

CASE STUDY

Advantages of Intellitrol®2 in Aviation Applications



FOR MORE INFORMATION:

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NFPA 407 COMPLIANCE – OVERFILL PREVENTION, BONDING & DEADMAN CONTROL

ABSTRACT

The National Fire Protection Association (NFPA) updated regulatory requirements for aviation fill stands (fuel racks) and refuelers (tank trucks) to improve safety for operators, reduce risks of environmental release (fuel spills), and eliminate liability incidents such as fires or human injury. The new requirements include:

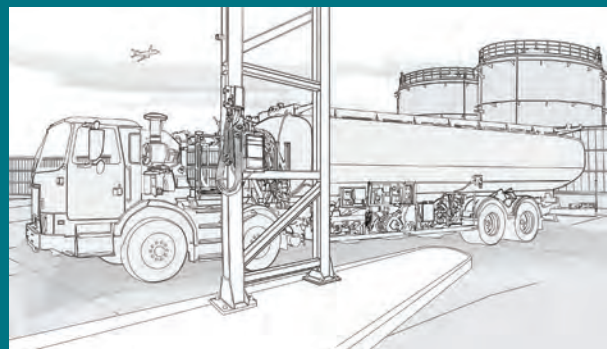
- Two-level overfill protection on refuelers and fill stands
- Bonding (preventing sparks or arcs in a combustible atmosphere)
- An operational deadman switch to ensure constant human monitoring of the vehicle during the filling process

These facility upgrades, which must be completed by June 2021, will be enforced by the Federal Aviation Administration, fire marshals, local airport authorities, and/or insurance companies. Although several systems meet NFPA 407 standards, the Scully Intellitrol®2 and associated refueler equipment is the optimum upgrade solution.

EVOLUTION OF FUEL STANDARDS

Commercial, freight, and corporate/private flights have expanded greatly over the last 50 years. Throughout the country, this growth has increased demand for distribution of fuel (avgas and jet fuel) and created needs for safe, efficient storage of fuel and loading into tank trucks to refill aircraft.

The NFPA developed fuel standards for airports beginning in 1966, with 15 revisions to the specific 407 regulatory language, assessing appropriate evolving technologies. Approximately 5,000 airports need to meet these standards (commercial, fixed-based operators [FBO], municipal airports, freight-only facilities). However, some of these airports have alternate fueling systems (hydrant style) or are already compliant, leaving about 2,000 that need to upgrade.



CHALLENGES

For airports seeking to upgrade, the situation at hand provides a unique set of challenges beyond budget and schedule compliance, including:

Various Upgrade Paths

The wide variation of equipment currently installed at the facility allows for multiple ways to upgrade.

Regulation Confusion

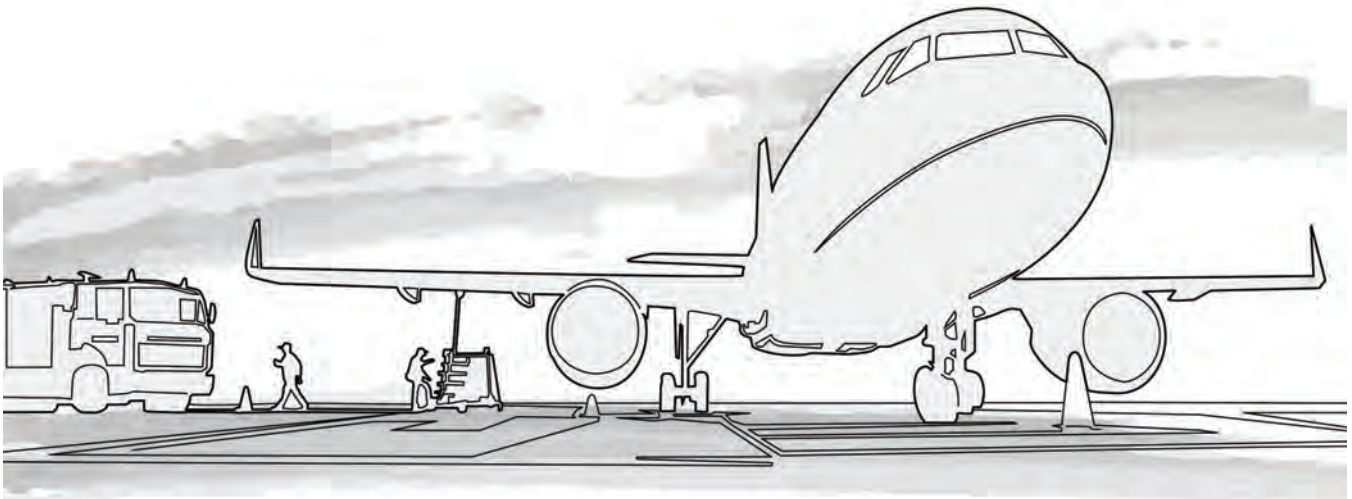
One of the most pervasive hurdles is a general misunderstanding of the regulations and erroneous speculations about the cost of upgrades, which may lead to a resistance or delay in complying.

