

M E M O R A N D U M

August 7, 1975

To: Dick Cunningham

From: Greg Cloud

Subject: Conditions Encountered in Pt. Angeles Harbor
on Marine Flight II

During the normal sampling of Routine Monitorings Marine Air Flights a change in water quality was observed at the ITT Rayonier Mill dock in Port Angeles. Two marine sampling stations, PAH 007 and PAH 006, are located on either side of the main finger pier (see accompanying map, Figure 1). During a period in May and June the mill was closed down due to contract negotiations. Within this period two routine visits were made to the Port Angeles Harbor area. The physical appearance of the water had greatly improved. The water had taken on a color more characteristic of the Straits instead of the brown-red or black color of sulfite liquor waste.

The two stations located at the mill are on a tide division line between the inner Port Angeles Harbor water and a large eddy of cleaner water from the Strait of Juan de Fuca. The maps (Figures 2 and 3) show the tidal current action on both flood and ebb tides (Pollutional Effects of Pulp and Mill Wastes in Puget Sound, March 1967). The historical data (9/27/67 - 9/16/70) indicates that PAH 006 station has a lower average SWL (229 mg/L) than PAH 007 (555 mg/L). This average is a combination of both surface and depth samples.

This would be substantiated by referring to Plates 2 and 3 and noticing the direction that the cleaner water travels in the area of the mill site. The only time that PAH 006 would possibly be as high or higher would be on a rising tide level of flood tide. If all tide cycles are considered, PAH 007 is within the SWL plume the majority of the time.

During the mill shutdown both PAH 007 and PAH 006 had low values on the surface and depth samples. This can be seen on Figures 4 - 7. The highest value of the samples during this time was 18 mg/L SWL. The NH_3 values also show low values during mill closure, the highest being .02 ppm. When the mill was reactivated the values on PAH 007 increased to 22 ppm on the surface and 5.6 ppm on the 30 ft. depth sample. This may be seen on Plates 8 and 9. As this is being written before the next scheduled sampling for the area, it is unknown if this condition is continuing.

