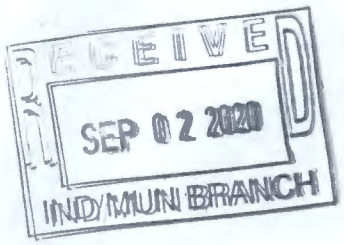
Applicant Information

1.6 Is applicant different from entity listed under Item 1.1 above?
☑ Yes ☐ No → SKIP to Item 1.8 (Part 2, Section 1).

1.7	Applicant name City of Geneva Water Works and Sewer Board			
	Applicant mailing address (street or P.O. box) PO Box 370			
	City or town Geneva		State AL	ZIP code 36340
	Contact name (first and last) James Dixon	Title Manager	Phone number (334) 313-6370	Email address genevawaterworks0622@g

1.8 Is the applicant the facility's owner, operator, or both? (Check only one response.)
☐ Operator ☐ Owner ☑ Both

1.9 To which entity should the NPDES permitting authority send correspondence? (Check only one response.)
☐ Facility ☑ Applicant ☐ Facility and applicant (they are one and the same)



1.10	Facility's NPDES permit number ☐ Check here if you do not have an NPDES permit but are otherwise required to submit Part 2 of Form 2S.	AL0020271

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.

☐ RCRA (hazardous wastes)	☐ Nonattainment program (CAA)	☐ NESHAPs (CAA)
☐ PSD (air emissions)	☐ Dredge or fill (CWA Section 404)	☐ Other (specify)
☐ Ocean dumping (MPRSA)	☐ 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?

☐ Yes ☑ 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.)

☑ Yes ☐ 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.)

☑ Yes ☐ 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?

☑ Yes ☐ No → SKIP to Item 1.18 (Part 2, Section 1) below.

1.17 Provide the following information for each contractor.

☐ 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)	PO Box 325		
City, state, and ZIP code	Geneva, AL 36442		
Contact name (first and last)	Cole Dunn		
Telephone number	(334) 248-3868		
Email address	cole@greensouthsolution:		

General Information Continued

1.17 cont.		Contractor 1	Contractor 2	Contractor 3
	Responsibilities of contractor			

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	<0.006	200.8	0.001
Cadmium	<0.006	200.8	0.001
Chromium	<0.006	200.8	0.001
Copper	0.030	200.8	0.001
Lead	0.003	200.8	0.001
Mercury	<0.001	245.1	0.002
Molybdenum			
Nickel	0.005	200.8	0.001
Selenium	ND	200.8	0.002
Zinc	0.183	200.8	0.010

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.

Column 1	Column 2
☑ Section 1 (General Information)	☑ w/ attachments
☑ Section 2 (Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge)	☑ w/ attachments
☐ Section 3 (Land Application of Bulk Sewage Sludge)	☐ w/ attachments
☐ Section 4 (Surface Disposal)	☐ w/ attachments
☐ Section 5 (Incineration)	☐ w/ attachments

1.20 **Certification Statement**

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

Name (print or type first and last name)	Official title
James Dixon	Manager
Signature	Date signed 9/2/20
Telephone number (334) 313-6370	[redacted]

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.

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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))

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

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: 50

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: 0

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
	☐ Not applicable ☐ Class A, Alternative 1 ☐ Class A, Alternative 2 ☐ Class A, Alternative 3 ☐ Class A, Alternative 4 ☐ Class A, Alternative 5 ☐ Class A, Alternative 6 ☐ Class B, Alternative 1 ☐ Class B, Alternative 2 ☐ Class B, Alternative 3 ☐ Class B, Alternative 4 ☐ Domestic septage, pH adjustment	☐ Not applicable ☐ Option 1 ☐ Option 2 ☐ Option 3 ☐ Option 4 ☐ Option 5 ☐ Option 6 ☐ Option 7 ☐ Option 8 ☐ Option 9 ☐ Option 10 ☐ 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.)

☐ Preliminary operations (e.g., sludge grinding and degritting)	☑ Thickening (concentration)
☐ Stabilization	☐ Anaerobic digestion
☐ Composting	☐ Conditioning
☐ Disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization)	☑ Dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons)
☐ Heat drying	☐ Thermal reduction
☐ Methane or biogas capture and recovery	☐ Other (specify) _____

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
☑ Land application of bulk sewage	☑ Not applicable	☑ Not applicable
☐ Land application of biosolids (bulk)	☐ Class A, Alternative 1	☐ Option 1
☐ Land application of biosolids (bags)	☐ Class A, Alternative 2	☐ Option 2
☐ Surface disposal in a landfill	☐ Class A, Alternative 3	☐ Option 3
☐ Other surface disposal	☐ Class A, Alternative 4	☐ Option 4
☐ Incineration	☐ Class A, Alternative 5	☐ Option 5
	☐ Class A, Alternative 6	☐ Option 6
	☐ Class B, Alternative 1	☐ Option 7
	☐ Class B, Alternative 2	☐ Option 8
	☐ Class B, Alternative 3	☐ Option 9
	☐ Class B, Alternative 4	☐ Option 10
	☐ Domestic septage, pH adjustment	☐ 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.)

- ☐ Preliminary operations (e.g., sludge grinding and degritting)
- ☑ Thickening (concentration)
- ☐ Stabilization
- ☐ Anaerobic digestion
- ☐ Composting
- ☐ Conditioning
- ☐ Disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization)
- ☑ Dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons)
- ☐ Heat drying
- ☐ Thermal reduction
- ☐ 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:	50

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?

☐ Yes ☐ 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.

☐ Check here to indicate that you have attached all labels or notices to this application package.

☐ 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.)

☐ Yes ☑ 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.

☐ 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) ☐ 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?

☐ Yes ☐ 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
☐ Not applicable	☐ Not applicable
☐ Class A, Alternative 1	☐ Option 1
☐ Class A, Alternative 2	☐ Option 2
☐ Class A, Alternative 3	☐ Option 3
☐ Class A, Alternative 4	☐ Option 4
☐ Class A, Alternative 5	☐ Option 5
☐ Class A, Alternative 6	☐ Option 6
☐ Class B, Alternative 1	☐ Option 7
☐ Class B, Alternative 2	☐ Option 8
☐ Class B, Alternative 3	☐ Option 9
☐ Class B, Alternative 4	☐ Option 10
☐ Domestic septage, pH adjustment	☐ 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.)

- ☐ Preliminary operations (e.g., sludge grinding and degritting)
- ☐ Thickening (concentration)
- ☐ Stabilization
- ☐ Anaerobic digestion
- ☐ Composting
- ☐ Conditioning
- ☐ Disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization)
- ☐ Dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons)
- ☐ Heat drying
- ☐ Thermal reduction
- ☐ Methane or biogas capture and recovery
- ☐ 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).

☐ 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?

☐ Yes ☐ 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.

☐ Check here to indicate that you have attached material.

☐ 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?

☐ Yes ☐ 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?

☐ Yes ☐ 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?

☐ Yes ☐ 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.

☐ Check here if you have attached the explanation to the application package.

☐ 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?

☐ Yes ☑ 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?

☐ Yes ➔ SKIP to Item 2.39 (Part 2, Section 2) below. ☐ 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.)

☐ 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.) ☐ Owner ☐ 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? ☐ Yes ☑ 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? ☐ Yes ➔ SKIP to Item 2.46 (Part 2, Section 2) below. ☐ 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.) ☐ 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)			☐ Same as mailing address
	City or town		State	ZIP code
2.44	Contact (check all that apply) ☐ Incinerator owner ☐ 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? ☐ Yes ☑ 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.) ☐ 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)			☐ Same as mailing address
	County	County code		☐ 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).

☐ 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?

☐ Yes ☐ 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?

☑ Yes ☐ No ➔ SKIP to Part 2, Section 4.

3.2 Do any of the following conditions apply?

- 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.

☑ Yes ➔ SKIP to Part 2, Section 4. ☐ No

3.3 Complete Section 3 for every site on which the sewage sludge is applied.

☐ 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) ☐ Same as mailing address

County	County code ☐ Not available

City or town	State	ZIP code

Latitude/Longitude of Land Application Site (see instructions)

Latitude	Longitude
° ' "	° ' "

Method of Determination

☐ USGS map ☐ Field survey ☐ Other (specify) _____

3.5 Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location.

☐ 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?

☐ Yes ➔ SKIP to Item 3.8 (Part 2, Section 3) below. ☐ 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?

☐ Yes ➔ SKIP to Item 3.10 (Part 2, Section 3) below. ☐ 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

Land Application of Bulk Sewage Sludge Continued

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

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?

☐ Yes ☑ 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.

☐ 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) ☐ Same as mailing address

County	County code ☐ Not available	
City or town	State	ZIP code

Latitude/Longitude of Active Sewage Sludge Unit (see instructions)

Latitude	Longitude
° ' "	° ' "

Method of Determination

☐ USGS map ☐ Field survey ☐ Other (specify) _____

4.4 Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location.

☐ 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)?

☐ Yes ☐ No → SKIP to Item 4.9 (Part 2, Section 4) below.

4.8 Describe the liner.

☐ 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?

☐ Yes ☐ 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.

☐ 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? ☐ Yes ☐ 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. ☐ 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? ☐ Yes ☐ 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.) ☐ 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
☐ Not applicable	☐ Not applicable
☐ Class A, Alternative 1	☐ Option 1
☐ Class A, Alternative 2	☐ Option 2
☐ Class A, Alternative 3	☐ Option 3
☐ Class A, Alternative 4	☐ Option 4
☐ Class A, Alternative 5	☐ Option 5
☐ Class A, Alternative 6	☐ Option 6
☐ Class B, Alternative 1	☐ Option 7
☐ Class B, Alternative 2	☐ Option 8
☐ Class B, Alternative 3	☐ Option 9
☐ Class B, Alternative 4	☐ Option 10
☐ Domestic septage, pH adjustment	☐ 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.)

☐ Preliminary operations (e.g., sludge grinding and degritting)	☐ Thickening (concentration)
☐ Stabilization	☐ Anaerobic digestion
☐ Composting	☐ Conditioning
☐ Disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization)	☐ Dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons)
☐ Heat drying	☐ Thermal reduction
☐ Methane or biogas capture and recovery	☐ Other (specify) _____

Surface Disposal Continued

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 10 (Incorporation into soil within 6 hours)

☐ Option 11 (Covering active sewage sludge unit daily)

☐ 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.

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

Incineration

Incinerator Information

5.1 Do you fire sewage sludge in a sewage sludge incinerator?

☐ Yes ☑ 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.)

☐ 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 ☐ Not available	
City or town	State	ZIP code

Latitude/Longitude of Incinerator (see instructions)

Latitude	Longitude
° ' "	° ' "

Method of Determination

☐ USGS map ☐ Field survey ☐ 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.

☐ 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?

☐ Yes ☐ 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 *and* documentation of ongoing incinerator operating parameters indicating that the NESHAP emission rate limit for beryllium has been and will continue to be met.

☐ 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?

☐ Yes ☐ 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.

☐ 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.

☐ Check here to indicate that you have attached this information.

5.11 Do you demonstrate compliance with the mercury NESHAP by sewage sludge sampling?

☐ Yes ☐ 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.

☐ Check here to indicate that you have attached this information.

Incineration Continued

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. ☐ 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). ☐ 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? ☐ Yes ☐ No ➔ SKIP to Item 5.21 (Part 2, Section 5) below.	
5.20	Identify the type of incinerator used as the basis. ☐ Fluidized bed with wet scrubber ☐ Other types with wet scrubber ☐ Fluidized bed with wet scrubber and wet electrostatic precipitator ☐ 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)? ☐ Yes ☐ 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. ☐ Check here to indicate that you have attached this information. ☐ Not applicable	

Incinerator Parameters

5.24	Do you monitor total hydrocarbons (THC) in the exit gas of the sewage sludge incinerator? ☐ Yes ☐ No	
5.25	Do you monitor carbon monoxide (CO) in the exit gas of the sewage sludge incinerator? ☐ Yes ☐ 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): ☐ Actual stack height ☐ Creditable stack height	

Incineration Continued

Performance Test Operating Parameters

5.29	Maximum performance test combustion temperature:	
5.30	Performance test sewage sludge feed rate, in dry metric tons/day	
5.31	Indicate whether value submitted in Item 5.30 is (check only one response): ☐ Average use ☐ Maximum design	
5.32	Attach supporting documents describing how the feed rate was calculated. ☐ Check here to indicate that you have attached this information.	
5.33	Submit information documenting the performance test operating parameters for the air pollution control device(s) used for this sewage sludge incinerator. ☐ Check here to indicate that you have attached this information.	

Monitoring Equipment

5.34 List the equipment in place to monitor the listed parameters.

Parameter	Equipment in Place for Monitoring
Total hydrocarbons or carbon monoxide	
Percent oxygen	
Percent moisture	
Combustion temperature	
Other (describe)	

Air Pollution Control Equipment

5.35 List all air pollution control equipment used with this sewage sludge incinerator.

☐ Check here if you have attached the list to the application package for the noted incinerator.

END of PART 2

Submit completed application package to your NPDES permitting authority.

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

PURPOSE OF THIS APPLICATION

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

* *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: GENEVA WASTE WATER TREATMENT PLANT

   a. Operator Name: JAMES DIXON

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

   c. Name of Permittee* if different than Operator: GENEVA WATER WORKS & SEWER BD
   **Permittee will be responsible for compliance with the conditions of the permit*

2. NPDES Permit Number: AL 0020273 (Not applicable if initial permit application)

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

   Street: 623 W MULBERRY ST

   City: GENEVA County: GENEVA State: AL Zip: 36340

   Facility Location (Front Gate): Latitude: 31.08889 Longitude: -85.88972

4. Facility Mailing Address: 517 S. COMMERCE ST.

   City: GENEVA County: GENEVA State: AL Zip: 36340

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

   Name and Title: JAMES DIXON MANAGER

   Address: 623 W MULBERRY

   City: GENEVA State: AL Zip: 36340

   Phone Number: 334-684-9554 Email Address: GENEVAWATERWORKS0622@GMAIL.COM

RECEIVED
NOV 06 2020
IND/MUN BRANCH

RECEIVED
NOV 21 2019
IND/MUN BRANCH

6. Designated Facility/DMR Contact:

Name and Title: JAMES R. DIXON MANAGER

Phone Number: 334 684-9554

DMR Email Address (Optional – for receipt of blank DMR Forms): GENEVAWATERWORKS0622@GMAIL.COM

7. Designated Emergency Contact:

Name and Title: JAMES R. DIXON MANAGER

Phone Number: 334 684-2949

Email Address **(Required)**: JAMESRDIXON1967@GMAIL.COM

8. Please complete this section if the Applicant's business entity is a Proprietorship or limited liability Corporation with a responsible official not listed in Item 5.

a) Proprietor:

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

9. Permit numbers for Applicant's previously issued NPDES Permits and identification of any other State Environmental Permits presently held by the Applicant within the State of Alabama:

Permit Name	Permit Number	Held by
GENEVA WATER WORK	AL0020273	

10. 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):

Facility Name	Permit Number	Type of Action	Date of Action

SECTION B – WASTEWATER DISCHARGE INFORMATION

1. List the following historical monthly flow rates recorded for the past five years for each outfall:

Outfall Number	Highest in Last 12 Months MGD	Highest Daily Flow MGD	Average Flow MGD
001	1.214	1.214	.347

2. Attach a process flow schematic of the treatment process, including the size of each unit operation.

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

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

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

IT IS ON ATTACHED DRAWING

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 ☐

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

WE WILL BID OUT A $600,000 RENOVATION PACKAGE. DURING THE YEAR 2016.

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
SOLID DRYED SLUDGE	ON SITE TEMP

Describe the location of any sites used for the ultimate disposal of solid or liquid waste materials or residuals (e.g. sludges) generated by any wastewater treatment system located at the facility.

Description of Waste	Quantity (lbs/day)	Disposal Method*
GREENSOUTA ENVIRONMENTAL		LAND APPLY

***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? Y/N
REVERE RUSH	ANODIZING WASTE	EXISTING		Y
LINCOLN FABRICS	DYING FABRIC	EXISTING		Y

2. Are industrial wastewater contributions regulated via a locally approved sewer use ordinance? Yes ☒ No ☐
If so, please attach a copy of the ordinance.

SECTION E – COASTAL ZONE INFORMATION

N/A

Is the discharge(s) located within the 10-foot elevation contour and within the limits of Mobile or Baldwin County? Yes No If yes, then complete items A through M below:

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

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.

1. 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.

2. 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:

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

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

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

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

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

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

SECTION 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. All applicants must submit Form 1.
2. 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.
3. Applicants for new or existing land application of sanitary wastewater must submit Form 2A and, if the land application site is not completely bermed to prevent runoff, applicants must also submit Form 2F.
4. Applicants for new and existing discharges of process wastewater from water treatment facilities (i.e. public water supply treatment plants) must submit Form 2C.
5. Applicants that generate sewage sludge, derive a material from sewage sludge, or dispose of sewage sludge must submit Part 2 of Form 2S.

SECTION F – ANTI-DEGRADATION EVALUATION

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

1. Is this a new or increased discharge that began after April 3, 1991? Yes ☐ No ☐
   If "yes", complete question 2 below. If "no", do not complete this section.

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

   If "no" and the discharge is to a Tier II waterbody as defined in ADEM Admin. Code r. 335-6-10-.12(4), complete questions A through F below, 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 www.adem.alabama.gov/DeptForms. If "yes", do not complete this section.

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

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

   B. Explain if and to what degree the discharger will be increasing employment as a result of the proposed discharge, either at its existing facility or as the result of the start-up of a related new facility or industry.

   C. Explain if and to what degree the discharge will prevent employment reductions?

   D. Describe any additional state or local taxes that the prospective discharger will be paying.

   E. Describe any public service the discharger will be providing to the community.

   F. Describe the economic or social benefit the discharger will 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 municipal facility depending on the number and types of discharges or outfalls. The EPA application forms are found on the Department's website at www.adem.alabama.gov\programs\water. The required ADEM and EPA forms are summarized in Attachment 1.

SECTION H– ENGINEERING REPORT/BMP PLAN REQUIREMENTS

Any Engineering Report or Best Management Practice (BMP) Plans required to be submitted to ADEM by the applicant must be in accordance with ADEM 335-6-6-.08(i) & (j).

SECTION I– RECEIVING WATERS

Receiving Water(s)	303(d) Segment? (Y / N)	Included in TMDL?* (Y / N)
PEA RIVER	N	N

*If a TMDL Compliance Schedule is requested the following should be attached as supporting documentation:
(1) Justification for the proposed 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 reported 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 the requested compliance schedule.

SECTION J – APPLICATION CERTIFICATION

THE INFORMATION CONTAINED IN THIS FORM MUST BE CERTIFIED BY A RESPONSIBLE OFFICIALAS DEFINED IN ADEM ADMINISTRATIVE RULE 335-6-6-.09 "SIGNATORY REQUIREMENTS FOR PERMIT APPLICATIONS" (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 RESONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE.I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

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

SIGNATURE OF RESPONSIBLE OFFICIAL: James R. Dixon DATE SIGNED: 7-23-18

(TYPE OR PRINT)

NAME OF RESPONSIBLE OFFICIAL: JAMES R. DIXON

OFFICIAL TITLE OF RESPONSIBLE OFFICIAL: MANAGER

MAILING ADDRESS: P.O. BOX 370

AREA CODE & PHONE NUMBER: 334 - 313-6370

SIGNATORY REQUIREMENTS FOR PERMIT APPLICATIONS

Responsible official is defined as follows:

1. 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
2. In the case of a partnership, by a general partner
3. In the case of a sole proprietorship, by the proprietor, or
4. In the case of a municipal, state, federal, or other public facility, by either a principal executive officer, or a ranking elected official.
5. In the case of a private or semi-public facility, the responsible official is either a principal executive officer or the owner of the corporation or other entity.

Attachment 1 to Supplementary Information Form

NPDES PROGRAM
PERMIT APPLICATION FORMS
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

TYPE DISCHARGE	ADEM FORMS	EPA FORMS
New or existing once through non-contact cooling water and/or cooling tower blowdown, and/or sanitary wastewater (non-process wastewater only). Note: POTWs and privately owned domestic treatment works should use Form 2A.	Supplemental Information Form 187 (Industrial) or Form 188 (Municipal)	Forms 1 and 2E
Existing discharges of process wastewater	Supplemental Information Form 187 (Industrial) or Form 188 (Municipal)	Forms 1 and 2C
New discharges of process wastewater	Supplemental Information Form 187 (Industrial) or Form 188 (Municipal)	Forms 1 and 2D
New or existing discharges composed entirely of stormwater meeting the EPA definition of stormwater associated with industrial activity	Supplemental Information Form 187 (Industrial) or Form 188 (Municipal)	Forms 1 and 2F
New or existing discharges composed of stormwater meeting the EPA definition of stormwater associated with industrial activity, and any other non-stormwater discharges.	Supplemental Information Form 187 (Industrial) or Form 188 (Municipal)	Forms 1 and 2F and, as appropriate, Forms 2E, 2E, 2C, and/or 2D
New or existing Publicly-Owned Treatment Works (POTWs) and Privately-Owned Treatment Works composed of sanitary wastewater	Supplemental Information Form 187 (Industrial) or Form 188 (Municipal)	Forms 1 and 2A
New or existing land application of process wastewater. Form 2F is required for stormwater runoff from the land application site, if the site is not completely bermed to prevent runoff.	Supplemental Information Form 187 (Industrial)	Forms 1, 2F, and 2C or 2D, as appropriate
New or existing land application of sanitary wastewater. Form 2F is required for stormwater runoff from the land application site, if the site is not completely bermed to prevent runoff.	Supplemental Information Form 187 (Industrial) or Form 188 (Municipal)	Forms 1, 2A, and 2F

Testing requirements: Test procedures for all analyses shall conform to 40 CFR Part 136 or an alternate method specifically approved by the Department. If more than one method of analysis is approved, then the method having the lowest detection level shall be used.

Polyenvironmental Corporation
Environmental Laboratory

P.O. Box 837 *Dothan, Alabama 36302* *334-793-4700*

01/21/2019
Geneva Water Works
P.O. Box 370
Geneva,AL 36340
ATTN: James Dixon

Waste Water Treatment Plant

Permit Renewal performed by Pace
Pace sample # L1056417

Polyenvironmental Corporation

Respectfully Submitted,

2019-01-0199

Lyn Buntin, Environmental Project Manager

POLYENVIRONMENTAL CORPORATION

CHAIN OF CUSTODY

1885 Headland Ave.
Dothan, AL 36303
Phone: (334) 793-4700

PO Box 837
Dothan, AL 36302
FAX: (334) 677-9477

Client: [illegible] WATER
Address:
City, State: [illegible] ZIP: 36744

Facility: WWTP
Location:
Name of Sampler: [signature]

Sample Location (Outfall No., Influent, Effluent, Etc.)	Preservative	Sample Date / Time	Sample Type Composite, Grab, Etc.	Sample Frequency Qtrly, Semi-Annual, Etc.	Analysis Required
V NOTE	Y	12-26-18 [illegible]	COMP	1-Year	MRFAA 317PHC

For Waste Water Samples Only:

Flow: _____ (mgd)

For Storm Water Samples Only:

Rainfall: _____ (inches)

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Date / Time
[signature]	12-26-18 1216	[signature]	12-26-18 1216
	Date / Time		Date / Time

Samples Shipped On Ice (Yes / No)

Turnaround Time (Rush / Normal)

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

January 07, 2019

Poly Environmental Corp. Env. Lab

Sample Delivery Group:	L1056417
Samples Received:	12/27/2018
Project Number:	
Description:	Geneva Water Works WWTP

Report To:

Mr. Steve Davis
PO Box 837
Dothan, AL 36303

Entire Report Reviewed By: Cassandra Foster

Cassandra Foster
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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V-NOTCH 317986 L1056417-01 WW

			Collected by:	Collected date/time	Received date/time
			Client	12/26/18 08:40	12/27/18 08:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 130.1	WG1217775	1	01/02/19 15:00	01/02/19 15:00	KK
Wet Chemistry by Method 420.4	WG1217192	1	01/02/19 09:16	01/02/19 14:04	KK
Wet Chemistry by Method 4500CN E-2011	WG1218844	1	01/04/19 14:17	01/04/19 16:20	KK
Mercury by Method 245.1	WG1217482	1	12/30/18 17:39	12/31/18 18:20	TCT
Metals (ICPMS) by Method 200.8	WG1217175	1	12/29/18 09:28	12/31/18 15:46	LD
Volatile Organic Compounds (GC/MS) by Method 624.1	WG1216711	1	12/28/18 04:26	12/28/18 04:26	BMB
Semi Volatile Organic Compounds (GC/MS) by Method 625.1	WG1216654	1	12/28/18 05:42	12/29/18 13:40	SNR

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Cassandra Foster

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Sample Handling and Receiving

2-Chloroethyl vinyl ether degrades under acidic conditions. Associated results were determined from the analysis of an acid-preserved sample.

