

Hard Targets

By Barrett Tillman

AP photo/Terry Ashe

An attempt to destroy German U-boats in their pens was fraught with peril and frustration.





A B-17 (top photo) opens its bomb bay door as it nears the target, the U-boat pens in Turlon, France (bottom photo).

Between October 1942 and October 1943 the US Army Air Forces' Eighth Air Force flew more than 2,000 sorties against German submarine bases at Lorient, Saint-Nazaire, and Brest, in France, and against Bremen, Emden, Kiel, and Wilhelmshaven in Germany.

The missions accomplished little against the massive U-boat shelters, but the effort cost the Eighth 135 bombers (including 16 written off), for an unsustainable 5.9 percent loss rate. Shockingly, almost 1,200 airmen were killed or captured in the 119 missing aircraft.

Seven decades later, perspective and context help explain these frustrating and tragic events.

As with most segments of the US military at the time of Pearl Harbor in December 1941, the AAF's anti-submarine warfare (ASW) effort was forced to play catch-up. Informally organized and poorly equipped, the Army ASW mission badly needed long-range aircraft, notably the Consolidated B-24 Liberator, but had to rely on less capable types.

Unlike the Royal Air Force's Coastal Command, the AAF had no ASW flying boats so land-based aircraft were required. However, the Army was focused on strategic bombardment, and with B-24s also going to the British, the ASW campaign had to make do for months into the war.

Furthermore, Germany's submarine operating bases were beyond the new Eighth Air Force's reach for nearly a year. The only option at the time was to kill U-boats at sea.

It was not an easy task. From the start of the European war in September 1939 through the end of 1942, Allied forces sank 159 U-boats—merely four a month. Meanwhile, the “gray wolves” preyed on Atlantic convoys, typically destroying 36 ships of 180,000 tons per month throughout 1941. The monthly figure soared to half-a-million tons for 1942, when U-boats sank 12 ships for each sub lost.

Allied navies, led by Britain, made dramatic progress technically, operationally, and with ASW intelligence especially.

A RARE KILL

The decisive year was 1943, when escort aircraft carriers closed the deadly Atlantic gap that existed in the middle of the ocean beyond the reach of land-based aircraft.

In the second quarter of 1943 the German U-boat command wrote off 73 submarines for only 120 Allied ships sunk, and German losses exceeded production. As a result, the path to the Normandy landings of June 1944 led across the rolling gray expanse of the North Atlantic's shipping lanes.

However, sub kills were rare, mainly because U-boats were extremely hard to find. Knowing the locations of their lairs, the RAF attacked pens in France in early 1942 but soon lost interest owing to a clear lack of results. All the while, construction of U-boat shelters proceeded apace.

Submarine pens represented one of the most intensive building programs in the Third Reich. Before the Battle of Britain ended in 1940, construction

was underway at Hamburg and Heligoland. Ever methodical, the Germans conserved material by designing four types of structures: covers over locks to protect boats being raised or lowered; bunkers for U-boat assembly yards; postconstruction or “fitting out” bunkers where equipment was installed; and most notably pens for deploying submarines and those under repair.

Most operating pens were on the French coast at Bordeaux, Brest, La Pallice, Lorient, and Saint-Nazaire. Together they consumed 5.7 million cubic yards of concrete. Construction was mostly accomplished in 1942 though some facilities remained unfinished when the Allies occupied northern France in 1944.

Submarine pens were massive structures largely impervious to conventional bombing. The Saint-Nazaire pen, for instance, had walls 11 feet thick with a 16-foot roof. German engineers calculated that the roof could withstand bombs of 7,000 pounds—more than an American aircraft could typically carry.

The Todt Organization, a German construction firm, built 14 pens at Saint-Nazaire and 20 at Lorient, mainly completed in 1943. Some were immense: Saint-Nazaire's base measured 945 feet by 455, reaching 58 feet high. The nearby Keroman facility at Lorient began building in February 1941, and despite 200 workers killed in British bombings, the first of three pens accepted U-boats that August.

U-boat bases in Norway were an obvious benefit to Kriegsmarine operations in the Arctic Ocean, but the intended pens came to naught. Facilities at Bergen and



Photos by Rama

Trondheim, begun in 1941, were left largely incomplete owing to weather and a shortage of heavy equipment.

Airpower wisdom holds that any target worth bombing is worth defending. Lorient fit this description, surrounded by 20 naval batteries. Five lesser batteries were deployed farther afield.