GC:ee

Figure 1



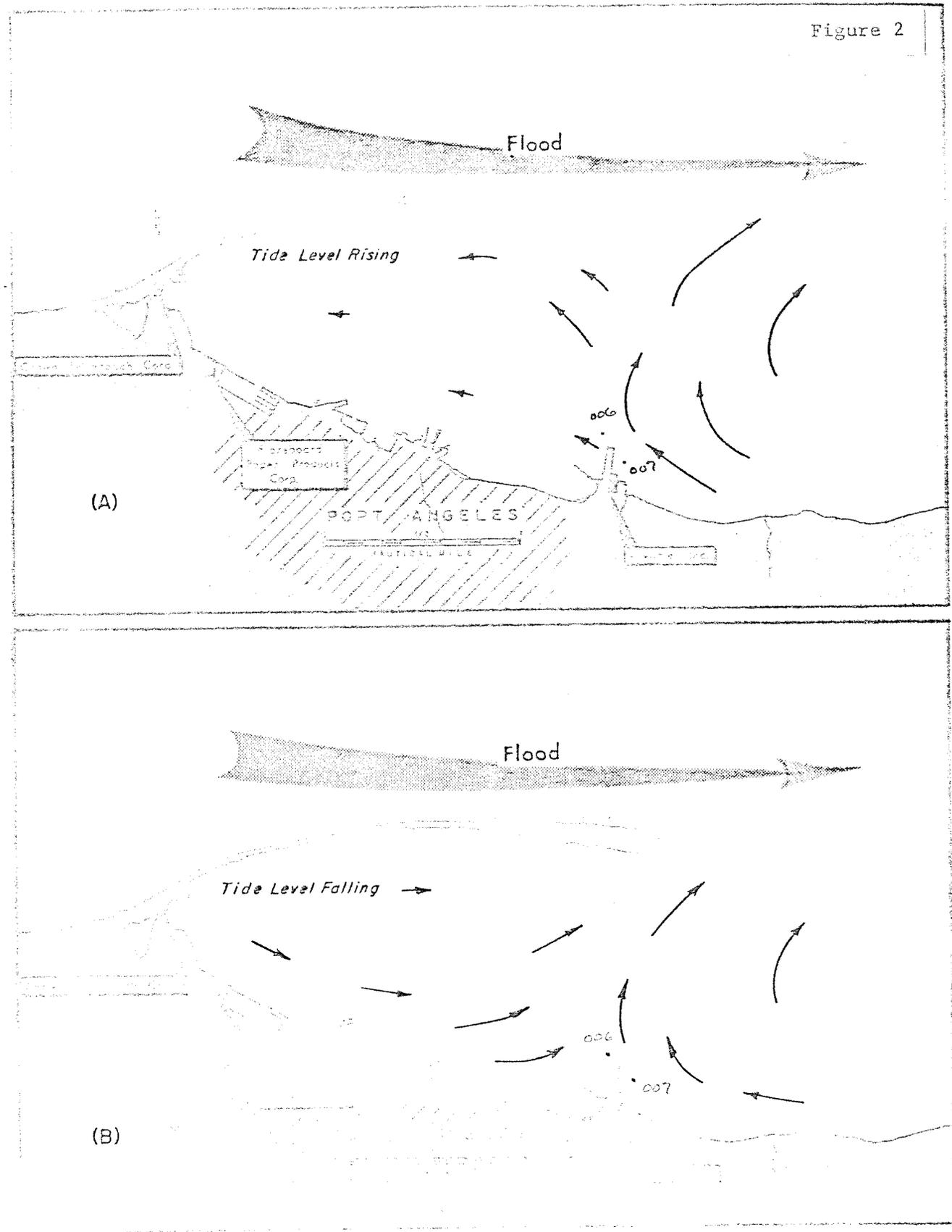


FIGURE 24-3. Patterns of surface circulation during flood current in the Strait and under conditions of (A) rising tide level and (B) falling tide level within the Harbor (after Charnell, 1958).

