Operations Bulletin

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Bulletin 95 | Driver Controlled Deliveries | Oct 2016

Background

It is increasingly common practice for the drivers of road tank cars (road bridgers) delivering aviation fuel to airports to carry out quality checks on the fuel and to control the delivery of fuel into storage unsupervised by depot staff. This type of operation is known as Driver Controlled Delivery (DCD).

The greatest risk associated with DCD is the possibility of an incorrect grade of fuel being discharged into airport storage. Examples of this include, but are not limited to, Jet Fuel into Avgas storage, Avgas into Jet Fuel storage, Heating Oil into Jet Fuel Storage and Jet Fuel into Jet Fuel + FSII storage. If undetected, such an error could result in a serious flight safety incident.

Purpose

The JIG Standard has for many years included requirements that shall be observed for Driver Controlled Deliveries. The purpose of this bulletin is to clarify and re-emphasise the importance of these mandatory JIG requirements.

With a traditional road tank car receipt at an airport the depot staff carry out quality checks on the fuel to ensure that it is the correct grade, is free from visual contamination and water and that it is from the batch identified on the Release Note. These checks provide an independent verification. In the case of DCD this layer of protection is eliminated.

JIG 2 Section 4.7 Requirements

To compensate for the loss of an independent quality check being carried out at the airport, three additional mechanical barriers are mandatory for road tank cars being used for DCD. They are:

- The road tank car shall be dedicated.
- The road tank car shall be bottom loaded.
- The road tank car shall be loaded and discharged using a grade selective system (for example, grade selective couplings).

Grade Selective Systems

Grade selectivity can be achieved by the use of grade selective couplings which are modified to include a slot and pin or slot and lug arrangement. This applies to both 2.5" international standard bayonet adaptors and 4" API coupler systems – further details are available in EI 1542 *Identification markings for dedicated aviation fuel manufacturing and distribution facilities, airport storage and mobile fueling equipment – Section 10 Mechanical Coding.* Alternatively, the use of a unique coupling arrangement that is used only for the Aviation Fuel type being handled may afford adequate protection. A grade selective system may also be achieved through the use of a bonding system that incorporates pins and slots. Any grade selective system has to be common to all applicable loading and discharge locations.

Section 4.7 also requires: (*red text in italics is added to clarify current requirements in more detail*)

- To ensure that the driver is in constant attendance *of the vehicle whilst in transit between the supplying location and the airport* the normal journey time from the supplying location and the airport shall be less than 4 hours. *The vehicle may be parked in a secure location for short periods of time to facilitate driver rest breaks but* shall not be parked overnight *after leaving the supplying location*.
- The offloading facility shall be equipped with a deadman of a type that requires periodic action by the driver to maintain the flow.
- Receiving tanks shall be fitted with a high level alarm system that shuts down the fuel flow.

Electronic densitometers meeting IP 559 that convert density readings to density at standard temperature should be used because of their ease of use and accuracy.

The scope of the additional tasks to be performed by the drivers shall be clearly identified and specific written procedures prepared. *Drivers shall record the additional checks they perform. This should include recording the depot receipt filter dP observed during discharge (re-settable maximum reading indicators on dP gauges may be acceptable at some locations as an alternative).* All drivers authorised to perform DCD shall receive training in the additional tasks to be performed and the training shall be recorded. *The training material shall be aligned with the written procedures and should be delivered by or, as a minimum, approved by staff at the receiving location. Drivers should be familiar with the location of alarm systems and training in the location's emergency procedures shall also be given.* The receiving location shall maintain records of the training provided and shall only allow access to those drivers who have been trained.

Before tank release, the airport depot staff shall compare the observed density at the standard reference temperature with the expected value based on the known batch densities of the receipts made into the tank. If the observed and expected densities differ by no more than 3.0 kg/m3, then the tank can be released.

If the observed density differs by more than 3.0 kg/m3 from the expected value, there could be a problem and the matter requires further investigation. The first possibility to check is whether there is layering in the tank. To check this possibility, repeat the Control Check on Upper, Middle and Lower Samples. If there continues to be a difference between observed and expected densities, then the tank shall be quarantined until the disparity has been explained

Random checks by a responsible person at the receiving location should be performed at least quarterly, *and the checks recorded,* to ensure that agreed procedures are followed.

Additional Controls and Security

Driver Controlled Delivery operations require the agreement of the senior management of the receiving location and, at JIG inspected locations, the approval of all participants shall be recorded.

Records of initial and refresher training provided by the airport depot to the authorised DCD drivers shall be available to view during inspections. New drivers should not be allowed access to the depot for training until their employing company has confirmed that background security checks have been completed.

Where DCD takes place at unattended sites (for example at night) a risk assessment shall be performed to decide whether additional procedures are required for lone worker arrangements. Procedures will be required to ensure that the depot and storage tanks are adequately secured after the discharge is complete and the site is left unattended.

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Actions to Implement this Bulletin (See Table 1 for Action Type Codes)

Action Description	Action Type	Target Completion Date
Airport Depot Operations receiving fuel by DCD to review their equipment and procedures with particular attention to grade selectivity requirements, training and security issues. Management & Participant approval shall be recorded.	JS	31st Mar 2017

Table 1 Action Type Codes

Action Types	JIG Bulletin Action Type Definition
JS	Change to JIG Standard – to be adopted by JV and/or Operator to continue to meet the JIG Standard(s) (JIG 1, 2, 4 and the JIG HSSE Management System).
RP	JIG Recommended Practice which the JV should consider adopting as its own practice **(**)**.
I	Issued for information purposes only.
Note (**) - If the JV agreements require any of the JIG Standards and/or any of the JIG Common Processes as the governing operational standard then adoption of changes to applicable JIG Standards and/or Common Processes should not be considered optional by the JV Board.	

__Note:__ This document is intended for the guidance of Members of JIG and companies affiliated with Members of JIG, and does not preclude the use of any other operating procedures, equipment or inspection procedures.

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