

The provided sources present strong evidence of his **unique and indispensable credibility** for understanding the specific design of the Mark II weapon, which is theorized to have been detonated at Port Chicago 1.

Here's how his unique credibility is established in the sources:

- **Sole Source for Mark II Identification:** Peter Vogel, the original author of *The Last Wave from Port Chicago*, met with Vice Admiral Frederick L. Ashworth in 1993 to discuss a biography of Rear Admiral William S. Parsons 2, 3. During this conversation, Vogel asked for more specific information about the Mark II bomb's design and technology 1. **In response, Admiral Ashworth identified the Mark II as "the autocatalytic uranium hydride lateral implosion experimental device"** 1. The source explicitly states that **"Lacking Adm. Ashworth's specific identification of the Mark II, I would not have been able to develop a comprehensive history of the development of that weapon, because nowhere in the presently declassified Manhattan Project documentary materials is that identification made, nor can that identification be deduced or inferred"** 1. This makes him a singular and crucial source for this foundational detail.
- **High-Level Manhattan Project Involvement:**
- Ashworth was Captain Parsons' "fly boy" (pilot) before Parsons' assignment to Los Alamos 3.
- He was **assigned as Captain Parsons' deputy at Los Alamos in October 1944** 4.
- **He served as the bomb commander on the Nagasaki combat mission** on August 9, 1945 4.
- He participated in the July 1946 Bikini atomic tests as Admiral Parsons' deputy 5.
- He was also involved in Project Alberta, an organization responsible for the combat delivery of atomic bombs, serving as operations officer and military alternate for Captain Parsons 6.
- **Extensive Military and Nuclear Expertise:** Ashworth graduated from the US Naval Academy and completed postgraduate studies in ordnance engineering. His career included commanding the Naval Ordnance Test Station (NOTS) at China Lake, serving as a rear admiral and Commander of the Sixth Fleet, and as a vice admiral and Deputy Commander in Chief of the Atlantic Fleet 5.
- **Knowledge of Key Figures and Events:** In 1993, his knowledge of Admiral Parsons, a central figure in the Los Alamos analyses of the Port Chicago explosion, was considered "the most comprehensive of any person living" 4. Captain Parsons oversaw the preparation of the principal reports and analyses of the Port Chicago explosion 7. Ashworth's proximity and deep professional relationship with Parsons would have given him insight into Parsons' work and knowledge.

In summary, while the sources don't use the superlative "most credible possible," they establish Admiral Ashworth as an **uniquely authoritative and essential source** for a critical piece of information—the specific design name of the Mark II uranium hydride bomb—that was otherwise unavailable in declassified records 1. His extensive, high-level involvement in the Manhattan Project and subsequent nuclear programs reinforces the weight of his contributions to this historical narrative.