



Las Cruces International Airport
**Aviation Fuel Storage,
Dispensing & Handling Guidelines**

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Aviation Fuel Storage, Dispensing & Handling Guidelines

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Section 1

Promulgation Statement

This page officially declares this document to be the Aviation Fuel Storage, Dispensing, & Handling Guidelines for Las Cruces International Airport this 1st day of June, 2020, superseding any and all previous documents of this kind previously approved.



Andrew Hume
Airport Administrator

Record of Revisions

Revision Number	Revision Date	Effective Date	Affected Pages	Summary

Section 2 Policy and Purpose

- A. These Guidelines define the policies, procedures and regulatory standards approved by the City of Las Cruces for protecting against fire, fuel spills, and contamination in the storage, dispensing and handling of aviation fuels at the Airport Owned Bulk Fuel Storage Facility as well as other private storage and refueling operations at the Las Cruces International Airport, (LRU).
- B. All information contained herein is intended to comply with Part 139 of the Federal Aviation Regulations (FAR).
- C. All aviation fuel storage, dispensing and handling activities are undertaken in strict accordance with FAR 139.321.
- D. The Airport Administrator, or his/her designee, has the authority to enforce these Guidelines, and is responsible for reviewing and updating it as is necessary.

Section 3 Bulk Fuel Storage Facility Description

- A. The Las Cruces International Airport Bulk Fuel Storage “Facility” is located at 8705 Gasoline Alley in Las Cruces, New Mexico and is owned and operated by the City.
- B. It is used for the storage of aviation fuel, both 100LL and Jet-A. It has two 12,000-gallon city-owned above ground storage tanks (ASTs) in which the fuel is kept until it is off loaded into privately owned aircraft fueling trucks.
- C. Other tanks and space within the facility are also owned by and leased to various private companies.



The Two City-owned AST systems are as follows:

Tank #1	
<u>Capacity:</u>	12,000 gallons
<u>Contents:</u>	100LL Avgas aircraft fuel
<u>Construction:</u>	Double-walled horizontal cylindrical steel tank on steel saddles inside concrete secondary containment.
<u>Date of Installation:</u>	June 9, 2014
<u>Dimensions:</u>	8' X 32'
<u>Manufacturer:</u>	Fireguard
<u>UL Number:</u>	32522
<u>Piping:</u>	Single-walled black steel piping inside concrete secondary containment attached to suction dispenser also inside concrete secondary containment.
<u>Ancillary Equipment:</u>	Scully overfill prevention system, Gorman-Rupp horizontal self-priming centrifugal pump, filter separator, sump separator, static relaxation vessel.
<u>Venting:</u>	One 3" pressure vacuum vent and two 8" emergency vents.

Tank #2	
<u>Capacity:</u>	12,000 gallons
<u>Contents:</u>	Jet-A aircraft fuel
<u>Construction:</u>	Double-walled cylindrical steel tank on steel saddles inside concrete secondary containment.
<u>Date of Installation:</u>	June 9, 2014
<u>Dimensions:</u>	8' X 32'
<u>Manufacturer:</u>	Fireguard
<u>UL Number:</u>	32522
<u>Piping:</u>	Single-walled black steel piping inside concrete secondary containment attached to suction dispenser also inside concrete secondary containment.
<u>Ancillary Equipment:</u>	Scully overfill prevention system, Gorman-Rupp horizontal self-priming centrifugal pump, filter separator, sump separator, static relaxation vessel
<u>Venting:</u>	One 3" pressure vacuum vent and two 8" emergency vents.

Section 4 Safety Standards

4.1 Authorized Personnel

- A. All personnel involved in the storage, dispensing, and handling of aviation fuel at the Facility shall participate in an appropriate aviation fuel service and fire safety training program. The program shall conform to FAR Part 139 and include the general provisions of Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5230-4B and National Fire Prevention Association (NFPA) standards.
- B. Individuals authorized to handle and dispense aviation fuels include:
 - 1. Airport employees whose work duties involve the storage, dispensing and handling of aviation fuel;
 - 2. Aviation fuel vendors and fixed base operators (FBO), including pertinent vendor and FBO staff who perform aircraft fuel servicing functions using their own fixed fueling cabinets, fuel trucks and/or other related fuel storage or transfer equipment, or that allow general aviation pilots to use fixed fuel cabinet equipment to perform self-service fueling of their own aircraft;
 - 3. Aviation maintenance and service organizations including pertinent staff, involved in storing, dispensing and handling aviation fuel, or that otherwise perform aircraft fuel servicing functions using their own fuel storage and/or transfer equipment; and
 - 4. Individual tenants and based aircraft owners who are authorized by the FAA to fuel and/or defuel their own aircraft on a self-supervised basis, using their own fuel trucks and/or fuel storage and transfer equipment.

4.2 Permits and Licenses

- A. A Fuel Dispensing Permit is required for all airport tenant organizations desiring to participate in the sale, dispensing, or handling of aviation fuel on or within authorized airport areas in quantities greater than 100 US gallons annually, or that otherwise perform aircraft fuel servicing involving aircraft other than those owned and operated by the Permit holder.
- B. The Permit will be issued upon completion of an industry-recognized aviation fuel service and fire safety training, as required by FAR Part 139.321 and payment of Permit fee. Once issued, the Permit will become an exhibit attached the authorized organizations, (SASO, FBO, etc.) lease and/or operating agreement.
- C. The Permit remains a valid and continuing part of that lease and/or operating agreement upon completion of biannual industry-recognized aviation fuel service and fire safety training, as required by FAR Part 139.321 or until revoked or superseded.
- D. A permit is not required for General Aviation pilots or crewmembers who may be self-servicing their aircraft at authorized fixed facilities on the airport.
- E. All fuel delivered into aircraft or fuel storage and dispensing equipment, or brought onto airport property, is subject to assessment of fuel flowage fees.
- F. Permit and fuel flowage fees are specified in the Airport Rates and Charges, as amended.
- G. Airport tenants and based aircraft owners desiring to fuel and/or defuel their own aircraft on a self-supervised basis using their own fuel trucks or related fuel storage and transfer

equipment, shall participate in biannual industry-recognized aviation fuel service and fire safety training, as required by FAR Part 139.321.

