



Alabama Department of Environmental Management
adem.alabama.gov

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FEB 19 2021

Dona D. Ray, President
PDR Properties, Inc.
Post Office Box 8131
Lexington KY, 40533

RE: Draft Permit
NPDES Permit No. AL0062863
Redstone Arsenal Central WWTP
Madison County, Alabama

Dear Ms. Ray:

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 nicholas.lowe@adem.alabama.gov or by phone at (334) 271-7811.

Sincerely,

A handwritten signature in black ink that reads "Nicholas Lowe".

Nicholas Lowe
Municipal Section
Water Division

/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





NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE: PDR PROPERTIES, INC.
POST OFFICE BOX 8131
LEXINGTON, KENTUCKY 40533

FACILITY LOCATION: REDSTONE ARSENAL CENTRAL WWTP (3.3 MGD)
8007 BUXTON ROAD
REDSTONE ARSENAL, ALABAMA
MADISON COUNTY

PERMIT NUMBER: AL0062863

RECEIVING WATERS: TENNESSEE RIVER (WHEELER LAKE)
UNNAMED TRIBUTARY TO TENNESSEE RIVER (WHEELER LAKE) (STORMWATER)

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

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

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PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

1. Outfall 0011 Discharge Limits - Effluent

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 0011, 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
pH 00400 I 0 0	*****	*****	*****	*****	6.0 S.U.	9.0 S.U.	*****	E	GRAB	D	*****
Solids, Total Suspended 00530 I 0 0	825 lbs/day	1238 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 I 0 0	550 lbs/day	825 lbs/day	20.0 mg/l	30.0 mg/l	*****	*****	*****	E	COMP24	D	*****
Nitrogen, Kjeldahl Total (As N) 00625 I 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	E	COMP24	G	*****
Nitrite Plus Nitrate Total I Det. (As N) 00630 I 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	E	COMP24	G	*****
Phosphorus, Total (As P) 00665 I 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	E	COMP24	G	*****
Flow, In Conduit or Thru Treatment Plant 50050 I 0 0	REPORT MGD	*****	*****	*****	*****	REPORT MGD	*****	E	CONTIN	A	*****
Chlorine, Total Residual See note (5) 50060 I 0 0	*****	*****	*****	*****	*****	1.0 mg/l	*****	E	GRAB	D	*****
E. Coli 51040 I 0 0	*****	*****	126 col/100mL	*****	*****	298 col/100mL	*****	E	GRAB	D	ECS
E. Coli 51040 I 0 0	*****	*****	548 col/100mL	*****	*****	2507 col/100mL	*****	E	GRAB	D	ECW
BOD, Carbonaceous 05 Day, 20C 80082 I 0 0	688 lbs/day	1032 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
- 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

(4) Seasonal Limits:

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

Testing, see Provision IV.B.

(5) See Part IV.D. 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.

2. Outfall 001T Discharge Limits – Acute Toxicity

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 001T, 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)(5) Measurement Frequency	(4) Seasonal
Toxicity, Ceriodaphnia Acute 61425 1 0 0	*****	Pass = 0 Fail = 1	*****	*****	*****	*****	*****	E	COMP24	Q	*****
Toxicity, Pimephales Acute 61427 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)

(5) See Part IV.B for Acute Toxicity monitoring requirements.

3. Outfalls 002S, 003S, and 004S Discharge Limits - Stormwater

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 Outfalls 002S, 003S, and 004S which are 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)(6) Sample Location	(2) Sample Type	(3)(5) Measurement Frequency	(4) Seasonal
pH 00400 SW 0 0	*****	*****	*****	*****	REPORT S.U.	REPORT S.U.	*****	SW	GRAB	J	*****
Solids, Total Suspended 00530 SW 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	SW	GRAB	J	*****
Oil & Grease 00556 SW 0 0	*****	*****	*****	*****	*****	15.0 mg/l	*****	SW	GRAB	J	*****
Nitrogen, Ammonia Total (As N) 00610 SW 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	SW	GRAB	J	*****
Nitrogen, Kjeldahl Total (As N) 00625 SW 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	SW	GRAB	J	*****
Nitrite Plus Nitrate Total 1 Det. (As N) 00630 SW 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	SW	GRAB	J	*****
Phosphorus, Total (As P) 00665 SW 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	SW	GRAB	J	*****
Flow, In Conduit or Thru Treatment Plant 50050 SW 0 0	*****	*****	*****	*****	*****	REPORT MGD	*****	SW	CALCTD	J	*****
E. Coli 51040 SW 0 0	*****	*****	*****	*****	*****	REPORT col/100mL	*****	SW	GRAB	J	*****
BOD, Carbonaceous 05 Day, 20C 80082 SW 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	SW	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) See Part IV.G for Stormwater monitoring requirements.

(6) Stormwater sampling and reporting may be accomplished by sampling the designated Outfall 002S (representative of Outfalls 003S and 004S)

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) 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 re-issuance, then the permittee shall continue to submit DMRs in accordance with the requirements of their previous permit until such time as DMRs are due as discussed in Part I.C.1.b. above.
2. Noncompliance 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 latitude and longitude of the SSO in the report except when the SSO is a result of an extreme weather event (e.g., hurricane). To participate in the 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.

D. OTHER REPORTING AND NOTIFICATION REQUIREMENTS

1. Anticipated Noncompliance

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

2. Termination of Discharge

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

3. Updating Information

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

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

4. Duty to Provide Information

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

E. SCHEDULE OF COMPLIANCE

1. Compliance with discharge limits

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

COMPLIANCE SHALL BE ATTAINED ON THE EFFECTIVE DATE OF THIS PERMIT

2. Schedule

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

PART II OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES**A. OPERATIONAL AND MANAGEMENT REQUIREMENTS**

1. Facilities Operation and Maintenance

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

2. Best Management Practices

- a. Dilution water shall not be added to achieve compliance with discharge limitations except when the Director or his designee has granted prior written authorization for dilution to meet water quality requirements.
- b. The permittee shall prepare, implement, and maintain a Spill Prevention, Control and Countermeasures (SPCC) Plan in accordance with 40 C.F.R. Section 112 if required thereby.
- c. The permittee shall prepare, submit for approval and implement a Best Management Practices (BMP) Plan for containment of any or all process liquids or solids, in a manner such that these materials do not present a significant potential for discharge, if so required by the Director or his designee. When submitted and approved, the BMP Plan shall become a part of this permit and all requirements of the BMP Plan shall become requirements of this permit.

3. Certified Operator

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

B. OTHER RESPONSIBILITIES

1. Duty to Mitigate Adverse Impacts

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

2. Right of Entry and Inspection

- a. The permittee shall allow the Director, or an authorized representative, upon the presentation of proper credentials and other documents as may be required by law to:
 - (1) Enter upon the permittee's premises where a regulated facility or activity or point source is located or conducted, or where records must be kept under the conditions of the permit;
 - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permits.
 - (3) Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the permit; and
 - (4) Sample or monitor, for the purposes of assuring permit compliance or as otherwise authorized by the AWPCA, any substances or parameters at any location.

C. BYPASS AND UPSET

1. Bypass

- a. Any bypass is prohibited except as provided in b. and c. below:
- b. A bypass is not prohibited if:

- (1) It does not cause any discharge limitation specified in Provision I. A. of this permit to be exceeded;
 - (2) It enters the same receiving stream as the permitted outfall and;
 - (3) It is necessary for essential maintenance of a treatment or control facility or system to assure efficient operation of such facility or system.
- c. A bypass is not prohibited and need not meet the discharge limitations specified in Provision I. A. of this permit if:
- (1) It is unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (2) There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and
 - (3) The permittee submits a written request for authorization to bypass to the Director at least ten (10) days prior to the anticipated bypass (if possible), the permittee is granted such authorization, and the permittee complies with any conditions imposed by the Director to minimize any adverse impact on human health or the environment resulting from the bypass.
- d. The permittee has the burden of establishing that each of the conditions of Provision II. C. 1. b. or c. have been met to qualify for an exception to the general prohibition against bypassing contained in a. and an exemption, where applicable, from the discharge limitations specified in Provision I. A. of this permit.

2. Upset

- a. A discharge which results from an upset need not meet the discharge limitations specified in Provision I. A. of this permit if:
- (1) No later than 24-hours after becoming aware of the occurrence of the upset, the Permittee orally reports the occurrence and circumstances of the upset to the Director or his designee; and
 - (2) No later than five (5) days after becoming aware of the occurrence of the upset, the Permittee furnishes the Director with evidence, including properly signed, contemporaneous operating logs, or other relevant evidence, demonstrating that:
 - (i) An upset occurred;
 - (ii) The Permittee can identify the specific cause(s) of the upset;
 - (iii) The Permittee's facility was being properly operated at the time of the upset; and
 - (iv) The Permittee promptly took all reasonable steps to minimize any adverse impact on human health or the environment resulting from the upset.
- b. The permittee has the burden of establishing that each of the conditions of Provision II C. 2. a. of this permit have been met to qualify for an exemption from the discharge limitations specified in Provision I. A. of this permit.

D. DUTY TO COMPLY WITH PERMIT, RULES, AND STATUTES

1. Duty to Comply

- a. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the AWPCA and the FWPCA and is grounds for enforcement action, 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 301(c), 301(g), 301(h), 301(k), or 316(a) of the FWPCA or for fundamentally different factors;
 - (9) To incorporate an applicable 307(a) FWPCA toxic effluent standard or prohibition;
 - (10) When required by the reopener conditions in this permit;
 - (11) When required under 40 CFR 403.8(e) (compliance schedule for development of pretreatment program);
 - (12) Upon failure of the state to notify, as required by Section 402(b)(3) of the FWPCA, another state whose waters may be affected by a discharge permitted by this permit;
 - (13) When required to correct technical mistakes, such as errors in calculation, or mistaken interpretations of law made in determining permit conditions; or

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

5. Termination

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

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

6. Suspension

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

7. Stay

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

F. COMPLIANCE WITH TOXIC POLLUTANT STANDARD OR PROHIBITION

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

G. NOTICE TO DIRECTOR OF INDUSTRIAL USERS

1. The permittee shall not allow the introduction of wastewater, other than domestic wastewater, from a new 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;
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 – ACUTE DIFFUSER

1. Acute Toxicity Test
 - a. The permittee shall perform 48-hour acute toxicity tests on the wastewater discharges required to be tested for acute toxicity by Part I of this permit.
 - b. The samples shall be diluted using an appropriate control water, to the Instream Waste Concentration (IWC) which is **15 percent** effluent. The IWC is the actual concentration of effluent, after mixing, in the receiving stream during a 1-day, 10-year flow period.
 - c. Any test where survival in the effluent concentration is less than 90% and statistically lower than the control indicates acute toxicity and constitutes noncompliance with this permit.
2. General Test Requirements:
 - a. A 24-hour composite sample shall be obtained for use in above biomonitoring tests. The holding time for each 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-02-012 or most current edition or another control water selected by the permittee and approved by the Department.

- b. Effluent toxicity tests in which the control survival is less than 90% or in which the other requirements of the EPA Test Procedure are not met shall be unacceptable and the permittee shall rerun the tests as soon as practical within the monitoring period.
 - c. In the event of an invalid test, upon subsequent completion of a valid test, the results of all tests, valid and invalid, are reported with an explanation of the tests performed and results.
 - d. Toxicity tests shall be conducted for the duration of this permit in the month of **October**. Should results from the Annual Toxicity test indicate that Outfall 0011 exhibits acute 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 January, April, July, and October.
3. Reporting Requirements:
- a. The permittee shall notify the Department in writing within 48 hours after toxicity has been demonstrated by the scheduled test(s).
 - b. Biomonitoring test results obtained during each monitoring period shall be summarized and reported using the appropriate Discharge Monitoring Report (DMR) form approved by the Department. In accordance with Section 2 of this part, an effluent toxicity report containing the information in Section 2 and 7 shall be included with the DMR. Two copies of the test results must be submitted to the Department no later than 28 days after the month in which the tests were performed.
4. Additional Testing Requirements:
- a. If acute toxicity is indicated (noncompliance with permit limit), the permittee shall perform four additional valid acute toxicity tests in accordance with these procedures to determine the extent and duration of the toxic condition. The toxicity tests shall be performed once per week and shall be performed during the first four calendar weeks following the date on which the permittee became aware of the permit noncompliance and the results of these tests shall be submitted no later than 28 days following the month in which the tests were performed.
 - 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/guidance outlined by EPA (e.g., EPA/600/2-88/062, EPA/600/R-92/080, EPA/600/R-92/081, EPA/833/B-99/022 and/or EPA/600/6-91/005F, etc.).
5. Test Methods:
- The tests shall be performed in accordance with the latest edition of the "EPA Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms" and shall be performed using the fathead minnow (*Pimephales promelas*) and the cladoceran (*Ceriodaphnia dubia*).
6. Effluent Toxicity Testing Reports
- The following information shall be submitted with each discharge monitoring report unless otherwise directed by the Department. The Department may at any time suspend or reinstate this requirement or may increase or decrease 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 date (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) Sample temperature when received at the laboratory
 - (f) Lapsed time from sample collection to delivery
 - (g) Lapsed time from sample collection to test initiation
 - (2) Dilution Water Samples
 - (a) Source
 - (b) Collection date(s) and time(s) (where applicable)
 - (c) Pretreatment
 - (d) Physical and chemical characteristics (pH, hardness, water temperature, alkalinity, 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) Feeding frequency, and amount and type of food
 - (12) Light intensity (mean)
- e. Test Organisms
 - (1) Scientific name
 - (2) Life stage and age
 - (3) Source
 - (4) Disease treatment (if applicable)
- f. Quality Assurance
 - (1) Reference toxicant utilized and source
 - (2) Date and time of most recent acute reference toxicant test(s), raw data, and current cusum chart(s)
 - (3) Dilution water utilized in reference toxicant test
 - (4) Results of reference toxicant test(s) (LC50, etc.), report concentration-response relationship and evaluate test sensitivity. The most recent reference toxicant test shall be conducted within 30-days of the routine.
 - (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: LC50, NOEC, Pass/Fail (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) (LC50, NOEC, Pass/Fail, etc.), report concentration-response relationship (definitive test only), report percent minimum significant difference (PMSD).

h. Conclusions and Recommendations

- (1) Relationship between test endpoints and permit limits
- (2) Action to be taken

1/ Adapted from "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms", Fifth Edition, October 2002 (EPA 821-R-02-012), Section 12, Report Preparation

C. 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. 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

d. 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

e. 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
- f. 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.

D. 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.

E. 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.

F. POLLUTANT SCANS

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

G. STORM WATER REQUIREMENTS

1. Prohibitions

- a. The Permittee shall not allow the discharge of non-storm water into permitted storm water outfall(s) unless said discharge is already subject to an NPDES permit.
- b. Pollutants removed in the course of treatment or control shall be disposed in a manner that complies with all applicable Department rules and regulations.

2. Operational and Management Practices

The permittee shall prepare and implement a Storm Water Pollution Prevention (SWPP) Plan within one year of the effective date of this permit.

a. In the SWPP Plan, the Permittee shall:

- (1) Assess the treatment plant site by developing and presenting site drainage maps, materials inventory, and best management operational practices. The plan shall also include a description of all spill or leak sources;
- (2) Describe mechanisms and procedures to prevent the contact of sewage sludge, screenings, raw or partially treated wastewater, or any other waste product or pollutant with storm water discharged from the facility;
- (3) Provide for daily inspection on workdays of any structures that function to prevent storm water pollution or that remove pollutants from storm water;
- (4) Provide for daily inspection of the facility in general to ensure that the SWPP Plan is continually implemented and effective;
- (5) Include a Best Management Practices (BMP) Plan that, as a minimum, addresses housekeeping, preventative maintenance, spill prevention and response, and non-storm water discharges;
- (6) Describe mechanisms and procedures to provide sediment control sufficient to prevent or control storm water pollution storm water by particles resulting from soil or sediment migration from the site due to significant clearing, grading, or excavation activities;
- (7) Designate by position or name the person or persons responsible for the day to day implementation of the SWPP Plan; and
- (8) Bear the signature of an individual meeting signatory requirements as defined in ADEM Administrative Code, Rule 335-6-6-.09.

- b. The Director or his designee may notify the permittee at any time that the SWPP Plan is deficient and will require correction of the deficiency. The permittee shall correct any SWPP Plan deficiency

identified by the Director or his designee within 30 days of receipt of notification and shall certify to the Department that the correction has been made and implemented.

c. Administrative Procedures

- (1) A copy of the SWPP Plan shall be maintained at the facility and shall be available for inspection by the Department.
- (2) A log of daily inspections required by Provision IV.G.2.a.(3) of the permit shall be maintained at the facility and shall be made available for inspection by the Department upon request. The log shall contain records of all inspections performed and each daily entry shall be signed by the person performing the inspection.
- (3) The Permittee shall provide training for any personnel required to implement the SWPP Plan and shall retain documentation of such training at the facility. Training records for all personnel shall be available for inspection by the Department. Training shall be performed prior to the date implementation is required.

3. Monitoring Requirements

- a. Storm water discharged through each storm water outfall shall be sampled once per calendar year, using first flush grab samples (FFGS) collected during the first 30 minutes of discharge.
- b. The total volume of storm water discharged for the event must be monitored, including the date and duration (in hours) and rainfall (in inches) for the storm event(s) sampled. The duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event must be a minimum of 72 hours. This information must be recorded as part of the sampling procedure and records retained in accordance with Provision I.B.5. of this permit. The volume may be measured using flow measurement devices or may be estimated using any method approved in writing by the Department.



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

FACT SHEET

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

Date: November 5, 2020

Prepared By: Nicholas Lowe

NPDES Permit No. AL0062863

1. Name and Address of Applicant:

PDR Properties, Inc.
Post Office Box 8131
Lexington, KY 40533

2. Name and Address of Facility:

Redstone Arsenal Central WWTP
8007 Buxton Road
Redstone Arsenal, Alabama 35898

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

Waste Water Treatment Plant

4. Applicant's Receiving Waters

<u>Receiving Waters</u>	<u>Classifications</u>
Tennessee River (Wheeler Lake)	PWS, F&W
UT to Tennessee River (Wheeler Lake)	F&W

For the Outfall latitude and longitude see the permit application.

5. Permit Conditions:

See attached Rationale and Draft Permit.

6. PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS

a. Comment Period

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



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

Jeffery W. Kitchens, Chief
ADEM-Water Division
1400 Coliseum Blvd.
[Mailing address: PO Box 301463; Zip 36130-1463]
Montgomery, Alabama 36110-2400
(334) 271-7823
water-permits@adem.alabama.gov

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

b. Public Hearing

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

Jeffery W. Kitchens, Chief
ADEM-Water Division
1400 Coliseum Blvd.
[Mailing address: PO Box 301463; Zip 36130-1463]
Montgomery, Alabama 36110-2400
(334) 271-7823
water-permits@adem.alabama.gov

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

c. Issuance of the Permit

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

Unless a request for a stay of a permit or permit provision is granted by the Environmental Management Commission, the proposed permit contained in the Director's determination shall be issued and effective, and such issuance will be the final administrative action of the Alabama Department of Environmental Management.

d. Appeal Procedures

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

Alabama Environmental Management Commission
1400 Coliseum Blvd

**(Mailing Address: Post Office Box 301463; Zip 36130-1463)
Montgomery, Alabama 36110-2059**

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

NPDES PERMIT RATIONALE

NPDES Permit No: **AL0062863** Date: 11/3/2020

Permit Applicant: PDR Properties, Inc.
Post Office Box 8131
Lexington, Kentucky 40533

Location: Redstone Arsenal Central WWTP
8007 Buxton Road
Redstone Arsenal, Alabama 35898

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

Basis for Limitations: Water Quality Model: CBOD, NH3-N
Reissuance with no modification: pH, TSS, NH3-N, TRC, CBOD, CBOD
% Removal, TSS % Removal
Instream calculation at 7Q10: 15% (IWC)
Toxicity based: TRC
Secondary Treatment Levels: CBOD, NH3-N, CBOD % Removal,
TSS % Removal, TSS
Other (described below): E. coli, pH

Design Flow in Million Gallons per Day: 3.3 MGD

Major: Yes

Description of Discharge: Outfall Number 001;
Effluent discharge to the Tennessee River (Wheeler
Lake), which is classified as Public Water Supply and
Fish & Wildlife.

Outfall Numbers 002, 003, and 004;
Stormwater discharges to a UT to the Tennessee River
(Wheeler Lake), which is classified as Fish & Wildlife.

Discussion: This is a reissuance due to expiration.

The segment of the Tennessee River (Wheeler Lake), containing the discharge from outfall 0011, is classified as a Tier I stream and is on the most recent 303(d) list for Nutrient impairment. Since this permit reissuance does not include an expansion, the nutrient contributions from this facility should not be significantly different from discharges during the previous permit. Therefore, nutrient monitoring is being continued for outfall 0011 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. There are no TMDLs affecting this discharge.

The limits for Five Day Carbonaceous Biochemical Oxygen Demand (CBOD) and Total Ammonia as Nitrogen (NH₃-N) are based on the Waste Load Allocation (WLA) model that was completed by ADEM's Water Quality Branch on August 5, 2014. The monthly average limit for CBOD is 25.0 mg/L. The monthly average limit for NH₃-N is 20.0 mg/L.

The limits for Total Suspended Solids (TSS), TSS % removal, and CBOD % removal are 30.0 mg/L, 85%, and 85% respectively. These limits are based on requirements of 40 CFR part 133.102 regarding Secondary Treatment.

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

The pH limits were developed in accordance with the Water-Use designation of the receiving stream and to be consistent with the Department's permitting approach and procedures. The minimum pH limit of 6.0 S.U. and a maximum limit of 9.0 S.U. are imposed.

The Total Residual Chlorine (TRC) limit of 1.0 mg/L (maximum daily) is based on EPA's recommended water quality values and on the current Toxicity Rationale, which considers the available dilution and should be protective of acute and chronic criteria in the receiving stream. Monitoring for TRC is only applicable if chlorine is utilized for disinfection purposes. That is, if chlorine disinfection is not utilized, monitoring would not be applicable during the monitoring period, and "*9" should be entered on the monthly DMR.

This permit imposes monitoring for the following nutrient-related parameters: Total Kjeldahl Nitrogen (TKN), Nitrite plus Nitrate as Nitrogen (NO₂+NO₃-N), and Total Phosphorus (TP). Monitoring for these nutrient-related parameters is imposed so that sufficient information will be available regarding the nutrient contribution from this point source, should it be necessary at some later time to impose nutrient limits on this discharge.

Since this facility is classified as a Major Municipal Wastewater plant and treats a mixture of domestic and industrial wastewater, the Department completed a reasonable potential analysis (RPA) of the discharge based on background data from the Guntersville Forebay on the Tennessee River and laboratory data provided in the Permittee's application. The RPA indicates whether pollutants in treated effluent have the potential to contribute to excursions of Alabama's in-stream water quality standards. Based on the RPA, it appears that there may be reasonable potential to cause in-stream water quality criteria exceedances for Arsenic and Zinc. The reasonable potential for Arsenic and Zinc in the Tennessee River appears to be due to the background data used in the analysis. The Arsenic and Zinc data submitted with the application indicates that the Arsenic and Zinc concentrations are well below the chronic, acute, and human health water quality criteria. In addition, two of three samples analyzed showed that Arsenic was not detected in the effluent.

In the permit application, the Permittee reported three stormwater outfalls at the treatment plant. Stormwater monitoring will be required from representative outfall 002S on an annual basis.

This permit imposes toxicity testing for both survival and life-cycle impairment (i.e., growth and reproduction). Acute toxicity testing with two species (Ceriodaphnia and Pimephales) is required on an annual basis at the calculated Instream Waste Concentration (IWC) of 15 percent.

Monitoring will be conducted twice per week for most parameters. Percent removal for CBOD and TSS will be calculated once per month. Monitoring for nutrient-related parameters will be once per month. Flow will be monitored continuously, 7 days per week.

ADEM Administrative Rule 335-6-10-.04 requires applicants to new or expanded discharges to Tier II waters demonstrate that the proposed discharge is necessary for important economic or social development in the area in which the waters are located. The application submitted by the facility is not for a new or expanded discharge 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: Nicholas Lowe

TOXICITY AND DISINFECTION RATIONALE

Facility Name:	Redstone Arsenal Central WWTP	
NPDES Permit Number:	AL0062863	
Receiving Stream:	Tennessee River (Wheeler Lake)	
Facility Design Flow (Q _w):	3.300 MGD	
Receiving Stream 7Q ₁₀ :	6291.000 cfs	
Receiving Stream 1Q ₁₀ :	4718.000 cfs	
Winter Headwater Flow (WHF):	11061.00 cfs	
Summer Temperature for CCC:	28 deg. Celsius	
Winter Temperature for CCC:	28 deg. Celsius	
Headwater Background NH ₃ -N Level:	0.32 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.

$$\text{Stream Dilution Ration (SDR)} = \frac{Q_w}{7Q_{10} + Q_w} = 0.08\%$$

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.

$$\text{Limiting Dilution} = \frac{Q_w}{7Q_{10} + Q_w} = 0.08\% \quad \text{Stream-Dominated, CMC Applies}$$

Criterion Maximum Concentration (CMC): $CMC = 0.411 / (1 + 10^{(7.204 - pH)}) + 58.4 / (1 + 10^{(pH - 7.204)})$
 Criterion Continuous Concentration (CCC): $CCC = [0.0577 / (1 + 10^{(7.688 - pH)}) + 2.487 / (1 + 10^{(pH - 7.688)})] * \text{Min}[2.85, 1.45 * 10^{(0.028 * (25 - T))}]$

	<u>CMC</u>	<u>CCC</u>
Allowable Summer Instream NH ₃ -N:	36.09 mg/l	2.48 mg/l
Allowable Winter Instream NH ₃ -N:	36.09 mg/l	2.48 mg/l

$$\text{Summer NH}_3\text{-N Toxicity Limit} = \frac{[(\text{Allowable Instream NH}_3\text{-N}) * (7Q_{10} + Q_w)] - [(\text{Headwater NH}_3\text{-N}) * (7Q_{10})]}{Q_w} = 44112.2 \text{ mg/l NH}_3\text{-N at 7Q}_{10}$$

$$\text{Winter NH}_3\text{-N Toxicity Limit} = \frac{[(\text{Allowable Instream NH}_3\text{-N}) * (\text{WHF} + Q_w)] - [(\text{Headwater NH}_3\text{-N}) * (\text{WHF})]}{Q_w} = \text{N./A.}$$

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.

	<u>DO-based NH₃-N limit</u>	<u>Toxicity-based NH₃-N limit</u>
Summer	20.00 mg/l NH₃-N	44112.20 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.

Acute toxicity testing is required

Instream Waste Concentration (IWC) = Based on Cormix Model = **15.03%** 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: **Public Water Supply, 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)
<u>E. Coli (applies to Non-coastal and Shellfish Harvesting Coastal)</u>		
Monthly limit as monthly average (November through April):	548	548
Monthly limit as monthly average (May through October):	126	126
Daily Max (November through April):	2507	2507
Daily Max (May through October):	298	298
<u>Enterococci (applies to Coastal)</u>		
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:	13.564 mg/l (chronic)	(0.011)/(SDR)
Maximum allowable TRC in effluent:	23.429 mg/l (acute)	(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: Nicholas Lowe Date: 7/29/2020

$Q_d * C_d + Q_{d2} * C_{d2} + Q_s * C_s = Q_r * C_r$										
ID	Pollutant	Carcinogen "yes"	Type	Background from upstream source (C _{d2})	Background from upstream source (C _{d2})	Background Instream (C _s)	Background Instream (C _s)	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)
				Daily Max µg/l	Monthly Ave µg/l	Daily Max µg/l	Monthly Ave µg/l	µg/l	µg/l	
1	Antimony		Metals	0	0	0	0	0	0	-
2	Arsenic**,**	YES	Metals	0	0	1.5	0.6	2.75	0.9	0.574
3	Beryllium		Metals	0	0	0	0	0	0	-
4	Cadmium**		Metals	0	0	0.51	0.02	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	1.4	0.69	11.5	7.8	0.388
8	Lead**		Metals	0	0	6.1	0.3	0	0	0.206
9	Mercury**		Metals	0	0	0	0	0.2	0.2	0.302
10	Nickel**		Metals	0	0	1.4	0.4	2.25	1.8	0.505
11	Selenium		Metals	0	0	1.2	0.08	8.38	2.79	-
12	Silver		Metals	0	0	0	0	0	0	-
13	Thallium		Metals	0	0	0	0	0	0	-
14	Zinc**		Metals	0	0	550	29.4	60.7	46	0.330
15	Cyanide		Metals	0	0	0	0	10.6	3.5	-
16	Total Phenolic Compounds		Metals	0	0	0	0	200	98.9	-
17	Hardness (As CaCO3)		Metals	0	0	88000	66000	109000	102900	-
18	Acrolein		VOC	0	0	0	0	0	0	-
19	Acrylonitrile*	YES	VOC	0	0	0	0	0	0	-
20	Aldrin	YES	VOC	0	0	0	0	0	0	-
21	Benzene*	YES	VOC	0	0	0	0	0	0	-
22	Bromoform*	YES	VOC	0	0	0	0	0	0	-
23	Carbon Tetrachloride*	YES	VOC	0	0	0	0	0	0	-
24	Chlordane	YES	VOC	0	0	0	0	0	0	-
25	Chlorobenzene		VOC	0	0	0	0	0	0	-
26	Chlorodibromo-Methane*	YES	VOC	0	0	0	0	0	0	-
27	Chloroethane		VOC	0	0	0	0	0	0	-
28	2-Chloro-Ethylvinyl Ether		VOC	0	0	0	0	0	0	-
29	ChloroForm*	YES	VOC	0	0	0	0	0	0	-
30	4,4'-DDD	YES	VOC	0	0	0	0	0	0	-
31	4,4'-DDE	YES	VOC	0	0	0	0	0	0	-
32	4,4'-DDT	YES	VOC	0	0	0	0	0	0	-
33	Dichlorobromo-Methane*	YES	VOC	0	0	0	0	0	0	-
34	1, 1-Dichloroethane		VOC	0	0	0	0	0	0	-
35	1, 2-Dichloroethane*	YES	VOC	0	0	0	0	0	0	-
36	Trans-1, 2-Dichloro-Ethylene		VOC	0	0	0	0	0	0	-
37	1, 1-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	2.48	0.8	-
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-methylphenol	YES	Acids	0	0	0	0	0	0	-
61	Dioxin (2,3,7,8-TCDD)	YES	Acids	0	0	0	0	0	0	-
62	2-Nitrophenol		Acids	0	0	0	0	0	0	-
63	4-Nitrophenol		Acids	0	0	0	0	0	0	-
64	Pentachlorophenol*	YES	Acids	0	0	0	0	0	0	-
65	Phenol		Acids	0	0	0	0	0	0	-
66	2, 4, 6-Trichlorophenol*	YES	Acids	0	0	0	0	0	0	-
67	Acenaphthene		Bases	0	0	0	0	0	0	-
68	Acenaphthylene		Bases	0	0	0	0	0	0	-
69	Anthracene		Bases	0	0	0	0	0	0	-
70	Benzidine		Bases	0	0	0	0	0	0	-
71	Benzo(A)Anthracene*	YES	Bases	0	0	0	0	0	0	-
72	Benzo(A)Pyrene*	YES	Bases	0	0	0	0	0	0	-
73	3, 4 Benzo-Fluoranthene		Bases	0	0	0	0	0	0	-
74	Benzo(GHI)Perylene		Bases	0	0	0	0	0	0	-
75	Benzo(K)Fluoranthene		Bases	0	0	0	0	0	0	-
76	Bis (2-Chloroethoxy) Methane		Bases	0	0	0	0	0	0	-
77	Bis (2-Chloroethyl)-Ether*	YES	Bases	0	0	0	0	0	0	-
78	Bis (2-Chloroisopropyl) Ether		Bases	0	0	0	0	0	0	-
79	Bis (2-Ethylhexyl) Phthalate*	YES	Bases	0	0	0	0	0	0	-
80	4-Bromophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
81	Butyl Benzyl Phthalate		Bases	0	0	0	0	0	0	-
82	2-Chloronaphthalene		Bases	0	0	0	0	0	0	-
83	4-Chlorophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
84	Chrysene*	YES	Bases	0	0	0	0	0	0	-
85	Di-N-Butyl Phthalate		Bases	0	0	0	0	0	0	-
86	Di-N-Octyl Phthalate		Bases	0	0	0	0	0	0	-
87	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	-