Lab Sample ID	Project Sample ID	Method
L1056417-01	V-NOTCH 317986	624.1

Wet Chemistry by Method 130.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Hardness (colorimetric) as CaCO3	43.6		30.0	1	01/02/2019 15:00	WG1217775

Wet Chemistry by Method 420.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Total Phenol by 4AAP	ND		0.0400	1	01/02/2019 14:04	WG1217192

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	01/04/2019 16:20	WG1218844

Mercury by Method 245.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	12/31/2018 18:20	WG1217482

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Antimony	ND	J4	0.00200	1	12/31/2018 15:46	WG1217175
Arsenic	ND		0.00100	1	12/31/2018 15:46	WG1217175
Beryllium	ND		0.00100	1	12/31/2018 15:46	WG1217175
Cadmium	ND		0.00100	1	12/31/2018 15:46	WG1217175
Chromium	ND		0.00100	1	12/31/2018 15:46	WG1217175
Copper	0.00420		0.00100	1	12/31/2018 15:46	WG1217175
Lead	ND		0.00100	1	12/31/2018 15:46	WG1217175
Nickel	0.00115		0.00100	1	12/31/2018 15:46	WG1217175
Selenium	ND		0.00200	1	12/31/2018 15:46	WG1217175
Silver	ND		0.00100	1	12/31/2018 15:46	WG1217175
Thallium	ND		0.00100	1	12/31/2018 15:46	WG1217175
Zinc	0.0239		0.0100	1	12/31/2018 15:46	WG1217175

Volatile Organic Compounds (GC/MS) by Method 624.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Acrolein	ND		0.0500	1	12/28/2018 04:26	WG1216711
Acrylonitrile	ND		0.0100	1	12/28/2018 04:26	WG1216711
Benzene	ND		0.00100	1	12/28/2018 04:26	WG1216711
Bromodichloromethane	0.00249		0.00100	1	12/28/2018 04:26	WG1216711
Bromoform	ND		0.00100	1	12/28/2018 04:26	WG1216711
Bromomethane	ND		0.00500	1	12/28/2018 04:26	WG1216711
Carbon tetrachloride	ND		0.00100	1	12/28/2018 04:26	WG1216711
Chlorobenzene	ND		0.00100	1	12/28/2018 04:26	WG1216711
Chlorodibromomethane	ND		0.00100	1	12/28/2018 04:26	WG1216711
Chloroethane	ND		0.00500	1	12/28/2018 04:26	WG1216711
2-Chloroethyl vinyl ether	ND		0.0500	1	12/28/2018 04:26	WG1216711
Chloroform	0.00826		0.00500	1	12/28/2018 04:26	WG1216711
Chloromethane	ND		0.00250	1	12/28/2018 04:26	WG1216711
1,2-Dichlorobenzene	ND		0.00100	1	12/28/2018 04:26	WG1216711
1,3-Dichlorobenzene	ND		0.00100	1	12/28/2018 04:26	WG1216711
1,4-Dichlorobenzene	ND		0.00100	1	12/28/2018 04:26	WG1216711
Dichlorodifluoromethane	ND		0.00500	1	12/28/2018 04:26	WG1216711

Volatile Organic Compounds (GC/MS) by Method 624.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1-Dichloroethane	ND		0.00100	1	12/28/2018 04:26	WG1216711
1,2-Dichloroethane	ND		0.00100	1	12/28/2018 04:26	WG1216711
1,1-Dichloroethene	ND		0.00100	1	12/28/2018 04:26	WG1216711
trans-1,2-Dichloroethene	ND		0.00100	1	12/28/2018 04:26	WG1216711
1,2-Dichloropropane	ND		0.00100	1	12/28/2018 04:26	WG1216711
cis-1,3-Dichloropropene	ND		0.00100	1	12/28/2018 04:26	WG1216711
trans-1,3-Dichloropropene	ND		0.00100	1	12/28/2018 04:26	WG1216711
Ethylbenzene	ND		0.00100	1	12/28/2018 04:26	WG1216711
Methylene Chloride	ND		0.00500	1	12/28/2018 04:26	WG1216711
1,1,2,2-Tetrachloroethane	ND		0.00100	1	12/28/2018 04:26	WG1216711
Tetrachloroethene	ND		0.00100	1	12/28/2018 04:26	WG1216711
Toluene	ND		0.00100	1	12/28/2018 04:26	WG1216711
1,1,1-Trichloroethane	ND		0.00100	1	12/28/2018 04:26	WG1216711
1,1,2-Trichloroethane	ND		0.00100	1	12/28/2018 04:26	WG1216711
Trichloroethene	ND		0.00100	1	12/28/2018 04:26	WG1216711
Trichlorofluoromethane	ND		0.00500	1	12/28/2018 04:26	WG1216711
Vinyl chloride	ND		0.00100	1	12/28/2018 04:26	WG1216711
Total Xylenes	ND		0.00300	1	12/28/2018 04:26	WG1216711
(S) Toluene-d8	*109*		*80.0-120*		*12/28/2018 04:26*	WG1216711
(S) Dibromofluoromethane	*95.4*		*76.0-123*		*12/28/2018 04:26*	WG1216711
(S) a,a,a-Trifluorotoluene	*100*		*80.0-120*		*12/28/2018 04:26*	WG1216711
(S) 4-Bromofluorobenzene	*108*		*80.0-120*		*12/28/2018 04:26*	WG1216711

Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00100	1	12/29/2018 13:40	WG1216654
Acenaphthylene	ND		0.00100	1	12/29/2018 13:40	WG1216654
Anthracene	ND		0.00100	1	12/29/2018 13:40	WG1216654
Benzidine	ND	J4 J6	0.0100	1	12/29/2018 13:40	WG1216654
Benzo(a)anthracene	ND		0.00100	1	12/29/2018 13:40	WG1216654
Benzo(b)fluoranthene	ND		0.00100	1	12/29/2018 13:40	WG1216654
Benzo(k)fluoranthene	ND		0.00100	1	12/29/2018 13:40	WG1216654
Benzo(g,h,i)perylene	ND		0.00100	1	12/29/2018 13:40	WG1216654
Benzo(a)pyrene	ND		0.00100	1	12/29/2018 13:40	WG1216654
Bis(2-chlorethoxy)methane	ND		0.0100	1	12/29/2018 13:40	WG1216654
Bis(2-chloroethyl)ether	ND		0.0100	1	12/29/2018 13:40	WG1216654
Bis(2-chloroisopropyl)ether	ND		0.0100	1	12/29/2018 13:40	WG1216654
4-Bromophenyl-phenylether	ND		0.0100	1	12/29/2018 13:40	WG1216654
2-Chloronaphthalene	ND		0.00100	1	12/29/2018 13:40	WG1216654
4-Chlorophenyl-phenylether	ND		0.0100	1	12/29/2018 13:40	WG1216654
Chrysene	ND		0.00100	1	12/29/2018 13:40	WG1216654
Dibenz(a,h)anthracene	ND		0.00100	1	12/29/2018 13:40	WG1216654
3,3-Dichlorobenzidine	ND		0.0100	1	12/29/2018 13:40	WG1216654
2,4-Dinitrotoluene	ND		0.0100	1	12/29/2018 13:40	WG1216654
2,6-Dinitrotoluene	ND		0.0100	1	12/29/2018 13:40	WG1216654
1,2-Diphenylhydrazine	ND		0.0100	1	12/29/2018 13:40	WG1216654
Fluoranthene	ND		0.00100	1	12/29/2018 13:40	WG1216654
Fluorene	ND		0.00100	1	12/29/2018 13:40	WG1216654
Hexachlorobenzene	ND		0.00100	1	12/29/2018 13:40	WG1216654
Hexachloro-1,3-buladiene	ND		0.0100	1	12/29/2018 13:40	WG1216654
Hexachlorocyclopentadiene	ND		0.0100	1	12/29/2018 13:40	WG1216654
Hexachloroethane	ND		0.0100	1	12/29/2018 13:40	WG1216654
Indeno(1,2,3-cd)pyrene	ND		0.00100	1	12/29/2018 13:40	WG1216654
Isophorone	ND		0.0100	1	12/29/2018 13:40	WG1216654
Naphthalene	ND		0.00100	1	12/29/2018 13:40	WG1216654

Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Nitrobenzene	ND		0.0100	1	12/29/2018 13:40	WG1216654
n-Nitrosodimethylamine	ND		0.0100	1	12/29/2018 13:40	WG1216654
n-Nitrosodiphenylamine	ND		0.0100	1	12/29/2018 13:40	WG1216654
n-Nitrosodi-n-propylamine	ND		0.0100	1	12/29/2018 13:40	WG1216654
Phenanthrene	ND		0.00100	1	12/29/2018 13:40	WG1216654
Benzylbutyl phthalate	ND		0.00300	1	12/29/2018 13:40	WG1216654
Bis(2-ethylhexyl)phthalate	ND		0.00300	1	12/29/2018 13:40	WG1216654
Di-n-butyl phthalate	ND		0.00300	1	12/29/2018 13:40	WG1216654
Diethyl phthalate	ND		0.00300	1	12/29/2018 13:40	WG1216654
Dimethyl phthalate	ND		0.00300	1	12/29/2018 13:40	WG1216654
Di-n-octyl phthalate	ND		0.00300	1	12/29/2018 13:40	WG1216654
Pyrene	ND		0.00100	1	12/29/2018 13:40	WG1216654
1,2,4-Trichlorobenzene	ND		0.0100	1	12/29/2018 13:40	WG1216654
4-Chloro-3-methylphenol	ND		0.0100	1	12/29/2018 13:40	WG1216654
2-Chlorophenol	ND		0.0100	1	12/29/2018 13:40	WG1216654
2,4-Dichlorophenol	ND		0.0100	1	12/29/2018 13:40	WG1216654
2,4-Dimethylphenol	ND		0.0100	1	12/29/2018 13:40	WG1216654
4,6-Dinitro-2-methylphenol	ND		0.0100	1	12/29/2018 13:40	WG1216654
2,4-Dinitrophenol	ND		0.0100	1	12/29/2018 13:40	WG1216654
2-Nitrophenol	ND		0.0100	1	12/29/2018 13:40	WG1216654
4-Nitrophenol	ND		0.0100	1	12/29/2018 13:40	WG1216654
Pentachlorophenol	ND		0.0100	1	12/29/2018 13:40	WG1216654
Phenol	ND		0.0100	1	12/29/2018 13:40	WG1216654
2,4,6-Trichlorophenol	ND		0.0100	1	12/29/2018 13:40	WG1216654
(S) Nitrobenzene-d5	*50.3*		*15.0-314*		*12/29/2018 13:40*	WG1216654
(S) 2-Fluorobiphenyl	*62.3*		*22.0-127*		*12/29/2018 13:40*	WG1216654
(S) p-Terphenyl-d14	*64.3*		*29.0-141*		*12/29/2018 13:40*	WG1216654
(S) Phenol-d5	*24.4*		*8.00-424*		*12/29/2018 13:40*	WG1216654
(S) 2-Fluorophenol	*41.4*		*10.0-120*		*12/29/2018 13:40*	WG1216654
(S) 2,4,6-Tribromophenol	*61.5*		*10.0-153*		*12/29/2018 13:40*	WG1216654

Method Blank (MB)

(MB) R3372902-1 01/02/19 14:47

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Hardness (colorimetric) as CaCO3	1.44	J	1.43	30.0

L1056123-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1056123-01 01/02/19 14:51 • (DUP) R3372902-3 01/02/19 14:52

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Hardness (colorimetric) as CaCO3	56.8	55.7	1	1.96		20

L1056756-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1056756-01 01/02/19 15:01 • (DUP) R3372902-6 01/02/19 15:07

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Hardness (colorimetric) as CaCO3	138	142	1	2.86		20

Laboratory Control Sample (LCS)

(LCS) R3372902-2 01/02/19 14:48

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Hardness (colorimetric) as CaCO3	150	152	101	85.0-115	

L1056755-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056755-01 01/02/19 15:02 • (MS) R3372902-4 01/02/19 15:03 • (MSD) R3372902-5 01/02/19 15:03

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Hardness (colorimetric) as CaCO3	150	60.5	208	207	98.3	97.7	1	80.0-120	E	E	0.482	20

Method Blank (MB)

(MB) R3372890-1 01/02/19 13:58

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Total Phenol by 4AAP	U		0.00830	0.0400

L1056263-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1056263-04 01/02/19 14:01 • (DUP) R3372890-3 01/02/19 14:02

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Total Phenol by 4AAP	ND	0.0233	1	5.51	J	20

L1056660-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1056660-15 01/02/19 14:14 • (DUP) R3372890-6 01/02/19 14:17

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Total Phenol by 4AAP	ND	0.0279	1	6.78	J	20

Laboratory Control Sample (LCS)

(LCS) R3372890-2 01/02/19 13:59

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Total Phenol by 4AAP	0.500	0.494	98.8	90.0-110	

L1056532-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056532-02 01/02/19 14:08 • (MS) R3372890-4 01/02/19 14:09 • (MSD) R3372890-5 01/02/19 14:10

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Total Phenol by 4AAP	1.00	ND	0.899	0.832	89.9	83.2	1	90.0-110	J6	J6	7.77	20

L1056660-17 Original Sample (OS) • Matrix Spike (MS)

(OS) L1056660-17 01/02/19 14:18 • (MS) R3372890-7 01/02/19 14:18

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/l	mg/l	mg/l	%		%	
Total Phenol by 4AAP	1.00	ND	0.870	84.3	1	90.0-110	J6

Method Blank (MB)

(MB) R3373497-1 01/04/19 16:05

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L1056279-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1056279-01 01/04/19 16:13 • (DUP) R3373497-3 01/04/19 16:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	0.00809	0.00671	1	18.6		20

L1056596-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1056596-02 01/04/19 16:27 • (DUP) R3373497-6 01/04/19 16:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	U	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3373497-2 01/04/19 16:06

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Cyanide	0.100	0.103	103	85.0-115	

L1056596-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056596-01 01/04/19 16:23 • (MS) R3373497-4 01/04/19 16:25 • (MSD) R3373497-5 01/04/19 16:26

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	U	0.106	0.103	106	103	1	75.0-125			2.87	20

L1056721-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056721-02 01/04/19 16:38 • (MS) R3373497-7 01/04/19 16:39 • (MSD) R3373497-8 01/04/19 16:42

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	U	0.101	0.101	101	101	1	75.0-125			0.000	20

Method Blank (MB)

(MB) R3372677-1 12/31/18 17:44

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Mercury	U		0.0000490	0.000200

Laboratory Control Sample (LCS) + Laboratory Control Sample Duplicate (LCSD)

(LCS) R3372677-2 12/31/18 17:46 • (LCSD) R3372677-3 12/31/18 17:49

	Spike Amount	LCS Result	LCSD Result	LCS Rec	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Mercury	0.00300	0.00266	0.00257	88.6	85.6	85.0-115			3.45	20

L1056010-01 Original Sample (OS) + Matrix Spike (MS) + Matrix Spike Duplicate (MSD)

(OS) L1056010-01 12/31/18 17:51 • (MS) R3372677-4 12/31/18 17:53 • (MSD) R3372677-5 12/31/18 18:01

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Mercury	0.00300	0.000250	0.00328	0.00322	101	98.9	1	70.0-130			2.13	20

L1056955-02 Original Sample (OS) + Matrix Spike (MS) + Matrix Spike Duplicate (MSD)

(OS) L1056955-02 12/31/18 18:03 • (MS) R3372677-6 12/31/18 18:06 • (MSD) R3372677-7 12/31/18 18:08

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Mercury	0.00300	U	0.000551	0.00207	31.7	68.9	1	70.0-130	J6	J3 J6	74.0	20

Method Blank (MB)

(MB) R3372396-1 12/31/18 01:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Arsenic	U		0.000170	0.00100
Beryllium	U		0.000280	0.00100
Cadmium	U		0.000220	0.00100
Chromium	U		0.000320	0.00100
Copper	U		0.000270	0.00100
Lead	U		0.000260	0.00100
Nickel	U		0.000320	0.00100
Selenium	U		0.000320	0.00200
Silver	U		0.000180	0.00100
Thallium	U		0.000280	0.00100
Zinc	U		0.00191	0.0100

Method Blank (MB)

(MB) R3372621-1 12/31/18 13:22

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Antimony	U		0.000254	0.00200

Laboratory Control Sample (LCS) + Laboratory Control Sample Duplicate (LCSD)

(LCS) R3372396-2 12/31/18 01:10 • (LCSD) R3372396-3 12/31/18 01:15

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Arsenic	0.0500	0.0538	0.0516	108	103	85.0-115			4.18	20
Beryllium	0.0500	0.0498	0.0475	99.5	95.0	85.0-115			4.67	20
Cadmium	0.0500	0.0518	0.0508	104	102	85.0-115			1.78	20
Chromium	0.0500	0.0538	0.0509	108	102	85.0-115			5.57	20
Copper	0.0500	0.0542	0.0531	108	106	85.0-115			2.09	20
Lead	0.0500	0.0525	0.0517	105	103	85.0-115			1.47	20
Nickel	0.0500	0.0548	0.0525	110	105	85.0-115			4.23	20
Selenium	0.0500	0.0569	0.0507	114	101	85.0-115			11.4	20
Silver	0.0500	0.0531	0.0512	106	103	85.0-115			3.35	20
Thallium	0.0500	0.0526	0.0518	105	104	85.0-115			1.62	20
Zinc	0.0500	0.0550	0.0522	110	104	85.0-115			5.22	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3372621-2 12/31/18 13:27 • (LCSD) R3372621-3 12/31/18 13:32

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Antimony	0.0500	0.0643	0.0680	129	136	85.0-115	J4	J4	5.56	20

L1056273-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056273-01 12/31/18 01:20 • (MS) R3372396-5 12/31/18 01:29 • (MSD) R3372396-6 12/31/18 01:34

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Arsenic	0.0500	0.00238	0.0532	0.0527	102	101	1	70.0-130			0.972	20
Beryllium	0.0500	U	0.0469	0.0477	93.8	95.3	1	70.0-130			1.57	20
Cadmium	0.0500	U	0.0521	0.0538	104	108	1	70.0-130			3.24	20
Chromium	0.0500	0.000991	0.0511	0.0520	100	102	1	70.0-130			1.80	20
Copper	0.0500	0.00948	0.0525	0.0626	106	106	1	70.0-130			0.224	20
Lead	0.0500	0.00332	0.0547	0.0557	103	105	1	70.0-130			1.81	20
Nickel	0.0500	0.0103	0.0629	0.0623	105	104	1	70.0-130			0.981	20
Selenium	0.0500	0.000405	0.0564	0.0576	112	114	1	70.0-130			1.96	20
Silver	0.0500	0.000182	0.0521	0.0533	104	105	1	70.0-130			2.22	20
Thallium	0.0500	U	0.0514	0.0523	103	105	1	70.0-130			1.78	20
Zinc	0.0500	0.169	0.212	0.214	104	109	1	70.0-130			0.960	20

L1056385-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056385-01 12/31/18 01:38 • (MS) R3372396-7 12/31/18 01:43 • (MSD) R3372396-8 12/31/18 01:48

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Arsenic	0.0500	ND	0.0526	0.0516	104	102	1	70.0-130			1.92	20
Beryllium	0.0500	ND	0.0491	0.0479	98.2	95.7	1	70.0-130			2.49	20
Cadmium	0.0500	ND	0.0549	0.0538	109	107	1	70.0-130			2.15	20
Chromium	0.0500	0.00199	0.0540	0.0536	104	103	1	70.0-130			0.787	20
Copper	0.0500	0.0291	0.0828	0.0807	108	103	1	70.0-130			2.65	20
Lead	0.0500	0.00200	0.0551	0.0545	106	105	1	70.0-130			1.06	20
Nickel	0.0500	0.00170	0.0547	0.0534	106	103	1	70.0-130			2.43	20
Selenium	0.0500	ND	0.0585	0.0580	116	115	1	70.0-130			0.772	20
Silver	0.0500	ND	0.0549	0.0535	109	106	1	70.0-130			2.64	20
Thallium	0.0500	ND	0.0534	0.0524	107	105	1	70.0-130			1.91	20
Zinc	0.0500	0.0251	0.0793	0.0801	108	110	1	70.0-130			1.01	20

L1056273-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056273-01 12/31/18 13:36 • (MS) R3372621-5 12/31/18 13:45 • (MSD) R3372621-6 12/31/18 13:50

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Antimony	0.0500	0.00155	0.0693	0.0703	136	137	1	70.0-130	J5	J5	1.33	20

L1056385-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056385-01 12/31/18 15:14 • (MS) R3372621-7 12/31/18 15:19 • (MSD) R3372621-8 12/31/18 15:23

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Antimony	0.0500	ND	0.0695	0.0698	139	140	1	70.0-130	J5	J5	0.382	20

Method Blank (MB)

(MB) R3371801-3 12/27/18 22:12

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Acrolein	U		0.00387	0.0500
Acrylonitrile	U		0.00187	0.0100
Benzene	U		0.000331	0.00100
Bromodichloromethane	U		0.000360	0.00100
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
2-Chloroethyl vinyl ether	U		0.00301	0.0500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
1,2-Dichlorobenzene	U		0.000349	0.00100
1,3-Dichlorobenzene	U		0.000220	0.00100
1,4-Dichlorobenzene	U		0.000274	0.00100
Dichlorodifluoromethane	U		0.000551	0.00500
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000399	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
Ethylbenzene	U		0.000384	0.00100
Methylene Chloride	U		0.00108	0.00500
1,1,2,2-Tetrachloroethane	U		0.000730	0.00100
Tetrachloroethene	U		0.000372	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100
1,1,2-Trichloroethane	U		0.000383	0.00100
Toluene	U		0.000412	0.00100
Trichloroethene	U		0.000398	0.00100
Trichlorofluoromethane	U		0.00120	0.00500
Vinyl chloride	U		0.000759	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*107*			*80.0-120*
(S) Dibromofluoromethane	*94.8*			*76.0-123*
(S) a,a,a-Trifluorotoluene	*103*			*80.0-120*
(S) 4-Bromofluorobenzene	*114*			*80.0-120*

Laboratory Control Sample (LCS) + Laboratory Control Sample Duplicate (LCSD)

(LCS) R3371801-1 12/27/18 19:13 • (LCSD) R3371801-2 12/27/18 19:33

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acrolein	0.125	0.148	0.145	118	116	60.0-140			1.63	20
Acrylonitrile	0.125	0.102	0.0985	81.3	78.8	60.0-140			3.20	20
Bromodichloromethane	0.0250	0.0250	0.0257	100	103	70.0-135			2.62	20
Bromoform	0.0250	0.0251	0.0243	100	97.4	70.0-130			2.96	20
Bromomethane	0.0250	0.0287	0.0313	115	125	15.0-185			8.57	20
Carbon tetrachloride	0.0250	0.0264	0.0268	105	107	70.0-130			1.53	20
Chlorobenzene	0.0250	0.0292	0.0256	117	102	65.0-135			13.2	20
Chlorodibromomethane	0.0250	0.0285	0.0263	114	105	70.0-135			7.78	20
Chloroethane	0.0250	0.0271	0.0263	108	105	40.0-160			2.70	20
2-Chloroethyl vinyl ether	0.125	0.168	0.148	135	118	0.100-225			13.1	20
Chloroform	0.0250	0.0259	0.0256	103	103	70.0-135			0.881	20
Chloromethane	0.0250	0.0195	0.0201	77.8	80.4	0.100-205			3.29	20
Benzene	0.0250	0.0228	0.0226	91.3	90.4	65.0-135			1.01	20
1,2-Dichlorobenzene	0.0250	0.0268	0.0254	107	101	65.0-135			5.34	20
1,3-Dichlorobenzene	0.0250	0.0260	0.0257	104	103	70.0-130			0.830	20
1,4-Dichlorobenzene	0.0250	0.0251	0.0247	100	99.0	65.0-135			1.40	20
Dichlorodifluoromethane	0.0250	0.0194	0.0188	77.6	75.3	49.0-155			2.99	20
1,1-Dichloroethane	0.0250	0.0259	0.0259	104	104	70.0-130			0.0263	20
1,2-Dichloroethane	0.0250	0.0260	0.0262	104	105	70.0-130			0.715	20
1,1-Dichloroethene	0.0250	0.0239	0.0237	95.5	94.9	90.0-150			0.556	20
trans-1,2-Dichloroethene	0.0250	0.0247	0.0244	99.0	97.4	70.0-139			1.57	20
1,2-Dichloropropane	0.0250	0.0254	0.0256	102	102	35.0-165			0.826	20
cis-1,3-Dichloropropene	0.0250	0.0283	0.0268	113	107	25.0-175			5.33	20
trans-1,3-Dichloropropene	0.0250	0.0283	0.0273	113	109	50.0-150			3.63	20
Methylene Chloride	0.0250	0.0227	0.0235	90.9	93.9	60.0-140			3.28	20
1,1,2,2-Tetrachloroethane	0.0250	0.0220	0.0220	88.0	88.0	60.0-140			0.00595	20
Ethylbenzene	0.0250	0.0289	0.0258	115	103	60.0-140			11.2	20
Tetrachloroethene	0.0250	0.0286	0.0262	114	105	70.0-130			8.67	20
1,1,1-Trichloroethane	0.0250	0.0258	0.0254	103	102	70.0-130			1.63	20
1,1,2-Trichloroethane	0.0250	0.0273	0.0252	109	101	70.0-130			8.10	20
Trichloroethene	0.0250	0.0280	0.0282	112	113	65.0-135			0.736	20
Trichlorofluoromethane	0.0250	0.0268	0.0269	107	107	50.0-150			0.435	20
Vinyl chloride	0.0250	0.0232	0.0229	92.8	91.6	5.00-195			1.25	20
Toluene	0.0250	0.0265	0.0245	106	98.1	70.0-130			7.86	20
Xylenes, Total	0.0750	0.0854	0.0801	114	107	77.0-120			6.40	20
(S) Toluene-d8				*108*	*97.9*	*80.0-120*				
(S) Dibromofluoromethane				*94.5*	*93.5*	*76.0-123*				
(S) a,a,a-Trifluorotoluene				*98.0*	*102*	*80.0-120*				
(S) 4-Bromofluorobenzene				*108*	*108*	*80.0-120*				

Method Blank (MB)

