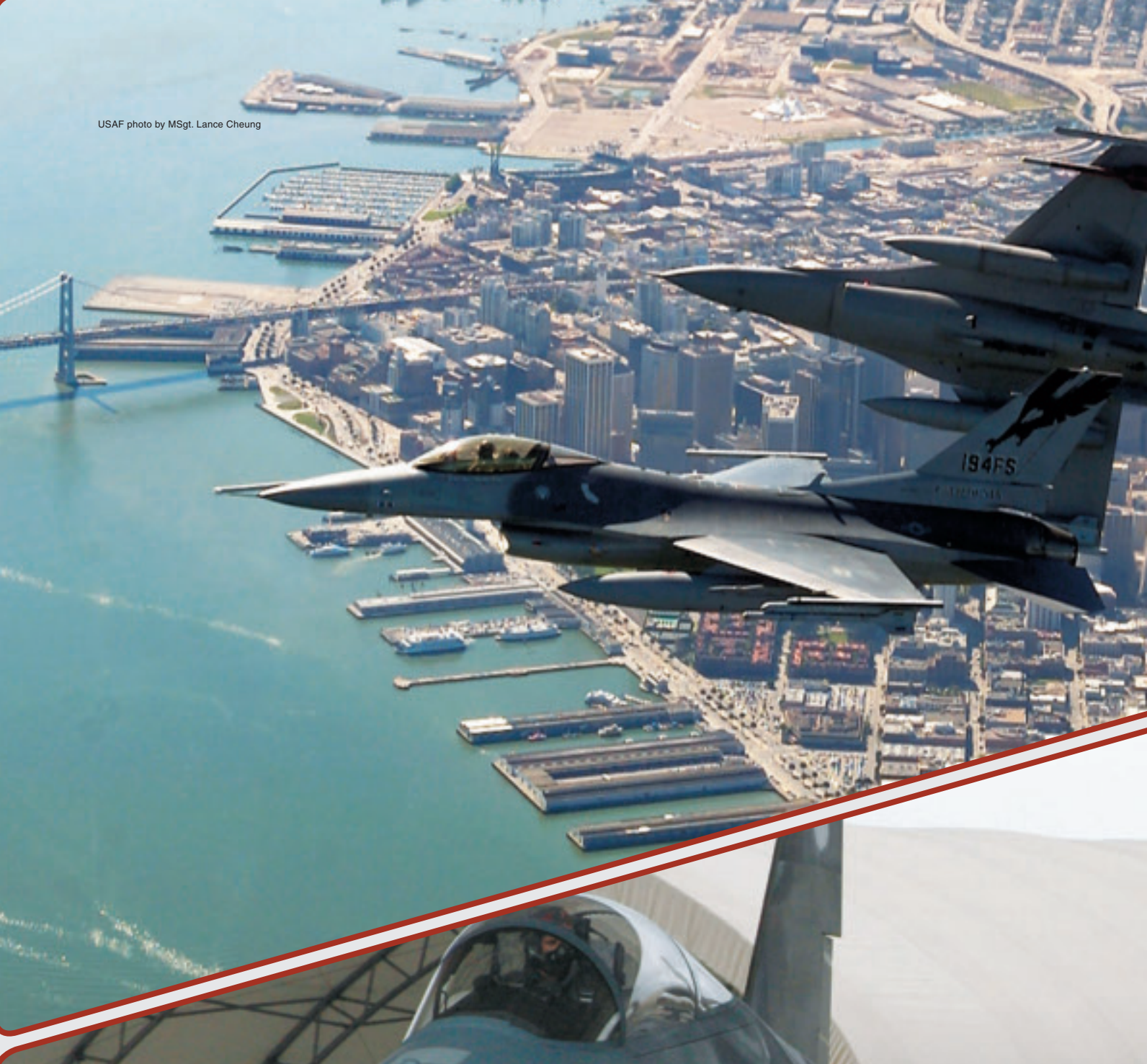
