

Appendix D

SAMPLING AT SEA

During the past year. Project personnel conducted or participated in 109 cruises involving a total of 283 man-days at sea. The cruises are described below.

Retrieval and installation of sediment collectors and current meters off Orange County, ENCHANTER IV, 27 June 1975.

Installation of mussels on buoy off Palos Verdes, 16-ft outboard, 27 June 1975.

Test of new underwater television towed cone and new television sled off Redondo Beach, STRAIGHT ARROW II, 8 July 1975.

Quarterly trawl survey off Palos Verdes, R/V VANTUNA, 9 July 1975.

Retrieval and relocation of sediment collectors and current meters off Orange County, ENCHANTER IV, 11 July 1975.

Installation of two current meters near Oil Platform Hilda (Santa Barbara), 16-ft outboard, 18 July 1975.

Physical, chemical, and biological surveys of the benthos off Orange County with modified Van Veen grab sampler, MARINE SURVEYOR, 29-31 July 1975.

Retrieval and relocation of sediment collectors off Orange County, ENCHANTER IV, 1 August 1975.

Survey with otter trawl at 90 m, Isaac-Kidd midwater trawl at 550 m, and shell dredge at 27 m in San Pedro Basin, VAN TUNA, 5 August 1975.

Test of underwater television equipment and water sampling device off Santa Monica, STRAIGHT ARROW II, 6 August 1975.

Trawl in Santa Monica Bay for speckled sanddabs for use in chromium bioassay, MARINE SURVEYOR, 8 August 1975.

Retrieval of sediment collectors off Orange County, ENCHANTER IV, 15 August 1975.

Recovery of current meters, underwater television taping of soft- and hard-bottom control areas, and fish counts at Oil Platforms Hazel and Hilda in Santa Barbara Channel, HAIK, 19-21 August 1975.

Test of new sediment stirrer and underwater television in Santa Monica Bay, MARINE SURVEYOR, 3 September 1975.

Underwater television taping of Ventura-Oxnard municipal wastewater outfall, MARINE SURVEYOR, 4 September 1975.

Trawl to obtain data on species and abundance of fish and invertebrates in an area around the San Diego outfall, SEA QUEST, 10 September 1975.

Installation of current meters and test of a drogue current measuring system off Oceanside, 16-ft outboard, 19 September 1975.

Conducted methane gas production experiments and coring and grab sampling survey around the 7-mile outfall area in Santa Monica Bay, MARINE SURVEYOR, 23 September 1975.

Underwater television taping of Oil Platform Hilda and collection of mussels in Santa Barbara Channel, HAIK, 29-30 September 1975.

Installation of mussels at five depths on buoy off Whites Point, 16-ft outboard, 1 October 1975.

Twenty-sixth quarterly trawl survey off Orange County, R/V VANTUNA, 8 October 1975.

Retrieval of mussels from buoy off Whites Point, 16-ft outboard, 8 October 1975.

Retrieval of current meters and test of drogue system off

Oceanside, 16-ft Boston whaler, 8 October 1975.

Collection of fish and invertebrates off Cortes Bank for study of metals in sportfish, TRUTH, 15 October 1975.

Operation of sediment stirrer off Whites Point, SEA-S-DEE, 22 October 1975.

Installation of current meters and collection of grab samples in San Pedro Basin, MARINE SURVEYOR, 29 October 1975.

Retrieval of mussels from buoy off Whites Point for virus study, 16-ft outboard, 31 October 1975.

Collection of grab and core samples at old and new Orange County outfalls, MARINE SURVEYOR, 4 November 1975.

Trawl in Santa Monica Bay for speckled sanddabs for use in chromium bioassay, MARINE SURVEYOR, 12 November 1975.

Collection of grab samples at the Hyperion 7-mile pipe in Santa Monica Bay to determine the lateral gradient of volatile solids; trawl survey around 5- and 7-mile outfalls, MARINE SURVEYOR, 19 November 1975.

