



OPERATIONAL TEST
AND EVALUATION

OFFICE OF THE SECRETARY OF DEFENSE
1700 DEFENSE PENTAGON
WASHINGTON, DC 20301-1700

SEP 22 2015

The Honorable William M. "Mac" Thornberry
Chairman
Committee on Armed Services
United States House of Representatives
Washington, DC 20515-6035

Dear Mr. Chairman:


I have enclosed the report on operational testing of the Joint High Speed Vessel (JHSV) ship class. In the report I conclude the following:

- JHSV is a high-speed, shallow-draft surface vessel designed for intra-theater transport of personnel and medium payloads for the Joint Force. It is a redesign of a commercial catamaran capable of accessing relatively austere ports. Classified as a non-combatant, JHSV has limited self-protection capability.
- The events covered in this testing were not performed during the Initial Operational Test and Evaluation (IOT&E) because of the unavailability of test assets, primarily the Mobile Landing Platform with the Core Capability Set (MLP (CCS)). Testers collected effectiveness data from three FOT&E events, all with USNS *Millinocket* (JHSV 3). Testers collected suitability data derived from the maiden voyage maintenance records of USNS *Spearhead* (JHSV 1).
- The first two test periods, in June 2014 and October 2014, examined at-sea equipment transfers between JHSV and the MLP (CCS). The third FOT&E test period was devoted to launch and recovery of the U.S. Navy's Sea, Air, Land Team (SEAL) Delivery Vehicle (SDV).
- JHSV interoperability with MLP (CCS) is not operationally effective since, by design (ramp limitation), it can conduct vehicle transfers when conducted in sea states with significant wave heights of less than 0.1 meters (approximate a Sea State 1), which are normally found in protected harbors. I do not consider vehicle transfers inside a harbor as operationally realistic.
- JHSV is capable of launching the Navy SDV in sea conditions up to and including Sea State 3, but support boats required for a SDV mission are currently limited to Sea State 2 launches. The SDV portion of the FOT&E was limited to the SDV and did not include launch of the support boats since launch of these type boats was completed in IOT&E.



- JHSV is operationally suitable, although the demonstrated availability has decreased from 98 percent, reported in the IOT&E report, to 87 percent. The main drivers of ship unavailability were the Ship Service Diesel Generators, waterjets, and the Ride Control System (RCS).
- The RCS failures are a symptom of a more serious problem with the JHSV bow structure related to the ship's Safe Operating Envelope (SOE), which is designed to limit wave impact loads on the bow structure. The Navy accepted compromises in the bow structure, presumably to save weight, during the building of these ships. Multiple ships of the class have suffered damage to the bow structure, and repairs/reinforcements are in progress class-wide.
- Operating the ship outside of the SOE or encountering a rogue wave that is outside of the current sea state can result in sea slam events that cause structural damage to the bow structure of the ship. The operational restriction of the SOE is a major limitation of the ship class that must be factored into all missions. To utilize the speed capability of the ship, seas must not exceed Sea State 3 (significant wave height up to 1.25 meters). At Sea State 4 (significant wave height up to 2.5 meters) the ship must slow to 15 knots. At Sea State 5 (significant wave height up to 4 meters) the ship must slow to 5 knots. Above Sea State 5, the ship can only hold position and await calmer seas. The necessity of avoiding high sea states while transiting is an operational limitation.

Section 2399 provides that the Secretary of Defense may submit separate comments on my report, if he so desires. I have sent copies to him; the Under Secretary of Defense for Acquisition, Technology and Logistics; the Secretary of the Navy; the Vice Chairman of the Joint Chiefs of Staff; and the Chairmen and Ranking Members of the Congressional defense committees.


J. Michael Gilmore
Director

Enclosure:
As stated

cc:
The Honorable Adam Smith
Ranking Member



OFFICE OF THE SECRETARY OF DEFENSE
1700 DEFENSE PENTAGON
WASHINGTON, DC 20301-1700

OPERATIONAL TEST
AND EVALUATION

SEP 22 2015

The Honorable Rodney P. Frelinghuysen
Chairman, Subcommittee on Defense
Committee on Appropriations
United States House of Representatives
Washington, DC 20515-6015

Dear Mr. Chairman:

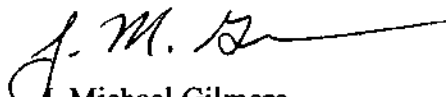
I have enclosed the report on operational testing of the Joint High Speed Vessel (JHSV) ship class. In the report I conclude the following:

