

From 5 May 1958 to 15 August 1958 De Haven participated in Operation Hardtack I, the nuclear detonation testing in the Pacific. Below is the official account of that operation pertaining to the De Haven.

USS De Haven (DD-727)

The destroyer De Haven was at the EPG for 27 shots of the HARDTACK series. The ships primary duties were to conduct weather observations and SAR patrols. Assignments included support of Projects 4.1, 6.5, 6.12, and 8.1.

De Haven spent the first week after its arrival in the EPG preparing to participate in shot WAHOO (Reference C.3.3.15). Following that event, it. was involved mainly with weather observations and SAR assignments. On 8 July, it left for Johnston Island, where it began rehearsals for the Johnston Island phase of HARDTACK.

Its commanding officer considered that the training of all hands in radiological safety was adequate. He noted one radiological encounter (Reference C.3.3.15):

On 14 May DeHaven recorded an unexpected fallout with average background count of 12 milliroentgens [per hour] with hot spots reading 50-80 milliroentgens [per hour]. Immediate decontamination procedures in accordance with available information were carried out. No recommendations were received to alleviate the concern by DeHaven. Decontamination teams worked throughout the day and night and by 1500 M the background of the ship was reduced to 4 milliroentgens [per hour] and “hot” material was surveyed or isolated with some isolated spots remaining on board reading over 10 milliroentgens [per hour]. After discussion at a WAHOO conference 14 May at 2100M, no recommendations resulted until several days later when the acceptable background was changed from 1 to 10 milliroentgens [per hour].

No other encounters with radioactivity were reported. The ship’s crew was badged and exposure data appear in Table 34.

De Havens log (Reference C.3.4.16) shows the following movements:

5 May	0915	Left Pearl Harbor in company with Destroyer Division 91
12 May	1247	Arrived Enewetak
12 August	1501	Left Johnston Island

It was out of the test operational area for shots YUCCA, CACTUS, PISONIA, JUNIPER, OLIVE, PINE, QUINCE, and FIG. Summaries of the vessel’s operational activities for the rest of the shots follow.

- FIR (Bikini, 12 May, 0550). Steaming en route to Enewetak. At 0549 observed FIR detonation bearing 600, distance approximately 180 nmi (334 km).

- BUTTERNUT (Enewetak, 12 May, 0615). At 0615 observed detonation bearing ~0, distance approximately 45 nmi (83 km). At 1247 moored portside to YOS-32 at berth N-4, Enewetak. At 1449 anchored at G-3, Enewetak.
- KOA (Enewetak, 13 May, 0630). Anchored in berth G-3, Enewetak. At 0225 prepared to get underway on 15-minute notice. At 0630 observed nuclear detonation on Dridrilbwij Island 18 nmi (33 km) away. On 14 May at 0845 detected readings of 0.009 to 0.016 R/hr on topside of ship; commenced washdown. At 0904 changed speed to 15 knots (28km/hr). At 1514 anchored in berth G-3, Enewetak. At 1830 ship was decontaminated to an acceptable level.
- WAHOO (Enewetak, 16 May, 1330). At 1106 on assigned station. At 1330 observed detonation bearing 1820, approximately 3 nmi (6 km).
- HOLLY (Enewetak, 21 May, 0630). Anchored in anchorage D-4, Enewetak; ship ready to get underway on 15 minutes notice. Between 0250 and 0450 launched and tracked weather balloons. At 0630 observed detonation from approximately 10 nmi (19 km) south.
- NUTMEG (Bikini, 22 May, 0920). At 0305 underway to weather station Bravo. Steaming approximately 225 nmi (417 km) west-northwest of shot site at time of detonation.
- YELLOWWOOD (Enewetak, 26 May, 1400). Steaming on weather station BRAVO, approximately 200 to 250 nmi (371 to 463 km) northwest of shot site at time of detonation, launching weather balloons.
- MAGNOLIA (Enewetak, 27 May, 0600). Steaming on weather station BRAVO, approximately 200 to 250 nmi (371 to 463 km) northwest of shot site, at time of detonation.
- TOBACCO (Enewetak, 30 May, 1415). Anchored in anchorage D-4, Enewetak. Launched weather balloons between 0445 and 1241. Approximately 18 nmi (33 km) southeast of shot site at time of detonation.
- SYCAMORE (Bikini, 31 May, 1500). Anchored in anchorage D-4. Enewetak.
- ROSE (Enewetak, 3 June, 0645). Anchored in anchorage D-4, Enewetak. Launched weather balloons between 0140 and 0447. Approximately 10 nmi (19 km) south of shot site at time of detonation.
- UMBRELLA (Enewetak, 9 June, 1115). On 9 June steamed independently on SAR station bearing 90°, 5 to 7 nmi (9 to 13 km) from Enewetak. Observed detonation bearing 280<sup>0</sup>T, approximately 7 nmi (13 km) from shot site. At 1413 anchored in D-4, Enewetak.
- MAPLE (Bikini, 11 June, 0530). Steaming on SAR station Fred, approximately 205 nmi (380 km) west—southwest of shot site.

