Las Vegas (LAS)
McCarran International Airport

AIRPORT TENANT FUELING STANDARD

Department of Aviation
Clark County, Nevada

Dated: June 1, 2021*

****This version supersedes all previous versions***

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AIRPORT OPERATOR SIGNATURE PAGE

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RECORD OF DISTRIBUTION

AIRPORT TENANT FUELING STANDARD

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TENANT FUELERS:

All tenant fuelers currently serving McCarran International Airport (LAS) can request an electronic version of the Airport Tenant Fueling Standard through the following link: https://www.mccarran.com/Business/Development/OperationRegulations

SIGNATURE PAGE

The following representatives reviewed this document and concur with the contents.

Deputy Director	5/18/21 Date
Deputy Director	5/26/2021 Date
Assistant Director, Airside Operations	5/11/21 Date
Assistant Director, Business Office	5/17/21 Date
Manager, Airside Operations	5-11-21 Date
Manager, Airport Safety & Risk Management	5/17/2021 Date
Manager, Business Office	5/26/21 Date
Supervisor, Airside Operations	5/11/2021 Date
ARFF Asst Fire Chief, Clark County Fire Department	5/10/2021 Date

I. INTRODUCTION

Within the scope of comprehensive tenant fueling management program, this Standard specifically addresses the normal operations (handling, fueling, transfer and storage), minimal training requirements and precautions relating to safe fueling operations to mitigate loss of life, injury, environmental impact and damage to property.

A. OVERVIEW

1. The specific goals of this document are:

    a. Assign responsibilities to organizations and individuals for executing specific actions in regards to fueling operations

    b. Establish lines of airport authority and organizational responsibilities

    c. Describe general safety processes to protect people and property involved in fueling operations

    d. Identify personnel, equipment, facilities and other resources available to assist during emergency response and recovery operations

    e. Cite the legal basis, objectives and assumptions to assist in fueling operations

2. Organizations (including tenants) certificated under 14 CFR §121, §129 and §135 conducting ramp fueling operations will identify a representative to attend the mandatory Tenant Fueling Safety Committee meetings every 3 consecutive calendar months (CCM). These meetings are announced with the time and location by the Committee Chair, the designated Airport Operations Coordinator (AOC).

3. Deviations from this Standard are prohibited without the expressed permission from the Director of Aviation or authorized representative. Tenants seeking relief from the requirements described in this Standard may submit written requests to the Airport Operations Coordinator Office and must include: specific Tenant Fueling Standard or other directive reference(s), circumstances preventing compliance and proposed solutions with timeframe. Waiver requests should be submitted as soon as practicable after discovery of a needed waiver.

B. CITATION OF LEGAL AUTHORITY

The McCarran International Airport Department of Aviation (DOA) shall follow these guidelines as established by the National Fire Prevention Association (NFPA) 407 (*Standard for Aircraft Fuel Servicing*), Federal Aviation Administration (FAA) 14 Code of Federal Regulations (CFR) Part 139.321 (*Aeronautics and Space, Certification of Airports, Operations, Handling and Storing of Hazardous Substances and Materials)*, 40 CFR Part 112 (*Oil Pollution Prevention*), 49 CFR Part 171-180 (*Pipeline and Hazardous Materials Safety Administration*, *Department of Transportation*), Advisory Circular (AC) 150/5230-4 (*Aircraft Fuel Storage, Handling, Training and Dispensing on Airports*) with Addendum, Nevada Revised Statute (NRS) 496 and Clark County Code Titles 13, 20 and 24. Any violations of these Standards and/or governing references may result in a citation with a potential fine assessed by the DOA Airside Operations or Environmental and Safety for non-compliance violations, which may include a Contractual Penalty and/or Administrative Assessment by the DOA Business Office.

C. ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES OVERVIEW

1. At least two (2) fueling supervisors with each fueling company must complete an aviation fuel training course in fire safety authorized by the Federal Aviation Administration (FAA) Administrator. These individuals must be trained prior to their initial performance of duties or enrolled in an authorized aviation fuel training course that will be completed within 90 days of initiating duties and receive recurrent instruction at least every 24 CCM. The FAA Administrator lists supervisory and line service programs currently available nationally in the Advisory Circular (AC) 150/5230-4 and Addendum which is normally updated quarterly. The AC and Addendum are located on the FAA website.

2. All other employees who fuel aircraft, accept fuel shipments or otherwise handle fuel must receive at least initial on-the-job training and recurrent instruction every 24 CCM in fire safety from a supervisor trained in accordance with Appendix 1, Supervisory and Line Service Fuel Safety Training Program Syllabus of this Standard.

3. All new fueling personnel shall be trained for safe and proper fueling operations as dictated by §139.321. The FAA Administrator approved McCarran International Airport elements for supervisory and line service fuel safety training are described in Appendix 1, Supervisory and Line Service Fuel Safety Training Program Syllabus. Appendix 2, Supervisor and Line Service Hand-on Fire Extinguisher Form is for documenting the training conducted by a certifier.

4. In addition to the requirements described in Section I, Paragraphs C2 and C3, fueling personnel shall be trained to the appropriate level for spill identification, reporting, response and prevention.

5. Tenants shall coordinate Agent Supervisor fire extinguisher training with the Clark County Fire Department (CCFD) Aircraft Rescue and Fire Fighting (ARFF) Station 13 at 702-261-5353.

6. Tenants shall provide the AOC Office a written confirmation once every 12 CCM that training required under §139.321 was accomplished, according to 139.321. The written confirmation format is provided in Appendix 3 of this Standard. The tenant will provide a copy of the confirmation that verifies the training, a copy of each supervisor's Supervisor Fuel Training Certificate, and Supervisor and Line Service Fire Training CCFD Local Fire Official Training Verification shall be kept by Airside Operations. All original training records for tenant line fueling personnel, including their Supervisor and Line Service Fire Training CCFD Local Fire Official Training Verification, shall be kept in each fueling tenant's office. Emergency personnel training records and fueling agent inspection records are maintained at the ARFF Station. Airside Operations will maintain all other records. All records shall be furnished to the DOA and FAA upon request.

