

# MEMORANDUM

To H.E.P., R.J.T.

Date APRIL 26, 1976

From C.Q.O.

Ref.

Subject ARSENIC SUPPRESSION

Abstract: a further study into the use of  $\text{FeCl}_3$  and  $\text{NH}_4\text{OH}$  as a suppressant in the CPW.

Procedure: 1000 ml samples of CPW were treated with varying amounts of  $\text{FeCl}_3$  and a constant amount of  $\text{NH}_4\text{OH}$ .

## Data:

SD	Amount $\text{FeCl}_3$ (g.)	Amount $\text{NH}_4\text{OH}$ (ml)	pH	Fe	As
CPW	0	0	8.0	64	1140
1	15	0	6.3	21.8	55
2	20	0	5.5	170	38
3	25	0	4.4	440	49
1A	15	10	7.3	1.0	49
2A	20	10	7.0	1.5	29
3A	25	10	7.0	.6	17

Note: 15 g  $\text{FeCl}_3$  3100 ppm Fe  
20 g  $\text{FeCl}_3$  4132 ppm Fe  
25 g  $\text{FeCl}_3$  5165 ppm Fe

Conclusions as shown in the above data the arsenic suppresses very readily  
after the addition of  $\text{FeCl}_3$  to the CPW a vast amount of  $\text{HCN}$  gas was noted with the use of a  $\text{HCN}$  gas Drager tube. Therefore if such a method of suppress<sup>ion</sup> was to be employed it would have to be done in a closed system.