- ASPEN (Bikini, 15 June, 0530). Steaming independently on weather station Bravo. Observed detonation bearing 1100, approximately 370 nmi (686 km) from shot site.
- WALNUT (Enewetak, 15 June, 0630). Steaming independently on weather station Bravo. Observed detonation bearing 1600, approximately 225 nmi (417 km) from shot site. At 0655 heard three detonations of unknown position.
- LINDEN (Enewetak, 18 June, 1500). Steaming independently on weather station Bravo Prime, approximately 225 nmi (417 km) northwest of shot site at time of detonation.
- REDWOOD (Bikini, 28 June, 0530). Steaming independently on weather station Bravo, approximately 370 nmi (686 km) northwest of shot site.
- ELDER (Enewetak, 28 June, 0630). Steaming independently on weather station Bravo, approximately 225 nmi (417 km) northwest of shot site, at time of detonation.
- OAK (Enewetak, 29 June, 0730). Steaming independently on weather station Bravo Prime, approximately 225 nmi (417 km) north of shot site, at time of detonation.
- HICKORY (Bikini, 29 June, 1200). Steaming independently on weather station Bravo Prime, approximately 370 nmi (686 km) north of shot site, at time of detonation.
- SEQUOIA (Enewetak, 2 July, 1200). Steaming independently from weather station Bravo Prime, approximately 200 nmi (371 km) east of shot site, at time of detonation.
- CEDAR (Bikini, 3 July, 0530). Anchored in anchorage N-3, Bikini, approximately 15 nmi (28 km) southeast of shot site.
- DOGWOOD (Enewetak, 6 July, 0630). Anchored in anchorage N-3, Bikini.
- POPLAR (Bikini, 12 July, 1530). At 1100 underway for Johnston Island; approximately 250 nmi (463 km) from shot site at time of detonation.
- SCAEVOLA (Enewetak, 14 July, 1600). Underway to Johnston Island, approximately 1,240 nmi (2,298 km) from shot site at time of detonation. On 15 July at 0803 anchored in anchorage A-4, Johnston Island.
- TEAK (Johnston Island, 31 July, 2350). At 1034 underway from Johnston Island to assigned station. At 2353 observed detonation bearing 200, at a range of approximately 150 nmi (278 km). On 1 August at 0655 anchored in anchorage A-4, Johnston Island.
- ORANGE (Johnston Island, 11 August, 2330). At 1037 underway for ORANGE event. At 2321 shifted steering control to aftersteering until after detonation. Steaming 168 nmi (311 km) northeast of Johnston Island at time of detonation. At 2335 shifted steering control back to the bridge. On 12 August at 0736 anchored in anchorage A-4, Johnston Island. At 0935 seven civilians and Air Force personnel departed ship. At 1501 underway for Pearl Harbor.

