

Henderson, Katie

From: Torrence, Rufus
Sent: Monday, April 09, 2012 10:34 AM
To: Dennis Brunson
Cc: Henderson, Katie
Subject: AFIN 26-00145 AR0033880 City of Hot Springs Pretreatment Streamlining Modification
Attachments: HTSP TBLL2008.xls



April 6, 2012

Dennis R. Brunson, Pretreatment Coordinator
City of Hot Springs
P. O. Box 700
Hot Springs, Arkansas 71901

Re: City of Hot Springs Pretreatment Streamlining Modification
(Permit No. AR0033880 AFIN 26-00145 & AR0050148 AFIN 26-00444)

Dear Mr. Brunson:

The Department has reviewed the Hot Springs' program modification which you hand-delivered on 4-2-2012. The Department has four required updates to the submitted modification.

- (1) The modification did not contain any "labeled" appendices. The 2-25-2002 program narrative had twelve (12) appendices. The City must add tabbed sheets to the narrative at the beginning of each appendix and add a Table of Appendices below the Table of Contents to show the location of the appendices. For example,

Table of Appendices

Appendix A: Attorney Statement
Appendix B: Pretreatment Ordinance
Appendix C: Enforcement Response Plan
Appendix D: Funding Resolution

- (2) Appendix L in the old narrative contained the Technically Based Local Limits (TBLL). The City must submit a TBLL development. Referring to the Department's audit report dated 9-23-11, find in Section B.2:

2) Under **40 CFR 403.5(c)(1)**, “Each POTW developing a POTW Pretreatment Program...shall develop and enforce specific limits...Each POTW with an approved pretreatment program shall continue to develop these limits as necessary and effectively enforce such limits.”

The current approved pretreatment program narrative has a local limit development in Attachment L. The City adopted these local limits in Ordinance #4577 and codified the limits in Hot Springs Code; Section 9-3-43.4 (see Attachment K-1/1). These limits are currently effective and enforceable.

At a minimum the City must update the current local limits in conjunction with updating the program narrative to comply with the recent Streamlining revisions to 40 CFR 403. The City is currently applying local limits in some SIU permits (see Attachments B2-2/2 & B3-2/2) which do not appear to have a firm technical basis and may not be enforceable.

The Department recommends that the City submit a second notebook (or the development can be Appendix E) for the local limit development. The language in Section 10.0 on page 9 in the narrative states that “Technically Based Local Limits (TBLLs) developed from time to time by the Control Authority”. The TBLL notebook may simply contain the most recent TBLL Excel workbook which the Department provides to the City from time to time. The most recent TBLL workbook is attached. The City should also include a description on mass allocation if the City plans to develop permit limits for its SIUs. For example, the MAIL (Maximum Allowable Industrial Loading) for Zinc is 33.4 lbs/day. The City may use the Contributory Method (allocating a portion of the MAIL to SIUs which are capable of discharging zinc above domestic levels). The City may allocate the zinc MAIL at its discretion. If the City wishes to give each zinc contributing SIU (Triumph, Triumph Airborne & Alliance Rubber) an equal share, then Triumph’s Zinc local limit would be:

Triumph (Chem-Fab) Average Flow = 0.75 MGD => $(33.4/3)/(8.34*0.75) = 1.78 \text{ mg/l}$.

Therefore, the zinc permit limits for Triumph would be: Ave Monthly = 1.48 mg/l
Daily Maximum = 1.78 mg/l

Note that the local limit for zinc is more stringent than the 40 CFR 433 Daily Maximum Limit (2.61 mg/l).

(3) The Attorney letter is missing language from:

40 CFR 403.8(f)(1)(iii)(B)(6): Requirement to control Slug Discharges
40 CFR 403.8(f)(1)(iv)(A): Requirement for compliance schedules

Since Ordinance #5837 (Article IV) contains both these requirements, the Department will accept the Attorney’s letter as submitted unless Mr. Albright has concerns. Furthermore, Ordinance #5837 repealed Ordinance #4577. However, the codes [Section 9-3-41(c)] still refer to Ordinance #4577.