(MB) R3372434-3 12/29/18 10:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acenaphthene	U		0.000316	0.00100
Acenaphthylene	U		0.000309	0.00100
Anthracene	U		0.000291	0.00100
Benzidine	U		0.00432	0.0100
Benzo(a)anthracene	U		0.0000925	0.00100
Benzo(b)fluoranthene	U		0.0000898	0.00100
Benzo(k)fluoranthene	U		0.000355	0.00100
Benzo(g,h,i)perylene	U		0.000167	0.00100
Benzo(a)pyrene	U		0.000340	0.00100
Bis(2-chloroethoxy)methane	U		0.000329	0.0100
Bis(2-chloroethyl)ether	U		0.00162	0.0100
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100
4-Bromophenyl-phenylether	U		0.000335	0.0100
2-Chloronaphthalene	U		0.000330	0.00100
4-Chlorophenyl-phenylether	U		0.000303	0.0100
Chrysene	U		0.000312	0.00100
Dibenz(a,h)anthracene	U		0.000279	0.00100
3,3-Dichlorobenzidine	U		0.00202	0.0100
2,4-Dinitrotoluene	U		0.00165	0.0100
2,6-Dinitrotoluene	U		0.000279	0.0100
Fluoranthene	U		0.000310	0.00100
Fluorene	U		0.000323	0.00100
Hexachlorobenzene	U		0.000341	0.00100
Hexachloro-1,3-butadiene	U		0.000329	0.0100
Hexachlorocyclopentadiene	U		0.00233	0.0100
Hexachloroethane	U		0.000365	0.0100
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100
Isophorone	U		0.000272	0.0100
Naphthalene	U		0.000372	0.00100
Nitrobenzene	U		0.000367	0.0100
n-Nitrosodimethylamine	U		0.00126	0.0100
n-Nitrosodiphenylamine	U		0.00119	0.0100
n-Nitrosodi-n-propylamine	U		0.000403	0.0100
Phenanthrene	U		0.000366	0.00100
Benzylbutyl phthalate	U		0.000275	0.00300
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300
Di-n-butyl phthalate	U		0.000266	0.00300
Diethyl phthalate	U		0.000282	0.00300
Dimethyl phthalate	U		0.000283	0.00300
Di-n-octyl phthalate	U		0.000278	0.00300

Method Blank (MB)

(MB) R3372434-3 12/29/18 10:32

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Pyrene	U		0.000330	0.00100
1,2,4-Trichlorobenzene	U		0.000356	0.0100
1,2-Diphenylhydrazine	U		0.000318	0.0100
4-Chloro-3-methylphenol	U		0.000263	0.0100
2-Chlorophenol	U		0.000283	0.0100
2-Nitrophenol	U		0.000320	0.0100
4-Nitrophenol	U		0.00201	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.000334	0.0100
2,4,5-Trichlorophenol	U		0.000297	0.0100
2,4-Dichlorophenol	U		0.000284	0.0100
2,4-Dimethylphenol	U		0.000624	0.0100
4,6-Dinitro-2-methylphenol	U		0.00202	0.0100
2,4-Dinitrophenol	U		0.00325	0.0100
(S) Nitrobenzene-d5	*57.4*			*15.0-114*
(S) 2-Fluorobiphenyl	*68.1*			*22.0-127*
(S) p-Terphenyl-d14	*72.3*			*29.0-141*
(S) Phenol-d5	*24.3*			*8.00-124*
(S) 2-Fluorophenol	*43.9*			*10.0-120*
(S) 2,4,6-Tribromophenol	*62.0*			*10.0-153*

Laboratory Control Sample (LCS) + Laboratory Control Sample Duplicate (LCSD)

(LCS) R3372434-1 12/29/18 09:45 • (LCSD) R3372434-2 12/29/18 10:08

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Acenaphthene	0.0500	0.0438	0.0415	91.6	83.0	47.0-145			1.70	46
Acenaphthylene	0.0500	0.0409	0.0412	81.8	82.4	33.0-145			0.731	74
Anthracene	0.0500	0.0473	0.0420	94.6	84.0	27.0-133			0.712	66
Benzidine	0.0500	ND	0.00578	0.000	11.6	1.00-120	J4	J3	200	36
Benzo(a)anthracene	0.0500	0.0450	0.0457	90.0	91.4	33.0-143			1.54	53
Benzo(b)fluoranthene	0.0500	0.0398	0.0412	79.6	82.4	24.0-159			3.46	71
Benzo(k)fluoranthene	0.0500	0.0439	0.0443	87.8	88.6	11.0-162			0.907	63
Benzo(g,h,i)perylene	0.0500	0.0443	0.0457	88.6	91.4	1.00-219			3.11	97
Benzo(a)pyrene	0.0500	0.0396	0.0404	79.2	80.8	17.0-163			2.00	72
Bis(2-chloroethoxy)methane	0.0500	0.0328	0.0338	65.6	67.6	1.00-219			3.00	54
Bis(2-chloroethyl)ether	0.0500	0.0329	0.0345	65.8	69.0	23.0-185			4.75	108
Bis(2-chloroisopropyl)ether	0.0500	0.0366	0.0380	73.2	76.0	36.0-166			3.75	76
4-Bromophenyl-phenylether	0.0500	0.0439	0.0444	87.8	88.8	53.0-127			1.13	47

Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Laboratory Control Sample (LCS) - Laboratory Control Sample Duplicate (LCSD)

(LCS) R3372434-1 12/29/18 09:45 - (LCSD) R3372434-2 12/29/18 10:08

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2-Chloronaphthalene	0.0500	0.0398	0.0410	79.6	82.0	60.0-120			2.97	24
4-Chlorophenyl-phenylether	0.0500	0.0410	0.0433	82.0	86.6	25.0-158			5.46	61
Chrysene	0.0500	0.0421	0.0434	84.2	86.8	17.0-168			3.04	87
Dibenz(a,h)anthracene	0.0500	0.0445	0.0456	89.0	91.2	1.00-227			2.44	126
3,3-Dichlorobenzidine	0.0500	0.0410	0.0420	82.0	84.0	1.00-262			2.41	108
2,4-Dinitrotoluene	0.0500	0.0437	0.0446	87.4	89.2	39.0-139			2.04	42
2,6-Dinitrotoluene	0.0500	0.0425	0.0432	85.0	86.4	50.0-158			1.63	48
Fluoranthene	0.0500	0.0434	0.0451	86.8	90.2	26.0-137			3.84	66
Fluorene	0.0500	0.0397	0.0415	79.4	83.0	59.0-121			4.43	38
Hexachlorobenzene	0.0500	0.0449	0.0460	89.8	92.0	1.00-152			2.42	55
Hexachloro-1,3-butadiene	0.0500	0.0382	0.0389	76.4	77.8	24.0-120			1.82	62
Hexachlorocyclopentadiene	0.0500	0.0306	0.0308	61.2	61.6	10.0-120			0.651	31
Hexachloroethane	0.0500	0.0348	0.0360	69.6	72.0	40.0-120			3.39	52
Indeno(1,2,3-cd)pyrene	0.0500	0.0435	0.0444	87.0	88.8	1.00-171			2.05	99
Isophorone	0.0500	0.0329	0.0349	65.8	69.8	21.0-196			5.90	93
Naphthalene	0.0500	0.0339	0.0349	67.8	69.8	21.0-133			2.91	65
Nitrobenzene	0.0500	0.0322	0.0345	64.4	69.0	35.0-180			6.90	62
n-Nitrosodimethylamine	0.0500	0.0174	0.0178	34.8	35.6	10.0-120			2.27	34
n-Nitrosodiphenylamine	0.0500	0.0414	0.0404	82.8	80.8	44.0-120			2.44	21
n-Nitrosodi-n-propylamine	0.0500	0.0338	0.0347	67.6	69.4	1.00-230			2.63	67
Phenanthrene	0.0500	0.0406	0.0415	81.2	83.0	54.0-120			2.19	39
Benzylbutyl phthalate	0.0500	0.0383	0.0418	76.6	83.6	1.00-152			8.74	60
Bis(2-ethylhexyl)phthalate	0.0500	0.0417	0.0433	83.4	86.6	8.00-158			3.76	82
Di-n-butyl phthalate	0.0500	0.0434	0.0447	86.8	89.4	1.00-120			2.95	47
Diethyl phthalate	0.0500	0.0411	0.0407	82.2	81.4	1.00-120			0.978	100
Dimethyl phthalate	0.0500	0.0426	0.0435	85.2	87.0	1.00-120			2.09	183
Di-n-octyl phthalate	0.0500	0.0439	0.0449	87.8	89.8	4.00-146			2.25	69
Pyrene	0.0500	0.0391	0.0427	78.2	85.4	52.0-120			8.80	43
1,2,4-Trichlorobenzene	0.0500	0.0372	0.0382	74.4	76.4	44.0-142			2.65	50
1,2-Diphenylhydrazine	0.0500	0.0326	0.0342	65.2	68.4	37.0-125			4.79	20
4-Chloro-3-methylphenol	0.0500	0.0353	0.0354	70.6	70.8	22.0-147			0.283	73
2-Chlorophenol	0.0500	0.0366	0.0389	73.2	77.8	23.0-134			6.09	61
2,4-Dichlorophenol	0.0500	0.0389	0.0396	77.8	79.2	39.0-135			1.78	50
2,4-Dimethylphenol	0.0500	0.0342	0.0354	68.4	70.8	32.0-120			3.45	58
4,6-Dinitro-2-methylphenol	0.0500	0.0476	0.0468	95.2	93.6	1.00-181			1.69	203
2,4-Dinitrophenol	0.0500	0.0421	0.0400	84.2	80.0	1.00-191			5.12	132
2-Nitrophenol	0.0500	0.0414	0.0436	82.8	87.2	29.0-182			5.18	55
4-Nitrophenol	0.0500	0.0188	0.0187	37.6	37.4	1.00-132			0.533	131
Pentachlorophenol	0.0500	0.0422	0.0426	84.4	85.2	14.0-176			0.943	86
Phenol	0.0500	0.0156	0.0167	31.2	33.4	5.00-120			6.81	64

WG1216654

QUALITY CONTROL SUMMARY

L1056417-01

ONE LAB. NATIONWIDE

Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3372434-1 12/29/18 09:45 • (LCSD) R3372434-2 12/29/18 10:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2,4,6-Trichlorophenol	0.0500	0.0448	0.0452	89.6	90.4	37.0-144			0.889	58
(S) Nitrobenzene-d5				*53.1*	*57.5*	*15.0-314*				
(S) 2-Fluorobiphenyl				*67.2*	*68.1*	*22.0-127*				
(S) p-Terphenyl-d14				*66.7*	*73.5*	*29.0-141*				
(S) Phenol-d5				*24.9*	*26.5*	*8.00-424*				
(S) 2-Fluorophenol				*42.1*	*45.0*	*10.0-120*				
(S) 2,4,6-Tribromophenol				*79.5*	*76.5*	*10.0-153*				

L1056417-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056417-01 12/29/18 13:40 • (MS) R3372434-4 12/29/18 14:04 • (MSD) R3372434-5 12/29/18 14:27

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0500	ND	0.0400	0.0393	80.0	78.6	1	47.0-145			1.77	48
Acenaphthylene	0.0500	ND	0.0401	0.0382	80.2	77.9	1	33.0-145			3.04	74
Anthracene	0.0500	ND	0.0397	0.0387	79.4	77.4	1	27.0-133			2.55	66
Benzidine	0.0500	ND	ND	ND	0.000	0.000	1	1.00-120	J6	J6	0.000	40
Benzo(a)anthracene	0.0500	ND	0.0439	0.0432	87.8	86.4	1	33.0-143			1.61	53
Benzo(b)fluoranthene	0.0500	ND	0.0392	0.0394	78.4	78.8	1	24.0-159			0.509	71
Benzo(k)fluoranthene	0.0500	ND	0.0423	0.0409	84.6	81.8	1	11.0-162			3.37	63
Benzo(g,h,i)perylene	0.0500	ND	0.0438	0.0430	87.6	86.0	1	1.00-219			1.84	97
Benzo(a)pyrene	0.0500	ND	0.0385	0.0386	77.0	77.2	1	17.0-163			0.259	72
Bis(2-chloroethoxy)methane	0.0500	ND	0.0317	0.0317	63.4	63.4	1	33.0-184			0.000	54
Bis(2-chloroethyl)ether	0.0500	ND	0.0316	0.0315	63.2	63.0	1	12.0-158			0.317	108
Bis(2-chloroisopropyl)ether	0.0500	ND	0.0355	0.0351	71.0	70.2	1	36.0-166			1.13	76
4-Bromophenyl-phenylether	0.0500	ND	0.0415	0.0415	83.6	83.4	1	53.0-127			0.959	43
2-Chloronaphthalene	0.0500	ND	0.0387	0.0387	77.4	77.4	1	60.0-120			0.000	24
4-Chlorophenyl-phenylether	0.0500	ND	0.0417	0.0406	83.4	81.2	1	25.0-158			2.67	61
Chrysene	0.0500	ND	0.0421	0.0410	84.2	82.0	1	17.0-168			2.65	87
Dibenz(a,h)anthracene	0.0500	ND	0.0433	0.0425	86.6	85.0	1	1.00-227			1.86	126
3,3-Dichlorobenzidine	0.0500	ND	0.0355	0.0385	71.2	77.0	1	1.00-262			7.83	108
2,4-Dinitrotoluene	0.0500	ND	0.0430	0.0422	86.0	84.4	1	39.0-139			1.88	47
2,6-Dinitrotoluene	0.0500	ND	0.0408	0.0406	81.6	81.2	1	50.0-158			0.491	48
Fluoranthene	0.0500	ND	0.0421	0.0417	84.2	82.4	1	26.0-137			2.15	66
Fluorene	0.0500	ND	0.0398	0.0392	79.6	78.4	1	59.0-121			1.52	38
Hexachlorobenzene	0.0500	ND	0.0431	0.0434	86.2	86.8	1	1.00-152			0.694	55
Hexachloro-1,3-butadiene	0.0500	ND	0.0374	0.0370	74.8	74.0	1	24.0-120			1.08	62
Hexachlorocyclopentadiene	0.0500	ND	0.0292	0.0341	58.4	68.2	1	10.0-146			15.5	34
Hexachloroethane	0.0500	ND	0.0332	0.0333	66.4	66.6	1	40.0-120			0.301	52

WG1216654

QUALITY CONTROL SUMMARY

ONE LAB NATIONWIDE.

Semi Volatile Organic Compounds (GC/MS) by Method 625.1

L1056417-01

L1056417-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056417-01 12/29/18 13:40 • (MS) R3372434-4 12/29/18 14:04 • (MSD) R3372434-5 12/29/18 14:27

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Indeno(1,2,3-cd)pyrene	0.0500	ND	0.0425	0.0417	85.0	83.4	1	1.00-171			1.90	99
Isophorone	0.0500	ND	0.0321	0.0318	64.2	63.6	1	21.0-196			0.939	93
Naphthalene	0.0500	ND	0.0329	0.0325	65.8	65.0	1	21.0-133			1.22	65
Nitrobenzene	0.0500	ND	0.0316	0.0316	63.2	63.2	1	35.0-180			0.000	62
n-Nitrosodimethylamine	0.0500	ND	0.0187	0.0178	37.4	35.6	1	10.0-120			4.93	40
n-Nitrosodiphenylamine	0.0500	ND	0.0381	0.0374	76.2	74.8	1	16.0-160			1.85	28
n-Nitrosodi-n-propylamine	0.0500	ND	0.0335	0.0322	67.0	64.4	1	1.00-230			3.96	87
Phenanthrene	0.0500	ND	0.0396	0.0383	79.2	76.6	1	54.0-120			3.34	39
Benzylbutyl phthalate	0.0500	ND	0.0411	0.0396	82.2	79.2	1	1.00-152			3.72	60
Bis(2-ethylhexyl)phthalate	0.0500	ND	0.0416	0.0409	83.2	81.8	1	8.00-158			1.70	82
Di-n-butyl phthalate	0.0500	ND	0.0421	0.0413	84.2	82.6	1	1.00-120			1.92	47
Diethyl phthalate	0.0500	ND	0.0399	0.0386	79.8	77.2	1	1.00-120			3.31	100
Dimethyl phthalate	0.0500	ND	0.0417	0.0406	83.4	81.2	1	1.00-120			2.67	183
Di-n-octyl phthalate	0.0500	ND	0.0435	0.0424	87.0	84.8	1	4.00-146			2.56	69
Pyrene	0.0500	ND	0.0411	0.0398	82.2	79.6	1	52.0-120			3.21	49
1,2,4-Trichlorobenzene	0.0500	ND	0.0366	0.0363	73.2	72.6	1	44.0-142			0.823	50
1,2-Diphenylhydrazine	0.0500	ND	0.0329	0.0323	65.8	64.6	1	18.0-156			1.84	34
4-Chloro-3-methylphenol	0.0500	ND	0.0345	0.0328	69.0	65.6	1	22.0-147			5.05	73
2-Chlorophenol	0.0500	ND	0.0363	0.0363	72.6	72.6	1	23.0-134			0.000	61
2,4-Dichlorophenol	0.0500	ND	0.0384	0.0382	76.8	76.4	1	39.0-135			0.522	50
2,4-Dimethylphenol	0.0500	ND	0.0328	0.0334	65.6	66.8	1	32.0-120			1.81	58
4,6-Dinitro-2-methylphenol	0.0500	ND	0.0436	0.0423	87.2	84.6	1	1.00-181			3.03	203
2,4-Dinitrophenol	0.0500	ND	0.0419	0.0400	83.8	80.0	1	1.00-191			4.64	132
2-Nitrophenol	0.0500	ND	0.0408	0.0412	81.6	82.4	1	29.0-182			0.976	55
4-Nitrophenol	0.0500	ND	0.0196	0.0191	39.2	38.2	1	1.00-132			2.58	131
Pentachlorophenol	0.0500	ND	0.0426	0.0404	85.2	80.8	1	14.0-176			5.30	86
Phenol	0.0500	ND	0.0165	0.0160	33.0	32.0	1	5.00-120			3.08	64
2,4,6-Trichlorophenol	0.0500	ND	0.0445	0.0441	89.0	88.2	1	37.0-144			0.903	58
(S) Nitrobenzene-d5					*51.4*	*52.1*		*15.0-314*				
(S) 2-Fluorobiphenyl					*65.9*	*65.0*		*22.0-127*				
(S) p-Terphenyl-d14					*70.8*	*70.1*		*29.0-141*				
(S) Phenol-d5					*26.2*	*25.7*		*8.00-424*				
(S) 2-Fluorophenol					*42.5*	*42.6*		*10.0-120*				
(S) 2,4,6-Tribromophenol					*72.5*	*69.5*		*10.0-153*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Certification

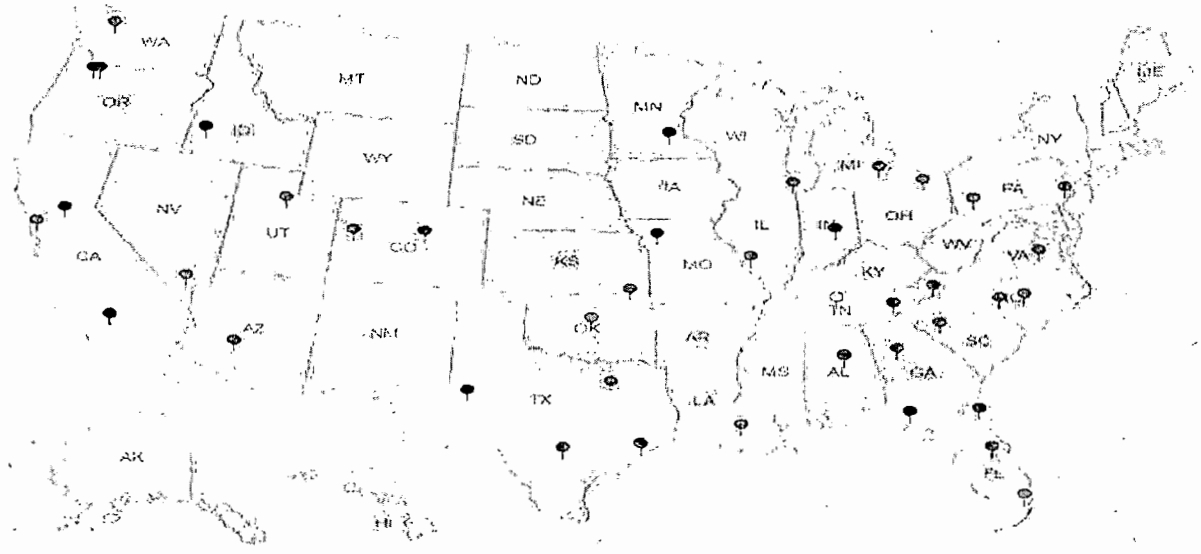
Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1,6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1,4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

Third-Party Registered Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Pace Analytical

C141

Rush? (Lab MUST Be Notified)

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs

Analysis / Container / Preservation

Pace Analytical

Shipped Via:

Remarks

Sample # (lab only)

Samples returned via: UPS FedEx Courier

Tracking # Fedex 4624 2990 4781

Temp °C

Received on ice (Y/N)

Custody Seals Intact? (Y/N)

Cooler Temp Blank Received: Yes/No HCL/MeoH TBR

Temp °C Received:

0.4-0.3:0.1 7

Date: 12/27/18 Time: 5:15

Received by (Signature)

Relinquished by (Signature)

Date: Time:

Received by (Signature)

Relinquished by (Signature)

Date: Time:

Received for lab by (Signature)

Date: Time:

pH Temp

Flow Other

VOA Zero Headspace

Preservation Correct/Checked

RAD SCREEN <0.5 mR/hr

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

* Matrix: SS - Soil AIR - Air F - Filter
SW - Surface Water B - Biassay
WW - Wastewater
DW - Drinking Water
OT - Other

Katie Ingram

Pace Analytical®
Midwest Center for Testing & Innovation

Login #: L105617	Client:POLYENV	Date:12/27/18	Evaluated by:Myra "Katie" Ingram

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time	X	Data Clarification Needed		**If Broken Container:**
	Temperature not in range		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type		Please specify Metals requested.		Insufficient packing material inside cooler
	pH not in range		Please specify TCLP requested		Improper handling by carrier (FedEx / UPS / Courier)
	Insufficient Sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing.		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Trackings:

Login Comments:
Please clarify the analysis requested.

Client informed by:	Call	X	Email		Voice Mail		Date:12/27/18	Time:1150
TSR Initials:CF	Client Contact: Lyn Buntin							

Login Instructions:

Please log for the following:

- 625 1BNA
- V624 1AAX
- Metals
  - SBG
  - ASG
  - BEG
  - CDG
  - CRG

Polyenvironmental Corporation
Environmental Laboratory

P.O. Box 837 *Dothan, Alabama 36302* *334-793-4700*

Invoice

Customer No.: **50200**
Invoice No.: **49207**
Invoice Date: **01/21/19**
PO No.:
Terms: **Net 30 Days**

Geneva Water Works
P.O. Box 370
Geneva,AL 36340
ATTN: Accounts Payable Dept.

For Analytical Services From 12/26/18 To 12/26/18

Form 2A Expanded parameters list	**$650.00**

Amount Due: $650.00

Permit Renewal performed by Pace
Pace sample # L1056417

Polyenvironmental Corporation
Environmental Laboratory

P.O. Box 837 *Dothan, Alabama 36302* *334-793-4700*

01/21/2019
Geneva Water Works
P.O. Box 370
Geneva,AL 36340
ATTN: James Dixon

Waste Water Treatment Plant

Permit Renewal performed by Pace
Pace sample # L1056419

Polyenvironmental Corporation

Respectfully Submitted,

2019-01-0198

Lyn Buntin, Environmental Project Manager

POLYENVIRONMENTAL CORPORATION

CHAIN OF CUSTODY

1885 Headland Ave.
Dothan, AL 36303
Phone: (334) 793-4700

PO Box 837
Dothan, AL 36302
FAX: (334) 677-9477

Client: CAUDEN WATER WORKS
Address:
City, State: CAUDEN ZIP: 36320

Facility: WWTP
Location:
Name of Sampler: James Rae

Sample Location (Outfall No., Influent, Effluent, Etc.)	Preservative	Sample Date / Time	Sample Type Composite, Grab, Etc.	Sample Frequency Qtrly, Semi-Annual, Etc.	Analysis Required
EFFLUENT	4	12-19-18 1200	COMP	1-YEAR	METALS 31705
[illegible]	4				

For Waste Water Samples Only:

Flow: _____ (mgd)

For Storm Water Samples Only:

Rainfall: _____ (inches)

Relinquished By:
(Signature) James Rae 12-19-18 1214
Date / Time

Received By:
(Signature) [illegible] 12-19-18 1214
Date / Time

Date / Time

Date / Time

Samples Shipped On Ice (Yes / No)

Turnaround Time (Rush / Normal)

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

January 07, 2019

Poly Environmental Corp. Env. Lab

Sample Delivery Group:	L1056419
Samples Received:	12/27/2018
Project Number:	
Description:	Geneva Water Works WWTP

Report To: Mr. Steve Davis
PO Box 837
Dothan, AL 36303

Entire Report Reviewed By: Cassandra Foster

Cassandra Foster
Project Manager

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ONE LAB. NATIONWIDE.

V-NOTCH 317985 L1056419-01 WW			Collected by	Collected date/time 12/19/18 08:00	Received date/time 12/27/18 08:15
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 130.1	WG1217775	1	01/02/19 15:01	01/02/19 15:01	KK
Wet Chemistry by Method 420.4	WG1217192	1	01/02/19 09:16	01/02/19 14:05	KK
Wet Chemistry by Method 4500CN E-2011	WG1218022	1	01/02/19 13:37	01/03/19 10:21	KK
Mercury by Method 245.1	WG1217482	1	12/30/18 17:39	12/31/18 18:23	TCT
Metals (ICPMS) by Method 200.8	WG1217175	1	12/29/18 09:28	12/31/18 16:08	LD
Volatile Organic Compounds (GC/MS) by Method 624.1	WG1216711	1	12/28/18 04:46	12/28/18 04:46	BMB
Semi Volatile Organic Compounds (GC/MS) by Method 625.1	WG1216654	1	12/28/18 05:42	12/29/18 14:51	SNR

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Cassandra Foster

Cassandra Foster
Project Manager

Sample Handling and Receiving

2-Chloroethyl vinyl ether degrades under acidic conditions. Associated results were determined from the analysis of an acid-preserved sample.

