



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

7272 Cleanwater Lane, LU-11 • Olympia, Washington 98504 •

M E M O R A N D U M
October 3, 1984

To: John Glynn
From: Marc Heffner ~~MAH~~
Subject: Sampling Near the Orcas Island Ferry Dock, August 15, 1984

Samples were collected near the Orcas Island ferry dock on August 15, 1984, between 1300 and 1400. Samples for fecal coliform analysis were collected from six receiving water stations near the dock (Figure 1). Also, samples for fecal coliform, turbidity, conductivity, total suspended solids, and nutrient analyses were collected from a pipe discharging under the Union 76 service area. The discharge ran across the beach (approximately 30 feet) before entering the receiving water. A low tide of 0.8 foot was predicted at 1350 on August 15.

Sampling data are presented on Table 1. Fecal coliform counts at stations 1 through 5 (Figure 1) were low (all were <3/100 mL). The count at station 6, the station closest to the discharging pipe, was 480/100 mL. Applicable Class AA fecal coliform standards are:

"Fecal coliform organisms shall not exceed a geometric mean value of 14 organisms/100 mL, with not more than 10 percent of samples exceeding 43 organisms/10 mL."

(Chapter 173-201 WAC, "Water Quality Standards for Waters of the State of Washington", 6/2/82)

The fecal coliform count in the pipe discharge was 1.6×10^6 /100 mL, suggesting that the discharge could have been responsible for the high count observed at station 6 (Table 1). The fecal coliform, nutrient, and total suspended solids analytical results all suggest that the sample collected was raw sewage. Children were observed playing on the beach near the ferry landing; thus, the discharge is both a potential public health hazard as well as a possible cause of receiving water quality violations.

MH:cp

Attachments

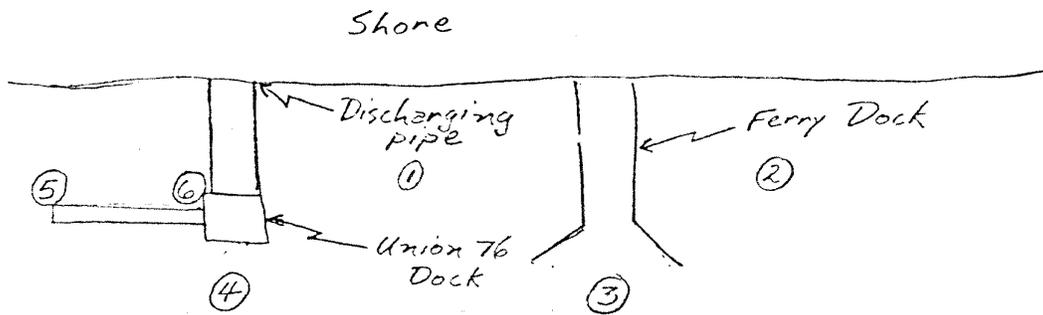


Figure 1 : Orcas Island ferry dock sampling stations, 8/15/84

Table 1. Orcas Island ferry dock sampling results, August 15, 1984.

Station	Fecal Coliform (#/100 mL)	Total Suspended Solids (mg/L)	Nutrients (mg/L)					Turbidity (NTU)	Specific Conductivity (umhos/cm)
			NO ₃ -N	NO ₂ -N	NH ₃ -N	O-PO ₄ -P	T-PO ₄ -P		
1	2 Est.								
2	1 Est.								
3	<1								
4	<2								
5	<2								
6	480								
Discharging Pipe	1.6 x 10 ⁶	220	0.25	<0.25	30	9.5	18	140	1030

Est. = Estimated