3.3	Enter Q _d = wastewater discharge flow from facility (MGD)
5.1058557	Q _d = wastewater discharge flow (cfs) (this value is calculated from the MGD)
0	Enter flow from upstream discharge Q _{d2} = background stream flow in MGD above point of discharge
0	Q _{d2} = background stream flow from upstream source (cfs)
6291	Enter 7Q10, Q _s = background stream flow in cfs above point of discharge
4718	Enter or estimated, 1Q10, Q _s = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of 7Q10)
41891	Enter Mean Annual Flow, Q _s = background stream flow in cfs above point of discharge
11061	Enter 7Q2, Q _s = background stream flow in cfs above point of discharge (For LWF class streams)
Enter to Left	Enter C _s = background in-stream pollutant concentration in µg/l (assuming this is zero "0" unless there is data)
Q _d + Q _{d2} + Q _s	Q _s = resultant in-stream flow, after discharge
Calculator on other sheet	C _r = resultant in-stream pollutant concentration in µg/l in the stream (after complete mixing occurs)
66	Enter background hardness above point of discharge (assumed 50 South of Birmingham and 100 North of Birmingham)
7.00 s.u.	Enter, Background pH above point of discharge
YES	Enter, Is discharge to a stream? "YES" Other option would be to a Lake. (This changes the partition coefficients for the metals)

** Using Partition Coefficients

February 16, 2021

112	Hexachloroethane		0	0	-	-	-	-	0	0	-	-	-	-	1.82E+00	2.37E+03	4.73E+02	No
113	Indeno(1, 2, 3-CK)Pyrene	YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	8.74E+01	1.75E+01	No
114	Isophorone		0	0	-	-	-	-	0	0	-	-	-	-	5.61E+02	6.91E+05	1.38E+05	No
115	Naphthalene		0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
116	Nitrobenzene		0	0	-	-	-	-	0	0	-	-	-	-	4.04E+02	4.88E+05	9.90E+04	No
117	N-Nitrosodi-N-Propylamine	YES	0	0	-	-	-	-	0	0	-	-	-	-	2.95E-01	2.42E+03	4.84E+02	No
118	N-Nitrosodimethylamine	YES	0	0	-	-	-	-	0	0	-	-	-	-	1.78E+00	1.44E+04	2.89E+03	No
119	N-Nitrosodiphenylamine	YES	0	0	-	-	-	-	0	0	-	-	-	-	3.90E+00	2.87E+04	5.75E+03	No
120	PCB-1016	YES	0	0	-	-	-	-	0	0	0.014	17.264	3.453	No	3.74E-05	3.07E-01	6.14E-02	No
121	PCB-1221	YES	0	0	-	-	-	-	0	0	0.014	17.264	3.453	No	3.74E-05	3.07E-01	6.14E-02	No
122	PCB-1232	YES	0	0	-	-	-	-	0	0	0.014	17.264	3.453	No	3.74E-05	3.07E-01	6.14E-02	No
123	PCB-1242	YES	0	0	-	-	-	-	0	0	0.014	17.264	3.453	No	3.74E-05	3.07E-01	6.14E-02	No
124	PCB-1248	YES	0	0	-	-	-	-	0	0	0.014	17.264	3.453	No	3.74E-05	3.07E-01	6.14E-02	No
125	PCB-1254	YES	0	0	-	-	-	-	0	0	0.014	17.264	3.453	No	3.74E-05	3.07E-01	6.14E-02	No
126	PCB-1260	YES	0	0	-	-	-	-	0	0	0.014	17.264	3.453	No	3.74E-05	3.07E-01	6.14E-02	No
127	Phenanthrene		0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
128	Pyrene		0	0	-	-	-	-	0	0	-	-	-	-	2.33E+03	2.88E+08	5.75E+05	No
128	1, 2, 4-Trichlorobenzene		0	0	-	-	-	-	0	0	-	-	-	-	4.06E+01	5.05E+04	1.01E+04	No

Waste Load Allocation Summary

REQUEST INFORMATION

Request Number: 2846

From: [] In Branch/Section []
Date Submitted [] Date Required [] FUND Code []
Date Permit application received by NPDES program []

Receiving Waterbody: Tennessee River
Previous Stream Name: []

Facility Name: Redstone Arsenal Central WWTP (Name of Discharger-WQ will use to file)
Previous Discharger Name: []

River Basin: Tennessee Outfall Latitude: 34.588249 (decimal degrees)
*County: Madison Outfall Longitude: -86.690407 (decimal degrees)

Permit Number: AL0062863 Permit Type: CONVERSION
Permit Status: Active
Type of Discharger: MUNICIPAL

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

If yes, impacting dischargers names:
Huntsville Aldridge Creek WWTP, Huntsville Spring Branch WWTP, Huntsville West Area WWTP, Decatur Dry Creek WWTP, Ascend Performance Materials, Daikin, 3M, BP Amoco, TVA Browns Ferry, Lucy Branch WWTP, IP Courtland, Joe Wheeler State Park, Rogersville Lag

Impacting dischargers permit numbers:
[]

Existing Discharge Design Flow: 3.3 MGD
Proposed Discharge Design Flow: [] MGD

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

Comments included
 Yes No

Information Verified By: REC
Year File Was Created: 1997
Response ID Number: 1425

Lat/Long Method: Arcview

12 Digit HUC Code: 060300020904

Use Classification: PWS / F&W

Site Visit Completed? Yes No

Date of Site Visit: 7/17/2014

Waterbody Impaired? Yes No

Date of WLA Response: 8/5/2014

Antidegradation Yes No

Approved TMDL?
 Yes No

Waterbody Tier Level: Tier II

Use Support Category: 1

Approval Date of TMDL: []

Waste Load Allocation Information

Modeled Reach Length	76	Miles	Date of Allocation	8/5/2014
Name of Model Used	QUAL2E		Allocation Type	Annual
Model Completed by	Ross Caton		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
Season			Season				Season	
From			From				From	
Through			Through				Through	
CBOD5	25	mg/L	CBOD5	mg/L	TP	mg/L	TP	mg/L
NH3-N	20	mg/L	NH3-N	mg/L	TN	mg/L	TN	mg/L
TKN		mg/L	TKN	mg/L	TSS	mg/L	TSS	mg/L
D.O.	0	mg/L	D.O.	mg/L		mg/L		mg/L

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

Water Quality Characteristics Immediately Upstream of Discharge				
Parameter	Summer		Winter	
CBODu	2	mg/l		mg/l
NH3-N	0.32	mg/l		mg/l
Temperature	28	°C		°C
pH	7	su		su

Hydrology at Discharge Location

Drainage Area Qualifier	Drainage Area	25657	sq mi
Exact	Stream 7Q10	6291	cfs
	Stream 1Q10	4718	cfs
	Stream 7Q2	11061	cfs
	Annual Average	41891	cfs

Method Used to Calculate

ADEM Estimate w/USGS Gage Data
75% of 7Q10
ADEM Estimate w/USGS Gage Data
ADEM Estimate w/USGS Gage Data

Comments and/or Notations

Mixing Zone Analysis Summary

Page 1

REQUEST INFORMATION

request number: 3127

From: (Responsible Engineer) _____ In Branch/Section _____
Date Submitted 12/30/1899 Date Required 12/30/1899 FUND Code 605
Date Permit application received by NPDES program _____

Receiving Waterbody Tennessee River
Previous Stream Name _____
Facility Name Redstone Arsenal Central WWTP (Name of Discharger-WQ will use to file)
Previous Discharger Name _____

River Basin Tennessee Outfall Latitude 34.588249 (decimal degrees)
*County Madison Outfall Longitude -86.690407 (decimal degrees)

Permit Number AL0062863 Permit Type CONVERSION
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 3 MGD
Proposed Discharge Design Flow _____ MGD
Note: The flow rates given should be those requested for modeling.

Seasonal limits requested? Yes No
If not seasonal, only the summer sections will be used

Comments included Yes No
Information Verified By REC
Year File Was Started 1997

12 Digit HUC Code 060300020904
Use Classification PWS / F&W
Date of MZ Response 8/27/2014
Site Visit Completed? Yes No
Date of Site Visit 7/17/2014

Hydrology

Drainage Area	25657	sq mi
Stream 7Q10	6291	cfs
Stream 1Q10	4718	cfs
Stream 7Q2	11061	cfs
Annual Average		cfs

Method Used to Calculate

- ADEM Estimate w/USGS Gage Data
- 75% of 7Q10
- ADEM Estimate w/USGS Gage Data

Date of MZ Analysis 8/27/2014 Model Completed by Ross Caton

Pollutant Category
Whole Effluent Toxicity (WET) Thermal Pathogens

WET Parameters

Summer

Acute

Ambient Streamflow 4718 cfs
 ZID Length 4.5 Meters
 ZID IWC 15.03 %

Chronic

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

Winter

Acute

Ambient Streamflow _____ cfs
 ZID Length 4.5 Meters
 ZID IWC _____ %

Chronic

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

Thermal Parameters

Summer

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

Winter

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

Pathogen Parameters

Summer

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


Winter

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

Comments
 and/or
 Notations

MAR 26 2020

EPA Identification Number	NPDES Permit Number AL00062863	Facility Name Redstone Arsenal Central WWTP	Form Approved 03/05/19 OMB No. 2040-0004
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Form 2A NPDES		U.S. Environmental Protection Agency Application for NPDES Permit to Discharge Wastewater NEW AND EXISTING PUBLICLY OWNED TREATMENT WORKS
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SECTION 1. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS (40 CFR 122.21(j)(1) and (9))

Facility Information	1.1	Facility name Redstone Arsenal Central Wastewater Treatment Plant			
		Mailing address (street or P.O. box) P.O. Box 8131			
		City or town Lexington	State Kentucky	ZIP code 40533-8131	
		Contact name (first and last) Bryce McCreless	Title Plant Superintendent	Phone number 256.650.5605	Email address brycepdrprop@gmail.com
		Location address (street, route number, or other specific identifier) <input type="checkbox"/> Same as mailing address 8007 Buxton Road			
		City or town Redstone Arsenal	State Alabama	ZIP code 35898	
	1.2	Is this application for a facility that has yet to commence discharge? <input type="checkbox"/> Yes → See instructions on data submission requirements for new dischargers. <input checked="" type="checkbox"/> No			
Applicant Information	1.3	Is applicant different from entity listed under Item 1.1 above? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 1.4.			
		Applicant name			
		Applicant address (street or P.O. box)			
		City or town	State	ZIP code	
		Contact name (first and last)	Title	Phone number	Email address
	1.4	Is the applicant the facility's owner, operator, or both? (Check only one response.) <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator <input type="checkbox"/> Both			
	1.5	To which entity should the NPDES permitting authority send correspondence? (Check only one response.) <input checked="" type="checkbox"/> Facility <input type="checkbox"/> Applicant <input type="checkbox"/> Facility and applicant (they are one and the same)			
Existing Environmental Permits	1.6	Indicate below any existing environmental permits. (Check all that apply and print or type the corresponding permit number for each.)			
		Existing Environmental Permits			
		<input checked="" type="checkbox"/> NPDES (discharges to surface water) AL00062863	<input type="checkbox"/> RCRA (hazardous waste)	<input type="checkbox"/> UIC (underground injection control)	
		<input type="checkbox"/> PSD (air emissions)	<input type="checkbox"/> Nonattainment program (CAA)	<input type="checkbox"/> NESHAPs (CAA)	
	<input type="checkbox"/> Ocean dumping (MPRSA)	<input type="checkbox"/> Dredge or fill (CWA Section 404)	<input type="checkbox"/> Other (specify)		

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	
	Resident	1,980	<input checked="" type="checkbox"/> 100 % separate sanitary sewer <input type="checkbox"/> % combined storm and sanitary sewer <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> Own <input type="checkbox"/> Own <input type="checkbox"/> Own	<input type="checkbox"/> Maintain <input type="checkbox"/> Maintain <input type="checkbox"/> Maintain	
	Civilians & Contractor	36,000	<input checked="" type="checkbox"/> 100 % separate sanitary sewer <input type="checkbox"/> % combined storm and sanitary sewer <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> Own <input type="checkbox"/> Own <input type="checkbox"/> Own	<input type="checkbox"/> Maintain <input type="checkbox"/> Maintain <input type="checkbox"/> Maintain	
			<input type="checkbox"/> % separate sanitary sewer <input type="checkbox"/> % combined storm and sanitary sewer <input type="checkbox"/> Unknown	<input type="checkbox"/> Own <input type="checkbox"/> Own <input type="checkbox"/> Own	<input type="checkbox"/> Maintain <input type="checkbox"/> Maintain <input type="checkbox"/> Maintain	
			<input type="checkbox"/> % separate sanitary sewer <input type="checkbox"/> % combined storm and sanitary sewer <input type="checkbox"/> Unknown	<input type="checkbox"/> Own <input type="checkbox"/> Own <input type="checkbox"/> Own	<input type="checkbox"/> Maintain <input type="checkbox"/> Maintain <input type="checkbox"/> Maintain	
	Total Population Served	37,980				
			Separate Sanitary Sewer System	Combined Storm and Sanitary Sewer		
Total percentage of each type of sewer line (in miles)		100 %	0 %			
Indian Country	1.8	Is the treatment works located in Indian Country? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
	1.9	Does the facility discharge to a receiving water that flows through Indian Country? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Design and Actual Flow Rates	1.10	Provide design <i>and</i> actual flow rates in the designated spaces.		Design Flow Rate		
					3.30 mgd	
	Annual Average Flow Rates (Actual)					
	Two Years Ago		Last Year		This Year	
	1.46 mgd		1.93 mgd		2.159 mgd	
	Maximum Daily Flow Rates (Actual)					
Two Years Ago		Last Year		This Year		
6.20 mgd		7.17 mgd		7.50 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	None	None	None	None		

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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 1.14.		
1.13	Provide the location of each surface impoundment and associated discharge information in the table below.		
Surface Impoundment Location and Discharge Data			
	Location	Average Daily Volume Discharged to Surface Impoundment	Continuous or Intermittent (check one)
		gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
		gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
		gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
1.14	Is wastewater applied to land? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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
		acres	gpd
		acres	gpd
		acres	gpd
1.16	Is effluent transported to another facility for treatment prior to discharge? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes <input type="checkbox"/> 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	

EPA Identification Number

NPDES Permit Number

Facility Name

Form Approved 03/05/19

AL00062863

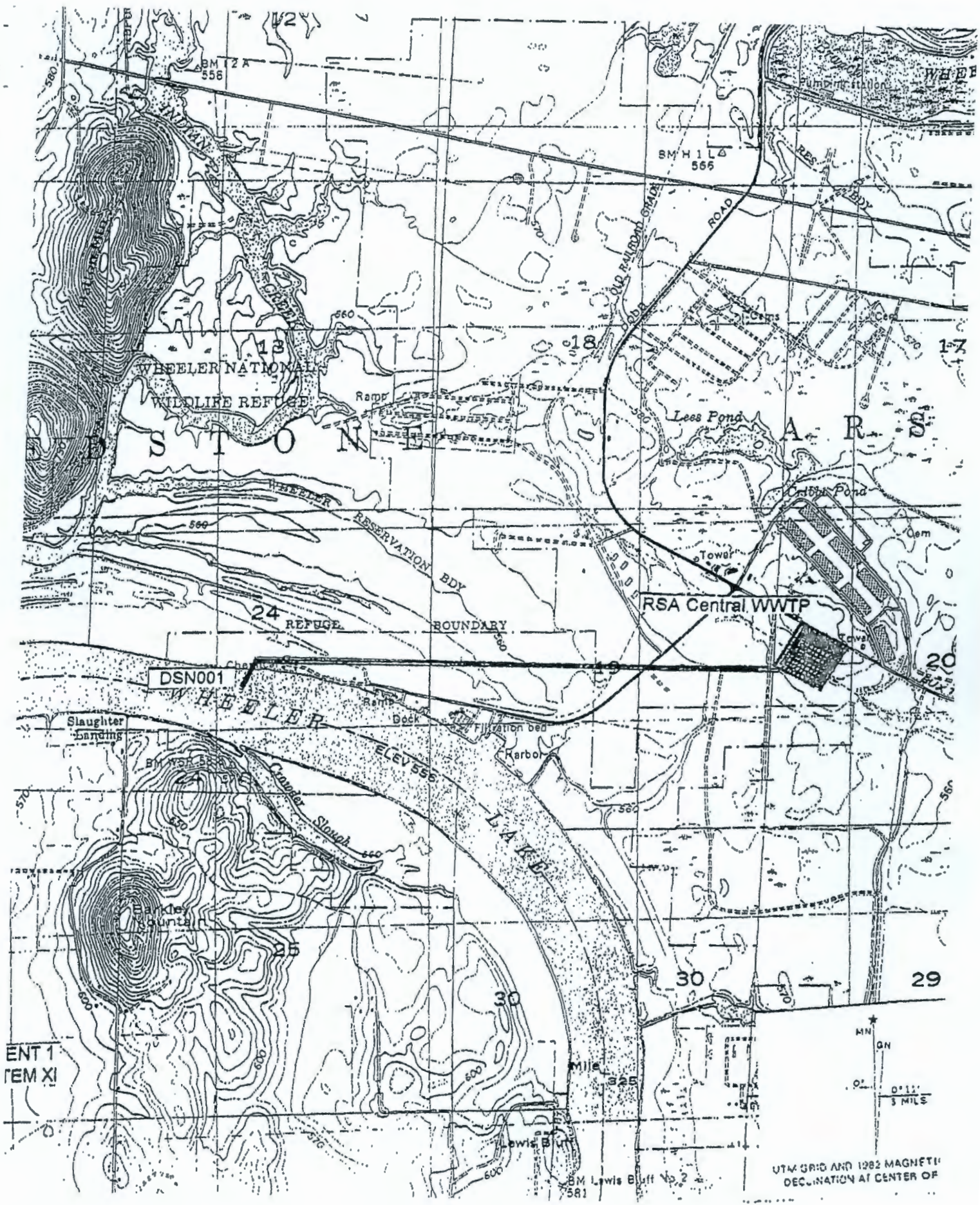
Redstone Arsenal Central
WWTP

OMB No. 2040-0004

Outfalls and Other Discharge or Disposal Methods Continued	1.20	In the table below, indicate the name, address, contact information, NPDES number, and average daily flow rate of the receiving facility.			
	Receiving Facility Data				
	Facility name		Mailing address (street or P.O. box)		
	City or town		State	ZIP code	
	Contact name (first and last)		Title		
	Phone number		Email address		
	NPDES number of receiving facility (if any) <input type="checkbox"/> None		Average daily flow rate mgd		
Variance Requests	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)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 1.23.			
	1.22	Provide information in the table below on these other disposal methods.			
	Information on Other Disposal Methods				
	Disposal Method Description	Location of Disposal Site	Size of Disposal Site	Annual Average Daily Discharge Volume	Continuous or Intermittent (check one)
			acres	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
		acres	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	
		acres	gpd	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	
Contractor Information	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.) <input type="checkbox"/> Discharges into marine waters (CWA Section 301(h)) <input type="checkbox"/> Water quality related effluent limitation (CWA Section 302(b)(2)) <input checked="" type="checkbox"/> Not applicable			
	1.24	Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 2.			
	1.25	Provide location and contact information for each contractor in addition to a description of the contractor's operational and maintenance responsibilities.			
	Contractor Information				
			Contractor 1	Contractor 2	Contractor 3
		Contractor name (company name)			
		Mailing address (street or P.O. box)			
		City, state, and ZIP code			
		Contact name (first and last)			
	Phone number				
	Email address				
	Operational and maintenance responsibilities of contractor				

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

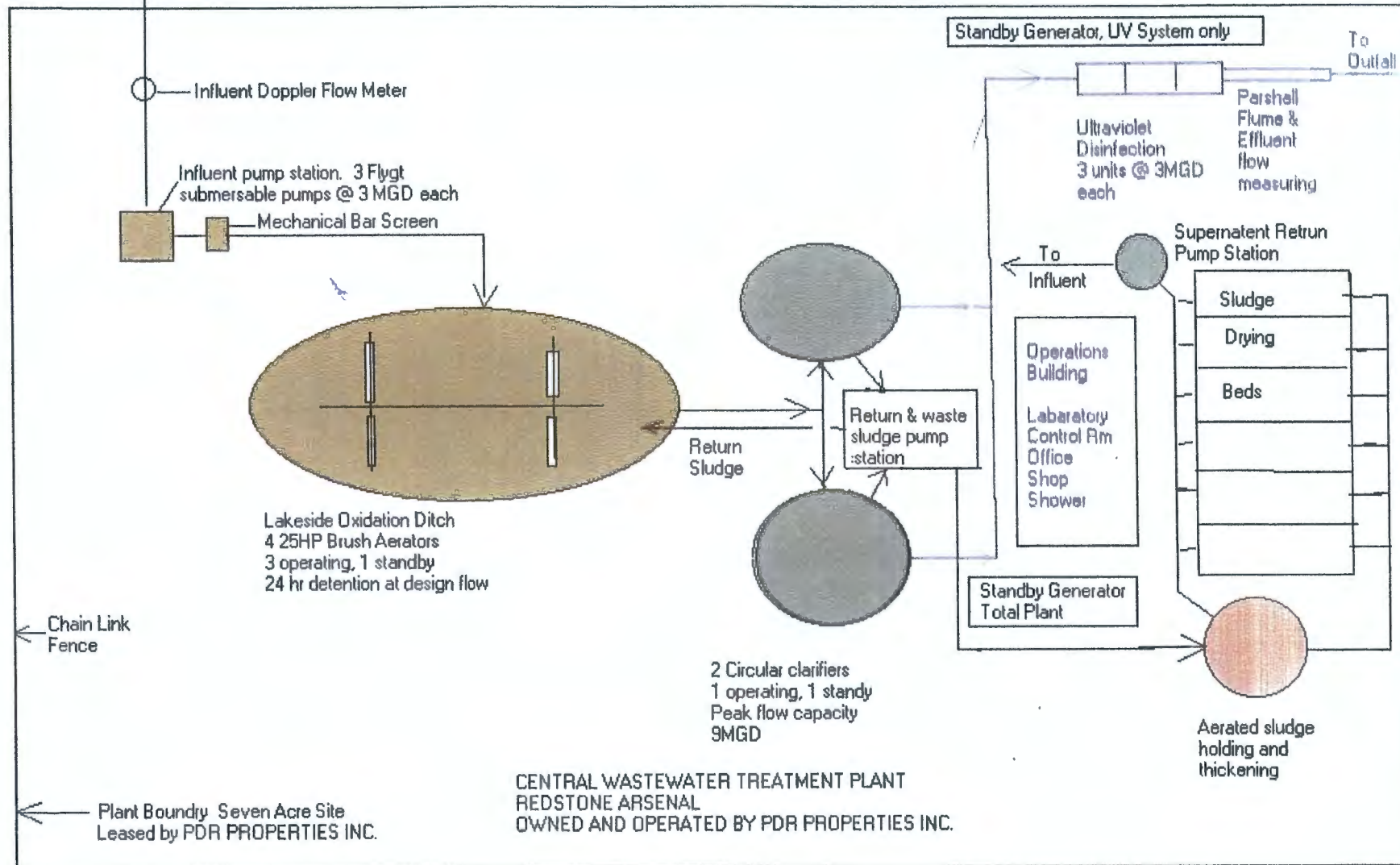
Design Flow	Outfalls to Waters of the United States						
	2.1	Does the treatment works have a design flow greater than or equal to 0.1 mgd? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Section 3.					
Inflow and Infiltration	2.2	Provide the treatment works' current average daily volume of inflow and infiltration.	Average Daily Volume of Inflow and Infiltration				
			200,000 gpd				
		Indicate the steps the facility is taking to minimize inflow and infiltration. Flow monitoring & TV Inspection with needed repairs					
Topographic Map	2.3	Have you attached a topographic map to this application that contains all the required information? (See instructions for specific requirements.) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Flow Diagram	2.4	Have you attached a process flow diagram or schematic to this application that contains all the required information? (See instructions for specific requirements.) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Scheduled Improvements and Schedules of Implementation	2.5	Are improvements to the facility scheduled? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 3.					
		Briefly list and describe the scheduled improvements.					
		1.					
		2.					
		3.					
		4.					
	2.6	Provide scheduled or actual dates of completion for improvements.					
		Scheduled or Actual Dates of Completion for Improvements					
		Scheduled Improvement (from above)	Affected Outfalls (list outfall number)	Begin Construction (MM/DD/YYYY)	End Construction (MM/DD/YYYY)	Begin Discharge (MM/DD/YYYY)	Attainment of Operational Level (MM/DD/YYYY)
		1.					
	2.						
	3.						
	4.						
	2.7	Have appropriate permits/clearances concerning other federal/state requirements been obtained? Briefly explain your response. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None required or applicable					
		Explanation:					



ENT 1
EM XI

UTM GRID AND 1982 MAGNETIC
DECLINATION AT CENTER OF

24" Force Main from Redstone Arsenal



EPA Identification Number

NPDES Permit Number
AL00062863Facility Name
Redstone Arsenal Central
WWTPForm Approved 03/05/19
OMB No. 2040-0004**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 <u>DSN00</u>	Outfall Number _____	Outfall Number _____
	State	Alabama		
	County	Madison		
	City or town	Redstone Arsenal		
	Distance from shore	150 ft.	ft.	ft.
	Depth below surface	25 ft.	ft.	ft.
	Average daily flow rate	2.1 mgd	mgd	mgd
	Latitude	34° 35' 17" N	° ' "	° ' "
	Longitude	86° 41' 25" W	° ' "	° ' "
Seasonal or Periodic Discharge Data	3.2	Do any of the outfalls described under Item 3.1 have seasonal or periodic discharges? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 3.4.		
	3.3	If so, provide the following information for each applicable outfall.		
		Outfall Number _____	Outfall Number _____	Outfall Number _____
	Number of times per year discharge occurs			
	Average duration of each discharge (specify units)			
Average flow of each discharge	mgd	mgd	mgd	
Months in which discharge occurs				
Diffuser Type	3.4	Are any of the outfalls listed under Item 3.1 equipped with a diffuser? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 3.6.		
	3.5	Briefly describe the diffuser type at each applicable outfall.		
		Outfall Number <u>DSNC</u>	Outfall Number _____	Outfall Number _____
		17 diffusers are in place consisting of 24" ductile iron pipe with a 4" ductile iron pipe elbow, which is the diffuser opening, diffuser opening is facing down stream		
Waters of the U.S.	3.6	Does the treatment works discharge or plan to discharge wastewater to waters of the United States from one or more discharge points? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Section 6.		

EPA Identification Number

NPDES Permit Number
AL00062863

Facility Name
Redstone Arsenal Central
WWTP

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Receiving Water Description	3.7	Provide the receiving water and related information (if known) for each outfall.					
			Outfall Number <u>DSNO1</u>	Outfall Number _____	Outfall Number _____		
	Receiving water name	Tennessee River					
	Name of watershed, river, or stream system	Wheeler River					
	U.S. Soil Conservation Service 14-digit watershed code						
	Name of state management/river basin	Tennessee River/Wheeler Rese					
	U.S. Geological Survey 8-digit hydrologic cataloging unit code						
	Critical low flow (acute)	10,212.0000	cfs		cfs		cfs
	Critical low flow (chronic)	10,212.00	cfs		cfs		cfs
Total hardness at critical low flow	73.70	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 <u>DSNO1</u>	Outfall Number _____	Outfall Number _____		
	Highest Level of Treatment (check all that apply per outfall)	<input type="checkbox"/> Primary <input type="checkbox"/> Equivalent to secondary <input checked="" type="checkbox"/> Secondary <input type="checkbox"/> Advanced <input type="checkbox"/> Other (specify) _____	<input type="checkbox"/> Primary <input type="checkbox"/> Equivalent to secondary <input type="checkbox"/> Secondary <input type="checkbox"/> Advanced <input type="checkbox"/> Other (specify) _____	<input type="checkbox"/> Primary <input type="checkbox"/> Equivalent to secondary <input type="checkbox"/> Secondary <input type="checkbox"/> Advanced <input type="checkbox"/> Other (specify) _____			
	Design Removal Rates by Outfall						
	BOD ₅ or CBOD ₅	85.5	%		%		%
	TSS	85.5	%		%		%
	Phosphorus	<input checked="" type="checkbox"/> Not applicable	%	<input type="checkbox"/> Not applicable	%	<input type="checkbox"/> Not applicable	%
	Nitrogen	<input checked="" type="checkbox"/> Not applicable	%	<input type="checkbox"/> Not applicable	%	<input type="checkbox"/> Not applicable	%
	Other (specify) _____	<input type="checkbox"/> Not applicable	%	<input type="checkbox"/> Not applicable	%	<input type="checkbox"/> 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.					
			Outfall Number <u>DSN0</u>	Outfall Number _____	Outfall Number _____		
		Disinfection type	Ultra Violet				
		Seasons used	Year Round				
		Dechlorination used?	<input checked="" type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Not applicable <input type="checkbox"/> Yes <input type="checkbox"/> No

Effluent Testing Data	3.10	Have you completed monitoring for all Table A parameters and attached the results to the application package? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
	3.11	Have you conducted any WET tests during the 4.5 years prior to the date of the application on any of the facility's discharges or on any receiving water near the discharge points? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 3.13.					
	3.12	Indicate the number of acute and chronic WET tests conducted since the last permit reissuance of the facility's discharges by outfall number or of the receiving water near the discharge points.					
			Outfall Number <u>DSN00</u>	Outfall Number _____	Outfall Number _____		
			Acute	Chronic	Acute	Chronic	Acute Chronic
		Number of tests of discharge water	5				
		Number of tests of receiving water	0				
	3.13	Does the treatment works have a design flow greater than or equal to 0.1 mgd? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 3.16.					
	3.14	Does the POTW use chlorine for disinfection, use chlorine elsewhere in the treatment process, or otherwise have reasonable potential to discharge chlorine in its effluent? <input type="checkbox"/> Yes → Complete Table B, including chlorine. <input checked="" type="checkbox"/> No → Complete Table B, omitting chlorine.					
	3.15	Have you completed monitoring for all applicable Table B pollutants and attached the results to this application package? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
3.16	Does one or more of the following conditions apply? <ul style="list-style-type: none"> • The facility has a design flow greater than or equal to 1 mgd. • The POTW has an approved pretreatment program or is required to develop such a program. • The NPDES permitting authority has informed the POTW that it must sample for the parameters in Table C, must sample other additional parameters (Table D), or submit the results of WET tests for acute or chronic toxicity for each of its discharge outfalls (Table E). <input checked="" type="checkbox"/> Yes → Complete Tables C, D, and E as applicable. <input type="checkbox"/> No → SKIP to Section 4.						
3.17	Have you completed monitoring for all applicable Table C pollutants and attached the results to this application package? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
3.18	Have you completed monitoring for all applicable Table D pollutants required by your NPDES permitting authority and attached the results to this application package? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No additional sampling required by NPDES permitting authority.						

