

# SAFECOM\* SUMMARY

Apr - Oct 2016



BSEE's aviation hazard reporting culture continued to see improvement throughout the second half of FY16.

BSEE's 111 SAFECOM reports in the second half of FY 16 were up 185% over the first half of FY16 (60) and accounted for 38% of all DOI SAFECOM reports (second only to BLM's 116).

This is good news, not because of the sheer number of reports or the increase over the first half of FY16 but, because we are now seeing issues being reported regularly that had not been reported in the past and which allows us to mitigate those hazards before they can cause an accident (see discussion on Helideck Hazards pg 3).

Another way to evaluate our aviation hazard reporting program is to look at the number of SAFECOMs compared to the number of hours flown (exposure) as shown in Table 1.

Table 1

Semi Annual Period	Flight Hours	SAFECOMs	Flt Hrs/SAFECOM
Oct 1, 2015 - Mar 31, 2016	4186.2	60	69.8
Apr 1, 2016 - Sep 30, 2016	5106.9	111	46.0

NOTE - The lower the ratio between flight hours and SAFECOMs indicates better hazard reporting.

The SAFECOM process has resulted in enhanced troubleshooting and maintenance actions, and changes to our vendor's SOPs. It has also resulted in changes to BSEE contracts, aviation plans, and training.

**SAFECOM Breakdown.** As we have seen in past years, most SAFECOMs in the second half of FY16 document maintenance deficiencies (87%) followed by human factors (6%) and environmental factors (7%).

Similarly, electrical and instruments issues continue to account for the majority of maintenance issues (41% and 10% respectively) which is not surprising given the salty, humid environment in which these sophisticated, electronic-laden, aircraft operate.

Many SAFECOMs that reported problems with an aircraft's engine, transmission, fuel, or hydraulic systems actually were electrical issues such as faulty transducers, broken or chaffed wires, or moisture affecting connectors. Due in part to improved hazard reporting and BSEE's frequent follow up on SAFECOMs, our aviation service providers are increasing their maintenance oversight and focusing on actions to prevent these electrical issues from interrupting our missions.

For example, BSEE's Aviation Service Provider in the Gulf of Mexico recognized that moisture is affecting canon plugs and chip detector wiring and has since published Engineering Orders for the A119 and A109 aircraft models to minimize the false indications due to the salty/humid environment.

Figure 1

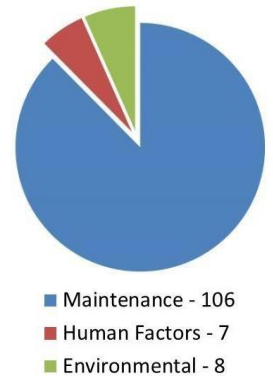
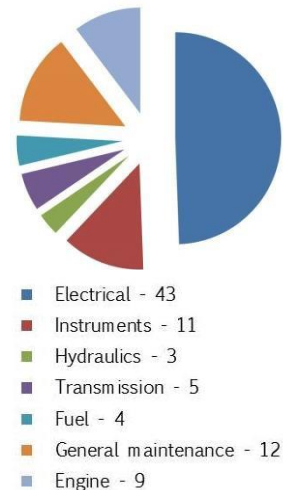


Figure 2



\* **SAFECOM** refers to DOI's voluntary aviation hazard reporting program. A SAFECOM report is used to report any condition, observation, act, maintenance problem, or circumstance with personnel or the aircraft that has the potential to cause an aviation-related mishap.

# Case Study – Doors and Windows



The second half of FY16 saw two types of hazards that pose a significant risk to BSEE personnel; door and window security and, hazards associated with helidecks. The good news is that our reporting system is alerting us to these threats and giving us the opportunity to address them.

**Overview.** The second half of FY16 BSEE continued to see a disproportionate number of problems (8) with door/window security or maintenance when compared to the rest of DOI (1). To put this problem into perspective, between FY13 and FY16 BSEE reported 30 door/window events while the rest of DOI only reported 5 helicopter door/window

events. Table 2 suggests that these types of incidents are increasing in BSEE. However, no events have been reported to date in FY17.

Table 2

FY13	FY14	FY15	FY16
4	5	8	13

In the last six months of FY16, the majority of these events were due to mechanical issues while the rest were associated with human performance (e.g., not properly securing a door) or decision making/risk tolerance (e.g., choosing to fly with a broken door handle).