7. Supervisor Fuel Safety Training Certificates must have the following wording:

    a. Name of company doing the training

    b. Name of individual who completed the "Fuel Safety Supervisor" training

    c. "Has successfully completed all classroom and practical application for the requirements of §139.321(b)(1) through (b)(6) and §139.321(e)(1)"

    d. Date of completion

8. Line Service Training Certificates must have the following wording:

    a. Name of company doing the training

    b. Name of individual who completed the "Line Fuel Service" training

    c. "Has successfully completed all classroom and practical application for the requirements of §139.321(b)(1) through (b)(7) and §139.321(e)(2)"

    d. Date of completion

II. INSPECTIONS

A. OVERVIEW

Compliance with §139.321, the ACM, this Standard and the governing references of NFPA 407 constitutes the basis for the inspections conducted at McCarran International Airport. These inspections may be announced or random and are intended to ensure safe fueling operations by these consistent standards.

B. OPERATIONS

1. Tenant facilities with aggregate aboveground tank petroleum storage above 1,320 gallons (or 660 gallons for a single tank) or 42,000 gallons of underground petroleum storage shall prepare and implement a Spill Prevention Control and Countermeasure Plan (SPCC). The tenant will annually provide the DOA Airport Safety and Environmental Section with an updated copy of the SPCC.

2. Fuel shall be stored in approved containers and tanks that are in good condition (i.e., free of spills, leaks, structural damage or deterioration). Secondary containment is required for all containers and tanks. Legible labels and markings will be maintained on all containers and tanks that are in serviceable condition.

3. Airport Operations, CCFD and the DOA Airport Safety and Environmental Section will perform reasonable surveillance of fueling activities on the airport.

4. Physical facilities and fueling vehicles of each airport tenant fueling agent must be inspected at least once every three (3) CCM for compliance with §139.321 and the Airport Certification Manual (ACM) inspection checklists. The records of these inspections are maintained for at least 12 CCM from the date of the inspection by the AOC office. Other Inspections for specific areas are accomplished by:

    a. CCFD inspections of the tank farms and distribution load racks.

    b. ARFF inspections of fuel vehicle/equipment.

    c. AOC random inspections of fuel vehicle/equipment and spill carts.

    d. DOA Airport Safety and Environmental Section random inspection of spill carts and fire extinguishers.

5. Tenants shall provide the ARFF Station with the most current vehicle equipment list prior to every inspection. Lists shall be hand delivered or emailed to Airside Operations at coord@mccarran.com.

6. In-service fueling vehicles will display the most current color coded ARFF Inspection sticker. The ARFF will remove the sticker from equipment failing inspection and tenants will remove the equipment from service until repaired and re-inspected.

7. Tenant fueling vehicles/equipment will have required markings, placards, labels and unit identification number visible at all times.

8. Tenants will periodically check hoses associated with fuel dispensing for wear, leaks and tears. Inspection of the attached automatic shut-off switches (Deadman Controls) is also a requirement.

III. FUELING OPERATIONS

A. OVERVIEW

1. Fueling tenants and personnel who handle fuel at the airport will adhere to the current AC 150/5230-4, *Aircraft Fuel Storage, Handling, and Dispensing on Airports* for fuel handling guidance and the following procedures for safe fuel handling.

2. Only personnel trained in the safe operation of the fueling equipment and operational training of emergency controls and the procedures are permitted to handle fuel.

B. OPERATIONS

1. Aircraft fuel servicing tank vehicles shall be loaded only at an approved loading rack. Approved loading racks are located at the East and West Fuel Tank Farms, and the CB2 Load Rack next to Holding Pad 2.

2. No aircraft shall be fueled or de-fueled while one (1) or more of its engines are running or while the aircraft is being warmed by external heat, except in an emergency situation when the on-board auxiliary power unit is inoperative. Then, in the absence of suitable ground support equipment, an aircraft mounted jet engine on the rear of the aircraft or on the wing opposite from the fueling location may be operated, provided:

    a. Operational procedures published by LAS are to ensure safe fuel operations.

    b. Prior approval is obtained from the duty AOC.

    c. The CCFD is positioned on standby fire watch at the aircraft.

3. All defuel operations require the duty AOC approval prior to beginning the operation regardless of aircraft location or quantity of fuel to remove.

4. DOA Assistant Director of Airside Operations authorization is required for emergency loading of fuel servicing vehicles from a hydrant pit.

5. No aircraft or equipment fueling or de-fueling operations to include the parking of fuel servicing trucks and equipment, whether loaded or empty are allowed inside a hangar, building or structure.

6. Keys shall be removed from the ignition of unattended fuel vehicles.

7. The parking arrangement of aircraft fuel servicing tank vehicles outside must maintain a minimum distance of 10 ft. (3 m) of clear space between parked vehicles for accessibility for fire control, also maintaining a minimum distance of 50 ft. (15 m) from any parked aircraft and buildings other than maintenance facilities and garages designated for fuel servicing tank vehicle maintenance.

8. Fuel vehicle/equipment scheduled or unscheduled maintenance may occur inside an approved building or facility, only after all safety preparations and protocols are accomplished by the organization.

9. No fuel, grease, oil, dopes, paints, solvents, acids, flammable liquids or contaminants of any kind are allowed to flow into or be placed directly in any airport sanitary or storm drain system.

10. Any person, including the owners or operators of an aircraft causing overflowing or spilling of fuel, oil, grease or other contaminants anywhere on the airport is responsible for ensuring the immediate containment, mitigation, clean-up and completing the McCarran International Airport Spill Report electronically at https://team.mccarran.com/Landing/Index. If the aircraft owner/operator is unable to clean up the spill, the airport will contract the clean-up at the aircraft owner/operator's expense.

11. All fuel spills must be immediately reported to the Airport Control Center (ACC). In turn ACC will notify the duty AOC and ARFF. A fireguard must be posted promptly. The aircraft, fuel delivery devices and other vehicles shall not be moved or operated in the vicinity of the spill until the spillage is cleaned-up by an approved method and cleared by the duty AOC.

12. If passengers remain on board an aircraft during fuel servicing, at least one (1) qualified person trained in emergency evacuation procedures shall be in the aircraft at or near a door at which there is a passenger loading walkway, integral stairs that lead downward, or a passenger loading stairs or stand.

13. Each fueling hose, funnel or apparatus used in fueling or de-fueling aircraft shall be maintained in good condition and properly grounded to prevent ignition.

