

MEMORANDUM

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

Date August 31, 1976

From C.Q.O.

Ref.

Subject ARSENIC SUPPRESSION.

Abstract: to further test the use of a KOH and KNO_3 in solution as an arsenic suppressant.

Procedure: samples from thickeners 6, 11 and 13 were combined in ratios of 70/125, 35/125, 20/125 respectively and the combined sample volumes were 1000 ml. To 4 combined samples 5, 10, 15 and 20 mls of a 50% KOH solution saturated with KNO_3 was added.

DATA:

	pH	p.p.m. Fe	p.p.m. As
#6 Thickener	7.4	.3	52.5
#11 Thickener	6.2	1.57	130.0
#13 Thickener	6.6	1.85	1280
Combination	6.5	2.1	325
Combination (theo)	?	.87	270.6

SD	amt. 50% KCl+ KNO_3 (sat) (ml)	pH	p.p.m. Fe	p.p.m. As
1	5	12.0	ND	63
2	10	12.3	ND	51
3	15	12.4	ND	56
4	20	12.7	.25	62

Conclusions: with the high pH values occurring in the above test it would indicate that the high alkalinity would suppress the arsenic. Therefore, more tests without the KNO_3 present should be done to see if the reasoning is viable and also to test with FeCl_3 as a substitution for the FeCl_3 and NH_4OH method.