

**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
MONITORING REPORT FOR DECENTRALIZED WASTEWATER TREATMENT FACILITIES VIA DRIP IRRIGATION
NO DISCHARGE MONTHLY MONITORING REPORT**

| |
|-----------------------------------|
| PERMITTEE NAME |
| CITY OF CAVE SPRINGS |
| PERMITTEE ADDRESS |
| PO Box 5 Cave Springs AR 72718 |

| |
|--|
| FACILITY NAME |
| CAVE SPRINGS WASTEWATER TREATMENT PLANT |
| FACILITY ADDRESS |
| The Creeks Golf Course 1499 S Main St Cave Springs AR 72718 |

| |
|-------------------|
| PERMIT NO. |
| 4893-WR-3 |
| AFIN NO. |
| 04-01642 |

| | | |
|--------------------------|----|------------|
| MONITORING PERIOD | | |
| MM/DD/YYYY | TO | MM/DD/YYYY |
| 11/1/2019 | | 11/30/2019 |


| EFFLUENT LIMITS, MONITORING, AND REPORTING REQUIREMENTS | | | | | | |
|--|---|---|-----------|----------------|-------------------------|-------------|
| PARAMETER | PERMIT LIMIT | SAMPLE MEASUREMENT | | UNITS | FREQUENCY OF ANALYSIS | SAMPLE TYPE |
| | | Plant 1 | Plant 2 | | | |
| CARBONACEOUS BIOCHEMICAL OXYGEN DEMAND (CBOD ₅) | 30 | < 2.0 | 3.4 | MG/L | Once per Month / Grab | |
| TOTAL SUSPENDED SOLIDS (TSS) | 45 | 6.2 | 4.7 | MG/L | | |
| FECAL COLIFORM BACTERIA (FCB) | 10,000 | 74 | 1565 | COLONIES/100ml | | |
| pH | 6.0 - 9.0 | 5.4 | 6.8 | s.u | | |
| TOTAL PHOSPHOROUS (TP) | Report | 0.61 | 1.77 | MG/L | | |
| TOTAL KJELDAHL NITROGEN (TKN) | Report | | | MG/L | Once per Quarter / Grab | |
| NITROGEN AMMONIA NITROGEN (NH ₃ - N) | Report | | | MG/L | | |
| NITRITE NITROGEN (NO ₂ - N) + NITRATE NITROGEN (NO ₃ - N) | Report | | | MG/L | | |
| PLANT AVAILABLE NITROGEN (PAN) | Report | | | MG/L | | |
| TOTAL FLOW | | MONTHLY TOTAL | DAILY MAX | GPD | | |
| | | 3.858717 | 0.306878 | | | |
| NAME/TITLE PRINCIPAL EXECUTIVE OFFICER | I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. |  SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT | | TELEPHONE | | DATE |
| Kathy Bartlett | | | | 479 | 530-5926 | 12/16/2019 |
| TYPED OR PRINTED | | | | AREA CODE | NUMBER | MM/DD/YYYY |
| COMMENTS AND EXPLANATION OF VIOLATIONS (Reference all attachments here) | | | | | | |
| Wet areas seen on drip field. In the process of checking all electronic zone valves and replacing as needed. | | | | | | |

