

**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 |
| 5/1/2020 | | 5/31/2020 |


| 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 (CBOD5) | 30 | < 2.0 | 6.1 | MG/L | Once per Month / Grab | | |
| TOTAL SUSPENDED SOLIDS (TSS) | 45 | 2.7 | 7.1 | MG/L | | | |
| FECAL COLIFORM BACTERIA (FCB) | 10,000 | < 5.0 | 2053.0 | COLONIES/100ml | | | |
| pH | 6.0 - 9.0 | 6.8 | 7 | s.u | | | |
| TOTAL PHOSPHOROUS (TP) | Report | 5.59 | 7.76 | 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 | | | |
| | | 4,408,749 | 283,943 | | | | |
| 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 | 6/15/20 5/12/2020 | |
| TYPED OR PRINTED | | | | AREA CODE | NUMBER | MM/DD/YYYY | |
| COMMENTS AND EXPLANATION OF VIOLATIONS (<i>Reference all attachments here</i>) | | | | | | | |
| | | | | | | | |

TABLE II

DRIP ZONES LOADING RATE LIMITS, MONITORING AND REPORTING REQUIREMENTS

| | | May-20 | | | DAILY MAXIMUM FLOW TOTAL | | 283,943 |
|---------------|-------|---------|----------------------|-------|--------------------------|-----------------------------|---------|
| Zone ID | Limit | Units | Maximum Volume Limit | Units | Monitoring | Reported Maximum | |
| Leach Field 1 | 0.55 | gpd/ft2 | 26,000 | gpd | Daily | 20444 | |
| 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 | | | 10506 | |
| Zone 6 | 0.2 | | 7,723 | | | 6247 | |
| Zone 7 | 0.2 | | 10,910 | | | 8519 | |
| Zone 8 | 0.3 | | 7,081 | | | 5679 | |
| Zone 9 | 0.4 | | 18,291 | | | 14482 | |
| Zone 10 | 0.3 | | 9,450 | | | 7383 | |
| Zone 11 | 0.2 | | 4,110 | | | 3408 | |
| Zone 12 | 0.4 | | 7,522 | | | 5963 | |
| Zone 13 | 0.25 | | 5,717 | | | 4544 | |
| Zone 14 | 0.15 | | 6,097 | | | 4828 | |
| Zone 15 | 0.2 | | 8,378 | | | 6815 | |
| Zone 16 | 0.4 | | 9,427 | | | 7383 | |
| Zone 17 | 0.23 | | 3,694 | | | 2840 | |
| Zone 19 | 0.35 | | 13,778 | | | 10790 | |
| Zone 20 | 0.2 | | 5,766 | | | 4544 | |
| Zone 21 | 0.4 | | 17,040 | | | 13630 | |
| Zone 22 | 0.5 | | 28,113 | | | 22148 | |
| Zone 23 | 0.25 | | 15,640 | | | 12210 | |
| Zone 24 | 0.25 | | 9,547 | | | 7667 | |
| Zone 25 | 0.2 | | 4,436 | | | 3408 | |
| Zone 26 | 0.3 | | 9,334 | | | 7383 | |
| Zone 27 | 0.31 | | 16,511 | | | 13062 | |
| Zone 28 | 0.31 | | 13,018 | | | 10222 | |
| Zone 29 | 0.2 | | 3,923 | | | 3124 | |
| Zone 30 | 0.55 | | 10,116 | | | 7951 | |
| Zone 31 | 0.3 | | 5,714 | | | 4544 | |

Environmental Services Company, Inc.