Selection of site on 7-mile outfall for installation of new buoy, retrieval of current meter, and collection of grab samples in Santa Monica Basin, MARINE SURVEYOR, 2 December 1975.

Trawl survey off Palos Verdes, SEA-S-DEE, 2-3 December 1975.

Training program with Hyperion treatment plant personnel in trawling techniques in Santa Monica Bay, MARINE SURVEYOR, 4 December 1975.

Installation of mussel cages on buoys in Orange County and Whites Point for virus study, 16-ft outboard, 5 December 1975.

Trawl survey off Palos Verdes, SEA-S-DEE, 10-11 December 1975.

Trawling for sanddabs in Santa Monica Bay to obtain background data on the hematocrit value and amount of total dissolved solids in plasma of sanddabs, MARINE SURVEYOR,

16 December 1975.

Trawl off Santa Catalina Island control station, SEA-S-DEE, 16-17 December 1975.

Trawl survey off Palos Verdes, SEA-S-DEE, 18 December 1975.

Test of underwater case for 35-mm camera in Santa Monica Bay, MARINE SURVEYOR, 30 December 1975.

Training program with Point Loma treatment plant personnel in the use of the Van Veen grab sampler off San Diego, MONITOR II, 6 January 1976.

Test of 35-mm underwater camera and sediment collector off Whites Point, SEA-S-DEE, 15 January 1976.

Installation of mussels on buoy off Orange County, 16-ft outboard, 15 January 1976.

Installation of mussels on buoy off Palos Verdes, 16-ft outboard, 16 January 1976.

Collection of 20 live Dover sole with no apparent fin erosion in Santa Monica Bay to test for salinity tolerance, MARINE SURVEYOR, 20 January 1976.

Collection of control animals off Santa Catalina Island for mercury uptake studies, MARINE SURVEYOR, 21-22 January 1976.

Collection of mussels off Orange County buoy for trace metal and pesticide analyses, 16-ft outboard, 22 January 1976.

Installation of mussels on buoy off Palos Verdes and collection of mussels off Orange County buoy for trace metal and pesticide analyses, 16-ft outboard, 29 January 1976.

Installation of mussels on buoy in Santa Monica Bay, 16-ft outboard, 30 January 1976.

Day and night underwater photography off Santa Catalina Island, 30-ft sailing vessel, 2-4 February 1976.

Collection of mussels off Orange County and Palos Verdes buoys for trace metal and pesticide analyses, 16-ft

outboard, 5 February 1976.

Collection of mussels off buoys in Santa Monica Bay for trace metal and pesticide analyses, 16-ft outboard, 6 February 1976.

Collection of shrimp (*Crangon nigromaculata*) off Santa Monica for use in chromium bioassays, MARINE SURVEYOR, 10 February 1976.

Collection of mussels off buoys in Santa Monica Bay for trace metal and pesticide analyses, 16-ft outboard, 11 February 1976.

Collection of mussels off Orange County buoys for trace metal and pesticide analyses, 16-ft outboard, 12 February 1976.

Collection of mussels off Palos Verdes buoys for trace metal and pesticide analyses, 16-ft outboard, 13 February 1976.

Collection of mussels off buoys in Santa Monica Bay for trace metal and pesticide analyses, 16-ft outboard, 18 February 1976.

Collection of mussels off Palos Verdes and Orange County buoys for trace metal and pesticide analyses, 16-ft outboard, 19 February 1976.

Test sampling of subsurface seawater off Palos Verdes for trace metals analysis, using new all-plastic pump sampler, CAYUSE, 23 February 1976.

Collection of mussels off buoys in Santa Monica Bay for trace metal and pesticide analyses, 16-ft outboard, 25 February 1976.

Underwater television taping of 120-in. outfall off Orange County, ENCHANTER IV, 26 February 1976.

Collection of mussels off Orange County buoy for trace metal and pesticide analyses, 16-ft outboard, 26 February 1976.

Collection of mussels off Palos Verdes buoys for trace metal and pesticide analyses, 16-ft outboard, 27 February 1976.

