

MEMORANDUM

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

Date April 1, 1976

From C.Q.O.

Ref.

Subject ARSENIC SUPPRESSION

Abstract: to establish the effects of FeCl_3 and NH_4OH on D.T.B.

Procedure: samples of unfiltered D.T.B. (sample sizes 1000 ml) were subjected to varying amounts of FeCl_3 (1g, 2g and 3g) and a constant amount of NH_4OH (8ml)

Data

SD	Amount FeCl_3 (g)	Amount NH_4OH (ml)	pH	ppm Fe	ppm As
DTB	0	0	8.1	41.0	1410
1	1	0	8.0	37.0	1000
2	2	0	7.7	20.0	750
3	3	0	7.6	10.0	640
1A	1	8	9.4	35.0	1160
2A	2	8	9.1	37.4	920
3A	3	8	8.8	29.0	680

NB 1g FeCl_3 = 206.6 ppm Fe
2g FeCl_3 = 413.2 ppm Fe
3g FeCl_3 = 619.8 ppm Fe

Conclusions: as

as noted in the data the consumption of the iron is quite large, also the arsenic removed is quite large. (i.e. 210 ppm Fe to 410 ppm As removed; 434 ppm Fe to 660 ppm As removed; 651 ppm Fe to 770 ppm As removed). But as can be seen the ratio of Fe/As, it is not yet 5:1, where if brought up to that ratio (5:1) it may remove the arsenic, Therefore, more tests will be run.