Please check with Mr. Albright and confirm that he does not wish to update or correct his letter. If he has not responded in writing by May 1, 2012, the Department will proceed with his letter dated March 28, 2012.

(4) Finally, there are typos:

In the Table of Contents: “7.0 SLUG CONTROL EVALUATION”
“15.0 CONFIDENTIAL INFORMATION”

On page 6 in Section 6.0: “TBILL” should be “TBLL”

On page 6 in Section 7.0: Replace the word “Sludge” with “Slug” in both paragraphs, hence,
“All Significant Users

(SIUs) are required to be evaluated for the need to implement a Slug Control Plan....

On page 7 in Section 9.0: “EVALUATION OF LEGAL AUTHORITY...”

On the Ordinance Cover Page: “...Ordinance 5837 under Article IV of Chapter 3 in Title 9 of the City’s...”.

All updates are due by **May 1, 2012**.

The Department appreciates the City’s continued efforts in updating the modification. If you have any questions or concerns, please contact the Department at (501) 682-0626 or by email at torrence@adeq.state.ar.us .

Sincerely,



Rufus Torrence, Pretreatment Engineer
Water Division

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
5301 NORTHSHORE DRIVE • NORTH LITTLE ROCK, ARKANSAS 72118 5317 • TELEPHONE 501 687-0744 / FAX 501 687 0880
www.adeq.state.ar.us

CALCULATIONS OF ARKANSAS WATER QUALITY-BASED EFFLUENT LIMITATIONS

For an Arkansas Lake

(Reserved)

STEP 1: INPUT TWO LETTER CODE FOR ECOREGION (Use Code at Right)
Basin Name

N/A
Lake Catherine

FACILITY

Permittee
NPDES Permit No.
Outfall No. 002 **(Discharge to the Arkansas River)**
Plant Ave Flow (MGD) from HTSP 2008 Annual Report
SIUs Ave Flow (MGD) from HTSP 08 report at 2.3% of Ave
Domestic Flow (MGD)
Plant Design Flow (MGD)
Plant Design Flow (cfs)

Hot Springs
AR0033880
001
11.59
0.27
11.32
12.00
18.54

RECEIVING STREAM

Is this a large river? (see list at right)(enter "1" if yes, "0" if no; make entry as a number)
Name of Receiving Stream:
Waterbody Segment Code No.
Is this a lake or reservoir? (enter '1' if yes, '0' = no; make entry as a number)
Is seasonal critical flow applicable (1=yes, 0=no); see Reg 2 page 1-3 for details.
Is Jet Stream model applicable (1=yes,0=no); see CPP attmt V section IV.
(Reserved)
(Reserved) (Reserved)
(Reserved)
(Reserved)
(Reserved)

0
Lake Catherine
2F
1
0
?
?
?
(Reserved)
(Reserved)
(Reserved)
2.00
28.00
20.00 (Reserved)
3384.00 (Reserved (Reserved))
No
6.89
0.67
0.33
1.00
N/A
1.55
3.11

TSS (mg/l)
Hardness (mg/l)
Enter 7Q10 (cfs) (Reserved)
Long Term Ave / Harmonic Mean Flow (cfs)
Using Diffusers (Yes/No)
pH (Avg)
Percent (%) of 7Q10 for Chronic Criteria
Percent (%) of 7Q10 for Acute Criteria
Water Effect Ration (WER)
EPA Statistical Factor for Data (Not Applicable to these calculations)
Ave Monthly Limit LTA Multiplier (Ref: page 103 TSD for WQ-Based Toxics Control)
Max Daily Limit LTA Multiplier (Ref: " " " ")