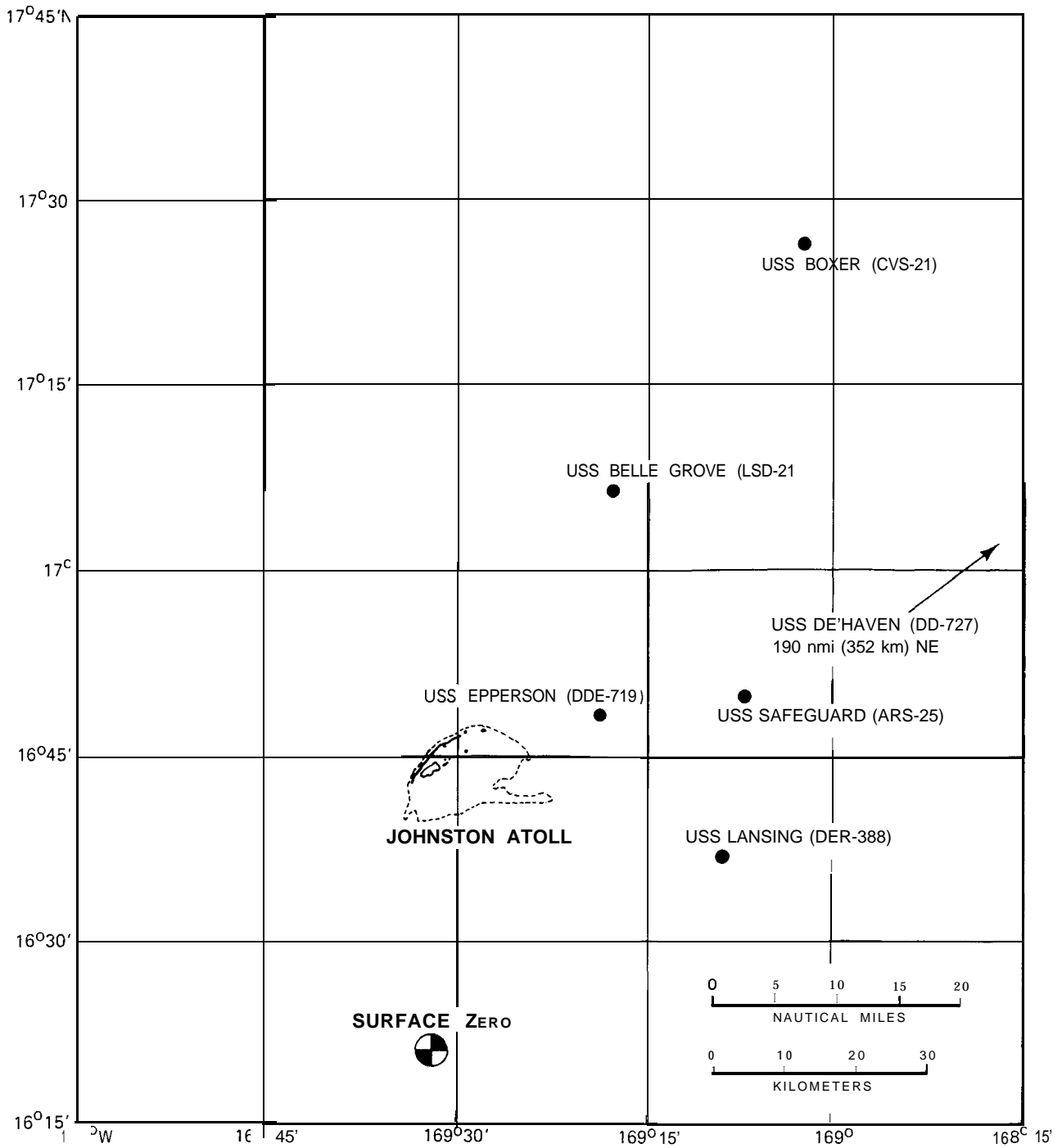


Figure 84. Ship positions, HARDTACK, ORANGE.

