

QL

O-(2-DIISOPROPYLAMINOETHYL) O'-ETHYL METHYLPHOSPHONITE

QL is a thick, non-lethal, colorless liquid with a strong, fishy smell. QL can be combined with a second non-lethal compound to make the lethal nerve agent VX. The Army completed destruction of the QL stored at Pine Bluff Arsenal in September 2006 in accordance with U.S. international treaty obligations.

Workers at Newport Chemical Depot, Indiana, produced the United States' inventory of the binary precursor chemical QL. After closing the Newport VX Production Facility in 1968, the QL was moved to the Pilot Plant at Aberdeen Proving Ground, Maryland, for storage. In the late 1980s, the QL was transferred to Pine Bluff Arsenal, Arkansas, for use in development work on the binary chemical weapons program, where it remained until its destruction in 2006.

The BLU-80/B bomb, commonly known as the Bigeye bomb, was a developmental 500-pound air-launched binary chemical weapon intended to disperse VX. Construction of the Bigeye bomb fill-and-close facility at the Pine Bluff Integrated Binary Production Facilities (PB IBPF) was only partially completed, and no filling of the bombs ever took place. The Army only produced a few of these bombs; they remained empty or filled with a safe, simulated chemical for test purposes. International treaty inspectors witnessed the destruction of all these bombs in the summer of 1999.

Bigeye bomb components

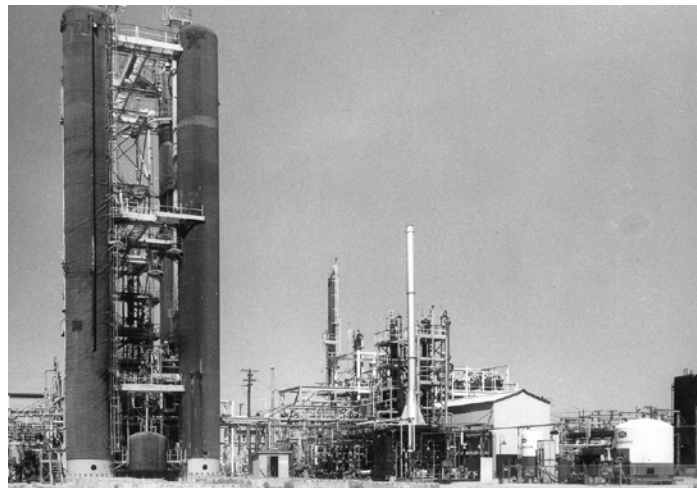
Major components of the bomb included the airframe, reactor and dissemination systems. The airframe consisted of the outside skin and folding fin assembly. The reactor area inside the bomb contained chambers for QL and sulfur, which were separated by a steel diaphragm. Prior to release of the bomb, the diaphragm would rupture, allowing the chemicals to combine and form the nerve agent VX while in flight to the target. Once operators released the bomb, a time-delayed fuze would ignite to cut several dissemination ports, allowing air to be forced through the bomb and spread nerve agent over the target area.

Processing QL

QL is neutralized by mixing it with water. The QL stored at Pine Bluff Arsenal was neutralized at the Pine Bluff Binary Destruction Facility (PB BDF) in a mission that began on June 6 and was completed on September 27, 2006.

The wastewater, or neutralent, from processing QL contains byproducts that require additional treatment before final disposal. The QL operation at PB BDF generated approximately 80,000 gallons of QL neutralent. The Recovered Chemical Materiel Directorate disposes of secondary waste in a safe, environmentally sound and cost-effective manner, ensuring compliance with the Chemical Weapons Convention.

After completing the QL neutralization operations, the Army demolished the PB BDF in accordance with U.S. international obligations in December 2006.



Workers at Newport Chemical Depot, Indiana, produced the United States' inventory of QL, one of two non-lethal compounds used to make the lethal nerve agent VX. The Newport VX Production Facility produced 4,400 tons of VX from 1961 to 1968, when the facility was closed.

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