Codes & TSS for Ecoregions and Large Rivers

Ouachita Mts. Eco (OM) = 2.0 mg/l	Arkansas (Ft. Smith to Dardanelle Darr	12.0 mg/l
Ozark Highlands Eco (OH) = 2.5 mg/l	Arkansas (Dardanelle Dam to Terry L&	10.5 mg/l
Boston Mts. Eco (BM) = 1.3 mg/l	Arkansas (Terry L&D to L&D No. 5)	8.3 mg/l
Ark River Valley Eco (AV) = 3.0 mg/l	Arkansas (L&D No. 5 to Mouth)	9.0 mg/l
Gulf Coastal Eco (GC) = 5.5 mg/l	White (Above Beaver Lake)	2.5 mg/l
Delta Ecoregion (DL) = 8.0 mg/l	White (Below Bull Shoals to Black Riv)	3.3 mg/l
	White (From Black River to Mouth)	18.5 mg/l
	St. Francis River	18.0 mg/l
	Ouachita (Above Caddo River)	2.0 mg/l
	Ouachita (Below Caddo River)	5.5 mg/l
	Red River	33.0 mg/l

Total Hardness for:

Arkansas River = 125 mg/l	Red River = 211 mg/l
Ouachita River = 28 mg/l	St. Francis River = 103 mg/l
White River = 116 mg/l	
Gulf Coastal = 31 mg/l	Ouachita Mount = 31 mg/l
Ozark Highlands = 148 mg/l	Ark River Valley = 25 mg/l
Boston Mount = 25 mg/l	Delta = 81 mg/l

Large Rivers

Mississippi River, Arkansas River, Red River
White (Below confluence with Black River)
Ouachita (Below confluence with Little Miss. River)

For industrial and federal facility, use the highest monthly average flow for the past 24 months. For POTWs, use the design flow.

#VALUE! => No violation or Not Applicable

WQ Limits for the Hot Springs

Aquatic Life
AML, ug/l

Cadmium Total	3.65
Chromium (hex)	18.82
Copper Total	24.91
Lead Total	4.52
Mercury Total	0.02
Nickel Total	371.64
Selenium Total	9.61
Silver Total	1.55
Zinc Total	241.04
Chromium (Tri)	554.92
Cyanide Total	10.00
Beryllium Total	10.19
Arsenic	576.72

Hot Springs Maximum Allowable Headworks Loading

Pollutant	% Rem***	Water Quality mg/l	Water Quality* lbs/day	Sludge mg/kg	Sludge+ lbs/day	Inhibition** mg/l	Inhibition++ lbs/day	MAHL lbs/day	MAHC mg/l	Domestic lbs/day	Allocation for %SF lbs/day^	MAIL lbs/day	Max Inf Exceedec MAHC	Max Effluent vs WQS(mg/l)
Cadmium Total	67	0.0036	1.068	85	0.866	1.00	96.66	0.866	0.00896	0.28	0.65	0.366	No	No
Copper Total	81	0.0249	12.673	4300	36.244	1.00	96.66	12.673	0.13111	5.73	9.50	3.772	No	No
Lead Total	61	0.0045	1.120	840	9.402	1.00	96.66	1.120	0.01159	4.63	0.84	0.000	No	No
Mercury Total	60	0.00002	0.006	57	0.649	0.10	9.67	0.006	0.00006	0.0283	0.0042	0.000	No	No
Nickel Total	42	0.3716	61.936	420	6.827	1.00	96.66	6.827	0.07063	1.98	5.12	3.137	No	No
Selenium Total	50	0.0096	1.858	100	1.365	0.20	19.33	1.365	0.01413	0.47	1.02	0.552	No	No
Silver Total	75	0.0016	0.600	0	0.000	0.25	24.165	0.600	0.00620	0.47	0.45	0.000	No	No
Zinc Total	65	0.2410	66.568	7500	78.778	0.800	77.33	66.568	0.68868	16.53	49.93	33.400	No	No
Chromium Total	82	0.5549	297.994	3000	24.978	1.00	96.661	24.978	0.25841	0.01	18.73	18.725	No	No
Cyanide Total	69	0.0100	3.117	0	0.000	0.10	9.666	3.117	0.03225	3.87	2.34	0.000	No	No
Arsenic	45	0.5767	101.357	75	1.138	0.10	9.666	1.138	0.01177	0.28	0.85	0.570	No	No
Molybdenum	50	0.0000	0.000	75	1.024	0.20	19.332	1.024	0.01059	#####	0.77	0.000	No	No
Beryllium	50	0.010190	1.970	0	0.000	0.10	9.6661	1.970	0.02038	#####	1.48	0.000	No	No

