

**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY  
MONTHLY MONITORING REPORT FOR DECENTRALIZED WASTEWATER TREATMENT FACILITIES VIA DRIP IRRIGATION**

|  |
|--|
| <b>PERMITTEE NAME</b><br>City of Cave Springs                  |
| <b>PERMITTEE ADDRESS</b><br>PO Box 36<br>Cave Springs AR 72718 |

|   |
|---|
| <b>FACILITY NAME (IF DIFFERENT)</b><br>Plant #2 |
| <b>FACILITY ADDRESS</b><br>498 Pebble Beach     |

|                               |
|-------------------------------|
| <b>PERMIT NO</b><br>4893-WR-2 |
| <b>AFIN NO</b><br>04-01642    |

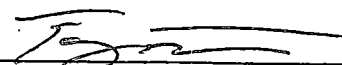
MAKE ADDITIONAL COPIES OF THIS FORM FOR FUTURE USE. SUBMIT LAB ANALYSES WITH THIS FORM.

|  |               |
|--|---------------|
| <b>WASTEWATER EFFLUENT MONITORING PERIOD</b> |               |
| MM/DD/YYYY                                   | MM/DD/YYYY    |
| FROM 12/01/2016                              | TO 12/31/2016 |

**TREATED WASTEWATER EFFLUENT SAMPLING**

| PARAMETER  | PERMIT REQUIREMENT | SAMPLE MEASUREMENT | UNITS     | FREQUENCY OF ANALYSIS | SAMPLE TYPE |            |
|--|--------------------|--------------------|-----------|-----------------------|-------------|------------|
| PHOSPHOROUS, TOTAL (AS P) GROSS VALUE<br>EFFLUENT  | *****              | 6.9                | MG/L      | ONCE/MONTH            | GRAB        |            |
| CBOD, 5-DAY (20 DEG. C) EFFLUENT GROSS VALUE   | _____              | 4.3                | MG/L      | ONCE/MONTH            | GRAB        |            |
| PH EFFLUENT GROSS VALUE  | 6 to 9             | 6.7                | S.U.      | ONCE/MONTH            | GRAB        |            |
| SOLIDS, TOTAL SUSPENDED EFFLUENT GROSS VALUE   | _____              | 5.5                | MG/L      | ONCE/MONTH            | GRAB        |            |
| COLIFORM, FECAL GENERAL EFFLUENT GROSS VALUE   | _____              | 358                | N/100 ML  | ONCE/MONTH            | GRAB        |            |
| NITROGEN, TOTAL KJELDAHL (AS TKN) EFFLUENT GROSS VALUE                                       | *****              | 23.52              | MG/L      | ONCE/MONTH            | GRAB        |            |
| NITROGEN, AMMONIA TOTAL (AS NH <sub>3</sub> N) EFFLUENT GROSS VALUE                          | *****              | 13.0               | MG/L      | ONCE/MONTH            | GRAB        |            |
| NITROGEN, NITRATE + NITRITE (AS NO <sub>3</sub> N + NO <sub>2</sub> -N) EFFLUENT GROSS VALUE | *****              | 47.033             | MG/L      | ONCE/MONTH            | GRAB        |            |
| PLANT AVAILABLE NITROGEN (AS PAN) CALCULATED VALUE   |                    | 63.2               | MG/L      | ONCE/MONTH            | GRAB        |            |
| FLOW, THRU CONDUIT OR TREATMENT UNIT EFFLUENT GROSS VALUE                                    | *****              | MONTHLY TOTAL      | DAILY MAX | MGD                   | ONCE/MONTH  | TOTAL FLOW |
|  |                    | 1.77               | .069      |                       |             |            |

|   |   |
|---|---|
| NAME/TITLE PRINCIPAL EXECUTIVE OFFICER<br>Tony Merworth<br>water/sewer superintendent | 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. |
| TYPED OR PRINTED  |   |

|   |              |            |
|---|--------------|------------|
| <br>SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT | TELEPHONE    | DATE       |
|   | 479 295-3013 | 01/03/2017 |
| AREA CODE   | NUMBER       | MM/DD/YYYY |

COMMENTS AND EXPLANATION OF VIOLATIONS (Reference all attachments here)  
 All reads were lost for 12/1/2016 thru 12/15/2016 did an average for those dates. Please call if any questions may arise.

