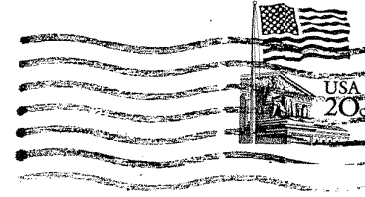


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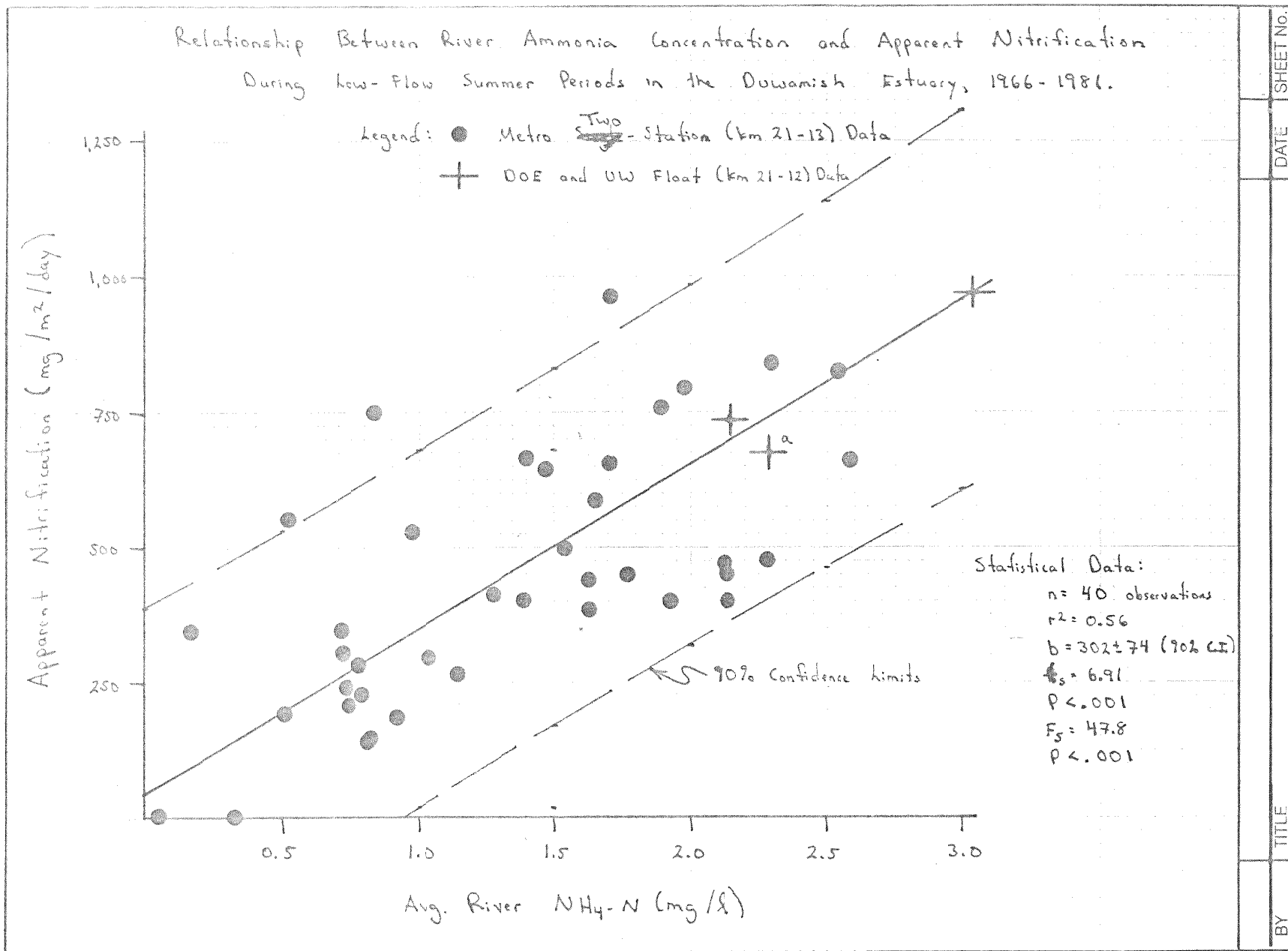
Bill:

I thought I'd pass on to you another piece of the continuing Keston plot / Duwamish nitrication saga. I've put together data from several routine monitoring programs, arranged in a table as shown here. The columns are time (covering a single day) for each Marginal Way. All stations upstream, to 2 1/2 miles (km 13), were sampled on the same date. The data are for average flow and nitrate flows. We also recorded all observations for the June-September period, so the river flows less than 15 cfs (530 cfs), and for now we have no substantial salt water intrusion was recorded at East Marginal Way. There were several observations of the average of the nitrate concentration at the station (updated from the previous) and the measured concentration at Km 13. Nitrate concentration was measured at the station for the data. Results from your two float trips and Wall's one were also developed for the same month.

All this data is presented in the accompanying graph. I think the data support your assumption of a first-order reaction rate, with no variation with the river flow rate presently "saturated" with nitrate. Your model therefore appears, to me at least, to be appropriate for assessing predictions of the river, though perhaps the model may be used for a sequence of similar situations. Let me know your thoughts on this - I'm planning to review it in a journal article. It's like to see the river in the Alton, with the fact that the river level the bend the river remains level on a single day, and the high flow program appears to have been quite different - do you agree? Take care.

Bill
1/28/83

Bill
PATMONT (22-2500)



a.) ^{12/2} 9/23/80 float, river NH₄-N based on a single effluent dose (i.e. not a triple-dose dilution block observed transiently near the effluent diffuser; Berkhardt, 1981 and York, 1981)