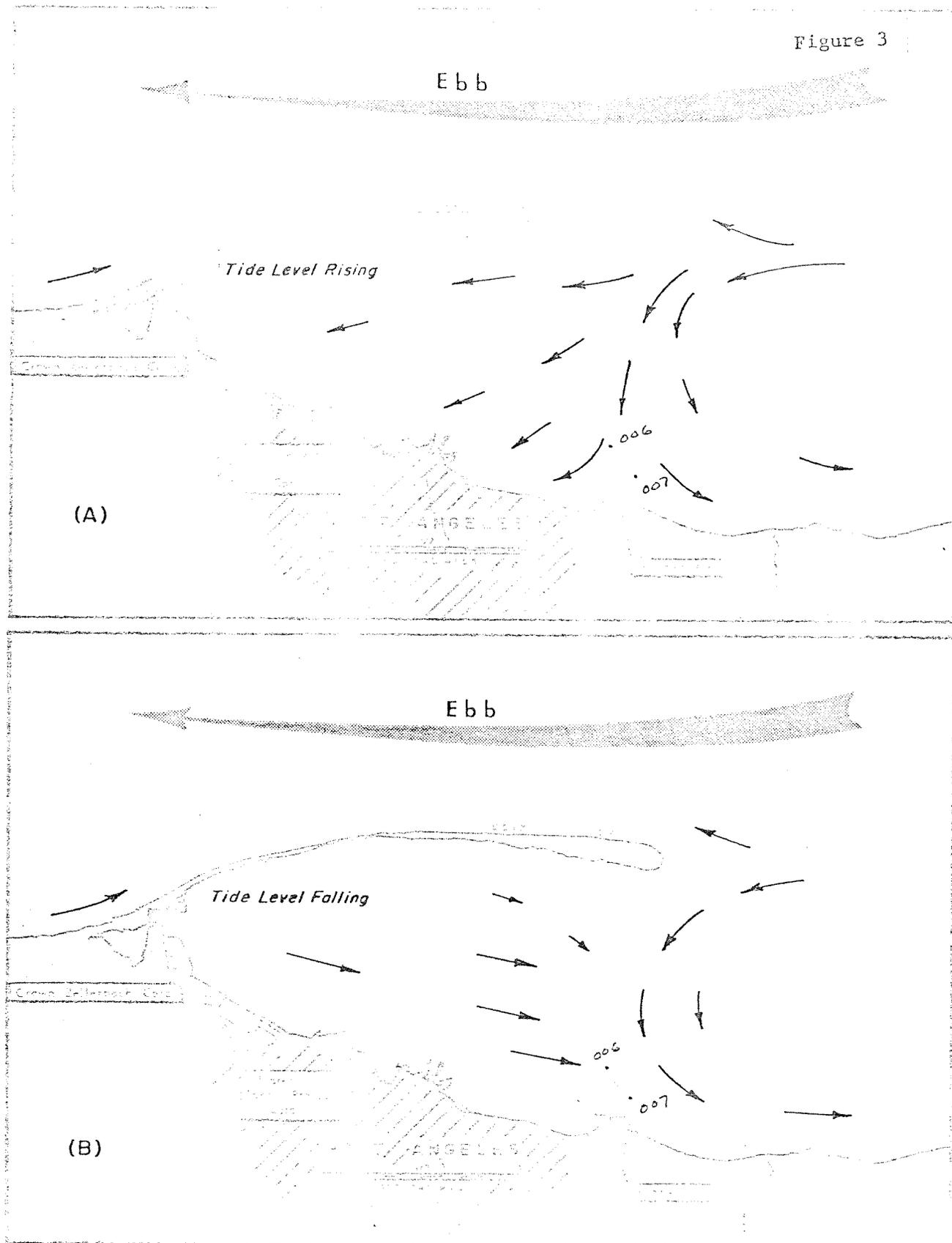