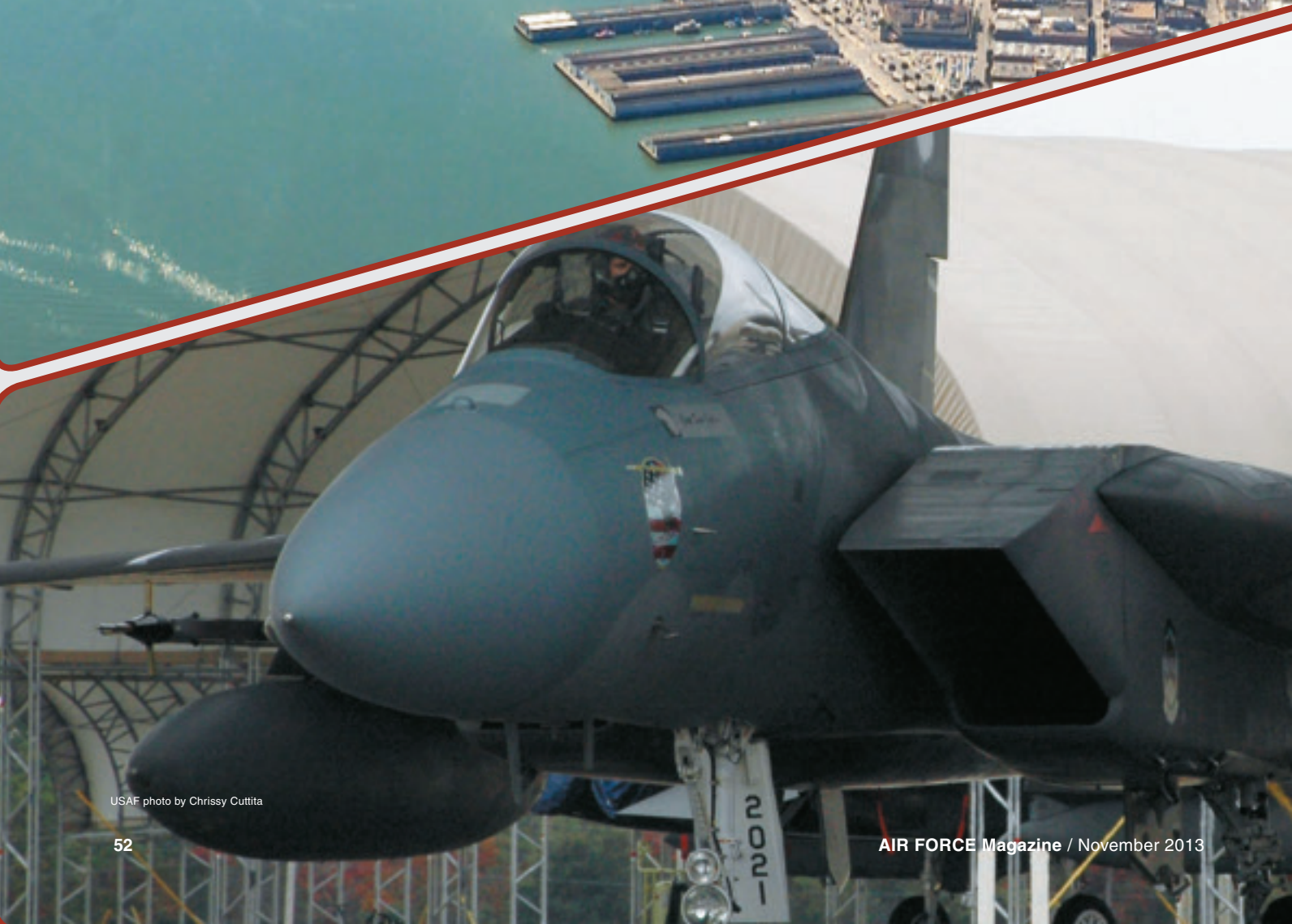