14. A vehicle safety spotter is required to assist and guide a fuel truck backing up within 20 feet of an aircraft.

15. If a fire occurs around the fuel delivery device while servicing an aircraft, cease all fueling operations immediately by activating all emergency shut-off valves and dome covers, then immediately notify the ACC Airport Emergency Line (702-261-5911 or x5911) of the incident status.

16. Fuel vehicles designed for or employed in the transportation of fuel are not allowed to operate in the Movement Area (including taxiways or runways) at any time without prior permission from the duty AOC.

17. Only aircraft fuel servicing hydrant transfer vehicles are allowed to engage in fueling operations on the terminal ramps or aprons. The only exception is on the Air Cargo Ramp or the West side Fixed Base Operations (FBOs) which are not equipped with a fuel hydrant system. All other fuel truck servicing operations in aircraft parking areas requires prior approval from the duty AOC.

18. Appropriately classified fire extinguishing equipment must be readily accessible (within 50 feet) to personnel engaged in the fueling/defueling of supply vehicles, support equipment or aircraft.

19. Minimum fire extinguisher requirements for fueling operations include:

    a. Each fuel servicing tank vehicle shall have two (2) listed serviceable fire extinguishers, each having a rating of at least 20-B:C, with one (1) fire extinguisher mounted on opposite sides of the vehicle.

    b. Each fuel servicing hydrant vehicle or P-Cart must have one (1) 20-B:C rated serviceable fire extinguisher installed on the equipment.

    c. Where the open hose discharge capacity of the aircraft fueling system or equipment is more than 200 gallons/minute (750 L/min), at least one (1) of not less than 80-B:C rated serviceable wheeled extinguisher with a minimum capacity of 125 lbs. (55 kg) of agent.

       NOTE: ABC multipurpose dry chemical fire extinguishers (ammonium phosphate) are not approved for aircraft fueling vehicles, airport fuel servicing ramps, aprons or at airport fuel facilities. This agent is known to cause corrosion failure to aluminum aircraft components.

20. Airport aircraft engine operations are unauthorized if there is gasoline or other volatile fluid on the ground within the vicinity of the aircraft operation.

21. Operations of a radio transmitter/receiver or switching electrical appliances on or off in an aircraft is not permitted during refuel or defuel operations.

22. Only persons engaged in the fueling, servicing and operation of an aircraft are permitted within 100 feet of an aircraft during refueling or defueling operations. Passengers may be exempted as described in Paragraph B12.

23. ACC will advise when to cease all fueling or defueling operations during periods of lightning activity; after two (2) cloud to ground lightning strikes within seven (7) minutes and within a five (5) mile radius of LAS.

24. Aircraft fuel servicing personnel shall not carry lighters, matches, e-cigarettes or other ignition sources on their person while involved in fuel servicing operations.

25. Position aircraft fuel servicing vehicles as follows:

    a. Aircraft fuel servicing vehicles will be positioned to allow quick movement after all aircraft fuel hoses are disconnected and properly stowed.

    b. During over-wing fueling, the propulsion or pumping engine of aircraft fuel-servicing vehicles will not be positioned under the area where aircraft fuel system vents are located on the under wing surface.

    c. After each fueling operation, all equipment/hoses must be properly stowed, to include disconnection from the fuel supply hydrant.

    d. Aircraft fuel servicing vehicles will not be positioned under the wing of an aircraft within a 10 ft. (3 m) radius of aircraft fuel system vent openings.

    e. Fuel servicing vehicle hand brakes must be set before vehicle operators depart the vehicle cab and vehicle wheel chocks must be properly positioned prior to beginning refueling operations.

    f. Aircraft being fueled shall be positioned so that aircraft fuel vents or fuel tank openings are not closer than 25 ft. (7.6 m) to any terminal building, hangar, service building or enclosed passenger concourse other than a loading walkway.

    g. Aircraft being fueled shall be positioned so that the vent or tank openings are not closer the 50 ft. (15 m) of any combustion or ventilation air intake to any boiler, heater or incinerator room.

26. Fuel Farm Storage Areas, Appendix 1, *Airport Grid Plan*, Figure 1 will comply with NFPA 407, *Standard for Aircraft Fuel Servicing* and the following directions:

    a. Fenced with an electronically operated key lock gate and appropriately signed to reduce unauthorized entry and/or tampering

    b. Located to mitigate damage by aircraft/vehicles

    c. Posted with “FLAMMABLE” and “NO-SMOKING” signage

d. Void of any feature which would allow introduction of any foreign material into the fuel

e. Free of material, equipment, functions and activities which could be ignition sources

f. Constructed in such a manner so as to prevent the introduction of the wrong product into the wrong storage tank

g. Facilities and surrounding areas must be maintained free of trash, debris and weeds which could contribute to the spread of fire

1.27. Fuel storage tanks and fuel vehicles will be marked, equipped and maintained as per NFPA 407, *Standard for Aircraft Fuel Servicing*. Inspections of fuel farm areas and fueling vehicles are performed every three (3) CCM. Either a representative of the CCFD ARFF Station or a CCFD Fire Inspector and an AOC will perform the inspection using the forms shown in Appendix 1, *Quarterly Fire-Safety Inspection, Fuel Storage Areas & Loading/Unloading Stations*, Figure 14 and *Quarterly Fire-Safety Inspection, Fueling Vehicle/Equipment*, Figure 15. The records of each inspection are maintained at the ARFF Station for 24 CCM after the date of the inspection.

IV. PROHIBITED OPERATIONS

A. OVERVIEW

Compliance with §139.321, the ACM, this standard and the governing references of NFPA 407 constitutes the basis for prohibited operations involving fueling operations. The listed prohibited operations is not exhaustive, but establish a firm understanding that safety during all fueling operations is paramount at McCarran International Airport.

B. OPERATIONS

1. Aircraft fuel servicing personnel shall not carry lighters, matches, e-cigarettes or other ignition sources on the person while involved in fuel operations.

2. Operations of a radio transmitter/receiver or switching electrical appliances on or off in an aircraft is not permitted during refuel or defuel operations.

3. ACC will advise tenants and DOA Operations of a lightning strike within a ten (10) mile radius of the airport. Fueling operations may continue however the tenant should prepare to cease all fueling operations.