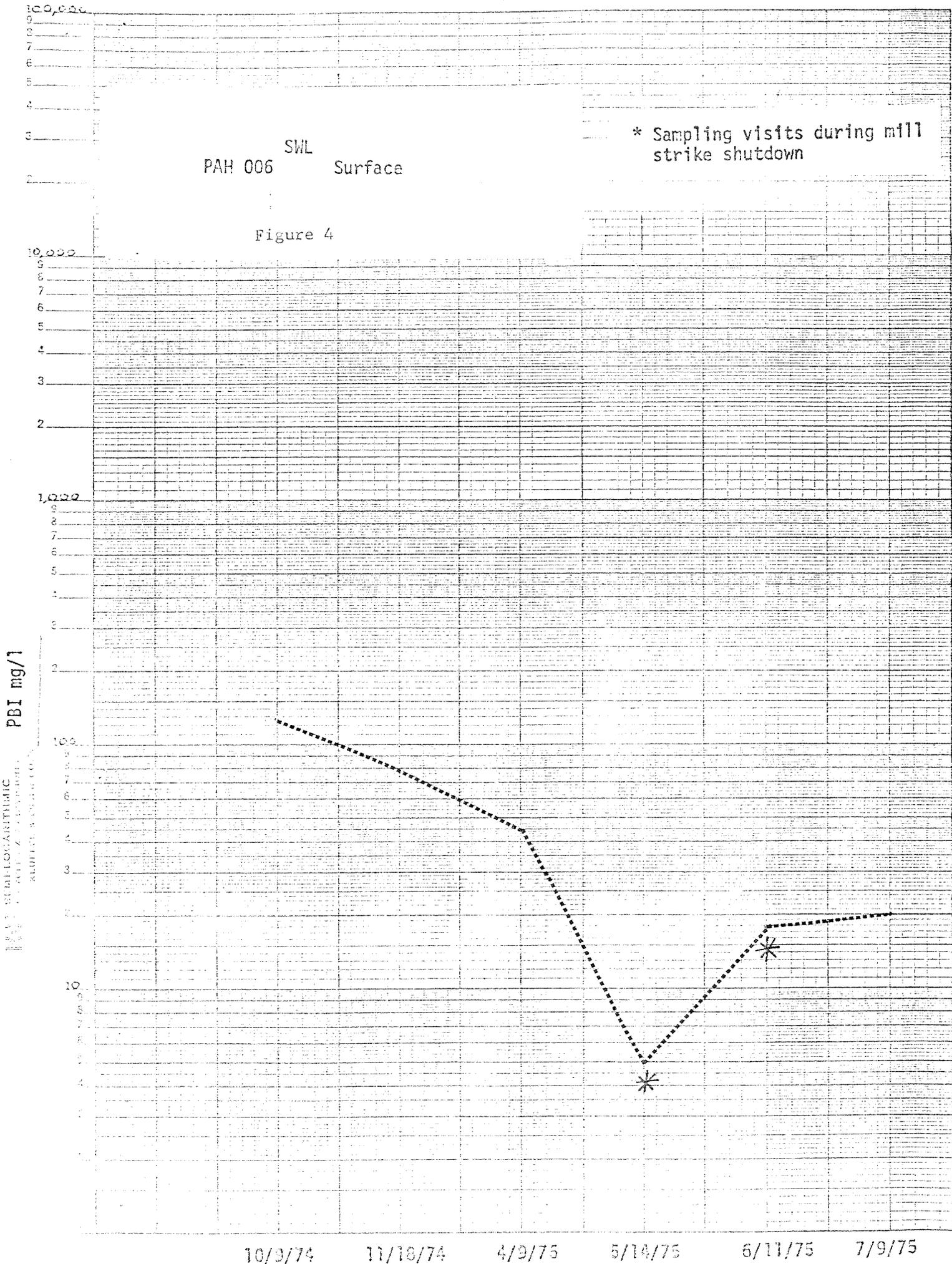
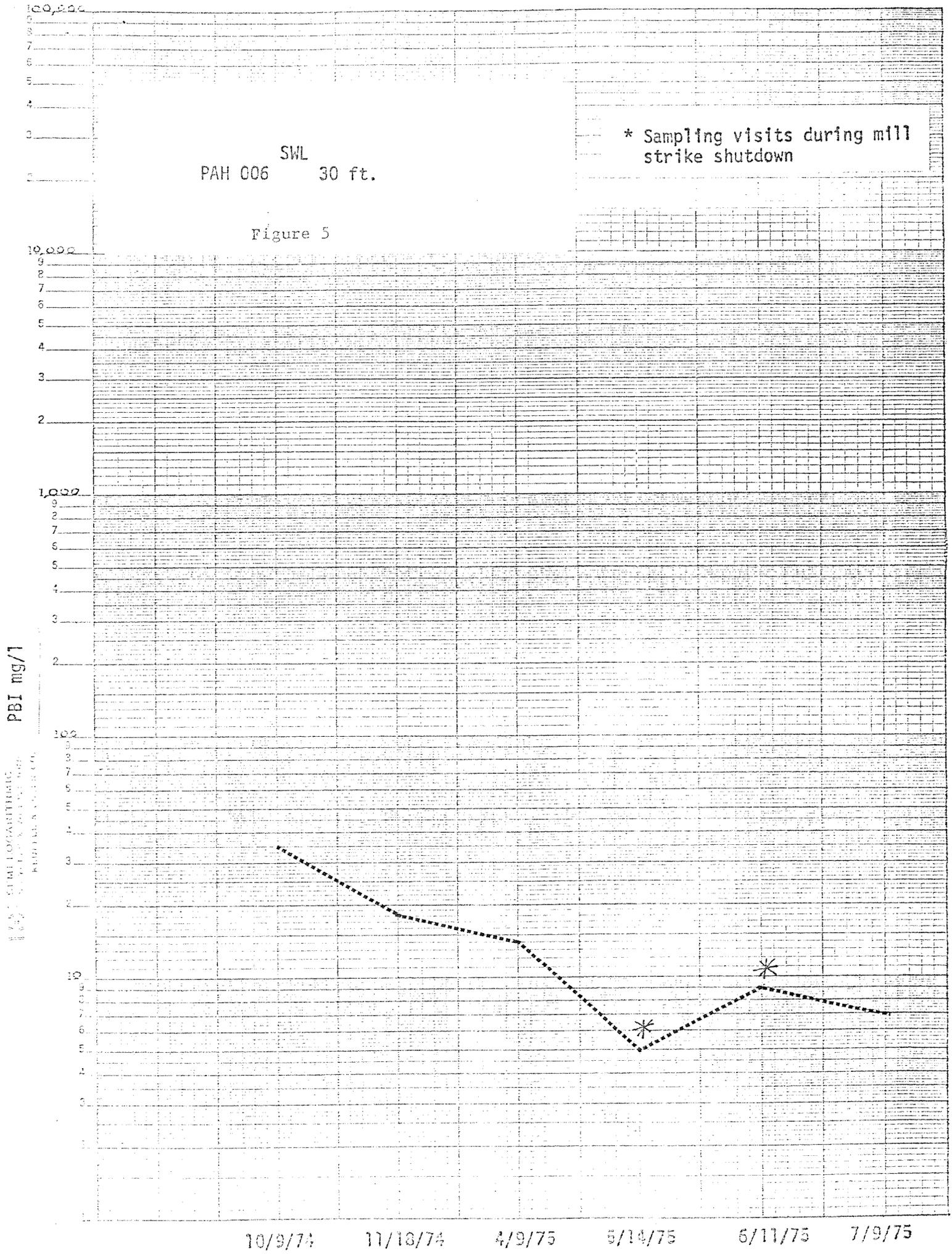