Lab Sample ID	Project Sample ID	Method
L1056419-01	V-NOTCH 317985	624.1

Wet Chemistry by Method 130.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (colorimetric) as CaCO3	45.9		30.0	1	01/02/2019 15:01	WG1217775

Wet Chemistry by Method 420.4

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Total Phenol by 4AAP	ND		0.0400	1	01/02/2019 14:05	WG1217192

Wet Chemistry by Method 4500CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Cyanide	ND		0.00500	1	01/03/2019 10:21	WG1218022

Mercury by Method 245.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	12/31/2018 18:23	WG1217482

Metals (ICPMS) by Method 200.8

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND	J4	0.00200	1	12/31/2018 16:08	WG1217175
Arsenic	ND		0.00100	1	12/31/2018 16:08	WG1217175
Beryllium	ND		0.00100	1	12/31/2018 16:08	WG1217175
Cadmium	ND		0.00100	1	12/31/2018 16:08	WG1217175
Chromium	ND		0.00100	1	12/31/2018 16:08	WG1217175
Copper	0.00551		0.00100	1	12/31/2018 16:08	WG1217175
Lead	0.00120		0.00100	1	12/31/2018 16:08	WG1217175
Nickel	0.00158		0.00100	1	12/31/2018 16:08	WG1217175
Selenium	ND		0.00200	1	12/31/2018 16:08	WG1217175
Silver	ND		0.00100	1	12/31/2018 16:08	WG1217175
Thallium	ND		0.00100	1	12/31/2018 16:08	WG1217175
Zinc	0.0379		0.0100	1	12/31/2018 16:08	WG1217175

Volatile Organic Compounds (GC/MS) by Method 624.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acrolein	ND	T8	0.0500	1	12/28/2018 04:46	WG1216711
Acrylonitrile	ND	T8	0.0100	1	12/28/2018 04:46	WG1216711
Benzene	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
Bromodichloromethane	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
Bromoform	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
Bromomethane	ND	T8	0.00500	1	12/28/2018 04:46	WG1216711
Carbon tetrachloride	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
Chlorobenzene	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
Chlorodibromomethane	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
Chloroethane	ND	T8	0.00500	1	12/28/2018 04:46	WG1216711
2-Chloroethyl vinyl ether	ND	T8	0.0500	1	12/28/2018 04:46	WG1216711
Chloroform	ND	T8	0.00500	1	12/28/2018 04:46	WG1216711
Chloromethane	ND	T8	0.00250	1	12/28/2018 04:46	WG1216711
1,2-Dichlorobenzene	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
1,3-Dichlorobenzene	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
1,4-Dichlorobenzene	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
Dichlorodifluoromethane	ND	T8	0.00500	1	12/28/2018 04:46	WG1216711

Volatile Organic Compounds (GC/MS) by Method 624.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1-Dichloroethane	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
1,2-Dichloroethane	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
1,1-Dichloroethene	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
trans-1,2-Dichloroethene	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
1,2-Dichloropropane	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
cis-1,3-Dichloropropene	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
trans-1,3-Dichloropropene	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
Ethylbenzene	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
Methylene Chloride	ND	T8	0.00500	1	12/28/2018 04:46	WG1216711
1,1,2,2-Tetrachloroethane	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
Tetrachloroethene	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
Toluene	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
1,1,1-Trichloroethane	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
1,1,2-Trichloroethane	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
Trichloroethene	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
Trichlorofluoromethane	ND	T8	0.00500	1	12/28/2018 04:46	WG1216711
Vinyl chloride	ND	T8	0.00100	1	12/28/2018 04:46	WG1216711
Total Xylenes	ND	T8	0.00300	1	12/28/2018 04:46	WG1216711
(S) Toluene-d8	*105*		*80.0-120*		*12/28/2018 04:46*	WG1216711
(S) Dibromofluoromethane	*101*		*76.0-123*		*12/28/2018 04:46*	WG1216711
(S) a,a,a-Trifluorotoluene	*101*		*80.0-120*		*12/28/2018 04:46*	WG1216711
(S) 4-Bromofluorobenzene	*107*		*80.0-120*		*12/28/2018 04:46*	WG1216711

Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	ND	T8	0.00100	1	12/29/2018 14:51	WG1216654
Acenaphthylene	ND	T8	0.00100	1	12/29/2018 14:51	WG1216654
Anthracene	ND	T8	0.00100	1	12/29/2018 14:51	WG1216654
Benzidine	ND	J3 J4 T8	0.0100	1	12/29/2018 14:51	WG1216654
Benzo(a)anthracene	ND	T8	0.00100	1	12/29/2018 14:51	WG1216654
Benzo(b)fluoranthene	ND	T8	0.00100	1	12/29/2018 14:51	WG1216654
Benzo(k)fluoranthene	ND	T8	0.00100	1	12/29/2018 14:51	WG1216654
Benzo(g,h,i)perylene	ND	T8	0.00100	1	12/29/2018 14:51	WG1216654
Benzo(a)pyrene	ND	T8	0.00100	1	12/29/2018 14:51	WG1216654
Bis(2-chlorethoxy)methane	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
Bis(2-chloroethyl)ether	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
Bis(2-chloroisopropyl)ether	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
4-Bromophenyl-phenylether	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
2-Chloronaphthalene	ND	T8	0.00100	1	12/29/2018 14:51	WG1216654
4-Chlorophenyl-phenylether	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
Chrysene	ND	T8	0.00100	1	12/29/2018 14:51	WG1216654
Dibenz(a,h)anthracene	ND	T8	0.00100	1	12/29/2018 14:51	WG1216654
3,3-Dichlorobenzidine	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
2,4-Dinitrotoluene	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
2,6-Dinitrotoluene	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
1,2-Diphenylhydrazine	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
Fluoranthene	ND	T8	0.00100	1	12/29/2018 14:51	WG1216654
Fluorene	ND	T8	0.00100	1	12/29/2018 14:51	WG1216654
Hexachlorobenzene	ND	T8	0.00100	1	12/29/2018 14:51	WG1216654
Hexachloro-1,3-butadiene	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
Hexachlorocyclopentadiene	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
Hexachloroethane	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
Indeno(1,2,3-cd)pyrene	ND	T8	0.00100	1	12/29/2018 14:51	WG1216654
Isophorone	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
Naphthalene	ND	T8	0.00100	1	12/29/2018 14:51	WG1216654

Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Nitrobenzene	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
n-Nitrosodimethylamine	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
n-Nitrosodiphenylamine	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
n-Nitrosodi-n-propylamine	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
Phenanthrene	ND	T8	0.00100	1	12/29/2018 14:51	WG1216654
Benzylbutyl phthalate	ND	T8	0.00300	1	12/29/2018 14:51	WG1216654
Bis(2-ethylhexyl)phthalate	ND	T8	0.00300	1	12/29/2018 14:51	WG1216654
Di-n-butyl phthalate	ND	T8	0.00300	1	12/29/2018 14:51	WG1216654
Diethyl phthalate	ND	T8	0.00300	1	12/29/2018 14:51	WG1216654
Dimethyl phthalate	ND	T8	0.00300	1	12/29/2018 14:51	WG1216654
Di-n-octyl phthalate	ND	T8	0.00300	1	12/29/2018 14:51	WG1216654
Pyrene	ND	T8	0.00100	1	12/29/2018 14:51	WG1216654
1,2,4-Trichlorobenzene	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
4-Chloro-3-methylphenol	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
2-Chlorophenol	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
2,4-Dichlorophenol	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
2,4-Dimethylphenol	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
4,6-Dinitro-2-methylphenol	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
2,4-Dinitrophenol	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
2-Nitrophenol	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
4-Nitrophenol	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
Pentachlorophenol	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
Phenol	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
2,4,6-Trichlorophenol	ND	T8	0.0100	1	12/29/2018 14:51	WG1216654
(S) Nitrobenzene-d5	*50.4*		*15.0-314*		*12/29/2018 14:51*	WG1216654
(S) 2-Fluorobiphenyl	*62.9*		*22.0-127*		*12/29/2018 14:51*	WG1216654
(S) p-Terphenyl-d14	*67.7*		*29.0-141*		*12/29/2018 14:51*	WG1216654
(S) Phenol-d5	*24.0*		*8.00-424*		*12/29/2018 14:51*	WG1216654
(S) 2-Fluorophenol	*40.5*		*10.0-120*		*12/29/2018 14:51*	WG1216654
(S) 2,4,6-Tribromophenol	*63.5*		*10.0-153*		*12/29/2018 14:51*	WG1216654

Method Blank (MB)

(MB) R3372902-1 01/02/19 14:47

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Hardness (calculated) as CaCO3	1.44	J	1.43	30.0

L1056123-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1056123-01 01/02/19 14:51 • (DUP) R3372902-3 01/02/19 14:52

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Hardness (calculated) as CaCO3	56.8	56.7	1	1.96		20

L1056756-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1056756-01 01/02/19 15:04 • (DUP) R3372902-6 01/02/19 15:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Hardness (calculated) as CaCO3	138	142	1	2.86		20

Laboratory Control Sample (LCS)

(LCS) R3372902-2 01/02/19 14:48

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Hardness (calculated) as CaCO3	150	152	101	85.0-115	

L1056755-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056755-01 01/02/19 15:02 • (MS) R3372902-4 01/02/19 15:03 • (MSD) R3372902-5 01/02/19 15:03

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Hardness (calculated) as CaCO3	150	60.5	208	207	98.3	97.7	1	80.0-120	J	J	0.482	20

Method Blank (MB)

(MB) R3372890-1 01/02/19 13:58

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Total Phenol by 4AAP	U		0.00830	0.0400

[illegible] Original Sample (OS) • Duplicate (DUP)

(OS) L1056263-04 01/02/19 14:01 • (DUP) R3372890-3 01/02/19 14:02

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Total Phenol by 4AAP	ND	0.0233	1	5.51	J	20

L1056660-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1056660-15 01/02/19 14:14 • (DUP) R3372890-6 01/02/19 14:17

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Total Phenol by 4AAP	ND	0.0279	1	6.78	J	20

Laboratory Control Sample (LCS)

(LCS) R3372890-2 01/02/19 13:59

	Spike Amount	LCS Result	LCS Rec	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Total Phenol by 4AAP	0.500	0.494	98.8	90.0-110	

L1056532-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056532-02 01/02/19 14:08 • (MS) R3372890-4 01/02/19 14:09 • (MSD) R3372890-5 01/02/19 14:10

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Total Phenol by 4AAP	1.00	ND	0.899	0.832	89.9	83.2	1	90.0-110	J6	J6	7.77	20

L1056660-17 Original Sample (OS) • Matrix Spike (MS)

(OS) L1056660-17 01/02/19 14:18 • (MS) R3372890-7 01/02/19 14:18

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/l	mg/l	mg/l	%		%	
Total Phenol by 4AAP	1.00	ND	0.870	84.3	1	90.0-110	J6

Method Blank (MB)

(MB) R3373047-1 01/03/19 09:50

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L1055729-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1055729-02 01/03/19 09:58 • (DUP) R3373047-3 01/03/19 09:59

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3373047-2 01/03/19 09:51

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Cyanide	0.100	0.109	109	85.0-115	

L1056325-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056325-01 01/03/19 10:08 • (MS) R3373047-4 01/03/19 10:09 • (MSD) R3373047-5 01/03/19 10:10

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0902	0.0760	90.2	76.0	1	75.0-125			17.1	20

L1056327-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056327-03 01/03/19 10:17 • (MS) R3373047-6 01/03/19 10:18 • (MSD) R3373047-7 01/03/19 10:19

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0764	0.0656	76.4	65.6	1	75.0-125		J6	15.2	20

Method Blank (MB)

(MB) R3372677-1 12/31/18 17:44

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Mercury	U		0.0000490	0.000200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3372677-2 12/31/18 17:46 • (LCSD) R3372677-3 12/31/18 17:49

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Mercury	0.00300	0.00266	0.00257	88.6	85.6	85.0-115			3.45	20

[L1056010-01] Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056010-01 12/31/18 17:51 • (MS) R3372677-4 12/31/18 17:53 • (MSD) R3372677-5 12/31/18 18:01

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Mercury	0.00300	0.000250	0.00328	0.00322	101	98.9	1	70.0-130			2.13	20

[L1056955-02] Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056955-02 12/31/18 18:03 • (MS) R3372677-6 12/31/18 18:06 • (MSD) R3372677-7 12/31/18 18:08

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Mercury	0.00300	U	0.000951	0.00207	31.7	68.9	1	70.0-130	J6	J3 J6	74.0	20

Method Blank (MB)

(MB) R3372396-1 12/31/18 01:05

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Arsenic	U		0.000170	0.00100
Beryllium	U		0.000280	0.00100
Cadmium	U		0.000220	0.00100
Chromium	U		0.000320	0.00100
Copper	U		0.000270	0.00100
Lead	U		0.000260	0.00100
Nickel	U		0.000320	0.00100
Selenium	U		0.000320	0.00200
Silver	U		0.000180	0.00100
Thallium	U		0.000280	0.00100
Zinc	U		0.00191	0.0100

Method Blank (MB)

(MB) R3372621-1 12/31/18 13:22

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Antimony	U		0.000754	0.00200

Laboratory Control Sample (LCS) + Laboratory Control Sample Duplicate (LCSD)

(LCS) R3372396-2 12/31/18 01:10 • (LCSD) R3372396-3 12/31/18 01:15

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec	LCSD Rec	Rec Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Arsenic	0.0500	0.0539	0.0516	108	103	85.0-115			4.18	20
Beryllium	0.0500	0.0498	0.0475	99.5	95.0	85.0-115			4.67	20
Cadmium	0.0500	0.0518	0.0508	104	102	85.0-115			1.78	20
Chromium	0.0500	0.0532	0.0509	103	102	85.0-115			5.57	20
Copper	0.0500	0.0542	0.0531	108	106	85.0-115			2.09	20
Lead	0.0500	0.0525	0.0517	105	103	85.0-115			1.47	20
Nickel	0.0500	0.0548	0.0525	110	105	85.0-115			4.23	20
Selenium	0.0500	0.0569	0.0507	114	101	85.0-115			11.4	20
Silver	0.0500	0.0531	0.0513	106	103	85.0-115			3.35	20
Thallium	0.0500	0.0526	0.0518	105	104	85.0-115			1.62	20
Zinc	0.0500	0.0550	0.0522	110	104	85.0-115			5.22	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3372621-2 12/31/18 13:27 • (LCSD) R3372621-3 12/31/18 13:32

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Antimony	0.0500	0.0643	0.0680	129	136	85.0-115	J1	J1	5.56	20

L1056273-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056273-01 12/31/18 01:20 • (MS) R3372396-5 12/31/18 01:29 • (MSD) R3372396-6 12/31/18 01:34

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Arsenic	0.0500	0.00738	0.0532	0.0527	102	101	1	70.0-130			0.972	20
Beryllium	0.0500	U	0.0469	0.0477	93.8	95.3	1	70.0-130			1.57	20
Cadmium	0.0500	U	0.0521	0.0538	104	108	1	70.0-130			3.24	20
Chromium	0.0500	0.000991	0.0511	0.0520	100	102	1	70.0-130			1.80	20
Copper	0.0500	0.00948	0.0625	0.0626	106	106	1	70.0-130			0.224	20
Lead	0.0500	0.00332	0.0547	0.0557	103	105	1	70.0-130			1.81	20
Nickel	0.0500	0.0103	0.0629	0.0623	105	104	1	70.0-130			0.981	20
Selenium	0.0500	0.000405	0.0564	0.0576	112	114	1	70.0-130			1.96	20
Silver	0.0500	0.000182	0.0521	0.0532	104	106	1	70.0-130			2.22	20
Thallium	0.0500	U	0.0514	0.0523	103	105	1	70.0-130			1.78	20
Zinc	0.0500	0.160	0.212	0.214	104	109	1	70.0-130			0.960	20

L1056385-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056385-01 12/31/18 01:38 • (MS) R3372396-7 12/31/18 01:43 • (MSD) R3372396-8 12/31/18 01:48

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Arsenic	0.0500	ND	0.0526	0.0516	104	102	1	70.0-130			1.92	20
Beryllium	0.0500	ND	0.0491	0.0479	98.2	95.7	1	70.0-130			2.49	20
Cadmium	0.0500	ND	0.0549	0.0538	109	107	1	70.0-130			2.15	20
Chromium	0.0500	0.00199	0.0540	0.0536	104	103	1	70.0-130			0.797	20
Copper	0.0500	0.0291	0.0828	0.0807	106	103	1	70.0-130			2.65	20
Lead	0.0500	0.00200	0.0551	0.0545	106	105	1	70.0-130			1.06	20
Nickel	0.0500	0.00170	0.0547	0.0534	106	103	1	70.0-130			2.43	20
Selenium	0.0500	ND	0.0585	0.0580	116	115	1	70.0-130			0.773	20
Silver	0.0500	ND	0.0549	0.0535	109	106	1	70.0-130			2.64	20
Thallium	0.0500	ND	0.0534	0.0524	107	105	1	70.0-130			1.91	20
Zinc	0.0500	0.0251	0.0793	0.0801	108	110	1	70.0-130			1.01	20

L1056273-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056273-01 12/31/18 13:36 • (MS) R3372621-5 12/31/18 13:45 • (MSD) R3372621-6 12/31/18 13:50

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Antimony	0.0500	0.00155	0.0693	0.0703	136	137	1	70.0-130	J5	J5	1.33	20

L1056385-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056385-01 12/31/18 15:14 • (MS) R3372621-7 12/31/18 15:19 • (MSD) R3372621-8 12/31/18 15:23

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Antimony	0.0500	ND	0.0695	0.0698	139	140	1	70.0-130	J5	J5	0.382	20

Method Blank (MB)

(MB) R3371801-3 12/27/18 22:12

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Acrolein	U		0.00887	0.0500
Acrylonitrile	U		0.00197	0.0100
Benzene	U		0.000331	0.00100
Bromodichloromethane	U		0.000380	0.00100
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
2-Chloroethyl vinyl ether	U		0.00301	0.0500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
1,2-Dichlorobenzene	U		0.000349	0.00100
1,3-Dichlorobenzene	U		0.000220	0.00100
1,4-Dichlorobenzene	U		0.000274	0.00100
Dichlorodifluoromethane	U		0.000551	0.00500
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
trans-1,2-Dichloroethene	U		0.000395	0.00100
1,2-Dichloropropane	U		0.000305	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
Ethylbenzene	U		0.000384	0.00100
Methylene Chloride	U		0.00100	0.00500
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100
1,1,2-Trichloroethane	U		0.000383	0.00100
Toluene	U		0.000412	0.00100
Trichloroethene	U		0.000398	0.00100
Trichlorofluoromethane	U		0.00120	0.00500
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*107*			*80.0-120*
(S) Dibromofluoromethane	*94.8*			*76.0-123*
(S) a,a,a-Trifluorotoluene	*103*			*80.0-120*
(S) 4-Bromofluorobenzene	*114*			*80.0-120*

Volatile Organic Compounds (GC/MS) by Method 624.1

Laboratory Control Sample (LCS) / Laboratory Control Sample Duplicate (LCSD)

(LCS) R3371801-1 12/27/18 19:13 • (LCSD) R3371801-2 12/27/18 19:33

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acrolein	0.125	0.148	0.145	118	116	60.0-140			1.63	20
Acrylonitrile	0.125	0.102	0.0985	81.3	78.8	60.0-140			3.20	20
Bromodichloromethane	0.0250	0.0250	0.0267	100	103	70.0-135			2.62	20
Bromoform	0.0250	0.0251	0.0243	100	97.4	70.0-130			2.96	20
Bromomethane	0.0250	0.0287	0.0313	115	125	15.0-185			8.57	20
Carbon tetrachloride	0.0250	0.0264	0.0268	105	107	70.0-130			1.53	20
Chlorobenzene	0.0250	0.0292	0.0255	117	102	65.0-135			13.2	20
Chlorodibromomethane	0.0250	0.0285	0.0263	114	105	70.0-135			7.78	20
Chloroethane	0.0250	0.0271	0.0263	108	105	40.0-160			2.70	20
2-Chloroethyl vinyl ether	0.125	0.168	0.148	135	118	0.100-225			13.1	20
Chloroform	0.0250	0.0259	0.0256	103	103	70.0-135			0.881	20
Chloromethane	0.0250	0.0195	0.0201	77.8	80.4	0.100-205			3.29	20
benzene	0.0250	0.0228	0.0226	91.3	90.4	65.0-135			1.01	20
1,2-Dichlorobenzene	0.0250	0.0268	0.0254	107	101	65.0-135			5.34	20
1,3-Dichlorobenzene	0.0250	0.0260	0.0257	104	103	70.0-130			0.830	20
1,4-Dichlorobenzene	0.0250	0.0251	0.0247	100	99.0	65.0-135			1.40	20
Dichlorodifluoromethane	0.0250	0.0194	0.0188	77.6	75.3	49.0-155			2.99	20
1,1-Dichloroethane	0.0250	0.0259	0.0253	104	104	70.0-130			0.0263	20
1,2-Dichloroethane	0.0250	0.0260	0.0262	104	105	70.0-130			0.715	20
1,1-Dichloroethene	0.0250	0.0239	0.0237	95.5	94.9	50.0-150			0.556	20
trans-1,2-Dichloroethene	0.0250	0.0247	0.0244	99.0	97.4	70.0-130			1.57	20
1,2-Dichloropropane	0.0250	0.0254	0.0256	102	102	35.0-165			0.826	20
cis-1,3-Dichloropropene	0.0250	0.0283	0.0268	113	107	25.0-175			5.33	20
trans-1,3-Dichloropropene	0.0250	0.0283	0.0273	113	109	50.0-150			3.63	20
Methylene Chloride	0.0250	0.0227	0.0235	90.9	93.9	60.0-140			3.28	20
1,1,2,2-Tetrachloroethane	0.0250	0.0220	0.0220	88.0	88.0	60.0-140			0.00595	20
Ethylbenzene	0.0250	0.0289	0.0258	115	103	60.0-140			11.2	20
Tetrachloroethene	0.0250	0.0286	0.0262	114	105	70.0-130			8.67	20
1,1,1-Trichloroethane	0.0250	0.0258	0.0254	103	102	70.0-130			1.63	20
1,1,2-Trichloroethane	0.0250	0.0273	0.0252	109	101	70.0-130			8.10	20
Trichloroethene	0.0250	0.0280	0.0282	112	113	65.0-135			0.736	20
Trichlorofluoromethane	0.0250	0.0269	0.0269	107	107	50.0-150			0.435	20
Vinyl chloride	0.0250	0.0242	0.0229	97.8	91.6	5.00-195			1.25	20
Toluene	0.0250	0.0265	0.0245	106	98.1	70.0-130			7.86	20
Xylenes, Total	0.0750	0.0854	0.0801	114	107	70.0-120			6.40	20
(S) Toluene-d8				*108*	*97.9*	*80.0-120*				
(S) Dibromofluoromethane				*94.5*	*93.5*	*76.0-123*				
(S) a,a,a-Trifluorotoluene				*98.0*	*102*	*80.0-120*				
(S) 4-Bromofluorobenzene				*108*	*108*	*80.0-120*				

Method Blank (MB)

(MB) R3372434-3 12/29/19 10:32

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Acenaphthene	U		0.000316	0.00100
Acenaphthylene	U		0.000309	0.00100
Anthracene	U		0.000291	0.00100
Benzidine	U		0.00432	0.0100
Benzo(a)anthracene	U		0.0000975	0.00100
Benzo(b)fluoranthene	U		0.0000896	0.00100
Benzo(k)fluoranthene	U		0.000355	0.00100
Benzo(g,h,i)perylene	U		0.000161	0.00100
Benzo(a)pyrene	U		0.000340	0.00100
Bis(2-chloroethoxy)methane	U		0.000329	0.0100
Bis(2-chloroethyl)ether	U		0.00182	0.0100
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100
4-Bromophenyl-phenylether	U		0.000335	0.0100
2-Chloronaphthalene	U		0.000330	0.00100
4-Chlorophenyl-phenylether	U		0.000303	0.0100
Chrysene	U		0.000332	0.00100
Dibenz(a,h)anthracene	U		0.000279	0.00100
3,3-Dichlorobenzidine	U		0.00202	0.0100
2,4-Dinitrotoluene	U		0.00165	0.0100
2,6-Dinitrotoluene	U		0.000279	0.0100
Fluoranthene	U		0.000310	0.00100
Fluorene	U		0.000323	0.00100
Hexachlorobenzene	U		0.000341	0.00100
Hexachloro-1,3-butadiene	U		0.000329	0.0100
Hexachlorocyclopentadiene	U		0.00233	0.0100
Hexachloroethane	U		0.000365	0.0100
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100
Isophorone	U		0.000272	0.0100
Naphthalene	U		0.000372	0.00100
Nitrobenzene	U		0.000367	0.0100
n-Nitrosodimethylamine	U		0.00125	0.0100
n-Nitrosodiphenylamine	U		0.00119	0.0100
n-Nitrosodi-n-propylamine	U		0.000403	0.0100
Phenanthrene	U		0.000366	0.00100
Benzylbutyl phthalate	U		0.000275	0.00300
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300
Di-n-butyl phthalate	U		0.000266	0.00300
Diethyl phthalate	U		0.000282	0.00300
Dimethyl phthalate	U		0.000283	0.00300
Di-n-octyl phthalate	U		0.000278	0.00300

