

9. Ice Demolitions

No ice demolitions were conducted during AWS-77, however demolitions were used effectively to construct three of the four RACON towers.

BURTON ISLAND sailed with an abbreviated demolition allowance to make room for 10 tons of Dupont Tovex explosives scheduled for scientific seismic measurement. This project was cancelled after deployment, and demolitions were transferred from GLACIER to BURTON ISLAND to complete RACON construction.

Demolitions used in RACON construction consisted of charge, demolition, shaped M2A3 (15 lbs) and M3 (40 lbs) and charge assembly, demolition MK 138, Mod 1. The shaped charges were used to blow holes in sand and permafrost to place guide wire anchors. A brief description of demolitions at each RACON site follows.

a. Reindeer Island Racon. Four (4) shaped charges M3 (40 lbs) were used with the standard 15" standoff to construct four craters of suitable size for the base pedestal and three guide wire anchors. The crater produced by demolition were approximately eight feet across and three feet deep in loose sand. The anchors merely had to be dropped in the holes and filled with sand to finish anchoring operations at a considerable savings of time versus hand labor. Non-electric detonation was used to detonate the M3.

b. Coville Delta Racon. Six (6) shaped charges M2A3 (15 lbs), one (1) shaped charge M3 (40 lbs) and one (1) charge assembly MK138 Mod 1 were used at this site to construct holes in permafrost for guide wire anchors. The thawed topsoil was removed until permafrost was exposed and the charges were set on the permafrost. The shaped charge M2A3 (15 lbs) with standard standoff proved extremely effective in excavating a hole six to eight inches in diameter approximately four feet deep. The steel poles used for guide wire anchors were secured easily in these holes. Due to the unavailability of shaped charge, M2A3, a shaped charge M3 was detonated along with shape charges constructed with the high explosive from the charge assembly MK138, Mod 1 and tin cans with the shaped effect. The 40 lb M3 proved too much and the 4 lb ship constructed shape charge proved too little to construct an adequate hole, but in the latter case, the permafrost was weakened to allow easier drilling. Still considerable time was saved by using demolitions in lieu of auger drilling. Electric detonation was used to detonate all charges.