

Lawrence was decommissioned in late March 1990 and stricken from the Naval Vessel Register a few months later. She was sold in April 1994, but was repossessed in October 1996 after the failure of the ship breaking firm. Following two more years in Navy custody, Lawrence's hulk was again sold for scrapping in February 1999.

Around December 2003, Lawrence was moved to Metro Machine's drydock in the Philadelphia Naval Business Park, which was formally known as the Philadelphia Naval Shipyard, for dismantling. The last sections of Lawrence were placed on a barge and taken up river to the scrapping company in New Jersey in October 2004.