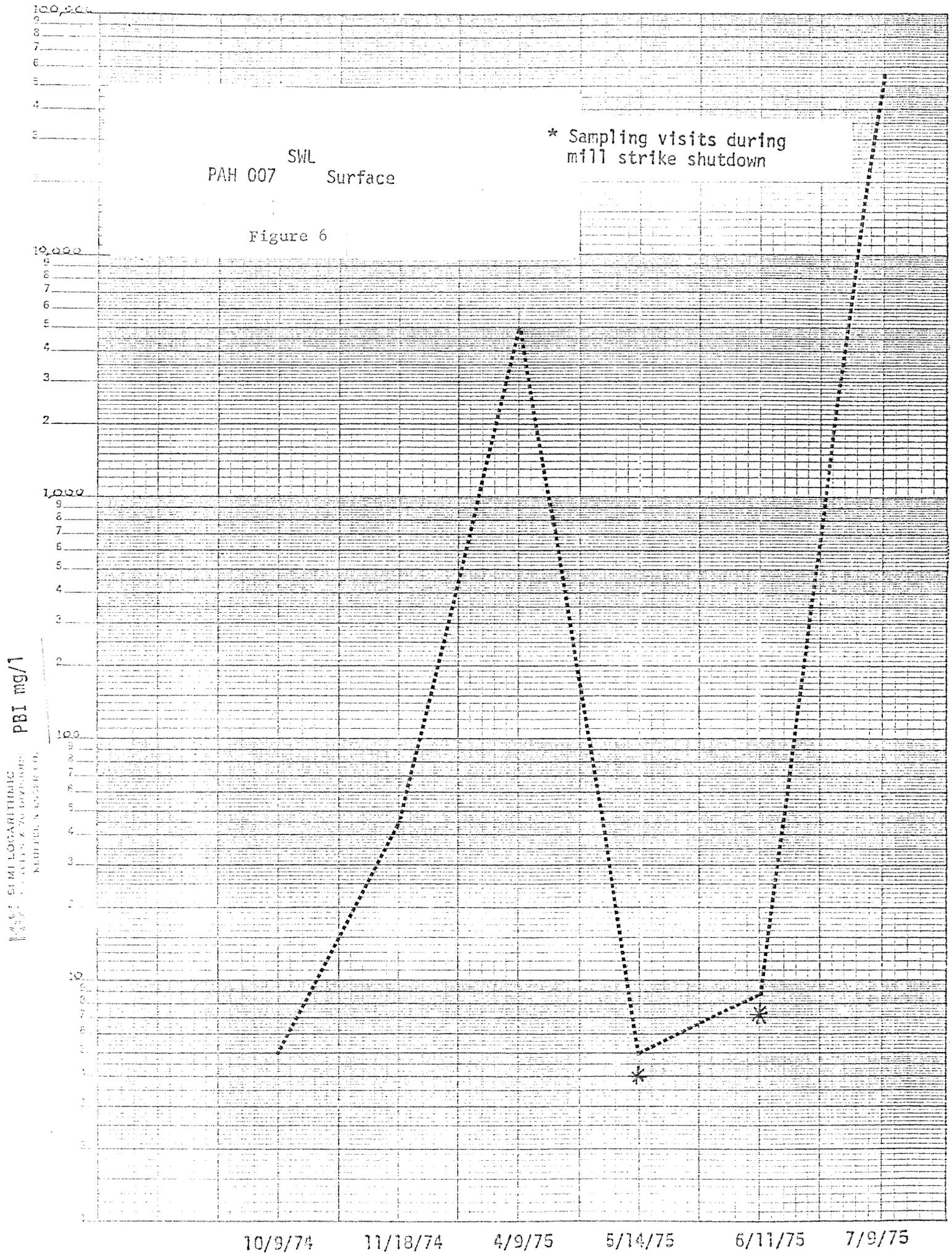