Collection of mussels off buoys in Santa Monica Bay for trace metal and pesticide analyses, 16-ft outboard, 4 March 1976.

Collection of mussels off Palos Verdes buoys for trace metal and pesticide analyses, 16-ft outboard, 5 March 1976.

Collection of Crangon n-Lgromaculata and Sicyoma ingentis from Santa Monica Bay and benthic grab samples off Whites Point, MARINE SURVEYOR, 10 March 1976.

Collection of mussels off buoys in Santa Monica Bay for trace metal and pesticide analyses, 16-ft outboard, 10 March 1976.

Collection of mussels off Orange County buoys for trace metal and pesticide analyses, 16-ft outboard, 11 March 1976.

Collection of mussels off Palos Verdes buoys for trace metal and pesticide analyses, 16-ft outboard, 12 March 1976.

Retrieval and service of current meters off Point Loma, 16-ft Boston whaler, 15 March 1976.

Collection of mussels off Palos Verdes buoys for trace metal and pesticide analyses, 16-ft outboard, 18 March 1976.

Test of "flying" television camera sled in Santa Monica Bay, MARINE SURVEYOR, 22 March 1976.

Collection of mussels off Palos Verdes buoys for trace metal and pesticide analyses, 16-ft outboard, 24 March 1976.

Survey of sludge field around the 7-mile pipe in Santa Monica Bay using the modified Van Veen grab sampler, MARINE SURVEYOR, 25 March 1976.

Collection of mussels off buoys in Santa Monica Bay for trace metal and pesticide analyses, 16-ft outboard, 26 March 1976.

Retrieval and service of current meters off Oceanside, 16-ft Boston whaler, 28 March 1976.

Training program with Orange County Sanitation personnel on the use of the modified Van Veen grab sampler, ENCHANTER IV,

6 April 1976.

Retrieval and service of current meter off Point La Jolla, 16-ft Boston whaler, 20 April 1976.

Collection of mussels off Palos Verdes buoys for trace metal and pesticide analyses, 16-ft outboard, 21 April 1976.

Retrieval and service of current meters off Oceanside, 16-ft Boston whaler, 21 April 1976.

Collection of mussels off buoys in Santa Monica Bay for trace metal and pesticide analyses, 16-ft outboard, 22 April 1976.

Semiannual trawl survey off Palos Verdes, SEA-S-DEE, 5, 12, and 13 May 1976.

Collection of mussels off Orange County buoys for trace metal and pesticide analyses, 16-ft outboard, 12 May 1976.

Retrieval and reinstallation of current meters at Oceanside, 16-ft Boston whaler, 12 May 1976.

Television survey off Whites Point area to inspect bottom for fish (initiated because trawl catches were small), SEA-S-DEE, 17 May 1976.

Collection of mussels off Palos Verdes buoys for trace metal and pesticide analyses, 16-ft outboard, 17 May 1976.

Sediment resuspension velocity test off Whites Point, SEA-S-DEE, 20 May 1976.

Collection of mussels off Palos Verdes buoys for virus analyses, 16-ft outboard, 1 June 1976.

Collection of mussels off Orange County buoys for trace metal and pesticide analyses, 16-ft outboard, 2 June 1976.
Semiannual trawl survey at control area off Santa Catalina Island, SEA-S-DEE, 9-10 June 1976.

Collection of mussels off Palos Verdes buoys for trace metal and pesticide analyses, 16-ft outboard, 16 June 1976.

Sediment resuspension velocity test off Orange County,

ENCHANTER IV, 17 June 1976.

Trawl and test of pan-and-tilt and "flying" television systems off Santa Catalina Island, MARINE SURVEYOR, 22-23 June 1976.

Survey of the sludge field around the 7-mile pipe in Santa Monica Bay using the modified Van Veen grab sampler, MARINE SURVEYOR, 24 June 1976.

Collection of mussels off Orange County buoys for trace metal and pesticide analyses, 16-ft outboard, 29 June 1976.