4. Fueling operations are not authorized during thunderstorm activity and when a lightning strike is detected within a five (5) mile radius of the airport. ACC will advise tenants to cease all fueling or defueling operations via the lightning detection system (red flashing light and 3 sounds of the horn). The lightning detection system units are set up at multiple locations around the airport.

5. Aircraft engines shall not be started if there is any fuel or other volatile fluid on the ground within the vicinity of the aircraft.

6. No person shall engage in aircraft fueling operations without an adequately sized and serviceable fire extinguishing equipment readily accessible within 50 feet of the point of the fueling operation.

7. No aircraft fuel system or fuel servicing vehicle/equipment maintenance is permitted while located at a boarding gate without the duty AOC prior approval; this maintenance approval is by exception only.

8. No aircraft or fueling equipment or de-fueling operations are authorized within 50 feet of or inside a hangar, building or structure.

9. Fuel vehicles, whether loaded or empty shall never enter or park in aircraft hangars nor park unattended within 50 feet of hangars, buildings or facilities nor within 10 feet (between) of any other fueling vehicles or ground support equipment.

10. Fuel trucks, whether loaded or empty shall not park facing hangars, buildings, fuel storage systems or other critical infrastructure.

11. Aircraft engine operations must be terminated before any aircraft fueling operation may commence.

12. Aircraft engine operations must be terminated if there is a presence of gasoline (fuel) or other volatile fluids on the ground within the immediate vicinity of the aircraft engine operation.

13. No aircraft refuel or defuel operations are permitted while passengers are on-board unless the duty AOC authorizes the operation, provided a passenger boarding device is in place at the cabin door of the aircraft, the aircraft door is open and a cabin attendant is at or near the cabin door with an ARFF vehicle at the aircraft location.

14. Aircraft shall not be fueled with non-ambulatory passengers onboard unless:

    a. Prior approval is obtained from the duty AOC.

    b. An ARFF unit is positioned on standby watch at the aircraft.

    c. The operation follows procedures published by the operator to assure safety of the operation.

15. Aircraft “hot” refueling operations are prohibited except in an emergency situation. The only exceptions are operating the on-board auxiliary power unit or the auxiliary ground support equipment, provided in either operation:

    a. Operational procedures published by McCarran International Airport are followed to ensure safe fueling operations.

    b. Prior approval is obtained from the duty AOC.

    c. The organization positions an added fire safety observer at the aircraft.

    d. ARFF is positioned on standby fire watch at the aircraft.

16. Fuel vehicles designed for or employed in the transportation of fuel are not allowed to operate in the Movement Area (including taxiways or runways) at any time without prior permission and escort authorized by the duty AOC.

17. Fuel vehicles shall not be driven over bridges or through tunnels.

18. Fuel vehicles shall not be driven or parked on unpaved surfaces.

19. Diesel Particulate Filter (DPF) regeneration engine runs shall not be conducted within 100 feet of any aircraft fueling operation, building, facility, hangar or other vehicles. DPF regeneration area(s) must be appropriately marked in accordance with NFPA 407 and approved by the duty AOC and DOA Airport Safety and Environmental Section.

V. ENVIRONMENTAL PROTECTION

A. OVERVIEW

Tenants shall develop and implement a site-specific spill response plan to address the prevention of spills, leaks or discharges of oil, fuel or hazardous substances into the environment in accordance with Clark County Department of Aviation Environmental Management System. The plan shall include spill control, response and cleaning actions. In addition to the requirements of this Standard, tenants shall determine the spill planning and reporting requirements that apply to their operation and comply with the requirements. A copy of the Spill Response Plan shall be provided to the DOA Safety, Environmental, Risk & Fleet Management Section.

B. OPERATIONS

1. Tenants shall implement the following contingency/safety measures to prevent and prepare for fuel spill responses:

    a. Post a summary of spill plans at appropriate locations identifying spill clean-up coordinators, location of clean-up equipment and materials, evacuation routes and phone numbers of regulatory agencies to contact in the event of a spill.

    b. Make absorbent material, drip pans and other spill clean-up materials available where spills are probable, particularly in fueling and maintenance areas.

    c. Use only non-sparking and non-conducting tools to clean-up fuel spills.

    d. Keep absorbent material stored in the same location as supplies and equipment necessary to remove and dispose of the material after it has been contaminated.

    e. Regularly inspect equipment and vehicles for leaks.

    f. Evacuate the area immediately if material released into the environment is an unknown substance or is known to be extremely hazardous.

    g. Should consider establishing a contract with a licensed emergency response contractor to respond to spills beyond the capabilities of employees.

    h. Ensure all employees are trained in spill mitigation and cleanup and are familiar with their company’s Spill Response Plan.

2. Tenants shall maintain and equip carts with spill response kits capable of safely and effectively cleaning a 100-gallon fuel spill. DOA spill carts shall be positioned in an accessible location.

    a. Spill carts shall contain containment booms, granular absorbent, non-sparking shovels, disposal bags, storm drain cover mats and personal protective equipment as a minimum.

    b. Store absorbent materials in closed containers.

3. Tenants will comply with the following: to report, control and clean-up fuel spills.

    a. When any spill is observed originating from an aircraft, vehicle or hydrant, fuel servicing shall be discontinued immediately. After the duty AOC or ARFF arrives at the spill scene, fueling operations may continue when the AOC or ARFF approves resumption of fueling operations.

    b. Fuel spills, regardless of magnitude, shall be reported to the ACC Airport Emergency Line (702-261-5911 or X5911) immediately upon discovery. Fueling personnel operating fuel servicing equipment at the time of a fuel spill will standby to act as a fire watch until relieved by a supervisor or designated representative and provide any necessary information the ARFF may require. The fire watch will have at least one (1) serviceable dry chemical extinguisher with a 20lbs B:C rating or two (2) 20lbs B:C serviceable dry chemical extinguishers if a tanker is used, placed on the ground and available for immediate use (Ammonium Phosphate extinguishers are prohibited).

    c. Aircraft, vehicles or spark-producing equipment in the area of a fuel spill should not be started until the spilled fuel is removed or rendered harmless. If a vehicle engine is running at the time of the spill, it is normally good practice to drive it from the hazard area unless the hazard to personnel is judged too severe. Spark-producing equipment, other than removable vehicles, should be shut-down unless the danger to personnel is judged too severe.