**Actions Taken.** Analysis of the individual events indicates that there is no single mechanical or procedural problem contributing to this issue. Therefore, it is likely that there will not be one mitigation action. BSEE and our vendors are working along several fronts to address the continuing problems with doors/windows.

- **Maintenance.** BSEE’s Aviation Service Provider in the Gulf of Mexico has issued maintenance directives for special inspections of Agusta cockpit doors and windows (July 2016) and inspections of AS350 door latch strike plates (September 2016). Since implementation of these special inspections there have been no recurrences of those issues.
- **Policy.** BSEE added to the new Gulf of Mexico aviation contract the pilot’s responsibility for addressing door/window security during pre-flight briefings.
- **Education/Awareness.** BSEE’s Aviation Service Provider in the Gulf of Mexico issued an Operations Alert on Door Closure Assurance and Checklist Usage (July 2016) to re-emphasize the pilot’s responsibility for door/window/cargo security. Incidents with doors/windows are also addressed during monthly aviation safety meetings and during BSEE’s annual Inspector’s Workshop.
- **Oversight/Management.** A working group consisting of BSEE, Office of Aviation Services, and our aviation service provider has been established to review door/window incidents and develop corrective actions.

Figure 3



Figure 4



# Case Study – Helideck Hazards



**Overview.** Evidence of improved hazard's recognition and an improving quality in the content of BSEE's SAFECOM reporting are the reports we have received for obstructions on helidecks and various procedural errors by operators and pilots that compound those hazards. Examples of the types helideck hazards reported in the second half of FY16 include:

**May 26.** A pilot did not check NOTAMs (Notices to Airmen) and landed to a closed helideck that was not properly marked. ([16-0263](#))

**July 6.** After landing near the edge of a helideck (rather than in the aiming circle), the pilot found a vent pipe four feet from the tail rotor (fig 1). ([16-0503](#))

**July 19.** During an unannounced inspection, a pilot landed before seeing a flashing red light indicating that the helideck was closed. ([16-0604](#))

**August 6.** After landing on an unmanned facility, the pilot noticed a section of helideck skirting was missing and the three metal retaining bars bent upward with the closest metal bar only eight inches from the tail rotor ([16-0734](#))

**August 15.** A pilot on a non-BSEE flight noticed some retaining bars for the helideck skirting that were not secured and posed a hazard. He reported it to the Operator who repaired the helideck.

None of these events resulted in any damage or injury, and each could have been quietly ignored with no embarrassment for the pilot (but a lingering hazard for someone else to discover). Fortunately, our people have the courage, and trust in the system, to step up and say something when they see something.

For a full description of each event see the links to the individual SAFECOMs or go to [www.safecom.gov](http://www.safecom.gov). In August, BSEE published [BSEE Safety Alert 322](#) which summarizes these events and provides recommended actions for facility operators and pilots. BSEE also shared these lessons learned with industry via briefings for the Oil and Gas Industry and the Helicopter Safety Advisory Conference.

Figure 5

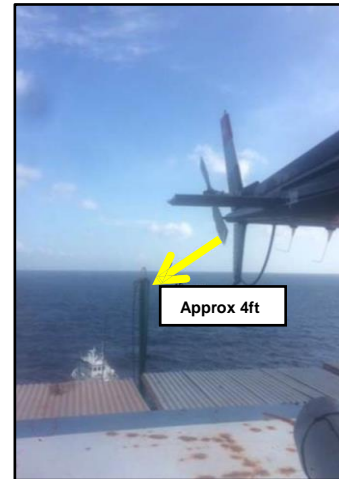
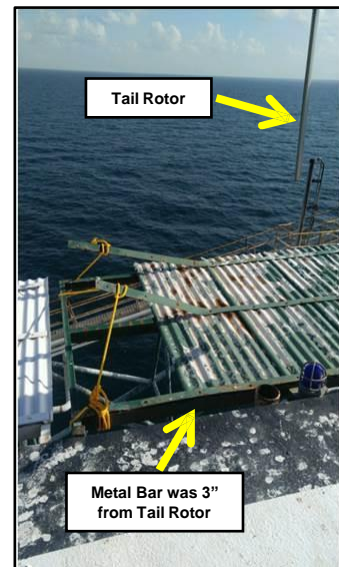


Figure 6



For questions concerning this SAFECOM Summary or the BSEE Aviation Safety Program, contact your supervisor or the BSEE Aviation Safety Manager  
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