4.3 Training

All permitted tenant and other authorized organizations and personnel subject to these Guidelines shall establish, adopt, implement or participate in an appropriate aviation fuel service and fire safety training program that conforms to these Guidelines and, at a minimum, addresses the subjects listed below:

- A. Grounding and bonding
- B. Public protection
- C. Control of access to storage areas
- D. Fire safety in fuel farms and storage areas
- E. Fire safety in the operation of fuel service equipment
- F. Aviation fuel quality control
- G. Fuel spill handling and cleanup
- H. The general provisions of NFPA 407, FAA AC 150/5230-4A, and City of Las Cruces fire prevention codes.
- I. Summaries of training programs instituted or used to satisfy the requirement above shall be made available at the Airport Manager's request. Notification of any subsequent changes shall be provided to the Airport Manager within ten (10) working days prior to their implementation.

4.4 Supervisory Roles

- A. Airport aviation fuel vendors, FBOs and maintenance/service organizations coming under the purview of these Guidelines shall have at least one supervisor on staff who has completed an aviation fuel service training course in fire safety and quality control that is acceptable to the City and FAA.
- B. All Supervisors shall renew their every 24 consecutive calendar months and be responsible for administering related on-the-job training (initial and refresher) for organization employees who require or have been issued a Fuel Handling Permit.
- C. Prior to a Supervisor conducting training, a copy of the supervisor's certificate shall be provided to the City.

4.5 Training Verification

- A. Each permit holder shall submit a written summary annually verifying that each Fuel Handling Permitted employee has been trained in compliance with FAR 139.321.
- B. This Annual Summary is to be submitted by January 31st of each year. The City will maintain these documents for 12 consecutive calendar months and shall serve as proof of training to the FAA, City Fire Inspectors, as required.

4.6 Training Matrix: Aircraft Fuel Storage, Handling, and Dispensing on the Airport

- A. Fuel Safety Supervisor

1. Initial Training: FAA Approved Fuel Safety Supervisor Course (Reference Advisory Circular AC 15/5230-4B)
2. Hands-on fire extinguisher training provided by an FAA Approved Training Course or Local Fire Authority
3. All training must be completed within 90 days of initiating duties
4. Recurrent Training must be completed every 24 CCM (Consecutive Calendar Months)

B. Line Service Employee

1. Initial Training: On-the-job training in fire safety, delivered by a trained Fuel Safety Supervisor or;
2. Training for employees may also be completed using an approved line service fuel safety course (Reference Advisory Circular AC 15/5230-4B)
3. Recurrent Training: Must be completed every 24 months.

4.7 Fuel Quality Testing

Aviation fuel can be contaminated by waters and solids. Contamination of fuel is an extremely hazardous situation, there for, fuel suppliers must carry out fuel quality testing. In addition to quality testing to detect contaminates, fuel suppliers must follow a comprehensive program of inspection and maintenance of equipment to ensure clean dry fuel is delivered.

- A. Testing fuel quality is accomplished by visually inspecting a fuel sample. Draining a small amount of fuel for quality testing is known as sumping. Sump buckets used for testing fuel should be metal with a porcelain liner. Do not use plastic buckets as dangerous static electricity may result. Fuel should be sumped daily and inspected using the Clear, Bright, and Dry visual test:
 1. Clear: The fuel should be absence of sediment or emulsion
 2. Bright: The fuel should be free of clouding or haze caused by fine water droplets
 3. Dry: The fuel should be consistent with no separate water layers

B. Sample Retention - Aircraft Mishaps

Upon receiving any report of a mishap involving an aircraft that has received fuel at LRU, the fueling agent organization or authorized self-fueler that delivered the fuel shall notify the Airport Manager and quarantine the fuel service vehicle or equipment used to deliver that batch of fuel.

4.8 Inspections by the City

- A. The City or its designee shall conduct sufficient announced and unannounced inspections of fuel storage and handling sites, fuel service equipment, personnel training records and written procedures to ensure full compliance with these Guidelines.
- B. Inspections shall be documented by a written report that shall be maintained by the Airport Manager for a period of not less than twenty-four (24) months
- C. Inspections shall emphasize safety and protection against fire and explosions in the storage, dispensing and handling of aviation fuel. Copies of inspection reports shall be

provided to inspected organizations and other certified personnel within seven (7) working days of inspection completion.

- D. Safety Violations of any Guideline Policy, procedure or regulatory standard specified in these Guidelines or implied by reference, will be recorded in the inspection report.
- E. Any permit holder issued a Safety Violation whether specified in these Guidelines or implied by reference, shall take immediate action to correct that violation and report their corrective actions in writing, to the Airport Manager.
- F. Permit holders will receive a copy of the inspection report and will work with the Airport Manager to correct the deficiency within a mutually agreed-to timeline.
- G. Any tools and equipment, if found to be unsafe or improper for use, shall be required to be removed from service and replaced, until corrective action are complete and a return to service inspection has been conducted.
- H. A Safety Violation issued by the City can result in suspension or revocation of your operating privileges.

Section 5 Corrosion Protection of Storage Tanks

Steel Tank Institute's "Standard for Inspection of In-Service Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids," has been approved by the City to ensure the AST systems at our facilities are maintained in a proper manner.

A copy of this standard was purchased from the Steel Tank Institute and is kept in electronic PDF format in the Airport Manager's office.

A. Corrosion Protection

1. Due to the original design and installation of the AST systems at our facility, neither of the two City-owned tank systems have any metal components that routinely contain fuel in contact with soil or water.
2. Currently there are no modifications such that metal components are in contact with the ground or water, corrosion protection is not needed for these tank systems.

Section 6 Release Detection Methods & Inspections for AST

To meet the release detection and operational requirements for 20.5 NMAC, inspections must be performed on the AST systems at this facility on a routine basis as outlined below:

A. Daily Inspections

The two ASTs at the bulk fuel storage facility are monitored daily for proper operation and for releases by daily visual inspections, which are recorded for both ASTs using the visual Fuel Storage Inspection checklist (Attachment A). Daily inspections are performed on site by personnel who are familiar with the operation and maintenance requirements for these AST systems.

B. Monthly Inspections

1. The two ASTs at this facility are monitored monthly for releases by monthly visual inspections which are posted on the log sheet in Appendix 4.