    d. Tenants shall take immediate steps to contain spills from spreading to a point where there is a possibility of property damage, personal injury, or damage to the environment.

    e. No fuel, grease, oil, dopes, paints, solvents, acids, flammable liquids or contaminants of any kind are allowed to flow into or be placed directly in any airport sanitary or storm drain system.

f. The ARFF or the duty AOC shall make the sole determination on the quantity of fuel spilled.

g. If a fuel spill is less than 25 gallons and ARFF has determined that it is safe to do so, the tenant fueling agent and aircraft operator/owner shall immediately clean-up the spill with absorbent material.

h. When a fuel spill is 25 gallons or more, ARFF at their discretion may cover the spill with a foam blanket or monitor the clean-up effort. In the event the ARFF does put a foam blanket on the spill, the tenant fueling agent will be responsible for containment and cleaning of the spill with absorbent material. The containment and clean-up shall begin immediately. If the fuel spill is too large to be handled by available tenant fueling agent resources, the DOA will provide personnel, equipment and material to the extent available to clean-up the spill and bill the tenant for actual and administrative costs.

i. Tenants shall complete the McCarran International Airport Fuel Spill Report electronically at https://team.mccarran.com/Landing/Index to document the spill. A copy must be received by the DOA Airport Safety and Environmental Section within 24 hours of a spill. One (1) copy shall also be retained by the tenant for a minimum of three (3) years.

j. Additionally, the DOA Airport Safety and Environmental Section shall notify the Nevada Division of Environmental Protection (1-888-331-6337) and Nevada Division of Emergency Management within 24 hours for a petroleum, oil and lubricant (POL) spill of 25 gallons or more.

4. Any person, including the owners or operators of aircraft causing fuel, oil, grease or other contaminant spills anywhere on the airport, shall be responsible for ensuring the spill is immediately cleaned-up or it will be cleaned by the DOA at the responsible party's expense. The responsible party may also be liable for other potential fines and penalties.

5. Aircraft involved in a fuel spill should be inspected thoroughly to ensure no fuel or vapors have accumulated in the flap well areas or internal wing sections not designed for fuel tankage. Any cargo, baggage, mail sacks or similar items that have been wet by fuel must be decontaminated before being placed aboard any aircraft.

VI. APPENDIX 1 - SUPERVISORY AND LINE SERVICE FUEL SAFETY TRAINING PROGRAM SYLLABUS

A. OVERVIEW

This syllabus provides the aviation line service fueling supervisor with the fire training requirements of 14 CFR §139.321 (b) (1)-(7) and §139.321 (e), *Handling and Storing Hazardous Substances and Materials*, AC 150/5230-4, *Aircraft Fuel Storage, Handling, Training, and Dispensing on Airports,* NFPA 407, *Standard for Aircraft Fuel Servicing* and local jurisdictional fire codes. §139.321 (e) (1) requires at least one (1) supervisor with fire agent must have completed handheld fire extinguisher training, an aviation fuel training course in fire safety that is authorized by the (FAA) Administrator and possess a minimum of two (2) years of experience in all aspects of fueling procedures. This training may be accomplished by completing any nationally recognized course or a course developed in accordance with a local fire marshal within 90 days of initiating duties and receive recurrent instruction at least every 24 CCM (see Addendum). After the supervisor attends and passes the training course, the supervisor is responsible for the training of the line service fueling personnel in these same areas. §139.321 (e) (2) requires all other employees who fuel aircraft, accept fuel shipments, or otherwise handle fuel must receive at least initial on-the-job training and recurrent instruction every 24 CCM in fire safety from this trained supervisor along with airport approved handheld fire extinguisher training prior to initial duties, then every 24 CCM thereafter.

B. MANDATORY ELEMENTS FOR SUPERVISORY AND LINE SERVICE FUEL SAFETY TRAINING PROGRAMS

1. An orientation that addresses:

    a. Purpose of the course

    b. Expected outcomes as identified in §139.321

    c. Familiarity with applicable Advisory Circulars, jurisdictional fire codes, fire and fuel safety organizations including their publications

    d. Knowledge of fuel types

    e. Fueling of different types of aircraft

f. Supervisory Requirement – An overview of techniques for effective training including:

1. Methods of delivery; Classroom, On-the-Job and Online

2. Understanding of different types of learning (i.e. visual, cognitive, hands-on)

3. Motivational aspects of training

2. Basic safety practices including:

a. Protection against fire and explosions

b. Safe handling and storage procedures for fuels and lubricants

1. Identification and marking of Diesel Exhaust Fluid (DEF)

2. Fuel System Icing Inhibitor (FSII)

c. An understanding of the term “hazardous materials” and procedures for handling hazardous materials and other fuels and lubricants

d. Use of Personal Protective Equipment (PPE) including eye protection, ear protection, hand protection and proper types of clothing including shoes/boots. Prohibition carrying of smoking materials (i.e. cigars, cigarettes, lighters, matches, electronic smoking devices (also called e-cigarettes) and pipes.

e. First aid for responding to contact with aviation fuels or lubricants including ingestion, inhalation, and contact with eyes or bare skin

3. Bonding:

a. Definitions as contained in NFPA 407

b. Physics of bonding (what/when/why)

c. How to ground versus how to bond:

1. Where and how to bond

2. Types of bonding equipment

3. Correct bonding procedures

d. Static electricity

e. Fuel flash points

4. Public protection:

   a. Protection from sources of ignition

   b. Proper ramp fueling procedures including aircraft with passengers on board

   c. Coordination with flight crew prior to fueling aircraft

   d. Situations requiring cessation of fueling procedures

5. Fire classification and appropriate types of extinguishers

   a. Fire classifications and extinguisher types used

   b. Inspections, safety, and personnel protection after a spill

   c. Hands-on training in use of a portable fire extinguisher

6. Control of access to storage areas:

   a. Fences and gates/locks

   b. Signs and other required placarding (i.e., “No Smoking,” “Jet A,” “AVGAS”)

   c. Protection and security associated with fuel farms including proper authorizations and procedures

   d. Safety awareness (location and operation of fire extinguishers, location of emergency shutoffs, communications for assistance)