Contractor Capability

It is also difficult to find contractors capable of performing necessary work on both refuelers and fill stands. Most are specific to either refuelers or fill stands, averting a one-source, “turn-key” quotation.

Cheap Workarounds

Understandably, many single-site operators want to fulfill regulatory obligations in the least expensive manner possible. They may settle for overfill-only solutions, maintaining existing bonding systems (clamp and cable on reel that does not provide positive shutdown if in non-working condition). Some reuse the existing deadman switch, which yields three separate and distinct systems (overfill, bonding, deadman switch) to maintain, test, and troubleshoot.



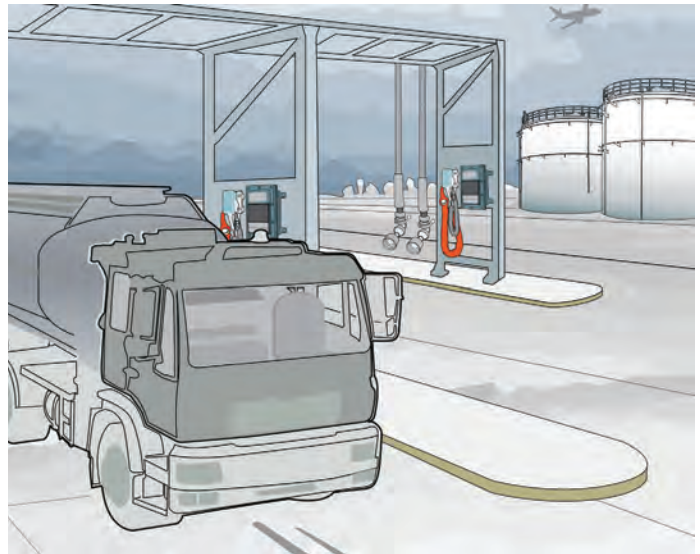
Scully offers a consultative approach to NFPA 407 compliance for tailored, turn-key solutions.



SOLUTIONS

Scully offers several options to meet the regulations. As most of the refuelers have single compartment tanks, Scully's ST-15 can provide an additional sensor for primary overfill detection (existing jet-level sensors become secondary). The ST-15 combined with an ST-47 (bonding) with deadman switch, can meet regulatory standards.

The Intellitrol®2 can provide all requirements in one unit: overfill, bonding, deadman switch.



KEY BENEFITS

The Intellitrol®2 meets current regulations with user-friendly functionality. A robust display offers easy-to-see safety indicators, error messages, and diagnostic features. Intellitrol®2 also has remote communication capability for future advantages. One unit, instead of multiple, makes servicing and/or repair easier and more efficient, reducing total cost of ownership.

The Intellitrol®2 is a user-friendly, all-in-one solution for complying with NFPA 407.

IMPLEMENTATION

Scully employs a consultative approach to resolving each customer's unique needs. This includes a site survey, equipment determination, project scope, and costs to deliver a turnkey proposal. As each facility is controlled by a variety of entities—city, private, chain FBO, franchise, etc.—Scully adapts processes to address and satisfy requirements particular to each situation. Scully's aim has been to streamline the sales cycle to accommodate timelines to be met within the regulation parameters (depending on when the agreements are started).

SUMMARY

Multiple systems are available to aviation facilities upgrading to comply with new NFPA 407 regulations. Scully offers a variety of industry-leading solutions and a consultative approach for overfill prevention, bonding, and deadman control. Chief among these is the Intellitrol®2, which provides a user-friendly, all-in-one solution for safe, efficient operations.



For more information on Intellitrol®2 and other Scully systems, visit www.scully.com or click below:

[Intellitrol®2 Webpage](#)

[Intellitrol®2 Datasheet](#)

[All Scully Product Resources](#)



Scully Signal Company has over 30 years of Overfill Prevention Systems and electronic liquid handling experience providing the ultimate dependability, service, and safety. How can we help you better handle your terminal equipment, overfill prevention, grounding, and safety needs?

Contact us now to explore your options.

To learn more, visit: www.scully.com

For product information, call: 1-800-272-8559

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