TABLE II

DRIP ZONES LOADING RATE LIMITS, MONITORING AND REPORTING REQUIREMENTS

| | | Nov-19 | | | DAILY MAXIMUM FLOW TOTAL | | 306,878 |
|---------------|-------|---------------------|----------------------|-------|--------------------------|-----------------------------|---------|
| Zone ID | Limit | Units | Maximum Volume Limit | Units | Monitoring | Reported Maximum | |
| Leach Field 1 | 0.55 | gpd/ft ² | 26,000 | gpd | Daily | 22096 | |
| Zone 1 | 0.42 | | 19,524 | | | <i>zones not being used</i> | |
| Zone 2 | 0.45 | | 19,309 | | | | |
| Zone 3 | 0.4 | | 16,424 | | | | |
| Zone 4 | 0.46 | | 10,811 | | | | |
| Zone 5 | 0.2 | | 13,059 | | | 11355 | |
| Zone 6 | 0.2 | | 7,723 | | | 6752 | |
| Zone 7 | 0.2 | | 10,910 | | | 9207 | |
| Zone 8 | 0.3 | | 7,081 | | | 6138 | |
| Zone 9 | 0.4 | | 18,291 | | | 15651 | |
| Zone 10 | 0.3 | | 9,450 | | | 7979 | |
| Zone 11 | 0.2 | | 4,110 | | | 3683 | |
| Zone 12 | 0.4 | | 7,522 | | | 6445 | |
| Zone 13 | 0.25 | | 5,717 | | | 4911 | |
| Zone 14 | 0.15 | | 6,097 | | | 5217 | |
| Zone 15 | 0.2 | | 8,378 | | | 7366 | |
| Zone 16 | 0.4 | | 9,427 | | | 7979 | |
| Zone 17 | 0.23 | | 3,694 | | | 3069 | |
| Zone 19 | 0.35 | | 13,778 | | | 11662 | |
| Zone 20 | 0.2 | | 5,766 | | | 4911 | |
| Zone 21 | 0.4 | | 17,040 | | | 14731 | |
| Zone 22 | 0.5 | | 28,113 | | | 23937 | |
| Zone 23 | 0.25 | | 15,640 | | | 13196 | |
| Zone 24 | 0.25 | | 9,547 | | | 8286 | |
| Zone 25 | 0.2 | | 4,436 | | | 3683 | |
| Zone 26 | 0.3 | | 9,334 | | | 7979 | |
| Zone 27 | 0.31 | | 16,511 | | | 14117 | |
| Zone 28 | 0.31 | | 13,018 | | | 11048 | |
| Zone 29 | 0.2 | | 3,923 | | | 3376 | |
| Zone 30 | 0.55 | | 10,116 | | | 8593 | |
| Zone 31 | 0.3 | | 5,714 | | | 4911 | |

Environmental Services Company, Inc.

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 13715 West Markham
 Little Rock, AR 72211
 Tel. (501)221-2565 Fax (501)221-1341

Northwest Arkansas Branch
 1107 Century Avenue
 Springdale, AR 72762
 Tel. (479)750-1170 Fax (479)750-1172

Control Number: 1911020012
 Customer Name : CAVE SPRINGS, CITY OF OUTFALL 2
 Customer/Permit No. : 2379 / 4893-WR-3 002
 Report Date : 11/12/19

Sample Date : 11/06/19
 Sample Time : 1350
 Sample Type : GRAB
 Sample From : EFF. DIVERTER BOX

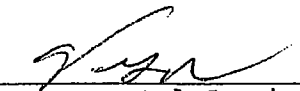
Collected By: JEW
 Delivery By : JEW
 Work Order :
 Purchase Order :

Laboratory Analysis

| Analysis | | | | | | Quality Assurance | | | |
|----------|------|-----|----------------------------|--------|--------|-------------------|--------------------|--------------------|------------------------|
| Date | Time | By | Parameter | Result | Notes | Quantity | Method | Precision % RPD | Accuracy % Recovery |
| 11/06 | 1400 | JEW | pH | 6.8 | S.U. | | SM 2011 4500-H+ B | | |
| 11/07 | 0830 | TSB | Phosphorous, Total (as P) | 1.77 | mg/L | | EPA 365.3 | 3.04 | 109.0 * |
| 11/08 | 1500 | TSB | Solids, Total Suspended | 4.7 | mg/L | | SM 2011 2540 D | 6.27 | N/A * |
| 11/06 | 1630 | TM | Fecal Coliform (MPN/100mL) | 1565.0 | /100mL | | 06/2012 Colilert18 | 0.00 | 0.0 * |
| 11/06 | 1630 | TSB | BOD, Carbonaceous | 3.4 | mg/L | | SM 2001 5210 B | 0.46 | 94.2 |

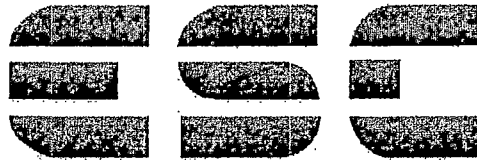
* QA data shown is from a different sample or standard on the same date.