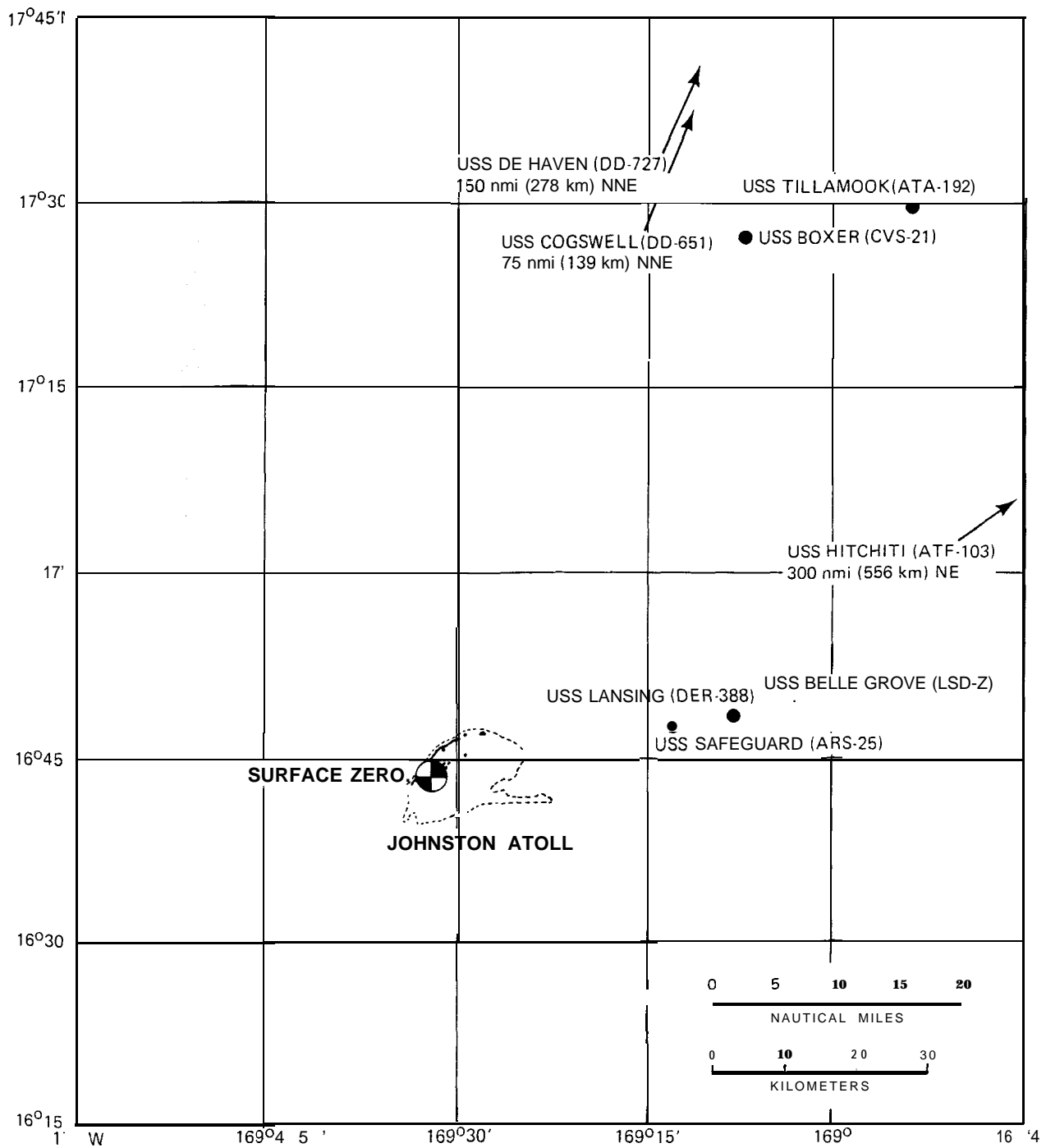


Figure 81. Ship positions, **HARDTACK**, **TEAK**