# Environmental Services Company, Inc.

Corporate Office  
 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: 1612020107                      | Sample Date : 12/06/16             | Collected By: AU |
| Customer Name : CAVE SPRINGS, CITY OF OUTFALL 2 | Sample Time : 1110                 | Delivery By : AU |
| Customer/Permit No. : 2379 / 4893-WR-2 002      | Sample Type : GRAB                 | Work Order :     |
| Report Date : 12/14/16                          | Sample From : EFFLUENT DIVERTER BX | Purchase Order : |

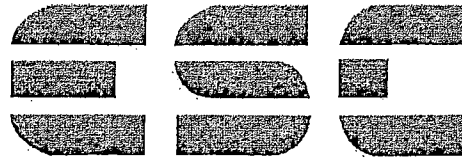
| <u>Laboratory Analysis</u> |             |           |                           |              |                 |                    | <u>Quality Assurance</u> |                 |
|----------------------------|-------------|-----------|---------------------------|--------------|-----------------|--------------------|--------------------------|-----------------|
| <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>    |
| 12/08                      | 1300        | TSB       | Ammonia Nitrogen          | 13.0 mg/L    |                 | SM 1997 4500-NH3 F | 0.00                     | 100.8 *         |
| 12/13                      | 0820        | AEU       | Kjeldahl Nitrogen Total   | 23.52 mg/L   |                 | SM 1997 4500-NorgB | 3.92                     | 91.1 *          |
| 12/08                      | 1500        | TSB       | Nitrate Nitrogen          | 46.60 mg/L   |                 | SM 2000 4500-NO3 E | 0.75                     | 99.3 *          |
| 12/08                      | 1400        | TSB       | Nitrite Nitrogen          | 0.433 mg/L   |                 | SM 2000 4500 NO2 B | 6.33                     | 96.0 *          |
| 12/06                      | 1116        | AEU       | pH                        | 6.7 S.U.     |                 | SM 2000 4500-H+ B  | 0.00                     | N/A *           |
| 12/09                      | 0800        | TSB       | Phosphorous, Total (as P) | 6.9 mg/L     |                 | EPA 365.3          | 3.39                     | 101.5 *         |
| 12/13                      | 1000        | AEU       | Solids, Total Suspended   | 5.5 mg/L     |                 | SM 1997 2540 D     | 0.00                     | N/A *           |
| 12/06                      | 1340        | JCB       | Coliform, Fecal           | 358 /100ml   |                 | SM 9222 D 1997     | 66.67                    | N/A *           |
| 12/07                      | 1400        | TSB       | BOD, Carbonaceous         | 4.3 mg/L     |                 | SM 2001 5210 B     | 1.70                     | 104.2 *         |
| 12/09                      | 0830        | JCB       | Solids, % Total by mass   | 0.056 %      |                 | SM 1997 2540 G     | 2.60                     | N/A *           |
| 12/14                      | 1850        | AEU       | Nitrogen, Plant Available | 63.2 mg/L    |                 | SM 1997 4500-N     | 0.00                     | 0.0 *           |

\* 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 Richard Brown  
 Environmental Services Co., Inc.