All equipment used is checked and/or calibrated daily. All NPDES testing is conducted in accordance with 40 CFR Part 136. A minimum of 10% spiked and duplicate samples is run on each parameter where applicable for Quality Assurance purposes. Quality Assurance Plan on file with Arkansas Department of Environmental Quality. Analysis time indicates the time of the start of the analytical batch in which the specific sample was included.

Signature 
 Environmental Services Co., Inc.

3,858,717
 366,878

Environmental Services Company, Inc.
 Northwest Arkansas
 1107 Century Street
 Springdale, Arkansas 72762
 website: www.esclabs.com



Corporate Office, Little Rock, Arkansas
 501-221-2565

Carlsbad, New Mexico
 575-887-1ESC

Phone: 479-750-1170 Fax: 479-750-1172

CHAIN OF CUSTODY

| Client Information | | | | | | Project Information | | | | | Requested Parameters | | | | | | | | | |
|---|---------------|--------------------------------|-------------------|---|--------|--------------------------------------|------------|--|--|-------------------------------------|--------------------------|-----------------------|-------------------|--------------|--|--|--|--|--|--|
| Company Name: | | Cave Springs Plant 2 | | | | Permit/Project #: | | | | | pH(23) | Fecal Coliform(43.1F) | CBOD(70), TSS(28) | Total P (25) | | | | | | |
| Address: | | PO BOX 5 Cave Springs 72718 | | | | Purchase Order #: | | | | | | | | | | | | | | |
| Telephone: | | 479 248-1040 | | | | Sampler Name(s): <i>James Wiltse</i> | | | | | | | | | | | | | | |
| FAX: | | | | | | and Signature(s): | | | | | | | | | | | | | | |
| ESC Client Number: | | 2379 | | | | | | | | | | | | | | | | | | |
| Sample Identification | | | Sample Collection | | | Sample Containers | | | | | | | | | | | | | | |
| Identification | ESC Control # | Date | Time | Type | Matrix | Type | Volume | Preservative | # | | | | | | | | | | | |
| Effluent Diverter Box | 1911020012 | 11-6-19 | 1350 | Grab | Water | Teflon | 150 ml | none | 1 | X | | | | | | | | | | |
| | | | | Grab | Water | whirlpak | 100 ml | Na ₂ S ₂ O ₃ | 1 | | X | | | | | | | | | |
| | | | | Grab | Water | Plastic | 1/2 gal | none/ice | 1 | | | X | | | | | | | | |
| | | | | Grab | Water | Plastic | 8 oz | H ₂ SO ₄ , pH <2 | 1 | | | | X | | | | | | | |
| Relinquished By: (Signature and Printed Name) | | Date | Time | Received By: (Signature and Printed Name) | | Date | Time | Custody Seals: | | Used? | Intact? | | | | | | | | | |
| <i>James Wiltse</i> | | 11-6-19 | 1620 | <i>James Wiltse</i> | | | | Regular <input checked="" type="checkbox"/> Special <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | |
| Relinquished By: (Signature and Printed Name) | | Date | Time | Received By: (Signature and Printed Name) | | Date | Time | Were samples properly preserved: | | Yes | No | | | | | | | | | |
| | | | | <i>James Wiltse</i> | | 11-6-19 | 1620 | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | |
| Comments: | | | | | | FLOW DATA | Field Test | Time | Analyst | Result | Result | Units | | | | | | | | |
| | | | | | | Analyst: | pH: | 1700 | GW | 6.8 | 6.8 | | | | | | | | | |
| | | | | | | Time: | Temp.: | 1400 | GW | 17.9 | 17.4 | °C | °F | | | | | | | |
| | | | | | | Reading: | DO: | | | | | | | | | | | | | |
| | | | | | | Units: | Debris: | | | | | | | | | | | | | |
| Cool all samples to 6 degrees C. | | | | | | Chlorinated? Yes No | | | This Document is Page <u>1</u> of <u>1</u> | | | | | | | | | | | |