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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.				
		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Date(s) Submitted (MM/DD/YYYY)</th> <th style="width:50%;">Summary of Results</th> </tr> </thead> <tbody> <tr> <td style="height: 40px;"></td> <td></td> </tr> </tbody> </table>	Date(s) Submitted (MM/DD/YYYY)	Summary of Results		
	Date(s) Submitted (MM/DD/YYYY)	Summary of Results				
	3.22	Regardless of how you provided your WET testing data to the NPDES permitting authority, did any of the tests result in toxicity? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 3.26.				
	3.23	Describe the cause(s) of the toxicity:				
3.24	Has the treatment works conducted a toxicity reduction evaluation? <input type="checkbox"/> Yes <input type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 4.7.				
	4.2	Indicate the number of SIUs and NSCIUs that discharge to the POTW.				
		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Number of SIUs</th> <th style="width:50%;">Number of NSCIUs</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2</td> <td></td> </tr> </tbody> </table>	Number of SIUs	Number of NSCIUs	2	
	Number of SIUs	Number of NSCIUs				
	2					
	4.3	Does the POTW have an approved pretreatment program? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					

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

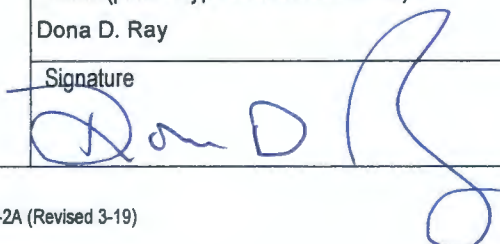
SECTION 5. COMBINED SEWER OVERFLOWS (40 CFR 122.21(j)(8))

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

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	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	CSO flow volume	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	CSO pollutant concentrations	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Receiving water quality	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	CSO frequency	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Number of storm events	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
CSO Events in Past Year	5.6	Provide the following information for each of your CSO outfalls.		
		CSO Outfall Number ____	CSO Outfall Number ____	CSO Outfall Number ____
	Number of CSO events in the past year	events	events	events
	Average duration per event	hours <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	hours <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	hours <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated
	Average volume per event	million gallons <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	million gallons <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	million gallons <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated
	Minimum rainfall causing a CSO event in last year	inches of rainfall <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	inches of rainfall <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated	inches of rainfall <input type="checkbox"/> Actual or <input type="checkbox"/> Estimated

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

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

Checklist and Certification Statement	6.1	In Column 1 below, mark the sections of Form 2A that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to provide attachments.			
		Column 1	Column 2		
		<input checked="" type="checkbox"/> Section 1: Basic Application Information for All Applicants	<input type="checkbox"/> w/ variance request(s)	<input type="checkbox"/> w/ additional attachments	
		<input checked="" type="checkbox"/> Section 2: Additional Information	<input checked="" type="checkbox"/> w/ topographic map <input type="checkbox"/> w/ additional attachments	<input checked="" type="checkbox"/> w/ process flow diagram	
		<input checked="" type="checkbox"/> Section 3: Information on Effluent Discharges	<input checked="" type="checkbox"/> w/ Table A <input checked="" type="checkbox"/> w/ Table B <input checked="" type="checkbox"/> w/ Table C	<input checked="" type="checkbox"/> w/ Table D <input checked="" type="checkbox"/> w/ Table E <input type="checkbox"/> w/ additional attachments	
		<input checked="" type="checkbox"/> Section 4: Industrial Discharges and Hazardous Wastes	<input type="checkbox"/> w/ SIU and NSCIU attachments <input type="checkbox"/> w/ additional attachments	<input checked="" type="checkbox"/> w/ Table F	
		<input checked="" type="checkbox"/> Section 5: Combined Sewer Overflows	<input type="checkbox"/> w/ CSO map <input type="checkbox"/> w/ CSO system diagram	<input type="checkbox"/> w/ additional attachments	
		<input checked="" type="checkbox"/> Section 6: Checklist and Certification Statement	<input checked="" type="checkbox"/> w/ attachments		
		6.2	Certification Statement		
			<i>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i>		
		Name (print or type first and last name) Dona D. Ray	Official title President		
		Signature 	Date signed 3/23/2020		

EPA Identification Number	NPDES Permit Number AL00062863	Facility Name Redstone Arsenal Central WWTP	Outfall Number DSN001
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TABLE A. EFFLUENT PARAMETERS FOR ALL POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method ¹	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Biochemical oxygen demand <input type="checkbox"/> BOD ₅ or <input type="checkbox"/> CBOD ₅ (report one)	15.8	mg/L	2.94	mg/L	105	EPA 5210B	2.0 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Fecal coliform	6000	col/100mL	94.67	col/100mL	105	SM9222D	10.0 col <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Design flow rate	3.3	MGD	2.115	MGD	365		
pH (minimum)	6.10	S.U.					
pH (maximum)	7.51	S.U.					
Temperature (winter)	-	-	-	-	-		
Temperature (summer)	-	-	-	-	-		
Total suspended solids (TSS)	14.5	mg/L	4.25	mg/L	105	USGS I-3765-85	2.5 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL

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

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EPA Identification Number	NPDES Permit Number AL0062863	Facility Name PDR Properties Inc.	Outfall Number DSN0011
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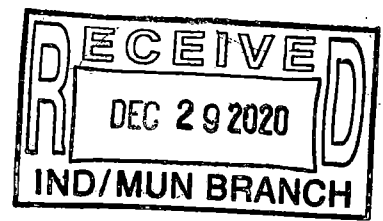
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TABLE B. EFFLUENT PARAMETERS FOR ALL POTWS WITH A FLOW EQUAL TO OR GREATER THAN 0.1 MGD

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)	4.67	mg/L	0.526	mg/L	105	SM 4500	0.100 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Chlorine (total residual, TRC) ²	-	-	-	-	NA	-	- <input type="checkbox"/> ML <input type="checkbox"/> MDL
Dissolved oxygen	8.92	mg/L	7.7	mg/L	105	SM 4500-O G	0.01 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Nitrate/nitrite	27.9	mg/L	13.6	mg/L	12	EPA 353.2	0.10 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Kjeldahl nitrogen	4.63	mg/L	2.85	mg/L	12	EPA 353.2	0.25 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Oil and grease	-	-	-	-	-	-	- <input type="checkbox"/> ML <input type="checkbox"/> MDL
Phosphorus	4.02	mg/L	1.94	mg/L	12	EPA 365.2	1.0 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Total dissolved solids	-	-	-	-	-	-	- <input type="checkbox"/> ML <input type="checkbox"/> MDL

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

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



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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method ¹	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Metals, Cyanide, and Total Phenols							
Hardness (as CaCO ₃)	109.0	mg/L	102.9	mg/L	3	EPA 200.7	25.0 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Antimony, total recoverable	0	mg/L	0	mg/L	3	EPA 200.8	.002 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Arsenic, total recoverable	0.0028	mg/L	0.0009	mg/L	3	EPA 200.8	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Beryllium, total recoverable	0	mg/L	0	mg/L	3	EPA 200.8	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Cadmium, total recoverable	0	mg/L	0	mg/L	3	EPA 200.8	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Chromium, total recoverable	0	mg/L	0	mg/L	3	EPA 200.8	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Copper, total recoverable	0.0115	mg/L	0.0078	mg/L	3	EPA 200.8	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Lead, total recoverable	0	mg/L	0	mg/L	3	EPA 200.8	.001 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Mercury, total recoverable	0	mg/L	0	mg/L	3	EPA 200.8	0.002 mg <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Nickel, total recoverable	0.00225	mg/L	0.0018	mg/L	3	EPA 200.8	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Selenium, total recoverable	0.00838	mg/L	0.0028	mg/L	3	EPA 200.8	0.002 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Silver, total recoverable	0	mg/L	0	mg/L	3	EPA 200.8	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Thallium, total recoverable	0	mg/L	0	mg/L	3	EPA 200.8	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Zinc, total recoverable	0.0607	mg/L	0.0460	mg/L	3	EPA 200.8	0.01 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Cyanide	0.0106	mg/L	0.0035	mg/L	3	ASTM D7511-09	0.005 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Total phenolic compounds	0.200	mg/L	0.0989	mg/L	3	EPA 420.4	040 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Volatile Organic Compounds							
Acrolein	0	mg/L	0	mg/L	3	EPA 624.1	0.05 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Acrylonitrile	0	mg/L	0	mg/L	3	EPA 624.1	0.01 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Benzene	0	mg/L	0	mg/L	3	EPA 624.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Bromoform	0	mg/L	0	mg/L	3	EPA 624.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL

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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method ¹	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Carbon tetrachloride	0	mg/L	0	mg/L	3	EPA 624.1	0.01 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Chlorobenzene	0	mg/L	0	mg/L	3	EPA 624.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Chlorodibromomethane	0	mg/L	0	mg/L	3	EPA 624.1	0.001 mg/ <input checked="" type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Chloroethane	0	mg/L	0	mg/L	3	EPA 624.1	0.005 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
2-chloroethylvinyl ether	0	mg/L	0	mg/L	3	EPA 624.1	0.05 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Chloroform	0	mg/L	0	mg/L	3	EPA 624.1	0.005 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Dichlorobromomethane	0	mg/L	0	mg/L	3	EPA 624.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,1-dichloroethane	0	mg/L	0	mg/L	3	EPA 624.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,2-dichloroethane	0	mg/L	0	mg/L	3	EPA 624.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
trans-1,2-dichloroethylene	0	mg/L	0	mg/L	3	EPA 624.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,1-dichloroethylene	0	mg/L	0	mg/L	3	EPA 624.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,2-dichloropropane	0	mg/L	0	mg/L	3	EPA 624.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,3-dichloropropylene	0	mg/L	0	mg/L	3	EPA 624.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Ethylbenzene	0	mg/L	0	mg/L	3	EPA 624.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Methyl bromide	0	mg/L	0	mg/L	3	EPA 624.1	0.005 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Methyl chloride	0	mg/L	0	mg/L	3	EPA 624.1	0.0025 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Methylene chloride	0	mg/L	0	mg/L	3	EPA 624.1	0.005 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,1,2,2-tetrachloroethane	0	mg/L	0	mg/L	3	EPA 624.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Tetrachloroethylene	0	mg/L	0	mg/L	3	EPA 624.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Toluene	0	mg/L	0	mg/L	3	EPA 624.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,1,1-trichloroethane	0	mg/L	0	mg/L	3	EPA 624.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,1,2-trichloroethane	0	mg/L	0	mg/L	3	EPA 624.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL

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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method ¹	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Trichloroethylene	0.00248	mg/L	0.0008	mg/L	3	EPA 624.1	0.001 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Vinyl chloride	0	mg/L	0	mg/L	3	EPA 624.1	0.001 mg/L <input type="checkbox"/> ML <input type="checkbox"/> MDL
Acid-Extractable Compounds							
p-chloro-m-cresol	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
2-chlorophenol	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
2,4-dichlorophenol	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
2,4-dimethylphenol	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
4,6-dinitro-o-cresol	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
2,4-dinitrophenol	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
2-nitrophenol	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
4-nitrophenol	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Pentachlorophenol	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Phenol	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
2,4,6-trichlorophenol	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Base-Neutral Compounds							
Acenaphthene	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Acenaphthylene	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Anthracene	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Benzidine	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Benzo(a)anthracene	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Benzo(a)pyrene	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
3,4-benzofluoranthene	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/L <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL

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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method ¹	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Benzo(ghi)perylene	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/ <input type="checkbox"/> ML <input type="checkbox"/> MDL
Benzo(k)fluoranthene	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Bis (2-chloroethoxy) methane	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Bis (2-chloroethyl) ether	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Bis (2-chloroisopropyl) ether	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Bis (2-ethylhexyl) phthalate	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
4-bromophenyl phenyl ether	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Butyl benzyl phthalate	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
2-chloronaphthalene	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
4-chlorophenyl phenyl ether	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Chrysene	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
di-n-butyl phthalate	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
di-n-octyl phthalate	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Dibenzo(a,h)anthracene	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,2-dichlorobenzene	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,3-dichlorobenzene	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,4-dichlorobenzene	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
3,3-dichlorobenzidine	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Diethyl phthalate	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Dimethyl phthalate	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
2,4-dinitrotoluene	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
2,6-dinitrotoluene	0	mg/L	0	mg/L	3	EPA 625.1	0.001 mg/ <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL

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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method ¹	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
1,2-diphenylhydrazine	0	mg/L	0	mg/L	3	EPA 625.1	0.01mg/L: <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Fluoranthene	0	mg/L	0	mg/L	3	EPA 625.1	.001 mg/L: <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Fluorene	0	mg/L	0	mg/L	3	EPA 625.1	.001 mg/L: <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Hexachlorobenzene	0	mg/L	0	mg/L	3	EPA 625.1	.001 mg/L: <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Hexachlorobutadiene	0	mg/L	0	mg/L	3	EPA 625.1	.001 mg/L: <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Hexachlorocyclo-pentadiene	0	mg/L	0	mg/L	3	EPA 625.1	.001 mg/L: <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Hexachloroethane	0	mg/L	0	mg/L	3	EPA 625.1	.001 mg/L: <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Indeno(1,2,3-cd)pyrene	0	mg/L	0	mg/L	3	EPA 625.1	.001 mg/L: <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Isophorone	0	mg/L	0	mg/L	3	EPA 625.1	.001 mg/L: <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Naphthalene	0	mg/L	0	mg/L	3	EPA 625.1	.001 mg/L: <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Nitrobenzene	0	mg/L	0	mg/L	3	EPA 625.1	.001 mg/L: <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
N-nitrosodi-n-propylamine	0	mg/L	0	mg/L	3	EPA 625.1	.001 mg/L: <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
N-nitrosodimethylamine	0	mg/L	0	mg/L	3	EPA 625.1	.001 mg/L: <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
N-nitrosodiphenylamine	0	mg/L	0	mg/L	3	EPA 625.1	.001 mg/L: <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Phenanthrene	0	mg/L	0	mg/L	3	EPA 625.1	.001 mg/L: <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
Pyrene	0	mg/L	0	mg/L	3	EPA 625.1	.001 mg/L: <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL
1,2,4-trichlorobenzene	0	mg/L	0	mg/L	3	EPA 625.1	.001 mg/L: <input type="checkbox"/> ML <input checked="" type="checkbox"/> MDL

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

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TABLE D. ADDITIONAL POLLUTANTS AS REQUIRED BY NPDES PERMITTING AUTHORITY

Pollutant (test)	Maximum Daily Discharge		Average Daily Discharge			Analytical Method ¹	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
<input checked="" type="checkbox"/> No additional sampling is required by NPDES permitting authority.							
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL
							<input type="checkbox"/> ML <input type="checkbox"/> MDL

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

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TABLE E. EFFLUENT MONITORING FOR WHOLE EFFLUENT TOXICITY

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

Test Information			
	Test Number <u>01</u>	Test Number <u>01</u>	Test Number <u>02</u>
Test species	Pimephales promelas	Ceriodaphnia dubia	Pimephales promelas
Age at initiation of test	<48 hours	<24 hours	3 days
Outfall number	DSN001	DSN001	DSN 001
Date sample collected	10/25/17	10/25/17	10/30/19
Date test started	10/25/17	10/25/17	10/31/19
Duration	48 hours	48 hours	48 hours
Toxicity Test Methods			
Test method number			EPA Method 2000.0
Manual title	EPA 821-02-012	EPA 821-02-012	EPA 821-02-212
Edition number and year of publication	October 2002 fifth edition	October 2002 fifth edition	October 2002 fifth edition
Page number(s)			
Sample Type			
Check one:	<input type="checkbox"/> Grab <input checked="" type="checkbox"/> 24-hour composite	<input type="checkbox"/> Grab <input checked="" type="checkbox"/> 24-hour composite	<input type="checkbox"/> Grab <input checked="" type="checkbox"/> 24-hour composite
Sample Location			
Check one:	<input type="checkbox"/> Before Disinfection <input checked="" type="checkbox"/> After Disinfection <input type="checkbox"/> After Dechlorination	<input type="checkbox"/> Before Disinfection <input checked="" type="checkbox"/> After Disinfection <input type="checkbox"/> After Dechlorination	<input type="checkbox"/> Before disinfection <input checked="" type="checkbox"/> After disinfection <input type="checkbox"/> After dechlorination
Point in Treatment Process			
Describe the point in the treatment process at which the sample was collected for each test.	Sample was collected at UV Effluent	Sample was collected at UV Effluent	Sample was collected at UV Effluent
Toxicity Type			
Indicate for each test whether the test was performed to assess acute or chronic toxicity, or both. (Check one response.)	<input checked="" type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Both	<input checked="" type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Both	<input checked="" type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Both

EPA Identification Number	NPDES Permit Number AL0062863	Facility Name PDR Properties Inc.	Outfall Number DSN0011
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TABLE E. EFFLUENT MONITORING FOR WHOLE EFFLUENT TOXICITY

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

Test Information			
	Test Number <u>02</u>	Test Number _____	Test Number <u>02</u>
Test species	Ceriodaphnia Dubia		
Age at initiation of test	<24 hours		
Outfall number	DSN0011		
Date sample collected	10/30/2019		
Date test started	10/31/2019		
Duration	48 hours		
Toxicity Test Methods			
Test method number	EPA Method 2002.0		
Manual title	EPA-821-02-012		
Edition number and year of publication	October 2002 Fifth Edition		
Page number(s)			
Sample Type			
Check one:	<input type="checkbox"/> Grab <input checked="" type="checkbox"/> 24-hour composite	<input type="checkbox"/> Grab <input type="checkbox"/> 24-hour composite	<input type="checkbox"/> Grab <input type="checkbox"/> 24-hour composite
Sample Location			
Check one:	<input type="checkbox"/> Before Disinfection <input checked="" type="checkbox"/> After Disinfection <input type="checkbox"/> After Dechlorination	<input type="checkbox"/> Before Disinfection <input type="checkbox"/> After Disinfection <input type="checkbox"/> After Dechlorination	<input type="checkbox"/> Before disinfection <input type="checkbox"/> After disinfection <input type="checkbox"/> After dechlorination
Point in Treatment Process			
Describe the point in the treatment process at which the sample was collected for each test.	Sample was collected at UV Effluent		
Toxicity Type			
Indicate for each test whether the test was performed to assess acute or chronic toxicity, or both. (Check one response.)	<input checked="" type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Both	<input type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Both	<input type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Both

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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 <u>01</u>		Test Number <u>01</u>		Test Number <u>02</u>	
Test Type						
Indicate the type of test performed. (Check one response.)	<input checked="" type="checkbox"/> Static <input type="checkbox"/> Static-renewal <input type="checkbox"/> Flow-through	<input checked="" type="checkbox"/> Static <input type="checkbox"/> Static-renewal <input type="checkbox"/> Flow-through	<input checked="" type="checkbox"/> Static <input type="checkbox"/> Static-renewal <input type="checkbox"/> Flow-through	<input checked="" type="checkbox"/> Static <input type="checkbox"/> Static-renewal <input type="checkbox"/> Flow-through	<input checked="" type="checkbox"/> Static <input type="checkbox"/> Static-renewal <input type="checkbox"/> Flow-through	<input checked="" type="checkbox"/> Static <input type="checkbox"/> Static-renewal <input type="checkbox"/> Flow-through
Source of Dilution Water						
Indicate the source of dilution water. (Check one response.)	<input checked="" type="checkbox"/> Laboratory water <input type="checkbox"/> Receiving water	<input checked="" type="checkbox"/> Laboratory water <input type="checkbox"/> Receiving water	<input checked="" type="checkbox"/> Laboratory water <input type="checkbox"/> Receiving water	<input checked="" type="checkbox"/> Laboratory water <input type="checkbox"/> Receiving water	<input checked="" type="checkbox"/> Laboratory water <input type="checkbox"/> Receiving water	<input checked="" type="checkbox"/> Laboratory water <input type="checkbox"/> Receiving water
If laboratory water, specify type.	MHSFW	MHSFW	MHSFW	MHSFW	MHSFW	MHSFW
If receiving water, specify source.						
Type of Dilution Water						
Indicate the type of dilution water. If salt water, specify "natural" or type of artificial sea salts or brine used.	<input checked="" type="checkbox"/> Fresh water <input type="checkbox"/> Salt water (specify)	<input checked="" type="checkbox"/> Fresh water <input type="checkbox"/> Salt water (specify)	<input checked="" type="checkbox"/> Fresh water <input type="checkbox"/> Salt water (specify)	<input checked="" type="checkbox"/> Fresh water <input type="checkbox"/> Salt water (specify)	<input checked="" type="checkbox"/> Fresh water <input type="checkbox"/> Salt water (specify)	<input checked="" type="checkbox"/> Fresh water <input type="checkbox"/> Salt water (specify)
Percentage Effluent Used						
Specify the percentage effluent used for all concentrations in the test series.	0, 0.06, 0.12, 0.25, 0.50, 1.0 g/L	0, 0.03, 0.06, 0.12, 0.25 0.5 g/L	0, 0.03, 0.06, 0.12, 0.25 0.5 g/L	0, 0.03, 0.06, 0.12, 0.25 0.5 g/L	0.3, 0.6, 1.2, 2.4, 4.8 g/L	0.3, 0.6, 1.2, 2.4, 4.8 g/L
Parameters Tested						
Check the parameters tested.	<input checked="" type="checkbox"/> pH <input type="checkbox"/> Salinity <input type="checkbox"/> Temperature	<input type="checkbox"/> Ammonia <input type="checkbox"/> Dissolved oxygen	<input checked="" type="checkbox"/> pH <input type="checkbox"/> Salinity <input type="checkbox"/> Temperature	<input type="checkbox"/> Ammonia <input type="checkbox"/> Dissolved oxygen	<input checked="" type="checkbox"/> pH <input type="checkbox"/> Salinity <input type="checkbox"/> Temperature	<input type="checkbox"/> Ammonia <input type="checkbox"/> Dissolved oxygen
Acute Test Results						
Percent survival in 100% effluent	100 %	100 %	100 %	100 %	100 %	100 %
LC ₅₀					0.7917	
95% confidence interval	0.64-0.83 %		0.19-0.51 %		0.7214-0.8689 %	
Control percent survival	100 %				100 %	

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TABLE E. EFFLUENT MONITORING FOR WHOLE EFFLUENT TOXICITY						
The table provides response space for one whole effluent toxicity sample. Copy the table to report additional test results.						
	Test Number _____		Test Number _____		Test Number _____	
Acute Test Results Continued						
Other (describe)						
Chronic Test Results						
NOEC		%		%		%
IC ₂₅		%		%		%
Control percent survival		%		%		%
Other (describe)						
Quality Control/Quality Assurance						
Is reference toxicant data available?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Was reference toxicant test within acceptable bounds?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
What date was reference toxicant test run (MM/DD/YYYY)?						
Other (describe)						

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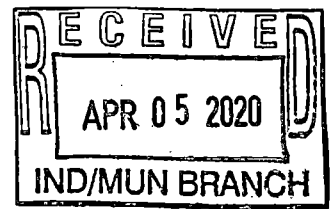
TABLE F. INDUSTRIAL DISCHARGE INFORMATION			
Response space is provided for three SIUs. Copy the table to report information for additional SIUs.			
	SIU ____	SIU <u>084</u>	SIU ____
Name of SIU	ISP	Marshall Space Flight	
Mailing address (street or P.O. box)	Building 5565	Bldg., 4200, Room 427 - Redstone Arsen	
City, state, and ZIP code	Redstone Arsenal, AL 35804	Huntsville, AL 35813	
Description of all industrial processes that affect or contribute to the discharge.	Food grade food additive	Prep. of classified equipment	
List the principal products and raw materials that affect or contribute to the SIU's discharge.	Iron Powder	Classified Equipment	
Indicate the average daily volume of wastewater discharged by the SIU.	10,000 - 20,000 gpd	45,000 gpd	gpd
How much of the average daily volume is attributable to process flow?	10,000-20,000 gpd	45,000 gpd	gpd
How much of the average daily volume is attributable to non-process flow?	10,000 - 20,000 gpd	45,000 gpd	gpd
Is the SIU subject to local limits?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is the SIU subject to categorical standards?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

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NPDES Permit Number
AL00062863Facility Name
Redstone Arsenal Central WWTPForm Approved 03/05/19
OMB No. 2040-0004**TABLE F. INDUSTRIAL DISCHARGE INFORMATION**

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

	SIU <u>084</u>	SIU <u>084</u>	SIU <u> </u>
Under what categories and subcategories is the SIU subject?	Iron Powder	CD, CR, CR6, CU, PB, Ni, AG, ZN, SN, TTO	
Has the POTW experienced problems (e.g., upsets, pass-through interferences) in the past 4.5 years that are attributable to the SIU?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
If yes, describe.			



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: Redstone Arsenal Central Wastewater Treatment Plant
a. Operator Name: Bryce McCreless
b. Is the operator identified in A.1.a, the owner of the facility? No
Bryce McCreless, 8007 Buxton Road, Redstone Arsenal, Alabama 35898
Plant Superintendent, Grade IV
c. Name of Permittee* if different than Operator: PDR Properties, Inc.
*Permittee will be responsible for compliance with the conditions of the permit
2. NPDES Permit Number: AL 0062863 (Not applicable if initial permit application)
3. Facility Physical Location: (Attach a map with location marked; street, route no. or other specific identifier)
Street: 8007 Buxton Road
City: Redstone Arsenal County: Madison State: Alabama Zip: 35898
Facility Location (Front Gate): Latitude: 34" 35' 25" N Longitude: 86" 39' 51" W
4. Facility Mailing Address: P.O. Box 8131
City: Lexington County: Fayette State: Kentucky Zip: 40533-8131
5. Responsible Official (as described on last page of this application):
Name and Title: Dona D. Ray, President
Address: 1028 Monarch Street, Suite 250
City: Lexington State: Kentucky Zip: 40513
Phone Number: 859.223.0425 Email Address: Dray@rayconsultantsllc.com

6. Designated Facility/DMR Contact:

Name and Title: Bryce McCreless, Plant Superintendent
Phone Number: 256.650.5604 Email Address: brycepdrprop@gmail.com

7. Designated Emergency Contact:

Name and Title: Marie Jacobs
Phone Number: 859.223.0425 Email Address: mjacobs@rayconsultantsllc.com

8. Please complete this section if the Applicant's business entity is a Proprietorship or Limited Liability Company (LLC) with a responsible official not listed in A.5.

Name and Title: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____ Email Address: _____

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:

<u>Permit Type</u>	<u>Permit Number</u>	<u>Held By</u>
Discharge	AL0062863	PDR Properties, Inc.
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

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):

<u>Facility Name</u>	<u>Permit Number</u>	<u>Type of Action</u>	<u>Date of Action</u>
None	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

SECTION B – WASTEWATER DISCHARGE INFORMATION

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

Outfall No.	Highest Flow in Last 12 Months (MGD)	Highest Daily Flow (MGD)	Average Flow (MGD)
DNS001	7.5	7.50	2.1
_____	_____	_____	_____
_____	_____	_____	_____

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

3. Do you share an outfall with another facility? Yes No (If no, continue to B.4)
 For each shared outfall, provide the following:

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

4. 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:

5. 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.)

SECTION C – WASTE STORAGE AND DISPOSAL INFORMATION

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

Description of Waste	Description of Storage Location
N/A	N/A
_____	_____
_____	_____

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*
N/A		

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

SECTION D – INDUSTRIAL INDIRECT DISCHARGE CONTRIBUTORS

a. 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?	
NASA	Prep of classified equipment	Existing	0.0450	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
ISP	Ammonia & Steam to process iron powder	Existin	.001	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
				<input type="checkbox"/> Yes	<input type="checkbox"/> No
				<input type="checkbox"/> Yes	<input type="checkbox"/> No

b. Are industrial wastewater contributions regulated via a locally approved sewer use ordinance? Yes No
If yes, please attach a copy of the ordinance.

SECTION E – COASTAL ZONE INFORMATION

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

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

SECTION F – ANTI-DEGRADATION EVALUATION

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

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 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

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

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

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

SECTION J - APPLICATION CERTIFICATION

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

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

Signature of Responsible Official:  Date Signed: 3/23/2020
 Name and Title: Dona D. Ray, President

If the Responsible Official signing this application is not identified in Section A.5 or A.8, provide the following information:

Mailing Address: P.O. Box 8131
 City: Lexington State: Kentucky Zip: 40533-8131
 Phone Number: 859.223.0425 Email Address: dray@rayconsultantsllc.com

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

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

Form 2F NPDES		U.S Environmental Protection Agency Application for NPDES Permit to Discharge Wastewater STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY
---------------------	--	---

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

Outfall Location	1.1	Provide information on each of the facility's outfalls in the table below			
		Outfall Number	Receiving Water Name	Latitude	Longitude
		002	Unnamed Tributary of Tennessee River	34° 35' 23" <input type="checkbox"/>	86° 39' 54" W <input type="checkbox"/>
		003	Unnamed Tributary of Tennessee River	34° 35' 22" <input type="checkbox"/>	86° 39' 52" W <input type="checkbox"/>
		004	Unnamed Tributary of Tennessee River	34° 35' 19" <input type="checkbox"/>	86° 39' 50" W <input type="checkbox"/>
				. ' "	. ' "
				. ' "	. ' "

SECTION 2. IMPROVEMENTS (40 CFR 122.21(g)(6))

Improvements	2.1	Are you presently required by any federal, state, or local authority to meet an implementation schedule for constructing, upgrading, or operating wastewater treatment equipment or practices or any other environmental programs that could affect the discharges described in this application? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 3.			
	2.2	Briefly identify each applicable project in the table below.			
		Brief Identification and Description of Project	Affected Outfalls (list outfall numbers)	Source(s) of Discharge	Final Compliance Dates
					Required Projected

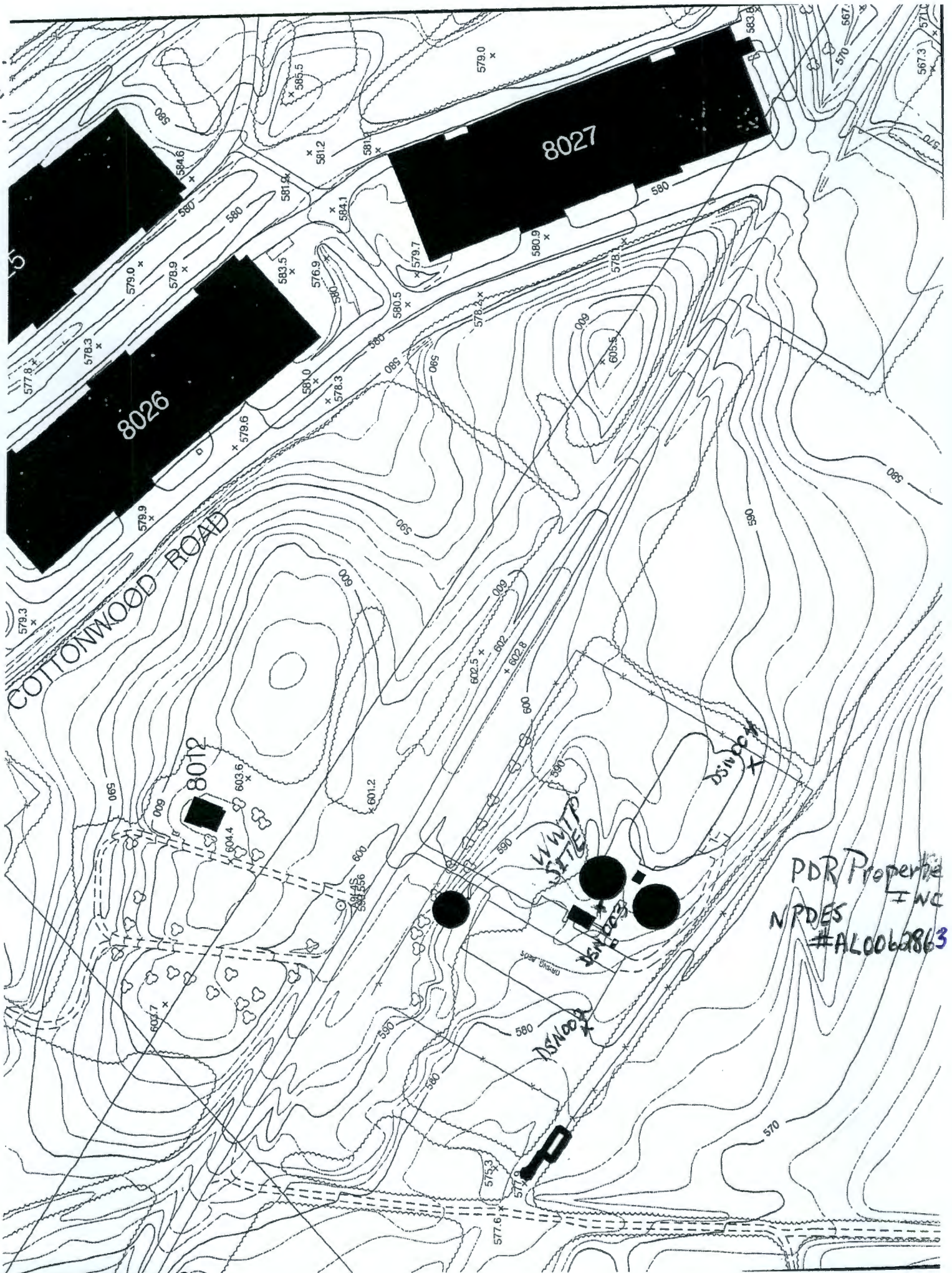
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 IND/MUN BRANCH

SECTION 3. SITE DRAINAGE MAP (40 CFR 122.26(c)(1)(i)(A))

Site Drainage Map	3.1	<p>Have you attached a site drainage map containing all required information to this application? (See instructions for specific guidance.)</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
----------------------------------	-----	---

SECTION 4. POLLUTANT SOURCES (40 CFR 122.26(c)(1)(i)(B))

Pollutant Sources	4.1	Provide information on the facility's pollutant sources in the table below.				
		Outfall Number	Impervious Surface Area (within a mile radius of the facility)	Total Surface Area Drained (within a mile radius of the facility)		
		002	1.11 Acres	<i>specify units</i>	2.11 Acres	<i>specify units</i>
		003	0 Acres	<i>specify units</i>	1.35 Acres	<i>specify units</i>
		004	0.59 Acres	<i>specify units</i>	2.30 Acres	<i>specify units</i>
				<i>specify units</i>		<i>specify units</i>
				<i>specify units</i>		<i>specify units</i>
				<i>specify units</i>		<i>specify units</i>
	4.2	Provide a narrative description of the facility's significant material in the space below. (See instructions for content requirements.)				
		None				
		4.3	Provide the location and a description of existing structural and non-structural control measures to reduce pollutants in stormwater runoff. (See instructions for specific guidance.)			
			Stormwater Treatment			
			Outfall Number	Control Measures and Treatment		Codes from Exhibit 2F-1 (list)
			002	No Structural controls or Treatment exists		N/a
			003	For DSN 002, DSN 003 & DSN 004		N/A
004			N/A			



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NPDES Permit Number
AL 0062863Facility Name
Redstone Arsenal Central
WWTPForm Approved 03/05/19
OMB No. 2040-0004**SECTION 5. NON STORMWATER DISCHARGES (40 CFR 122.26(c)(1)(i)(C))**

Non-Stormwater Discharges

5.1 I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of non-stormwater discharges. Moreover, I certify that the outfalls identified as having non-stormwater discharges are described in either an accompanying NPDES Form 2C, 2D, or 2E application.