Dry tons/day of sludge**** 3.41 Safety Factor 0.25

* lbs/day = mg/l * 8.34 * average flow / (1-%Rem)

** Page 3-44 of EPA 833B87202 Be est @ 0.10 mg/l and Zinc Level from 04-19-2005 Inf analysis

+ lbs/day = (dry tons/day * 0.002 * critria(mg/kg)) / % Rem

++ lbs/day = mg/l * Flow * 8.34

^ lbs/day = (1 - SF) * MAHL

MAIL = Maximum allowable industrial loading = Allocation for % SF - Domestic

*** Page 3-56 EPA 833B87202, Be & Mo est @ 50

****Dry tons/day of sludge from last audit report dated 9-24-08 on page 3 at (1246 dt/year)/365 days/yr = 3.41 dt/day

Effluent

Date	Cadmium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Chromium	Cyanide	Arsenic	Molydenur	Beryllium
01-31-06		0.0060						0.0230					
05-16-06		0.0060						0.0220					
08-08-06		0.0068						0.0390					
10-31-06		0.0064						0.0370					
02-27-07		0.0060						0.0200					
05-08-07		0.0061						0.0460					
08-29-07		0.0110						0.0360					
11-13-07		0.0140						0.0470					

Detection Level	0.0005	0.0005	0.0005	0.000005	0.0005	0.0050	0.0005	0.0200	0.0100	0.0100	0.0005	0.0100	0.0005
Average	#DIV/0!	0.00779	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.03375	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Maximum	0.0000	0.0140	0.0000	0.0000	0.0000	0.0000	0.0000	0.0470	0.0000	0.0000	0.0000	0.0000	0.0000
All Concs > DL (Yes/No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	#REF!	Yes	Yes	Yes	Yes	Yes
% Rem													
	Cadmium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Chromium	Cyanide	Arsenic	Molydenur	Beryllium
Average	#DIV/0!	81	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	65	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
EPA % REM	67	86	61	60	42	50	75	79	82	69	45	50	50

Domestic Calculations fo Hot Springs

Pollutants	EPA, P3-59* mg/l	Avg Reported mg/l	Loading lbs/day
Cadmium Total	0.0030	0.00000	0.28
Copper Total	0.0607	0.00000	5.73
Lead Total	0.0490	0.00000	4.63
Mercury Total	0.0003	0.00000	0.0283
Nickel Total	0.0210	0.00000	1.98
Selenium Total	0.0050	0.00000	0.47
Silver Total	0.0050	0.00000	0.47
Zinc Total	0.1750	0.00000	16.53
Chromium Total	0.0500	0.00000	0.01
Cyanide Total	0.0410	0.00000	3.87
Arsenic	0.0030	0.00000	0.28
Molybdenum	#####	0.00000	#####
Beryllium	999999.00	0.00000	#####

Date	Cadmium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc	Chromium	Cyanide	Arsenic	Molydenum	Beryllium

Detection Level (DL)	0.0005	0.0005	0.0005	0.000005	0.0005	0.0050	0.0005	0.0200	0.0100	0.0100	0.0005	0.0100	0.0005
Average	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
All Concs > DL (Yes/No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

*EPA Page 3-59 of 833-B87-202 except Selenium is Detection Level at 0.005 mg/l