- JHSV is a high-speed, shallow-draft surface vessel designed for intra-theater transport of personnel and medium payloads for the Joint Force. It is a redesign of a commercial catamaran capable of accessing relatively austere ports. Classified as a non-combatant, JHSV has limited self-protection capability.
- The events covered in this testing were not performed during the Initial Operational Test and Evaluation (IOT&E) because of the unavailability of test assets, primarily the Mobile Landing Platform with the Core Capability Set (MLP (CCS)). Testers collected effectiveness data from three FOT&E events, all with USNS *Millinocket* (JHSV 3). Testers collected suitability data derived from the maiden voyage maintenance records of USNS *Spearhead* (JHSV 1).
- The first two test periods, in June 2014 and October 2014, examined at-sea equipment transfers between JHSV and the MLP (CCS). The third FOT&E test period was devoted to launch and recovery of the U.S. Navy's Sea, Air, Land Team (SEAL) Delivery Vehicle (SDV).
- JHSV interoperability with MLP (CCS) is not operationally effective since, by design (ramp limitation), it can conduct vehicle transfers when conducted in sea states with significant wave heights of less than 0.1 meters (approximate a Sea State 1), which are normally found in protected harbors. I do not consider vehicle transfers inside a harbor as operationally realistic.
- JHSV is capable of launching the Navy SDV in sea conditions up to and including Sea State 3, but support boats required for a SDV mission are currently limited to Sea State 2 launches. The SDV portion of the FOT&E was limited to the SDV and did not include launch of the support boats since launch of these type boats was completed in IOT&E.



- JHSV is operationally suitable, although the demonstrated availability has decreased from 98 percent, reported in the IOT&E report, to 87 percent. The main drivers of ship unavailability were the Ship Service Diesel Generators, waterjets, and the Ride Control System (RCS).
- The RCS failures are a symptom of a more serious problem with the JHSV bow structure related to the ship's Safe Operating Envelope (SOE), which is designed to limit wave impact loads on the bow structure. The Navy accepted compromises in the bow structure, presumably to save weight, during the building of these ships. Multiple ships of the class have suffered damage to the bow structure, and repairs/reinforcements are in progress class-wide.
- Operating the ship outside of the SOE or encountering a rogue wave that is outside of the current sea state can result in sea slam events that cause structural damage to the bow structure of the ship. The operational restriction of the SOE is a major limitation of the ship class that must be factored into all missions. To utilize the speed capability of the ship, seas must not exceed Sea State 3 (significant wave height up to 1.25 meters). At Sea State 4 (significant wave height up to 2.5 meters) the ship must slow to 15 knots. At Sea State 5 (significant wave height up to 4 meters) the ship must slow to 5 knots. Above Sea State 5, the ship can only hold position and await calmer seas. The necessity of avoiding high sea states while transiting is an operational limitation.

Section 2399 provides that the Secretary of Defense may submit separate comments on my report, if he so desires. I have sent copies to him; the Under Secretary of Defense for Acquisition, Technology and Logistics; the Secretary of the Navy; the Vice Chairman of the Joint Chiefs of Staff; and the Chairmen and Ranking Members of the Congressional defense committees.


J. Michael Gilmore
Director

Enclosure:
As stated

cc:
The Honorable Peter J. Visclosky
Ranking Member



OPERATIONAL TEST
AND EVALUATION

OFFICE OF THE SECRETARY OF DEFENSE
1700 DEFENSE PENTAGON
WASHINGTON, DC 20301-1700

SEP 22 2015

The Honorable John McCain
Chairman
Committee on Armed Services
United States Senate
Washington, DC 20510-6050

Dear Mr. Chairman:


I have enclosed the report on operational testing of the Joint High Speed Vessel (JHSV) ship class. In the report I conclude the following:

- JHSV is a high-speed, shallow-draft surface vessel designed for intra-theater transport of personnel and medium payloads for the Joint Force. It is a redesign of a commercial catamaran capable of accessing relatively austere ports. Classified as a non-combatant, JHSV has limited self-protection capability.
- The events covered in this testing were not performed during the Initial Operational Test and Evaluation (IOT&E) because of the unavailability of test assets, primarily the Mobile Landing Platform with the Core Capability Set (MLP (CCS)). Testers collected effectiveness data from three FOT&E events, all with USNS *Millinocket* (JHSV 3). Testers collected suitability data derived from the maiden voyage maintenance records of USNS *Spearhead* (JHSV 1).
- The first two test periods, in June 2014 and October 2014, examined at-sea equipment transfers between JHSV and the MLP (CCS). The third FOT&E test period was devoted to launch and recovery of the U.S. Navy's Sea, Air, Land Team (SEAL) Delivery Vehicle (SDV).
- JHSV interoperability with MLP (CCS) is not operationally effective since, by design (ramp limitation), it can conduct vehicle transfers when conducted in sea states with significant wave heights of less than 0.1 meters (approximate a Sea State 1), which are normally found in protected harbors. I do not consider vehicle transfers inside a harbor as operationally realistic.
- JHSV is capable of launching the Navy SDV in sea conditions up to and including Sea State 3, but support boats required for a SDV mission are currently limited to Sea State 2 launches. The SDV portion of the FOT&E was limited to the SDV and did not include launch of the support boats since launch of these type boats was completed in IOT&E.