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 Tel. (479)750-1170 Fax (479)750-1172

Control Number: 1911020011
 Customer Name : CAVE SPRINGS UTILITY, OUTFALL 1
 Customer/Permit No. : 1826 / 4893-WR-2
 Report Date : 11/12/19

Sample Date : 11/06/19
 Sample Time : 1420
 Sample Type : GRAB
 Sample From : EFFLUENT DOSE TANK

Collected By: JEW
 Delivery By : JEW
 Work Order :
 Purchase Order :


Laboratory Analysis

| <u>Analysis</u> | | | | | | <u>Quality Assurance</u> | | | |
|-----------------|-------------|-----------|----------------------------|---------------|--------------|--------------------------|--------------------|------------------|-------------------|
| <u>Date</u> | <u>Time</u> | <u>By</u> | <u>Parameter</u> | <u>Result</u> | <u>Notes</u> | <u>Quantity</u> | <u>Method</u> | <u>Precision</u> | <u>Accuracy</u> |
| | | | | | | | | <u>% RPD</u> | <u>% Recovery</u> |
| 11/06 | 1420 | JEW | pH | 5.4 S.U. | (b) | | SM 2011 4500-H+ B | | |
| 11/07 | 0830 | TSB | Phosphorous, Total (as P) | 0.61 mg/L | | | EPA 365.3 | 3.04 | 109.0 * |
| 11/08 | 1500 | TSB | Solids, Total Suspended | 6.2 mg/L | | | SM 2011 2540 D | 6.27 | N/A * |
| 11/06 | 1630 | TM | Fecal Coliform (MPN/100mL) | 74.0 /100ml | | | 06/2012 Colilert18 | 0.00 | 0.0 * |
| 11/06 | 1630 | TSB | BOD, Carbonaceous | < 2.0 mg/L | | | SM 2001 5210 B | 0.46 | 94.2 * |

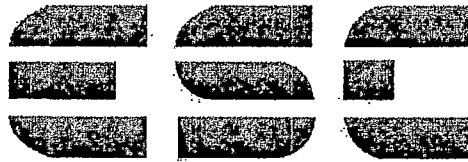
* QA data shown is from a different sample or standard on the same date.
 (b) Under Minimum Permit Limits

All equipment used is checked and/or calibrated daily. All NPDES testing is conducted in accordance with 40 CFR Part 136. A minimum of 10% spiked and duplicate samples is run on each parameter where applicable for Quality Assurance purposes. Quality Assurance Plan on file with Arkansas Department of Environmental Quality. Analysis time indicates the time of the start of the analytical batch in which the specific sample was included.

Signature _____


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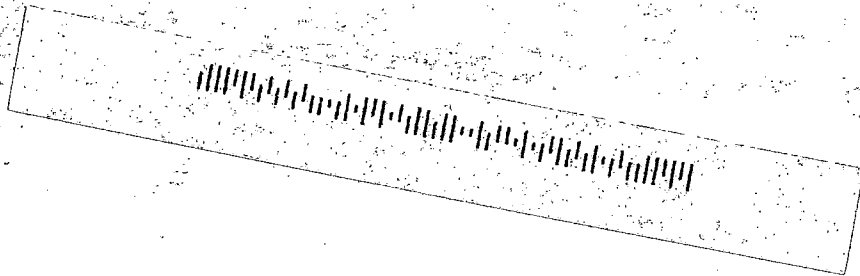
Phone: 479-750-1170 Fax: 479-750-1172