USAAF only established a dedicated antisubmarine command in October 1942. Brig. Gen. C. W. Russell, AAF coordinator for antisubmarine activity, favored attacks on U-boat production facilities and operating bases rather than emulating RAF Coastal Command's policy of hunting submarines at sea. His opinion seemed to have merit—the RAF had long since abandoned daylight bombing operations as too costly, while accepting nocturnal bombing's inevitable reduction in accuracy.

But America's faith in daylight precision bombing seemed valid against targets such as U-boat shelters versus the RAF's aimpoints of city centers. The power brokers accepted the approach offered by Russell and others.

There were practical advantages as well. The Bay of Biscay, where the bases were located, was within easy reach of AAF bases in Britain—London to Saint-Nazaire was 300 miles, Brest even less. The entire approach could be made over water, largely avoiding Luftwaffe interceptors. That was a major concern, as the Biscay ports lay well beyond the escort range of RAF Spitfires and would remain beyond that of P-47s when they went operational in mid-1943.

In October 1942, the Eighth received a new list of priority targets. Topping the menu—above German industry—were submarine bases, in an effort to support the Battle of the Atlantic.

That month, German Adm. Karl Doenitz's 105 U-boats in the North Atlantic and Arctic sank nearly 90 merchant vessels of some 585,000 tons—and that was only part of the story. Since January 1942, U-boats had sent 779 merchantmen to the bottom, not counting other Allied sea losses to aircraft and mines. For the eventual Allied invasion of Nazi-occupied France to occur, the sea-lanes had to be more secure.

The new priority was not entirely welcomed among airpower strategists. They recognized the ASW campaign as defensive in nature rather than depriving the Third Reich of its production base. Nonetheless, the order stuck.

In October, Lt. Gen. Dwight D. Eisenhower responded to Maj. Gen. Carl A. "Tooe" Spaatz's concerns by declaring the U-boat campaign "one of the basic requirements to the winning of the war." Eisenhower linked bombing submarine bases to the success of Operation Torch, the invasion of French Morocco in November 1942.

At the core, Eisenhower was correct: Defeat of the U-boats was essential to D-Day's eventual success. But his optimism about the efficacy of bombing massive submarine pens—shared by other commanders—proved badly misled.

Some senior airmen saw the potential miscalculation. As early as the end of October 1942, Spaatz told Lt. Gen. Henry H. "Hap" Arnold, "Whether or not these operations will prove too costly for the results obtained remains to be seen. The concrete submarine pens are hard, maybe impossible nuts to crack." He leavened the tart message with the hope that damage to adjacent facilities might handicap the German submarine

effort. U-boat support infrastructure was frequently damaged—sometimes seriously—but the Germans became masters of repair and improvisation.

A YEARLONG CAMPAIGN

AAF's yearlong antisubmarine campaign began on Oct. 21, 1942, with an inauspicious debut at Lorient. Of the four bomb groups committed, only the 97th Bomb Group penetrated heavy weather. Consequently, the defenders concentrated on Brig. Gen. Joseph H. Atkinson's 21 B-17s, which had descended through a convenient hole in the clouds. Luftwaffe radar controllers vectored 36 Focke-Wulf 190s onto the Americans. Three of the rearmost bombers were hacked down and six shot up.

The others pressed ahead, unloading their bombs across five sub pens, but not even their one-ton ordnance made an appreciable dent.

Frustrated by poor results, on Nov. 9, VIII Bomber Command directed a perilously low-level mission against Saint-Nazaire. An RAF deception drew off many German fighters, but the anti-aircraft gunners were presented a rare gift: a dozen B-24s at about 18,000 feet with 31 B-17s between 7,500 and 10,000 feet.

Plowing through heavy, accurate flak, the lower formation lost three B-17s while 22 took damage. Despite the expected greater accuracy, bomb plots were disappointing: Only about eight struck within 200 yards of either aimpoint. Nearby rail tracks were hit but easily repaired.

The Eighth's Lt. Gen. Ira C. Eaker drew the obvious lesson—subsequent attacks on sub bases were flown from



17,500 to 22,000 feet, encountering less accurate flak.

Lacking fighter escort, AAF stuck to its doctrinal guns: “The bomber will always get through.” Generally speaking, that was true, but it ignored the awful reality: Surviving bombers inflicted little worthwhile damage for the growing cost.

Eighth headquarters pressed on. In January, Eaker happily reported that bombers could knock down six fighters for every bomber loss. In truth, by that time German fighters were downing bombers better than at parity—a clear German victory.

