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MEMORANDUM

August 2, 1976

To: Bruce Johnson

From: Allen Moore AWM

Subject: Low pH and Large Amounts of Wood Pulp in Whatcom Waterway

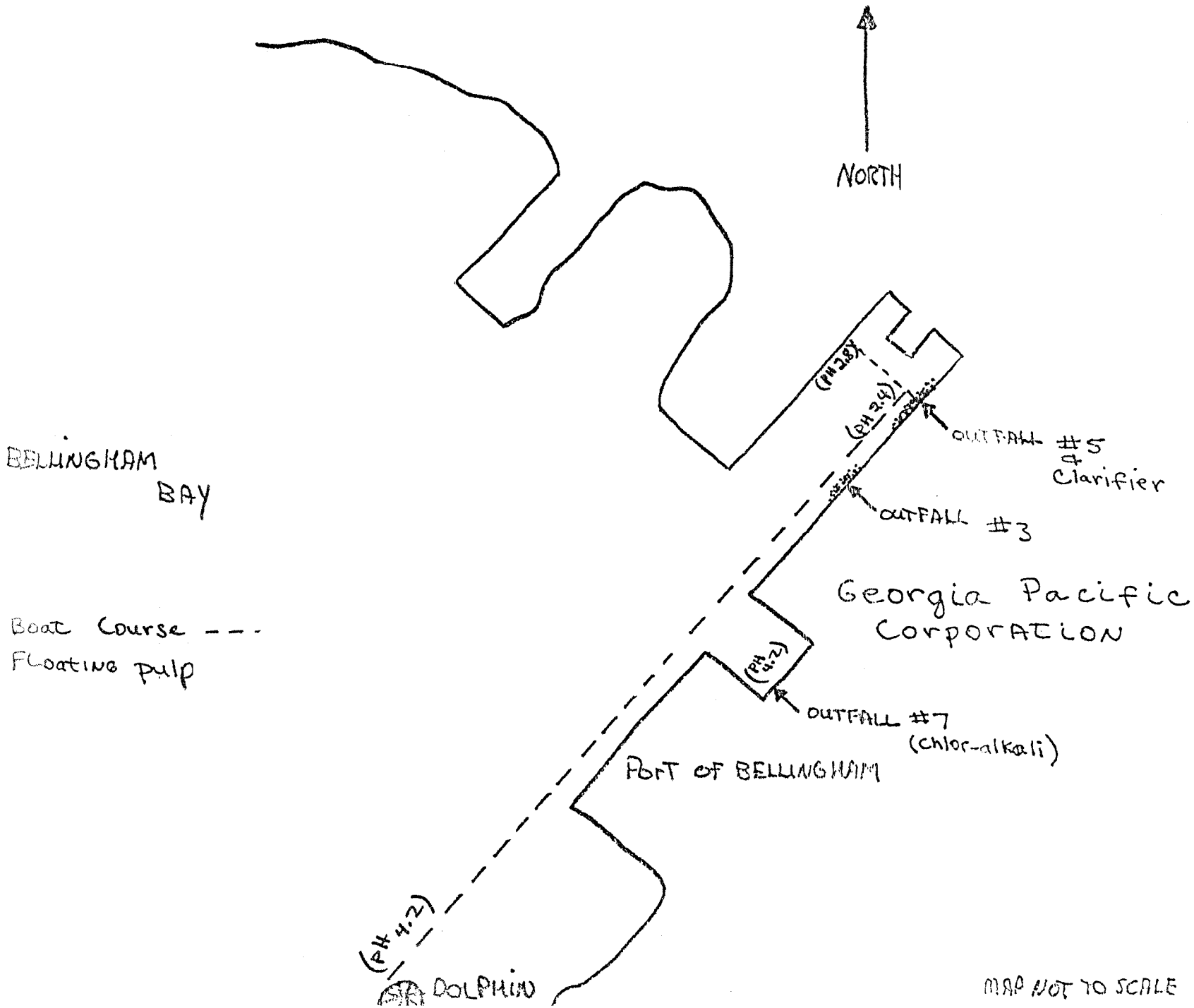
On Thursday morning, 22 July 1976, my assistant Darrel Anderson, John Glynn of Redmond DOE and I cruised the waters of inner Bellingham Bay in preparation of a water quality study of the area. Whatcom Waterway, which receives the effluents from Georgia Pacific Corporation was inspected between 0900 and 1000. Low tide was 0.2 feet at 0854. A pH reading of 2.4 was taken adjacent to outfall 005. Following a line at that point perpendicular to the dock to the other side of the waterway, the pH ranged up to 2.8. Following the Georgia Pacific side of the waterway to the southwest out to a dolphin approximately a mile away the pH ranged up to 4.2. All of these were surface readings.

Large quantities of pulp were floating on the surface above Georgia Pacific's outfalls 3 and 5. The pulp was very buoyant and up to about 8 inches thick. The shore riprap was covered with a very thick layer of pulp giving it a pillowy look.

The log boom chain along the pier was containing most of the surface material but large quantities of fresh pulp were also drifting out below the surface into the waterway. Near the outfalls the submerged particles were the size of a dime and about an inch apart from each other. At least 90% of this pulp was very fresh with colors of pink, tan and blue. The other 10% was old sludge which had floated to the surface buoyed by the decomposition gases of methane and hydrogen sulfide. Also the outfall from the chlor-alkali plant (#007) had a pH of 4.2.

The attached figure diagrams the observed conditions.

AWM:ee


NORTH
BELLINGHAM BAY
Boat Course - - -
Floating pulp
(pH 2.8)
(pH 2.4)
OUTFALL #5 & Clarifier
OUTFALL #3
Georgia Pacific Corporation
(pH 4.2)
OUTFALL #7 (Chlor-alkali)
PORT OF BELLINGHAM
(pH 4.2)
DOLPHIN
MAP NOT TO SCALE