Method Blank (MB)

(MB) R3372434-3 12/29/18 10:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Pyrene	U		0.000330	0.00100
1,2,4-Trichlorobenzene	U		0.000365	0.0100
1,2-Diphenylhydrazine	U		0.000316	0.0100
4-Chloro-3-methylphenol	U		0.000263	0.0100
2-Chlorophenol	U		0.000283	0.0100
2-Nitrophenol	U		0.000320	0.0100
4-Nitrophenol	U		0.00200	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.000334	0.0100
2,4,6-Trichlorophenol	U		0.000297	0.0100
2,4-Dichlorophenol	U		0.000264	0.0100
2,4-Dimethylphenol	U		0.000624	0.0100
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100
2,4-Dinitrophenol	U		0.00325	0.0100
(S) Nitrobenzene-d5	*57.4*			*15.0-314*
(S) 2-Fluorobiphenyl	*68.1*			*22.0-127*
(S) p-Terphenyl-d14	*72.3*			*29.0-141*
(S) Phenol-d5	*24.3*			*8.00-424*
(S) 2-Fluorophenol	*43.9*			*10.0-120*
(S) 2,4,6-Tribromophenol	*62.0*			*10.0-153*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3372434-1 12/29/18 09:45 • (LCSD) R3372434-2 12/29/18 10:08

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0500	0.0408	0.0415	81.6	83.0	47.0-145			1.70	48
Acenaphthylene	0.0500	0.0409	0.0412	81.8	82.4	33.0-145			0.731	74
Anthracene	0.0500	0.0423	0.0420	84.6	84.0	27.0-133			0.712	56
Benzidine	0.0500	ND	0.00578	0.000	11.6	1.00-120	J4	J3	200	36
Benzo(a)anthracene	0.0500	0.0450	0.0457	90.0	91.4	33.0-143			1.54	53
Benzo(b)fluoranthene	0.0500	0.0398	0.0412	79.6	82.4	24.0-159			3.46	71
Benzo(k)fluoranthene	0.0500	0.0439	0.0443	87.8	88.6	11.0-162			0.907	63
Benzo(g,h,i)perylene	0.0500	0.0443	0.0457	88.6	91.4	1.00-219			3.11	97
Benzo(a)pyrene	0.0500	0.0396	0.0404	79.2	80.8	17.0-163			2.00	72
Bis(2-chloroethoxy)methane	0.0500	0.0328	0.0338	65.6	67.6	1.00-219			3.00	54
Bis(2-chloroethyl)ether	0.0500	0.0329	0.0345	65.8	69.0	33.0-185			4.75	108
Bis(2-chloroisopropyl)ether	0.0500	0.0366	0.0380	73.2	76.0	36.0-166			3.75	76
4-Bromophenyl-phenylether	0.0500	0.0439	0.0444	87.8	88.8	53.0-127			1.13	43

Semi Volatile Organic Compounds (GC/MS) by Method 625.1

L1056419-01

Laboratory Control Sample (LCS) - Laboratory Control Sample Duplicate (LCSD)

(LCS) R3372434-1 12/29/18 09:45 - (LCSD) R3372434-2 12/29/18 10:08

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2-Chloronaphthalene	0.0500	0.0398	0.0410	79.6	82.0	60.0-120			2.97	24
4-Chlorophenyl-phenylether	0.0500	0.0410	0.0433	82.0	86.6	25.0-158			5.46	61
Chrysene	0.0500	0.0421	0.0434	84.2	86.8	17.0-168			3.04	97
Dibenz(a,h)anthracene	0.0500	0.0445	0.0456	89.0	91.2	1.00-227			2.44	126
3,3-Dichlorobenzidine	0.0500	0.0410	0.0420	82.0	84.0	1.00-262			2.41	108
2,4-Dinitrotoluene	0.0500	0.0437	0.0446	87.4	89.2	39.0-139			2.04	42
2,6-Dinitrotoluene	0.0500	0.0425	0.0432	85.0	86.4	50.0-158			1.63	48
Fluoranthene	0.0500	0.0434	0.0451	86.8	90.2	26.0-137			3.84	66
Fluorene	0.0500	0.0397	0.0415	79.4	83.0	59.0-121			4.43	38
Hexachlorobenzene	0.0500	0.0449	0.0460	89.8	92.0	1.00-152			2.42	55
Hexachloro-1,3-butadiene	0.0500	0.0382	0.0389	76.4	77.8	24.0-120			1.82	62
Hexachlorocyclopentadiene	0.0500	0.0306	0.0308	61.2	61.6	10.0-120			0.651	31
Hexachloroethane	0.0500	0.0349	0.0360	69.8	72.0	40.0-120			3.39	52
Indeno(1,2,3-cd)pyrene	0.0500	0.0435	0.0444	87.0	88.8	1.00-171			2.05	99
Isophorone	0.0500	0.0329	0.0349	65.8	69.8	21.0-196			5.90	93
Naphthalene	0.0500	0.0339	0.0349	67.8	69.8	21.0-133			2.91	65
Nitrobenzene	0.0500	0.0322	0.0345	64.4	69.0	35.0-180			6.90	62
n-Nitrosodimethylamine	0.0500	0.0174	0.0178	34.8	35.6	10.0-120			2.27	34
n-Nitrosodiphenylamine	0.0500	0.0414	0.0404	82.8	80.8	44.0-120			2.44	21
n-Nitroso-di-n-propylamine	0.0500	0.0338	0.0347	67.6	69.4	1.00-230			2.63	87
Phenanthrene	0.0500	0.0406	0.0415	81.2	83.0	54.0-120			2.19	39
Benzylbutyl phthalate	0.0500	0.0383	0.0418	76.6	83.6	1.00-152			8.74	60
Bis(2-ethylhexyl)phthalate	0.0500	0.0417	0.0433	83.4	86.6	8.00-158			3.76	82
Di-n-butyl phthalate	0.0500	0.0434	0.0447	86.8	89.4	1.00-120			2.95	47
Diethyl phthalate	0.0500	0.0411	0.0407	82.2	81.4	1.00-120			0.978	100
Dimethyl phthalate	0.0500	0.0426	0.0435	85.2	87.0	1.00-120			2.09	183
Di-n-octyl phthalate	0.0500	0.0439	0.0449	87.8	89.8	4.00-146			2.25	69
Pyrene	0.0500	0.0391	0.0427	78.2	85.4	52.0-120			8.80	49
1,2,4-Trichlorobenzene	0.0500	0.0372	0.0382	74.4	76.4	44.0-142			2.65	50
1,2-Diphenylhydrazine	0.0500	0.0326	0.0347	65.2	69.4	37.0-125			6.25	29
4-Chloro-3-methylphenol	0.0500	0.0353	0.0354	70.6	70.8	22.0-147			0.283	73
2-Chlorophenol	0.0500	0.0365	0.0389	73.2	77.8	23.0-134			6.09	61
2,4-Dichlorophenol	0.0500	0.0389	0.0396	77.8	79.2	39.0-135			1.78	50
2,4-Dimethylphenol	0.0500	0.0342	0.0354	68.4	70.8	32.0-120			3.45	58
4,6-Dinitro-2-methylphenol	0.0500	0.0476	0.0468	95.2	93.6	1.00-181			1.69	203
2,4-Dinitrophenol	0.0500	0.0421	0.0400	84.2	80.0	1.00-191			5.12	132
2-Nitrophenol	0.0500	0.0414	0.0436	82.8	87.2	29.0-182			5.16	55
4-Nitrophenol	0.0500	0.0188	0.0187	37.6	37.4	1.00-132			0.533	131
Pentachlorophenol	0.0500	0.0422	0.0426	84.4	85.2	14.0-176			0.943	86
Phenol	0.0500	0.0156	0.0167	31.2	33.4	5.00-120			6.81	64

Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Laboratory Control Sample (LCS) + Laboratory Control Sample Duplicate (LCSD)

(LCS) R3372434-1 12/29/18 09:45 • (LCSD) R3372434-2 12/29/18 10:08

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2,4,6-Trichlorophenol	0.0500	0.0448	0.0452	89.6	90.4	37.0-144			0.889	58
(S) Nitrobenzene-d5				*53.1*	*57.5*	*15.0-314*				
(S) 2-Fluorobiphenyl				*67.2*	*68.1*	*22.0-127*				
(S) p-Terphenyl-d14				*66.7*	*73.5*	*29.0-141*				
(S) Phenol-d5				*24.9*	*26.5*	*8.00-424*				
(S) 2-Fluorophenol				*42.1*	*45.0*	*10.0-120*				
(S) 2,4,6-Tribromophenol				*78.5*	*76.5*	*10.0-153*				

L1056417-01 Original Sample (OS) + Matrix Spike (MS) + Matrix Spike Duplicate (MSD)

(OS) L1056417-01 12/29/18 13:40 • (MS) R3372434-4 12/29/18 14:04 • (MSD) R3372434-5 12/29/18 14:27

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0500	ND	0.0400	0.0393	80.0	78.6	1	47.0-145			1.77	48
Acenaphthylene	0.0500	ND	0.0401	0.0389	80.2	77.8	1	33.0-145			3.04	74
Anthracene	0.0500	ND	0.0397	0.0387	79.4	77.4	1	27.0-133			2.55	56
Benzidine	0.0500	ND	ND	ND	0.000	0.000	1	1.00-120	J6	J6	0.000	40
Benzo(a)anthracene	0.0500	ND	0.0439	0.0432	87.8	86.4	1	33.0-143			1.61	53
Benzo(b)fluoranthene	0.0500	ND	0.0392	0.0394	78.4	78.8	1	24.0-159			0.509	71
Benzo(k)fluoranthene	0.0500	ND	0.0423	0.0409	84.6	81.8	1	11.0-162			3.37	63
Benzo(g,h,i)perylene	0.0500	ND	0.0438	0.0430	87.6	86.0	1	1.00-219			1.84	97
Benzo(a)pyrene	0.0500	ND	0.0385	0.0386	77.0	77.2	1	17.0-163			0.259	72
Bis(2-chloroethoxy)methane	0.0500	ND	0.0317	0.0317	63.4	63.4	1	33.0-184			0.000	54
Bis(2-chloroethyl)ether	0.0500	ND	0.0316	0.0315	63.2	63.0	1	12.0-158			0.317	108
Bis(2-chloroisopropyl)ether	0.0500	ND	0.0355	0.0351	71.0	70.2	1	36.0-166			1.13	76
4-Bromophenyl-phenylether	0.0500	ND	0.0419	0.0415	83.8	83.0	1	53.0-127			0.959	43
2-Chloronaphthalene	0.0500	ND	0.0387	0.0387	77.4	77.4	1	60.0-120			0.000	24
4-Chlorophenyl-phenylether	0.0500	ND	0.0417	0.0406	83.4	81.2	1	25.0-158			2.67	61
Chrysene	0.0500	ND	0.0421	0.0410	84.2	82.0	1	17.0-168			2.65	87
Dibenz(a,h)anthracene	0.0500	ND	0.0433	0.0425	86.6	85.0	1	1.00-227			1.86	126
3,3-Dichlorobenzidine	0.0500	ND	0.0356	0.0385	71.2	77.0	1	1.00-262			7.83	108
2,4-Dinitrotoluene	0.0500	ND	0.0430	0.0422	86.0	84.4	1	39.0-139			1.88	42
2,6-Dinitrotoluene	0.0500	ND	0.0408	0.0406	81.6	81.2	1	50.0-158			0.491	48
Fluoranthene	0.0500	ND	0.0421	0.0412	84.2	82.4	1	26.0-137			2.16	66
Fluorene	0.0500	ND	0.0398	0.0392	79.6	78.4	1	59.0-121			1.52	38
Hexachlorobenzene	0.0500	ND	0.0431	0.0434	86.2	86.8	1	1.00-152			0.694	55
Hexachloro-1,3-butadiene	0.0500	ND	0.0374	0.0370	74.8	74.0	1	24.0-120			1.08	62
Hexachlorocyclopentadiene	0.0500	ND	0.0292	0.0341	58.4	68.2	1	10.0-146			15.5	34
Hexachloroethane	0.0500	ND	0.0332	0.0333	66.4	66.6	1	40.0-120			0.301	52

WG1216654

QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE

Semi Volatile Organic Compounds. (GC/MS) by Method 625.1

L1056419-01

L1056417-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056417-01 12/29/18 13:40 • (MS) R3372434-4 12/29/18 14:04 • (MSD) R3372434-5 12/29/18 14:27

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Indeno(1,2,3-cd)pyrene	0.0500	ND	0.0425	0.0417	85.0	83.4	1	1.00-171			1.90	99
Isophorone	0.0500	ND	0.0321	0.0318	64.2	63.6	1	21.0-196			0.939	90
Naphthalene	0.0500	ND	0.0329	0.0325	65.8	65.0	1	21.0-133			1.22	65
Nitrobenzene	0.0500	ND	0.0316	0.0316	63.2	63.2	1	35.0-180			0.000	62
n-Nitrosodimethylamine	0.0500	ND	0.0187	0.0178	37.4	35.6	1	10.0-120			4.93	40
n-Nitrosodiphenylamine	0.0500	ND	0.0381	0.0374	76.2	74.8	1	15.0-160			1.85	28
n-Nitrosodi-n-propylamine	0.0500	ND	0.0335	0.0322	67.0	64.4	1	1.00-230			3.96	87
Phenanthrene	0.0500	ND	0.0396	0.0383	79.2	76.6	1	54.0-120			3.34	39
Benzylbutyl phthalate	0.0500	ND	0.0411	0.0396	82.2	79.2	1	1.00-152			3.72	60
Bis(2-ethylhexyl)phthalate	0.0500	ND	0.0416	0.0409	83.2	81.8	1	8.00-158			1.70	82
Di-n-butyl phthalate	0.0500	ND	0.0421	0.0413	84.2	82.6	1	1.00-120			1.92	47
Diethyl phthalate	0.0500	ND	0.0399	0.0386	79.8	77.2	1	1.00-120			3.31	100
Dimethyl phthalate	0.0500	ND	0.0417	0.0406	83.4	81.2	1	1.00-120			2.67	183
Di-n-octyl phthalate	0.0500	ND	0.0435	0.0424	87.0	84.8	1	4.00-146			2.56	69
Pyrene	0.0500	ND	0.0411	0.0398	82.2	79.6	1	52.0-120			3.21	49
1,2,4-Trichlorobenzene	0.0500	ND	0.0366	0.0363	73.2	72.6	1	44.0-142			0.823	50
1,2-Diphenylhydrazine	0.0500	ND	0.0329	0.0323	65.8	64.6	1	18.0-156			1.84	34
4-Chloro-3-methylphenol	0.0500	ND	0.0345	0.0328	69.0	65.6	1	22.0-147			5.05	73
2-Chlorophenol	0.0500	ND	0.0363	0.0363	72.6	72.6	1	23.0-134			0.000	61
2,4-Dichlorophenol	0.0500	ND	0.0384	0.0382	76.8	76.4	1	39.0-135			0.522	50
2,4-Dimethylphenol	0.0500	ND	0.0328	0.0334	65.6	66.8	1	32.0-120			1.81	58
4,6-Dinitro-2-methylphenol	0.0500	ND	0.0436	0.0423	87.2	84.6	1	1.00-181			3.03	203
2,4-Dinitrophenol	0.0500	ND	0.0419	0.0400	83.8	80.0	1	1.00-191			4.64	132
2-Nitrophenol	0.0500	ND	0.0408	0.0412	81.6	82.4	1	29.0-182			0.976	55
4-Nitrophenol	0.0500	ND	0.0196	0.0191	39.2	38.2	1	1.00-132			2.58	131
Pentachlorophenol	0.0500	ND	0.0426	0.0404	85.2	80.8	1	14.0-176			5.30	86
Phenol	0.0500	ND	0.0165	0.0160	33.0	32.0	1	5.00-120			3.08	64
2,4,6-Trichlorophenol	0.0500	ND	0.0445	0.0441	89.0	88.2	1	37.0-144			0.903	58
(S) Nitrobenzene-d5					*51.4*	*52.1*		*15.0-314*				
(S) 2-Fluorobiphenyl					*65.9*	*66.0*		*22.0-127*				
(S) p-Terphenyl-d14					*70.8*	*70.1*		*29.0-141*				
(S) Phenol-d5					*26.2*	*25.7*		*8.00-424*				
(S) 2-Fluorophenol					*42.5*	*42.6*		*10.0-120*				
(S) 2,4,6-Tribromophenol					*72.5*	*69.5*		*10.0-153*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed; Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1,6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1,4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

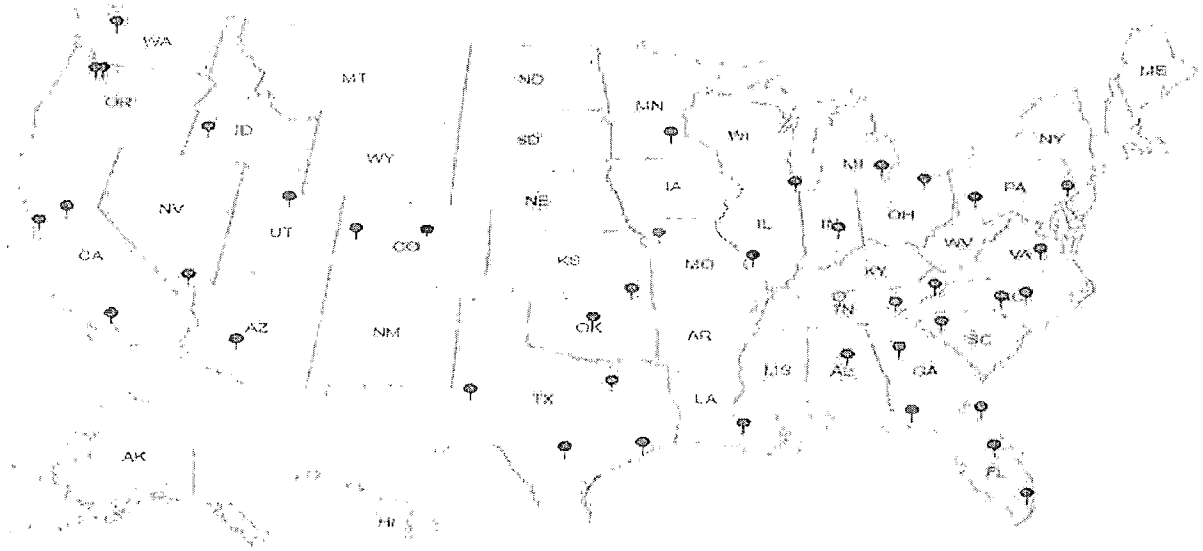
Other Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Client Service Centers

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Billing Information

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace Analytical

Report To

Email To

Project Description

City/State Collected

Phone Fax

Client Project #

Lab Project #

Lab ID L1056419

Table # DODD

Acctnum:

Template:

Prelogin:

TSR:

PB:

Shipped Via:

Sample # (lab only)

Sampled by (print & sign)

Sample ID Direct Entry

Collected (signature)

Immediately Packed on Ice N Y

Rush? (Lab MUST Be Notified)

Same Day Five Day

Next Day 5 Day (Rad Only)

Two Day 10 Day (Rad Only)

Three Day Other

Date Results Needed

Quote #

No. of Cntrs

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - Wastewater
DW - Drinking Water
OT - Other

Remarks:

FAD SCREEN: <0.5 mR/hr

pH ____ Temp ____

Flow ____ Other ____

Sample Receipt Checklist

COC Signed/Accurate: Y N

Bottles arrive intact: Y N

Correct Bottles Used: Y N

Sufficient volume sent: Y N

If Applicable

VOA Zero Headspace: Y N

Preservation Correct/Checked: Y N

Samples returned via: UPS FedEx Courier

Tracking # 4624 2990 5720

Relinquished by (Signature)	Date	Time	Received by (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by (Signature)	Date	Time	Received by (Signature)	Temp: °C Bottles Received: 0.7-0.3=0.4 7
				If preservation required by Login: Date/Time
Relinquished by (Signature)	Date	Time	Received for lab by (Signature)	Date: 12/27/18 Time: 10:15
				Hold:

Condition: (lab use only) / OK

Katie Ingram

Login #: [illegible]	Client:POLYENV	Date:12/27/18	Evaluated by:Myra "Katie" Ingram

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time	x	Unsigned relinquished/received		**If Broken Container:**
	Temperature not within range		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type		Please specify Metals requested.		Insufficient packing material inside cooler
	Bottle not labeled		Please specify TAT requested		Improper handling (Shipped on [illegible])
	Insufficient sample volume		Received and/or collected on COC		Sample was frozen
	Sample is biphasic		Sample IDs on containers do not match IDs on COC		Container lid not intact
	Vials received with headspace		Trip Blank not received		**If no Chain of Custody:**
	Broken container		Client did not "X" analysis		Received by
	Broken container		Chain of Custody is missing		Date/Time
	Sufficient sample remains				Temp/Cont. Rec'd/pH
					Carrier
					Tracking#

Login Comments:

Please clarify the analysis requested.

Client informed by:	Call	x	Email		Voice Mail		Date:12/27/18	Time:1150

TSR Initials:	Client Contact: Lee Burton

Login Instructions:

Please log for the following

- 625.1BNA
- 8021 1AAX
- Metals
  - 5BG
  - A5G
  - B2G
  - CDG
  - CRG

- CUG
- PSG
- HG
- NG
- SEG
- AGG
- TIG
- ZNG

- CFi
- PHT-preserve
- HARD

Polyenvironmental Corporation
Environmental Laboratory

P.O. Box 837 *Dothan, Alabama 36302* *334-793-4700*

Invoice

Customer No.: **50200**
Invoice No.: **49206**
Invoice Date: **01/21/19**
PO No.:
Terms: **Net 30 Days**

Geneva Water Works
P.O. Box 370
Geneva,AL 36340
ATTN: Accounts Payable Dept.

For Analytical Services From 12/19/18 To 12/19/18

Form 2A Expanded Parameter List	**$650.00**

Amount Due: $650.00

Permit Renewal performed by Pace
Pace sample # L1056419

Polyenvironmental Corporation
Environmental Laboratory

P.O. Box 837 *Dothan, Alabama 36302* *334-793-4700*

01/21/2019
Geneva Water Works
P.O. Box 370
Geneva,AL 36340
ATTN: James Dixon

Waste Water Treatment Plant

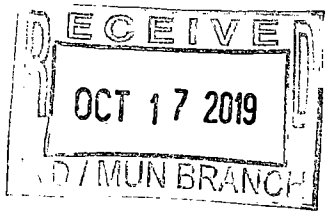
Permit Renewal performed by Pace
Pace sample # L1058259

Polyenvironmental Corporation

Respectfully Submitted,

2019-01-0200

Lyn Buntin, Environmental Project Manager



POLYENVIRONMENTAL CORPORATION

CHAIN OF CUSTODY

1885 Headland Ave.
Dothan, AL 36303
Phone: (334) 793-4700

PO Box 837
Dothan, AL 36302
FAX: (334) 677-9477

Client: Carbon Water Wor
Address:
City, State: Carbon ZIP: 36749

Facility: WWTP
Location:
Name of Sampler: [signature]

Sample Location (Outfall No., Influent, Effluent, Etc.)	Preservative	Sample Date / Time	Sample Type Composite, Grab, Etc.	Sample Frequency Qtrly, Semi-Annual, Etc.	Analysis Required
V NOTCH.	Y	1-2-19 8:00	COMP		METALS 3151(8

For Waste Water Samples Only:

Flow: _____ (mgd)

For Storm Water Samples Only:

Rainfall: _____ (inches)

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Date / Time
[signature]	1-2-19 9:57	[signature]	1-2-19 0957
	Date / Time		Date / Time

Samples Shipped On Ice (Yes / No)

Turnaround Time (Rush / Normal)

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

January 09, 2019

Poly Environmental Corp. Env. Lab

Sample Delivery Group:	L1058259
Samples Received:	01/03/2019
Project Number:	
Description:	Geneva Water Works WWTP

Report To:

Mr. Steve Davis
PO Box 837
Dothan, AL 36303

Entire Report Reviewed By: Cassandra Foster

Cassandra Foster
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

ONE LAB. NATIONWIDE.

V-NOTCH 318167 L1058259-01 WW

			Collected by	Collected date/time	Received date/time
			Client	01/02/19 08:00	01/03/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 130.1	WG1220213	1	01/08/19 13:53	01/08/19 13:53	GB
Wet Chemistry by Method 420.4	WG1219502	1	01/05/19 10:00	01/08/19 12:08	KK
Wet Chemistry by Method 4500CN E-2011	WG1219523	1	01/07/19 00:18	01/07/19 11:37	KK
Mercury by Method 245.1	WG1219855	1	01/07/19 10:22	01/07/19 16:52	TCT
Metals (ICPMS) by Method 200.8	WG1218847	1	01/05/19 12:12	01/07/19 01:00	JDG
Volatile Organic Compounds (GC/MS) by Method 624.1	WG1219520	1	01/05/19 13:40	01/05/19 13:40	BMB
Semi Volatile Organic Compounds (GC/MS) by Method 625.1	WG1219735	1	01/06/19 06:42	01/06/19 18:20	LEA

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Cassandra Foster
Project Manager

Sample Handling and Receiving

2-Chloroethyl vinyl ether degrades under acidic conditions. Associated results were determined from the analysis of an acid-preserved sample.

