



Aviation Fuel Quality Control Course: Fuel Farm, Hydrant and Into-Plane Fuelling



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Introduction:

Aviation fuel quality control across the fuel farm, hydrant and into-plane fuelling chain is the subject of this 5-day course for airport depot operators, into-plane supervisors, fuel quality assurance staff and airline fuel coordinators, ending with a Fuel Quality Control and Audit Checklist for a case airport fuel farm. Water, particulates and microbial growth that slip past receipt, settling or filtration reach aircraft tanks, delay departures and trigger costly investigations. Nominees already handle jet fuel daily, and the course is taught through site and record walkthroughs against inspection criteria. CoreConcept Training Center delivers this course.

Course Objectives:

- Trace the quality assurance chain for jet fuel from refinery release through airport receipt to the aircraft wing and identify where each check is made
- Apply receipt, settling, tank drain and floating suction routines that keep free water and sediment out of issued fuel
- Operate and monitor filter water separators, filter monitors and filtration vessels using differential pressure and element change criteria
- Perform clear and bright checks, water detector tests and periodic sampling, and record results in depot and into-plane logs
- Conduct hydrant dispenser and refueller fuelling, defuelling, static bonding and spill response steps to joint inspection standards
- Inspect a fuel farm and its into-plane service against audit criteria, grade findings and investigate contamination incidents to root cause

Target Audience:

- Staff responsible for receiving, storing and issuing jet fuel at airport depots and fuel farms
 - Staff responsible for supervising into-plane fuelling crews, hydrant dispensers and refueller vehicles on the apron
 - Staff responsible for fuel quality assurance checks, sampling records and filtration equipment monitoring
 - Staff responsible for airline fuel uplift oversight and acceptance of fuel quality at outstations
 - Staff responsible for fuel facility inspections, audit follow-up and incident reporting within airport fuel operations
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Course Outline:

Day 1: Jet Fuel Properties and the Aviation Fuel Supply Chain

- Jet A-1 Kerosene Properties Relevant to Airport Fuel Handling
- Specification Check Points Read by Airport Fuel Quality Staff
- EI 1530 Quality Assurance Chain from Refinery to Wing
- Pipeline, Ship and Road Receipt Routes into Airport Depots
- Fuel Farm Baseline Using Contamination and Incident Logs

Day 2: Fuel Farm Receipt, Storage and Filtration Standards

- Joint Inspection Standards Scope for Airport Depots and Into-Plane
- Receipt Batch Documents and Recertification Test Before Tank Release
- Settling Time, Floating Suctions and Tank Drain Routines
- EI 1581 Filter Water Separators and EI 1583 Filter Monitors
- EI 1596 Filtration Vessels and Differential Pressure Monitoring

Day 3: Quality Control Checks, Hydrant Systems and Into-Plane Procedures

- Clear and Bright Visual Check and Water Detector Capsules
- Daily, Weekly and Monthly Sampling Routines With Retained Samples
- Hydrant Pit Valves, Hydrant Dispensers and Deadman Control Use
- Refueller Loading, Sump Draining and Pre-Fuelling Vehicle Inspection
- Underwing Pressure and Overwing Fuelling Sequence at the Aircraft

Day 4: Contamination Control, Fuelling Safety, Defuelling and Incident Investigation

- Microbial Growth Indicators, Tank Bottom Samples and Cleaning Triggers
- Static Bonding, Fire Extinguisher Placement and Fuelling Zone Rules
- Spill Response Kits, Containment Steps and Fuelling Stoppage Criteria
- Defuelling Segregation, Quarantine and Fuel Return Decision Rules
- Contamination Incident Investigation With Root Cause and Management of Change

Day 5: Inspection Walkthrough of a Case Airport Fuel Farm

- Case Airport Fuel Farm Brief, Site Layout and Records Set
 - Walkthrough of Receipt, Storage and Filtration Records Against Criteria
 - Walkthrough of Hydrant, Refueller and Into-Plane Observation Points
 - Audit Finding Grading, Corrective Actions and Close-Out Tracking
 - Fuel Quality Control and Audit Checklist Completion and Review
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Skills You Will Gain:

- Jet Fuel Receipt Control
- Tank Settling and Drain Management
- Filtration Equipment Monitoring
- Free Water Detection
- Fuel Sampling and Record Keeping
- Hydrant and Refueller Fuelling Practice
- Fuel Spill and Static Hazard Control
- Fuel Facility Audit Grading

Why Attend This Course:

- Hand the depot manager or fuel quality lead a Fuel Quality Control and Audit Checklist tested on a case airport fuel farm
- Judge when to hold, quarantine or release a tank, a refueller load or a defuelled batch on clear evidence
- Avoid flight delays, aircraft fuel system damage and repeat audit findings caused by water, sediment or microbial contamination
- Share sampling routines, filtration change criteria and bonding steps with fuelling crews and new depot staff

Conclusion:

Back at work, the participant gives the depot manager and the fuel quality lead a Fuel Quality Control and Audit Checklist adapted to their own fuel farm and into-plane service. Managers use it to schedule inspections, decide which findings need immediate corrective action and brief airline customers on fuel quality. After its first internal audit, the team should review overdue drains, filtration differential pressure trends, water detector failures and open corrective actions, and then tighten the checklist where findings repeat.

Frequently Asked Questions FAQ:

What should participants know before the aviation fuel quality control course?

Participants should already work with jet fuel at an airport depot, on into-plane fuelling or in fuel quality oversight, and be familiar with basic tank, filter and vehicle terms. No laboratory background is expected.

How does the aviation fuel quality control course differ from a petroleum product specifications course?

This course follows jet fuel through airport receipt, storage, filtration, hydrant and refueller delivery to the aircraft. A product specifications course focuses on laboratory testing and blending of many fuels before they leave the refinery or terminal.

Why is water the main concern in aviation fuel quality control?

Free water supports microbial growth, corrodes tanks and can freeze in aircraft fuel systems at altitude. Settling, tank drains, filtration and water detector checks at each handover keep it out of the fuel delivered to aircraft.

What do participants take back from the aviation fuel quality control course?

Participants take back a Fuel Quality Control and Audit Checklist built on a case airport fuel farm, covering receipt, storage, filtration, sampling, hydrant and refueller checks, finding grades and corrective action tracking.