USAF photo by MSgt. Lance Cheung



USAF photo by Chrissy Cuttita

Noble Eagle Flies On

By John A. Tirpak, Executive Editor

The Iraq war is over. Afghanistan is ending. Operation Noble Eagle must continue.

Even after the US withdraws the last of its combat forces from Afghanistan a little more than a year from now, one major military effort undertaken in the wake of the 9/11 attacks will continue with no end point in sight: Operation Noble Eagle, the mission keeping America's skies safe from aerial attack.

Launched on Sept. 14, 2001, ONE has evolved from a series of ad-libbed defensive measures to a refined, relentlessly practiced, and—so far—100 percent effective enterprise. Noble Eagle ranges from national command and control efforts down to individual fighter and helicopter intercepts, aimed at ensuring that no unauthorized aircraft even gets close to—let alone threatens—national targets or heavily populated events.

Thousands of aircraft intruding in restricted airspace have been intercepted, challenged, and diverted. The mission has evolved and continues to do so, but like any other mission conducted by the US military, it's under scrutiny as sequester tightens the nation's purse strings.

The budget sequester, which went into effect on March 1, hasn't had "a day-to-day impact [on] Operation Noble Eagle," said Steven Armstrong, chief of North American air defense operations at NORAD, in an interview. The Air National Guard, carrying the bulk of the mission on behalf of NORAD and the US Air Force, had flexibility in how it allotted its flying hours during the first few months of sequestration, when dozens of Active Duty Air Force squadrons were grounded or limited to only the most basic proficiency flying.

However, with senior leaders "looking very seriously at mission, risk, and at dollars, I would certainly think" that changes to ONE, driven by budget, are "not off the table," said Armstrong, who has been involved with NORAD air security operations since before 9/11.

Even so, "it's an open-ended operation," Armstrong said. "It says that very specifically in the operation itself and in the execution order."

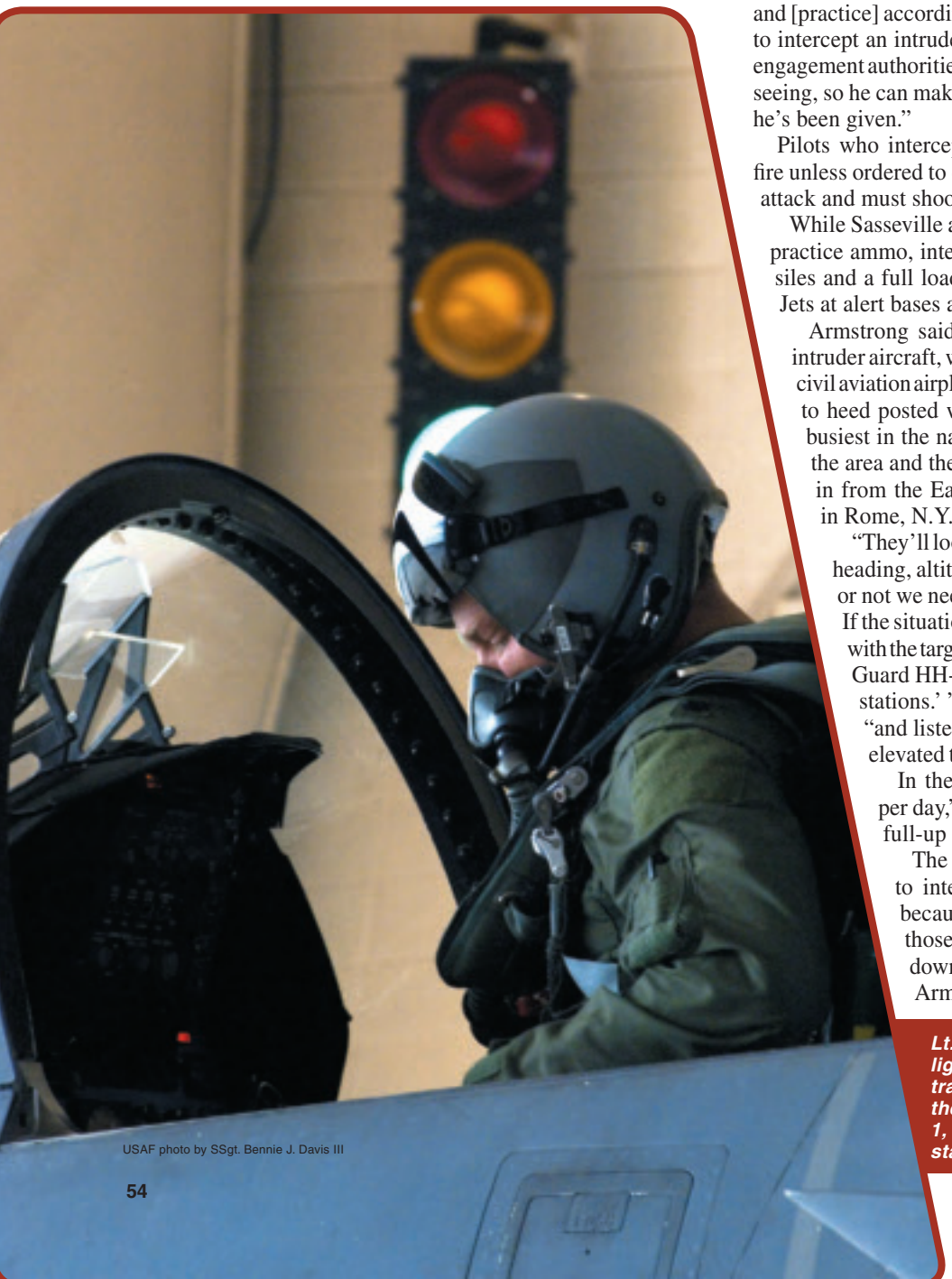
Though neither USAF nor NORAD will officially comment on ONE operational numbers, there are about 16 bases where aircraft sit alert for ONE intercepts. These sites include JB Elmendorf-Richardson, Alaska—whose F-22 fighters are the only Active Duty unit in ONE—and JB Pearl Harbor-Hickam, Hawaii, controlled by US Pacific Command rather than NORAD. Specific numbers of people dedicated to the mission are also not released.