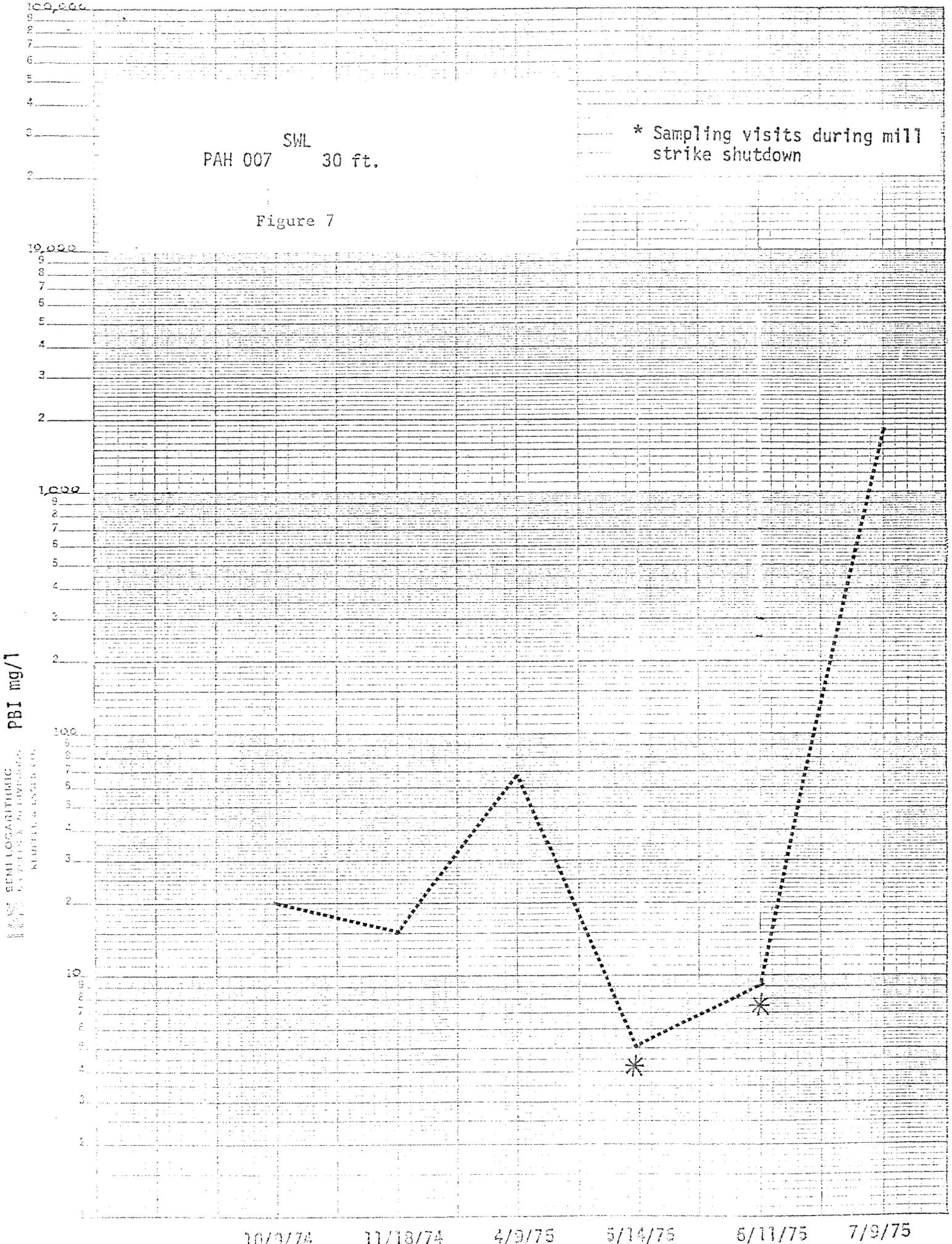