Lab Sample ID	Project Sample ID	Method
L1058259-01	V-NOTCH 318167	624.1

Wet Chemistry by Method 130.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (colorimetric) as CaCO3	46.4		30.0	1	01/08/2019 13:53	WG1229213

Wet Chemistry by Method 420.4

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Total Phenol by 4AAP	ND		0.0400	1	01/08/2019 12:08	WG1219502

Wet Chemistry by Method 4500CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Cyanide	ND		0.00500	1	01/07/2019 11:37	WG1219523

Mercury by Method 245.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	01/07/2019 16:52	WG1219855

Metals (ICPMS) by Method 200.8

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND	J4	0.00200	1	01/07/2019 01:00	WG1218847
Arsenic	ND		0.00100	1	01/07/2019 01:00	WG1218847
Beryllium	ND		0.00100	1	01/07/2019 01:00	WG1218847
Cadmium	ND		0.00100	1	01/07/2019 01:00	WG1218847
Chromium	ND		0.00100	1	01/07/2019 01:00	WG1218847
Copper	0.00482		0.00100	1	01/07/2019 01:00	WG1218847
Lead	ND		0.00100	1	01/07/2019 01:00	WG1218847
Nickel	ND		0.00100	1	01/07/2019 01:00	WG1218847
Selenium	ND		0.00200	1	01/07/2019 01:00	WG1218847
Silver	ND		0.00100	1	01/07/2019 01:00	WG1218847
Thallium	ND		0.00100	1	01/07/2019 01:00	WG1218847
Zinc	0.0248		0.0100	1	01/07/2019 01:00	WG1218847

Volatile Organic Compounds (GC/MS) by Method 624.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acrolein	ND	J4	0.0500	1	01/05/2019 13:40	WG1219520
Acrylonitrile	ND		0.0100	1	01/05/2019 13:40	WG1219520
Benzene	ND		0.00100	1	01/05/2019 13:40	WG1219520
Bromodichloromethane	0.00170		0.00100	1	01/05/2019 13:40	WG1219520
Bromoform	ND		0.00100	1	01/05/2019 13:40	WG1219520
Bromomethane	ND		0.00500	1	01/05/2019 13:40	WG1219520
Carbon tetrachloride	ND		0.00100	1	01/05/2019 13:40	WG1219520
Chlorobenzene	ND		0.00100	1	01/05/2019 13:40	WG1219520
Chlorodibromomethane	ND		0.00100	1	01/05/2019 13:40	WG1219520
Chloroethane	ND		0.00500	1	01/05/2019 13:40	WG1219520
2-Chloroethyl vinyl ether	ND		0.0500	1	01/05/2019 13:40	WG1219520
Chloroform	ND		0.00500	1	01/05/2019 13:40	WG1219520
Chloromethane	ND		0.00250	1	01/05/2019 13:40	WG1219520
1,2-Dichlorobenzene	ND		0.00100	1	01/05/2019 13:40	WG1219520
1,3-Dichlorobenzene	ND		0.00100	1	01/05/2019 13:40	WG1219520
1,4-Dichlorobenzene	ND		0.00100	1	01/05/2019 13:40	WG1219520
Dichlorodifluoromethane	ND		0.00500	1	01/05/2019 13:40	WG1219520

Volatile Organic Compounds (GC/MS) by Method 624.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1-Dichloroethane	ND		0.00100	1	01/05/2019 13:40	WG1219520
1,2-Dichloroethane	ND		0.00100	1	01/05/2019 13:40	WG1219520
1,1-Dichloroethene	ND		0.00100	1	01/05/2019 13:40	WG1219520
trans-1,2-Dichloroethene	ND		0.00100	1	01/05/2019 13:40	WG1219520
1,2-Dichloropropane	ND		0.00100	1	01/05/2019 13:40	WG1219520
cis-1,3-Dichloropropene	ND		0.00100	1	01/05/2019 13:40	WG1219520
trans-1,3-Dichloropropene	ND		0.00100	1	01/05/2019 13:40	WG1219520
Ethylbenzene	ND		0.00100	1	01/05/2019 13:40	WG1219520
Methylene Chloride	ND		0.00500	1	01/05/2019 13:40	WG1219520
1,1,2,2-Tetrachloroethane	ND		0.00100	1	01/05/2019 13:40	WG1219520
Tetrachloroethene	ND		0.00100	1	01/05/2019 13:40	WG1219520
Toluene	ND		0.00100	1	01/05/2019 13:40	WG1219520
1,1,1-Trichloroethane	ND		0.00100	1	01/05/2019 13:40	WG1219520
1,1,2-Trichloroethane	ND		0.00100	1	01/05/2019 13:40	WG1219520
Trichloroethene	ND		0.00100	1	01/05/2019 13:40	WG1219520
Trichlorofluoromethane	ND		0.00500	1	01/05/2019 13:40	WG1219520
Vinyl chloride	ND		0.00100	1	01/05/2019 13:40	WG1219520
Total Xylenes	ND		0.00300	1	01/05/2019 13:40	WG1219520
(S) Toluene-d8	*108*		*80.0-120*		*01/05/2019 13:40*	WG1219520
(S) Dibromofluoromethane	*88.0*		*76.0-123*		*01/05/2019 13:40*	WG1219520
(S) a,a,a-Trifluorotoluene	*103*		*80.0-120*		*01/05/2019 13:40*	WG1219520
(S) 4-Bromofluorobenzene	*108*		*80.0-120*		*01/05/2019 13:40*	WG1219520

Sample Narrative:

L1058259-01 WG1219520: V624.1 AAX received in vial preserved with HCL.

Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00100	1	01/06/2019 18:20	WG1219735
Acenaphthylene	ND		0.00100	1	01/06/2019 18:20	WG1219735
Anthracene	ND		0.00100	1	01/06/2019 18:20	WG1219735
Benzidine	ND	J3 J4	0.0100	1	01/06/2019 18:20	WG1219735
Benzo(a)anthracene	ND		0.00100	1	01/06/2019 18:20	WG1219735
Benzo(b)fluoranthene	ND		0.00100	1	01/06/2019 18:20	WG1219735
Benzo(k)fluoranthene	ND		0.00100	1	01/06/2019 18:20	WG1219735
Benzo(g,h,i)perylene	ND		0.00100	1	01/06/2019 18:20	WG1219735
Benzo(a)pyrene	ND		0.00100	1	01/06/2019 18:20	WG1219735
Bis(2-chlorethoxy)methane	ND		0.0100	1	01/06/2019 18:20	WG1219735
Bis(2-chloroethyl)ether	ND		0.0100	1	01/06/2019 18:20	WG1219735
Bis(2-chloroisopropyl)ether	ND		0.0100	1	01/06/2019 18:20	WG1219735
4-Bromophenyl-phenylether	ND		0.0100	1	01/06/2019 18:20	WG1219735
2-Chloronaphthalene	ND	J4	0.00100	1	01/06/2019 18:20	WG1219735
4-Chlorophenyl-phenylether	ND		0.0100	1	01/06/2019 18:20	WG1219735
Chrysene	ND		0.00100	1	01/06/2019 18:20	WG1219735
Dibenz(a,h)anthracene	ND		0.00100	1	01/06/2019 18:20	WG1219735
3,3-Dichlorobenzidine	ND		0.0100	1	01/06/2019 18:20	WG1219735
2,4-Dinitrotoluene	ND		0.0100	1	01/06/2019 18:20	WG1219735
2,6-Dinitrotoluene	ND		0.0100	1	01/06/2019 18:20	WG1219735
1,2-Diphenylhydrazine	ND		0.0100	1	01/06/2019 18:20	WG1219735
Fluoranthene	ND		0.00100	1	01/06/2019 18:20	WG1219735
Fluorene	ND		0.00100	1	01/06/2019 18:20	WG1219735
Hexachlorobenzene	ND		0.00100	1	01/06/2019 18:20	WG1219735
Hexachloro-1,3-butadiene	ND		0.0100	1	01/06/2019 18:20	WG1219735
Hexachlorocyclopentadiene	ND		0.0100	1	01/06/2019 18:20	WG1219735
Hexachloroethane	ND		0.0100	1	01/06/2019 18:20	WG1219735

Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Indeno(1,2,3-cd)pyrene	ND		0.00100	1	01/06/2019 18:20	WG1219735
Isophorone	ND		0.0100	1	01/06/2019 18:20	WG1219735
Naphthalene	ND		0.00100	1	01/06/2019 18:20	WG1219735
Nitrobenzene	ND		0.0100	1	01/06/2019 18:20	WG1219735
n-Nitrosodimethylamine	ND		0.0100	1	01/06/2019 18:20	WG1219735
n-Nitrosodiphenylamine	ND		0.0100	1	01/06/2019 18:20	WG1219735
n-Nitrosodi-n-propylamine	ND		0.0100	1	01/06/2019 18:20	WG1219735
Phenanthrene	ND		0.00100	1	01/06/2019 18:20	WG1219735
Benzylbutyl phthalate	ND		0.00300	1	01/06/2019 18:20	WG1219735
Bis(2-ethylhexyl)phthalate	ND		0.00300	1	01/06/2019 18:20	WG1219735
Di-n-butyl phthalate	ND		0.00300	1	01/06/2019 18:20	WG1219735
Diethyl phthalate	ND		0.00300	1	01/06/2019 18:20	WG1219735
Dimethyl phthalate	ND		0.00300	1	01/06/2019 18:20	WG1219735
Di-n-octyl phthalate	ND		0.00300	1	01/06/2019 18:20	WG1219735
Pyrene	ND		0.00100	1	01/06/2019 18:20	WG1219735
1,2,4-Trichlorobenzene	ND		0.0100	1	01/06/2019 18:20	WG1219735
4-Chloro-3-methylphenol	ND		0.0100	1	01/06/2019 18:20	WG1219735
2-Chlorophenol	ND		0.0100	1	01/06/2019 18:20	WG1219735
2,4-Dichlorophenol	ND		0.0100	1	01/06/2019 18:20	WG1219735
2,4-Dimethylphenol	ND		0.0100	1	01/06/2019 18:20	WG1219735
4,6-Dinitro-2-methylphenol	ND		0.0100	1	01/06/2019 18:20	WG1219735
2,4-Dinitrophenol	ND		0.0100	1	01/06/2019 18:20	WG1219735
2-Nitrophenol	ND		0.0100	1	01/06/2019 18:20	WG1219735
4-Nitrophenol	ND		0.0100	1	01/06/2019 18:20	WG1219735
Pentachlorophenol	ND		0.0100	1	01/06/2019 18:20	WG1219735
Phenol	ND		0.0100	1	01/06/2019 18:20	WG1219735
2,4,6-Trichlorophenol	ND		0.0100	1	01/06/2019 18:20	WG1219735
(S) Nitrobenzene-d5	*43.9*		*15.0-314*		*01/06/2019 18:20*	WG1219735
(S) 2-Fluorobiphenyl	*44.4*		*22.0-127*		*01/06/2019 18:20*	WG1219735
(S) p-Terphenyl-d14	*48.4*		*29.0-141*		*01/06/2019 18:20*	WG1219735
(S) Phenol-d5	*16.6*		*8.00-424*		*01/06/2019 18:20*	WG1219735
(S) 2-Fluorophenol	*27.7*		*10.0-120*		*01/06/2019 18:20*	WG1219735
(S) 2,4,6-Tribromophenol	*35.8*		*10.0-153*		*01/06/2019 18:20*	WG1219735

Method Blank (MB)

(MB) R3374164-1 01/08/19 13:45

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Hardness (colorimetric) as CaCO3	U		1.43	30.0

L1058019-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1058019-01 01/08/19 13:48 • (DUP) R3374164-3 01/08/19 13:49

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Hardness (colorimetric) as CaCO3	89.8	89.3	1	0.558		20

Laboratory Control Sample (LCS)

(LCS) R3374164-2 01/08/19 13:46

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Hardness (colorimetric) as CaCO3	150	153	102	85.0-115	

L1058023-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1058023-01 01/08/19 13:50 • (MS) R3374164-4 01/08/19 13:50 • (MSD) R3374164-5 01/08/19 13:51

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Hardness (colorimetric) as CaCO3	150	89.9	206	205	77.4	76.7	1	80.0-120	E J6	E J6	0.487	20

Method Blank (MB)

(MB) R3374109-1 01/08/19 12:01

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Total Phenol by 4AAP	U		0.00830	0.0400

L1056934-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1056934-02 01/08/19 12:05 • (DUP) R3374109-3 01/08/19 12:06

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Total Phenol by 4AAP	ND	0.000	1	0.000		20

L1058253-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1058253-02 01/08/19 12:06 • (DUP) R3374109-4 01/08/19 12:07

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Total Phenol by 4AAP	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3374109-2 01/08/19 12:02

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Total Phenol by 4AAP	0.500	0.476	95.2	90.0-110	

L1057966-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1057966-02 01/08/19 12:15 • (MS) R3374109-5 01/08/19 12:16

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/l	mg/l	mg/l	%		%	
Total Phenol by 4AAP	1.00	ND	0.780	78.0	1	90.0-110	J6

L1056798-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056798-02 01/08/19 12:21 • (MS) R3374109-6 01/08/19 12:22 • (MSD) R3374109-7 01/08/19 12:23

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Total Phenol by 4AAP	0.0200	ND	ND	ND	0.000	0.000	50	90.0-110	J6	J6	0.000	20

L1055798-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1056798-02 01/08/19 12:21 • (MS) R3374109-6 01/08/19 12:22 • (MSD) R3374109-7 01/08/19 12:23

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%

Sample Narrative:
OS diluted sample due to interference on instrument

WG1219523

Wet Chemistry by Method 4500CN E-2011

QUALITY CONTROL SUMMARY

L1058259-01

ONE LAB. NATIONWIDE.

Method Blank (MB)

(MB) R3373834-1 01/07/19 10:56

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L1057340-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1057340-01 01/07/19 11:02 • (DUP) R3373834-3 01/07/19 11:03

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Cyanide	ND	0.000	1	0.000		20

L1057806-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1057806-02 01/07/19 11:25 • (DUP) R3373834-6 01/07/19 11:26

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Cyanide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3373834-2 01/07/19 10:57

	Spike Amount	LCS Result	LCS Rec	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Cyanide	0.100	0.101	101	85-115	

L1057604-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1057604-02 01/07/19 11:13 • (MS) R3373834-4 01/07/19 11:14 • (MSD) R3373834-5 01/07/19 11:15

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec	MSD Rec	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	U	0.0882	0.0948	88.2	94.8	1	75-125			7.21	20

L1058022-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1058022-01 01/07/19 11:30 • (MS) R3373834-7 01/07/19 11:31 • (MSD) R3373834-8 01/07/19 11:32

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec	MSD Rec	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0948	0.0967	94.8	96.7	1	75-125			1.98	20

Method Blank (MB)

(MB) R3373967-1 01/07/19 16:10

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Mercury	U		0.0000490	0.000200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3373967-2 01/07/19 16:13 • (LCSD) R3373967-3 01/07/19 16:15

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Mercury	0.00300	0.00266	0.00260	88.8	86.7	85.0-115			2.39	20

[illegible] (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1057773-01 01/07/19 16:18 • (MS) R3373967-4 01/07/19 16:20 • (MSD) R3373967-5 01/07/19 16:23

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Mercury	0.00300	ND	0.00321	0.00312	107	104	1	70.0-130			2.92	20

L1057944-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1057944-01 01/07/19 16:25 • (MS) R3373967-6 01/07/19 16:27 • (MSD) R3373967-7 01/07/19 16:30

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Mercury	0.00300	U	0.00295	0.00296	98.6	98.7	1	70.0-130			0.135	20

Method Blank (MB)

(MB) R3373823-1 01/06/19 22:51

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Antimony	U		0.000754	0.00200
Arsenic	U		0.000170	0.00100
Beryllium	U		0.000239	0.00100
Cadmium	U		0.000220	0.00100
Chromium	U		0.000320	0.00100
Copper	U		0.000270	0.00100
Lead	U		0.000260	0.00100
Nickel	U		0.000320	0.00100
Selenium	U		0.000320	0.00200
Silver	U		0.000180	0.00100
Thallium	U		0.000280	0.00100
Zinc	U		0.00191	0.0100

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3373823-2 01/06/19 22:56 • (LCSD) R3373823-3 01/06/19 23:00

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Antimony	0.0500	0.0672	0.0671	134	134	85.0-115	J4	J4	0.167	20
Arsenic	0.0500	0.0497	0.0492	99.3	98.4	85.0-115			0.901	20
Beryllium	0.0500	0.0467	0.0475	93.5	95.0	85.0-115			1.65	20
Cadmium	0.0500	0.0491	0.0486	98.2	97.3	85.0-115			0.984	20
Chromium	0.0500	0.0491	0.0494	98.1	98.8	85.0-115			0.588	20
Copper	0.0500	0.0503	0.0500	101	100	85.0-115			0.589	20
Lead	0.0500	0.0487	0.0486	97.4	97.1	85.0-115			0.299	20
Nickel	0.0500	0.0507	0.0506	101	101	85.0-115			0.216	20
Selenium	0.0500	0.0539	0.0516	108	103	85.0-115			4.33	20
Silver	0.0500	0.0526	0.0526	105	105	85.0-115			0.0141	20
Thallium	0.0500	0.0494	0.0479	98.8	95.7	85.0-115			3.19	20
Zinc	0.0500	0.0509	0.0505	102	101	85.0-115			0.749	20

L1057576-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1057576-01 01/06/19 23:05 • (MS) R3373823-5 01/06/19 23:14 • (MSD) R3373823-6 01/06/19 23:18

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Antimony	0.0500	ND	0.0708	0.0716	140	141	1	70.0-130	J5	J5	1.08	20
Arsenic	0.0500	ND	0.0509	0.0506	101	100	1	70.0-130			0.619	20
Beryllium	0.0500	ND	0.0494	0.0475	98.9	95.1	1	70.0-130			3.93	20

L1057576-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1057576-01 01/06/19 23:05 • (MS) R3373823-5 01/06/19 23:14 • (MSD) R3373823-6 01/06/19 23:18

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cadmium	0.0500	ND	0.0501	0.0505	99.5	100	1	70.0-130			0.797	20
Chromium	0.0500	0.00315	0.0539	0.0529	102	99.6	1	70.0-130			1.85	20
Copper	0.0500	0.00197	0.0515	0.0523	99.0	101	1	70.0-130			1.52	20
Lead	0.0500	ND	0.0496	0.0493	99.2	98.6	1	70.0-130			0.618	20
Nickel	0.0500	0.00192	0.0530	0.0528	102	102	1	70.0-130			0.329	20
Selenium	0.0500	ND	0.0527	0.0548	103	107	1	70.0-130			3.89	20
Silver	0.0500	ND	0.0540	0.0527	107	105	1	70.0-130			2.59	20
Zinc	0.0500	ND	0.0562	0.0557	97.8	98.8	1	70.0-130			0.914	20

L1057586-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1057586-01 01/06/19 23:23 • (MS) R3373823-7 01/06/19 23:28 • (MSD) R3373823-8 01/06/19 23:32

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	0.0500	ND	0.0678	0.0716	134	141	1	70.0-130	J5	J5	5.41	20
Arsenic	0.0500	ND	0.0514	0.0522	102	103	1	70.0-130			1.44	20
Beryllium	0.0500	ND	0.0480	0.0492	96.4	97.8	1	70.0-130			2.46	20
Cadmium	0.0500	ND	0.0513	0.0513	102	102	1	70.0-130			0.101	20
Chromium	0.0500	0.00216	0.0525	0.0537	101	102	1	70.0-130			1.28	20
Copper	0.0500	0.0169	0.0678	0.0681	102	102	1	70.0-130			0.467	20
Lead	0.0500	ND	0.0507	0.0509	99.9	100	1	70.0-130			0.505	20
Nickel	0.0500	0.00184	0.0538	0.0541	104	105	1	70.0-130			0.521	20
Selenium	0.0500	ND	0.0503	0.0508	99.4	100	1	70.0-130			0.908	20
Silver	0.0500	ND	0.0540	0.0545	107	108	1	70.0-130			0.931	20
Zinc	0.0500	0.0446	0.0970	0.0976	105	106	1	70.0-130			0.560	20

Method Blank (MB)

(MB) R3373680-4 01/05/19 11:32

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Acrolein	U		0.00887	0.0500
Acrylonitrile	U		0.00187	0.0100
Benzene	U		0.000231	0.00100
Bromodichloromethane	U		0.000380	0.00100
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000556	0.00500
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000451	0.00500
Chloroform	U		0.000324	0.00500
2-Chloroethyl vinyl ether	U		0.00301	0.0500
Chloromethane	U		0.000276	0.00250
1,2-Dichlorobenzene	U		0.000349	0.00100
1,3-Dichlorobenzene	U		0.000220	0.00100
1,4-Dichlorobenzene	U		0.000274	0.00100
Dichlorodifluoromethane	U		0.000551	0.00500
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
Ethylbenzene	U		0.000384	0.00100
Methylene Chloride	U		0.00100	0.00500
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000412	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100
1,1,2-Trichloroethane	U		0.000383	0.00100
Trichloroethene	U		0.000398	0.00100
Trichlorofluoromethane	U		0.00120	0.00500
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*106*			*80.0-120*
(S) Dibromofluoromethane	*87.5*			*76.0-123*
(S) 4-Bromofluorobenzene	*107*			*80.0-120*
(S) a,a,a-Trifluorotoluene	*104*			*80.0-120*

Laboratory Control Sample (LCS) + Laboratory Control Sample Duplicate (LCSD)

(LCS) R3373680-1 01/05/19 08:49 • (LCSD) R3373680-2 01/05/19 09:08

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acrylonitrile	0.125	0.0984	0.0967	78.7	75.7	60.0-140			1.76	20
Benzene	0.0250	0.0225	0.0225	90.0	90.2	65.0-135			0.222	20
Bromochloromethane	0.0250	0.0235	0.0233	94.2	93.4	70.0-135			0.828	20
Bromoform	0.0250	0.0235	0.0231	94.1	92.4	70.0-130			1.88	20
Bromomethane	0.0250	0.0190	0.0180	75.8	72.2	15.0-185			4.85	20
Acrolein	0.125	0.203	0.214	163	171	60.0-140	J4	J4	5.22	20
Carbon tetrachloride	0.0250	0.0212	0.0209	84.9	83.5	70.0-130			1.64	20
Chlorobenzene	0.0250	0.0266	0.0264	107	106	65.0-135			0.740	20
Chlorodibromomethane	0.0250	0.0254	0.0255	102	102	70.0-135			0.371	20
Chloroethane	0.0250	0.0214	0.0208	85.6	83.3	40.0-160			2.93	20
Chloroform	0.0250	0.0224	0.0220	89.5	87.9	70.0-135			1.79	20
Chloromethane	0.0250	0.0238	0.0231	95.1	92.5	0.100-205			2.77	20
1,2-Dichloroethylene	0.0250	0.0225	0.0229	89.9	91.5	65.0-135			1.68	20
1,3-Dichlorobenzene	0.0250	0.0268	0.0263	107	105	70.0-130			1.99	20
1,4-Dichlorobenzene	0.0250	0.0249	0.0247	99.5	98.6	65.0-135			0.904	20
2-Chloroethyl vinyl ether	0.125	0.121	0.121	97.1	97.0	0.100-225			0.118	20
Dichlorodifluoromethane	0.0250	0.0215	0.0209	86.0	83.6	49.0-155			2.87	20
1,1-Dichloroethane	0.0250	0.0219	0.0217	87.7	86.7	70.0-130			1.07	20
1,2-Dichloroethane	0.0250	0.0213	0.0210	85.3	83.9	70.0-130			1.67	20
1,1-Dichloroethene	0.0250	0.0221	0.0215	88.5	86.0	50.0-150			2.83	20
trans-1,2-Dichloroethene	0.0250	0.0219	0.0214	87.4	85.7	70.0-130			2.00	20
1,2-Dichloropropane	0.0250	0.0245	0.0244	98.0	97.4	35.0-165			0.561	20
cis-1,3-Dichloropropene	0.0250	0.0256	0.0257	102	103	25.0-175			0.192	20
trans-1,3-Dichloropropene	0.0250	0.0246	0.0247	98.6	98.8	50.0-150			0.213	20
Ethylbenzene	0.0250	0.0270	0.0268	108	107	60.0-140			0.674	20
Methylene Chloride	0.0250	0.0216	0.0216	86.2	86.4	60.0-140			0.223	20
1,1,2,2-Tetrachloroethane	0.0250	0.0250	0.0251	99.9	100	60.0-140			0.562	20
Tetrachloroethene	0.0250	0.0268	0.0264	107	106	70.0-130			1.60	20
Toluene	0.0250	0.0259	0.0257	103	103	70.0-130			0.533	20
1,1,1-Trichloroethane	0.0250	0.0223	0.0222	89.2	88.6	70.0-130			0.674	20
1,1,2-Trichloroethane	0.0250	0.0256	0.0256	102	102	70.0-130			0.448	20
Trichloroethene	0.0250	0.0247	0.0246	98.6	98.3	65.0-135			0.356	20
Trichlorofluoromethane	0.0250	0.0193	0.0192	77.3	76.6	50.0-150			0.854	20
Vinyl chloride	0.0250	0.0234	0.0233	93.6	93.1	5.00-195			0.512	20
Xylenes, Total	0.0750	0.0836	0.0824	111	110	77.0-120			1.45	20
(S) Toluene-d8				*103*	*104*	*80.0-120*				
(S) Dibromofluoromethane				*86.8*	*87.0*	*76.0-123*				
(S) 4-Bromofluorobenzene				*114*	*115*	*80.0-120*				
(S) a,a,a-Trifluorotoluene				*100*	*102*	*80.0-120*				

WG1219735

Semi Volatile Organic Compounds (GC/MS) by Method 625.1

QUALITY CONTROL SUMMARY

L1058259-01

ONE LAB. NATIONWIDE.