7. Fire safety in fuel farm and storage areas:

   a. Verification of product types

   b. Fuel farm inspection procedures

   c. Fueling operations at fuel storage facilities during low visibility and night operations

   d. Fuel delivery operations including the use of hoses, valves and other equipment

e. Proper procedures for fuel equipment use/storage (nozzle covers, securing of equipment when not in use)

f. Leak and spill prevention

g. Product leaks and contamination

h. Emergency procedures and notifications

    1. Local spill reporting procedures

    2. Spill control and containment (limited quantity)

    3. Spill (large quantity) and aircraft rescue and firefighting notification requirements

    4. Clean-up procedures

i. Effects of weather on fueling operations

8. Fire safety in mobile fuelers, fueling pits, and fueling cabinets:

    a. Weight and balance, driving requirements, speed precautions, and driver qualifications

    b. Inspection of fueling vehicle and sumping, exhaust, and muffler system

    c. Procedures and vehicle placement for fueling operations, controls, interlocks, brakes, and chocking

    d. Mobile fueler refueling procedures

    e. Parking requirements and separation distances

    f. Fueling pit safety/procedures/product leaks/clean-up

    g. Fueling cabinet safety procedures

9. Misfueling Prevention Training

    a. Misfueling prevention training should include instruction on:

        1. Components of a correct fuel order (written of verbal)

            a) Aircraft registration (tail) number

            b) Type and grade of fuel

            c) Volume of fuel and distribution among Aircraft fuel tanks

        2. Use of Selective-Nozzle spouts and controls for Non-Selective Jet Fuel "round/rogue spouts

    b. Diesel Exhaust Fluid (DEF) Contamination Prevention

        1. The purpose and function of DEF

        2. The purpose and function of Fuel System Icing Inhibiter (FSII)

        3. The identified risk of DEF contamination

            a) Mistaking DEF for FSII and adding it to FSII storage tanks/reservoirs on refueling equipment

            b) Using non-dedicated transfer equipment in the handling of FSII

10. Hands on Fire Extinguisher Training – All fueling personnel, not just the supervisor must receive hands-on fire extinguisher training every 24 CCM. During Hands-on Training (HOT), the trainee will feel the weight associated with the extinguisher, know how it feels to discharge agent, and know how to sweep the nozzle toward a fire, however, a live fire is not required. While extinguishing a live fire does provide the best training, the FAA understands there are limitations imposed in certain localities and will accept recurrent training conducted with realistic training devices. HOT topics for fire extinguishers must include:

    a. Purpose of the fire extinguisher

    b. How to identify the classification of extinguisher used for a liquid fuel fire

    c. Nomenclature of the fire extinguisher

    d. How to inspect the components of the fire extinguisher for serviceability

e. Proper storage and removal of the extinguisher from the fueling vehicle or fuel cart

f. Demonstration of the proper use/operations of an extinguisher (**PASS**)

   1. **P**ull the pin

   2. **A**im the nozzle

   3. **S**queeze the handle from a safe distance

   4. **S**weep the handle from side to side to extinguish the fire

g. Demonstration by all course participants that they can: Select the appropriate extinguisher based on the size and type of fire, safely carry, approach a fire, and operate a portable fire extinguisher.

h. Using a handheld fire extinguisher or realistic training device and discharge agent from the handheld extinguisher in a manner sufficient to extinguish the fire.

   Note: For training purposes, a live fire is not required and may be simulated, however, a realistic training device must be used. Realistic training devices should have the approximate weight and discharge characteristics of the actual handheld extinguisher used in fuel servicing areas.

   Note: For training purposes only, the extinguisher can use water instead of dry chemical.

   Note: All fuel servicing supervisors and line personnel must complete handheld fire extinguisher training either 60 days prior to or after completing either the supervisory or line service training if it was not provided by one (1) of the certified fuel service training courses identified in the associated addendum. The fuel supervisor may also have been trained to teach hands-on fire extinguisher training.

VII. APPENDIX 2 - SUPERVISORY AND LINE SERVICE HANDS-ON FIRE EXTINGUISHER TRAINING CERTIFICATION FORM

For Line Service Employee ONLY: Must successfully demonstrate to the organization's trained Agent Supervisor the ability to select and properly demonstrate the use of the appropriate fire extinguisher. This form validates the satisfactory completion of hands-on fire extinguisher training.

(Print) Line Service Name	Organization	Date

(Print) Supervisor Name	(Sign) Name	Date

For Agent Supervisors ONLY: Must successfully complete the Fire Extinguisher Training Course at an FAA approved facility and demonstrate to the Clark County Fire Department (CCFD) Certifier the ability to select and properly demonstrate the use of the appropriate fire extinguisher. This form validates the satisfactory completion of hands-on fire extinguisher training.

(Print) Supervisor Name	Organization	Date

(Print) CCFD Certifier Name	(Sign) Name	Date

VIII. APPENDIX 3 - ANNUAL TENANT TRAINING CONFIRMATION LETTER FORMAT

Company Logo

To: Airside Operations
Clark County Department of Aviation
McCarran International Airport

From: Winston Churchill

Subject: Annual Training Verification Letter

Date: December 31, 2020

The following personnel have successfully completed an FAA Administrator approved AC 150/5230-4 Addendum Supervisory Fuel Safety Training course, on the dates indicated in accordance with 14 CFR Part 139.321(b)(1) through (b)(6) and Part 139.321(e)(1). A copy of the documented trainee training certificate by the Supervisor and Line Service Fire Training CCFD Local Fire Official Verification are attached to this letter.

Name	**Date**	**Name**	**Date**
Adams, Samuel	02/07	Lincoln, Abraham	12/07

The following personnel have successfully completed Line Service Fuel Safety Training on the dates indicated in accordance with the requirements contained in 14 CFR Part 139.321(b)(1) through (b)(7) and Part 139.321(e)(2).

Name	**Date**	**Name**	**Date**
Davis, Jefferson	07/07	Roosevelt, Franklyn	11/06
Eisenhower, Dwight	08/07	Washington, George	08/07

~SIGNED~
Winston Churchill
Training Manager

Note: Training Confirmation Letters **must** include company letterhead or logo.