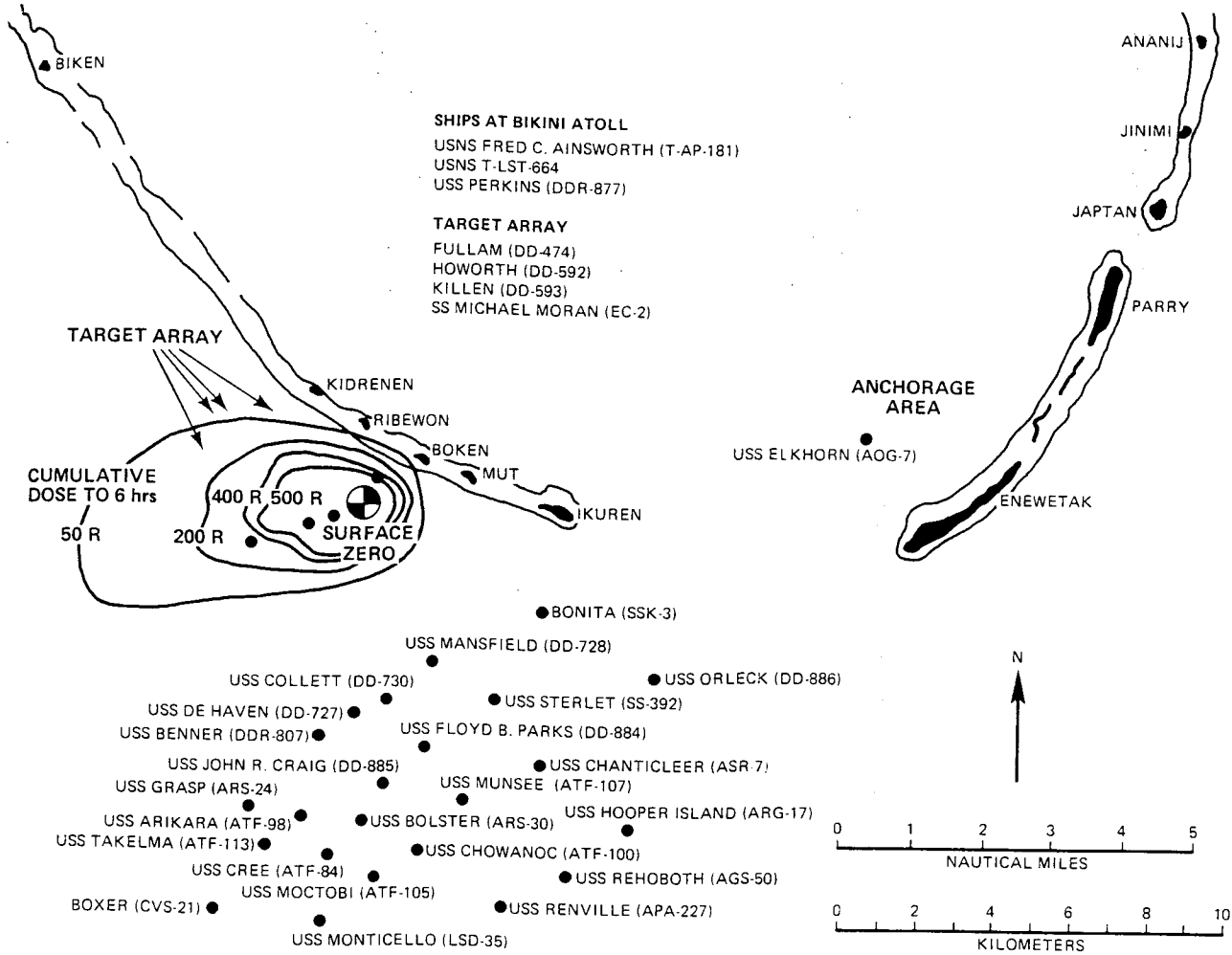


Figure 69. Ship positions at HARDTACK, WAH00, and cumulative dose to H+6.