



FACT SHEET

Office of the
Assistant Secretary of Defense (Health Affairs)
Deployment Health Support Directorate

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Deseret Test Center Project SHAD

Eager Belle, Phase II (Revised)

Project Shipboard Hazard and Defense (SHAD) was part of the joint service chemical and biological warfare test program conducted during the 1960s. Project SHAD encompassed tests designed to identify US warships' and ashore installations' vulnerabilities to attacks with chemical or biological warfare agents and to develop procedures to respond to such attacks while maintaining a war-fighting capability.

The primary purpose of the Eager Belle, Phase II test was to study the downwind travel of biological aerosols. The primary test objectives were to relate biological cloud travel to predicted cloud travel based on prediction models for prevailing conditions; to obtain additional information on weapon system performance over the open sea under meteorological conditions encountered; and, to obtain information to assist in the design and execution of future trials. A secondary objective was to provide information on the performance of a particle sized analyzer under environmental conditions.

Bacillus globigii (BG), a biological tracer, was released as a line source generated by Aero 14B spray tanks mounted on A4 series jet attack aircraft. The ships which operated in Eager Belle, Phase II were the USS *George Eastman* (YAG 39), the USS *Carpenter* (DD 825), the USS *Navarro* (APA 215), and the USS *Tioga County* (LST 1185). The USS *Granville S. Hall* (YAG 40) and an EC-121 aircraft maintained operational control of testing.

The Department of Defense (DoD) is providing this information, at the request of the Department of Veterans Affairs (VA), to assist the VA in providing healthcare services to qualified veterans and to assist veterans in establishing service connection for disability claims. The Deployment Health Support Directorate (DHSD) collected this information from multiple sources and requested that the military services declassify it to allow its public distribution. The VA accepts this information provided on location, dates, units and/or ships, and substances involved in this exercise, which DHSD extracted from classified DoD records, and will provide it to individual veterans as necessary, but the VA cannot verify its accuracy.

Eager Belle, Phase II tests were conducted in an area of the Pacific Ocean approximately 175 miles west of Oahu, Hawaii within 100 miles radius of latitude 19° 30' N, 160° 00' W during the months of February, March, and June 1963.

Following publication of this fact sheet in January 2002, we received new information about the Eager Belle, Phase II test. Based on that information, the Marine Medium Helicopter Squadron 161 was added to the list of units and ships involved.

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Test Name	Eager Belle, Phase II (Test 63-1)
Testing Organization	US Army Deseret Test Center
Test Dates	February, March, June 1963
Test Location	Testing was conducted in the Pacific Ocean, west of Oahu, Hawaii.
Test Operations	To study the downwind travel of biological aerosols.
Participating Services	US Navy, plus Deseret Test Center personnel
Units and Ships Involved	USS <i>George Eastman</i> (YAG 39) USS <i>Granville S. Hall</i> (YAG 40) USS <i>Carpenter</i> (DD 825) USS <i>Navarro</i> (APA 215) USS <i>Tioga County</i> (LST 1185) Marine Medium Helicopter Squadron 161
Dissemination Procedures	Biological tracer released as a line source generated by Aero 14B spray tanks mounted on A 4 series jet attack aircraft.
Agents, Simulants, Tracers	<i>Bacillus globigi</i> (BG)
Ancillary Testing	Particle-sized analyzer under development
Decontamination	Not identified
Potential Health Risks Associated with Agents, Simulants, Tracers	<u><i>Bacillus globigii</i> (BG)</u> Now considered to be <i>Bacillus subtilis</i> var. <i>niger</i> , a close relative of <i>Bacillus subtilis</i> , this bacterial species was used as a simulant and considered harmless to healthy individuals. <i>Bacillus subtilis</i> and similar <i>Bacillus</i> species are common in the environment, and are uncommon causes of disease. They have been associated with acute infections of the ear, meninges (brain lining), urinary tract, lung, heart valve, bloodstream, and other body sites, but

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always or nearly always in individuals whose health has already been compromised. Long-term or late-developing health effects would be very unlikely (except perhaps as a complication of the acute infection).

(Sources: Tuazon CU, *Other Bacillus Species* (chap. 197), in *Principles and Practice of Infectious Diseases*, 5th edition (vol. 2), ed., Mandell GL, Bennett JE, Dolin R, Churchill Livingstone, Philadelphia, 2000, p. 2220-6; US Environmental Protection Agency, *Bacillus subtilis* Final Risk Assessment, February 1997, available at <http://www.epa.gov> as of October 4, 2002.)

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