IX. APPENDIX 4 - DEFINITIONS

ADVISORY CIRCULAR (AC): An FAA publication issued to inform the aviation public in a systematic way of non-regulatory material. It is issued to provide guidance and information in a designated subject area or to show a method acceptable to the FAA Administrator.

AIR CARRIER: An organization or group which undertakes directly, by lease or other arrangement to engage in air transportation, holds or is required to hold an FAA air carrier operating certificate.

AIR OPERATIONS AREA (AOA): That portion of the airport designated and used for landing, take off or surface maneuvering of aircraft.

AIRCRAFT FUEL SERVICING: The transfer of fuel into or from an aircraft.

AIRCRAFT FUEL SERVICING HYDRANT VEHICLE (HYDRANT VEHICLE): A motorized vehicle equipped to transfer fuel between a fuel hydrant and an aircraft.

AIRCRAFT FUEL SERVICING RAMP OR APRON: A designated area at the airport for aircraft fuel servicing.

AIRCRAFT FUEL SERVICING TANK VEHICLE (FUELER): A vehicle having a cargo tank (tank truck, tank full trailer, or tank semitrailer) designed for or used to transport and transfer fuel into or from an aircraft.

AIRPORT FUELING SYSTEM: An arrangement of aviation fuel storage tanks, pumps, piping and associated equipment such as filters, water separators, hydrants and station, or aircraft fuel servicing vehicles installed at an airport and designed to service aircraft at fixed positions.

AIRCRAFT FUELING VEHICLE/EQUIPMENT (P-CART): A fuel servicing hydrant vehicle or an aircraft fuel servicing equipment cart.

AIRCRAFT INCIDENT: An occurrence other than an accident associated with the operation of an aircraft which affects or could affect the safety of operations.

AIRCRAFT OPERATOR: Any organization which causes or authorizes the operating of an aircraft such as the owner, lessee or bailee of an aircraft.

AIRCRAFT RESCUE AND FIREFIGHTING (ARFF): On-site specially equipped and manned fire station specifically trained for handling aircraft-related incidents, accidents and initial medical response.

AIRLINE REPRESENTATIVE: A person vested with the authority to represent an airline and its interests during an event covered by this emergency plan.

AIRLINE STATION MANAGER: The representative of an air carrier who is responsible for that air carrier's total operation at the airport.

AIRPORT: An area of land or other hard surface excluding water that is used or intended to be used for the landing and takeoff of aircraft including any buildings and facilities.

AIRPORT CONTROL CENTER (ACC): The Airport Control Center is the primary communication point for McCarran International Airport. In an emergency, the Airport Control Center initiates personnel recall and coordinates flow of information per established procedures.

AIRPORT ENVIRONMENTAL DIRECTIVE: This policy adheres to Environmental Protection Agency (EPA) guidelines concerning proper disposal of material classified as hazardous. Additionally, it provides for uniformity of fuel spill handling procedures among Airport Tenant Fueling Agents and the Department of Aviation.

AIRSIDE OPERATIONS COORDINATOR (AOC): The primary Emergency Response Incident Commander for the Airport. The on-duty AOC functions as the representative of the Director of Aviation ensuring that the airport meets FAA regulations governing airports and aircraft operations.

AIR TRAFFIC CONTROL TOWER (ATCT): A service facility providing safe air and ground aircraft traffic control for airports.

APRON/RAMP: A defined area on an airport intended to accommodate aircraft for purposes of embarkation and disembarkation of passengers, loading, unloading, refueling, parking or maintenance.

CERTIFICATE HOLDER: The holder of an Airport Operating Certificate issued by the FAA under 14 CFR Part 139 which governs airport operational requirements.

CODE OF FEDERAL REGULATION (CFR): The codification of the general and permanent rules published in the Federal Register by the departments and agencies of the Federal Government produced by the Office of the Federal Register (OFR) and the Government Publishing Office.

CONSECUTIVE CALENDAR MONTHS (CCM): A set of months that follow in a progressive continuous order inclusive of from the first day of the first month to the last day of the ending month.

DEADMAN CONTROL: A device that needs a positive continuing action by a person to allow fuel to flow.

DIESEL EXHAUST FLUID: A liquid used to reduce the amount of air pollution created by a diesel engine.

DIESEL PARTICULATE FILTER (DPF): This filter must be cleaned during a regeneration operation that creates significant heat.

DIRECTOR OF AVIATION: The Director of the Department of Aviation is responsible for planning initiatives and activities, business growth planning and organizational strategy development.

DOA: An acronym for the Clark County Department of Aviation, the Owner/Operator of McCarran International Airport (LAS).

EMERGENCY FUEL SHUTOFF: A function mechanism activated to stop the flow of fuel in an emergency.

ENVIRONMENTAL PROTECTION AGENCY (EPA): The federal governmental agency responsible for the protection of people, property and the environment from ground, air and water pollutants such as fuel, hazardous materials, chemicals or other contaminates and resolving the cause of the contamination.

FEDERAL AVIATION ADMINISTRATION (FAA): The federal governmental agency responsible for the aviation system throughout the United States. Divisions of the FAA are: Air Traffic, Security, Airport Certification, Flight Standards and Facilities.

FIXED BASED OPERATOR (FBO): An airport servicing support facility for aviators.

FUEL LOAD RACK STATION: A facility servicing station that allows a fuel servicing vehicle to load and/or off-load fuel.

FUEL STORAGE AREA: Designated areas where gasoline, jet fuel, or any other types of petroleum products transferred to or from storage tanks for immediate or future use also referred to as a Tank Farm.

FUEL SYSTEM ICING INHIBITOR: An additive to aviation fuels that prevents the formation of ice in fuel lines.

HAZARDOUS MATERIALS (HAZMAT): Substances or materials that are determined to be capable of posing a reasonable risk of harm to health, safety or property. They are categorized as explosives, combustible liquids, corrosive materials, flammable liquids, flammable gases, non-flammable gases, flammable solids, oxidizing materials, poisons, irritation materials, etiologic agents, radioactive materials and Other Restricted Materials (ORMs).

INCIDENT ACTION PLAN (IAP): A plan established to respond to a declared Alert or Natural Disaster usually developed during a Joint Assessment Meeting (JAM).

INCIDENT COMMAND SYSTEM (ICS): An incident management process consisting of procedures for organizing personnel, facilities, equipment, resources and communications to respond to and recover from an emergency.

