



U.S. Department  
of Transportation

**Federal Aviation  
Administration**

# NSP GB

National Simulator Program  
FSTD Qualification Guidance Bulletin

**NSP GB 18-01**  
**DATE: 08/11/2018**

Flight Standards Service  
Washington, DC

## [National Simulator Program Guidance Bulletin](#)

*An NSP GB contains valuable information for FSTD sponsors that should help them meet certain administrative, regulatory, or operational requirements with relatively low urgency or impact on safety.*

**Subject:** Flight Simulation Training Device (FSTD) Qualification for Offshore Standard Approach Procedures (OSAP), Airborne Radar Approaches (ARA), and Helicopter Enroute Descent Areas (HEDA).

**Purpose:** To provide guidance to sponsors for the evaluation of Offshore Standard Approach Procedures (OSAP), Airborne Radar Approaches (ARA), and Helicopter Enroute Descent Areas (HEDA).

**Background:** AC 90-80 provides airworthiness, training, and operational approval guidance for aircraft operators conducting over water instrument operations. OSAP, ARA, and HEDA are not considered special instrument approach procedures (IAP), therefore the appropriate term is “instrument operations.” These operations allow helicopters to make an instrument flight rule (IFR) enroute descent offshore within a specified area of operation. Upon reaching visual conditions, the pilot proceeds using visual references to a landing location to execute an offshore landing on an oil rig or platform. These instrument operations are approved by the Federal Aviation Administration (FAA) for individual operators and issued through OpSpecs or LOAs. Helicopter FSTDs specifically approved by the FAA for OSAP training may be used for any amount of required training.

<b>Revision</b>	<b>Description of Change</b>	<b>Effective Date</b>
0	Original.	08/11/2018

## **General Information**

The FSTD sponsor will request OSAP, ARA, or HEDA qualification by providing a Statement of Compliance using [NSP Form T056](#) and checking the appropriate “Requested” box on the current NSP Form T001A, Section 3b. Upon successful demonstration of the procedure during an initial, continuing, or special evaluation, the evaluating inspector will check the appropriate “Qualified” box and present the Combined Statement of Qualification to the sponsor.

## **Statement of Compliance**

The Statement of Compliance (SOC) is an affirmation from the Sponsor that the FSTD meets all requirements for navigational equipment and airborne radar with ground mapping mode as specified in AC 90-80. The SOC must stipulate that a pilot qualified in the type helicopter being simulated and familiar with OSAP, ARA, and HEDA; has evaluated the FSTD and found that the configuration and performance meet FAA requirements.

Sponsor must use [NSP Form T056](#) when adding this qualification for previously qualified FSTDs and NSP Form T025 for FSTDs seeking an initial qualification under 14 CFR Part 60. These forms may be obtained from the obtained the [National Simulator Program](#) website

## **Simulation Standards and Evaluation Criteria**

1. The FSTD used for OSAP, ARA, or HEDA training, testing, or checking must be an FAA qualified Level 6 (with a qualified visual system) or higher level.
2. The FSTD must replicate the required equipment configuration, as reflected in the Rotorcraft Flight Manual (RFM), specifically an airborne radar approved for OSAP, an IFR approved Global Positioning System (GPS) navigation receiver augmented by the Wide Area Augmentation System (WAAS) with an external course deviation indicator (DCI), or horizontal situation indicator (HIS) mounted in the pilot’s primary instrument scan, and a radio altimeter. When required to ensure positive identification of targets, a radar transponder beacon should be evaluated during the approval process. All equipment must be meet the requirements of AC 90-80.
3. The reference coordinate datum system used for all operations must be World Geodetic System 1984 (WGS 84) or North American Datum of 1983 (NAD 83).
4. The simulated airborne radar must contain a stabilized 120 degree/60 degree scanning antenna with scan rates no less than 12 per minute and 24 per minute respectively, contain an adjustable bright display, contain an alphanumeric display for selected ranges and azimuth markers, contain an indicated range error that does not exceed + 0.2 NM for display ranges of 5 NM or less, contain a lowest selectable range display of 2.5 NM and a range mark display of 0.5 NM increments or smaller, contain tilt control of + 15 degrees,

display a test pattern, be operable in the primary mode, be equipped with a fault monitor or self-test function.