Above left: Two F-16s begin a roll over San Francisco during an Operation Noble Eagle mission in 2004. Left: A crew chief marshals an F-15 during a 2008 Noble Eagle training exercise at Eglin AFB, Fla.

"On Day 1, we were making things up as we went along," said Brig. Gen. Marc H. Sasseville, commander of the D.C. ANG's 113th Wing at JB Andrews, Md. His Guard unit provides F-16s to protect some 34 miles of airspace around the National Capital Region (NCR) surrounding Washington, D.C. Sasseville, then a major, happened to be the flight lead for the first two-ship of F-16s launched from Andrews to respond to the 9/11 air attack on D.C. On that day, he and fellow Air Guard pilot 1st Lt. Heather Penney scrambled, expecting to intercept United Flight 93. United Flight 77 had already hit the Pentagon.

In the confusion of that morning, no one in the Federal Aviation Administration or the national military chain of command knew Flight 93 had already crashed in Shanksville, Pa., and that no more hijacked airliners were inbound to Washington.

The situation raised the uncomfortable question, though, about who could order a civilian airliner shot down if it posed a real threat. Ultimately, orders descended from then-Vice President Richard B. Cheney to fire if the situation presented itself, but the scenario was so novel and unexpected that it had scarcely been discussed and procedures didn't exist.



USAF photo by SSgt. Bennie J. Davis III

In the days after 9/11, "we had some experts from 1st Air Force in the Northeast Air Defense Sector come down [to] help us with our procedures and definitions," Sasseville said. In the intervening years, those procedures have been refined, and constant exercises practice the system.

"The facilities have gotten better over time; the communications, redundancies—technology's obviously helped out a great deal," Sasseville reported. Now "we have an operation that is much more efficient than it ever has been. So it's really been a joy to watch and develop and get better … almost every day, really," he said.

Various Stages of Reaction

The issue of who can order an airliner shot down is no longer ambiguous and no longer rests with the highest levels of government, Armstrong said.