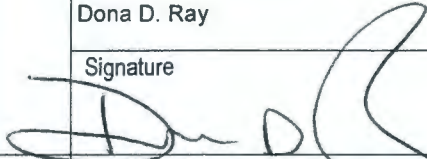
Name (print or type first and last name)

Dona D. Ray

Official title

President

Signature



Date signed

3/23/2020

5.2 Provide the testing information requested in the table below.

Outfall Number	Description of Testing Method Used	Date(s) of Testing	Onsite Drainage Points Directly Observed During Test
N/A			

SECTION 6. SIGNIFICANT LEAKS OR SPILLS (40 CFR 122.26(c)(1)(i)(D))

Significant Leaks or Spills

6.1 Describe any significant leaks or spills of toxic or hazardous pollutants in the last three years.
N/A

SECTION 7. DISCHARGE INFORMATION (40 CFR 122.26(c)(1)(i)(E))

Discharge Information

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

7.1 Is this a new source or new discharge?

 Yes → See instructions regarding submission of *estimated* data.

 No → See instructions regarding submission of *actual* data.
Tables A, B, C, and D

7.2 Have you completed Table A for each outfall?

 Yes

 No

Discharge Information Continued

7.3	Is the facility subject to an effluent limitation guideline (ELG) or effluent limitations in an NPDES permit for its process wastewater? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 7.5.
7.4	Have you completed Table B by providing quantitative data for those pollutants that are (1) limited either directly or indirectly in an ELG and/or (2) subject to effluent limitations in an NPDES permit for the facility's process wastewater? <input type="checkbox"/> Yes <input type="checkbox"/> No
7.5	Do you know or have reason to believe any pollutants in Exhibit 2F-2 are present in the discharge? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 7.7.
7.6	Have you listed all pollutants in Exhibit 2F-2 that you know or have reason to believe are present in the discharge and provided quantitative data or an explanation for those pollutants in Table C? <input type="checkbox"/> Yes <input type="checkbox"/> No
7.7	Do you qualify for a small business exemption under the criteria specified in the Instructions? <input type="checkbox"/> Yes → SKIP to Item 7.18. <input checked="" type="checkbox"/> No
7.8	Do you know or have reason to believe any pollutants in Exhibit 2F-3 are present in the discharge? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 7.10.
7.9	Have you listed all pollutants in Exhibit 2F-3 that you know or have reason to believe are present in the discharge in Table C? <input type="checkbox"/> Yes <input type="checkbox"/> No
7.10	Do you expect any of the pollutants in Exhibit 2F-3 to be discharged in concentrations of 10 ppb or greater? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 7.12.
7.11	Have you provided quantitative data in Table C for those pollutants in Exhibit 2F-3 that you expect to be discharged in concentrations of 10 ppb or greater? <input type="checkbox"/> Yes <input type="checkbox"/> No
7.12	Do you expect acrolein, acrylonitrile, 2,4-dinitrophenol, or 2-methyl-4,6-dinitrophenol to be discharged in concentrations of 100 ppb or greater? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 7.14.
7.13	Have you provided quantitative data in Table C for the pollutants identified in Item 7.12 that you expect to be discharged in concentrations of 100 ppb or greater? <input type="checkbox"/> Yes <input type="checkbox"/> No
7.14	Have you provided quantitative data or an explanation in Table C for pollutants you expect to be present in the discharge at concentrations less than 10 ppb (or less than 100 ppb for the pollutants identified in Item 7.12)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
7.15	Do you know or have reason to believe any pollutants in Exhibit 2F-4 are present in the discharge? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 7.17.
7.16	Have you listed pollutants in Exhibit 2F-4 that you know or believe to be present in the discharge and provided an explanation in Table C? <input type="checkbox"/> Yes <input type="checkbox"/> No
7.17	Have you provided information for the storm event(s) sampled in Table D? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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Discharge Information Continued

Used or Manufactured Toxics

7.18 Is any pollutant listed on Exhibits 2F-2 through 2F-4 a substance or a component of a substance used or manufactured as an intermediate or final product or byproduct?

Yes No → SKIP to Section 8.

7.19 List the pollutants below, including TCDD if applicable.

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

SECTION 8. BIOLOGICAL TOXICITY TESTING DATA (40 CFR 122.21(g)(11))

Biological Toxicity Testing Data

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

Yes No → SKIP to Section 9.

8.2 Identify the tests and their purposes below.

Test(s)	Purpose of Test(s)	Submitted to NPDES Permitting Authority?		Date Submitted
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	

SECTION 9. CONTRACT ANALYSIS INFORMATION (40 CFR 122.21(g)(12))

Contract Analysis Information

9.1 Were any of the analyses reported in Section 7 (on Tables A through C) performed by a contract laboratory or consulting firm?

Yes No → SKIP to Section 10.

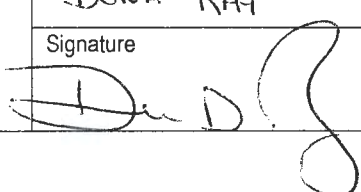
9.2 Provide information for each contract laboratory or consulting firm below.

	Laboratory Number 1	Laboratory Number 2	Laboratory Number 3
Name of laboratory/firm	PACE Analytical		
Laboratory address	2220 Beltline Road SW Decatur, AL 35601		
Phone number	256.350.0846		
Pollutant(s) analyzed	Permit Limits		

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WWTPForm Approved 03/05/19
OMB No. 2040-0004**SECTION 10. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))**

Checklist and Certification Statement

10.1	In Column 1 below, mark the sections of Form 2F that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to complete all sections or provide attachments.	
	Column 1	Column 2
	<input checked="" type="checkbox"/> Section 1	<input type="checkbox"/> w/ attachments (e.g., responses for additional outfalls)
	<input checked="" type="checkbox"/> Section 2	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/> Section 3	<input checked="" type="checkbox"/> w/ site drainage map
	<input checked="" type="checkbox"/> Section 4	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/> Section 5	<input type="checkbox"/> w/ attachments
	<input type="checkbox"/> Section 6	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/> Section 7	<input checked="" type="checkbox"/> Table A <input type="checkbox"/> w/ small business exemption request <input checked="" type="checkbox"/> Table B <input type="checkbox"/> w/ analytical results as an attachment <input checked="" type="checkbox"/> Table C <input checked="" type="checkbox"/> Table D
	<input type="checkbox"/> Section 8	<input type="checkbox"/> w/ attachments
<input checked="" type="checkbox"/> Section 9	<input type="checkbox"/> w/ attachments (e.g., responses for additional contact laboratories or firms)	
<input checked="" type="checkbox"/> Section 10	<input type="checkbox"/>	
10.2	Certification Statement <i>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i>	
	Name (print or type first and last name)	Official title
	DONA RAY	President
	Signature	Date signed
		3/23/2020

EPA Identification Number	NPDES Permit Number AL 0062863	Facility Name Redstone Arsenal Central WWTP	Outfall Number DSN 002
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TABLE A. CONVENTIONAL AND NON CONVENTIONAL PARAMETERS (40 CFR 122.26(c)(1)(i)(E)(3))

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

Pollutant or Parameter	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
1. Oil and grease	<5.00 mg/L		<5.00 mg/L		1	
2. Biochemical oxygen demand (BOD ₅)	-	-	-	-	1	
3. Chemical oxygen demand (COD)	-	-	-	-	-	
4. Total suspended solids (TSS)	6.67 mg/L	-	3.9 mg/L	-	1	
5. Total phosphorus	0.181 mg/L	-	0.06 mg/L	-	1	
6. Total Kjeldahl nitrogen (TKN)	2.66 mg/L	-	1.81 mg/L	-	1	
7. Total nitrogen (as N)	2.99 mg/L	-	2.07 mg/L	-	1	
8. pH (minimum)	6.63 S.U.				1	
	7.55 S.U.				1	

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

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EPA Identification Number	NPDES Permit Number AL 0062863	Facility Name Redstone Arsenal Central WWTP	Outfall Number DSN 002
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TABLE B. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(A))¹

List each pollutant that is limited in an effluent limitation guideline (ELG) that the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		
E. Coli	<10 col/100 mL	-	<10 col/100 mL	-	1	
CBOD	7.0 mg/L	-	2.3 mg/L	-	1	

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

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EPA Identification Number	NPDES Permit Number AL 0062863	Facility Name Redstone Arsenal Central WWTP	Outfall Number DSN 002
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Form Approved 03/05/19
OMB No. 2040-0004

TABLE C. TOXIC POLLUTANTS, CERTAIN HAZARDOUS SUBSTANCES, AND ASBESTOS (40 CFR 122.26(c)(1)(i)(E)(4) and 40 CFR 122.21(g)(7)(vi)(B) and (vii))¹

List each pollutant shown in Exhibits 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)		Number of Storm Events Sampled	Source of Information (new source/new dischargers only; use codes in instructions)
	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-Weighted Composite		

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 AL 0062863	Facility name Redstone Arsenal Central WWTP	Outfall Number DSN 002
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Form Approved 03/05/19
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TABLE D. STORM EVENT INFORMATION (40 CFR 122.26(c)(1)(i)(E)(6))

Provide data for the storm event(s) that resulted in the maximum daily discharges for the flow-weighted composite sample.

Date of Storm Event	Duration of Storm Event (in hours)	Total Rainfall During Storm Event (in inches)	Number of Hours Between Beginning of Storm Measured and End of Previous Measurable Rain Event	Maximum Flow Rate During Rain Event (in gpm or specify units)	Total Flow from Rain Event (in gallons or specify units)
12/10/2019	15 hours	.75"	192 hours	.21 mgd	.75"

Provide a description of the method of flow measurement or estimate.
Rain guage

REPRESENTATIVE STORM WATER OUTFALL CERTIFICATION
ADEM Form 450

This is to certify that the storm water outfalls located at:

DSN 002 Latitude (34) ° (35) ' (16) " N and Longitude (86) ° (39) ' (53) " W

DSN 003 Latitude (34) ° (35) ' (16) " N and Longitude (86) ° (39) ' (50) " W

DSN 004 Latitude (34) ° (35) ' (16) " N and Longitude (86) ° (39) ' (55) " W

DSN _____ Latitude (_____) ° (_____) ' (_____) " N and Longitude (_____) ° (_____) ' (_____) " W

are associated with similar industrial activities such that the characteristics of storm water runoff are essentially the same. Therefore, Redstone Arsenal Central WWTP (Facility Name) requests that it be allowed to sample the outfall(s) located at:

DSN 002 Latitude (34) ° (35) ' (16) " N and Longitude (86) ° (39) ' (53) " W

DSN _____ Latitude (_____) ° (_____) ' (_____) " N and Longitude (_____) ° (_____) ' (_____) " W

DSN _____ Latitude (_____) ° (_____) ' (_____) " N and Longitude (_____) ° (_____) ' (_____) " W

as the representative outfall(s).

This form must be signed by the official representative of the facility who is: the owner, the sole proprietor of a sole proprietorship, a general partner for a partnership, or by a ranking elected official or other duly authorized representative for a unit of government or an executive officer of **at least the level of vice president** for a corporation, having overall responsibility for the operation of the facility.

CERTIFICATION: I certify that I have chosen the point(s) that is/are most likely or as likely to contain potential pollutants from the area. 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 or imprisonment for knowing violations.

Permit Number (*if already a permitted facility): AL0062863

Name and Official title (type or print): DONA RAY, PRESIDENT

Address: 1029 Monarch Street, Suite 250, Lexington, Kentucky 40513

Phone Number: (859) 223-0425

Signature: 

Please print name: DONA RAY

Date signed: 3/23/2020

Email address: dray@rayconsultantsllc.com

***If this is a modification to an existing permit, then a modification fee must also be included.**

INSTRUCTIONS

One certification should be submitted for each set of points from the same drainage area for which you want to designate a representative sampling point or points.

If you have more than one drainage area, you must submit a site drawing designating the drainage areas and all points of discharge with the chosen representative sampling points designated in each area.

If you have more than one drainage area, you may request that only one area be sampled if the areas are very similar to one another in terms of potential pollutants. You must choose as the representative sampling point the point that has the highest potential to contain pollutants in the storm water.

MAR 26 2020

EPA Identification Number	NPDES Permit Number AL 0062863	Facility Name Redstone Arsenal Central WWTP	Form Approved 03/05/19 OMB No. 2040-0004
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Form 2S NPDES		U.S Environmental Protection Agency Application for NPDES Permit for Sewage Sludge Management NEW AND EXISTING TREATMENT WORKS TREATING DOMESTIC SEWAGE
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PRELIMINARY INFORMATION

Does your facility currently have an effective NPDES permit or have you been directed by your NPDES permitting authority to submit a full Form 2S permit application?

Yes → Complete Part 2 of application package (begins p. 7). No → Complete Part 1 of application package (below).

PART 1 LIMITED BACKGROUND INFORMATION (40 CFR 122.21(c)(2)(ii))

Complete this part only if you are a "sludge-only" facility (i.e., a facility that does not currently have, and is not applying for, an NPDES permit for a direct discharge to a surface body of water).

PART 1, SECTION 1. FACILITY INFORMATION (40 CFR 122.21(c)(2)(ii)(A))

Facility Information	1.1	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
		Location address (street, route number, or other specific identifier)			<input type="checkbox"/> Same as mailing address
		City or town	State	ZIP code	
	1.2	Ownership Status			
	<input type="checkbox"/> Public—federal <input type="checkbox"/> Public—state <input type="checkbox"/> Other public (specify) _____ <input type="checkbox"/> Private <input type="checkbox"/> Other (specify) _____				

PART 1, SECTION 2. APPLICANT INFORMATION (40 CFR 122.21(c)(2)(ii)(B))

Applicant Information	2.1	Is applicant different from entity listed under Item 1.1 above?			
		<input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 2.3 (Part 1, Section 2).			
	2.2	Applicant name			
		Applicant address (street or P.O. box)			
		City or town	State	ZIP code	
	Contact name (first and last)	Title	Phone number	Email address	
2.3	Is the applicant the facility's owner, operator, or both? (Check only one response.)				
	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> Both				
2.4	To which entity should the NPDES permitting authority send correspondence? (Check only one response.)				
	<input type="checkbox"/> Facility <input type="checkbox"/> Applicant <input type="checkbox"/> Facility and applicant (they are one and the same)				

PART 1, SECTION 3. SEWAGE SLUDGE AMOUNT (40 CFR 122.21(c)(2)(ii)(D))

Sewage Sludge Amount	3.1	Provide the total dry metric tons per the latest 365-day period of sewage sludge generated, treated, used, and disposed of:		
		Practice		Dry Metric Tons per 365-Day Period
		Amount generated at the facility		
		Amount treated at the facility		
		Amount used (i.e., received from off site) at the facility		
		Amount disposed of at the facility		

PART 1, SECTION 4. POLLUTANT CONCENTRATIONS (40 CFR 122.21(c)(2)(ii)(E))

Pollutant Concentrations

4.1

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

Check here if you have provided a separate attachment with this information.

Pollutant	Concentration (mg/kg dry weight)	Analytical Method	Detection Level for Analysis
Arsenic			
Cadmium			
Chromium			
Copper			
Lead			
Mercury			
Molybdenum			
Nickel			
Selenium			
Zinc			
Other (specify) _____			
Other (specify) _____			
Other (specify) _____			
Other (specify) _____			
Other (specify) _____			
Other (specify) _____			
Other (specify) _____			
Other (specify) _____			
Other (specify) _____			
Other (specify) _____			

PART 1, SECTION 7. USE AND DISPOSAL SITES (40 CFR 122.21(c)(2)(ii)(C))

Use and Disposal Sites	Provide the following information for each site on which sewage sludge from this facility is used or disposed of.		
	<input type="checkbox"/> Check here if you have provided separate attachments with this information.		
	7.1	Site name or number	
		Mailing address (street or P.O. box)	
		City or town	State ZIP code
		Contact name (first and last) Title	Phone number Email address
		Location address (street, route number, or other specific identifier) <input type="checkbox"/> Same as mailing address	
		City or town	State ZIP code
	County	County code <input type="checkbox"/> Not available	
7.2	Site type (check all that apply)		
	<input type="checkbox"/> Agricultural	<input type="checkbox"/> Lawn or home garden <input type="checkbox"/> Forest	
	<input type="checkbox"/> Surface disposal	<input type="checkbox"/> Public contact <input type="checkbox"/> Incineration	
	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Municipal solid waste landfill <input type="checkbox"/> Other (describe)	

PART 1, SECTION 8. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))

Checklist and Certification Statement	8.1	In Column 1 below, mark the sections of Form 2S, Part 1, that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to provide attachments.	
		Column 1	Column 2
		<input checked="" type="checkbox"/> Section 1: Facility Information	<input checked="" type="checkbox"/> w/ attachments
		<input checked="" type="checkbox"/> Section 2: Applicant Information	<input checked="" type="checkbox"/> w/ attachments
		<input type="checkbox"/> Section 3: Sewage Sludge Amount	<input type="checkbox"/> w/ attachments
		<input type="checkbox"/> Section 4: Pollutant Concentrations	<input type="checkbox"/> w/ attachments
		<input type="checkbox"/> Section 5: Treatment Provided at Your Facility	<input type="checkbox"/> w/ attachments
		<input type="checkbox"/> Section 6: Sewage Sludge Sent to Other Facilities	<input type="checkbox"/> w/ attachments
		<input type="checkbox"/> Section 7: Use and Disposal Sites	<input type="checkbox"/> w/ attachments
		<input type="checkbox"/> Section 8: Checklist and Certification Statement	

EPA Identification Number		NPDES Permit Number AL 0062863	Facility Name Redstone Arsenal Central WWTP	Form Approved 03/05/19 OMB No. 2040-0004
Checklist and Certification Statement Continued	8.2	Certification Statement <i>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i>		
		Name (print or type first and last name)	Official title	Phone number
		Signature		Date signed

PART 1 APPLICANTS STOP HERE.

Submit completed application package to your NPDES permitting authority.

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PART 2	PERMIT APPLICATION INFORMATION (40 CFR 122.21(q))
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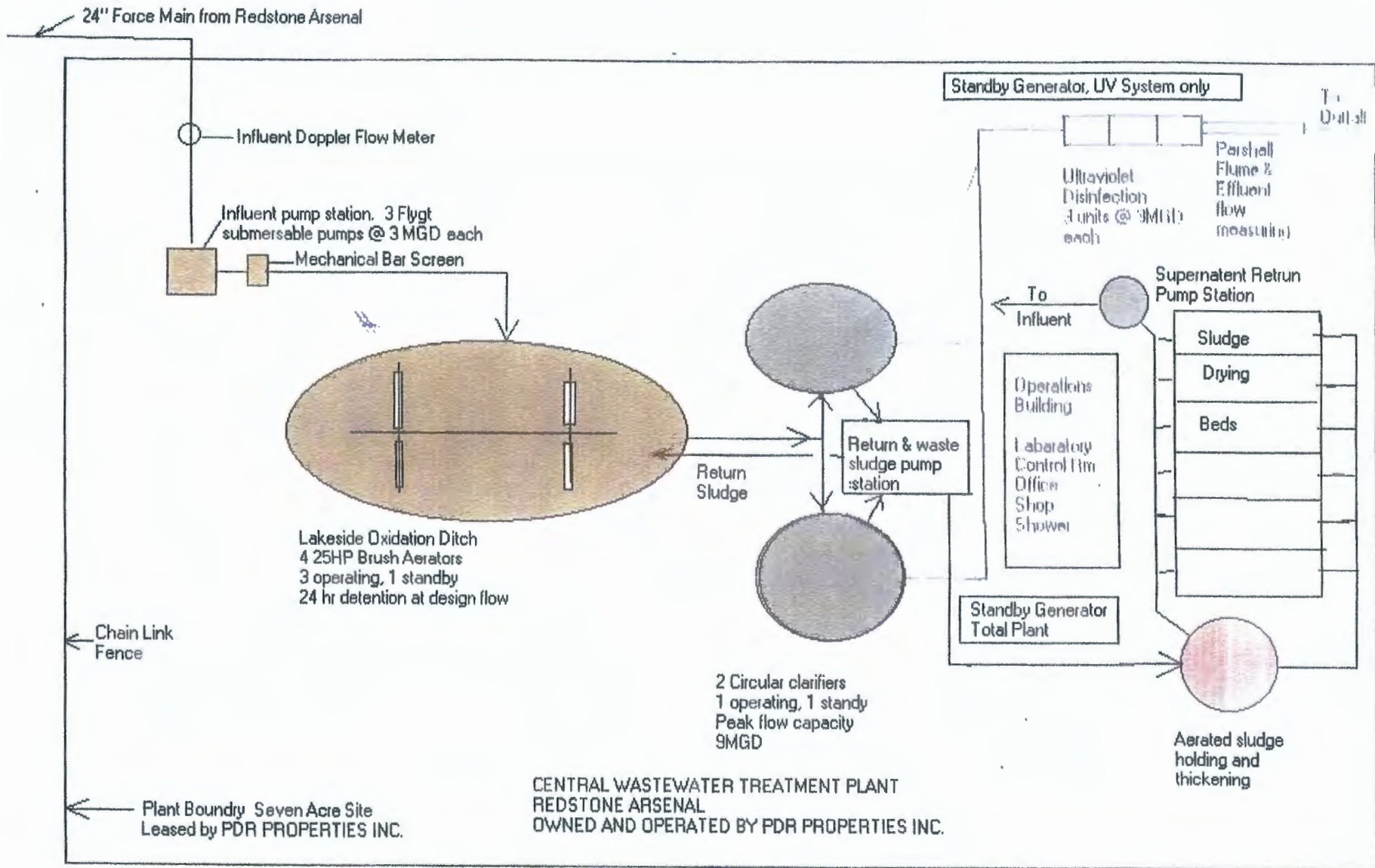
Complete this part if you have an effective NPDES permit or have been directed by the NPDES permitting authority to submit a full permit application. In other words, complete this part if your facility has, or is applying for, an NPDES permit. Part 2 is divided into five sections. Section 1 pertains 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 Redstone Arsenal Central Wastewater Treatment Plant		
	Mailing address (street or P.O. box) P.O. Box 8131		
	City or town Lexington	State Kentucky	ZIP code 40533-8131
			Phone number 859.223.0425
	Contact name (first and last) Bryce McCreless	Title Plant Superintendent	Email address brycepdprop@gmail.com
	Location address (street, route number, or other specific identifier) 8007 Buxton Road		<input type="checkbox"/> Same as mailing address
	City or town Redstone Arsenal	State Alabama	ZIP code 35898
1.2	Is this facility a Class I sludge management facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
1.3	Facility Design Flow Rate	3.3 million gallons per day (mgd)	
1.4	Total Population Served	38,000	
1.5	Ownership Status		
	<input type="checkbox"/> Public—federal	<input type="checkbox"/> Public—state	<input type="checkbox"/> Other public (specify) _____
	<input checked="" type="checkbox"/> Private	<input type="checkbox"/> Other (specify) _____	
Applicant Information			
1.6	Is applicant different from entity listed under Item 1.1 above? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 1.8 (Part 2, Section 1).		
1.7	Applicant name PDR Properties, Inc.		
	Applicant mailing address (street or P.O. box) P.O. Box 8131		
	City or town Lexington	State Kentucky	ZIP code 40533-8131
	Contact name (first and last) Dona D. Ray	Title President	Phone number 859.223.0425
			Email address dray@rayconsultantsllc.co
1.8	Is the applicant the facility's owner, operator, or both? (Check only one response.) <input type="checkbox"/> Operator <input checked="" type="checkbox"/> Owner <input type="checkbox"/> Both		
1.9	To which entity should the NPDES permitting authority send correspondence? (Check only one response.) <input type="checkbox"/> Facility <input checked="" type="checkbox"/> Applicant <input type="checkbox"/> Facility and applicant (they are one and the same)		

EPA Identification Number	NPDES Permit Number AL 0062863	Facility Name Redstone Arsenal Central WWTP	Form Approved 03/05/19 OMB No. 2040-0004																												
1.10	Facility's NPDES permit number <input type="checkbox"/> Check here if you do not have an NPDES permit but are otherwise required to submit Part 2 of Form 2S.																														
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.																														
<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:33%; padding: 5px;"><input type="checkbox"/> RCRA (hazardous wastes)</td> <td style="width:33%; padding: 5px;"><input type="checkbox"/> Nonattainment program (CAA)</td> <td style="width:33%; padding: 5px;"><input type="checkbox"/> NESHAPs (CAA)</td> </tr> <tr> <td style="padding: 5px;"><input type="checkbox"/> PSD (air emissions)</td> <td style="padding: 5px;"><input type="checkbox"/> Dredge or fill (CWA Section 404)</td> <td style="padding: 5px;"><input type="checkbox"/> Other (specify)</td> </tr> <tr> <td style="padding: 5px;"><input type="checkbox"/> Ocean dumping (MPRSA)</td> <td style="padding: 5px;"><input type="checkbox"/> UIC (underground injection of fluids)</td> <td style="padding: 5px;"></td> </tr> </table>				<input type="checkbox"/> RCRA (hazardous wastes)	<input type="checkbox"/> Nonattainment program (CAA)	<input type="checkbox"/> NESHAPs (CAA)	<input type="checkbox"/> PSD (air emissions)	<input type="checkbox"/> Dredge or fill (CWA Section 404)	<input type="checkbox"/> Other (specify)	<input type="checkbox"/> Ocean dumping (MPRSA)	<input type="checkbox"/> UIC (underground injection of fluids)																				
<input type="checkbox"/> RCRA (hazardous wastes)	<input type="checkbox"/> Nonattainment program (CAA)	<input type="checkbox"/> NESHAPs (CAA)																													
<input type="checkbox"/> PSD (air emissions)	<input type="checkbox"/> Dredge or fill (CWA Section 404)	<input type="checkbox"/> Other (specify)																													
<input type="checkbox"/> Ocean dumping (MPRSA)	<input type="checkbox"/> UIC (underground injection of fluids)																														
Indian Country																															
1.12	Does any generation, treatment, storage, application to land, or disposal of sewage sludge from this facility occur in Indian Country? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 1.14 (Part 2, Section 1) below.																														
1.13	Provide a description of the generation, treatment, storage, land application, or disposal of sewage sludge that occurs.																														
Topographic Map																															
1.14	Have you attached a topographic map containing all required information to this application? (See instructions for specific requirements.) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																														
Line Drawing																															
1.15	Have you attached a line drawing and/or a narrative description that identifies all sewage sludge practices that will be employed during the term of the permit containing all the required information to this application? (See instructions for specific requirements.) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																														
Contractor Information																															
1.16	Do contractors have any operational or maintenance responsibilities related to sewage sludge generation, treatment, use, or disposal at the facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 1.18 (Part 2, Section 1) below.																														
1.17	Provide the following information for each contractor. <input type="checkbox"/> Check here if you have attached additional sheets to the application package.																														
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:40%;"></th> <th style="width:15%;">Contractor 1</th> <th style="width:15%;">Contractor 2</th> <th style="width:15%;">Contractor 3</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Contractor company name</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding: 5px;">Mailing address (street or P.O. box)</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding: 5px;">City, state, and ZIP code</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding: 5px;">Contact name (first and last)</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding: 5px;">Telephone number</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding: 5px;">Email address</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>					Contractor 1	Contractor 2	Contractor 3	Contractor company name				Mailing address (street or P.O. box)				City, state, and ZIP code				Contact name (first and last)				Telephone number				Email address			
	Contractor 1	Contractor 2	Contractor 3																												
Contractor company name																															
Mailing address (street or P.O. box)																															
City, state, and ZIP code																															
Contact name (first and last)																															
Telephone number																															
Email address																															



Sludge is placed on drying beds. Once sludge is dry, sludge is hauled off site to be incinerated

General Information Continued

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

Pollutant Concentrations

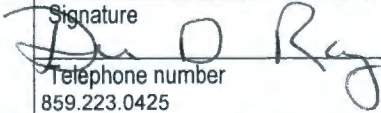
Using the table below or a separate attachment, provide sewage sludge monitoring data for the pollutants for which limits in sewage sludge have been established in 40 CFR 503 for this facility's expected use or disposal practices. All data must be based on three or more samples taken at least one month 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	N/A		
	Cadmium			
	Chromium			
	Copper			
	Lead			
	Mercury			
	Molybdenum			
	Nickel			
	Selenium			
Zinc				

Checklist and Certification Statement

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

1.20	Certification Statement	
	<i>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i>	
	Name (print or type first and last name) Dona D. Ray	Official title President
	Signature 	Date signed 3/23/2020
Telephone number 859.223.0425		

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

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

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:

Amount Received from Off Site Facility

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

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

Provide the following information for each of the facilities from which you receive sewage sludge.
 Check here if you have attached additional sheets to the application package.