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 #:                                 |        |                     |        |  |         |   |                    |                                  |                                      |                         |  |  |  |
| Address:                                      |               | PO BOX 5             |      | Purchase Order #:                                 |        |                     |        |  |         |   |                    |                                  |                                      |                         |  |  |  |
|   |               | Cave Springs 72718   |      | Sampler Name(s):                                  |        | Amber Underwood     |        |  |         |   |                    |                                  |                                      |                         |  |  |  |
| Telephone:                                    |               | 479 248-1040         |      | and Signature(s):                                 |        | <i>[Signature]</i>  |        |  |         |   |                    |                                  |                                      |                         |  |  |  |
| FAX:  |               |                      |      |   |        |                     |        |  |         |   |                    |                                  |                                      |                         |  |  |  |
| ESC Client Number:                            |               | 2379                 |      |   |        |                     |        |  |         |   |                    |                                  |                                      |                         |  |  |  |
| Sample Identification                         |               | Sample Collection    |      |   |        | Sample Containers   |        |  |         | pH(23)                                      | Fecal Coliform(43) | CBOD(70), TSS(28), NO2(19)       | NH3(15.A), P(25), TKN(16.A), NO3(18) | PAN(99.99), %Solids(82) |  |  |  |
| Identification                                | ESC Control # | Date                 | Time | Type  | Matrix | Type                | Volume | Preservative                           | #       |   |                    |                                  |                                      |                         |  |  |  |
| Effluent Diverter Box                         | 1103020107    | 12/6/16              | 1110 | Grab  | Water  | Teflon              | 150 ml | none                                   | 1       | x   |                    |                                  |                                      |                         |  |  |  |
|   |               |                      |      | Grab  | Water  | whirlpak            | 300 ml | none/ice                               | 1       |   | x                  |                                  |                                      |                         |  |  |  |
|   |               |                      |      | Grab  | Water  | Plastic             | 1 qt   | none/ice                               | 1       |   |                    | x                                |                                      | x                       |  |  |  |
|   |               |                      |      | Grab  | Water  | Plastic             | 8 oz   | H <sub>2</sub> SO <sub>4</sub> , 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"/> |                                      |                         |  |  |  |
| <i>[Signature]</i> Amber Underwood            |               | 12/6/16              | 1246 | <i>[Signature]</i> John Byrd                      |        | 12/6/16             | 1246   | Turnaround:                            |         | Regular <input checked="" type="checkbox"/> |                    | Special <input type="checkbox"/> |                                      |                         |  |  |  |
| Relinquished By: (Signature and Printed Name) |               | Date                 | Time | Received By: (Signature and Printed Name)         |        | Date                | Time   | Were samples properly preserved:       |         | Yes <input checked="" type="checkbox"/>     |                    | No <input type="checkbox"/>      |                                      |                         |  |  |  |
| Relinquished By: (Signature and Printed Name) |               | Date                 | Time | Received for Lab By: (Signature and Printed Name) |        | Date                | Time   |  |         |   |                    |                                  |                                      |                         |  |  |  |
| Comments:                                     |               |                      |      | FLOW DATA   |        | Field Test          |        | Time                                   | Analyst | Result                                      | Result             | Units                            |                                      |                         |  |  |  |
|   |               |                      |      | Analyst:  |        | pH:                 |        | 1110                                   | AEU     | 6.7   | 6.7                | °C                               |                                      |                         |  |  |  |
|   |               |                      |      | Time:   |        | Temp.:              |        | 1110                                   | AEU     | 13.0  | 13.0               | °F                               |                                      |                         |  |  |  |
|   |               |                      |      | Reading:  |        | DO:                 |        |  |         |   |                    |                                  |                                      |                         |  |  |  |
|   |               |                      |      | Units:  |        | Debris:             |        |  |         |   |                    |                                  |                                      |                         |  |  |  |
| Cool all samples to 6 degrees C.              |               |                      |      |   |        | Chlorinated? Yes No |        |  |         | This Document is Page 1 of 1                |                    |                                  |                                      |                         |  |  |  |

**CAVE SPRINGS WATER DEPARTMENT**

**P.O. Box 5**

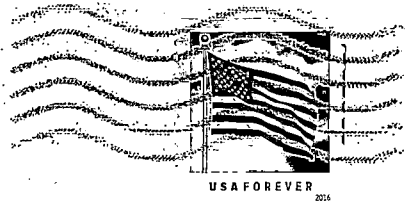
**CAVE SPRINGS, ARKANSAS 72718**

**RETURN SERVICE REQUESTED**

NORTHWEST AR P&DF

AR 727 1 T

04 JAN 2017 PM



ADEQ  
Enforcement Section/Water Div.  
5301 Northshore Drive  
North Little Rock, AR 72118

72118+5317