"That has been codified to the nth degree," he asserted.

"We have what are called 'engagement authorities,'" he said, who are at regional air defense centers. "All the folks who are in the chain of command for that have been trained accordingly and [practice] accordingly, on a regular basis." Aircraft vectored to intercept an intruder perform as the "eyes and ears of those engagement authorities … and draw him a picture of what they're seeing, so he can make a cogent decision on all the information he's been given."

Pilots who intercept intruder aircraft have no authority to fire unless ordered to do so or unless they themselves are under attack and must shoot in self-defense.

While Sasseville and Penney took off with mostly harmless practice ammo, interceptor F-16s today are armed with missiles and a full load of 20 mm cannons for any eventuality. Jets at alert bases are maintained in ready-to-go condition.

Armstrong said there are various stages of reaction to intruder aircraft, which are almost always small Cessna-like civil aviation airplanes that have wandered off course or failed to heed posted warnings. In the NCR, for example—the busiest in the nation because of the high-value targets in the area and the heavily congested airspace—calls come in from the Eastern Air Defense Sector, headquartered in Rome, N.Y.

"They'll look at a TOI—a track of interest—look at its heading, altitude, airspeed, etc., and figure out whether or not we need to respond to it," Armstrong explained. If the situation can't quickly be resolved over the radio with the target's pilot, fighters or—increasingly—Coast Guard HH-65 Dolphin helicopters can "go to 'battle stations.' " There, pilots will go out to their aircraft "and listen to the radio to see if they're going to be elevated to runway alert or to a scramble … status."

In the NCR, "they average almost two events per day," he said. Nationwide, there are about 135 full-up scrambles per year, he stated.

The Coast Guard helicopters are better suited to intercept low and slow small civil aircraft because their speed is more compatible with those types. "The F-16 has a hard time slowing down to chase guys who are going 100 knots," Armstrong noted.

Lt. Col. Michael Birkeland has a green light for takeoff in an F-15 during an ONE training exercise in 2007. Birkeland was then the commander of the 125th FW, Det. 1, which is on continuous 24-hour alert status for ONE.

Vigilant Eagle: Cooperating With Russia on Airspace Control

USAF photo by TSgt. Thomas J. Doscher

A Russian air force airborne warning and control aircraft taxis past the the Russian "track of interest" aircraft, an Il-62M, on the second day of Vigilant Eagle 2011.

When fighters are scrambled out of Alaska to intercept an aircraft, the intruder is usually a Russian Bear bomber on a less-than-friendly mission to test the North American Aersopace Defense Command system. But when it comes to possible terrorist-seized airliners, Russia and NORAD are getting well-practiced at cooperation.

In late August, Russia, the US, and Canada concluded their fifth Vigilant Eagle exercise since 2003. The drill practiced procedures between Russia and NORAD to deal with an airliner hijacked in Russia and flown toward the United States, and vice versa.

Sometimes run as simply a command-post event, this exercise featured live-fly elements, including Russian Su-27 Flanker and Canadian CF-18 Hornet interceptors, flying alongside aircraft simulating a hijacked airplane, and a visual handoff between nations within shared airspace.

The new visual handoff element took place "without a hitch," said Maj. Gen. André Viens, the Canadian officer who is NORAD's director of operations.

In a press conference at the conclusion of the exercise, Viens said it was the first time such a handoff had happened. The drill was the payoff for more than a year of preparation, he reported.

The exercise series has "developed and refined tactics, techniques, and procedures to effectively notify, coordinate, and conduct positive handoff" of terrorist-hijacked aircraft, he said.

Outbound, the putative hijacked aircraft, standing in for a 757 airliner, was intercepted by the CF-18s near Denali National Park in Alaska and handed over to the Flankers at the edge of American airspace. Although the CF-18s monitored the jet at a distance, the Flankers flew close formation with it all the way to a Russian Federation Air Force (RFAF) base in Anadyr, Russia.

Air Force E-3 AWACS and Russian A-50 airborne command post aircraft participated, and aerial refueling was also practiced. The process then was repeated in reverse, with the erstwhile terrorist-seized airplane originating in Russia.

