

Project Name: Diego Garcia POL pier moorings

Author: Pete Marshall

Organizations/People Involved:

UCT Two

LCDR P.W. Marshall OIC
LCDR J.M. Cherry AOIC
SW1/DV R.E. Pummell POIC Diving Supervisor
CE1/DV W.R. Macha APOIC Diving Supervisor
PH1/DV R.N. Duncan Diving Supervisor
CE2/DV T.S. Armstrong Diving Supervisor
UT2/DV W.L. Pierce
EN2 T.E. Cowlshaw
EO2/DV R.S. Johnston
UT2/DV S.L. Wendt
HM2/DV E.D. Gilliam Diving Med Tech
BU2/DV R.G. Barton
EO3/DV J.C. Demille
CM3/DV R.L. Voris
CMCN G.J. Hall
PHAN J.R. Rayson

FPO-1

Keith Cooper
Guy Mullin

Pier Det

EO2 Bob Maldonado crane operator

ACU one

EN1 Al Whitaker
BM2 Ron Farmer
SN John Mayers
FA Tex Riddles

NCEL

Bob Taylor

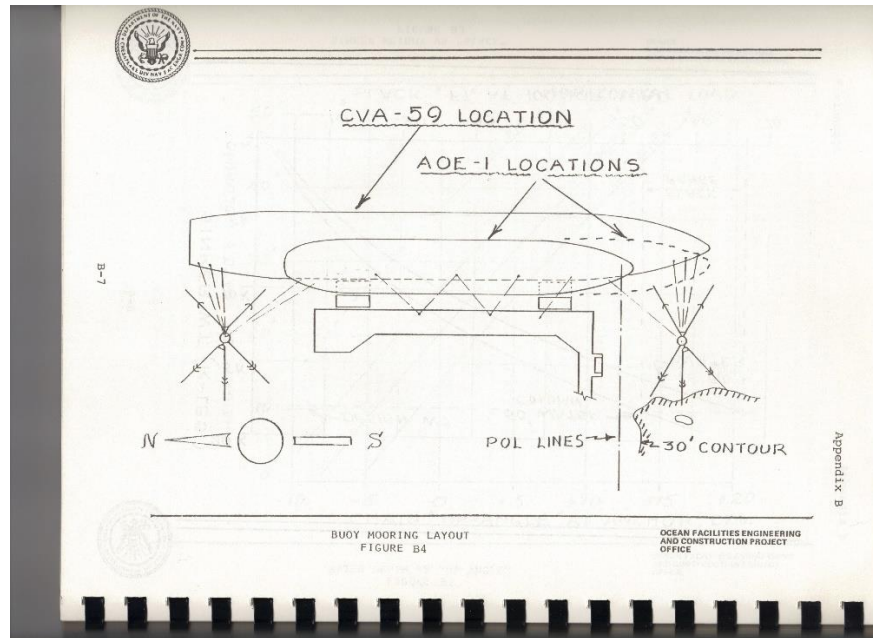
Date: Planning – 1979, Process training – 1979, Field construction - 1980

Project Summary:

In 1980, a team composed of personnel from FPO-1, NCEL, UCT Two and support from ACU One and on-island NMCB assets installed two high capacity, taut leg mooring buoys 175' north and south of the POL pier. The buoys were meant to provide mooring extensions to allow vessels larger than the length of the pier ample room to tie up. Each buoy was assembled with five propellant embedment anchors attached to chain assemblies coming together at the buoy. Final buoy mooring capacity was designed for approximately 250 kips of resistance. On-island installation was successfully completed in a 90-day window from March through early June, 1980.

Notes from LCDR P.W. Marshall (OIC UCT Two) and LT T.R. Liedke (OIC Pier Det DG):

The requirements for this project involved the construction and installation of two 250k mooring buoys north and south of the existing Diego Garcia POL pier in order to provide the required mooring extensions to accommodate larger vessels.



A work barge was prepared by the members of the Pier Det with tie down for a 640 P&H crawler crane and three winches from the OCEI. The crane provided capability restricted to 25 tons to move equipment and the explosive embedment anchor frames around the deck and into the water. The winches provided a lifting capacity of 100k, needed to set the PEA's and ultimately proof-test the moorings.

The divers arrived on-island in mid-March, 1980. The project had a 3-month completion timeline. Total crew involved 16 UCT Two personnel, 2 ChesDiv reps, an NCEL PEA specialist, LCM-8 with 4-man crew from ACU One in San Diego and crane operator from the DG Pier Det. (see personnel listing).

Each buoy has five legs with a horizontal working capacity of 100k per leg. Each leg was held to the bottom with one PEA attached to anchor chain leading to a spider plate and the surface buoy. Large hardware was the norm. Each chain link weighs approximately 100 pounds and each leg had a 20k anchor (sinker) installed on the leg to ensure correct strains on the PEA were maintained. Each leg of the mooring was assembled in Port Hueneme, palletized and shipped to Diego Garcia. This was done to minimize assembly time for the chains and mooring on-island.

When the PEAs and associated legs were completed, the buoy was towed to the site. It was flooded, submerged and all anchor chains and spider plates were attached with the buoy sitting on the bottom. After attachment, the buoys were refloated by filling them with air. After

resurfacing the buoys were filled with foam to ensure that buoyancy would always be maintained.



Project Report Link:

FPO-1 Install Plan FPO-1-80 (3) January, 1980 at DTIC: [Pier Buoy Mooring Project and Maintenance to Existing Mooring Diego Garcia B.I.O.T. Installation Plan, \(dtic.mil\) ADA167232 1980 January 01](#)
FPO-1 Project Completion Report FPO-1-80 (12) dated January, 1981, location unknown