2. Inspections will be performed by on-site personnel who are familiar with the operation and maintenance requirements for these AST systems.
3. During the monthly inspections, personnel will inspect the exterior of the tank and associated equipment for any sign of a leak, any indication that equipment is not operating as designed and any damage that will need to be repaired.
4. Also, during the monthly inspection, the tanks will be checked for the presence of water. To check for water, a Velcron "Hydrokit" cylinder is used to test a sample of fuel. If the cylinder turns pink, there is water in the fuel.
5. If any water is found in the tank, the volume will be entered on the inspection log and if an inch or more of water is found, then the water will be removed from the tank. This information will be logged on the log sheet in Attachment "A".
6. Piping for Tank #1 and Tank #2 is above ground with all surfaces visible, so monthly visual inspection is used as the method of release detection.
7. The inspection will include checking all the piping connections and valves for signs of a leak and if anything is found, it will be entered on the log sheet in Appendix 4.
8. Any leak or damage to the piping system found will be reported to the Safety Officer.
9. The emergency vents on all tanks will be inspected monthly to see if they are still operational and the results will be logged onto the log sheet in Appendix 4.
10. The inspection will check that no foreign objects have been lodged in the emergency vents and that they operate in accordance with the manufacturer's guidelines. Nozzle screens, signs and placards and fire extinguishers will also be inspected monthly.
11. The monthly inspection schedule includes a check of the interstitial space of both Tank #1 and Tank #2 for water. There is an automatic monitor in the interstitial space that sounds an alarm when liquid is present in the interstices of the tanks.
12. Any liquid found in the interstitial spaces will be removed.
13. Also, the tanks are equipped with a Crown Products water detection probe which can detect the presence of water in the filter-separator sump and prevents water from being introduced into the sump or fuel stream.
14. The interstitial inspection will be posted on the log sheet in Appendix 4 as well.

C. Quarterly Inspections

1. Inspections of the two AST systems will be conducted quarterly and the results of the inspections will be posted on the log sheet in Appendix 4.
2. The quarterly inspections will involve the inspection of the coatings on the tanks and all above ground piping to check for damage or failure.
3. The emergency fuel shutdown system and tank high-level alarm will also be checked.
4. The normal vent will also be checked to make sure it is still operating properly.
5. If not, it could possibly need to be cleaned out or repaired.
6. Any problems with the quarterly inspection items will be reported to the Safety Officer.

D. Annual Inspections

1. Annual inspections of the two (2) AST systems at this facility will be conducted in accordance with Steel Tank Institute's Standard SP001 and the checklist on Appendix 3 will be used to conduct the inspection.
2. A copy of SP001 can be found in the facility's file in the Airport Manager's office.

E. Periodic Inspections

1. Periodic inspections will be conducted at this facility as needed and they will be logged on the log sheet in Appendix 4.
2. For example, each time following the delivery of fuel to the ASTs, the spill containment equipment will be checked to make sure it has been emptied by the delivery driver and if it has not been emptied, then the person performing the inspection will take care of it.
3. Tank #1 and #2 will be externally inspected in accordance with Steel Tank Institute's Standard SP001, no later than the twentieth (20th) anniversary of the installation of the tank at this facility by a STI certified inspector.
4. The due date for the 20-year inspection described above will be June 9, 2034.
5. The results of the 20-year inspection will be kept in the facility file for the life of the tank.

Section 7 AST Routine Maintenance & Repairs

Routine maintenance of the two City-owned AST systems will be conducted by on-site personnel, unless otherwise directed by the Airport Manager or safety officer. Most of the routine maintenance tasks for these tank systems are listed below in this section. As for repairs, personnel or contractors at this Airport will follow the practices outlined below.

A. Routine Maintenance

1. After every rainfall event, the secondary containment system and the sumps will be checked for water.
2. Discovered water will be removed.
3. All water removed from the secondary containment and sumps with a visible sheen will be properly disposed of and the volume of water removed will be recorded on the log sheet in Appendix 4.
4. A 55-gallon drum is kept at the facility which will be used to store all water with a visible sheen. When the drum is full, personnel will inform the safety officer to contact an environmental remediation company who will empty the drum and haul offsite for disposal. The contracting company will issue a shipping manifest that documents disposal to be kept on file in the facility's records. The Water Disposal Form, Appendix 6, must be completed when the water with a visible sheen is hauled off-site.
5. If the secondary containment area and sumps need to be cleaned out, on-site personnel will perform this task and properly dispose of all debris, liquid, and trash removed from these locations.

6. Material discovered in these locations that is incompatible with the fuel stored in the tanks will be promptly removed and it will be reported to the safety officer.
7. When you find these conditions, add them into the comment section of the log sheet in Appendix 4.
8. When an inspection of the AST systems reveals that the coating of the tanks, piping, and/or secondary containment system needs to be repaired, it will be completed in accordance with the tank and coating manufacturer's instructions.
9. Any new coatings will be compatible with the fuel stored in the tank system, and the coating specifications and application document will be kept on file as part of the facility's repair records and kept for the life of the tank system.

B. Repairs

1. When it is found that a repair is needed, on-site personnel will contact the safety officer, who in turn will contact a certified installer such as (D & H Pump or Kachina Petroleum Equipment) to perform the repair.
2. The Safety Officer will also contact the Petroleum Storage Tank Bureau and provide proper notification and a description of the proposed repair.
3. Repairs to dispensers which involve equipment located above the impact or shear valve does not require a notification to the Bureau.

Section 8 AST Facility Tests

There are two tests that are required on the tank systems at this facility on either an annual or periodic basis.

- A. Annual test of the sump sensors to ensure they still function properly and the test will be conducted by on-site personnel in accordance with the manufacturer's instructions.
- B. Annual test of the automatic line leak detector, which will be performed by a contractor who meets the requirements in 20.5 NMAC.
- C. The Airport Manager or designee will coordinate with a contractor to perform the test once every 12 months.
- D. The records produced by the tests will be kept in the City's owner's files.

Section 9 Responses to Incidents & Emergency Situations

- A. In case of fire in or around the AST systems,

The following is the response that will be made by on-site personnel.

1. A site map can be found in Appendix 2, it indicates where the emergency assembly area is in case the Bulk Fuel Storage Facility has to be evacuated.
2. Fire extinguishers are located by the SW corners of both Tank #1 and Tank #2.
3. Call 911.