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

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

| | | |
|---|----------------------------------|-------------------|
| Control Number: 2005020010 | Sample Date : 05/06/20 | Collected By: NTR |
| Customer Name : CAVE SPRINGS UTILITY, PLANT 1 | Sample Time : 0836 | Delivery By : NTR |
| Customer/Permit No. : 1826 / 4893-WR-2 | Sample Type : GRAB | Work Order : |
| Report Date : 05/13/20 | Sample From : EFFLUENT/DOSE TANK | Purchase Order : |

| <u>Laboratory Analysis</u> | | | | | | | <u>Quality Assurance</u> | |
|----------------------------|-------------|-----------|----------------------------|--------------|-----------------|--------------------|--------------------------|-----------------|
| <u>Analysis</u> | | | <u>Result</u> | <u>Notes</u> | <u>Quantity</u> | <u>Method</u> | <u>Precision</u> | <u>Accuracy</u> |
| <u>Date</u> | <u>Time</u> | <u>By</u> | | | | | <u>Parameter</u> | <u>% RPD</u> |
| 05/06 | 0837 | NTR | pH | 6.1 S.U. | | SM 2011 4500-H+ B | 0.00 | N/A |
| 05/07 | 0945 | TSB | Phosphorous, Total (as P) | 8.59 mg/L | | EPA 365.3 | 0.92 | 107.0 * |
| 05/08 | 1310 | TSB | Solids, Total Suspended | 2.7 mg/L | | SM 2011 2540 D | 6.99 | N/A * |
| 05/06 | 1630 | TSB | Fecal Coliform (MPN/100mL) | < 5.0 /100ml | | 06/2012 Colilert18 | 0.00 | N/A * |
| 05/06 | 1300 | TSB | BOD, Carbonaceous | < 2.0 mg/L | | SM 2001 5210 B | 0.33 | 95.4 * |

* 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.

4,408,749

283,943

B

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 website: www.esclabs.com



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 501-221-2565

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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.IF) | CBOD (70), TSS (28) | T-Phosphorus | | | | | | |
| Address: PO BOX 5 | | | | Purchase Order #: | | | | | | | | | | | | | | | |
| Cave Springs 72718 | | | | Sampler Name(s): Ned Ryerson | | | | | | | | | | | | | | | |
| Telephone: 479 248-1040 | | | | and Signature(s): Ned Ryerson | | | | | | | | | | | | | | | |
| FAX: | | | | | | | | | | | | | | | | | | | |
| ESC Client Number: 1826 | | | | | | | | | | | | | | | | | | | |
| Sample Identification | | Sample Collection | | | | Sample Containers | | | | | | | | | | | | | |
| Identification | ESC Control # | Date | Time | Type | Matrix | Type | Volume | Preservative | # | | | | | | | | | | |
| Effluent/Dose Tank | 2005020010 | 5-6-20 | 0836 | Grab | Water | Glass | 250 ml | None | 0 | X | | | | | | | | | |
| Effluent/Dose Tank | | | | Grab | Water | Sterile | 125 ml | Na ₂ S ₂ O ₃ /Cool | 1 | | X | | | | | | | | |
| Effluent/Dose Tank | | | | Grab | Water | Plastic | 1/2 gal | None/Cool | 1 | | | X | | | | | | | |
| Effluent/Dose Tank | | | | 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? <input checked="" type="checkbox"/> Intact? <input type="checkbox"/> | | Turnaround: | | Regular <input checked="" type="checkbox"/> Special <input type="checkbox"/> | | Were samples properly preserved: | | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | |
| Relinquished By: (Signature and Printed Name) | | Date | Time | Received By: (Signature and Printed Name) | | Date | Time | | | | | | | | | | | | |
| Relinquished By: (Signature and Printed Name) Ned Ryerson | | 5-6-20 | 1130 | Received for Lab By: (Signature and Printed Name) T. J. Meek | | 5-6-20 | 1130 | | | | | | | | | | | | |
| Comments: 0 | | | | FLOW DATA | | Field Test | Time | Analyst | Result | Result | Units | | | | | | | | |
| | | | | Analyst: | | pH: | 0837 | NTR | 6.1 | 6.0 | SLI | | | | | | | | |
| | | | | Time: | | Temp.: | | | | | °C °F | | | | | | | | |
| | | | | Reading: | | DO: | | | | | | | | | | | | | |
| | | | | Units: | | Debris: | | | | | | | | | | | | | |
| Cool all samples to 6 degrees C. | | | | | | Chlorinated? Yes No | | This Document is Page 1 of 1 | | | | | | | | | | | |

