

**Cotter, Amy**

---

**From:** Reiber, Loretta  
**Sent:** Monday, April 07, 2008 9:57 AM  
**To:** Cotter, Amy  
**Subject:** allcity

**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY**

**MEMORANDUM**

**TO:** Amy Beck, Engineer  
**FROM:** Loretta Reiber, P.E., Engineer  
**DATE:** April 7, 2008  
**SUBJECT:** Update Effluent Limits

-----  
Name of facility: City of Mountain View

NPDES Permit No. AR0020117

NPDES Permit Expiration Date:

Are there any changes from previously permit? Yes x – outfall coordinates corrected  
NO

The following **Effluent Limits** and the **receiving stream** exist in WQMP, please confirm the accuracy:

**Effluent Limits:** 10/15/5/6 (CBOD5/TSS/NH3-N/DO) (May-Oct.)

10/15/10/7 (CBOD5/TSS/NH3-N/DO) (Nov.-Apr.)

Q = 0.73 MGD

**The receiving stream is:** Hughes Creek, then to Lick Fork Creek, then to South Sylamore Creek, then to the White River (Hughes Creek is a losing stream according to current permit)

**Outfall Coordinates:** Latitude: 35° 51' 57.32" Longitude: 92° 08' 42.54"

**County:** Stone

**Planning Segment:** 4F

**Previous permit 7Q10:** 

---

**From:** Amy Beck  
**TO:** Loretta Reiber, P.E.

7Q10 = 0 cfs  
 less than 10 square miles X  
 more than 10 square miles \_\_\_\_\_

May affect water of another State \_\_\_\_\_ Yes X No

Justification *Renew as is for DO limits. See attached for NH3-N toxicity.*

**Ammonia Calculations**

Facility Name Mountain View  
 Major or Minor minor  
 Permit Number AR0020117  
 Receiving Stream Hughes Creek  
 7Q10, cfs 0  
 0.25/0.67 multiplier 0.67  
 Qb, cfs 0.00  
 Qe, MGD 0.73  
 Qe, cfs 1.13  
 Cb, mg/l 0

Ecoregion or River name Ozark Highlands  
 Watershed area (mi<sup>2</sup>) 1  
 Regulation No. 2 Chronic Toxicity Criteria (Instream Concentration)  
 AML, mg/l 3.9  
 DML, mg/l 3.9  
 April 3.9  
 May - October 3.9  
 November - March 10.3

Allowable Effluent Conc., mg/l

$(Q_e * C_e) + (Q_b * C_b) = (Q_e + Q_b) * IWC$

Qe Effluent Flow  
 Ce Allowable Effluent Concentration  
 Qb % of Low Flow of Receiving Stream  
 Cb Background Concentration  
 IWC Instream Waste Concentration Chronic Toxicity Criteria

Allowable Effluent Conc. (Ce), mg/l

Ce =  $(IWC (Q_e + Q_b) - C_b \times Q_b) / Q_e$   
 Monthly Avg., mg/l  
 April 3.90  
 May - October 3.90  
 November - March 10.30  
 Daily Max, mg/l  
 3.90  
 3.90  
 10.30

**Chronic Toxicity Criteria vs. D.O. Model Limits**

Monthly Average, mg/l D.O. limit  
 Toxicity limit 3.90 10  
 April ~~3.90~~ 5  
 May - October 10.30 10  
 November - March

**Permit Limits**

Daily Maximum, mg/l D.O. limit  
 Toxicity limit 3.90 15  
 3.90 7.5  
 10.30 15

**Permit Limits**

3.90  
~~3.90~~  
 10.30

### Model Input Data

Facility Name: Mountain View

Permit Number: AR0020117 PN Date: \_\_\_\_\_

Lat./Long. 35° 51' 57.32" , 92° 8' 42.54"

W.S. Drainage Area (mi<sup>2</sup>) 410 Ecoregion: 04

|                       | Critical Season (May-Oct.) | Primary Season (Nov.-Apr.) |
|-----------------------|----------------------------|----------------------------|
| D.O. Standard (mg/L)  | <del>5</del> <b>5*</b>     | 6                          |
| Temp. Standard (°C)   | 29                         | 22                         |
| Q stream (cfs)        | Φ                          |                            |
| Velocity stream (fps) |                            |                            |
| Depth stream (ft)     |                            |                            |

\* flow > 1 cfs - must meet next standard

Q<sub>DESIGN</sub> (MGD): 0.73 Planning Seg. 4F

Receiving Stream: Hughes CK / Lick Fork Cr / S. Sylamore CK

HUC + reach code: 11010004+010 Permit type: municipal

Other Facilities none

|    | <u>Name</u> | <u>Permit#</u> | <u>Coord.</u> | <u>Seg?</u> | <u>PN</u> |
|----|-------------|----------------|---------------|-------------|-----------|
| 1. |             |                |               |             |           |
| 2. |             |                |               |             |           |
| 3. |             |                |               |             |           |
| 4. |             |                |               |             |           |

Engineer: [Signature]  
Date: 4/9/08