4. If the fire can be put out safely, then personnel will do so and report the incident to the Airport manager.
- B. If a fire is discovered in or around the AST systems and it is the judgment of on-site personnel that it cannot be safely put out with the fire extinguisher, then the response will be as follows:
1. Sound an alarm to alert personnel of the fire.
 2. Shut Off Power: Go to the Northwest corner of the facility and turn off the power to the AST systems at the breaker box, if possible. The two breakers are marked and located in the bottom right of the box.
 3. Evacuate personnel from to the area designated as the emergency assembly area along with all other on-site personnel.
 4. Call 911.
 5. Inform the Airport Manager: 575-496-6491
 6. Airport manager will notify Bureau, if a release occurred as a result of the fire.
- C. In case of a leak or release of fuel from the AST systems, on-site personnel will use the AST Release Detection Response Checklist (Appendix 4), as an aid in determining when an incident has occurred and what needs to be done in response to these situations.
- D. In case of an accident involving a vehicle impacting a dispenser or another part of the tank systems, on-site personnel will respond as follows:
1. Go to the Northwest corner of the fuel farm and turn off the power to the AST Systems at the breaker box. The two breakers are marked and located in the bottom right of the box.
 2. From a safe distance, determine if there is an immediate threat of fire or explosion.
 3. If a fire breaks out as a result of the accident, then follow the responses in (A) above.
 4. If there appears to be no threat of fire or explosion, on-site personnel will determine if a release has occurred.
 5. If a leak is discovered, on-site personnel will try to stop the leak as soon as possible without putting themselves and others at risk.
 6. A "spill kit" that includes absorbent materials and sandbags to be used as berms is in a container between Tank #1 and Tank #2.
 7. Call 911
 8. Inform the Airport Manager: 575-496-6491
 9. Airport Manager will notify Bureau of the incident and if 25 gallons or more of fuel is leaked onto the ground, and if the tank systems must be repaired.

Section 10 Loading & Unloading Operations at the AST

- A. Activities at the City owned AST facility are limited to the transferring aviation fuel into aircraft fueling trucks.

- B. No direct fueling of aircraft will be conducted in the facility.
- C. The unloading of fuel to the ASTs will be conducted on the south side of the tank system where the fill pipes and spill buckets are located.
- D. Fueling personnel will verify before each delivery, the amount of fuel to be transferred into each tank and will measure the volume in each tank to verify they can hold the amount to be delivered.
- E. Delivery drivers are required to monitor the transfer of fuel from their tanker to the ASTs.
- F. During the transfer, if the delivery driver needs to leave the loading area, he will suspend transferring fuel until he can return and monitor the transfer.
- G. All loading will be done through a tight fill system and not with a nozzle.

Section 11 Self Service & Self Fueling Operations

11.1 Aircraft Self-Service Fueling

Aviation fuel vendors, FBOs and tenant organizations may be permitted to conduct aircraft self-service fueling within their leasehold areas, provided such is specifically authorized in their lease with the City, they possess an appropriate Airport Fuel Dispensing Permit, the equipment is registered with the Airport, completed appropriate safety training and they adhere to the following provisions:

- A. Only fixed fueling cabinets shall be used for aircraft self-service fueling operations.
- B. These cabinets shall meet all applicable regulatory specifications and standards for safety and design, be registered for use by the Airport and be made available for periodic inspection by Airport Manager or their Designee.
- C. Aviation fuel storage tanks and related equipment that supply self-service fueling cabinets shall be fire-rated by Underwriter Laboratories (UL) and meet all applicable safety, design and operation standards, including those pertinent to leak detection, fire suppression and the avoidance of fuel spills.
- D. Fuel storage systems shall be registered annually with the Airport and be subject to periodic inspection by the Airport.
- E. Fuel vendors, FBOs and tenant organizations authorized to conduct aircraft self-service fueling shall be responsible for the proper and safe operation of all fuel storage systems and fixed fueling cabinet equipment, and for ensuring all items are inspected and maintained in a safe and operable condition at all times.
- F. All fuel storage and fixed fueling cabinet equipment shall be placarded in accordance with pertinent guidelines. In addition, instructions for fueling cabinet equipment use shall be posted near those cabinets.
- G. All fixed fueling cabinet equipment shall incorporate a positive bonding system, such that the equipment shall not operate and fuel not be dispensed unless the equipment senses a positive, electrostatic bond between the equipment and the aircraft to be fueled.
- H. Organizations authorized to conduct self-service fueling shall maintain public liability, property damage, and chemical and environmental damage liability insurance (combined

single limit per occurrence) in the amount(s) specified in the fuel vendor's, FBO's or tenant's lease with the City.

- I. Meet all the Airport Rules and Regulations and Airport Minimum Standards as applicable.

11.2 Aircraft Self-Fueling

Individual tenants are permitted to conduct self-fueling of aircraft they own and/or operate at the Airport, provided those activities are conducted solely within their leasehold or tie-down area, the equipment used is registered with the Airport and:

- A. Operations are conducted solely by the tenant, using the tenant's own equipment, and appropriate Airport permits have been received.
- B. All aircraft fuel servicing activities shall be conducted in strict accordance with all provisions of these Guidelines.
- C. Aviation fuel storage tanks, if used, shall be fire-rated by UL and meet all applicable safety, design and operation standards, including those pertinent to leak detection, fire suppression and the avoidance of fuel leaks and spills.
- D. Fuel storage systems shall be registered for use by the Airport and made available for periodic inspection by the Airport.
- E. Tenants, including based aircraft owners are not required to obtain a permit from the City, and are authorized to conduct self-fueling operations on their own aircraft if using DOT listed fuel containment tanks having a capacity between 6 and 110 gallons, are not stored on-site, and shall maintain Automotive Liability Insurance.
- F. Tenants, including based aircraft owners authorized to conduct self-fueling operations by the Airport, using fuel containment tanks in excess of 110 gallons (parked on airport or towed into the aircraft operating area) shall maintain public liability, property damage, and chemical and environmental damage liability insurance (combined single limit per occurrence) in the amount(s) specified in the fuel vendor's, FBO's or tenant's lease with the City.

