Report

06/16/05

1. Completed studying the operator's manual of the Oxygen Analyzer. We might have to purchase a bottle of Ammonium hydroxide and a bottle of Nitric Acid. These chemicals are required to clean the electrodes.

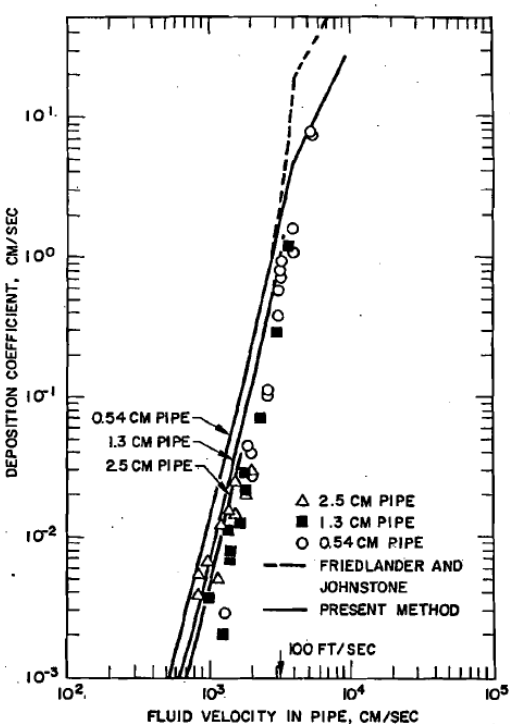
2. Determined the procedure to calibrate the pH sensor. In addition to the manual, Bob's notes were very helpful. Originally we had a plan to purchase 2.0 and 4.0 buffer solutions (which are required for the calibration), but today morning Bob has given me two bottles of these solutions that he bought earlier.

3. Spectrophotometer: Currently, I am studying the operating manual. I switched it on yesterday. It is in operating condition. Some of the parts are missing but I think we can either purchase them or use alternates. The parts we need are:
    1) Data recorder
    2) Sample holders
    3) Wave length selector (a handle)
    4) Dessicator

    I am planning to meet Dr. Nash today or tomorrow for his suggestion.

Literature Survey:

4. In my last report I had reported that particles preferentially deposit on high turbulence area. My report was based on a review paper [Ref: Survey of corrosion product generation, transport and deposition in light water nuclear reactors, EPRI NP-522, March 1979]. Last week I obtained the primary source of the statement which includes mathematical calculations and the experimental data.



* "FRIEDLANDER AND JOHNSTONE" method considers bigger size particles (~ 1 µ dia.)

* "PRESENT METHOD" method considers particles size range of , 0.1 µ dia. to 30 µ dia.

[Ref: Deposition of particles in turbulent flow on channel or pipe walls, S. K. Beal, *Nuclear Science & engineering*, 40, 1-11 (1970)]