

To

From Arsenic Suppression (Preliminary Tests) May 20, ^{Ref} 1975

Subject

Abstract:

To determine the feasibility of physical separation of influent from #5 agitator and to treat the supernate.

Summary:

On April 23, 1975 sampling was begun on treated and untreated #5 agitator. Samples were taken daily and are still in progress except for treated #5 agitator effluent, this was stopped May 5, 1975. On May 5, 1975 the supernate from the untreated #5 agitator was decanted off and a series of tests ran. On May 13, 1975 another set of samples were ran against the May 5, 1975 samples.

Sample Procedure and Preparation

1. Initial supernate May 5, 1975 D.T.B.
2. Sample #1 + 10 lb CaO/ton soln ($\frac{1}{2}$ hr. wait)
3. Sample 2 + 10 lb. CaO/ton soln. ($\frac{1}{2}$ hr. wait)
4. Sample #3 + 10 lb. CaO/ton soln (therefore sample #1 + 30 lb CaO/ton sol)
5. Treated #8 agitator discharge
6. Untreated D.T.B. (Same as #1)
7. Added 10" of sample #5 + $\frac{1}{2}$ " of sample #6 $\frac{1}{2}$ hr wait. N.B. 20:1 ratio
8. Add 2# CaO/ton soln to sample #7 ($\frac{1}{2}$ hr wait)
9. Mixture of sample #8 (3 days later)
10. Sample of #4 (3 days later)
11. Treated #5 agitator (sample taken on May 5/stopped collection also)
12. Sample of #11 sample (3 days later)
13. Sample from treated agitator #5 on May 13/75 (sample #11 8 days later)
14. Sample from treated supernate May 13/75 (sample #4 8 days later)
15. New untreated supernate D.T.B.
16. Sample #15 (D.T.B.) treated with 30 lb CaO (May 13/75)
17. Sample #16 added to sample #4 (May 13/75)
18. New D.T.B. from sample #15 aerated with 30 lb CaO in float cell
19. New D.T.B. Sample #17 completely destroyed
20. Sample #19 hit with 30 lb. CaO

To

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Subject Arsenic Suppression Data

all samples & analysis on May 16/72

<u>Sample No.</u>	<u>pH</u>	<u>As</u>	<u>Cu</u>	<u>Ni</u>	<u>Fe</u>	<u>Zn</u>
1.	8.0	1920	508	21.8	52.0	0.09
2.	11.0	---	444	12.5	32.8	0.02
3.	11.7	2.47	400	14.0	28.4	0.05
4.	11.6	4.52	404	12.0	28.4	0.04
5.	11.7	10.0	N.D.	N.D.	0.07	0.02
6.	8.1	1900	504	20.3	52	0.09
7.	11.5	7.0	36	1.08	3.2	0.02
8.	11.6	2.3	33.6	1.06	4.0	0.02
9.	11.6	---	---	---	---	---
10.	11.6	---	---	---	---	---
11.	11.43	6.39	364	10.0	18.0	0.03
12.	9.1	---	---	---	---	---
13.	9.8	45.0	440	13.6	22.0	0.03
14.	11.7	5.37	452	13.5	30.8	0.05
15.	7.5	1600	520	21.5	48.0	0.10
16.	11.7	6.5	520	11.6	28.0	0.04
17.	11.7	8.09	416	11.5	30.0	0.05
18.	11.8	6.39	404	10.8	28.0	0.04
19.	7.6	1800	520	20.5	50.0	0.13
20.	11.5	9.5	404	11.5	26.8	0.05

Sample No.

Fee CN (#/ton Soln)

Fee CaO (#/ton soln.)

13.	.3	.1
14.	.3	3.65
16.	.2	3.6
17.	.25	3.4
18.	.2	3.1

samples 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20.