

Date: 7 September 1982

Memorandum

From: Ms. Betz, Quality Control Lab., Environmental Section, NREAB, BMaintDiv

To: Mr. Sharpe, Supervisory Ecologist, Environmental Section, NREAB, BMaintDiv

Subj: Trihalomethane Sampling for August 1982; Results of

Encl: (1) Summary of Trihalomethane Analysis for July and August 1982

1. Enclosure (1) is a summary for July and August THM sampling from the distribution system samples. In August, additional THM samples were taken from the raw water wells feeding the New River Air Station Water Treatment Plant and five THM samples were taken at different points in the treatment process. Summary of the additional samples is below.

2. Samples #220-244 were raw water wells. The results show <1ppb of total THM in all the wells. All this says is none of the wells contain enough bromine (or Chlorine) to produce any of the four THMs. The reason for the analysis was that had the bromine level been high and the organic precursors there bromoform would have showed up, and those wells could be eliminated from any further testing of analysis. If there is still interest in determining which wells have high levels of precursors, the next step would be running the potential THM test, at a cost of \$240/sample. Since the test is expensive, perhaps compositing the wells in some form could help reduce the number of samples.

3. Samples #245-248 were taken at different points in the treatment process. Sample #210 was also taken at the plant, sample #245 was taken at the start of the process, it is suppose to be raw water, it was taken before the softener. Sample #246 was taken after the softener, before recarbonation. After recarbonation there are filters and the clear well. Sample #247 was taken at the clear well pump. The next step is chlorination which sample #248 was taken after. Sample #210 was taken at the distribution pumps. The difference between sample #248 and 210 is the finish water reservoir. With chlorination before the finish water reservoir, the reservoir becomes a chlorine contact chamber (as in the sewage plants) giving the chlorine time to not only knock out bacteria but also to react with organics to form THMs. The sample locations were picked by Mr. Price, general foreman of the Water and Sewage Section.

4. The results of Samples #210, 245-248 show that the THM formation is starting in the reservoir and continuing in the distribution system. Moving chlorination to after the reservoir would reduce the contact time of the chlorine and would reduce the THMs also.

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FOR A/S FACILITIES

SUMMARY OF TRIHALOMETHANE ANALYSIS FOR JULY & AUGUST 1982

<u>Sample#s</u>	<u>System</u>	<u>July</u>	<u>August</u>	<u>Jun-Aug</u>	<u>Mar-May</u>	<u>Run. Ave(2 Qtr)</u>	<u>Comply*</u>
165-168	Tarawa Terrace	0.02	---	0.02	0.01	0.02	yes
171-175	Montford Point	0.01	---	<0.01	<0.01	<0.01	yes
176-180 210-214	New River	0.11	0.14	0.12	0.09	0.105	**
181-185	Holcomb Blvd	0.03	---	0.03	0.04	0.04	yes
186-190 215-219	Rifle Range	0.05	0.05	0.06	0.05	0.06	yes
191-195	Courthouse Bay	0.05	---	0.05	0.05	0.05	yes
196-200	Onslow Beach	0.05	---	0.06	0.05	0.06	yes
201-205	Hadnot Point	0.05	---	0.03	0.04	0.04	yes

*-Compliance is actually determined from the running annual (4 Qtr) average.

** - Results are suppose to be reported in only two significant figures. No specific instructions are given for round off with 5; if it is rounded up New River is not in compliance.

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