CHAIN OF CUSTODY

| Client Information | | | | Project Information | | | | | | Requested Parameters | | | | | | | | | |
|---|---------------|----------------------|------|---|--------|-----------------------------|---------|--|---|----------------------|------------------------|---------------------|--------------|--------|--|-------|--|------------------------------|--|
| Company Name: | | Cave Springs Plant 1 | | Permit/Project #: | | | | | | pH (23) | Fecal Coliform (43.1F) | CBOD (70), TSS (28) | T-Phosphorus | | | | | | |
| Address: | | PO BOX 5 | | Purchase Order #: | | | | | | | | | | | | | | | |
| | | Cave Springs 72718 | | Sampler Name(s): | | James W. Hise James W. Hise | | | | | | | | | | | | | |
| Telephone: | | 479 248-1040 | | and Signature(s): | | | | | | | | | | | | | | | |
| FAX: | | | | | | | | | | | | | | | | | | | |
| ESC Client Number: | | 1826 | | | | | | | | | | | | | | | | | |
| Sample Identification | | Sample Collection | | | | Sample Containers | | | | | | | | | | | | | |
| Identification | ESC Control # | Date | Time | Type | Matrix | Type | Volume | Preservative | # | | | | | | | | | | |
| Effluent/Dose Tank | 1911020011 | 11-6-19 | 1420 | Grab | Water | Glass | 250 ml | None | 0 | X | | | | | | | | | |
| | | | | Grab | Water | Sterile | 100 ml | Na ₂ S ₂ O ₃ /Cool | 1 | | X | | | | | | | | |
| | | | | Grab | Water | Plastic | 1/2 gal | None/Cool | 1 | | | X | | | | | | | |
| | | | | Grab | Water | Plastic | 8 oz | H ₂ SO ₄ , pH <2 | 1 | | | | X | | | | | | |
| Relinquished By: (Signature and Printed Name) | | Date | Time | Received By: (Signature and Printed Name) | | Date | Time | Custody Seals: | | | | | | | | | | | |
| James W. Hise James W. Hise | | 11-6-19 | 1620 | James W. Hise James W. Hise | | | | Used? <input checked="" type="checkbox"/> Intact? <input type="checkbox"/> | | | | | | | | | | | |
| Relinquished By: (Signature and Printed Name) | | Date | Time | Received By: (Signature and Printed Name) | | Date | Time | Turnaround: | | | | | | | | | | | |
| | | | | | | | | Regular <input checked="" type="checkbox"/> Special <input type="checkbox"/> | | | | | | | | | | | |
| Relinquished By: (Signature and Printed Name) | | Date | Time | Received for Lab By: (Signature and Printed Name) | | Date | Time | Were samples properly preserved: | | | | | | | | | | | |
| | | | | James W. Hise James W. Hise | | 11-6-19 | 1620 | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | | | | | | | | | |
| Comments: | | | | FLOW DATA | | Field Test | | Time | | Analyst | | Result | | Result | | Units | | | |
| | | | | Analyst: | | pH: | | 1420 | | JWH | | 5.4 | | 5.5 | | | | | |
| | | | | Time: | | Temp.: | | 1420 | | JWH | | 17.2 | | 17.1 | | °C | | | |
| | | | | Reading: | | DO: | | | | | | | | | | | | | |
| | | | | Units: | | Debris: | | | | | | | | | | | | | |
| Cool all samples to 6 degrees C. | | | | | | Chlorinated? | | Yes No | | | | | | | | | | This Document is Page 1 of 1 | |

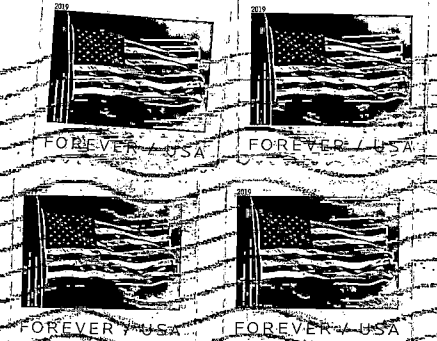
NWA UTILITY SERVICES, INC

PO Box 9299
Fayetteville, AR
72703



NWA PSDF 72703

FRI 20 DEC 2019 PM



ADEQ
Water Division
Permits Branch
5301 Northshore Dr
North Little Rock, AR
72118