A NORAD command post in Anchorage, Alaska, and a Russian site at Khabarovsk, located in that nation's Far East military district, were involved in coordinating the action.

Participants from both sides were at all locations, according to RFAF Maj. Gen. Dmitry V. Gomenkov. Speaking through an interpreter at the press conference, Gomenkov said all the exercise objectives were met, adding he hoped the next Vigilant Eagle exercise will permit "more interesting and complicated" scenarios.

Planning meetings start this month.

Gomenkov said Russia takes the threat of terrorist hijackings seriously. Answering a reporter's question, he said "at no time" was there any thought of canceling the exercise because of recent friction between Russia and the US about Syria or the Edward Snowden National Security Agency leaks affair.

Communication with the intruder is established either by radio or hand signals. Depending on the severity of the encroachment, the offender may be escorted to an airfield, required to land, and interviewed by federal authorities who go out to meet the airplane. Sometimes, a summons is issued.

Training for the Noble Eagle mission is different from what F-16 pilots get at their schoolhouse, Sasseville pointed out.

"We have a separate training syllabus" developed at the base that walks the pilot through various scenarios, procedures, radio calls, and interaction with the FAA unique to the region. These skills are not practiced by Active Duty F-16 pilots, he said. The training is updated as procedures are refined.

In the 12 years of ONE, there have been no real-world potential kamikaze attacks, Armstrong said.

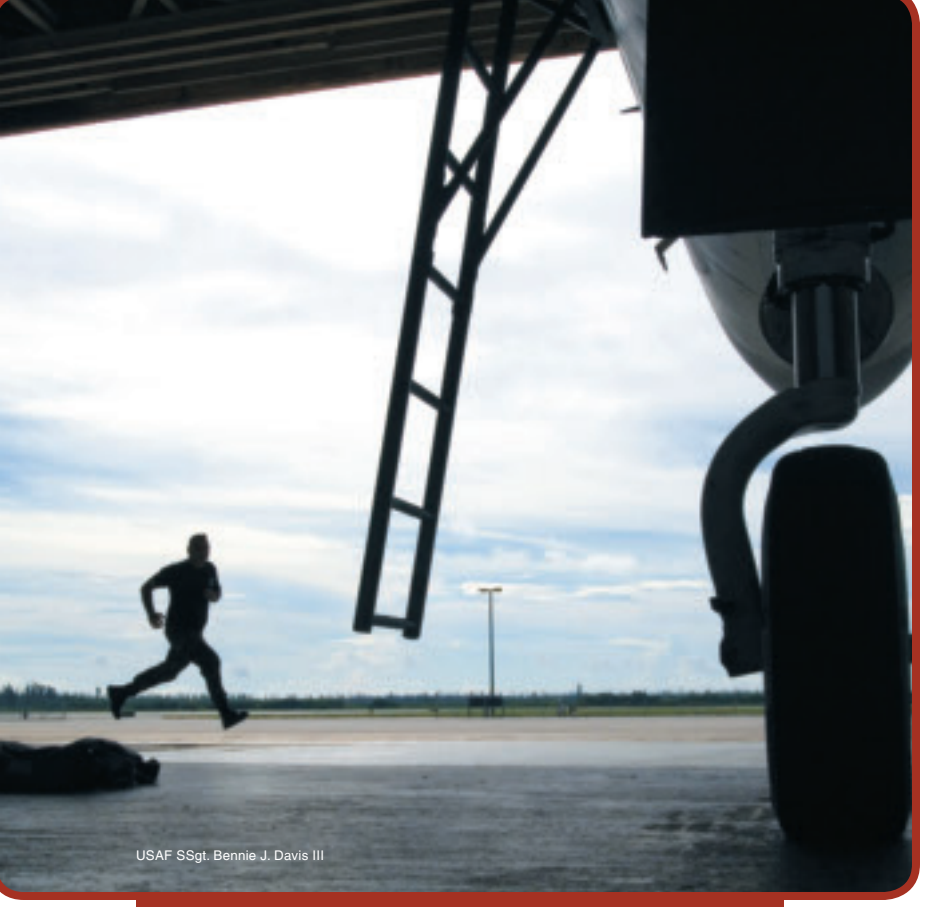
Restricted airspace is not always fixed. There are National Special Security Events, such as a presidential visit to an area—that ups the level of alert and the radius of restricted airspace.