2.5 Name of facility

Mailing address (street or P.O. box)

City or town State ZIP code

Contact name (first and last) Title Phone number Email address

Location address (street, route number, or other specific identifier) Same as mailing address

City or town State ZIP code

County County code Not available

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

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

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

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

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
	<input type="checkbox"/> Land application of bulk sewage <input type="checkbox"/> Land application of biosolids (bulk) <input type="checkbox"/> Land application of biosolids (bags) <input type="checkbox"/> Surface disposal in a landfill <input type="checkbox"/> Other surface disposal <input checked="" type="checkbox"/> Incineration	<input checked="" type="checkbox"/> Not applicable <input type="checkbox"/> Class A, Alternative 1 <input type="checkbox"/> Class A, Alternative 2 <input type="checkbox"/> Class A, Alternative 3 <input type="checkbox"/> Class A, Alternative 4 <input type="checkbox"/> Class A, Alternative 5 <input type="checkbox"/> Class A, Alternative 6 <input type="checkbox"/> Class B, Alternative 1 <input type="checkbox"/> Class B, Alternative 2 <input type="checkbox"/> Class B, Alternative 3 <input type="checkbox"/> Class B, Alternative 4 <input type="checkbox"/> Domestic septage, pH adjustment
		Vector Attraction Reduction Option
		<input checked="" type="checkbox"/> Not applicable <input type="checkbox"/> Option 1 <input type="checkbox"/> Option 2 <input type="checkbox"/> Option 3 <input type="checkbox"/> Option 4 <input type="checkbox"/> Option 5 <input type="checkbox"/> Option 6 <input type="checkbox"/> Option 7 <input type="checkbox"/> Option 8 <input type="checkbox"/> Option 9 <input type="checkbox"/> Option 10 <input type="checkbox"/> Option 11
2.9	Identify the treatment process(es) used at your facility to reduce pathogens in sewage sludge or reduce the vector attraction properties of sewage sludge? (Check all that apply.)	
	<input type="checkbox"/> Preliminary operations (e.g., sludge grinding and degritting) <input type="checkbox"/> Stabilization <input type="checkbox"/> Composting <input type="checkbox"/> Disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization) <input type="checkbox"/> Heat drying <input type="checkbox"/> Methane or biogas capture and recovery	<input type="checkbox"/> Thickening (concentration) <input type="checkbox"/> Anaerobic digestion <input type="checkbox"/> Conditioning <input checked="" type="checkbox"/> Dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons) <input type="checkbox"/> Thermal reduction
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. <input type="checkbox"/> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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:	
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? <input type="checkbox"/> Yes <input type="checkbox"/> No	
<input checked="" type="checkbox"/> 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
Location address (street, route number, or other specific identifier)		<input type="checkbox"/> Same as mailing address
City or town	State	ZIP code

2.20 Total dry metric tons per 365-day period of sewage sludge provided to receiving facility:

2.21 Does the receiving facility provide additional treatment to reduce pathogens in sewage sludge from your facility or reduce the vector attraction properties of sewage sludge from your facility?
 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
<input type="checkbox"/> Not applicable	<input type="checkbox"/> Not applicable
<input type="checkbox"/> Class A, Alternative 1	<input type="checkbox"/> Option 1
<input type="checkbox"/> Class A, Alternative 2	<input type="checkbox"/> Option 2
<input type="checkbox"/> Class A, Alternative 3	<input type="checkbox"/> Option 3
<input type="checkbox"/> Class A, Alternative 4	<input type="checkbox"/> Option 4
<input type="checkbox"/> Class A, Alternative 5	<input type="checkbox"/> Option 5
<input type="checkbox"/> Class A, Alternative 6	<input type="checkbox"/> Option 6
<input type="checkbox"/> Class B, Alternative 1	<input type="checkbox"/> Option 7
<input type="checkbox"/> Class B, Alternative 2	<input type="checkbox"/> Option 8
<input type="checkbox"/> Class B, Alternative 3	<input type="checkbox"/> Option 9
<input type="checkbox"/> Class B, Alternative 4	<input type="checkbox"/> Option 10
<input type="checkbox"/> Domestic septage, pH adjustment	<input type="checkbox"/> Option 11

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

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

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Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge Continued	2.36	Site name or number of surface disposal site you do not own or operate						
		Mailing address (street or P.O. box)						
		City or Town			State		ZIP Code	
		Contact Name (first and last)		Title	Phone Number		Email Address	
	2.37	Site Contact (Check all that apply.)						
		<input type="checkbox"/> Owner			<input type="checkbox"/> Operator			
	2.38	Total dry metric tons of sewage sludge from your facility placed on this surface disposal site per 365-day period:						
	Incineration							
	2.39	Is sewage sludge from your facility fired in a sewage sludge incinerator?						
		<input checked="" type="checkbox"/> Yes			<input type="checkbox"/> No → SKIP to Item 2.46 (Part 2, Section 2) below.			
	2.40	Total dry metric tons of sewage sludge from your facility fired in all sewage sludge incinerators per 365-day period:					65.11	
	2.41	Do you own or operate all sewage sludge incinerators in which sewage sludge from your facility is fired?						
		<input type="checkbox"/> Yes → SKIP to Item 2.46 (Part 2, Section 2) below.			<input checked="" type="checkbox"/> No			
	2.42	Indicate the total number of sewage sludge incinerators used that you do not own or operate. (Provide the information in Items 2.43 to 2.45 directly below for each facility.)					1	
		<input type="checkbox"/> Check here if you have attached additional sheets to the application package.						
2.43	Incinerator name or number Covanta Huntsville, Inc.							
	Mailing address (street or P.O. box) P.O. Box 28893							
	City or town New York			State NY		ZIP code 10087-8893		
	Contact name (first and last) Kim Achey		Title Operations Assistant	Phone number 256-713-7907		Email address kachey@covanta.com		
	Location address (street, route number, or other specific identifier) 5251 Triana Blvd., SW					<input type="checkbox"/> Same as mailing address		
	City or town Huntsville			State AL		ZIP code 35805		
2.44	Contact (check all that apply)							
	<input type="checkbox"/> Incinerator owner			<input checked="" type="checkbox"/> Incinerator operator				
2.45	Total dry metric tons of sewage sludge from your facility fired in this sewage sludge incinerator per 365-day period:					65.11 tons		
Disposal in a Municipal Solid Waste Landfill								
2.46	Is sewage sludge from your facility placed on a municipal solid waste landfill?							
	<input type="checkbox"/> Yes			<input checked="" type="checkbox"/> No → SKIP to Part 2, Section 3.				
2.47	Indicate the total number of municipal solid waste landfills used. (Provide the information in Items 2.48 to 2.52 directly below for each facility.)							
	<input type="checkbox"/> Check here if you have attached additional sheets to the application package.							

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

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

Land Application of Bulk Sewage Sludge

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

EPA Identification Number

NPDES Permit Number
AL 0062863

Facility Name
Redstone Arsenal Central
WWTP

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Land Application of Bulk Sewage Sludge Continued

Site Type			
3.10	Type of land application:	<input type="checkbox"/> Agricultural land	<input type="checkbox"/> Forest
		<input type="checkbox"/> Reclamation site	<input type="checkbox"/> Public contact site
		<input type="checkbox"/> 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?		
	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.)		
	<input type="checkbox"/> Option 9 (injection below land surface)	<input type="checkbox"/> 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.		
	<input type="checkbox"/> 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)?		
	<input type="checkbox"/> Yes	<input type="checkbox"/> 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?		
	<input type="checkbox"/> Yes	<input type="checkbox"/> 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?		
	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.		
	<input type="checkbox"/> 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?		
	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No → SKIP to Part 2, Section 5.	
4.2	Complete all items in Section 4 for each active sewage sludge unit that you own or operate.		
	<input type="checkbox"/> Check here to indicate that you have attached material to the application package for one or more active sewage sludge units.		
Information on Active Sewage Sludge Units			
4.3	Unit name or number		
	Mailing address (street or P.O. box)		
	City or town	State	ZIP code
	Contact name (first and last)	Title	Phone number Email address
	Location address (street, route number, or other specific identifier)		<input type="checkbox"/> Same as mailing address
	County	County code	<input type="checkbox"/> Not available
	City or town	State	ZIP code
Latitude/Longitude of Active Sewage Sludge Unit (see instructions)			
	Latitude		Longitude
	. ' "		. ' "
Method of Determination			
	<input type="checkbox"/> USGS map <input type="checkbox"/> Field survey <input type="checkbox"/> Other (specify) _____		
4.4	Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location.		
	<input type="checkbox"/> Check here to indicate that you have completed and attached a topographic map.		
4.5	Total dry metric tons of sewage sludge placed on the active sewage sludge unit per 365-day period:		
4.6	Total dry metric tons of sewage sludge placed on the active sewage sludge unit over the life of the unit:		
4.7	Does the active sewage sludge unit have a liner with a maximum permeability of 1×10^{-7} centimeters per second (cm/sec)?		
	<input type="checkbox"/> Yes	<input type="checkbox"/> No → SKIP to Item 4.9 (Part 2, Section 4) below.	
4.8	Describe the liner.		
	<input type="checkbox"/> Check here to indicate that you have attached a description to the application package.		
4.9	Does the active sewage sludge unit have a leachate collection system?		
	<input type="checkbox"/> Yes	<input type="checkbox"/> No → SKIP to Item 4.11 (Part 2, Section 4) below.	
4.10	Describe the leachate collection system and the method used for leachate disposal and provide the numbers of any federal, state, or local permit(s) for leachate disposal.		
	<input type="checkbox"/> Check here to indicate that you have attached the description to the application package.		

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

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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?		
		<input type="checkbox"/> Option 9 (Injection below and surface)	<input type="checkbox"/> Option 11 (Covering active sewage sludge unit daily)	
		<input type="checkbox"/> Option 10 (Incorporation into soil within 6 hours)	<input type="checkbox"/> None	
	4.22	Describe any treatment processes used at the active sewage sludge unit to reduce vector attraction properties of sewage sludge.		
		<input type="checkbox"/> 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?		
		<input type="checkbox"/> Yes	<input type="checkbox"/> No → SKIP to Item 4.26 (Part 2, Section 4) below.	
	4.24	Provide a copy of available groundwater monitoring data.		
		<input type="checkbox"/> 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.		
		<input type="checkbox"/> 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?		
	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.			
	<input type="checkbox"/> 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?			
	<input type="checkbox"/> Yes	<input type="checkbox"/> No → SKIP to Item 4.30 (Part 2, Section 4) below.		
4.29	Submit a copy of the certification with this permit application.			
	<input type="checkbox"/> 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?			
	<input type="checkbox"/> Yes	<input type="checkbox"/> No → SKIP to Part 2, Section 5.		
4.31	Submit information to support the request for site-specific pollutant limits with this application.			
	<input type="checkbox"/> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to END.
5.2	Indicate the total number of incinerators used at your facility. (Complete the remainder of Section 5 for each such incinerator.) <input type="checkbox"/> Check here to indicate that you have attached information for one or more incinerators.
5.3	Incinerator name or number
	Location address (street, route number, or other specific identifier)
	County <input type="checkbox"/> Not available
	County code
	City or town
	State
	ZIP code
	Latitude/Longitude of Incinerator (see instructions)
	Latitude
	Longitude
	° ' "
	° ' "
	Method of Determination
	<input type="checkbox"/> USGS map <input type="checkbox"/> Field survey <input type="checkbox"/> Other (specify) _____
	Amount Fired
5.4	Dry metric tons per 365-day period of sewage sludge fired in the sewage sludge incinerator:
	Beryllium NESHAP
5.5	Submit information, test data, and a description of measures taken that demonstrate whether the sewage sludge incinerated is beryllium-containing waste and will continue to remain as such. <input type="checkbox"/> Check here to indicate that you have attached this material to the application package.
5.6	Is the sewage sludge fired in this incinerator "beryllium-containing waste" as defined at 40 CFR 61.31? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 5.8 (Part 2, Section 5) below.
5.7	Submit with this application a complete report of the latest beryllium emission rate testing <i>and</i> documentation of ongoing incinerator operating parameters indicating that the NESHAP emission rate limit for beryllium has been and will continue to be met. <input type="checkbox"/> Check here to indicate that you have attached this information.
	Mercury NESHAP
5.8	Is compliance with the mercury NESHAP being demonstrated via stack testing? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 5.11 (Part 2, Section 5) below.
5.9	Submit a complete report of stack testing and documentation of ongoing incinerator operating parameters indicating that the incinerator has met and will continue to meet the mercury NESHAP emission rate limit. <input type="checkbox"/> Check here to indicate that you have attached this information.
5.10	Provide copies of mercury emission rate tests for the two most recent years in which testing was conducted. <input type="checkbox"/> Check here to indicate that you have attached this information.
5.11	Do you demonstrate compliance with the mercury NESHAP by sewage sludge sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 5.13 (Part 2, Section 5) below.
5.12	Submit a complete report of sewage sludge sampling and documentation of ongoing incinerator operating parameters indicating that the incinerator has met and will continue to meet the mercury NESHAP emission rate limit. <input type="checkbox"/> Check here to indicate that you have attached this information.

EPA Identification Number		NPDES Permit Number AL 0062863	Facility Name Redstone Arsenal Central WWTP	Form Approved 03/05/19 OMB No. 2040-0004
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. <input type="checkbox"/> Check here to indicate that you have attached this information.		
	Control Efficiency			
	5.16	Provide the control efficiency, in hundredths, for each of the pollutants listed below.		
		Pollutant	Control Efficiency, in Hundredths	
		Arsenic		
		Cadmium		
		Chromium		
		Lead		
		Nickel		
	5.17	Attach a copy of the results or performance testing and supporting documentation (including testing dates). <input type="checkbox"/> Check here to indicate that you have attached this information.		
	Risk-Specific Concentration for Chromium			
	5.18	Provide the risk-specific concentration (RSC) used for chromium in micrograms per cubic meter:		
	5.19	Was the RSC determined via Table 2 in 40 CFR 503.43? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 5.21 (Part 2, Section 5) below.		
	5.20	Identify the type of incinerator used as the basis. <input type="checkbox"/> Fluidized bed with wet scrubber <input type="checkbox"/> Other types with wet scrubber <input type="checkbox"/> Fluidized bed with wet scrubber and wet electrostatic precipitator <input type="checkbox"/> Other types with wet scrubber and wet electrostatic precipitator		
	5.21	Was the RSC determined via Table 6 in 40 CFR 503.43 (site-specific determination)? <input type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 5.23 (Part 2, Section 5) below.		
5.22	Provide the decimal fraction of hexavalent chromium concentration to total chromium concentration in stack exit gas:			
5.23	Attach the results of incinerator stack tests for hexavalent and total chromium concentrations, including the date(s) of any test(s), with this application. <input type="checkbox"/> Check here to indicate that you have attached this information. <input type="checkbox"/> Not applicable			
Incinerator Parameters				
5.24	Do you monitor total hydrocarbons (THC) in the exit gas of the sewage sludge incinerator? <input type="checkbox"/> Yes <input type="checkbox"/> No			
5.25	Do you monitor carbon monoxide (CO) in the exit gas of the sewage sludge incinerator? <input type="checkbox"/> Yes <input type="checkbox"/> No			
5.26	Indicate the type of sewage sludge incinerator.			
5.27	Incinerator stack height in meters:			
5.28	Indicate whether the value submitted in Item 5.27 is (check only one response): <input type="checkbox"/> Actual stack height <input type="checkbox"/> Creditable stack height			

EPA Identification Number

NPDES Permit Number
AL 0062863Facility Name
Redstone Arsenal Central
WWTPForm Approved 03/05/19
OMB No. 2040-0004**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) | |

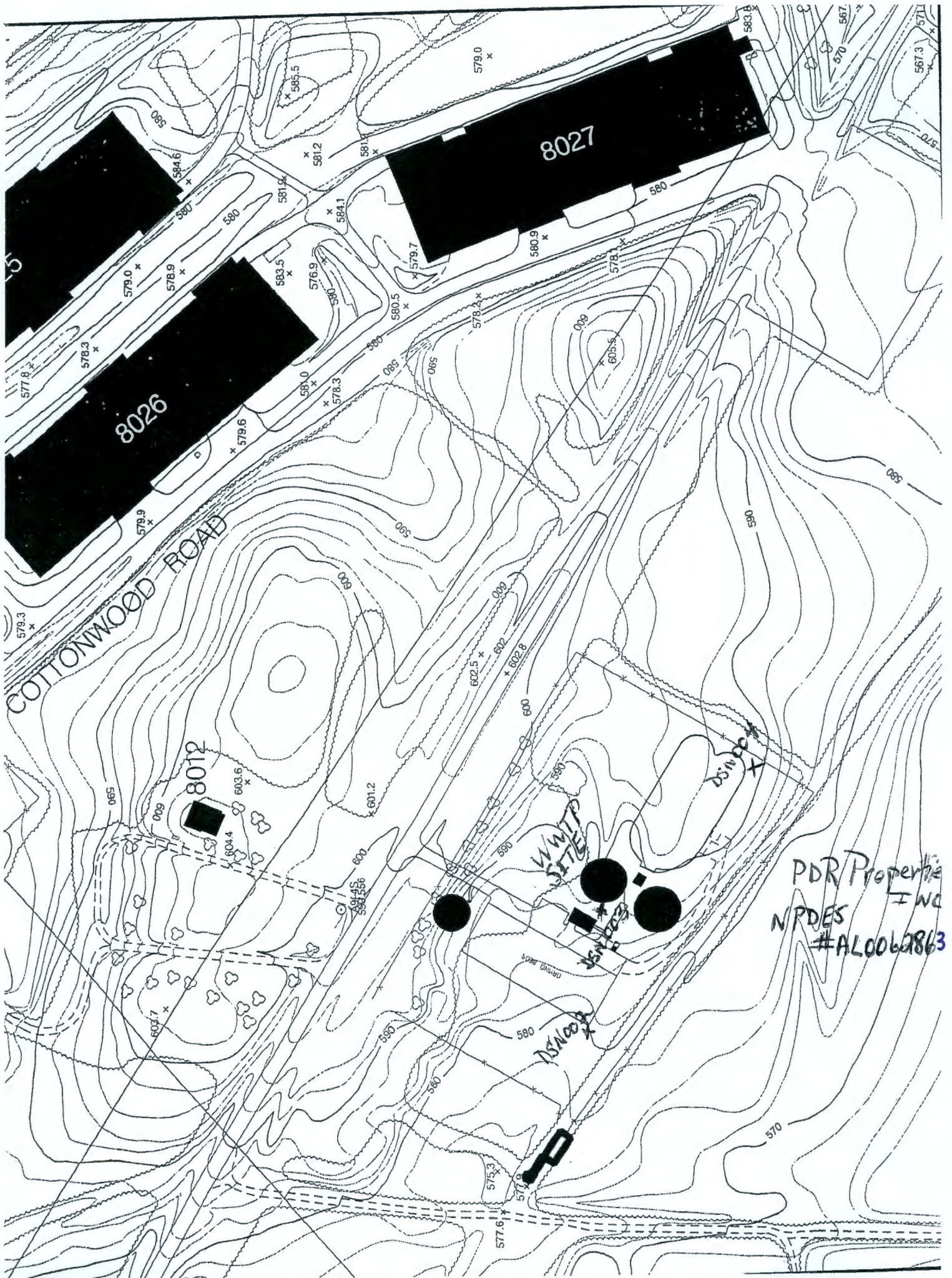
Air Pollution Control Equipment

- 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.

Incineration Continued

END of PART 2

Submit completed application package to your NPDES permitting authority.



8026

8027

8012

COTTONWOOD ROAD

PDR Properties
INC
#AL0062863

WINTERS

DISINCE

FROM U.S. GEOLOGICAL SURVEY MAP, TRIANA, 1982
 REDSTONE ARSENAL CENTRAL WWTP
 MADISON COUNTY, ALABAMA



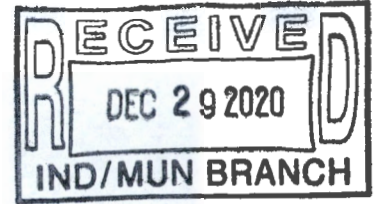
AMENT 1
 I, ITEM X!

UTM GRID AND 1982 MAGNET
 DECLINATION AT CENTER O



February 21, 2017

Bryce McCreless
PDR Properties
P.O. Box 8131
Lexington, KY 40533-8131



We appreciate the opportunity to provide our services to you on this project. Please find attached the data for the sample(s) listed below:

<u>LabNumber</u>	<u>Sample Description</u>	<u>Date/Time Collected</u>	<u>Date Submitted</u>
1701824-01	Permit Renewal Composite	2/8/17 06:00	2/8/17
1701824-02	Permit Renewal Grab	2/8/17 08:15	2/8/17

ENERSOLV is accredited to ISO/IEC 17025:2005 by Laboratory Accreditation Bureau and to the TNI 2003 Standard by the Florida Department of Health. Our quality system also meets relevant quality system requirements of ISO 9001:2008. Not all tests performed by ENERSOLV are covered by these accreditations. Tests within our scope of accreditation are indicated by an asterisk (*) in the Test Result section of this report. Tests not included in the accreditations are performed in accordance with ENERSOLV Standard Operating Procedures and the quality control program using, where applicable, USEPA methodology.

This cover page and the attached chain-of-custody record(s) are integral parts of your report. ENERSOLV considers this report your official record. This information shall remain in ENERSOLV's active database for a period of one (1) calendar year before archiving. Any replacement of this information after archiving may result in an administrative fee to cover the cost of retrieval.

If you have any questions or would like more information regarding these analyses, please call us at (256) 350-0846.

Karen Sutton
Vice President Client Services



SAMPLE RESULTS REPORT

Report Date/Time: 02/21/2017 13:51

REPORT TO
 Bryce McCreless
 PDR Properties
 P.O. Box 8131
 Lexington, KY 40533-8131



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Cert# L2239 Testing

ADEM
 Drinking Water
 Certification
 No. 40160

Analyte Name	Result	Units	Qual	Regulatory Limit
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Sample Point: Permit Renewal Composite

Sample ID: 1701824-01

Collected: 02/08/2017

Submitted: 02/08/2017

Metals by ICP-MS

* Total Recoverable Antimony CAS: 7440-36-0	<0.00100	mg/l		
* Total Recoverable Arsenic CAS: 7440-38-2	0.00275	mg/l		
* Total Recoverable Beryllium CAS: 7440-41-7	<0.00100	mg/l		
* Total Recoverable Cadmium CAS: 7440-43-9	<0.00100	mg/l		
* Total Recoverable Chromium CAS: 7440-47-3	<0.00100	mg/l		
* Total Recoverable Copper CAS: 7440-50-8	0.00662	mg/l		
* Total Recoverable Lead CAS: 7439-92-1	<0.00100	mg/l		
* Total Recoverable Nickel CAS: 7440-02-0	0.00225	mg/l		
* Total Recoverable Selenium CAS: 7782-49-2	0.00838	mg/l		
* Total Recoverable Silver CAS: 7440-22-4	<0.00100	mg/l		
* Total Recoverable Thallium CAS: 7440-28-0	<0.00100	mg/l		
* Total Recoverable Zinc CAS: 7440-66-6	0.0168	mg/l		

Miscellaneous Metals

* Total Mercury CAS: 7440-42-8	<0.000200	mg/l		
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ADEM
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 Certification
 No. 40160

Analyte Name	Result	Units	Qual	Regulatory Limit
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Sample Point: Permit Renewal Grab

Sample ID: 1701824-02

Collected: 02/08/2017

Submitted: 02/08/2017

Inorganics

Phenolics (4AAP)	<0.0100	mg/l		
Total Cyanide	<0.00500	mg/l		

Metals by ICP-OES

* Total Calcium CAS: 7440-70-2	34.3	mg/l		
Total Hardness	109	mg/l CaCO3		
* Total Magnesium CAS: 7439-95-4	5.03	mg/l		

Semivolatiles by EPA 625

1,2,4-Trichlorobenzene CAS: 120-82-1	<5.00	ug/l		
1,2-Diphenylhydrazine as Azobenzene CAS: 122-66-7	<10.0	ug/l		
2,4,6-Trichlorophenol CAS: 88-06-2	<5.00	ug/l		
2,4-Dichlorophenol CAS: 120-83-2	<5.00	ug/l		
2,4-Dimethylphenol CAS: 105-67-9	<10.0	ug/l		
2,4-Dinitrophenol CAS: 51-28-5	<50.0	ug/l		
2,4-Dinitrotoluene CAS: 121-14-2	<5.00	ug/l		
2,6-Dinitrotoluene CAS: 606-20-2	<5.00	ug/l		
2-Chloronaphthalene CAS: 91-58-7	<5.00	ug/l		
2-Chlorophenol CAS: 95-57-8	<5.00	ug/l		
2-Nitrophenol CAS: 88-75-5	<5.00	ug/l		
3,3'-Dichlorobenzidine CAS: 91-94-1	<10.0	ug/l		



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Cert# L2239 Testing

ADEM
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 No. 40160

Analyte Name	Result	Units	Qual	Regulatory Limit
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Sample Point: Permit Renewal Grab (Cont'd)

Sample ID: 1701824-02

Collected: 02/08/2017

Submitted: 02/08/2017

Semivolatiles by EPA 625 (Cont'd)

4,6-Dinitro-2-methylphenol CAS: 534-52-1	<50.0	ug/l		
4-Bromophenyl phenyl ether CAS: 101-55-3	<5.00	ug/l		
4-Chloro-3-methylphenol CAS: 59-50-7	<5.00	ug/l		
4-Chlorophenyl phenyl ether CAS: 7005-72-3	<5.00	ug/l		
4-Nitrophenol CAS: 100-02-7	<10.0	ug/l		
Accnaphthene CAS: 83-32-9	<5.00	ug/l		
Acenaphthylene CAS: 208-96-8	<10.0	ug/l		
Anthracene CAS: 120-12-7	<20.0	ug/l		
Benzidine CAS: 92-87-5	<50.0	ug/l		
Benzo[a]anthracene CAS: 56-55-3	<5.00	ug/l		
Benzo[a]pyrene CAS: 50-32-8	<5.00	ug/l		
Benzo[b]fluoranthene CAS: 205-99-2	<5.00	ug/l		
Benzo[g,h,i]perylene CAS: 191-24-2	<10.0	ug/l		
Benzo[k]fluoranthene CAS: 207-08-9	<5.00	ug/l		
Bis(2-chloroethoxy)methane CAS: 111-91-1	<5.00	ug/l		
Bis(2-chloroethyl)ether CAS: 111-44-4	<5.00	ug/l		
Bis(2-chloroisopropyl)ether CAS: 39638-32-9	<5.00	ug/l		



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Report Date/Time: 02/21/2017 13:51

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Cert# L2239 Testing

ADEM
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No. 40160

Analyte Name	Result	Units	Qual	Regulatory Limit
--------------	--------	-------	------	------------------

Sample Point: Permit Renewal Grab (Cont'd)

Sample ID: 1701824-02

Collected: 02/08/2017

Submitted: 02/08/2017

Semivolatiles by EPA 625 (Cont'd)

Bis(2-ethylhexyl)phthalate CAS: 117-81-7	<10.0	ug/l		
Butylbenzylphthalate CAS: 85-68-7	<10.0	ug/l		
Chrysene CAS: 218-01-9	<5.00	ug/l		
Dibenzo[a,h]anthracene CAS: 53-70-3	<10.0	ug/l		
Diethylphthalate CAS: 84-66-2	<10.0	ug/l		
Dimethylphthalate CAS: 131-11-3	<10.0	ug/l		
Di-n-butylphthalate CAS: 84-74-2	<5.00	ug/l		
Di-n-octylphthalate CAS: 117-84-0	<10.0	ug/l		
Fluoranthene CAS: 206-44-0	<5.00	ug/l		
Fluorene CAS: 86-73-7	<5.00	ug/l		
Hexachlorobenzene CAS: 118-74-1	<10.0	ug/l		
Hexachlorobutadiene CAS: 87-68-3	<10.0	ug/l		
Hexachlorocyclopentadiene CAS: 77-47-4	<10.0	ug/l		
Hexachloroethane CAS: 67-72-1	<10.0	ug/l	Q	
Indeno(1,2,3-cd)pyrene CAS: 193-39-5	<10.0	ug/l		
Isophorone CAS: 78-59-1	<5.00	ug/l		
Naphthalene CAS: 91-20-3	<5.00	ug/l		



SAMPLE RESULTS REPORT

Report Date/Time: 02/21/2017 13:51

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ADEM
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Analyte Name	Result	Units	Qual	Regulatory Limit
--------------	--------	-------	------	------------------

Sample Point: Permit Renewal Grab (Cont'd)

Sample ID: 1701824-02

Collected: 02/08/2017

Submitted: 02/08/2017

Semivolatiles by EPA 625 (Cont'd)

Nitrobenzene CAS: 98-95-3	<5.00	ug/l		
N-Nitrosodimethylamine CAS: 62-75-9	<10.0	ug/l		
N-Nitrosodi-n-propylamine CAS: 621-64-7	<10.0	ug/l		
N-Nitrosodiphenylamine CAS: 86-30-6	<5.00	ug/l	Q	
Pentachlorophenol CAS: 87-86-5	<10.0	ug/l		
Phenanthrene CAS: 85-01-8	<5.00	ug/l		
Phenol CAS: 108-95-2	<2.50	ug/l		
Pyrene CAS: 129-00-0	<10.0	ug/l		

Volatiles by EPA 624

* 1,1,1-Trichloroethane CAS: 71-55-6	<3.00	ug/l		
* 1,1,2,2-Tetrachloroethane CAS: 79-34-5	<3.00	ug/l		
* 1,1,2-Trichloroethane CAS: 79-00-5	<3.00	ug/l		
* 1,1-Dichloroethane CAS: 75-34-3	<3.00	ug/l		
* 1,1-Dichloroethylene CAS: 75-35-4	<3.00	ug/l		
* 1,2-Dichlorobenzene CAS: 95-50-1	<3.00	ug/l		
* 1,2-Dichloroethane CAS: 107-06-2	<3.00	ug/l		
* 1,2-Dichloropropane CAS: 78-87-5	<3.00	ug/l		



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ADEM
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Analyte Name	Result	Units	Qual	Regulatory Limit
--------------	--------	-------	------	------------------

Sample Point: Permit Renewal Grab (Cont'd)

Sample ID: 1701824-02

Collected: 02/08/2017

Submitted: 02/08/2017

Volatiles by EPA 624 (Cont'd)

* 1,3-Dichlorobenzene CAS: 541-73-1	<3.00	ug/l		
* 1,4-Dichlorobenzene CAS: 106-46-7	<3.00	ug/l		
* 2-Chloroethylvinyl ether CAS: 110-75-8	<3.00	ug/l		
* Acrolein CAS: 107-02-8	<3.00	ug/l		
* Acrylonitrile CAS: 107-13-1	<3.00	ug/l		
* Benzene CAS: 71-43-2	<3.00	ug/l		
* Bromodichloromethane CAS: 75-27-4	<3.00	ug/l		
* Bromoform CAS: 75-25-2	<3.00	ug/l		
* Bromomethane CAS: 74-83-9	<5.00	ug/l		
* Carbon tetrachloride CAS: 56-23-5	<3.00	ug/l		
* Chlorobenzene CAS: 108-90-7	<3.00	ug/l		
* Chloroethane CAS: 75-00-3	<5.00	ug/l		
* Chloroform CAS: 67-66-3	<3.00	ug/l		
* Chloromethane CAS: 74-87-3	<1.50	ug/l		
* cis-1,3-Dichloropropylene CAS: 10061-01-5	<3.00	ug/l		
* Dibromochloromethane CAS: 124-48-1	<3.00	ug/l		
* Ethyl benzene CAS: 100-41-4	<3.00	ug/l		



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ADEM
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Analyte Name	Result	Units	Qual	Regulatory Limit
--------------	--------	-------	------	------------------

Sample Point: Permit Renewal Grab (Cont'd)

Sample ID: 1701824-02

Collected: 02/08/2017

Submitted: 02/08/2017

Volatiles by EPA 624 (Cont'd)

* m & p-Xylene CAS: 108-38-3/106-42-3	<3.00	ug/l		
* Methylene chloride CAS: 75-09-2	<5.00	ug/l		
* o-Xylene CAS: 95-47-6	<3.00	ug/l		
* Tetrachloroethylene CAS: 127-18-4	<3.00	ug/l		
* Toluene CAS: 108-88-3	<3.00	ug/l		
* trans-1,2-Dichloroethylene CAS: 156-60-5	<3.00	ug/l		
* trans-1,3-Dichloropropylene CAS: 10061-02-6	<3.00	ug/l		
* Trichloroethylene CAS: 79-01-6	<3.00	ug/l		
* Trichlorofluoromethane CAS: 75-69-4	<5.00	ug/l		
* Vinyl chloride CAS: 75-01-4	<1.50	ug/l		



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All calculations are performed prior to rounding per EPA and Standard Methods requirements.

Data Qualifiers:

- Q One or more quality control criteria (LCS, continuing calibration, etc) failed. Data may be estimated or biased.
- < Less than reporting limit

Analysis Information

Lab Number	Analysis	SpecificMethod	Analyst	Analysis Start Date/Time	Analysis End Date/Time
1701824-01	Total Recoverable Silver	EPA 200.8/6020A	KW	02/09/2017 12:00	
1701824-01	Total Recoverable Arsenic	EPA 200.8/6020A	KW	02/09/2017 12:00	
1701824-01	Total Recoverable Beryllium	EPA 200.8/6020A	KW	02/09/2017 12:00	
1701824-01	Total Recoverable Cadmium	EPA 200.8/6020A	KW	02/09/2017 12:00	
1701824-01	Total Recoverable Chromium	EPA 200.8/6020A	KW	02/09/2017 12:00	
1701824-01	Total Recoverable Copper	EPA 200.8/6020A	KW	02/09/2017 12:00	
1701824-01	Total Mercury	EPA 245.1	KW	02/16/2017 13:00	
1701824-01	Total Recoverable Nickel	EPA 200.8/6020A	KW	02/09/2017 12:00	
1701824-01	Total Recoverable Lead	EPA 200.8/6020A	KW	02/09/2017 12:00	
1701824-01	Total Recoverable Antimony	EPA 200.8/6020A	KW	02/09/2017 12:00	
1701824-01	Total Recoverable Selenium	EPA 200.8/6020A	KW	02/09/2017 12:00	
1701824-01	Total Recoverable Thallium	EPA 200.8/6020A	KW	02/09/2017 12:00	
1701824-01	Total Recoverable Zinc	EPA 200.8/6020A	KW	02/09/2017 12:00	
1701824-02	Total Calcium	EPA 200.7/6010C	DJN	02/14/2017 08:00	
1701824-02	Total Cyanide	ASTM D7511-09	JW	02/10/2017 10:50	
1701824-02	Total Hardness	EPA 200.7	DJN	02/14/2017 08:00	
1701824-02	Total Magnesium	EPA 200.7/6010C	DJN	02/14/2017 08:00	
1701824-02	Phenolics (4AAP)	EPA 420.1	SII	02/15/2017 09:00	
1701824-02	BN/AE Semivolatiles	EPA 625	AJL	02/13/2017 08:15	
1701824-02	Volatile Organic Analytes	EPA 624	ET	02/10/2017 21:40	

The results contained in this report are only representative of the sample(s) received.