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| | | |
|---|------------------------|-------------------|
| Control Number: 2005020011 | Sample Date : 05/06/20 | Collected By: NTR |
| Customer Name : CAVE SPRINGS UTILITY, PLANT 2 | Sample Time : 0849 | Delivery By : NTR |
| Customer/Permit No. : 2379 / 4893-WR-3 002 | Sample Type : GRAB | Work Order : |
| Report Date : 05/13/20 | Sample From : EFFLUENT | Purchase Order : |

| <u>Laboratory Analysis</u> | | | | | | | <u>Quality Assurance</u> | |
|----------------------------|------|-----|----------------------------|---------------|----------|--------------------|--------------------------|----------|
| Analysis | | | Result | Notes | Quantity | Method | Precision | Accuracy |
| Date | Time | By | | | | | Parameter | % RPD |
| 05/06 | 0855 | NTR | pH | 6.8 S.U. | | SM 2011 4500-H+ B | 0.00 | N/A * |
| 05/07 | 0945 | TSB | Phosphorous, Total (as P) | 7.76 mg/L | | EPA 365.3 | 0.92 | 107.0 * |
| 05/08 | 1310 | TSB | Solids, Total Suspended | 7.1 mg/L | | SM 2011 2540 D | 6.99 | N/A * |
| 05/06 | 1630 | TSB | Fecal Coliform (MPN/100mL) | 2053.0 /100ml | | 06/2012 Colilert18 | 0.00 | N/A * |
| 05/06 | 1300 | TSB | BOD, Carbonaceous | 6.1 mg/L | | SM 2001 5210 B | 0.33 | 95.4 * |

* 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 _____


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88

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CHAIN OF CUSTODY

| Client Information | | | | Project Information | | | | | | | Requested Parameters | | | | | | | | | |
|---|---------------|-------------------|------|---|--------|-------------------|---------------------|---|----------------------------------|------------------------------|----------------------|-----------------------|-------------------------------------|--------------|--------------------------|--|--|--|--|--|
| Company Name: Cave Springs Plant 2 | | | | Permit/Project #: | | | | | | | pH(23) | Fecal Coliform(43,IF) | CBOD(70),TSS(28) | Total P (25) | | | | | | |
| Address: PO BOX 5 | | | | Purchase Order #: | | | | | | | | | | | | | | | | |
| Cave Springs 72718 | | | | Sampler Name(s): Ned Ryerson | | | | | | | | | | | | | | | | |
| Telephone: 479 248-1040 | | | | and Signature(s): Ned Ryerson | | | | | | | | | | | | | | | | |
| FAX: | | | | | | | | | | | | | | | | | | | | |
| ESC Client Number: 2379 | | | | | | | | | | | | | | | | | | | | |
| Sample Identification | | Sample Collection | | | | Sample Containers | | | | | | | | | | | | | | |
| Identification | ESC Control # | Date | Time | Type | Matrix | Type | Volume | Preservative | # | | | | | | | | | | | |
| Effluent Diverter Box | 2005020011 | 5-6-20 | 0349 | Grab | Water | Teflon | 150 ml | none | 0 | X | | | | | | | | | | |
| Effluent Diverter Box | I | I | I | Grab | Water | Sterile | 100 ml | Na ₂ S ₂ O ₃ | 1 | | X | | | | | | | | | |
| Effluent Diverter Box | I | I | I | Grab | Water | Plastic | 1/2 gal | none/ice | 1 | | | X | | | | | | | | |
| Effluent Diverter Box | I | I | I | 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? | <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: | | | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> | | | | | |
| Comments: | | FLOW DATA | | Field Test | Time | Analyst | Result | Result | Units | | | | | | | | | | | |
| | | Analyst: | | pH: | 0255 | NTR | 6.8 | 6.8 | SU | | | | | | | | | | | |
| | | Time: | | Temp.: | | | | | °C °F | | | | | | | | | | | |
| | | 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*
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