- JHSV is operationally suitable, although the demonstrated availability has decreased from 98 percent, reported in the IOT&E report, to 87 percent. The main drivers of ship unavailability were the Ship Service Diesel Generators, waterjets, and the Ride Control System (RCS).
- The RCS failures are a symptom of a more serious problem with the JHSV bow structure related to the ship's Safe Operating Envelope (SOE), which is designed to limit wave impact loads on the bow structure. The Navy accepted compromises in the bow structure, presumably to save weight, during the building of these ships. Multiple ships of the class have suffered damage to the bow structure, and repairs/reinforcements are in progress class-wide.
- Operating the ship outside of the SOE or encountering a rogue wave that is outside of the current sea state can result in sea slam events that cause structural damage to the bow structure of the ship. The operational restriction of the SOE is a major limitation of the ship class that must be factored into all missions. To utilize the speed capability of the ship, seas must not exceed Sea State 3 (significant wave height up to 1.25 meters). At Sea State 4 (significant wave height up to 2.5 meters) the ship must slow to 15 knots. At Sea State 5 (significant wave height up to 4 meters) the ship must slow to 5 knots. Above Sea State 5, the ship can only hold position and await calmer seas. The necessity of avoiding high sea states while transiting is an operational limitation.

Section 2399 provides that the Secretary of Defense may submit separate comments on my report, if he so desires. I have sent copies to him; the Under Secretary of Defense for Acquisition, Technology and Logistics; the Secretary of the Navy; the Vice Chairman of the Joint Chiefs of Staff; and the Chairmen and Ranking Members of the Congressional defense committees.


J. Michael Gilmore
Director

Enclosure:
As stated

cc:
The Honorable Jack Reed
Ranking Member



OPERATIONAL TEST
AND EVALUATION

OFFICE OF THE SECRETARY OF DEFENSE
1700 DEFENSE PENTAGON
WASHINGTON, DC 20301-1700

SEP 22 2015

The Honorable Thad Cochran
Chairman, Subcommittee on Defense
Committee on Appropriations
United States Senate
Washington, DC 20510-6025

Dear Mr. Chairman:

I have enclosed the report on operational testing of the Joint High Speed Vessel (JHSV) ship class. In the report I conclude the following:

- JHSV is a high-speed, shallow-draft surface vessel designed for intra-theater transport of personnel and medium payloads for the Joint Force. It is a redesign of a commercial catamaran capable of accessing relatively austere ports. Classified as a non-combatant, JHSV has limited self-protection capability.
- The events covered in this testing were not performed during the Initial Operational Test and Evaluation (IOT&E) because of the unavailability of test assets, primarily the Mobile Landing Platform with the Core Capability Set (MLP (CCS)). Testers collected effectiveness data from three FOT&E events, all with USNS *Millimocket* (JHSV 3). Testers collected suitability data derived from the maiden voyage maintenance records of USNS *Spearhead* (JHSV 1).
- The first two test periods, in June 2014 and October 2014, examined at-sea equipment transfers between JHSV and the MLP (CCS). The third FOT&E test period was devoted to launch and recovery of the U.S. Navy's Sea, Air, Land Team (SEAL) Delivery Vehicle (SDV).
- JHSV interoperability with MLP (CCS) is not operationally effective since, by design (ramp limitation), it can conduct vehicle transfers when conducted in sea states with significant wave heights of less than 0.1 meters (approximate a Sea State 1), which are normally found in protected harbors. I do not consider vehicle transfers inside a harbor as operationally realistic.
- JHSV is capable of launching the Navy SDV in sea conditions up to and including Sea State 3, but support boats required for a SDV mission are currently limited to Sea State 2 launches. The SDV portion of the FOT&E was limited to the SDV and did not include launch of the support boats since launch of these type boats was completed in IOT&E.



- JHSV is operationally suitable, although the demonstrated availability has decreased from 98 percent, reported in the IOT&E report, to 87 percent. The main drivers of ship unavailability were the Ship Service Diesel Generators, waterjets, and the Ride Control System (RCS).
- The RCS failures are a symptom of a more serious problem with the JHSV bow structure related to the ship's Safe Operating Envelope (SOE), which is designed to limit wave impact loads on the bow structure. The Navy accepted compromises in the bow structure, presumably to save weight, during the building of these ships. Multiple ships of the class have suffered damage to the bow structure, and repairs/reinforcements are in progress class-wide.
- Operating the ship outside of the SOE or encountering a rogue wave that is outside of the current sea state can result in sea slam events that cause structural damage to the bow structure of the ship. The operational restriction of the SOE is a major limitation of the ship class that must be factored into all missions. To utilize the speed capability of the ship, seas must not exceed Sea State 3 (significant wave height up to 1.25 meters). At Sea State 4 (significant wave height up to 2.5 meters) the ship must slow to 15 knots. At Sea State 5 (significant wave height up to 4 meters) the ship must slow to 5 knots. Above Sea State 5, the ship can only hold position and await calmer seas. The necessity of avoiding high sea states while transiting is an operational limitation.

Section 2399 provides that the Secretary of Defense may submit separate comments on my report, if he so desires. I have sent copies to him; the Under Secretary of Defense for Acquisition, Technology and Logistics; the Secretary of the Navy; the Vice Chairman of the Joint Chiefs of Staff; and the Chairmen and Ranking Members of the Congressional defense committees.


J. Michael Gilmore
Director

Enclosure:
As stated

cc:
The Honorable Richard J. Durbin
Vice Chairman