Method Blank (MB):

(MB) R3373756-3 01/06/19 14:24

Analyte	MB Result	MB Qualifier	MB MCL	MB RDL
	ug/l		mg/l	ug/l
Acenaphthene	U		0.000216	0.00100
Acenaphthylene	U		0.000309	0.00100
Anthracene	U		0.000291	0.00100
Benzidine	U		0.00412	0.100
Benzo(a)anthracene	U		0.0000975	0.00100
Benzo(b)fluoranthene	U		0.0000898	0.00100
Benzo(k)fluoranthene	U		0.000355	0.00100
Benzo(g,h,i)perylene	U		0.000951	0.00100
Benzo(a)pyrene	U		0.000240	0.00100
Bis(2-chloroethyl)ether	U		0.000329	0.0100
4,4'-Dibromobiphenyl	U		0.00762	0.0100
Bis(2-chloroisopropyl)ether	U		0.000446	0.0100
Bis(2-ethylhexyl)phthalate	U		0.000735	0.0100
4-Bromophenyl-phenylether	U		0.000380	0.00100
Butylbenzylphthalate	U		0.000403	0.0100
Carbazole	U		0.000332	0.00100
4-Chloroaniline	U		0.000277	0.00100
2-Chloronaphthalene	U		0.00202	0.0100
4-Chlorophenyl-phenylether	U		0.00165	0.0100
Chrysene	U		0.000279	0.00100
Dibenz(a,h)anthracene	U		0.000210	0.00100
Dibenzofuran	U		0.000323	0.00100
1,2-Dichlorobenzene	U		0.00134	0.00100
1,3-Dichlorobenzene	U		0.000329	0.0100
1,4-Dichlorobenzene	U		0.00121	0.0100
3,3-Dichlorobenzidine	U		0.000365	0.0100
2,4-Dichlorophenol	U		0.000229	0.00100
Diethylphthalate	U		0.000272	0.0100
Naphthalene	U		0.000377	0.00100
Nitrobenzene	U		0.000367	0.0100
4-Nitrosodimethylamine	U		0.00125	0.0100
4-Nitrosodiphenylamine	U		0.00119	0.0100
4-Nitrosodi-n-propylamine	U		0.000403	0.0100
Phenanthrene	U		0.000386	0.00100
Butylbenzylphthalate	U		0.000475	0.00300
Di(2-ethylhexyl)phthalate	U		0.000709	0.00300
Di-n-butylphthalate	U		0.000266	0.00300
Diethylphthalate	U		0.000282	0.00300
Dimethylphthalate	U		0.000283	0.00300
Di-n-octylphthalate	U		0.000278	0.00300

Method Blank (MB)

(MB) R3373756-3 01/06/19 14:24

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Hexachloroethane	U		0.000330	0.00100
1,2,4-Trichlorobenzene	U		0.000355	0.0100
1,2-Diphenylhydrazine	U		0.000318	0.0100
4-Chloro-3-methylphenol	U		0.000263	0.0100
2-Chlorophenol	U		0.000283	0.0100
2-Nitrophenol	U		0.000320	0.0100
4-Nitrophenol	U		0.00201	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.000334	0.0100
2,4,6-Trichlorophenol	U		0.000297	0.0100
2,4-Dichlorophenol	U		0.000284	0.0100
2,4-Dimethylphenol	U		0.000624	0.0100
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100
2,4-Dinitrophenol	U		0.00325	0.0100
(S) Nitrobenzene-d5	*39.3*			*15.0-314*
(S) 2-Fluorobiphenyl	*44.2*			*22.0-127*
(S) p-Terphenyl-d14	*51.9*			*29.0-141*
(S) Phenol-d6	*17.2*			*8.00-424*
(S) 2-Fluorophenol	*29.7*			*10.0-120*
(S) 2,4,6-Tribromophenol	*39.2*			*10.0-153*

Laboratory Control Sample (LCS) / Laboratory Control Sample Duplicate (LCSD)

(LCS) R3373756-1 01/06/19 13:36 • (LCSD) R3373756-2 01/06/19 14:00

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Acenaphthene	0.0500	0.0328	0.0312	65.6	62.4	47.0-145			5.00	48
Acenaphthylene	0.0500	0.0329	0.0309	65.8	61.8	33.0-145			6.27	74
Anthracene	0.0500	0.0329	0.0313	65.8	62.6	27.0-133			4.98	66
Benzidine	0.0500	0.00505	ND	10.1	0.000	1.00-120		J3 J4	200	36
Benzo(a)anthracene	0.0500	0.0320	0.0305	64.0	61.0	33.0-143			4.80	53
Benzo(b)fluoranthene	0.0500	0.0346	0.0328	69.2	65.6	24.0-159			5.34	71
Benzo(k)fluoranthene	0.0500	0.0343	0.0321	68.6	64.2	11.0-162			6.63	63
Benzo(g,h,i)perylene	0.0500	0.0353	0.0331	70.6	66.2	1.00-219			6.43	97
Benzo(a)pyrene	0.0500	0.0322	0.0306	64.4	61.2	17.0-163			5.10	72
Bis(2-chloroethoxy)methane	0.0500	0.0287	0.0275	57.4	55.0	1.00-219			4.27	54
Bis(2-chloroethyl)ether	0.0500	0.0312	0.0308	62.4	61.6	33.0-165			1.29	108
Bis(2-chloroisopropyl)ether	0.0500	0.0300	0.0297	60.0	59.4	36.0-166			1.01	76
4-Bromophenyl-phenylether	0.0500	0.0327	0.0320	65.4	64.0	53.0-127			2.16	43

Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Laboratory Control Sample (LCS) - Laboratory Control Sample Duplicate (LCSD)

(LCS) R3373756-1 01/06/19 13:36 • (LCSD) R3373756-2 01/06/19 14:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2-Chloronaphthalene	0.0500	0.0311	0.0296	62.2	59.2	60.0-120		J4	4.94	24
4-Chlorophenyl-phenylether	0.0500	0.0339	0.0322	67.8	64.4	25.0-158			5.14	61
Chrysene	0.0500	0.0346	0.0327	69.2	65.4	17.0-168			5.65	57
Dibenzo (a,h)anthracene	0.0500	0.0353	0.0333	70.6	66.6	1.00-227			5.83	126
3,3-Dichlorobenzidine	0.0500	0.0355	0.0331	71.0	66.2	1.00-262			7.00	108
2,4-Dinitrotoluene	0.0500	0.0367	0.0345	72.4	69.0	39.0-139			4.81	47
2,6-Dinitrotoluene	0.0500	0.0350	0.0326	70.0	65.2	50.0-158			7.10	48
Fluoranthene	0.0500	0.0346	0.0329	69.2	65.8	26.0-137			5.04	66
Fluorene	0.0500	0.0337	0.0314	67.4	62.8	59.0-121			7.07	38
Hexachlorobenzene	0.0500	0.0332	0.0322	66.4	64.4	1.00-152			3.06	55
Hexachloro-1,3-buladiene	0.0500	0.0291	0.0284	58.2	56.8	24.0-120			2.43	62
Hexachlorocyclopentadiene	0.0500	0.0254	0.0237	50.8	47.4	10.0-120			6.92	31
Hexachloroethane	0.0500	0.0294	0.0294	58.8	58.8	40.0-120			0.000	52
Indeno(1,2,3-cd)pyrene	0.0500	0.0343	0.0322	68.6	64.6	1.00-171			6.01	99
Isophorone	0.0500	0.0309	0.0291	61.8	58.2	21.0-196			6.00	93
Naphthalene	0.0500	0.0277	0.0269	55.4	53.8	21.0-133			2.93	65
Nitrobenzene	0.0500	0.0292	0.0284	58.4	56.8	35.0-180			2.78	62
n-Nitrosodimethylamine	0.0500	0.0171	0.0172	34.2	34.4	10.0-120			0.583	34
n-Nitrosodiphenylamine	0.0500	0.0322	0.0310	64.4	62.0	44.0-120			3.80	21
n-Nitrosodi-n-propylamine	0.0500	0.0318	0.0309	63.6	61.8	1.00-230			2.87	87
Phenanthrene	0.0500	0.0323	0.0305	64.6	61.0	54.0-120			5.73	39
Benzylbutyl phthalate	0.0500	0.0352	0.0338	70.4	67.6	1.00-152			4.06	60
Bis(2-ethylhexyl)phthalate	0.0500	0.0348	0.0338	69.6	67.6	8.00-158			2.92	82
Di-n-butyl phthalate	0.0500	0.0361	0.0342	72.2	68.4	1.00-120			5.41	47
Diethyl phthalate	0.0500	0.0361	0.0331	72.2	66.2	1.00-120			8.67	100
Dimethyl phthalate	0.0500	0.0345	0.0318	69.0	63.6	1.00-120			8.14	183
Di-n-octyl phthalate	0.0500	0.0372	0.0360	74.4	72.0	4.00-146			3.28	59
Pyrene	0.0500	0.0335	0.0319	67.0	63.8	52.0-120			4.89	43
1,2,4-Trichlorobenzene	0.0500	0.0285	0.0276	57.0	55.2	44.0-142			3.21	50
1,2-Diphenylhydrazine	0.0500	0.0335	0.0312	67.0	62.4	37.0-125			7.11	20
4-Chloro-3-methylphenol	0.0500	0.0317	0.0291	63.4	58.2	22.0-147			8.55	73
2-Chlorophenol	0.0500	0.0304	0.0288	60.8	57.6	23.0-134			5.41	61
2,4-Dichlorophenol	0.0500	0.0318	0.0300	63.6	60.0	39.0-135			5.83	50
2,4-Dimethylphenol	0.0500	0.0295	0.0280	59.0	56.0	32.0-120			5.22	58
4,6-Dinitro-2-methylphenol	0.0500	0.0416	0.0397	83.2	79.4	1.00-181			4.67	203
2,4-Dinitrophenol	0.0500	0.0475	0.0452	95.0	90.4	1.00-191			4.96	132
2-Nitrophenol	0.0500	0.0344	0.0334	68.8	66.8	29.0-182			2.95	55
4-Nitrophenol	0.0500	0.0174	0.0144	34.8	28.8	1.00-132			18.9	131
Pentachlorophenol	0.0500	0.0352	0.0343	70.4	68.6	14.0-176			2.59	86
Phenol	0.0500	0.0135	0.0121	27.0	24.2	5.00-120			10.9	64

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3373756-1 01/06/19 13:36 • (LCSD) R3373756-2 01/06/19 14:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2,4,6-Trichlorophenol	0.0500	0.0362	0.0343	72.4	68.6	37.0-144			5.39	58
(S) Nitrobenzene-d5				*45.3*	*45.2*	*15.0-314*				
(S) 2-Fluorobiphenyl				*51.3*	*49.0*	*22.0-127*				
(S) p-Terphenyl-d14				*54.5*	*52.1*	*29.0-141*				
(S) Phenol-d5				*20.3*	*17.9*	*8.00-424*				
(S) 2-Fluorophenol				*34.0*	*31.4*	*19.0-120*				
(S) 2,4,6-Tribromophenol				*52.0*	*51.5*	*10.0-153*				

L1058253-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1058253-01 01/06/19 15:58 • (MS) R3373756-4 01/06/19 16:22 • (MSD) R3373756-5 01/06/19 16:46

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec %	MSD Rec %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0500	ND	0.0268	0.0277	53.6	55.4	1	47.0-145			3.30	48
Acenaphthylene	0.0500	ND	0.0259	0.0270	51.8	54.0	1	33.0-145			4.16	74
Anthracene	0.0500	ND	0.0281	0.0282	56.2	56.4	1	27.0-133			0.355	66
Benzidine	0.0500	ND	ND	ND	0.000	0.000	1	1.00-120	J6	J6	0.000	40
Benzo(a)anthracene	0.0500	ND	0.0277	0.0275	55.4	55.0	1	33.0-143			0.725	53
Benzo(b)fluoranthene	0.0500	ND	0.0299	0.0300	59.8	60.0	1	24.0-159			0.334	71
Benzo(k)fluoranthene	0.0500	ND	0.0284	0.0290	56.8	58.0	1	11.0-162			2.09	63
Benzo(g,h,i)perylene	0.0500	ND	0.0296	0.0301	59.2	60.2	1	1.00-219			1.68	97
Benzo(a)pyrene	0.0500	ND	0.0278	0.0284	55.6	56.8	1	17.0-163			2.14	72
Bis(2-chloroethoxy)methane	0.0500	ND	0.0237	0.0244	47.4	48.8	1	33.0-184			2.91	54
Bis(2-chloroethyl)ether	0.0500	ND	0.0261	0.0270	52.2	54.0	1	12.0-158			3.39	108
Bis(2-chloroisopropyl)ether	0.0500	ND	0.0245	0.0255	49.0	51.0	1	36.0-166			4.00	78
4-Bromophenyl-phenylether	0.0500	ND	0.0278	0.0281	55.6	56.2	1	53.0-127			1.07	43
2-Chloronaphthalene	0.0500	ND	0.0251	0.0266	50.2	53.2	1	60.0-120	J6	J6	5.80	24
4-Chlorophenyl-phenylether	0.0500	ND	0.0279	0.0287	55.8	57.4	1	25.0-158			2.83	61
Chrysene	0.0500	ND	0.0298	0.0300	59.6	60.0	1	17.0-168			0.669	87
Dibenz(a,h)anthracene	0.0500	ND	0.0296	0.0302	59.2	60.4	1	1.00-227			2.01	126
3,3-Dichlorobenzidine	0.0500	ND	0.0272	0.0266	54.4	53.2	1	1.00-262			2.23	108
2,4-Dinitrotoluene	0.0500	ND	0.0305	0.0312	61.0	62.4	1	39.0-139			2.27	42
2,6-Dinitrotoluene	0.0500	ND	0.0285	0.0300	57.0	60.0	1	50.0-158			5.13	48
Fluoranthene	0.0500	ND	0.0298	0.0298	59.6	59.6	1	26.0-137			0.000	66
Fluorene	0.0500	ND	0.0277	0.0285	55.4	57.0	1	59.0-121	J6	J6	2.85	38
Hexachlorobenzene	0.0500	ND	0.0280	0.0281	56.0	56.2	1	1.00-152			0.357	55
Hexachloro-1,3-butadiene	0.0500	ND	0.0242	0.0252	48.4	50.4	1	24.0-120			4.05	62
Hexachlorocyclopentadiene	0.0500	ND	0.0177	0.0180	35.4	36.0	1	10.0-146			1.68	34
Hexachloroethane	0.0500	ND	0.0245	0.0248	49.0	49.6	1	40.0-120			1.22	52

L1058253-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1058253-01 01/06/19 15:58 • (MS) R3373756-4 01/06/19 16:22 • (MSD) R3373756-5 01/06/19 16:46

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec	MSD Rec	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Isophorone	0.0500	ND	0.0289	0.0264	57.8	52.8	1	21.0-196			9.02	93
Naphthalene	0.0500	ND	0.0234	0.0240	46.8	48.0	1	21.0-133			2.53	65
Nitrobenzene	0.0500	ND	0.0247	0.0253	49.4	50.6	1	35.0-180			2.40	62
n-Nitrosodimethylamine	0.0500	ND	0.0157	0.0164	31.4	32.8	1	10.0-120			4.35	40
n-Nitrosodiphenylamine	0.0500	ND	0.0277	0.0271	55.4	54.2	1	15.0-160			1.46	28
n-Nitrosodi-n-propylamine	0.0500	ND	0.0269	0.0271	53.8	54.2	1	1.00-230			4.53	87
Phenanthrene	0.0500	ND	0.0272	0.0274	54.4	54.8	1	54.0-120			0.733	39
Benzylbutyl phthalate	0.0500	ND	0.0315	0.0313	63.0	62.6	1	1.00-152			0.637	66
Bis(2-ethylhexyl)phthalate	0.0500	ND	0.0316	0.0319	63.2	63.8	1	8.00-158			0.914	82
Di-n-butyl phthalate	0.0500	ND	0.0277	0.0280	55.4	56.0	1	1.00-120			1.042	47
Diethyl phthalate	0.0500	ND	0.0296	0.0306	59.2	61.2	1	1.00-120			2.31	100
Dimethyl phthalate	0.0500	ND	0.0280	0.0287	56.0	57.4	1	1.00-120			2.47	181
Di-n-octyl phthalate	0.0500	ND	0.0347	0.0349	69.4	69.8	1	4.00-146			0.575	69
Fluorene	0.0500	ND	0.0293	0.0298	58.6	59.6	1	52.0-120			1.69	49
1,2,4-Trichlorobenzene	0.0500	ND	0.0240	0.0246	48.0	49.2	1	44.0-142			2.64	50
2,6-Dichlorophenol	0.0500	ND	0.0273	0.0275	54.6	55.0	1	18.0-156			0.729	34
4-Chloro-3-methylphenol	0.0500	ND	0.0268	0.0274	53.6	54.8	1	22.0-147			2.21	72
2-Chlorophenol	0.0500	ND	0.0264	0.0261	52.8	52.2	1	21.0-134			1.48	61
2,4-Dichlorophenol	0.0500	ND	0.0262	0.0271	52.4	54.2	1	39.0-135			3.49	50
2,4-Dimethylphenol	0.0500	ND	0.0246	0.0260	49.2	52.0	1	32.0-120			5.53	58
4,6-Dinitro-2-methylphenol	0.0500	ND	0.0362	0.0361	72.4	72.2	1	1.00-151			0.272	203
2,4-Dinitrophenol	0.0500	ND	0.0411	0.0405	82.2	81.0	1	1.00-91			0.244	132
2-Nitrophenol	0.0500	ND	0.0284	0.0295	56.8	59.0	1	29.0-182			3.81	55
4-Nitrophenol	0.0500	ND	0.0174	0.0174	34.8	34.8	1	1.00-132			2.30	131
Pentachlorophenol	0.0500	ND	0.0324	0.0312	64.8	62.4	1	14.0-176			3.77	86
Phenol	0.0500	ND	0.0135	0.0134	27.0	26.8	1	5.00-120			0.744	64
2,4,5-Trichlorophenol	0.0500	ND	0.0293	0.0307	58.6	61.4	1	37.0-144			4.67	58
(S) Nitrobenzene-d5					*28.6*	*40.2*		*10.0-114*				
(S) 2-Fluorobiphenyl					*44.5*	*40.9*		*22.0-127*				
(S) p-Terphenyl-d14					*48.1*	*48.4*		*29.0-141*				
(S) Phenol-d5					*19.7*	*20.0*		*9.00-424*				
(S) 2-Fluorophenol					*28.8*	*31.6*		*18.0-120*				
(S) 2,4,6-Tribromophenol					*44.5*	*45.0*		*10.0-153*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

ACCREDITATIONS & LOCATIONS

ONE LAB, NATIONWIDE.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

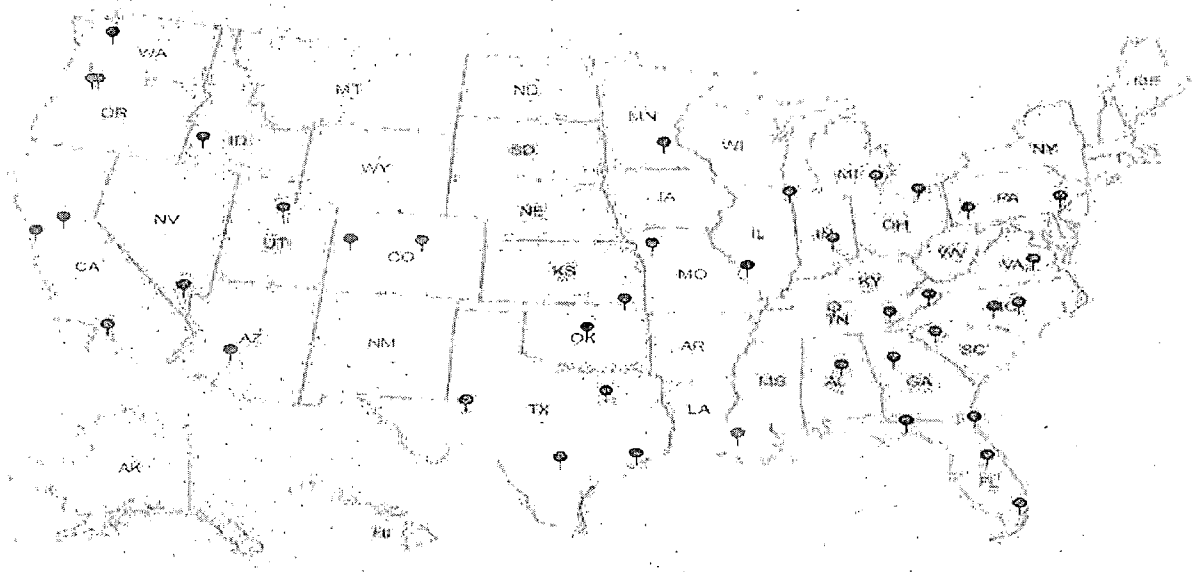
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

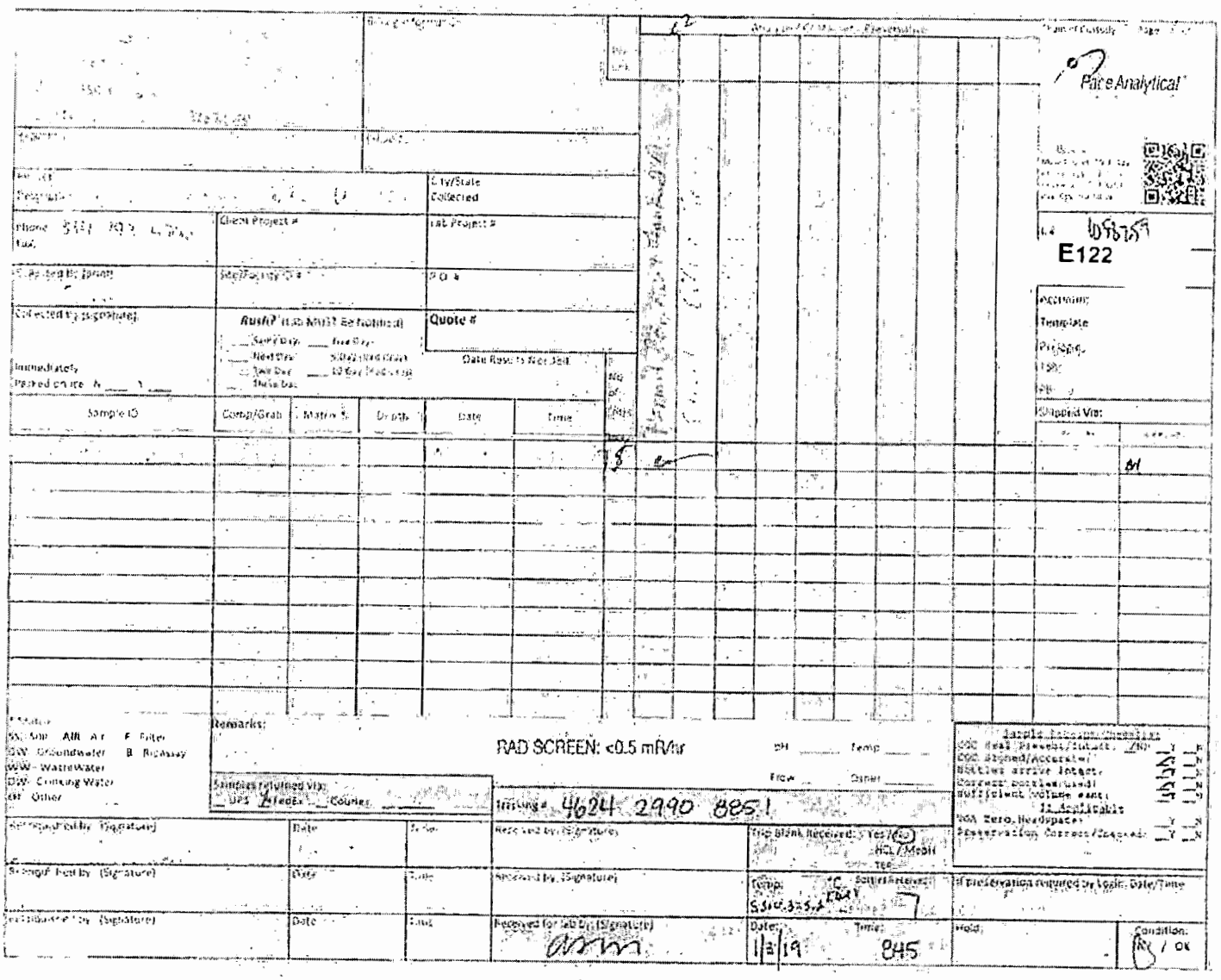
Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1,6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1,4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.





