Stipulated Duplicate

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AN INVESTIGATION TO DETERMINE THE BEDLOAD AND SUSPENDED LOAD TRANSPORT OVER THE OUTER TIDAL DELTA AND MONITOR THE SEDIMENTARY ENVIRONMENT AT SITES A, E, AND D NEAR THE MOUTH OF THE COLUMBIA RIVER

by

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ANNUAL REPORT

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PART I. INTRODUCTION

This annual progress report adds to prior results of a study to investigate the transport and distribution of bottom sediments in the lower Columbia River Estuary. Particular emphasis is given to dredge disposal sites A, D, and E.

This study is an extension of the previous year's study -- A Geological Investigation of the Sedimentary Environments at Sites E, G, and H, Near the Mouth of the Columbia River -- completed by J. C. Borgeld et al. of the University of Washington in 1978. That study provides the background for the present study. Additionally it permits long term processes affecting sedimentation at the mouth of the Columbia River to be recognized and evaluated.

PART II. OBJECTIVES

SITES A, D, E

A) Monitor the temporal and spatial changes in the dredge materials deposited at Sites A, D, and E utilizing bathymetric surveys, bottom grab samples, and bottom current and suspended sediment data

B) Examine the influence that the deposits have on the local circulation and transport of suspended and bedload sediments.

LOWER ESTUARY AND OUTER TIDAL DATA

A) Determine the paths whereby sediments are removed from both the river mouth and outer tidal delta.

B) Estimate the quantity of sediment thus transported.

C) Examine the mineralogy of sediments of the estuary and outer tidal delta in order to determine spatial and temporal variations that might exist.

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