11.3 Aircraft Fueling Operations & Equipment Use - Special Provisions

- A. Aircraft being fueled or defueled shall have battery and ignition switches in the "off" position.
- B. When monitoring aircraft fuel gauges during servicing operations, the aircraft battery switch may be left on provided a qualified person is monitoring those gauges and can turn that switch off in an emergency.
- C. Occupancy of aircraft during self-service and self-fueling operations is prohibited.
- D. Gravity feed fueling systems shall not be used for aircraft self-service and self-fueling operations.
- E. Pumps, either hand- or power-operated, shall be used when aircraft are fueled from drums or other metal containers or tanks that exceed 5-gallons in volume.
- F. When fuel nozzles are used, they shall be equipped with deadman flow control devices. Notches or latches in the nozzle handle that could allow the valve or device to be locked or blocked open are prohibited.

- G. All self-fueling equipment shall be staged within the authorized tenant's or individual's leasehold area(s), unless otherwise approved in advance by the Airport or specified within their agreement or lease.
- H. All equipment and the aircraft being serviced shall be parked and/or staged on hard, asphalt or concrete surfaces located away from storm drains or other locations where a fuel spill could enter public water supplies, sewer, or otherwise cause a hazard to personnel and property.

Section 12 Fire Safety

The single greatest hazard associated with the storage, dispensing and handling of aviation fuel is fire. As a result, all organizations and individuals operating the Airport and coming under the purview of these Guidelines shall become cognizant of and adhere to the basic fire safety information below.

12.1 Fire Hazards in Aircraft Fuel Servicing

- A. Aircraft fuel servicing involves the transfer of a flammable or combustible liquid fuel between a bulk storage system or source and the fuel tanks of an aircraft. During these operations, the movement of fuel through the pumps, piping and filters of the transfer system causes the fuel to become electrostatically charged. If that charge is sufficiently high when it arrives at the fuel tank, a static spark may ignite the fuel vapor and cause a fire.
- B. During over-wing fuel servicing, the flow and splashing of fuel generates a certain amount of static electricity, while at the same time producing flammable mists and vapors.
- C. During under-wing or single-point fuel servicing and tank vehicle bottom loading operations, the closed hoses or flexible connections of metal tubing or piping tend to minimize the static charge generation and the misting hazards associated with over-wing fuel servicing.
- D. Other potential sources of ignition that can present hazards during aircraft fuel servicing include:
 - 1. Operating aircraft engines & auxiliary power units
 - 2. Arcing of electrical circuits
 - 3. Automotive or internal-combustion engine servicing equipment
 - 4. Energized aircraft radar equipment
 - 5. Lightning

12.2 The Fire Tetrahedron

The Fire Tetrahedron represents the four elements needed for fire. For fire to occur and materials (including liquid fuels) to continue burning, four elements must be present:

- A. Fuel
- B. Heat
- C. Oxidizer (Generally Oxygen)
- D. Uninhibited Chemical Reaction

If any of these elements are removed, a fire cannot occur, or an active fire will be extinguished.

Since most fire prevention measures related to aircraft fuel storage, handling and dispensing tend to focus on the avoidance of fuel spills and eliminating or controlling potential ignition sources, three Fire Tetrahedron hazards need to be considered:

- A. Fuel Vapors
- B. Flashpoint of Fuel
- C. Auto-Ignition

Aviation fuel is by design, highly volatile and has tendency to quickly evaporate and produce vapors that can easily mix with the oxygen in the air and can be easily ignited.

Fuel vapors tend to be heavier than air, and can travel along the ground and find a source of ignition, such as a spark from an electric motor, static electricity, or a heat source

The following are prohibited within 50-feet of aircraft or aircraft fuel servicing equipment:

- A. Open flames and exposed flame heaters
- B. Smoking
- C. Matches and lighters
- D. Welding or cutting activities
- E. Flares/flare pots
- F. Running generators

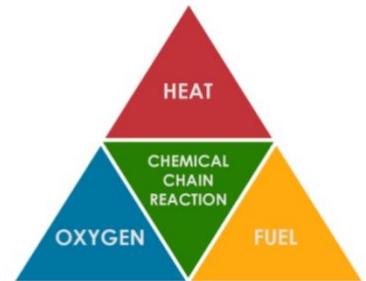
CAUTION: A partially filled fuel tank or container will generally contain fuel vapors above the liquid fuel in the air space and has a greater danger of ignition and fire than a tank that is full.

12.3 Flashpoint of Fuel

The temperature at which the fuel produces sufficient vapors to form an ignitable mixture in air is considered to be the flashpoint.

The flashpoint of aviation gasoline is very low, (approx. -50 degrees Fahrenheit (F).)¹, while for Kerosene based Jet-A turbine fuel it is much higher, about 100 degrees (F)².

FIRE TETRAHEDRON



¹ Shell Aviation Fuel SDS 800001008388

² Shell Fuel SDS M0754-375000

Escaping fuel vapors at or above the fuel's flashpoint can encounter an ignition source, and those vapors can ignite, and the fire will be carried back to the tank.

This possibility demands that all open fuel and flammable liquid containers, as well as potential vapor ignition sources, be minimized to the maximum extent practicable.

12.4 Auto-Ignition of Fuel

The temperature at which fuel will ignite and cause self-sustained combustion without a spark or other outside ignition source is auto-ignition.

The average auto-ignition temperature for aviation gasoline is 825 degrees F and Jet-A turbine fuel is 482 degrees F.

These temperatures may seem very high, but heat sources as residual heat from aircraft turbine engines and exhaust after shut-down or heat from aircraft brakes can cause spilled fuel to ignite.

Even when the fuel temperature is below its Auto-Ignition point, hot components on aircraft and vehicles can cause fuels to vaporize and mix with air to form combustible mixtures. Ignition sources can come from a broken headlight or clearance lights, faulty exhaust systems and other potential sources.

12.5 Fire Extinguishing Agents

- A. Different types of fires or burning materials require different types of extinguishing agents to be effective.
- B. Las Cruces Fire Department personnel use water, dry chemical and aqueous film forming foam (AFFF) to fight fires.
- C. Water works to eliminate the heat side of the Fire Tetrahedron, while dry chemical agents and AFFF work to simultaneously eliminate the Fire Tetrahedron's heat and Oxidizing Agent components, isolating the oxygen from the fuel.

