

MEMORANDUM

To H. E. Pawson, W. L. Richardson.

Date April 12, 1972.

From M. E. Lane.

Ref. Memo dated April 7, 1972.

Subject USE OF FERROUS SULPHATE IN WASTE TREATMENT.

(ARSENIC)

(D.W.T.O.).

All tests were carried out on #11 Wash Thickener Overflow solution
1st CALC. WASH

<u>Sample No.</u>	<u>Composition</u>	<u>pH after 15 Mins.</u>	<u>pH after 24 Hrs.</u>	<u>As ppm</u>	<u>% As Reduction</u>
1	D. W. T. O.	6.00	3.75	74.4	-
2	D. W. T. O. + 0.5 lb. /ton Lime	6.85	5.60	11.4	84.7
3	D. W. T. O. + 1.0 lb. /ton Lime	9.85	8.20	8.9	88.1
4	D. W. T. O. + 0.5 lb. /ton Lime + 0.5 lb. /ton FeSO_4	7.00	4.25	11.4	84.7
5	D. W. T. O. + 0.75 lb. /ton Lime + 0.75 lb. /ton FeSO_4	6.85	4.00	6.4	91.4
6	D. W. T. O. + 1.0 lb. /ton Lime + 1.0 lb. /ton FeSO_4	7.50	5.10	2.8	96.2
7	D. W. T. O. + 1.0 lb. /ton Lime + 0.5 lb. /ton FeSO_4	9.85	7.60	5.7	92.3

Results indicate that improved Arsenic reduction can be achieved by using Ferrous Sulphate in conjunction with lime.

Further tests will be carried out to determine the best combination of reagents. It is hoped to achieve improved reduction without increase cost.

MEL*mo's