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD
 2220 BELTLINE ROAD SW DECATUR, ALABAMA 35601
 (256) 350-0846

www.enersolv.com

COMPANY/CLIENT NAME PDR Properties		CLIENT P.O. NUMBER	ENERSOLV PROJECT NUMBER		REQUESTED ANALYSES												
CLIENT POINT OF CONTACT Bryce McCreless		CLIENT PHYSICAL ADDRESS Redstone		CITY/STATE/ZIP Huntsville	AGTR2, ASTR2, BETR2 CDTR2, CRTR2, CUTR2 NITR2, PBTR2, SBTR2 SETR2, TLTR2, ZNTR2 HG 245 CN HARD PHENOLICS SV PERMIT RENEWAL VOA 625 FORM2A PICKUP												
CLIENT EMAIL brycepdrprop@gmail.com		PHONE NUMBER 256-650-5605	OTHER INFORMATION														
SAMPLE COLLECTED BY Bryce McCreless		EXPEDITED REPORT DELIVERY (SURCHARGE)															
		DATE DUE (REQUIRED)															
ENERSOLV LAB NUMBER	SAMPLE DESCRIPTION	SAMPLE TRANSFER/GRAB DATE	SAMPLE TRANSFER/GRAB TIME	GRAB	COMP												
170182401	Permit Renewal Comp.	2/8/17	6:15 Am		X	X	X	X	X	X							
02	Permit Renewal Grab	2/8/17	8:15 Am	X						X	X	X	X	X			

Comments:
 Collector to complete shaded areas, as applicable

SAMPLE TEMPERATURE RECEIVED @ 2.2

SAMPLER INFORMATION	FIELD INFORMATION								Qty	Type	Parameter
	Start Date	pH	TRC mg/l	DO mg/l	Temp deg C	Stop Date	Analyst	Analyst			
	2/7/17								1	Poly Qrt HNO3	A Metals (Comp)
	6:00 Am								1	Poly Pint NAOH Cool 6c	A CN
	2/8/17								1	Poly Pint HNO3	B Hard
	6:00 Am								1	Am Gl 1000ml H2SO4 Cool 6c	C Phenolics
									4	Amb Glass 1000ml Cool 6c	DEFG 625
									2/2	VOA 40ml HCL/Iced Cool 6c	H I J K 624

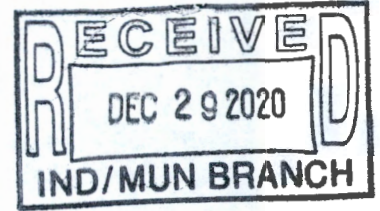
RELINQUISHED BY: (SIGNATURE) Bryce McCreless	DATE 2/8/17	TIME 12:10	RELINQUISHED BY: (SIGNATURE) Jimmy Sharp	DATE 2-8-17	TIME 13:00
RECEIVED BY: (SIGNATURE) Jimmy Sharp	DATE 2-8-17	TIME 12:10	RECEIVED BY: (SIGNATURE)	DATE	TIME
RECEIVED FOR LABORATORY USE BY: (SIGNATURE) L. Harris	DATE 2-8-17	TIME 13:00	SAMPLE STATUS: <input checked="" type="checkbox"/> Accepted <input type="checkbox"/> Rejected <input type="checkbox"/> Accepted with Exception		



2220 Beltline Road SW
 Decatur, AL 35601
 256.350.0846
 www.pacenational.com

September 09, 2018

Bryce McCreless
 PDR Properties
 P.O. Box 8131
 Lexington, KY 40533-8131



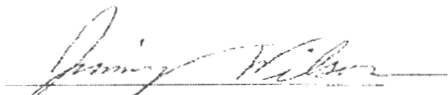
We appreciate the opportunity to provide our services to you on this project. Please find attached the data for the sample(s) listed below:

<u>LabNumber</u>	<u>Sample Description</u>	<u>Date/Time Collected</u>	<u>Date Submitted</u>
1811351-01	Permit Renewal Composite	8/24/18 06:00	8/24/18
1811351-02	Permit Renewal Grab	8/24/18 08:15	8/24/18

Pace National-Decatur is accredited to ISO/IEC 17025:2005 by ANSI-ASQ National Accreditation Board (ANAB) and to the TNI 2003 Standard by the Florida Department of Health. Our quality system also meets relevant quality system requirements of ISO 9001:2008. Not all tests performed by ESC-Decatur are covered by these accreditations. Tests within our scope of accreditation are indicated by an asterisk (*) in the Test Result section of this report. Tests not included in the accreditations are performed in accordance with ESC-Decatur's Standard Operating Procedures and the quality control program using, where applicable, USEPA methodology.

This cover page and the attached chain-of-custody record(s) are integral parts of your report. Pace National-Decatur considers this report your official record. This information shall remain in Pace National-Decatur's active database for a period of one (1) calendar year before archiving. Any replacement of this information after archiving may result in an administrative fee to cover the cost of retrieval.

If you have any questions or would like more information regarding these analyses, please call us at (256) 350-0846.


 Jimmy Wilson



2220 Beltline Road SW
 Decatur, AL 35601
 256.350.0846
 www.pacenational.com

SAMPLE RESULTS REPORT

Report Date/Time: 09/09/2018 16:06

REPORT TO
Bryce McCreless PDR Properties P.O. Box 8131 Lexington, KY 40533-8131



NELAP
 Accredited
 Florida DOH
 #E871078

Pace National-Decatur maintains National Environmental Laboratory Accreditation Program (NELAP) accreditation through Florida Department of Health (#E871078). Some tests included in this report may not be covered by this accreditation. ESC-Decatur also maintains ISO/IEC 17025 accreditation through ANSI-ASQ Accreditation Board for the specific tests listed in ANAB Certificate #L2239 scope of accreditation.



ANAB Cert. #L2239 Testing
 ADEM
 Drinking Water
 Certification
 No. 40160

Tests within the scope of accreditation are indicated by an asterisk (*).

This report may contain information that is confidential and/or proprietary. This information is intended for the addressee only and may not be copied or disseminated except in full without the written consent of Pace National-Decatur.

Analyte Name	Result	Units	Qual	Regulatory Limit
--------------	--------	-------	------	------------------

Sample Point: Permit Renewal Composite

Sample ID: 1811351-01

Collected: 08/24/2018

Submitted: 08/24/2018

Please see attached

Sample Point: Permit Renewal Grab

Sample ID: 1811351-02

Collected: 08/24/2018

Submitted: 08/24/2018

Inorganics

Total Cyanide

0.0106

mg/l



2220 Bellline Road SW
 Decatur, AL 35601
 256.350.0846
 www.pacenational.com

SAMPLE RESULTS REPORT

Report Date/Time: 09/09/2018 16:06

REPORT TO
Bryce McCreless PDR Properties P.O. Box 8131 Lexington, KY 40533-8131



NELAP
 Accredited
 Florida DOH
 #E871078

Pace National-Decatur maintains National Environmental Laboratory Accreditation Program (NELAP) accreditation through Florida Department of Health (#E871078). Some tests included in this report may not be covered by this accreditation. ESC-Decatur also maintains ISO/IEC 17025 accreditation through ANSI-ASQ Accreditation Board for the specific tests listed in ANAB Certificate #L2239 scope of accreditation.



Tests within the scope of accreditation are indicated by an asterisk (*).

This report may contain information that is confidential and/or proprietary. This information is intended for the addressee only and may not be copied or disseminated except in full without the written consent of Pace National-Decatur.

All calculations are performed prior to rounding per EPA and Standard Methods requirements.

Data Qualifiers:

< Less than reporting limit

Analysis Information

Lab Number	Analysis	SpecificMethod	Analyst	Analysis Start Date/Time	Analysis End Date/Time
1811351-02	Total Cyanide	ASTM D7511-09	JW	08/28/2018 13:15	

The results contained in this report are only representative of the sample(s) received.



ANALYTICAL REPORT

September 06, 2018

ESC - Decatur Lab

Sample Delivery Group: L1020869
Samples Received: 08/25/2018
Project Number: 1811351
Description:

Report To: ESC Decatur
2220 Beltline Road SW
Decatur, AL 35601

Entire Report Reviewed By:

Kelly Mercer
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.

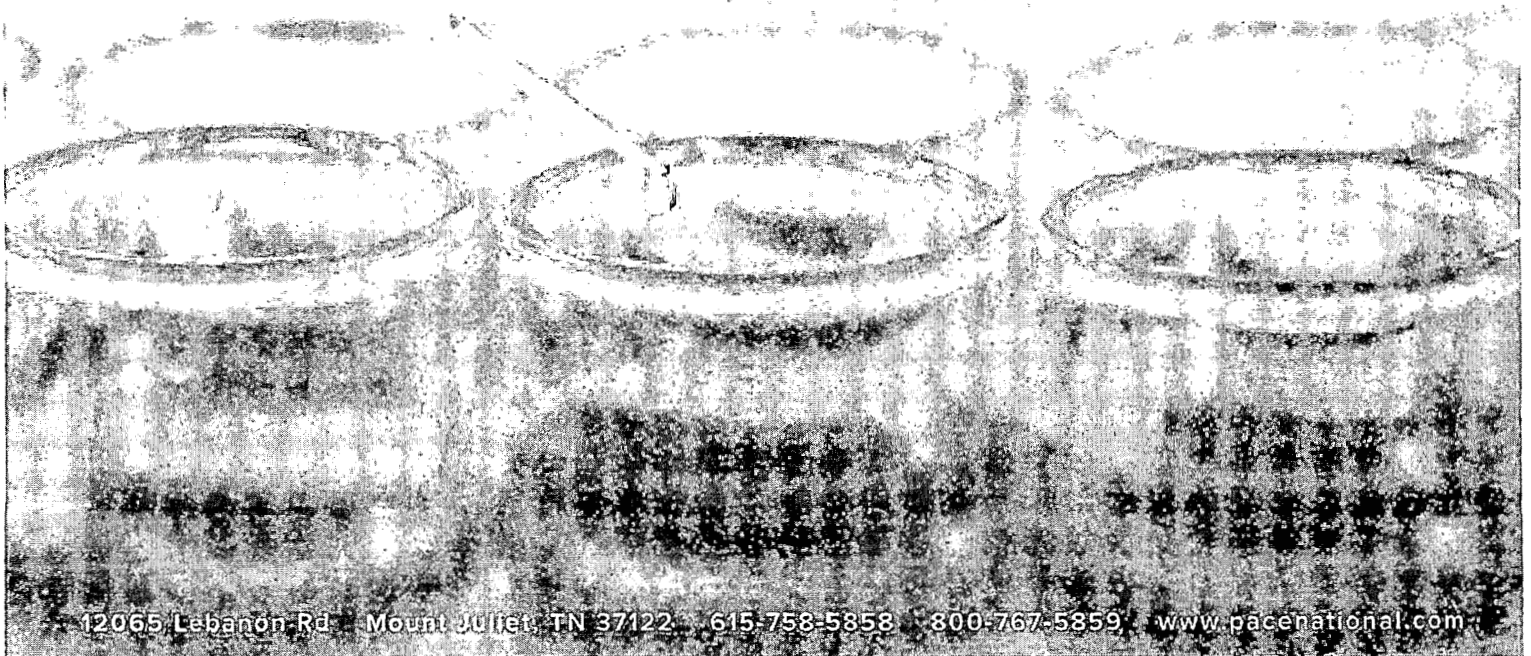










TABLE OF CONTENTS

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Sr: Sample Results	5	
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SAMPLE SUMMARY

ONE LAB. NATIONWIDE. 

1811351-01 PERMIT RENEWAL COMPOSITE L1020869-01 WW

Collected by _____ Collected date/time 08/24/18 07:10 Received date/time 08/25/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 245.1	WG1157574	1	08/27/18 05:30	08/27/18 10:29	TCT
Metals (ICPMS) by Method 200.8	WG1158800	1	08/29/18 09:09	08/29/18 17:56	LD

1
Cp

2
Tc

3
Ss

1811351-02 PERMIT RENEWAL GRAB L1020869-02 WW

Collected by _____ Collected date/time 08/24/18 08:15 Received date/time 08/25/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 420.4	WG1158887	1	08/30/18 06:50	08/30/18 10:34	KK
Metals (ICP) by Method 200.7	WG1158056	1	08/27/18 18:45	08/29/18 12:36	CCE
Volatile Organic Compounds (GC/MS) by Method 624.1	WG1158463	1	08/28/18 17:08	08/28/18 17:08	JHH
Semi Volatile Organic Compounds (GC/MS) by Method 625.1	WG1158700	1	08/30/18 11:02	08/31/18 10:47	AO
Semi Volatile Organic Compounds (GC/MS) by Method 625.1	WG1158700	1	08/30/18 11:02	09/05/18 12:26	LEA

4
Cn

5
Sr

6
Gl

7
Al

8
Sc

CASE NARRATIVE

ONE LAB. NATIONWIDE.

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.



Kelly Mercer
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Gl

⁷ Al

⁸ Sc

Collected date/time: 08/24/18 07:10

L1020869

Mercury by Method 245.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	08/27/2018 10:29	WG1157574

Metals (ICPMS) by Method 200.8

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	08/29/2018 17:56	WG1158800
Arsenic	ND		0.00100	1	08/29/2018 17:56	WG1158800
Beryllium	ND		0.00100	1	08/29/2018 17:56	WG1158800
Cadmium	ND		0.00100	1	08/29/2018 17:56	WG1158800
Chromium	ND		0.00100	1	08/29/2018 17:56	WG1158800
Copper	0.00516		0.00100	1	08/29/2018 17:56	WG1158800
Lead	ND		0.00100	1	08/29/2018 17:56	WG1158800
Nickel	0.00180		0.00100	1	08/29/2018 17:56	WG1158800
Selenium	ND		0.00200	1	08/29/2018 17:56	WG1158800
Silver	ND		0.00100	1	08/29/2018 17:56	WG1158800
Thallium	ND		0.00100	1	08/29/2018 17:56	WG1158800
Zinc	0.0605		0.0100	1	08/29/2018 17:56	WG1158800

1 Cp

2 Tc

3 Ss

4 Cn

5 Sp

6 Gl

7 Al

8 Sc

Collected date/time: 08/24/18 08:15

L1020869

Wet Chemistry by Method 420.4

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Total Phenol by 4AAP	0.0968		0.0400	1	08/30/2018 10:34	WG1158887

Metals (ICP) by Method 200.7

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium	33.6		1.00	1	08/29/2018 12:36	WG1158056
Magnesium	5.86		1.00	1	08/29/2018 12:36	WG1158056

Volatile Organic Compounds (GC/MS) by Method 624.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acrolein	ND		0.0500	1	08/28/2018 17:08	WG1158463
Acrylonitrile	ND		0.0100	1	08/28/2018 17:08	WG1158463
Benzene	ND		0.00100	1	08/28/2018 17:08	WG1158463
Bromodichloromethane	ND		0.00100	1	08/28/2018 17:08	WG1158463
Bromoform	ND		0.00100	1	08/28/2018 17:08	WG1158463
Bromomethane	ND		0.00500	1	08/28/2018 17:08	WG1158463
Carbon tetrachloride	ND		0.00100	1	08/28/2018 17:08	WG1158463
Chlorobenzene	ND		0.00100	1	08/28/2018 17:08	WG1158463
Chlorodibromomethane	ND		0.00100	1	08/28/2018 17:08	WG1158463
Chloroethane	ND		0.00500	1	08/28/2018 17:08	WG1158463
2-Chloroethyl vinyl ether	ND		0.0500	1	08/28/2018 17:08	WG1158463
Chloroform	ND		0.00500	1	08/28/2018 17:08	WG1158463
Chloromethane	ND		0.00250	1	08/28/2018 17:08	WG1158463
Dichlorodifluoromethane	ND		0.00500	1	08/28/2018 17:08	WG1158463
1,1-Dichloroethane	ND		0.00100	1	08/28/2018 17:08	WG1158463
1,2-Dichloroethane	ND		0.00100	1	08/28/2018 17:08	WG1158463
1,1-Dichloroethene	ND		0.00100	1	08/28/2018 17:08	WG1158463
trans-1,2-Dichloroethene	ND		0.00100	1	08/28/2018 17:08	WG1158463
1,2-Dichloropropane	ND		0.00100	1	08/28/2018 17:08	WG1158463
cis-1,3-Dichloropropene	ND		0.00100	1	08/28/2018 17:08	WG1158463
trans-1,3-Dichloropropene	ND		0.00100	1	08/28/2018 17:08	WG1158463
Ethylbenzene	ND		0.00100	1	08/28/2018 17:08	WG1158463
Methylene Chloride	ND		0.00500	1	08/28/2018 17:08	WG1158463
1,1,2,2-Tetrachloroethane	ND		0.00100	1	08/28/2018 17:08	WG1158463
Tetrachloroethene	ND		0.00100	1	08/28/2018 17:08	WG1158463
Toluene	ND		0.00100	1	08/28/2018 17:08	WG1158463
1,1,1-Trichloroethane	ND		0.00100	1	08/28/2018 17:08	WG1158463
1,1,2-Trichloroethane	ND		0.00100	1	08/28/2018 17:08	WG1158463
Trichloroethene	ND		0.00100	1	08/28/2018 17:08	WG1158463
Vinyl chloride	ND		0.00100	1	08/28/2018 17:08	WG1158463
(S) Toluene-d8	108		80.0-120		08/28/2018 17:08	WG1158463
(S) Dibromodifluoromethane	94.3		76.0-123		08/28/2018 17:08	WG1158463
(S) a,a,o-Trifluorotoluene	98.3		80.0-120		08/28/2018 17:08	WG1158463
(S) 4-Bromodifluorobenzene	94.5		80.0-120		08/28/2018 17:08	WG1158463

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	08/31/2018 10:47	WG1158700
Acenaphthylene	ND		0.00100	1	08/31/2018 10:47	WG1158700
Anthracene	ND		0.00100	1	08/31/2018 10:47	WG1158700
Benzidine	ND		0.0100	1	08/31/2018 10:47	WG1158700
Benzo(a)anthracene	ND		0.00100	1	08/31/2018 10:47	WG1158700

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Gl
- 7 Al
- 8 Sc

Collected date/time: 08/24/18 08:15

L1020869

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	ND		0.00100	1	08/31/2018 10:47	WG1158700
Benzo(k)fluoranthene	ND		0.00100	1	08/31/2018 10:47	WG1158700
Benzo(g,h,i)perylene	ND		0.00100	1	08/31/2018 10:47	WG1158700
Benzo(a)pyrene	ND		0.00100	1	08/31/2018 10:47	WG1158700
Bis(2-chloroethoxy)methane	ND		0.0100	1	08/31/2018 10:47	WG1158700
Bis(2-chloroethyl)ether	ND		0.0100	1	08/31/2018 10:47	WG1158700
Bis(2-chloroisopropyl)ether	ND		0.0100	1	08/31/2018 10:47	WG1158700
4-Bromophenyl-phenylether	ND		0.0100	1	08/31/2018 10:47	WG1158700
2-Chloronaphthalene	ND	J3 J4 J6	0.00100	1	08/31/2018 10:47	WG1158700
4-Chlorophenyl-phenylether	ND		0.0100	1	08/31/2018 10:47	WG1158700
Chrysene	ND		0.00100	1	08/31/2018 10:47	WG1158700
Dibenz(a,h)anthracene	ND		0.00100	1	08/31/2018 10:47	WG1158700
1,2-Dichlorobenzene	ND	J3	0.0100	1	08/31/2018 10:47	WG1158700
1,3-Dichlorobenzene	ND	J3	0.0100	1	08/31/2018 10:47	WG1158700
1,4-Dichlorobenzene	ND	J3	0.0100	1	08/31/2018 10:47	WG1158700
3,3-Dichlorobenzidine	ND		0.0100	1	08/31/2018 10:47	WG1158700
2,4-Dinitrotoluene	ND		0.0100	1	08/31/2018 10:47	WG1158700
2,6-Dinitrotoluene	ND		0.0100	1	08/31/2018 10:47	WG1158700
1,2-Diphenylhydrazine	ND		0.0100	1	08/31/2018 10:47	WG1158700
Fluoranthene	ND		0.00100	1	08/31/2018 10:47	WG1158700
Fluorene	ND		0.00100	1	08/31/2018 10:47	WG1158700
Hexachlorobenzene	ND		0.00100	1	08/31/2018 10:47	WG1158700
Hexachloro-1,3-butadiene	ND		0.0100	1	08/31/2018 10:47	WG1158700
Hexachlorocyclopentadiene	ND		0.0100	1	08/31/2018 10:47	WG1158700
Hexachloroethane	ND	J4 J6	0.0100	1	08/31/2018 10:47	WG1158700
Indeno(1,2,3-cd)pyrene	ND		0.00100	1	08/31/2018 10:47	WG1158700
Isophorone	ND		0.0100	1	08/31/2018 10:47	WG1158700
Naphthalene	ND		0.00100	1	08/31/2018 10:47	WG1158700
Nitrobenzene	ND		0.0100	1	08/31/2018 10:47	WG1158700
n-Nitrosodimethylamine	ND		0.0100	1	09/05/2018 12:26	WG1158700
n-Nitrosodiphenylamine	ND	J3	0.0100	1	08/31/2018 10:47	WG1158700
n-Nitrosodi-n-propylamine	ND		0.0100	1	08/31/2018 10:47	WG1158700
Phenanthrene	ND		0.00100	1	08/31/2018 10:47	WG1158700
Benzylbutyl phthalate	ND		0.00300	1	08/31/2018 10:47	WG1158700
Bis(2-ethylhexyl)phthalate	ND		0.00300	1	08/31/2018 10:47	WG1158700
Di-n-butyl phthalate	ND		0.00300	1	08/31/2018 10:47	WG1158700
Di-n-octyl phthalate	ND		0.00300	1	08/31/2018 10:47	WG1158700
Diethyl phthalate	ND		0.00300	1	08/31/2018 10:47	WG1158700
Dimethyl phthalate	ND		0.00300	1	08/31/2018 10:47	WG1158700
Pyrene	ND		0.00100	1	08/31/2018 10:47	WG1158700
1,2,4-Trichlorobenzene	NC	J4 J6	0.0100	1	08/31/2018 10:47	WG1158700
2,4,6-Trichlorophenol	ND	J4	0.0100	1	08/31/2018 10:47	WG1158700
4-Chloro-3-methylphenol	ND		0.0100	1	08/31/2018 10:47	WG1158700
2-Chlorophenol	ND		0.0100	1	08/31/2018 10:47	WG1158700
2,4-Dichlorophenol	ND	J4	0.0100	1	08/31/2018 10:47	WG1158700
2,4-Dimethylphenol	ND		0.0100	1	08/31/2018 10:47	WG1158700
2,4-Dinitrophenol	ND		0.0100	1	08/31/2018 10:47	WG1158700
2-Nitrophenol	ND	J4	0.0100	1	08/31/2018 10:47	WG1158700
4,6-Dinitro-2-methylphenol	ND		0.0100	1	08/31/2018 10:47	WG1158700
4-Nitrophenol	ND		0.0100	1	08/31/2018 10:47	WG1158700
Pentachlorophenol	ND		0.0100	1	08/31/2018 10:47	WG1158700
Phenol	ND		0.0100	1	08/31/2018 10:47	WG1158700
(S) Nitrobenzene-d5	58.7		15.0-314		08/31/2018 10:47	WG1158700
(S) Nitrobenzene-d5	64.8		15.0-314		09/05/2018 12:26	WG1158700
(S) 2-Fluorobiphenyl	70.1		22.0-127		08/31/2018 10:47	WG1158700
(S) 2-Fluorobiphenyl	66.7		22.0-127		09/05/2018 12:26	WG1158700

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Gl
- 7 Al
- 8 Sc

Collected date/time: 08/24/18 08:15

L1020869

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
(S) p-Terphenyl-d14	73.6		29.0-141		08/31/2018 10:47	WG1158700
(S) p-Terphenyl-d14	75.8		29.0-141		09/05/2018 12:26	WG1158700
(S) Phenol-d5	18.0		8.00-424		08/31/2018 10:47	WG1158700
(S) Phenol-d5	21.6		8.00-424		09/05/2018 12:26	WG1158700
(S) 2-Fluorophenol	31.4		10.0-120		09/05/2018 12:26	WG1158700
(S) 2-Fluorophenol	28.2		10.0-120		08/31/2018 10:47	WG1158700
(S) 2,4,6-Tribromophenol	33.4		10.0-153		09/05/2018 12:26	WG1158700
(S) 2,4,6-Tribromophenol	43.6		10.0-153		08/31/2018 10:47	WG1158700

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Gl

7 Al

8 Sc



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

ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
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.
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.
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.
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.
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.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Sc

⁷ Al

⁸ Sc

Qualifier Description

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.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.



- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Gl
- 7 Al
- 8 Sc

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-05-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0512	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	CTN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAC00356
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 Federal Accreditations

A2LA - ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA - ISO 17025 ³	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

Our Locations

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.





1083

SUBCONTRACT ORDER

Sending Laboratory:

ESC - Decatur
 2220 Beltline Road SW
 Decatur, AL 35601
 Phone: 256-350-0846
 Fax: 256-350-0686

Subcontracted Laboratory:

ESC
 12065 Lebanon Road
 Mount Juliet, TN 37122
 Phone: (615) 758-5858
 Fax:
 41020869

Work Order: 1811351

Analysis Code	Analysis Description	Due	Comments
Sample ID: 1811351-01	Permit Renewal Composite		Matrix: <i>Wastewater</i>
<i>Sampled: 08/24/2018</i>			
MG 245.1	Total Mercury	08/31/2018	
SB ICPMS TR	Total Recoverable Antimony	08/31/2018	
AS ICPMS TR	Total Recoverable Arsenic	08/31/2018	
BE ICPMS TR	Total Recoverable Beryllium	08/31/2018	
CD ICPMS TR	Total Recoverable Cadmium	08/31/2018	
CR ICPMS TR	Total Recoverable Chromium	08/31/2018	
CU ICPMS TR	Total Recoverable Copper	08/31/2018	
AG ICPMS TR	Total Recoverable Silver	08/31/2018	
PB ICPMS TR	Total Recoverable Lead	08/31/2018	
SE ICPMS TR	Total Recoverable Selenium	08/31/2018	
TL ICPMS TR	Total Recoverable Thallium	08/31/2018	
ZN ICPMS TR	Total Recoverable Zinc	08/31/2018	
NI ICPMS TR	Total Recoverable Nickel	08/31/2018	

Containers Supplied:

Sample ID: 1811351-02	Permit Renewal Grab		Matrix: <i>Wastewater</i> <i>Sampled:</i>
<i>08/24/2018</i>			
SV 625-PERMIT RENEWAL	EA/EA Semivolatiles	08/31/2018	
VOA 624 FORM2A	Volatile Organic Analytes	08/31/2018	
PHENOLICS	Phenolics (4AAP)	08/31/2018	
CA ICP	Total Calcium	08/31/2018	Please Calculate Hardness
MG ICP	Total Magnesium	08/31/2018	Please Calculate Hardness

Containers Supplied:

RAD SCREEN: <0.5 mR/hr

*1.0% COSE
 Count = 5K-9*

The appropriate credentials and accreditations of the subcontract laboratory have been verified for the analyses to be performed on the samples included in this document as of the date samples were shipped to the subcontract laboratory.

Yes No

NCF

Shank
 Released By

8-24-18
 Date

[Signature]
 Received By

8-25-18 0845
 Date



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD
 2220 BELTLINE ROAD SW DECATUR, ALABAMA 35601
 (256) 350-0846

PAGE	1	of	1
Permit Renewal			

www.enersolv.com

COMPANY/CLIENT NAME PDR Properties	CLIENT P.O. NUMBER	ENERSOLV PROJECT NUMBER	REQUESTED ANALYSES
CLIENT POINT OF CONTACT Bryce McCreless	CLIENT PHYSICAL ADDRESS Redstone	CITY/STATE/ZIP Huntsville	
CLIENT EMAIL brycedrprop@gmail.com	PHONE NUMBER 256-650-5605	OTHER INFORMATION	
SAMPLE COLLECTED BY	EXPEDITED REPORT DELIVERY (SURCHARGE)	DATE DUE (REQUIRED)	

4020869

ENERSOLV LAB NUMBER	SAMPLE DESCRIPTION	SAMPLE TRANSFER/GRAB DATE	SAMPLE TRANSFER/GRAB TIME	GRAB	COMP	AGTR2, ASTR2, BETR2	CDTR2, CRTR2, CUTR2	NTR2, PBTR2, SBTR2	SETR2, TLTR2, ZNTR2	HG 245	CN	HARD	PHENOLICS	SV PERMIT RENEWAL	VOA 624 FORM 2A
181135101	Permit Renewal Comp.	8/24/18	7:10AM		X	X	X	X	X	X					
02	Permit Renewal Grab	8/24/18	8:15AM	X							X	X	X	X	X

01
02

Comments:
 Collector to complete shaded areas, as applicable

SAMPLE TEMPERATURE RECEIVED @ 16.9

SAMPLER INFORMATION	FIELD INFORMATION						Qty	Type	Parameter
	Start Date	pH	TRC	DO	Temp				
Start Date: 8/23/18						1	Poly Qt HNO3	Metals (Comp)	
Start Time: 6:00AM	Date	Date	Date	Date		1	Poly Pint NaOH Cool 6c	CN	
Stop Date: 8/24/18	Time	Time	Time	Time		1	Poly Pint HNO3	Hard	
Stop Time: 10:00AM	Analyst	Analyst	Analyst	Analyst		1	Am GI-1000ml H2SO4 Cool 6c	Phenolics	
	SM 4500H+B	SM 4500-CID	SM 4500-O-G	SM 255DE		2	Amb Glass 1000ml Cool 6c	625	
						2/2	VOA 40ml HCL/iced Cool 6c	624	

OK

RELINQUISHED BY (SIGNATURE) <i>Bryce McCreless</i>	DATE 8/24/18	TIME 0945	RELINQUISHED BY (SIGNATURE) <i>Jimmy Sharp</i>	DATE 8-24-18	TIME 12:20	
RECEIVED FOR LABORATORY (SIGNATURE) <i>Jimmy Sharp</i>	DATE 8-24-18	TIME 0945	RECEIVED BY (SIGNATURE)	DATE	TIME	
RECEIVED FOR LABORATORY (SIGNATURE) <i>Frank</i>	DATE 8/24/18	TIME 1500	SAMPLE STATUS:	<input checked="" type="checkbox"/> Accepted	<input type="checkbox"/> Rejected	<input type="checkbox"/> Accepted with Exception

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: Finesolv		SDG#	L4070869
Cooler Received/Opened On: 8/25/18		Temperature:	1.0
Received By: Kathryn Cason		Signature: <i>Kathryn Cason</i>	
Receipt Check List			
NP	Yes	No	
	X		COC Seal Present / Intact?
	X		COC Signed / Accurate?
	X		Bottles arrive intact?
	X		Correct bottles used?
	X		Sufficient volume sent?
		X	If Applicable
			VOA Zero headspace?
	X		Preservation Correct / Checked?

Jeremy W. Watkins



Login #: L1020869	Client: ENERSOLV	Date: 8/25/18	Evaluated by: Troy Dunlap
-------------------	------------------	---------------	---------------------------

Non-Conformance (check applicable items)

Sample Integrity	Chain of Custody Clarification	
Parameter(s) past holding time	Login Clarification Needed	If Broken Container:
Improper temperature	Chain of custody is incomplete	Insufficient packing material around container
Improper container type	Please specify Metals requested.	Insufficient packing material inside cooler
Improper preservation	Please specify TCLP requested.	Improper handling by carrier (FedEx / UPS / Courie
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
<input checked="" type="checkbox"/> Metals 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:
		Tracking#

Login Comments: Both 40ml-HCL and both 40ml-nopres vials have headspace.