Fires and fire extinguishers are grouped into four classifications:

Class A	Fires involving ordinary combustibles, such as wood, paper, cloth, rubber and many plastics
Class B	Fires involving flammable liquids (including aviation fuel), greases, and gases
Class C	Fires involving energized electrical equipment
Class D	Fires involving combustible metals

- A. Both NFPA Standards and the IFC (International Fire Code) do not allow ABC dry chemical extinguishers in airport ramps, fueling areas and maintenance areas.
- B. Fire extinguishers must be approved for Class B and C fires.
- C. Placement and distribution of fire extinguishers should conform to NFPA 10 and 407 and Section 906 of the code. Generally, portable fire extinguishers are required in the immediate vicinity of all flammable and combustible liquid storage, use and dispensing;

welding and cutting; spray finishing and other maintenance operations, as well as on aircraft fueler and service vehicles.

- D. Sections 1105.2, 1105.4, 1105.5 and 1105.6 specifically require B:C rated portable extinguishers on vehicles and in locations that are near aircraft. This is because it has been reported by the National Safety Council that A:B:C-rated portable fire-extinguisher chemicals pose a severe aircraft damage problem.
- E. While A:B:C-rated portable extinguishers generally have an excellent fire –fighting capability and track record, the mono-ammonium-phosphate chemical extinguishing agent is highly corrosive to aluminum. This agent will melt and flow when it encounters heated surfaces and, once it comes into contact with hot aluminum and works its way into the structural joints and crevices, it cannot be flushed out as the B:C-dry chemical agents can.
- F. Clean-up following use of an A:B:C-rated extinguisher on an aircraft could require disassembly of the aircraft to remove any remnant of the chemical to prevent hidden corrosion damage that could lead to structural failure.
- G. NFPA 407 Standard for Aircraft Fuel Servicing
 - 1. (4.1.6.3) ABC multipurpose dry chemical extinguishers (ammonium phosphate) shall not be placed on airport fueling vehicles, airport fuel servicing ramps, or aprons, or at airport fuel facilities.
 - 2. (A.4.1.6.3) Multipurpose dry chemical (ammonium phosphate) fire extinguishing agent is known to cause corrosion to aluminum aircraft components.
 - 3. Although the agent is capable of extinguishing fires on or near aircraft, it is likely that the agent will spread to other, uninvolved aircraft, causing damage from corrosion.

12.6 Control of Ignition Sources

- A. Smoking is not permitted at the Airport. “NO SMOKING” signs shall be conspicuously displayed everywhere flammable liquid vapors are normally present. These signs also shall be posted on fuel servicing equipment, as required by applicable standards.
- B. Matches and lighters shall not be permitted on or in aircraft fuel servicing equipment at any time. Further, matches or lighters shall not be carried by personnel when conducting aircraft fuel servicing or aviation fuel handling operations.
- C. Open flames and open flame devices, such as lighted cigarettes, cigars and pipes; exposed flame heaters; heat-producing, welding or cutting devices and torches; flares or other open flame lights shall not be permitted on aircraft fuel servicing ramps or aprons within 50-feet of any aircraft fuel servicing operation or fuel servicing equipment.
- D. Electrical equipment, including battery chargers and aircraft ground power generators shall not be connected, operated or disconnected during aircraft fuel servicing operations.
- E. Similarly, an electric or similar tool likely to produce sparks or arcs shall not be used during those operations, or anywhere flammable vapors may be present unless these tools are categorized as being intrinsically safe, in accordance with applicable UL standards.
- F. Also, battery-powered vehicle equipment such as golf carts and tugs shall not be operated within 10-feet of aircraft fuel servicing equipment or any fuel spill.

- G. Photographic and communications equipment, including cellular telephones, shall not be used or operated within 10-feet of fuel servicing equipment, or aircraft fueling points or vents.
- H. Any communications equipment or radios requiring use inside that 10-foot restriction shall be classified as intrinsically safe, in accordance with applicable UL standards.
- I. Aircraft Operations - Aircraft fuel servicing operations shall not be conducted on any fixed wing aircraft while an aircraft engine is operating.
- J. Combustion heaters aboard aircraft shall not be operated during those operations.
- K. Lightning - All aircraft fuel servicing operations shall be suspended when there are lightning flashes visible in the immediate vicinity of the airport (3-miles or less).
- L. Aviation refuelers, fixed base operators and aviation maintenance organizations involved in aircraft fuel servicing or aviation fuel handling operations shall establish written criteria for suspending their operations when lightning flashes are observed. That criteria shall be incorporated into the organization's training program or manual.

12.7 Static Electricity and Bonding Procedures

- A. Prior to making any fuel servicing equipment connection to an aircraft, operators of that equipment shall bond the equipment to the aircraft using a cable that will provide a conductive path to equalize the static electricity charge potential between the fuel servicing equipment and the aircraft.
- B. This bond shall be maintained until all fuel servicing is complete and all fuel servicing connections to the aircraft have been removed.
- C. When performing over-wing aircraft fuel servicing, equipment nozzles shall be bonded using a nozzle bond cable having a clip or plug that can be metallically connected to the aircraft or its fuel tank filler port. This bond shall be established before the aircraft fuel tank filler cap is removed.
- D. If there is no plug receptacle or other means for attaching a clip to the aircraft, the operator shall touch the filler cap with a metal component of the nozzle before removing that cap. This will allow an electrostatic bond between the nozzle and aircraft before fuel flow commences. The operator shall keep the nozzle spout in contact with the aircraft's metal fuel filler port until fuel servicing is complete.
- E. All organizations and individuals engaged in the storage, dispensing and handling of aviation fuel at the Airport shall wear clothing that is suitable for the tasks performed, and that will minimize the potential for generating static electricity. Such clothing shall, whenever possible, be made of 100-percent (100%) cotton, incorporate a predominant cotton blend or be fire retardant.

12.8 Reporting Fires

- A. The first immediate action to be taken when encountering a fire is to call 9-1-1 on the telephone, or relay the request the airport manager, or a company's operation, or dispatcher via radio.

12.9 Fire Fighting

- B. Attempts to fight an active fire shall be undertaken only by personnel who have been appropriately trained and deem it safe to do so.