FIGURE 34-4. Patterns of surface circulation during ebb current in the Strait and under conditions of (A) rising tide level, and (B) falling tide level, within the Harbor (after Charnell, 1958).

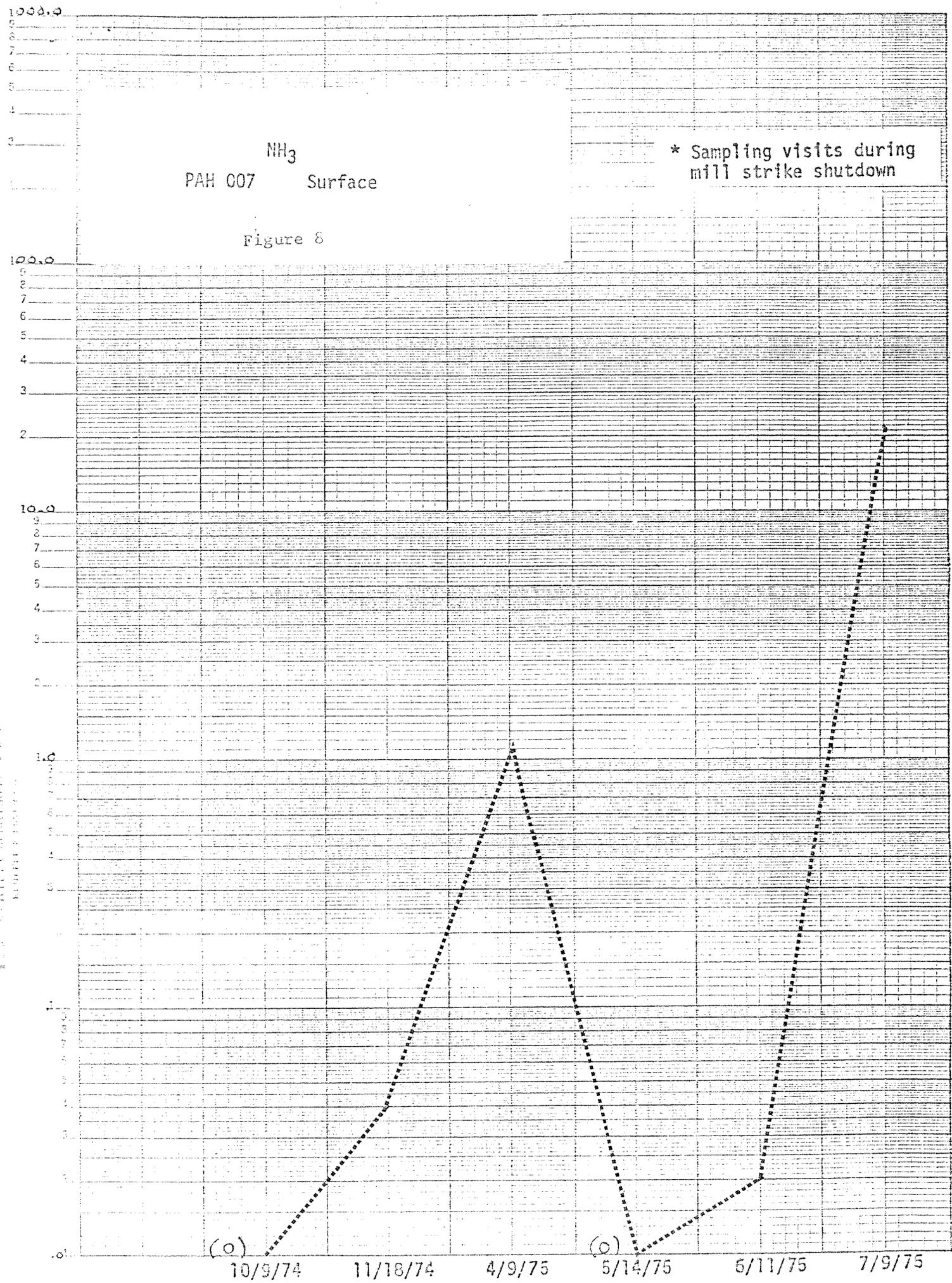








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