LAS: The airport code designation for McCarran International Airport.

MOVEMENT AREA: Areas normally controlled by the Air Traffic Controller that include: runways, taxiways and other areas/surfaces of an airport which are used for taxiing, air taxiing, takeoff and landing of aircraft exclusive parking and loading ramps, and other designated aircraft parking areas.

NATA: National Air Transportation Association is a national trade association of aviation business service providers.

NFPA 407: The National Fire Protection Association Standard (NFPA) 407 for Aircraft Fuel Servicing.

NON-MOVEMENT AREA: Areas normally controlled by the Ramp Controller including: the ramp/apron, taxi lanes, and other areas of an airport which are used for parking, staging, maintenance, and other designated activities.

P-CART: A common nomenclature for an aircraft hydrant cart refueling system.

PARAMEDIC: A medical technician who has received extensive training in advanced life support and emergency medicine and is certified by the Clark County Emergency Medical Services Office. Paramedics are usually permitted to administer intravenous fluids and other drugs that can arrest a life-threatening physiological condition.

PASSENGER: A person on board of an aircraft who is not a crew member, saboteur, hijacker or stowaway.

PASSENGER APRON/RAMP AREA: Those portions of the airport designated for the ground level loading or unloading of passengers to and from aircraft.

PERIMETER: The fenced outer boundary of the airport operational property.

POL: Acronym for Petroleum, Oil, and Lubricants.

PRODUCT LABEL: Equipment or materials attached with a label, symbol or other identifying mark that is acceptable to the authority having jurisdiction and concerned with product evaluation that maintains periodic inspection and by whose labeling the manufacturer indicates compliance with appropriate performance standards.

PUBLIC INFORMATION OFFICER (PIO): The point of contact for the media and other governmental agencies that seek information concerning an incident. Often developing informational media release(s) regarding an incident cause, size, scope, current situation status, resources committed and other matters of general interest for the public. This position is also referred to as the Media Responder.

RISK: A combination of a specific hazard and the likelihood that the hazard occurs (probability) x (hazard) = risk. That likelihood may be expressed as a rate or a probability. For example the risk of an aircraft accident (hazard) can be expressed as one accident per million flights (likelihood).

RISK ASSESSMENT: The process of analyzing potential losses from a given hazard using a combination of known information about the situation, knowledge about the relevant underlying processes and judgments about aspects of the situation not well understood.

RISK MANAGEMENT: The process of combining a risk assessment with decisions on how to address that risk considering the technical and social aspects of the risk assessment.

RUNWAY: A defined rectangular area surface on a land-based airport prepared for the landing and take-off run of aircraft along its length. Runways are normally designated by numbers in relation to the magnetic direction rounded off to the nearest 10 degrees with a letter to differentiate parallel runway surfaces.

SPCC: Acronym for **S**pill **P**revention **C**ontrol and **C**ountermeasure Plan which outlines the plan to ensure the LAS facility is in compliance with the requirements set forth in 40 CFR §112, *Oil Pollution Prevention*.

STAGING AREA: A prearranged, strategically placed area, where standby response personnel, vehicles and other equipment can be held and accounted for in an organized state of readiness for use during an emergency.

SWPPP: Acronym for **S**tormwater **P**ollution **P**revention **P**lan which is a plan to ensure that the facility remains in compliance with the requirements of the National Pollutant Discharge Elimination System (NPDES) program administered by the Nevada Division of Environmental Protection and the United States Environmental Protection Agency.

SUBSTANTIAL DAMAGE: Damage or failure which adversely affects the structural strength, performance, or flight characteristics of the aircraft which would normally require major repair or replacement of the affected component.

TAXI LANE: A prepared often paved strip in the Non-Movement Area over which aircraft normally taxi/tow, to/from a hangar, parking location, terminals, etc. so not to interfere with normal ground flight operations. Normally, this area is under the control of the Department of Aviation Ramp Controller.

TAXIWAY: A prepared often paved strip in the Movement Area which aircraft taxi to and from a runway, hangar, parking location, terminals etc. These surfaces minimize most interference with flight operations until crossing a runway. Normally, this area is also under the control of the FAA Air Traffic Controller.

TENANT: A leaseholder, sub-lessee, duly authorized agent, permittee or other occupant of land or premised within the boundaries of the McCarran International Airport.

TERMINAL BUILDINGS: All buildings and structures located within the airport and open to the public for the purpose of flight ticket purchase, public lobby waiting, baggage check-in and those other services related to public air travel.

TRIAGE: Sorting and classifying degrees of urgency of casualties to determine the order of priority for medical treatment and transportation.

X. APPENDIX 5 - REFERENCES

14 CFR Part 139.321, *Aeronautics and Space, Certification of Airports, Operations, Handling and Storing of Hazardous Substances and Materials*

29 CFR Part 1910.106, *Flammable and Combustible Liquids*

40 CFR Part 112, *Oil Pollution Prevention*

49 CFR Part 171-180, *Pipeline and Hazardous Materials Safety Administration, Department of Transportation*

Clark County Code Title 13 – *Fire and Fire Prevention*

Clark County Code Title 20 – *Airports*

Clark County Code Title 24 – *Water, Sewage and Other Utilities*

Clark County Department of Aviation Environmental Management System. https://cms.mccarran.com/dsweb/Get/Document-283602/DOAENVIRONMENTALMANAGEMENTSYSTEM_1.pdf

Federal Aviation Administration (FAA). Advisory Circular 150/5230-4, *Aircraft Fuel Storage, Handling and Dispensing on Airports*

Federal Aviation Administration (FAA). Advisory Circular 150/5230-4, *Addendum*, *List of Approved Fuel Safety Training Courses*

Federal Aviation Administration (FAA) guidelines for submitting a supervisory fueling safety program to the FAA Airport Safety and Operations Division, Office of Airports. http://www.faa.gov/airports/airport_safety/media/guidelines_submitting_supervisory_fueling_safety_program.pdf

McCarran International Airport, *Airport Certification Manual*

National Air Transportation Association (NATA), *Refueling and Quality Control Procedures for Airport Service and Support Operations*

National Fire Protection Association (NFPA), NFPA 407, *Standard for Aircraft Fuel Servicing*

Nevada Revised Statute 496. Municipal Airports