By the end of 1942, photo interpreters reported visible damage at Lorient and Saint-Nazaire, more from repetition than accuracy. The five missions between Nov. 9 and 23, 1942, involved 158 bombers releasing 385 tons on the sub base or the port area. While submarine-affiliated support and transport facilities were damaged enough to affect operations, the pens withstood the battering.

Meanwhile, from late November to early January, Saint-Nazaire endured no attacks, permitting industrious work crews to repair the damage. RAF intelligence concluded that the port was fully operational the first week in December.

The operations continued. On Jan. 3, 1943, Col. Curtis E. LeMay’s 305th BG flew Eighth Air Force’s sixth Saint-Nazaire raid. His innovative staggered formation within the group pointed the way toward the Eighth’s evolution in tactics as the war progressed.

That same day the 303rd BG lost four B-17s over Saint-Nazaire. One was *Snap! Crackle! Pop!*, which took flak, killing seven airmen. The ball turret gunner, SSgt. Alan E. Magee, was pitched out of the stricken Fortress without his

chest-pack parachute. From 20,000 feet, he smashed into the roof of the train station and sustained serious injuries, including a nearly severed arm, but he miraculously survived.

Magee was taken to a hospital where he received excellent treatment. “I owe the German military doctor who treated me a debt of gratitude,” he said. The doctor told him, “We are enemies, but I am first a doctor and I will do my best to save your arm,” Magee recalled, according to a 1996 303rd Bomb Group newsletter.

Magee never knew the doctor’s name but the German had saved his arm. In 1995, the city of Saint-Nazaire honored Magee and the crew of *Snap! Crackle! Pop!* with a memorial plaque.

RATE OF ATTRITION

Vegesack, Germany, became a frequent sub-pen target. Lying on the Weser River, 30 miles inland, the pen was the Eighth’s first target in Germany.

On Jan. 27, 1943, Col. Frank A. Armstrong Jr. shoved up the power to his 306th Bomb Group B-17F, leading 63 other B-17s outbound. He was among the most experienced commanders in the AAF, having led the first heavy bomber mission over France in August 1942.

Looping northward to avoid overflying hostile territory, Armstrong penetrated Reich airspace from the coast but found the primary target smothered by cloud. Thus, Vegesack was temporarily spared and the task force opted for the secondary target, Wilhelmshaven’s port area. Damage was moderate, and the B-17 bombers sustained only one loss to the surprisingly mild defensive effort.

On March 18, the bombers returned to Vegesack, again including the 303rd

The hardened U-boat pens at Saint-Nazaire (above and above left). The town was both a rail center and a port, making it an obvious and valuable target for the Allies, who bombed it almost continuously.

“Hell’s Angels” bomb group. The lead bombardier was 1st Lt. Jack W. Mathis, a 21-year-old Texan in 1st Lt. Harold L. Stouse’s *The Dutchess*. Flying his 14th mission, Mathis was well-regarded—the squadron would “drop on his lead.”

During the run to the target the formation met heavy flak that pummeled the low bombers flying at 24,000 feet. Less than a minute from bombs-away, a shell detonated near the right side of *The Dutchess*’ nose. Metal shards blasted through the plexiglass, hurling Mathis to the rear of the compartment.

Bleeding profusely, Mathis ignored his nearly severed right arm, crawled back to his sight, and dropped his bombs. Then he collapsed and died.

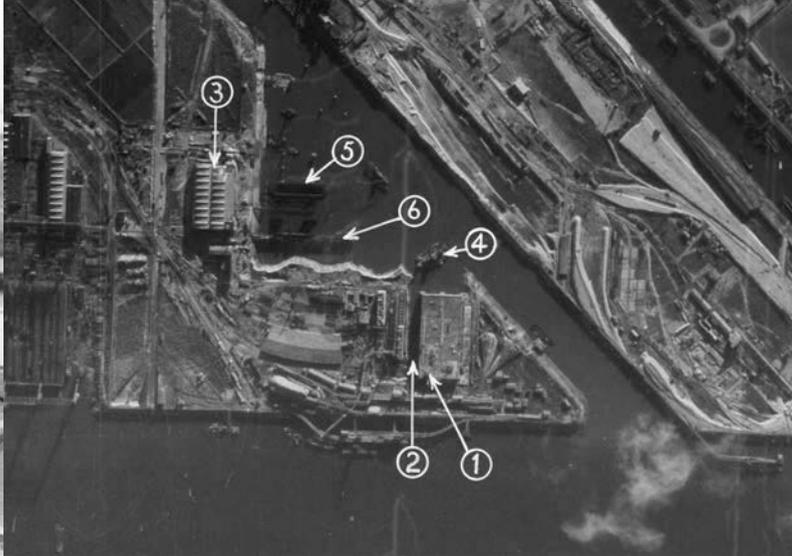
The 303rd did lose an airplane that day but Stouse got *The Dutchess* back to RAF Molesworth, UK. Mathis became the Eighth’s first Medal of Honor recipient.