- C. If any fire situation becomes too severe to handle, personnel shall depart the building or area immediately and standby to assist fire department personnel by keeping other personnel at least 50-feet away from the fire area.
- D. No person shall enter a liquid fire area without proper protective clothing and enough fire extinguishing agent to completely extinguish the fire.
- E. Remaining upwind of the fire at all times, and never turn your back on any fire even if it seems to have been extinguished because of the potential for re-ignition and flashback can occur.

12.10 Fuel Spills & Prevention

- A. Fuel spill prevention shall be the highest-level concern during all aircraft fuel servicing and aviation fuel handling activities due to fire, safety and environmental hazards.
- B. Ensure that all fueling equipment complies with applicable design and operating standards and is in proper operating condition prior to use.
- C. Remove leaking or malfunctioning equipment from service.
- D. When aircraft are fueled from fuel drums, use only drum pumps that are either hand or power operated.
- E. Pouring or gravity flow is not permitted from any container with a capacity greater than five (5) gallons because of the difficulty handling the weight, and increased potential for spillage and fire.
- F. When fuel nozzles are used, they shall be equipped with deadman flow control devices. Notches or latches in the nozzle handle that could allow the valve or device to be locked or blocked open are prohibited.
- G. To guard against fuel spills that could endanger aircraft and their occupants, transfer of fuel from one aircraft fuel service vehicle to another shall not be permitted within 200-feet of any aircraft.
- H. Only one aircraft fuel service vehicle shall be connected to the aircraft fuel service manifold at any one time. The only exception to this restriction shall be one in which specific means are provided to prevent fuel from back flowing into the fuel service vehicle when there is a difference in pumping pressure.

12.11 Disposal of Fuel Samples

Fuel samples from sumps are not to be dumped onto the ground. Return the fuel sample to the tank or a fuel sample retention canister prior to flight. Penalties can be significant if pilots are caught disposing fuel samples on the apron or ramp.

12.12 Spill Control, Clean Up and Reporting Outside of the Bulk Fuel Storage Facility

- A. Any fuel spill that occurs during aircraft fuel servicing, the equipment operator shall:
 - 1. Stop the flow of fuel immediately.
 - 2. Activate the EMERGENCY SHUT-OFF control.
 - 3. Stop or contain the spill to minimize any further hazard that could result.
 - 4. Immediately contact the Fire Department, and their supervisor for assistance.

- B. Aircraft fuel servicing operations shall not resume until:
 - 1. The spill has been cleared.
 - 2. Conditions are determined to be “safe” by the Fire Department.
 - 3. The cause of the spill has been corrected
- C. If the Fire Department is called, equipment operators shall standby upwind of the spill with a fire extinguisher in hand. They shall be prepared to keep unauthorized personnel at least 50-feet clear of the spill area and to assist Fire Department personnel as required.
- D. If aircraft needs to be evacuated, operators shall lay down a protective path of fire extinguishing agent to allow personnel to safely exit the aircraft and spill area.
- E. Do not attempt to move aircraft fuel service vehicles or equipment to or from the spill site unless specifically asked to by the Fire Department.
- F. Do not start or turn off any equipment, including ground power units to preclude any potential sparking, engine backfire, or creating any sources of ignition.
- G. Fuel spill control and mitigation can be aided by pre-positioning containment and cleanup materials on aircraft fuel service vehicles, and near aircraft fuel servicing locations.
- H. Used spill cleanup materials, including pads, dikes and granular absorbents shall be treated as hazardous waste and stored in fireproof containers and disposed of accordingly. Under no circumstances are these used materials to be discarded in normal trash receptacles or dumpsters.
- I. Report all spills in writing to the Airport Manager within 8-hours of spill occurrence. Reports shall include the date, time and location of the spill; the cause and contributing circumstances; the persons involved, and actions taken.
- J. The Fire Department (Station 7) shall be notified (via 9-1-1) of all fuel spills that:
 - 1. Comprise 5-gallons or more
 - 2. Cover an area extending 10-feet in any direction or an area of 50-square feet
 - 3. Continues to flow
 - 4. Poses a hazard to persons or property.
- K. During the corresponding Fire Department response, tenant organizations and/or persons involved or witnessing the spill shall immediately notify Airport Operations and Environmental Coordinator.
- L. Any failure to report a fuel spill or conceal a fuel spill occurrence may subject the organization and equipment operator(s) to fines, revocation of privileges, or other appropriate action by the Airport Authority.
- M. The City shall investigate all fuel spills requiring response by the Fire Department. This investigation shall focus on determining the cause of the spill, whether emergency procedures were carried out properly and if necessary and appropriate corrective measures were taken.
- N. Spill Prevention, Control, and Counter Measures (SPCC) Plan: All aviation fuel vendors, FBOs, aviation maintenance organizations and aircraft owner tenants involved in storing, dispensing or handling aviation fuel on the Airport shall develop an SPCC Plan. This plan

shall take inventory of all aviation fuel tanks and equipment that could present a fire or environmental hazard and describe the actions that will be taken to minimize those hazards and/or respond to them should an incident occur.

- O. Copies of completed SPCC Plans shall be maintained by the Airport Manager or designee.
- P. Plans shall include, as a minimum, the information requirements listed below
 1. Name, address and telephone number of the organization or aircraft owner/tenant preparing the plan.
 2. Name, address and telephone number of a designated Emergency Response Team Coordinator, an individual who would work with the Airport in the event of an incident.
 3. A physical description of all storage tanks and equipment used to store, dispense or otherwise handle aviation fuel at the Airport.
 4. A detailed description of the preventive measures to be employed to minimize and/or prevent fuel spills, including those associated with actual aircraft servicing locations and equipment staging areas.
 5. An inspection checklist describing daily, weekly, monthly and/or other periodic actions that will be taken to ensure equipment condition is suitable to minimize spill potential and include the forms to be used to document those actions.

APPENDIX-1

Points of Contact

Airport Owner: City of Las Cruces
Safety Officer: Andy Hume, (Airport Manager)
Main phone: 575-541-2471
Address: 8990 Zia Blvd.