5. Throughout its operation, the airborne radar antenna sweep must not be less than 120 degrees. Antenna sweep less than 120 degrees will limit the radar operator's ability to accurately observe and locate obstructions. Smaller sweep angles increase the possibility of premature loss of peripheral radar targets.
6. The sponsor must use an FAA approved procedure to an oil rig, platform, or ship at least five nautical miles (NM) from the nearest shoreline.
7. During the procedure, the maximum crosswind component is limited to 10 knots in order to achieve adequate airborne radar coverage.
8. While offshore landing areas (oilrigs, platforms, and ships) may be generic in nature, all structures must employ realistic visual scenes with established FAA heliport standards.
9. Simulator qualification for OSAP, ARA, or HEDA does not constitute Training Program Approval Authority (TPAA) approval for conducting training.
10. When qualifying an FSTD for an OSAP, ARA, or HEDA the sponsor must provide evidence to the NSP evaluator that the FSTD is equipped with, or sufficiently simulates, the current software versions or limitations.
11. The FSTD must have the ability to load the entire procedure to be flown from the onboard navigation database.
12. The FSTD must have the ability to verify the procedure to be flown through a review of the individual waypoints.
13. The navigation system must have the ability to monitor the achieved navigation performance and to alert the pilot when the RNP requirements are not being met (i.e. "UNABLE REQ NAV PERF", "NAV ACCUR DOWNGRAD", or other RNP messages during approaches).
14. The Instructor's Operating Panel must have the capability to induce the malfunction of an "UNABLE REQ NAV PERF" alert or other alert message that would cause a missed approach during the procedure (i.e. FMS failure, GPS failure, autopilot failure, etc.). The malfunction must appear realistic to the pilots.
15. The FSTD must provide a means to annunciate failures of any component of the system.
16. A missed approach must be executed when any one of the following events occur:
  - a. Visual reference with the landing site is not made at the MAP.

- b. Failure of the navigation system.
- c. Failure of the airborne radar.
- d. The approach target is lost from the airborne radar for one full sweep.
- e. When the radar operator determines the helicopter's track will not avoid all obstacles by at least 0.5 NM.

#### 17. Takeoff Minimums

- a. The takeoff visibility for offshore landing sites is ½ statute mile (SM) or lower if authorized by Op Specs or LOA. In the event that the takeoff is conducted from a facility without weather reporting, the flight crew may determine the available required visibility.

#### 18. Landing Minimums

- a. RA 200 feet and ¾ SM visibility.
- b. Barometric altitude 250 feet MSL and ¾ SM visibility if radio altimeter is not available.

### **Evaluation Procedure**

#### 1. Enroute Segment

- i. Special Authorization Required. WX Radar in ground mapping mode and GPS required.
- ii. Maintain MIA until departing the enroute fix.
- iii. Select a maximum of 1 NM CDE sensitivity when departing the enroute fix.

#### 2. Initial and Intermediate Segment

- i. Clear all obstructions by at least 0.5 NM laterally by radar after FAP inbound.

#### 3. Final Segment

- i. Proceed Visually to the Landing Site.
- ii. Maximum ground speed is 70 knots between FAP and MAP.
- iii. DPA (Not less than 2 NM from approach target), 500 MSL or no lower than barometric MDA adjusted for RASS.
- iv. Delta 30 degree heading at 1.1 NM from landing site.
- v. Altimeter source more than 5 NM but less than 75 NM increase MDA 5 feet for each NM beyond 5 NM.

#### 4. Departure and Alternate Segment

- i. Avoid radar targets by 0.5 NM laterally until reaching 900 MSL when making IFR departures.
- ii. When an offshore facility is designated as an alternate, use 800-2 instrument procedure alternate minimums or as approved by Op Specs, or LOA (Letter of Authorization).

5. Missed Approach Segment

- i. Delta 30 Degree OAP: Climb to 900 feet via the delta 30 degree heading, then climbing turn to 2000 feet, direct to the approach target within 10 NM and hold, 3 NM legs, or as directed by ATC.
- ii. Parallel Offset OSAP: Climb to 900 feet via the offset course, then climbing turn to 2000 feet, direct to the approach target within 10 NM and hold, or as directed ATC.
- iii. Hold over the approach target on the inbound course, 3 NM legs, maintain 2000 feet or as directed by ATC.

For question regarding this Guidance Bulletin or 14 CFR Part 60 Change 2, please call the FAA National Simulator Program at 404.474.5620.