As the Eighth still lacked long-range fighters, on June 11, 1943, Wilhelmshaven provided another hard lesson in self-defense. Of 252 B-17s launched for the mission, 168 dropped on the sub base and 30 on the port of Cuxhaven. Eight B-17s were shot down and more than 60 damaged.

The B-17 gunners claimed an astronomically high figure of 85 German fighters destroyed, but in reality the Luftwaffe only lost four. Instead of a 10-to-one loss ratio, the B-17s were on the short end of two-to-one odds—and carried much larger crews to boot.



Bundesarchiv photo by Jesse



Clockwise from left: The harbor at Marseilles before it was bombed by AAF B-17s. Nazi Gen. Wilhelm Fahrmbacher (center) leads Field Marshal Erwin Rommel (left) on a tour of the U-boat bunkers at Saint-Nazaire. Probable U-boat pens at Hamburg are marked number one.

An inevitable consequence of World War II bombing was collateral damage—what some analysts called “spillage.” Because Saint-Nazaire was a rail center as well as a port, it received near continuous bombing, resulting in nearly 500 known civilian deaths and destruction of perhaps 85 percent of the city. Nearly all the residents were evacuated by the spring of 1943.

LATE WAR EFFORTS

One of the war’s most technically ambitious programs was Project Aphrodite, an early attempt at precision weapons—which also targeted U-boat pens. “War-weary” bombers were stripped of unnecessary weight and crammed with as much as 15 tons of high explosives. A pilot and ordnance man took off in the bomber, armed it in flight, and bailed out. A guidance aircraft then flew the bomber by re-

mote control, aiming via a television camera in the nose.

The Aphrodite “designated hitter” was the 388th BG at RAF Knettishall, UK. It dedicated a squadron to the project. US Navy patrol bombers also participated, and in August 1944 the seventh Aphrodite mission, targeting a fortress on the French coast, ended with an in-flight explosion. It killed Navy Lt. Joseph P. Kennedy Jr. and his engineer, Lt. Wilford J. Willy.

Among the 19 Aphrodite missions, five targeted the North Sea’s Heligoland pens in September and October 1944. Of seven aircraft launched, two were downed by flak and three crashed or missed the target.

Another specialized weapon used to hit pens was the 4,500-pound concrete piercing “Disney bomb,” a rocket-assisted “bunker buster” conceived by the British Royal Navy. With an extremely high impact velocity, the Disney was expected to penetrate 16 feet of concrete before exploding.

Though potentially effective, the Disneys arrived far too late to defeat the U-boats, only reaching combat units attacking the Bremen pens in March 1945, with the Battle of the Atlantic over.

In March and April 1945 RAF Lancaster bombers, employing 11-ton Grand Slam bombs, struck U-boat pens at Valentin and Hamburg, inflicting substantial

damage upon largely useless facilities.

Between July 1942 and August 1943, AAF aircraft are believed to have sunk seven U-boats at sea and shared three more. However, Army bombers sank or destroyed as many as 46 in port, including many at Toulon.

Eighth Air Force bombers struck sub pens at least 27 times from October 1942 to October 1943.

The official AAF history concluded, “Undoubtedly the AAF raids caused temporary dislocations during the early months, ... especially at Saint-Nazaire. Clearly, also, they harassed the enemy by destroying auxiliary construction plants and neighboring railway facilities.”

A postwar interrogation provided a reasoned assessment of the bombing’s effectiveness. Doenitz, the commander of the U-boat fleet, said the sub pens were “impervious to anything but the heaviest type of bomb,” although the bases included the subs’ maintenance and repair shops. He concluded that bombing adjacent installations did not significantly detract from returning boats to the Atlantic supply routes.

Some planners resented the campaign against U-boat bases, insisting that it bled off weight of tonnage that should have been more usefully expended on German industry. There is some merit to the argument, as the Eighth’s first penetration of Reich airspace in January 1943 overlapped the remaining submarine missions by 10 months.

The legacy and frustration of the 13-month campaign is still evident today. On the Biscay coast most of the massive shelters remain intact, with bunkers at Lorient and Brest serving the French Navy. ★

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