Pace Analytical

E122

Sample ID | Comp/Grab | Matrix | Depth | Date | Time

Remarks:

RAD SCREEN: <0.5 mR/hr

pH ____ Temp ____

Flow ____ Other ____

Tracking # 4624 2990 8851

Trip Blank Received: Yes / No

HCL / MeoH

TBR

Temp: 5.5/6.3/5.4

Date: 1/3/19 Time: 845

Condition: OK

Polyenvironmental Corporation
Environmental Laboratory

P.O. Box 837 *Dothan, Alabama 36302* *334-793-4700*

Invoice

Customer No.: **50200**
Invoice No.: **49208**
Invoice Date: **01/21/19**
PO No.:
Terms: **Net 30 Days**

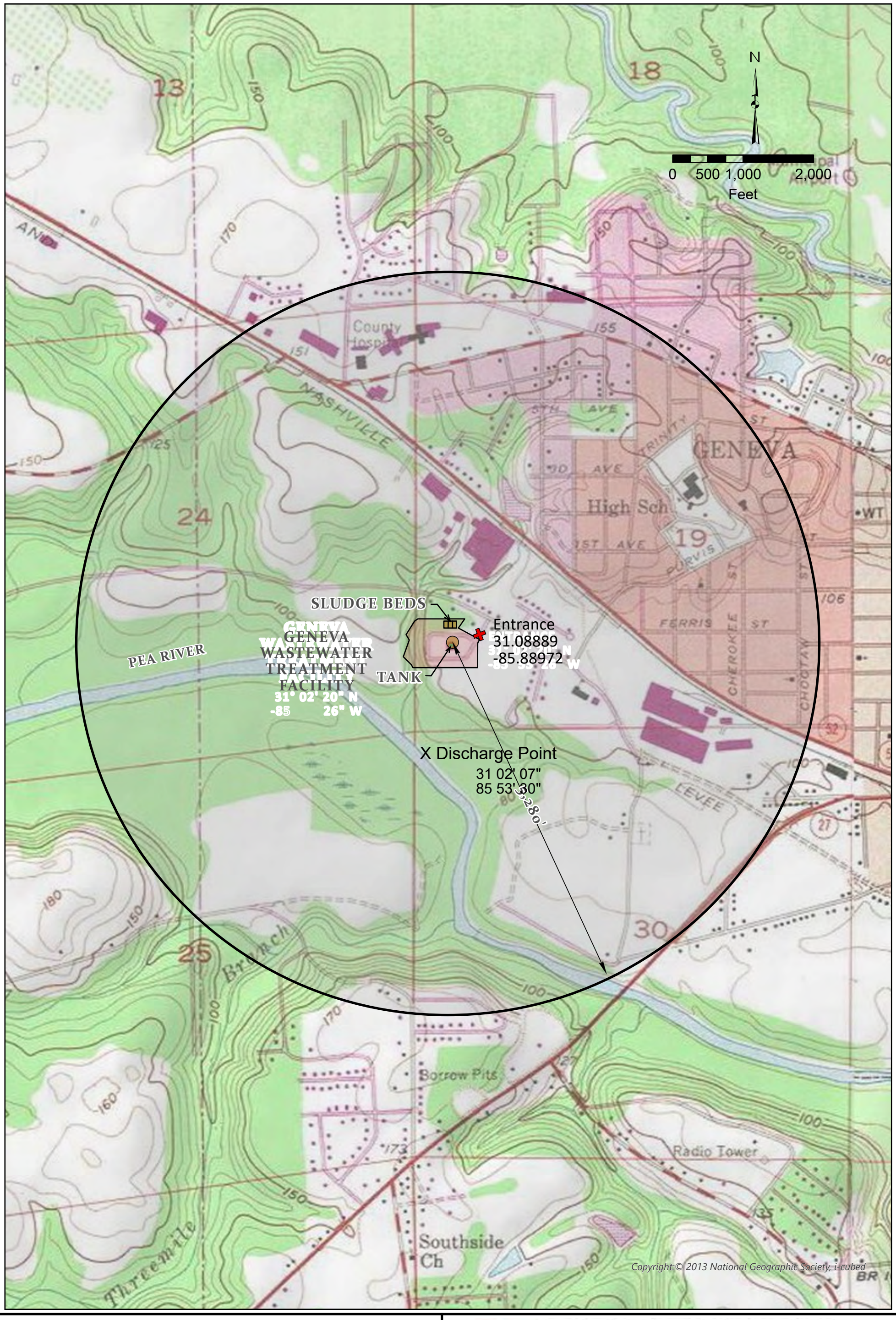
Geneva Water Works
P.O. Box 370
Geneva,AL 36340
ATTN: Accounts Payable Dept.

For Analytical Services From 01/02/19 To 01/02/19

Form 2A Expanded parameters list	**$650.00**

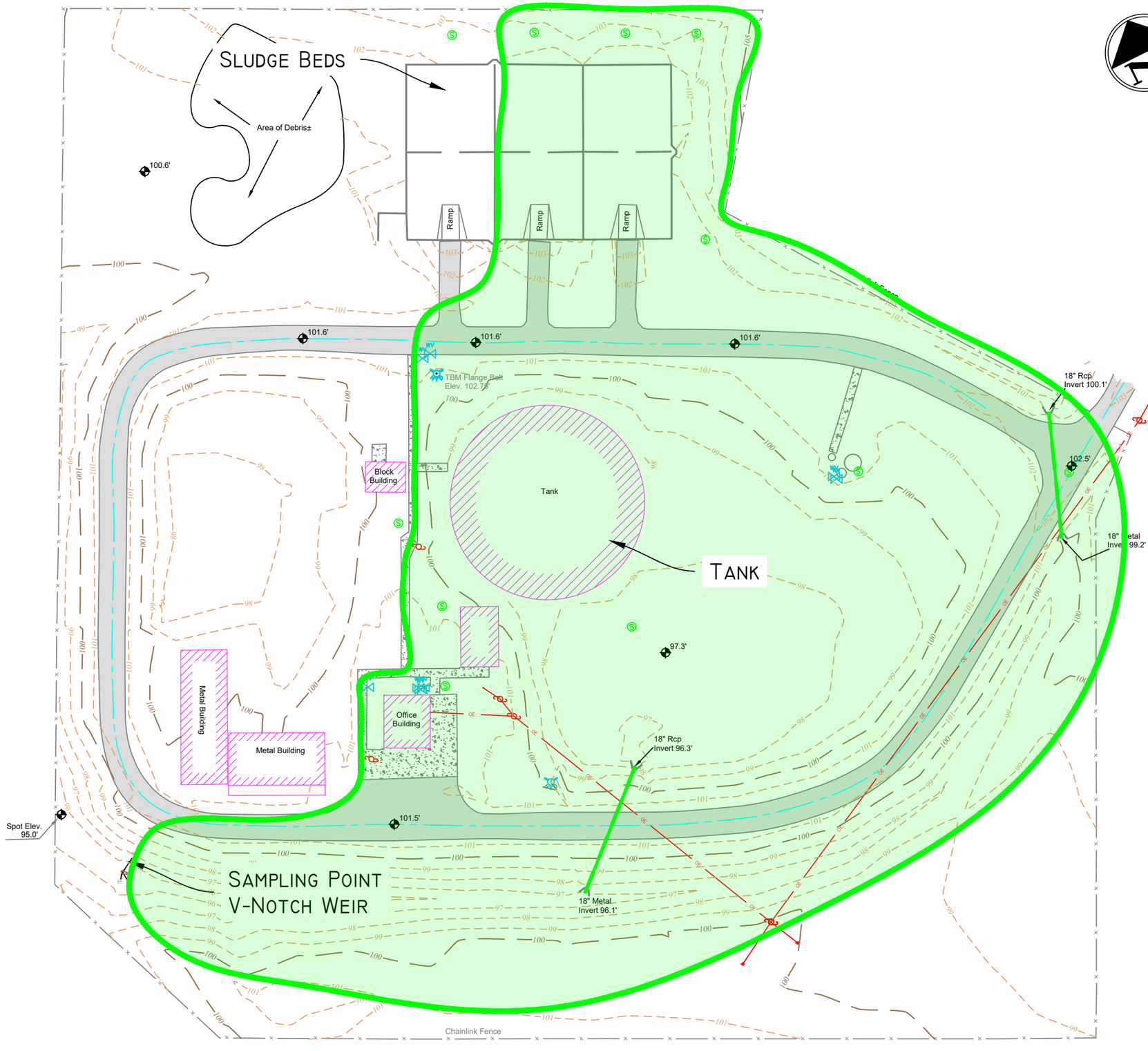
Amount Due: $650.00

Permit Renewal performed by Pace
Pace sample # L1058259



WASTEWATER TREATMENT FACILITY
GENEVA WATER WORKS AND SEWER BOARD
GENEVA, ALABAMA

SOUTHERN
ENGINEERING SOLUTIONS
201 EAST TROY STREET
P.O. BOX 610
ANDALUSIA, AL 36420
PHONE 334.222.1849
FAX 334.222.1869
WWW.SOUTHERNENGINEERINGSOLUTIONS.COM



60 0 60

GRAPHIC SCALE: 1" = 60'

NOTE: 0.95 MDG

LEGEND

FIP	FOUND IRON PIN (TYPE AS SHOWN)
SIP	SET IRON PIN 5/8" REBAR W/CAP
FCM	FOUND CONCRETE MONUMENT
OHE	OVERHEAD UTILITY LINES
	UTILITY POLE
	CALCULATED POINT
P.O.B.	POINT OF BEGINNING
P.O.C.	POINT OF COMMENCEMENT
	NOT TO SCALE
	Spot Elevation
S	Sanitary Sewer Manhole
	Fire Hydrant
	Drainage Area

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WWW.SOUTHERNENGINEERINGSSOLUTIONS.COM

WASTEWATER TREATMENT FACILITY
PROCESS FLOW DIAGRAM
GENEVA, ALABAMA

DESIGNED BY	PED
DRAWN BY	PDF
DATE	JULY, 2020
CADD FILE	GEN WWTP SW
PROJECT NO	*
REVISED	*
SHEET	1 OF 1

WASTEWATER TREATMENT PLANT RENOVATION

WATER WORKS AND SEWER BOARD

GENEVA, ALABAMA

JULY, 2018

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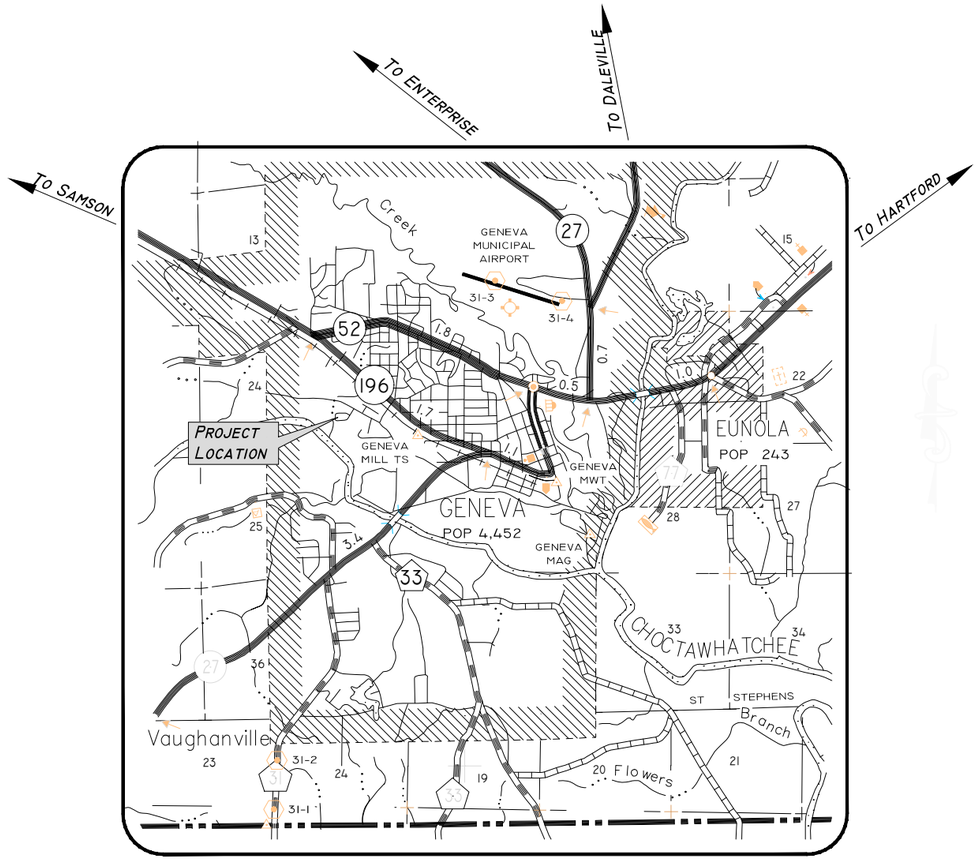
2	PLAN VIEW
3	SECTION VIEW



WATER WORKS & SEWER BOARD

Chair
Toby Seay

Vice Chair
Randall Meeks

Members
Rufus Lee
David Hayes
Philip Carter

Manager
James Dixon

Paul E. Darnell, P.E.

Date

ALABAMA PROFESSIONAL ENGINEER REGISTERED NO. 10161 LAND SURVEYOR PAUL E. DARNELL

SOUTHERN ENGINEERING SOLUTIONS
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Andalusia, AL 36420
Phone 334.222.1849
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www.southernengineeringsolutions.com

TITLE SHEET
WASTEWATER TREATMENT PLANT RENOVATION
GENEVA, ALABAMA

DESIGNED BY	PED
DRAWN BY	DLS
DATE	JULY, 2018
CADD FILE	GENEVA WWTP
PROJECT NO	1742605
REVISED	*
SHEET	1 OF 3

12" DIA. AIR HEADER EXTENSION TO RECEIVE PIPING FROM BLOWERS

12"X8" RELIEF OPENINGS 6" ABOVE WATER LEVEL

DIGESTER CHAMBER

DIGESTER CHAMBER

8" DIA. SHEAR GATE

16" DIA. SHEAR GATE

CLOW DIFFUSER ASSEMBLIES WITH INDIVIDUAL CONTROL VALVES.

24" DIA. CLARIFIER TRANSFER LINE WITH SHEAR GATE

CHLORINE CHAMBER

AERATION CHAMBER

BAFFLES

INSTALL NEW SUPERNATANT DECANT AIR LIFT ASSEMBLY

90° "V" NOTCH WEIR BOX

REPLACE EXISTING V-NOTCH WEIR

INSTALL WALKWAY TO ACCESS FLOW MEASUREMENT EQUIPMENT AND SAMPLER

ROTATION OF SCRAPER ARM

CLARIFIER SKIMMER ARM WITH FULL WIDTH WIPER

REMOVE INFLUENT TROUGH AND SUPPORTS

12" DIA. EFFLUENT PIPE

4" DIA. ADJUSTABLE DECANTING AIRFLIFT

7'-0" DIA. INLET WELL

3'-0" CENTER OF BRIDGE BEAM SUPPORTS.

SPRAY PUMP 2 H.P

INSTALL NEW CHLORINE DIFFUSER SYSTEM

FACTORY ASSEMBLED STAIRWAY, WALKWAY AND BRIDGE WITH HANDRAILS.

SAFETY HANDRAILS ARE SUPPLIED AT EACH ADJUSTABLE GATE

OPENING TO CHLORINE CHAMBER

3'-0" MIN. BETWEEN HANDRAIL

REPLACE EXISTING WALKWAY FROM EXTERIOR WALL TO CLARIFIER WALL

INSTALL 12" TEMPORARY CHLORINE CONTACT TANK BYPASS LINE TO EXTERIOR OF TANK

FROTH CONTROL SPRAY SYSTEM

INSTALL TEMPORARY CHLORINE CONTACT TANK

1" DIA. AIR VENT

HOSE

INSTALL NEW CARBON STEEL TRUSS HANDRAIL SYSTEM ON EXISTING CLARIFIER BRIDGE

16" DIA. INFLUENT PIPE WITH BAR SCREEN AND 2 A12 COMMINUTOR.

REPLACE RETURN SLUDGE AIR LIFT ASSEMBLY

REPLACE WASTE SLUDGE AIR LIFT ASSEMBLY

REPLACE CLARIFIER MECHANISM INCLUDING, SKIMMER, SLUDGE SCRAPER AND DRIVE SYSTEM

REPLACE INFLUENT BOX AND BAR SCREEN

8" DIA. DEZURICK PLUG VALVES WITH HANDLE EXTENSIONS AND PIPING FOR INDIVIDUAL DRAINING OF CHAMBERS

CLARIFIER CHAMBER

REMOVE INFLUENT TROUGH AND SUPPORTS

REPLACE DIFFUSER DROP PIPE SUPPORTS

DISTRIBUTION TROUGH WITH ADJUSTABLE GATES

10" DIA. SLUDGE RETURN AIRLIFT

18" MIN.

INSTALL NEW TOE PLATES ON EXISTING WALKWAYS

4" DIA. SLUDGE AIRLIFT TO SLUDGE HOLDING CHAMBER

2" DIA. INFLUENT TROUGH SPRAY

LOCATE FROTH SPRAY IN DISTRIBUTION TROUGH TO COMPLETELY WASH & AGITATE TROUGH

AERATION CHAMBER

CHECKERED STEEL SERVICE WALKWAY HANDRAILS ON BOTH SIDES OF SERVICE WALKWAY

REMOVE ALL SAND AND DEBRIS

REMOVE FROTH SPRAY SYSTEM

TYPICAL SPRAY NOZZLE APPROXIMATELY 4'-0" CENTER LINE TO CENTER LINE.

NOTE

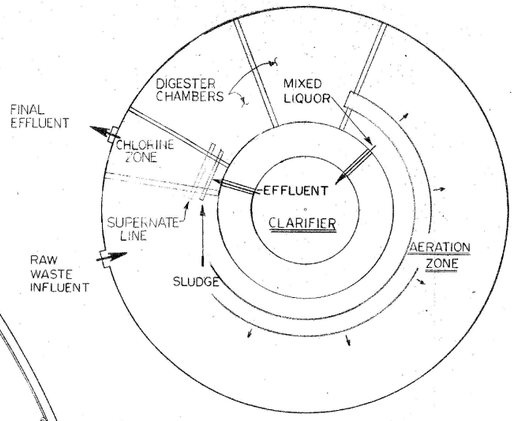
PLANT INFLUENT, EFFLUENT, AIR HEADER AND SLUDGE DRAIN PIPING TERMINATES IN STANDARD FLANGE TO FIT INFLUENT, EFFLUENT, AIR LINE AND DRAIN PIPING BY PURCHASER.

PLANT DRAIN SYSTEM IS DESIGNED TO ACCEPT INDIVIDUAL CHAMBER DEWATERING. SEE DRAWING NUMBER AE-557195 (INDIVIDUAL CHAMBER DEWATERING) FOR DIAGRAM AND INSTRUCTIONS.

REMOVABLE WALKWAY WILL BE SUPPLIED FOR ACCESS TO THE S.A. TROUGH FROM THE SEVICE WALKWAY

NOTES:

1. *REPAIR AND REPLACE DETERIORATED SECTIONS OF EXISTING WALLS AND BULKHEADS.*
2. *SANDBLAST AND RECOAT ENTIRE FACILITY*



STEP AERATION FLOW DIAGRAM

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PLAN VIEW
WASTEWATER TREATMENT PLANT RENOVATION
GENEVA, ALABAMA

DESIGNED BY	PED
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DATE	JULY, 2018
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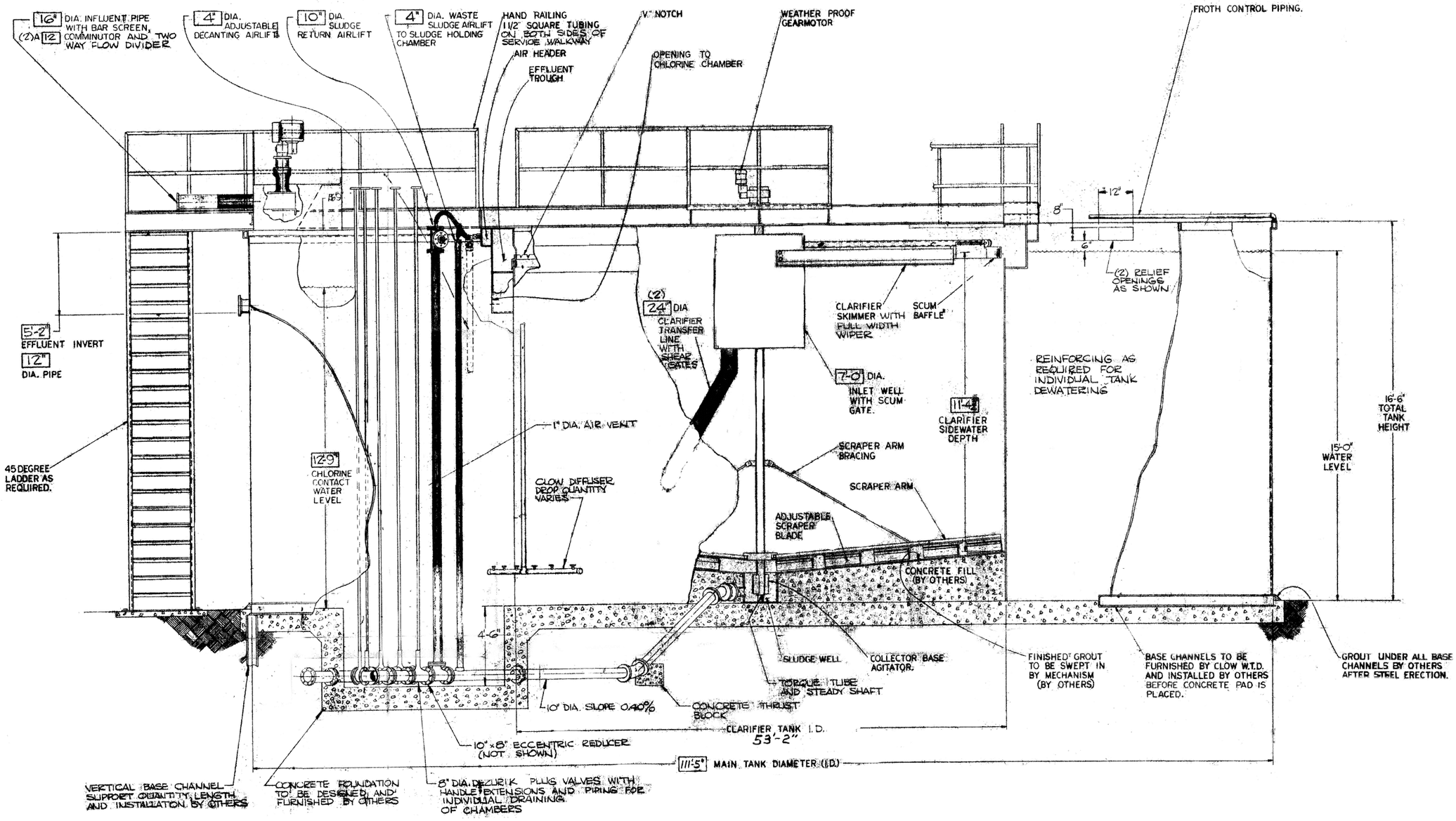

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SECTION VIEW
WASTEWATER TREATMENT PLANT RENOVATION
GENEVA, ALABAMA

DESIGNED BY	PED
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CADD FILE	GENEVA WWTP
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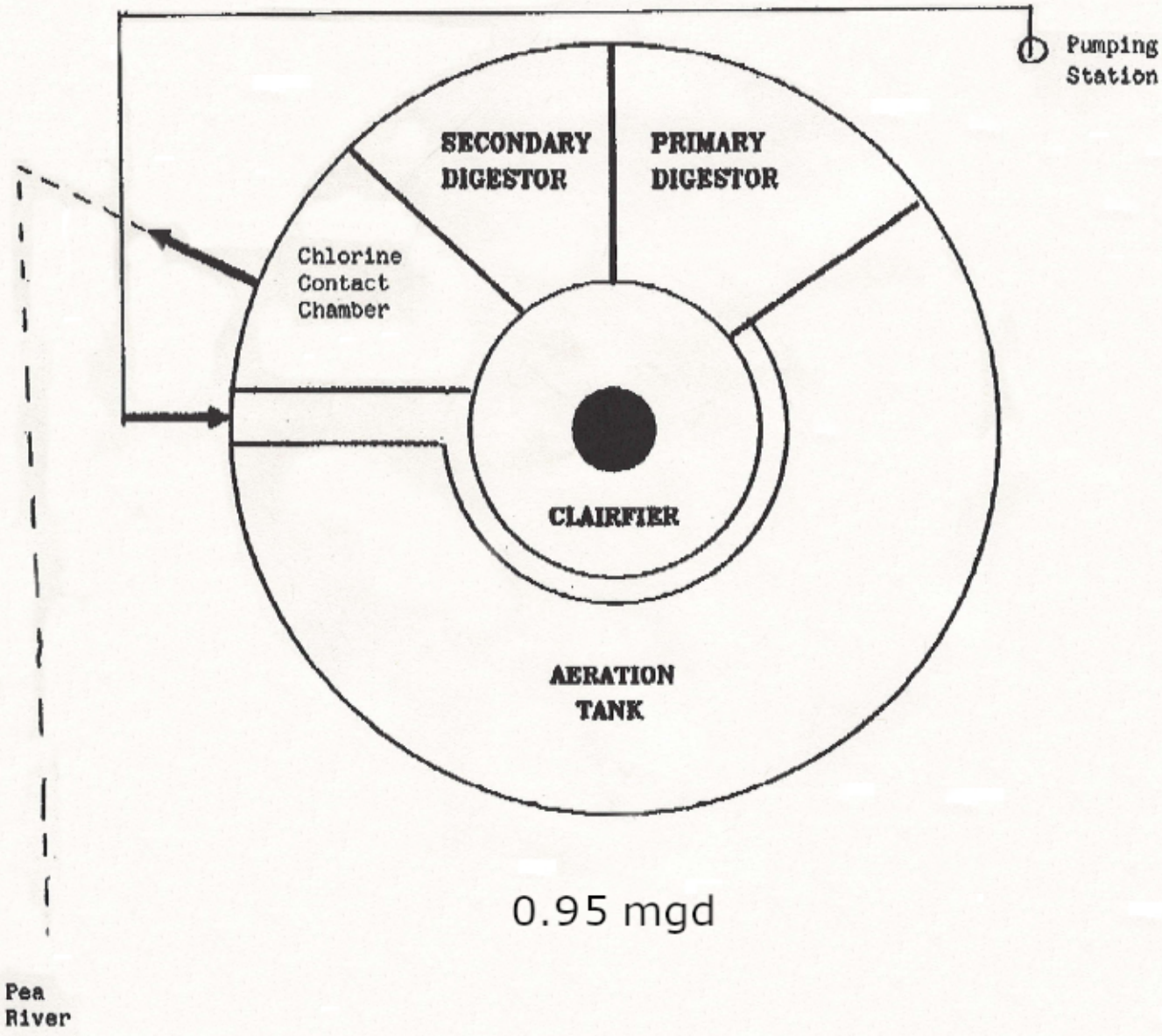
SHEET	3 OF 3

GENEVA WWTP



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