Client informed by:	Call	<input checked="" type="checkbox"/> Email	Voice Mail	Date: 8/27/18	Time: 0805
TSR initials: KM	Client Contact: Margaret A.				

Login Instructions:

Please run as received.



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD
 2220 BELTLINE ROAD SW DECATUR, ALABAMA 35601
 (256) 350-0846

PAGE	1	of	1
Permit Renewal			

www.enersolv.com

COMPANY/CLIENT NAME PDR Properties		CLIENT P.O. NUMBER		ENERSOLV PROJECT NUMBER		REQUESTED ANALYSES																		
CLIENT POINT OF CONTACT Bryce McCreless		CLIENT PHYSICAL ADDRESS Redstone		CITY/STATE/ZIP Huntsville		AGTR2, ASTR2, BETR2	CDTR2, CRTR2, CUTR2	NITR2, PBTR2, SBTR2	SETR2, TLTR2, ZNTR2	HG 245	CN	HARD	PHENOLICS	SV PERMIT RENEWAL	VOA 624 FORMZA									
CLIENT EMAIL brycepdrprop@gmail.com		PHONE NUMBER 256-650-5605	OTHER INFORMATION																					
SAMPLE COLLECTED BY			EXPEDITED REPORT DELIVERY (SURCHARGE)		DATE DUE (REQUIRED)																			
ENERSOLV LAB NUMBER	SAMPLE DESCRIPTION			SAMPLE TRANSFER/GRAB DATE	SAMPLE TRANSFER/GRAB TIME	GRAB	COMP																	
1811357-01	Permit Renewal Comp.			8/24/18	7:10am		X	X	X	X	X													
02	Permit Renewal Grab			8/24/18	8:15AM	X						X	X	X	X	X								

Comments:
 Collector to complete shaded areas, as applicable

SAMPLE TEMPERATURE RECEIVED @ 1.9

SAMPLER INFORMATION		FIELD INFORMATION						Qty	Type	Parameter
Start Date	8/23/18	pH	TRC	DO	Temp		1	Poly Qrt HNO3	Metals (Comp)	
Start Time	6:00 AM	su	mg/l	mg/l	deg C		1	Poly Pint NAOH Cool 6c	CN	
Stop Date	8/24/18	Date	Date	Date	Date		1	Poly Pint HNO3	Hard	
Stop Time	6:00 PM	Time	Time	Time	Time		1	Am Gl 1000ml H2SO4 Cool 6c	Phenolics	
		Analyst	Analyst	Analyst	Analyst		2	Amb Glass 1000ml Cool 6c	625	
		SM 4500H+B	SM 4500-CI D	SM 4500-O G	SM 2550B		2/2	VOA 40ml HCL/Iced Cool 6c	624	

RELINQUISHED BY: (SIGNATURE) <i>Bryce McCreless</i>	DATE 8/24/18	TIME 0945	RELINQUISHED BY: (SIGNATURE) <i>Jimmy Sharp</i>	DATE 8-24-18	TIME 1220	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE) <i>Jimmy Sharp</i>	DATE 8-24-18	TIME 0945	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
RECEIVED FOR LABORATORY USE BY (SIGNATURE) <i>Mark</i>	DATE 8/24/18	TIME 1500	SAMPLE STATUS:					

Accepted Rejected Accepted with Exception

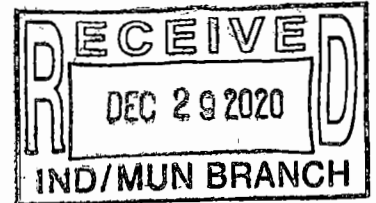
ANALYTICAL REPORT

January 09, 2018

ESC - Decatur Lab

Sample Delivery Group: L960559
Samples Received: 12/30/2017
Project Number:
Description: PDR - Redstone

Report To: Mr. Bill Hollerman
2220 Beltline Road SW
Decatur, AL 35601



Entire Report Reviewed By:

A handwritten signature in cursive script, appearing to read "Olivia Studebaker".

Olivia Studebaker
Technical Service Representative

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 ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

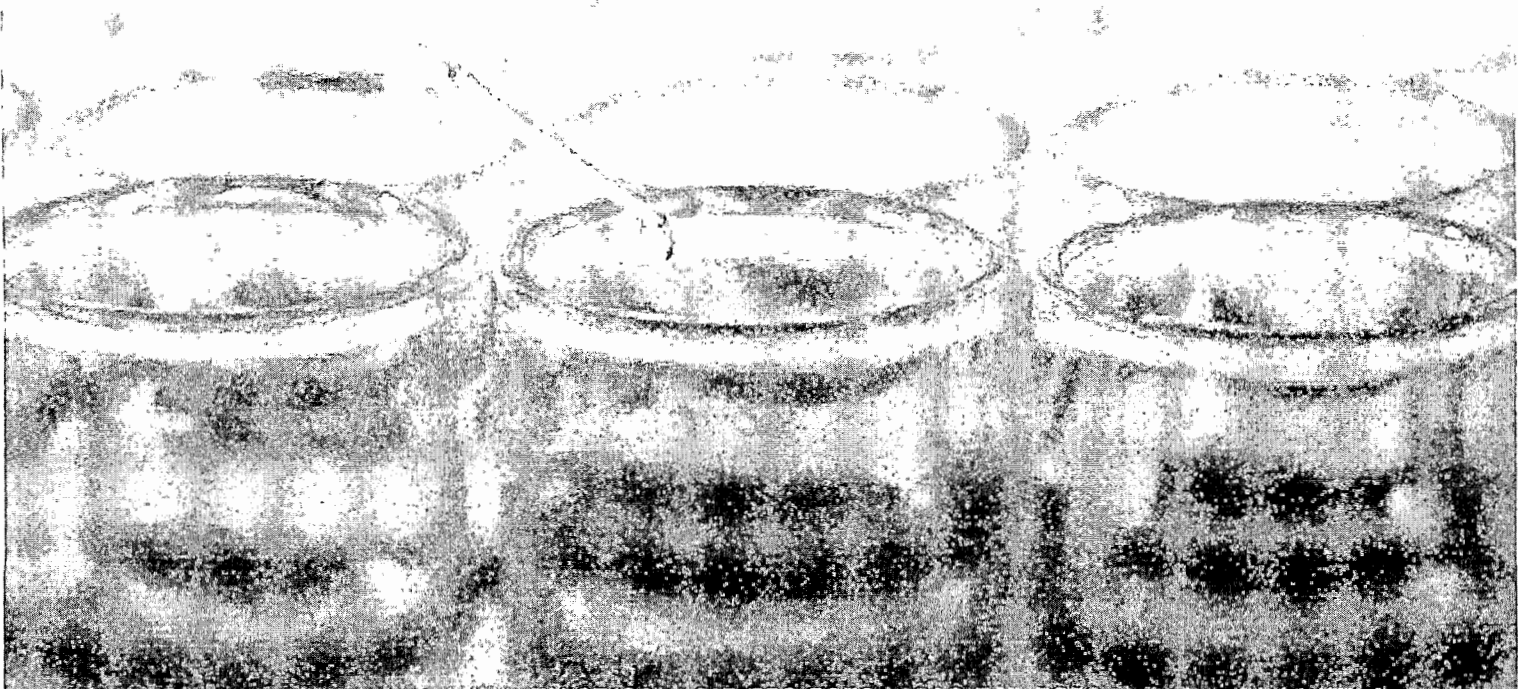











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ONE LAB. NATIONWIDE.

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Cn: Case Narrative	4	
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1718055-02 L960559-02	6	
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Mercury by Method 245.1	11	
Metals (ICPMS) by Method 200.8	12	
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Gl: Glossary of Terms	22	
Al: Accreditations & Locations	23	
Sc: Sample Chain of Custody	24	

SAMPLE SUMMARY

ONE LAB. NATIONWIDE

1718055-01 L960559-01 WW
 Collected by Bryce McCleless Collected date/time 12/29/17 07:10 Received date/time 12/30/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 245.1	WG1058937	1	01/02/18 13:14	01/03/18 02:18	ABL
Metals (ICPMS) by Method 200.8	WG1058836	1	12/31/17 21:10	01/02/18 17:36	LAT

1 Cp

2 Tc

3 Ss

1718055-02 L960559-02 WW
 Collected by Bryce McCleless Collected date/time 12/29/17 07:45 Received date/time 12/30/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2340 C-201i	WG1060494	5	01/09/18 10:23	01/09/18 10:23	MCG
Wet Chemistry by Method 420.4	WG1059583	1	01/08/18 09:36	01/09/18 09:11	KK
Volatile Organic Compounds (GC/MS) by Method 624	WG1058665	1	12/30/17 18:03	12/30/17 18:03	BMB
Volatile Organic Compounds (GC/MS) by Method 624	WG1058665	1	12/31/17 12:17	12/31/17 12:17	JAH
Semi Volatile Organic Compounds (GC/MS) by Method 625	WG1058723	1	12/31/17 08:07	01/05/18 17:42	LA

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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.

Olivia Studebaker
Technical Service Representative

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

1718055-01

Collected date/time. 12/29/17 07:10

SAMPLE RESULTS - 01

L960559

ONE LAB. NATIONWIDE.

Mercury by Method 245.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND	<u>J6</u>	0.000200	1	01/03/2018 02:18	<u>WG1058937</u>

1 Cp

2 Tc

Metals (ICPMS) by Method 200.8

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00200	1	01/02/2018 17:36	<u>WG1058836</u>
Arsenic	ND		0.00100	1	01/02/2018 17:36	<u>WG1058836</u>
Beryllium	ND		0.00100	1	01/02/2018 17:36	<u>WG1058836</u>
Cadmium	ND		0.00100	1	01/02/2018 17:36	<u>WG1058836</u>
Chromium	ND		0.00100	1	01/02/2018 17:36	<u>WG1058836</u>
Copper	0.0115		0.00100	1	01/02/2018 17:36	<u>WG1058836</u>
Lead	ND		0.00100	1	01/02/2018 17:36	<u>WG1058836</u>
Nickel	0.00120		0.00100	1	01/02/2018 17:36	<u>WG1058836</u>
Selenium	ND		0.00200	1	01/02/2018 17:36	<u>WG1058836</u>
Silver	ND		0.00100	1	01/02/2018 17:36	<u>WG1058836</u>
Thallium	ND		0.00100	1	01/02/2018 17:36	<u>WG1058836</u>
Zinc	0.0607	<u>J6</u>	0.0100	1	01/02/2018 17:36	<u>WG1058836</u>

3 Ss

4 Cn

5 Si

6 Qc

7 GI

8 Al

9 Sc

1718055-02

Collected date/time: 12/29/17 07:45

SAMPLE RESULTS - 02

L960559

ONE LAB. NATIONWIDE

Wet Chemistry by Method 2340 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (titrimetric) as CaCO3	91.7		25.0	5	01/09/2018 10:23	WG1060494

Wet Chemistry by Method 420.4

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Total Phenol by 4AAP	0.200		0.0400	1	01/09/2018 09:11	WG1059583

Volatile Organic Compounds (GC/MS) by Method 624

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acrolein	ND	J4	0.0500	1	12/30/2017 18:03	WG1058665
Acrylonitrile	ND		0.0100	1	12/31/2017 12:17	WG1058665
Benzene	ND		0.00100	1	12/30/2017 18:03	WG1058665
Bromodichloromethane	ND		0.00100	1	12/30/2017 18:03	WG1058665
Bromoform	ND		0.00100	1	12/30/2017 18:03	WG1058665
Bromomethane	ND		0.00500	1	12/30/2017 18:03	WG1058665
Carbon tetrachloride	ND		0.00100	1	12/30/2017 18:03	WG1058665
Chlorobenzene	ND		0.00100	1	12/30/2017 18:03	WG1058665
Chlorodibromomethane	ND		0.00100	1	12/30/2017 18:03	WG1058665
Chloroethane	ND		0.00500	1	12/30/2017 18:03	WG1058665
2-Chloroethyl vinyl ether	ND		0.0500	1	12/30/2017 18:03	WG1058665
Chloroform	ND		0.00500	1	12/30/2017 18:03	WG1058665
Chloromethane	ND		0.00250	1	12/30/2017 18:03	WG1058665
1,2-Dichlorobenzene	ND		0.00100	1	12/30/2017 18:03	WG1058665
1,3-Dichlorobenzene	ND		0.00100	1	12/30/2017 18:03	WG1058665
1,4-Dichlorobenzene	ND		0.00100	1	12/30/2017 18:03	WG1058665
Dichlorodifluoromethane	ND		0.00500	1	12/30/2017 18:03	WG1058665
1,1-Dichloroethane	ND		0.00100	1	12/30/2017 18:03	WG1058665
1,2-Dichloroethane	ND		0.00100	1	12/30/2017 18:03	WG1058665
1,1-Dichloroethene	ND		0.00100	1	12/30/2017 18:03	WG1058665
trans-1,2-Dichloroethene	ND		0.00100	1	12/30/2017 18:03	WG1058665
1,2-Dichloropropane	ND		0.00100	1	12/30/2017 18:03	WG1058665
cis-1,3-Dichloropropene	ND		0.00100	1	12/30/2017 18:03	WG1058665
trans-1,3-Dichloropropene	ND		0.00100	1	12/30/2017 18:03	WG1058665
Ethylbenzene	ND		0.00100	1	12/30/2017 18:03	WG1058665
Methylene Chloride	ND		0.00500	1	12/30/2017 18:03	WG1058665
1,1,2,2-Tetrachloroethane	ND		0.00100	1	12/30/2017 18:03	WG1058665
Tetrachloroethene	ND		0.00100	1	12/30/2017 18:03	WG1058665
Toluene	ND		0.00100	1	12/30/2017 18:03	WG1058665
1,1,1-Trichloroethane	ND		0.00100	1	12/30/2017 18:03	WG1058665
1,1,2-Trichloroethane	ND		0.00100	1	12/30/2017 18:03	WG1058665
Trichloroethene	D.00248		0.00100	1	12/30/2017 18:03	WG1058665
Trichlorofluoromethane	ND		0.00500	1	12/30/2017 18:03	WG1058665
Vinyl chloride	ND		0.00100	1	12/30/2017 18:03	WG1058665
Total Xylenes	ND		0.00300	1	12/30/2017 18:03	WG1058665
(S) Toluene-d8	108		80.0-120		12/31/2017 12:17	WG1058665
(S) Toluene-d8	107		80.0-120		12/30/2017 18:03	WG1058665
(S) Dibromofluoromethane	92.3		76.0-123		12/30/2017 18:03	WG1058665
(S) Dibromofluoromethane	92.7		76.0-123		12/31/2017 12:17	WG1058665
(S) a,a,a-Trifluorotoluene	101		80.0-120		12/30/2017 18:03	WG1058665
(S) a,a,a-Trifluorotoluene	138	J1	80.0-120		12/31/2017 12:17	WG1058665
(S) 4-Bromofluorobenzene	111		80.0-120		12/31/2017 12:17	WG1058665
(S) 4-Bromofluorobenzene	113		80.0-120		12/30/2017 18:03	WG1058665



1718055-02

SAMPLE RESULTS - 02

ONE LAB. NATIONWIDE

Collected date/time: 12/29/17 07:45

L960559

Semi Volatile Organic Compounds (GC/MS) by Method 625

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00100	1	01/05/2018 17:42	WG1058723
Acenaphthylene	ND		0.00100	1	01/05/2018 17:42	WG1058723
Anthracene	ND		0.00100	1	01/05/2018 17:42	WG1058723
Benidine	ND		0.0100	1	01/05/2018 17:42	WG1058723
Benzo(a)anthracene	ND		0.00100	1	01/05/2018 17:42	WG1058723
Benzo(b)fluoranthene	ND		0.00100	1	01/05/2018 17:42	WG1058723
Benzo(k)fluoranthene	ND		0.00100	1	01/05/2018 17:42	WG1058723
Benzo(g,h,i)perylene	ND		0.00100	1	01/05/2018 17:42	WG1058723
Benzo(a)pyrene	ND		0.00100	1	01/05/2018 17:42	WG1058723
Bis(2-chloroethoxy)methane	ND		0.0100	1	01/05/2018 17:42	WG1058723
Bis(2-chloroethyl)ether	ND		0.0100	1	01/05/2018 17:42	WG1058723
Bis(2-chloroisopropyl)ether	ND		0.0100	1	01/05/2018 17:42	WG1058723
4-Bromophenyl-phenylether	ND		0.0100	1	01/05/2018 17:42	WG1058723
2-Chloronaphthalene	ND		0.00100	1	01/05/2018 17:42	WG1058723
4-Chlorophenyl-phenylether	ND		0.0100	1	01/05/2018 17:42	WG1058723
Chrysene	ND		0.00100	1	01/05/2018 17:42	WG1058723
Dibenz(a,h)anthracene	ND		0.00100	1	01/05/2018 17:42	WG1058723
1,2-Dichlorobenzene	ND		0.0100	1	01/05/2018 17:42	WG1058723
1,3-Dichlorobenzene	ND		0.0100	1	01/05/2018 17:42	WG1058723
1,4-Dichlorobenzene	ND		0.0100	1	01/05/2018 17:42	WG1058723
3,3-Dichlorobenzidine	ND		0.0100	1	01/05/2018 17:42	WG1058723
2,4-Dinitrotoluene	ND		0.0100	1	01/05/2018 17:42	WG1058723
2,6-Dinitrotoluene	ND		0.0100	1	01/05/2018 17:42	WG1058723
1,2-Diphenylhydrazine	ND		0.0100	1	01/05/2018 17:42	WG1058723
Fluoranthene	ND		0.00100	1	01/05/2018 17:42	WG1058723
Fluorene	ND		0.00100	1	01/05/2018 17:42	WG1058723
Hexachlorobenzene	ND		0.00100	1	01/05/2018 17:42	WG1058723
Hexachloro-1,3-butadiene	ND		0.0100	1	01/05/2018 17:42	WG1058723
Hexachlorocyclopentadiene	ND		0.0100	1	01/05/2018 17:42	WG1058723
Hexachloroethane	ND		0.0100	1	01/05/2018 17:42	WG1058723
Indeno(1,2,3-cd)pyrene	ND		0.00100	1	01/05/2018 17:42	WG1058723
Isophorone	ND		0.0100	1	01/05/2018 17:42	WG1058723
Naphthalene	ND		0.00100	1	01/05/2018 17:42	WG1058723
Nitrobenzene	ND		0.0100	1	01/05/2018 17:42	WG1058723
n-Nitrosodimethylamine	ND		0.0100	1	01/05/2018 17:42	WG1058723
n-Nitrosodiphenylamine	ND		0.0100	1	01/05/2018 17:42	WG1058723
n-Nitrosodi-n-propylamine	ND		0.0100	1	01/05/2018 17:42	WG1058723
Phenanthrene	ND		0.00100	1	01/05/2018 17:42	WG1058723
Benzylbutyl phthalate	ND		0.00300	1	01/05/2018 17:42	WG1058723
Bis(2-ethylhexyl)phthalate	ND		0.00300	1	01/05/2018 17:42	WG1058723
Di-n-butyl phthalate	ND		0.00300	1	01/05/2018 17:42	WG1058723
Diethyl phthalate	ND		0.00300	1	01/05/2018 17:42	WG1058723
Dimethyl phthalate	ND		0.00300	1	01/05/2018 17:42	WG1058723
Di-n-octyl phthalate	ND		0.00300	1	01/05/2018 17:42	WG1058723
Pyrene	ND		0.00100	1	01/05/2018 17:42	WG1058723
1,2,4-Trichlorobenzene	ND		0.0100	1	01/05/2018 17:42	WG1058723
4-Chloro-3-methylphenol	ND		0.0100	1	01/05/2018 17:42	WG1058723
2-Chlorophenol	ND		0.0100	1	01/05/2018 17:42	WG1058723
2,4-Dichlorophenol	ND		0.0100	1	01/05/2018 17:42	WG1058723
2,4-Dimethylphenol	ND		0.0100	1	01/05/2018 17:42	WG1058723
4,6-Dinitro-2-methylphenol	ND		0.0100	1	01/05/2018 17:42	WG1058723
2,4-Dinitrophenol	ND		0.0100	1	01/05/2018 17:42	WG1058723
2-Nitrophenol	ND		0.0100	1	01/05/2018 17:42	WG1058723
4-Nitrophenol	ND		0.0100	1	01/05/2018 17:42	WG1058723
Pentachlorophenol	ND		0.0100	1	01/05/2018 17:42	WG1058723
Phenol	ND		0.0100	1	01/05/2018 17:42	WG1058723

1 Cp

2 Tc

3 Ss

4 Cn

5 Sl

6 Qc

7 Gl

8 Al

9 Sc

1718055-02

SAMPLE RESULTS - 02

ONE LAB. NATIONWIDE

Collected date/time: 12/29/17 07:45

L960559

Semi Volatile Organic Compounds (GC/MS) by Method 625

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	ND		0.0100	1	01/05/2018 17:42	<u>WG1058723</u>
(S) Nitrobenzene-d5	28.4		10.0-126		01/05/2018 17:42	<u>WG1058723</u>
(S) 2-Fluorobiphenyl	46.2		22.0-127		01/05/2018 17:42	<u>WG1058723</u>
(S) p-Terphenyl-d14	57.1		29.0-141		01/05/2018 17:42	<u>WG1058723</u>
(S) Phenol-d5	24.9		10.0-120		01/05/2018 17:42	<u>WG1058723</u>
(S) 2-Fluorophenol	28.0		10.0-120		01/05/2018 17:42	<u>WG1058723</u>
(S) 2,4,6-Tribromophenol	53.4		10.0-153		01/05/2018 17:42	<u>WG1058723</u>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sp
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

WG1060494

QUALITY CONTROL SUMMARY

ONE LAB NATIONWIDE.

Wet Chemistry by Method 2340 C-2011

L960559-02

Method Blank (MB)

(MB) R3278234-1 01/09/18 10:07

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hardness (titrimetric) as CaCO3	U		0.59	5.00

L961374-01 Original Sample (OS) • Duplicate (DUP)

(OS) L961374-01 01/09/18 10:41 • (DUP) R3278234-2 01/09/18 10:50

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hardness (titrimetric) as CaCO3	213	216	5	1.42		20

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

(LCS) R3278234-3 01/09/18 11:11 • (LCSD) R3278234-4 01/09/18 11:28

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 %
Hardness (titrimetric) as CaCO3	50.0	50.2	50.6	100	101	85-115			0.754	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Ca

7 Gl

8 Al

9 Sc

WG1059583

Wet Chemistry by Method 420.4

QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE

L960559-02

Method Blank (MB)

(MB) R3278197-1 01/09/18 09:08

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Total Phenol by 4AAP	U		0.0083	0.0400

L960964-02 Original Sample (OS) • Duplicate (DUP)

(OS) L960964-02 01/09/18 09:13 • (DUP) R3278197-4 01/09/18 09:14

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Phenol by 4AAP	ND	0.000	1	0		20

L961150-01 Original Sample (OS) • Duplicate (DUP)

(OS) L961150-01 01/09/18 09:23 • (DUP) R3278197-7 01/09/18 09:24

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Phenol by 4AAP	0.0892	0.0477	1	60.6	P1	20

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

(LCS) R3278197-2 01/09/18 09:09 • (LCSD) R3278197-3 01/09/18 09:10

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 %
Total Phenol by 4AAP	0.500	0.532	0.492	106	98.4	90-110			7.81	20

L961151-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L961151-01 01/09/18 09:25 • (MS) R3278197-8 01/09/18 09:28

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Total Phenol by 4AAP	1.00	ND	0.386	34.8	1	90-110	J6

- 1 Cs
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gf
- 8 Al
- 9 Sc

WG1058937

Mercury by Method 245.1

QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE

L960559-01

Method Blank (MB)

(MB) R3277125-1 01/03/18 01:56

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.000049	0.000200

1 Cp

2 Tc

3 Ss

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

(LCS) R3277125-2 01/03/18 01:59 • (LCSD) R3277125-3 01/03/18 02:15

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 %
Mercury	0.00300	0.00262	0.00279	87.3	93	85-115			6.29	20

4 Cn

5 Sr

L960559-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L960559-01 01/03/18 02:18 • (MS) R3277125-4 01/03/18 02:20 • (MSD) R3277125-5 01/03/18 02:22

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 %
Mercury	0.00300	ND	0.00218	0.00192	72.8	64	1	70-130		J6	13	20

6

7 GI

8 AI

9 Sc

WG1058836

Metals (ICPMS) by Method 200.8

QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE.

L960559-01

Method Blank (MB)

(MB) R3277130-1 01/02/18 17:04

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony	U		0.000754	0.00200
Arsenic	U		0.00017	0.00100
Beryllium	U		0.00028	0.00100
Cadmium	U		0.00022	0.00100
Chromium	U		0.00032	0.00100
Copper	0.000953	J	0.00027	0.00100
Lead	U		0.00026	0.00100
Nickel	U		0.00032	0.00100
Selenium	U		0.00032	0.00200
Silver	U		0.00018	0.00100
Thallium	U		0.00028	0.00100
Zinc	U		0.00191	0.0100

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Gc
- 7 Gl
- 8 Al
- 9 Sc

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

(LCS) R3277130-2 01/02/18 17:08 • (LCSD) R3277130-3 01/02/18 17:12

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 %
Antimony	0.0500	0.0520	0.0518	104	104	85-115			0.303	20
Arsenic	0.0500	0.0538	0.0540	108	108	85-115			0.475	20
Beryllium	0.0500	0.0504	0.0516	101	103	85-115			2.23	20
Cadmium	0.0500	0.0502	0.0509	100	102	85-115			1.54	20
Chromium	0.0500	0.0529	0.0532	106	106	85-115			0.636	20
Copper	0.0500	0.0548	0.0561	110	112	85-115			2.26	20
Lead	0.0500	0.0501	0.0525	100	105	85-115			4.53	20
Nickel	0.0500	0.0549	0.0559	110	112	85-115			1.85	20
Selenium	0.0500	0.0503	0.0516	101	103	85-115			2.5	20
Silver	0.0500	0.0504	0.0509	101	102	85-115			0.97	20
Thallium	0.0500	0.0511	0.0531	102	106	85-115			3.97	20
Zinc	0.0500	0.0561	0.0558	112	112	85-115			0.472	20

L960559-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L960559-01 01/02/18 17:36 • (MS) R3277130-5 01/02/18 17:43 • (MSD) R3277130-6 01/02/18 17:47

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	0.0519	0.0528	104	106	1	70-130			1.75	20
Arsenic	0.0500	ND	0.0536	0.0543	106	108	1	70-130			1.42	20
Beryllium	0.0500	ND	0.0471	0.0461	94.1	92.2	1	70-130			2.11	20

WG1058836

Metals (ICPMS) by Method 200.8

QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE.

L960559-01

L960559-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L960559-01 01/02/18 17:36 • (MS) R3277130-5 01/02/18 17:43 • (MSD) R3277130-6 01/02/18 17:47

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	0.0515	0.0514	103	103	1	70-130			0.193	20
Chromium	0.0500	ND	0.0526	0.0532	104	105	1	70-130			1.11	20
Copper	0.0500	0.0115	0.0602	0.0583	97.4	93.7	1	70-130			3.19	20
Lead	0.0500	ND	0.0466	0.0463	92.5	91.9	1	70-130			0.719	20
Nickel	0.0500	0.00120	0.0552	0.0551	108	108	1	70-130			0.176	20
Selenium	0.0500	ND	0.0508	0.0532	102	106	1	70-130			4.65	20
Silver	0.0500	ND	0.0507	0.0511	101	102	1	70-130			0.871	20
Thallium	0.0500	ND	0.0457	0.0452	91.4	90.4	1	70-130			1.09	20
Zinc	0.0500	0.0607	0.104	0.0957	86.1	69.9	1	70-130	J6		8.12	20

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Gc
- 7 Gl
- 8 Al
- 9 Sc

WG1058665

QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE.

Volatile Organic Compounds (GC/MS) by Method 624

L960559-02

Method Blank (MB)

(MB) R3276786-3 12/30/17 14:17

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acrolein	U		0.00887	0.0500
Acrylonitrile	U		0.00187	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		0.000396	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	93.4			76.0-123
(S) o, o, o-Trifluorotoluene	107			80.0-120
(S) 4-Bromofluorobenzene	110			80.0-120

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 GC
- 7 GI
- 8 AI
- 9 Sc

WG1058665

QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE.

Volatile Organic Compounds (GC/MS) by Method 624

L960559-02

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

(LCS) R3276786-1 12/30/17 12:58 • (LCSD) R3276786-2 12/30/17 13:18

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	0.698	0.653	559	530	10.0-160	J4	J4	5.26	20
Acrylonitrile	0.125	0.148	0.149	118	119	60.0-142			1.17	20
Benzene	0.0250	0.0221	0.0216	88.3	86.3	69.0-123			2.29	20
Bromodichloromethane	0.0250	0.0250	0.0258	100	103	76.0-120			3.08	20
Bromoform	0.0250	0.0286	0.0278	114	111	67.0-132			2.56	20
Bromomethane	0.0250	0.00928	0.00830	37.1	33.2	18.0-160			11.2	20
Carbon tetrachloride	0.0250	0.0231	0.0235	92.3	93.9	63.0-122			1.71	20
Chlorobenzene	0.0250	0.0270	0.0265	108	106	79.0-121			1.97	20
Chlorodibromomethane	0.0250	0.0274	0.0273	110	109	75.0-125			0.488	20
Chloroethane	0.0250	0.0205	0.0211	82.1	84.5	47.0-152			2.85	20
2-Chloroethyl vinyl ether	0.125	0.146	0.141	117	112	10.0-160			3.53	22
Chloroform	0.0250	0.0230	0.0234	92.0	93.8	72.0-121			1.93	20
Chloromethane	0.0250	0.0222	0.0232	88.7	92.6	48.0-139			4.31	20
1,2-Dichlorobenzene	0.0250	0.0236	0.0244	94.4	97.4	80.0-120			3.19	20
1,3-Dichlorobenzene	0.0250	0.0248	0.0249	99.2	99.6	72.0-123			0.361	20
1,4-Dichlorobenzene	0.0250	0.0234	0.0241	93.8	96.3	77.0-120			2.65	20
Dichlorodifluoromethane	0.0250	0.0236	0.0251	94.5	100	49.0-155			6.05	20
1,1-Dichloroethane	0.0250	0.0260	0.0260	104	104	70.0-126			0.161	20
1,2-Dichloroethane	0.0250	0.0249	0.0256	99.7	103	67.0-126			2.88	20
1,1-Dichloroethene	0.0250	0.0268	0.0281	107	113	64.0-129			4.86	20
trans-1,2-Dichloroethene	0.0250	0.0225	0.0232	90.2	92.8	71.0-121			2.82	20
1,2-Dichloropropane	0.0250	0.0288	0.0293	115	117	75.0-125			1.74	20
cis-1,3-Dichloropropene	0.0250	0.0256	0.0244	102	97.6	79.0-123			4.75	20
trans-1,3-Dichloropropene	0.0250	0.0246	0.0246	98.3	98.3	74.0-127			0.0256	20
Ethylbenzene	0.0250	0.0263	0.0265	105	106	77.0-120			0.889	20
Methylene Chloride	0.0250	0.0209	0.0204	83.5	81.4	66.0-121			2.57	20
1,1,2,2-Tetrachloroethane	0.0250	0.0235	0.0241	93.8	96.4	71.0-122			2.73	20
Tetrachloroethene	0.0250	0.0294	0.0294	118	118	70.0-127			0.0204	20
Toluene	0.0250	0.0262	0.0255	105	102	77.0-120			2.83	20
1,1,1-Trichloroethane	0.0250	0.0245	0.0249	98.1	99.8	68.0-122			1.75	20
1,1,2-Trichloroethane	0.0250	0.0274	0.0265	109	106	78.0-120			3.31	20
Trichloroethene	0.0250	0.0252	0.0252	101	101	78.0-120			0.177	20
Trichlorofluoromethane	0.0250	0.0232	0.0234	92.8	93.6	56.0-137			0.823	20
Vinyl chloride	0.0250	0.0233	0.0241	93.0	96.5	64.0-133			3.60	20
Xylenes, Total	0.0750	0.0809	0.0790	108	105	77.0-120			2.38	20
(S) Toluene-d8				105	102	80.0-120				
(S) Dibromofluoromethane				86.7	87.7	76.0-123				
(S) o,o,a-Trifluorotoluene				106	108	80.0-120				
(S) 4-Bromofluorobenzene				109	112	80.0-120				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Cc
- 7 Gl
- 8 Al
- 9 Sc

WG1058723

QUALITY CONTROL SUMMARY

ONE LAB NATIONWIDE

Semi Volatile Organic Compounds (GC/MS) by Method 625

L960559-02

Method Blank (MB)

(MB) R3277679-3 01/05/18 11:21

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		0.0000975	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-chlorethoxy)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
1,2-Dichlorobenzene	U		0.000340	0.0100
1,3-Dichlorobenzene	U		0.000365	0.0100
1,4-Dichlorobenzene	U		0.000322	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		0.00126	0.0100
1,2-Diphenylhydrazine	U		0.000318	0.0100
n-Nitrosodiphenylamine	U		0.000304	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

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Cc
- 7 Gl
- 8 Al
- 9 Sc

WG1058723

Semi Volatile Organic Compounds (GC/MS) by Method 625

QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE.

