ADEQ
ARKANSAS
Department of Environmental Quality

AFIN: 70-00040 Permit No.: AR0000752
Date: 6/13/2017 By: L.Reiber
Project: EDCC
Sheet 1 of 2

Printed on recycled content paper
ADEQ Engineer/Geologist Grid Pad - revised 2003

$IWC = [(Q_{007} * C_{007}) + (Q_{006} * C_{006}) + (Q_b * C_b)] / (Q_{007} + Q_{006} + Q_b)$

move IWC < WQS to separate outfall

Cadmium IWC

only info @ 006 highest point = 2 ug/l
assume no flow @ 007 for worst case scenario

$IWC = [(1 cfs \cdot 2 ug/l) + ((0.15 cfs \cdot 0.07) \cdot 0 ug/l)] / (1 + (0.15 * 0.0$

$IWC = (2) / (1.1005) = 1.82 ug/l = WQS$

since all background to effluent flow ratios in study were higher than 0.15:1 & highest test result was used, no RP for Cd is shown + permit requirements are not needed

ADEQ
ARKANSAS
Department of Environmental Quality

AFIN: 70-00040 Permit No.: AR0000752
Date: 6/13/2017 By: L. Reiber
Project: EDCC
Sheet 2 of 2

Printed on recycled content paper
ADEQ Engineer/Geologist Grid Pad - revised 2002

Zinc IWC + Lead IWC

use ratio of 1:1 for both outfalls

Pb 72.7	C_{Q007}	= 767 ug/l (Zn)	Q_{Q007} = 1 cfs
111	C_{Q006}	= 710 ug/l	Q_{Q006} = 1 cfs
0	C_b =	0 ug/l	Q_b = 1 cfs

Zn WQS = 119.50 ug/l
Pb WQS = 3.40 ug/l

$$IWC = [(1\text{ cfs} * 767\text{ ug/l}) + (1\text{ cfs} * 710\text{ ug/l}) + ((1 * 0.67) * 0\text{ ug/l})] / (1\text{ cfs} + 1\text{ cfs} + (0.67 * 1\text{ cfs}))$$

$$IWC = [(767) + (710) + (0)] / (2.67) = 553.18\text{ ug/l}$$

since several reported ratios were > WQS below 1:1, RP is demonstrated & limits are required

Lead IWC

$$IWC = [(1 \cdot 72.7) + (1 \cdot 111) + ((1 \cdot 0.67) \cdot 0)] / (1 + 1 + (1 \cdot 0.67))$$

$IWC = 68.8\text{ ug/l} > WQS$