There are also separate events rated by a system called SEAR—a Special Events Assessment Rating—such as the Super Bowl, that may warrant similar restrictions.

The Noble Eagle mission is exercised routinely. In the busy capital area, there are frequent Falcon Virgo exercises. Armstrong called them "one of the best training events we do, because it is a live-fly event where we have real, no-kidding tracks of interest."

An aircraft flown by the Civil Air Patrol acts as a surrogate target aircraft and allows NORAD to "exercise our enterprise to make the tactical and operational-level decision, intercepts, and inspections, and then go through the process of assessing intent and doing the entire joint engagement sequence."

Sasseville said Falcon Virgo involves the entire chain of command, "all the way back up through the air defense sector to the … Continental North America Region, up to NORAD. The FAA gets involved, too, and we've got the Coast Guard. ... It basically tests the entire system."



USAF SSgt. Bennie J. Davis III

Crew chief SSgt. Thomas Fitzgerald sprints to his F-15 after an alert alarm at Homestead ARB, Fla., in 2007.

The exercises typically are flown late at night to avoid disrupting traffic at the three nearby national airports, he said. "The skies are clearer and we have a little more freedom to maneuver."

A similar exercise, Fertile Keynote, also uses CAP light aircraft and F-16s.

[For more on Fertile Keynote, visit www.airforcemag.com, search "Capital Defenders."]

Though most of the Noble Eagle alert sites are on the coastal areas of the US, some are in the interior, Armstrong said, to guard against homegrown air attacks.

It's Personal

However, the ONE air mission is not only oriented toward a terrorist threat. The Air Force continues to monitor the skies and perform intercepts when other countries—notably Russia—fly military aircraft up to the edge of US airspace. These encounters typically happen in the Arctic region, and the Russian aircraft are usually met by F-22s from Elmendorf.

"That's the air sovereignty piece," Armstrong said. "We like to know who's flying our airspace."

The name of the mission shifted in recent years. It used to be air sovereignty alert, but without fanfare was changed to aerospace control alert (ACA) to better reflect the scope of the mission, now inclusive of the foreign and domestic intercepts alike.

Although it occasionally happens that NORAD is asked to assist the Department of Homeland Security with a drug enforcement situation involving aircraft, that occurs rarely, Armstrong reported.

Sasseville said he thinks the ONE mission is ideal for the Air Guard. For the D.C. Air Guard, specifically, it's also personal.

"We all live in the target area," he observed. "Our families, our relatives, our extended families, our employers, … so we're very interested in not only defending the country and defending the National Capital Region and the seat of government, but our families."

Both Armstrong and Sasseville said the number of alerts and scrambles is trending down. Although the D.C. ANG alone has scrambled more than 4,000 times, most of those were in the early years of the operation. It isn't clear why the number is declining; it may be that civil aviators are getting more cognizant of restricted airspace rules.

The search for better procedures, greater efficiency, and newer technologies to ensure a no-fail outcome will go on, Sasseville said.

"As technology improves, we'd be looking for improved weapon systems [and] improved information transfer capability. I think the procedures are good as they exist right now. ... We're as effective as we possibly could be, today, and we're always looking to the future to hone our skills and [use] technology to our advantage."

The adaptability of the enemy is one reason the ACA mission will probably continue, Sasseville said. "The enemy's continuing to look for seams in our operation," he commented. "Until that ceases—which I don't predict [will be] anytime soon—we'll continually evolve to match." ■

An F-22 takes off from Langley AFB, Va., in 2006 on a Noble Eagle mission.

USAF photo by SSgt. Samuel Rogers