L960559-02

Method Blank (MB)

(MB) R3277679-3 01/05/18 11:21

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
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
Pyrene	U		0.000330	0.00100
1,2,4-Trichlorobenzene	U		0.000355	0.0100
4-Chloro-3-methylphenol	U		0.000263	0.0100
2-Chlorophenol	U		0.000283	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
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
(S) Nitrobenzene-d5	68.0			10.0-126
(S) 2-Fluorobiphenyl	70.2			22.0-127
(S) p-Terphenyl-d14	62.9			29.0-141
(S) Phenol-d5	20.3			10.0-120
(S) 2-Fluorophenol	31.0			10.0-120
(S) 2,4,6-Tribromophenol	58.8			10.0-153

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Cc
- 7 Gl
- 8 Al
- 9 Sc

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

(LCS) R3277679-1 01/05/18 10:33 • (LCSD) R3277679-2 01/05/18 10:57

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	0.0353	0.0360	70.6	72.0	42.0-120			2.04	22
Acenaphthylene	0.0500	0.0380	0.0392	76.1	78.4	43.0-120			3.04	22
Anthracene	0.0500	0.0418	0.0418	83.7	83.6	44.0-120			0.0791	20
Benzidine	0.0500	0.0249	0.0245	49.8	49.1	100-120			1.59	36
Benzo(a)anthracene	0.0500	0.0405	0.0418	80.9	83.6	44.0-120			3.25	20
Benzo(b)fluoranthene	0.0500	0.0426	0.0443	85.1	88.6	40.0-120			4.04	21
Benzo(k)fluoranthene	0.0500	0.0403	0.0427	80.7	85.5	41.0-120			5.77	22
Benzo(g,h,i)perylene	0.0500	0.0438	0.0456	87.6	91.2	45.0-121			4.03	20
Benzo(a)pyrene	0.0500	0.0414	0.0430	82.8	86.0	41.0-120			3.85	20
Bis(2-chloroethoxy)methane	0.0500	0.0338	0.0351	67.5	70.2	36.0-120			3.87	25

ACCOUNT:
ESC - Decatur Lab

PROJECT:

SDG:
L960559

DATE/TIME:
01/09/18 15:29

PAGE:
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WG1058723

QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE

Semi Volatile Organic Compounds (GC/MS) by Method 625

L960559-02

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

(LCS) R3277679-1 01/05/18 10:33 - (LCSD) R3277679-2 01/05/18 10:57

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 %
Bis(2-chloroethyl)ether	0.0500	0.0307	0.0311	61.4	62.3	24.0-120			1.33	29
Bis(2-chloroisopropyl)ether	0.0500	0.0312	0.0310	62.4	62.0	32.0-120			0.656	29
4-Bromophenyl-phenylether	0.0500	0.0406	0.0409	81.2	81.8	42.0-121			0.797	21
2-Chloronaphthalene	0.0500	0.0323	0.0328	64.6	65.6	37.0-120			1.61	24
4-Chlorophenyl-phenylether	0.0500	0.0369	0.0381	73.9	76.2	44.0-120			3.14	21
Chrysene	0.0500	0.0393	0.0411	78.5	82.2	45.0-120			4.58	20
1,2-Diphenylhydrazine	0.0500	0.0409	0.0432	81.7	86.4	37.0-125			5.60	20
Dibenz(a,h)anthracene	0.0500	0.0431	0.0449	86.1	89.8	44.0-121			4.18	21
3,3-Dichlorobenzidine	0.0500	0.0434	0.0452	86.8	90.3	29.0-153			3.96	23
2,4-Dinitrotoluene	0.0500	0.0416	0.0445	83.2	89.0	47.0-127			6.75	21
2,6-Dinitrotoluene	0.0500	0.0388	0.0418	77.5	83.6	42.0-120			7.60	22
Fluoranthene	0.0500	0.0437	0.0443	87.5	88.6	46.0-121			1.31	20
Fluorene	0.0500	0.0392	0.0419	78.4	83.8	45.0-120			6.61	21
Hexachlorobenzene	0.0500	0.0408	0.0412	81.5	82.5	41.0-124			1.16	21
Hexachloro-1,3-butadiene	0.0500	0.0236	0.0230	47.2	45.9	26.0-120			2.75	31
Hexachlorocyclopentadiene	0.0500	0.0220	0.0235	44.0	47.0	10.0-120			6.56	31
Hexachloroethane	0.0500	0.0230	0.0225	46.1	45.0	22.0-120			2.24	34
Indeno(1,2,3-cd)pyrene	0.0500	0.0445	0.0464	89.0	92.8	45.0-123			4.19	21
Isophorone	0.0500	0.0354	0.0379	70.8	75.8	37.0-120			6.81	24
Naphthalene	0.0500	0.0253	0.0257	50.5	51.5	33.0-120			1.79	28
Nitrobenzene	0.0500	0.0302	0.0304	60.3	60.7	31.0-120			0.645	28
n-Nitrosodimethylamine	0.0500	0.0152	0.0148	30.4	29.6	10.0-120			2.57	34
n-Nitrosodiphenylamine	0.0500	0.0412	0.0414	82.5	82.8	44.0-120			0.319	21
n-Nitrosodi-n-propylamine	0.0500	0.0338	0.0363	67.5	72.7	29.0-120			7.42	27
1,2-Dichlorobenzene	0.0500	0.0248	0.0242	49.6	48.5	27.0-120			2.21	30
Phenanthrene	0.0500	0.0395	0.0397	79.0	79.4	42.0-120			0.493	20
1,3-Dichlorobenzene	0.0500	0.0230	0.0232	46.0	46.3	26.0-120			0.746	31
Benzylbutyl phthalate	0.0500	0.0385	0.0414	77.0	82.7	36.0-123			7.15	22
1,4-Dichlorobenzene	0.0500	0.0241	0.0235	48.3	47.0	26.0-120			2.62	30
Bis(2-ethylhexyl)phthalate	0.0500	0.0409	0.0424	81.8	84.8	37.0-121			3.58	21
Di-n-butyl phthalate	0.0500	0.0448	0.0457	89.5	91.5	43.0-122			2.17	21
Diethyl phthalate	0.0500	0.0428	0.0455	85.7	91.0	48.0-123			6.03	20
Dimethyl phthalate	0.0500	0.0415	0.0445	83.1	89.0	47.0-120			6.87	20
Di-n-octyl phthalate	0.0500	0.0389	0.0413	77.9	82.5	38.0-120			5.79	22
Pyrene	0.0500	0.0402	0.0418	80.3	83.6	43.0-120			4.05	21
1,2,4-Trichlorobenzene	0.0500	0.0226	0.0233	45.3	46.6	29.0-120			2.75	29
4-Chloro-3-methylphenol	0.0500	0.0342	0.0354	68.4	70.9	39.0-120			3.55	22
2-Chlorophenol	0.0500	0.0274	0.0269	54.8	53.9	28.0-120			1.74	29
2,4-Dichlorophenol	0.0500	0.0319	0.0319	63.9	63.7	37.0-120			0.214	26
2,4-Dimethylphenol	0.0500	0.0290	0.0289	58.0	57.7	35.0-120			0.498	25

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

WG1058723

QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE

Semi Volatile Organic Compounds (GC/MS) by Method 625

L960559-02

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

(LCS) R3277679-1 01/05/18 10:33 • (LCSD) R3277679-2 01/05/18 10:57

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 %
4,6-Dinitro-2-methylphenol	0.0500	0.0410	0.0412	82.0	82.5	34.0-125			0.601	27
2,4-Dinitrophenol	0.0500	0.0197	0.0218	39.5	43.7	10.0-120			10.1	40
2-Nitrophenol	0.0500	0.0298	0.0310	59.7	61.9	35.0-120			3.66	28
4-Nitrophenol	0.0500	0.0146	0.0143	29.2	28.7	10.0-120			1.95	35
Pentachlorophenol	0.0500	0.0397	0.0393	79.4	78.5	20.0-126			1.05	32
Phenol	0.0500	0.0128	0.0126	25.6	25.2	10.0-120			1.60	34
2,4,6-Trichlorophenol	0.0500	0.0386	0.0403	77.2	80.5	40.0-122			4.21	24
(S) Nitrobenzene-d5				55.7	58.2	10.0-126				
(S) 2-Fluorobiphenyl				67.8	72.0	22.0-127				
(S) p-Terphenyl-d14				63.0	66.4	29.0-141				
(S) Phenol-d5				24.4	23.1	10.0-120				
(S) 2-Fluorophenol				31.6	31.6	10.0-120				
(S) 2,4,6-Tribromophenol				77.4	80.6	10.0-153				

L960579-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L960579-01 01/05/18 18:06 • (MS) R3277679-4 01/05/18 18:30 • (MSD) R3277679-5 01/05/18 18:54

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	U	0.0331	0.0328	66.3	65.5	1	25.0-143			1.10	29
Acenaphthylene	0.0500	U	0.0354	0.0359	70.9	71.7	1	24.0-149			1.21	29
Anthracene	0.0500	U	0.0324	0.0329	64.8	65.9	1	27.0-145			1.57	30
1,2-Diphenylhydrazine	0.0500	U	0.0400	0.0390	80.0	77.9	1	18.0-156			2.55	34
Benzidine	0.0500	U	ND	ND	0.000	0.000	1	1.00-120	J6	J6	0.000	40
Benzo(a)anthracene	0.0500	U	0.0375	0.0367	74.9	73.4	1	30.0-138			2.02	26
Benzo(b)fluoranthene	0.0500	U	0.0424	0.0417	84.9	83.4	1	28.0-140			1.80	31
Benzo(k)fluoranthene	0.0500	U	0.0397	0.0390	79.3	78.0	1	28.0-140			1.75	31
Benzo(g,h,i)perylene	0.0500	U	0.0417	0.0408	83.3	81.7	1	26.0-149			2.00	27
Benzo(a)pyrene	0.0500	U	0.0310	0.0317	62.0	63.3	1	28.0-139			2.15	29
Bis(2-chloroethoxy)methane	0.0500	U	0.0308	0.0310	61.5	62.0	1	19.0-135			0.822	30
Bis(2-chloroethyl)ether	0.0500	U	0.0268	0.0293	53.6	58.7	1	10.0-126			8.96	34
Bis(2-chloroisopropyl)ether	0.0500	U	0.0260	0.0299	52.0	59.8	1	18.0-128			14.0	35
4-Bromophenyl-phenylether	0.0500	U	0.0374	0.0375	74.7	75.1	1	28.0-146			0.437	30
2-Chloronaphthalene	0.0500	U	0.0307	0.0314	61.4	62.8	1	23.0-134			2.17	32
4-Chlorophenyl-phenylether	0.0500	U	0.0363	0.0346	72.5	69.3	1	32.0-142			4.53	29
Chrysene	0.0500	U	0.0372	0.0368	74.4	73.5	1	32.0-144			1.23	27
Dibenz(a,h)anthracene	0.0500	U	0.0415	0.0408	82.9	81.6	1	22.0-149			1.62	29
1,2-Dichlorobenzene	0.0500	U	0.0203	0.0250	40.5	50.1	1	14.0-125			2.11	24
3,3-Dichlorobenzidine	0.0500	U	ND	ND	0.000	0.000	1	10.0-160	J6	J6	0.000	34

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

WG1058723

QUALITY CONTROL SUMMARY

ONELAB NATIONWIDE

Semi Volatile Organic Compounds (GC/MS) by Method 625

L960559-02

L960579-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L960579-01 01/05/18 18:06 • (MS) R3277679-4 01/05/18 18:30 • (MSD) R3277679-5 01/05/18 18:54

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 %
1,3-Dichlorobenzene	0.0500	U	0.0194	0.0241	38.7	48.3	1	12.0-123			21.9	22
2,4-Dinitrotoluene	0.0500	U	0.0395	0.0394	78.9	78.9	1	30.0-156			0.0930	29
1,4-Dichlorobenzene	0.0500	U	0.0193	0.0248	38.6	49.6	1	12.0-125		J3	24.8	23
2,6-Dinitrotoluene	0.0500	U	0.0384	0.0360	76.7	72.0	1	28.0-143			6.31	30
Fluoranthene	0.0500	U	0.0414	0.0412	82.8	82.4	1	31.0-146			0.484	30
Fluorene	0.0500	U	0.0388	0.0386	77.7	77.1	1	29.0-143			0.734	31
Hexachlorobenzene	0.0500	U	0.0387	0.0390	77.3	77.9	1	29.0-144			0.789	33
Hexachloro-1,3-butadiene	0.0500	U	0.0198	0.0239	39.5	47.9	1	18.0-122			19.1	35
Hexachlorocyclopentadiene	0.0500	U	0.0239	0.0261	47.8	52.2	1	10.0-146			8.77	34
Hexachloroethane	0.0500	U	0.0181	0.0235	36.1	47.1	1	12.0-120			26.3	36
Indeno(1,2,3-cd)pyrene	0.0500	U	0.0424	0.0420	84.9	84.1	1	24.0-151			0.972	28
Isophorone	0.0500	U	0.0329	0.0325	65.8	65.0	1	22.0-141			1.23	29
Naphthalene	0.0500	U	0.0236	0.0256	47.3	51.2	1	19.0-125			7.89	32
Nitrobenzene	0.0500	U	0.0386	0.0289	77.1	57.9	1	14.0-134			28.5	32
n-Nitrosodimethylamine	0.0500	U	0.0180	0.0183	36.0	36.6	1	10.0-120			1.76	40
n-Nitrosodiphenylamine	0.0500	U	0.0323	0.0341	64.6	68.3	1	16.0-160			5.53	28
n-Nitrosodi-n-propylamine	0.0500	U	0.0320	0.0321	64.0	64.2	1	16.0-136			0.381	30
Phenanthrene	0.0500	U	0.0370	0.0370	73.9	74.0	1	27.0-137			0.168	28
Benzylbutyl phthalate	0.0500	U	0.0376	0.0374	75.2	74.7	1	30.0-147			0.648	27
Bis(2-ethylhexyl)phthalate	0.0500	U	0.0389	0.0387	77.7	77.4	1	25.0-140			0.420	26
Di-n-butyl phthalate	0.0500	U	0.0423	0.0434	84.7	86.7	1	32.0-146			2.40	27
Diethyl phthalate	0.0500	U	0.0411	0.0414	82.3	82.7	1	34.0-149			0.551	26
Dimethyl phthalate	0.0500	U	0.0395	0.0392	79.0	78.4	1	29.0-147			0.775	27
Di-n-octyl phthalate	0.0500	U	0.0376	0.0374	75.2	74.9	1	24.0-146			0.347	29
Pyrene	0.0500	U	0.0381	0.0379	76.2	75.8	1	34.0-140			0.594	27
1,2,4-Trichlorobenzene	0.0500	U	0.0210	0.0235	42.0	47.1	1	19.0-120			11.3	33
4-Chloro-3-methylphenol	0.0500	U	0.0298	0.0284	59.6	56.8	1	20.0-138			4.89	28
2-Chlorophenol	0.0500	U	0.0235	0.0243	47.0	48.5	1	11.0-120.			3.23	33
2,4-Dichlorophenol	0.0500	U	0.0241	0.0230	48.3	45.9	1	19.0-135			4.93	32
2,4-Dimethylphenol	0.0500	U	0.00802	0.0116	16.0	23.2	1	18.0-127	J6	J3	36.5	31
4,6-Dinitro-2-methylphenol	0.0500	U	0.0283	0.0165	56.7	33.0	1	10.0-160		J3	52.9	38
2,4-Dinitrophenol	0.0500	U	0.0193	0.00910	38.7	18.2	1	10.0-137		J3	72.1	36
2-Nitrophenol	0.0500	U	0.0259	0.0259	51.7	51.7	1	15.0-143			0.0370	33
4-Nitrophenol	0.0500	U	0.0167	0.0157	33.4	31.4	1	10.0-120			6.09	31
Pentachlorophenol	0.0500	U	0.0241	0.0126	48.1	25.3	1	10.0-160		J3	62.3	40
Phenol	0.0500	U	0.0126	0.0118	25.1	23.5	1	10.0-120			6.77	34
2,4,6-Trichlorophenol	0.0500	U	0.0250	0.0230	50.0	46.0	1	10.0-153			8.23	29
(S) Nitrobenzene-d5					52.4	56.1		10.0-126				
(S) 2-Fluorobiphenyl					63.7	64.7		22.0-127				
(S) p-Terphenyl-d14					59.5	58.4		29.0-141				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Al
- 7 Gl
- 8 Sc

WG1058723

QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE

Semi Volatile Organic Compounds (GC/MS) by Method 625

L960559-02

L960579-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L960579-01 01/05/18 18:06 • (MS) R3277679-4 01/05/18 18:30 • (MSD) R3277679-5 01/05/18 18:54

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 %
(S) Phenol-d5					19.4	21.6		10.0-120				
(S) 2-Fluorophenol					23.7	23.8		10.0-120				
(S) 2,4,6-Tribromophenol					42.0	44.3		10.0-153				

- Co
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Ci
- ⁷Gl
- ⁸Al
- ⁹Sc

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, 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.
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.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 G
- 8 AI
- 9 Sc


Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
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.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

ESC Lab Sciences 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.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 
- 9 Sc

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey-NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina 1	DW21704
Florida	E87487	North Carolina 2	41
Georgia	NELAP	North Dakota	R-140
Georgia 1	923	Ohio-VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky 1	90010	South Dakota	n/a
Kentucky 2	16	Tennessee 14	2006
Louisiana	AI30792	Texas	T 10470 4245-07-TX
Maine	TN0002	Texas 5	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

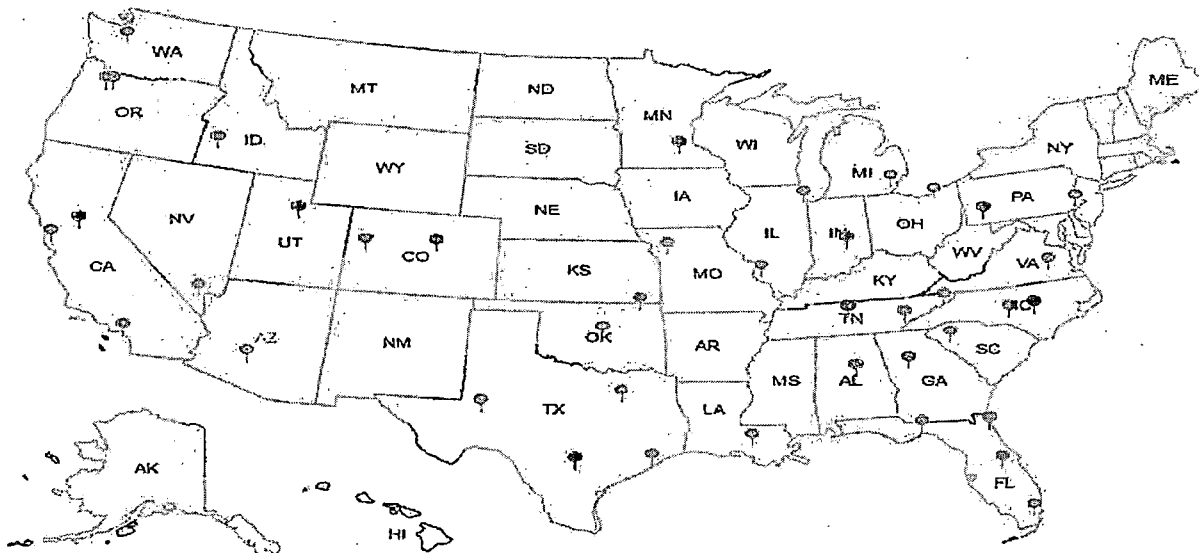
Third Party & Federal Accreditations

A2LA - ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA - ISO 17025 5	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA-Crypto	TN00003		

1 Drinking Water 2 Underground Storage Tanks 3 Aquatic Toxicity 4 Chemical/Microbiological 5 Mold ** Accreditation not applicable

Our Locations

ESC Lab Sciences 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. ESC Lab Sciences performs all testing at our central laboratory.





ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD
2220 BELTLINE ROAD SW DECATUR, ALABAMA 35601
(256)-350-0846

GOC NUMBER	129375
PAGE	1 of 1
Permit Renewal	

COMPANY/CLIENT NAME PDR - Redstone	ACCOUNT NUMBER 1279	QUOTE NUMBER	ENERSOLV PROJECT NUMBER	REQUIRED ANALYSES																		
CLIENT POINT OF CONTACT	CLIENT PHONE 890-0178 (cell)	CLIENT P.O. NUMBER 378		TRSB	TRAS	TRBE	TRCD	TRCR	TRCU	TRPB	TRN	TRSE	TRAG	TRIL	TRZN	HC-AA	PHENOLICS	HARD	\$624-FORM20A	\$625-FORM20	PICKUP	
CLIENT ADDRESS	CITY	STATE	ZIP CODE																			
SAMPLE COLLECTED BY <i>Bryce McCreless</i>		EXPEDITED REPORT DELIVERY (SURCHARGE)																				
		DATE DUE (REQUIRED)																				
SAMPLE (USE ONE LINE PER CONTAINER)																						
ENERSOLV LAB NO.	DESCRIPTION	DATE	TIME	GRAB	COMP.																	
719055-01	PDR-REDSTONE-DSN001	12/29/17	7:10 AM		X	X	X	X	X	X												
02	PDR-REDSTONE-DSN001	12/29/17	7:45 AM	X							X	X	X	X								

Comments: *Handwritten notes and signatures*

Field Information								Qty	Type	Vol.	Preserv.	<2	>12.5	Parameter	
Sampler	pH	TRC	DO	Temp				1	P	Pint	HNO3			Metals, Hardness	
Start Date	Date	Date	Date	Date				1	G	Liter	H2SO4			Phenolics B	
Start Time	Time	Time	Time	Time				2	Vial	40-mL	Iced	IK		624 Volatiles	
Stop Date	Analyst	Analyst	Analyst	Analyst				2	Vial	40-mL	HCl	PCH		624 Volatiles	
Stop Time								2	G	Liter	Iced	CDE		625 Semivolatiles	
SM 4500H+		SM 4500-CI D		SM 4500-C G		SM 2550B									
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME							
<i>Bryce McCreless</i>	12/29/17	11:00	<i>Jimmy Sharp</i>	12/29/17	13:20										
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME							
<i>Jimmy Sharp</i>	12/29/17	11:00	<i>Jimmy Sharp</i>	12/29/17	8:45										
RECEIVED FOR LABORATORY USE BY: (SIGNATURE)	DATE	TIME	SAMPLE STATUS												
<i>J. Smith</i>	12/29/17	13:20	<input checked="" type="checkbox"/> Accepted												
			<input type="checkbox"/> Rejected												
			<input type="checkbox"/> Accepted with Exception												

FedEx: 771 110 2 9160
Sample Count: 8 & 10 11



H069

L960559
SUBCONTRACT
ORDER

Sending Laboratory:

ESC - Decatur
2220 Beltline Road SW
Decatur, AL 35601
Phone: 256-350-0848
Fax: 256-350-0686

Subcontracted Laboratory:

ESC
12065 Lebanon Road
Mount Juliet, TN 37122
Phone: (615) 758-5858
Fax:

Work Order: 1718055

Analysis Code	Analysis Description	Due	Expires	Comments
Sample ID: 1718055-01 Wastewater Sampled: 12/29/2017 06:00				
HG 245.1	Total Mercury	01/08/2018	01/26/2018 06:00	
PB ICPMS TR	Total Recoverable Lead	01/08/2018	06/27/2018 06:00	
AS ICPMS TR	Total Recoverable Arsenic	01/08/2018	06/27/2018 06:00	
BE ICPMS TR	Total Recoverable Beryllium	01/08/2018	06/27/2018 06:00	
CD ICPMS TR	Total Recoverable Cadmium	01/08/2018	06/27/2018 06:00	
CR ICPMS TR	Total Recoverable Chromium	01/08/2018	06/27/2018 06:00	
CU ICPMS TR	Total Recoverable Copper	01/08/2018	06/27/2018 06:00	
AG ICPMS TR	Total Recoverable Silver	01/08/2018	06/27/2018 06:00	
NI ICPMS TR	Total Recoverable Nickel	01/08/2018	06/27/2018 06:00	
SB ICPMS TR	Total Recoverable Antimony	01/08/2018	06/27/2018 06:00	
SE ICPMS TR	Total Recoverable Selenium	01/08/2018	06/27/2018 06:00	
TL ICPMS TR	Total Recoverable Thallium	01/08/2018	06/27/2018 06:00	
ZN ICPMS TR	Total Recoverable Zinc	01/08/2018	06/27/2018 06:00	

PKCZ

Containers Supplied:

Sample ID: 1718055-02 Wastewater Sampled: 12/29/2017 07:45				
VOA 624 FORM2A	Volatile Organic Analytes	01/08/2018	01/12/2018 07:45	
CA ICP	Total Calcium	01/08/2018	06/27/2018 07:45	
MG ICP	Total Magnesium	01/08/2018	06/27/2018 07:45	

Containers Supplied:

Please see attached for EPA Form 2A volatile analytes

FedEx: 77 11 1102 9160

Sample Count: 8 ^{MF} 11011

Released By

12.29.17
Date

Received By

12.20.17 845
Date

0.6 mg/l

L960559

FACILITY NAME AND PERMIT NUMBER:

Form Approved 1/14/99
OMB Number 2040-0086

Outfall number: _____ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE			AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MCL
	Conc.	Units	Mass	Conc.	Units	Mass	Units	Number of Samples		
VOLATILE ORGANIC COMPOUNDS										
ACROLEIN										
ACRYLONITRILE										
BENZENE										
BROMOFORM										
CARBON TETRACHLORIDE										
CHLOROBENZENE										
CHLORODIBROMOMETHANE										
CHLOROETHANE										
2-CHLOROETHYL VINYL ETHER										
CHLOROFORM										
DICHLOROBROMOMETHANE										
1,1-DICHLOROETHANE										
1,2-DICHLOROETHANE										
TRANS-1,2-DICHLOROETHYLENE										
1,1-DICHLOROETHYLENE										
1,2-DICHLOROPROPANE										
1,3-DICHLOROPROPYLENE										
ETHYLBENZENE										
METHYL BROMIDE										
METHYL CHLORIDE										
METHYLENE CHLORIDE										
1,1,2,2-TETRACHLOROETHANE										
TETRACHLOROETHYLENE										
TOLUENE										

Handwritten signature

1960559

FACILITY NAME AND PERMIT NUMBER:

Form Approved 1/1/89
OMB Number 2040-0086

Outfall number: _____ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL	
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples			
1,1,1-TRICHLOROETHANE												
1,1,2-TRICHLOROETHANE												
TRICHLOROETHYLENE												
VINYL CHLORIDE												
Use this space (or a separate sheet) to provide information on other volatile organic compounds requested by the permit writer.												
ACID-EXTRACTABLE COMPOUNDS												
P-CHLORO-M-CRESOL												
2-CHLOROPHENOL												
2,4-DICHLOROPHENOL												
2,4-DIMETHYLPHENOL												
4,6-DINITRO-O-CRESOL												
2,4-DINITROPHENOL												
2-NITROPHENOL												
4-NITROPHENOL												
PENTACHLOROPHENOL												
PHENOL												
2,4,6-TRICHLOROPHENOL												
Use this space (or a separate sheet) to provide information on other acid-extractable compounds requested by the permit writer.												
BASE-NEUTRAL COMPOUNDS												
ACENAPHTHENE												
ACENAPHTHYLENE												
ANTHRACENE												
BENZIDINE												
BENZO(A)ANTHRACENE												

0.6

ESC LAB SCIENCES
Cooler Receipt Form

Client: <i>ENER SOLV</i>	SDG#	<i>L960559</i>	
Cooler Received/Opened On: <i>12/30/17</i>	Temperature:	<i>0.6</i>	<i>°C</i>
Received by: <i>Jennifer Royal</i>			
Signature: <i>Jennifer Royal</i>			
Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	<input checked="" type="checkbox"/>		
COC Signed / Accurate?		<input checked="" type="checkbox"/>	
Bottles arrive intact?		<input checked="" type="checkbox"/>	
Correct bottles used?		<input checked="" type="checkbox"/>	
Sufficient volume sent?		<input checked="" type="checkbox"/>	
If Applicable		<input checked="" type="checkbox"/>	
VOA Zero headspace?			
Preservation Correct / Checked?		<input checked="" type="checkbox"/>	



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD
 2220 BELTLINE ROAD SW DECATUR, ALABAMA 35601
 (256)-350-0846

COC NUMBER	129375
PAGE	1 of 1
Permit Renewal	

COMPANY/CLIENT NAME PDR - Redstone		ACCOUNT NUMBER 1279	QUOTE NUMBER	ENERSOLV PROJECT NUMBER	REQUIRED ANALYSES																
CLIENT POINT OF CONTACT		CLIENT PHONE 990-0178 (cell)		CLIENT P.O. NUMBER 378	TRSB, TRAS, TRBE, TRCD	TRCR, TRCU, TRPB, TRNI	TRSE, TRAG, TRTL, TRZN	HG-AA	PHENOLICS	#HARD	\$624-FORM2C	\$625-FORM2C	IPICKUP								
CLIENT ADDRESS		CITY	STATE	ZIP CODE																	
SAMPLE COLLECTED BY <i>Bryce McClellan</i>		EXPEDITED REPORT DELIVERY (SURCHARGE)																			
		DATE DUE (REQUIRED)																			
ENERSOLV LAB. NO.	SAMPLE (USE ONE LINE PER CONTAINER)																				
	DESCRIPTION	DATE	TIME	GRAB	COMP																
1718055-01	PDR-REDSTONE-DSN001	12/29/17	7:10 AM		X	X	X	X													
02	PDR-REDSTONE-DSN001	12/29/17	7:45 AM	X					X	X	X	X									

Comments: LAB # 1000
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Field Information										Qty	Type	Vol.	Preserv.	< 2	> 12.5	Parameter
Sampler	pH	TRC	DO	Temp						1	P	Pint	HNO3			Metals, Hardness
Start Date	Date	mg/l	mg/l	deg C						1	G	Liter	H2SO4			Phenolics B
Start Time	Time									2	Vial	40-mL	Iced	IK		624 Volatiles
Stop Date	Analyst									2	Vial	40-mL	HCl	FGH		624 Volatiles
Stop Time										2	G	Liter	Iced	CDE		625 Semivolatiles
	SM 4500H+	SM 4500-CI-D	SM 4500-O G	SM 2550B												
RELINQUISHED BY (SIGNATURE)		DATE	TIME	RELINQUISHED BY (SIGNATURE)		DATE	TIME	RELINQUISHED BY (SIGNATURE)		DATE	TIME	RELINQUISHED BY (SIGNATURE)		DATE	TIME	
<i>Bryce McClellan</i>		12/29/17	11:00	<i>Jimmy Sharp</i>		12-29-17	13:20									
RECEIVED BY (SIGNATURE)		DATE	TIME	RECEIVED BY (SIGNATURE)		DATE	TIME	RECEIVED BY (SIGNATURE)		DATE	TIME	RECEIVED BY (SIGNATURE)		DATE	TIME	
<i>Jimmy Sharp</i>		12-29-17	11:00	<i>Mark</i>		12-29-17	13:00									
RECEIVED FOR LABORATORY USE BY (SIGNATURE)		DATE	TIME	SAMPLE STATUS												
<i>Mark</i>		12-29-17	13:00	<input checked="" type="checkbox"/> Accepted <input type="checkbox"/> Rejected <input type="checkbox"/> Accepted with Exception												