New Mexico Environment Department	Inspector: Elmer Smith
Petroleum Storage Tank Bureau	Email: Elmer.smith@state.nm.us
Main phone: 575-288-2050	Office: 575-915-1163
Address: 2301 Entrada del Sol	Cell: 575-649-2954

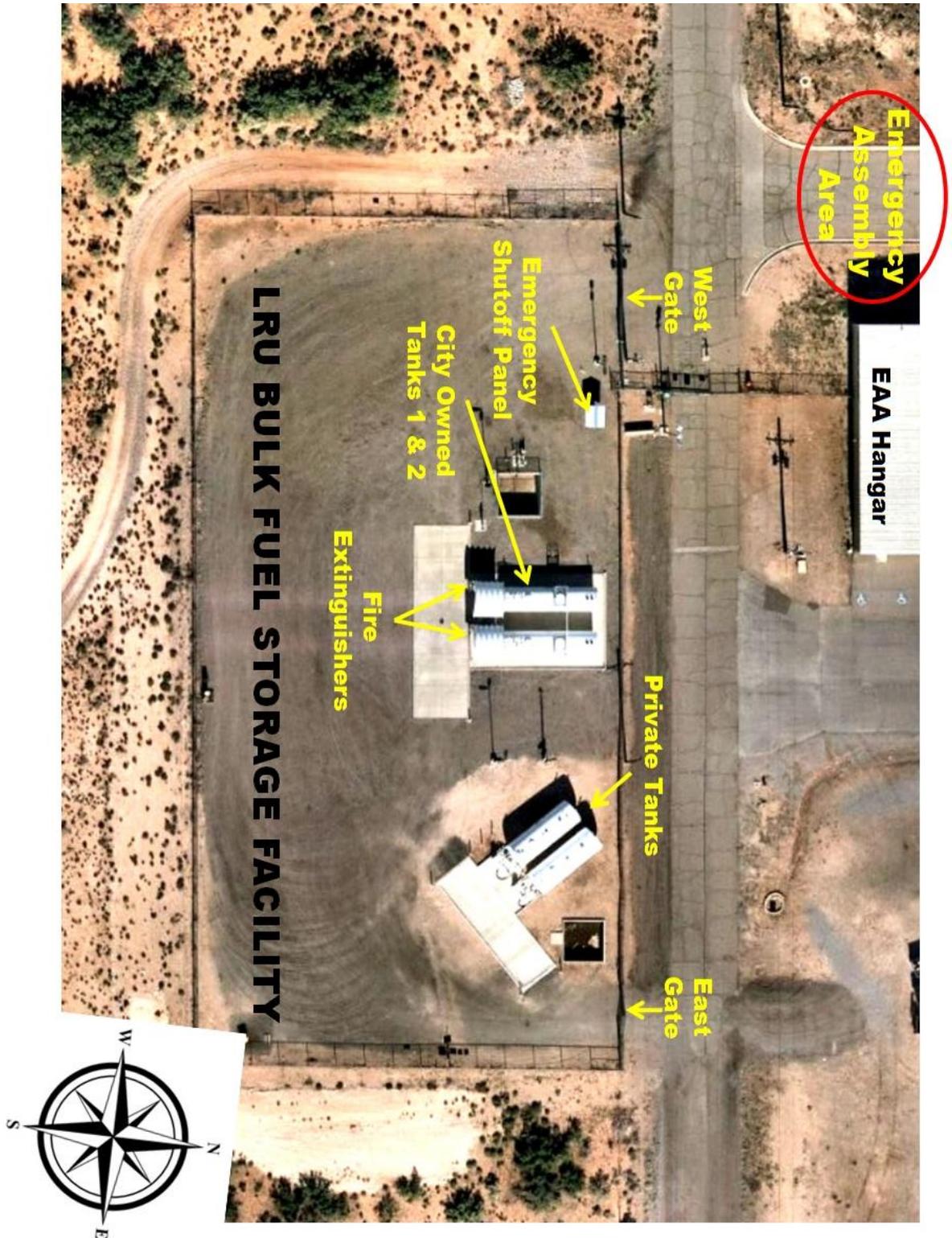
FBO Operator: Francis Aviation
Point of Contact: Andrew Kading
Main phone: 575-526-6341
Address: 8990 Zia Blvd. Las Cruces, NM 88007

FBO Operator: Southwest Aviation
Point of Contact: Mike Kading
Main phone: 575-524-8047
Address: 9050 Zia Blvd, Las Cruces, NM 88007

Petroleum Storage Tank Service Companies
D&H United Pump Supply
Main phone: (915) 859-8150
Kachina Petroleum Equipment Supply
Main phone: (915) 599-1717

APPENDIX-2

Site Map, Emergency Procedures



APPENDIX-3

Aboveground Storage Tank System Monthly Inspection Checklist

Facility Name: _____

AST Number: _____

Date/Time: _____

	Yes	No	N/A
Tank visually inspected. [20.5.5.8 NMAC]			
Piping visually inspected. [20.5.5.8 NMAC]			
Monthly monitoring method for tank is performed. [20.5.6.8 NMAC]			
Monthly monitoring method for piping is performed. [20.5.6.23.E NMAC]			
Operations and Maintenance Plan in place and is being followed. [20.5.5.9 NMAC]			
Spill containment free of fuel, water, and debris.* [20.5.5.11 NMAC]			
Overfill alarm is operational. [20.5.5.14 NMAC]			
Overfill prevention equipment is operational. [20.5.5.14 NMAC]			
Normal vent(s) operational and at proper height. [20.5.5.13 NMAC]			
Emergency vent(s) operational. [20.5.5.13 NMAC]			
Tank coating in serviceable condition. [20.5.5.8 NMAC]			
Secondary containment is free of cracks, holes, tears, or other damage. [20.5.5.10 NMAC]			
Secondary containment free of fuel, water, and debris.* [20.5.5.10.C NMAC]			
Concrete secondary containment coating is free of cracks, flaking, or other damage. [20.5.5.10.E]			
Secondary containment drain valve is closed. [20.5.5.10.C NMAC]			
Tank checked for water. (Height in inches, if found: _____) [20.5.5.8.F/20.5.6.20 NMAC]			
Interstice of double-walled tank checked for water. (Height in inches, if found: _____) [20.5.5.10.H]			
Regulated substance found in interstice of tank. (Height in inches, if found: _____) [20.5.5.10.H]			
Transition sump free of fuel, water, and debris.* [20.5.5.8.E NMAC]			
Transition sump liner in serviceable condition. [20.5.5.10.A NMAC]			
Transition sump sensor at proper height & orientation. [20.5.6.8 NMAC & 20.5.6.23 NMAC]			
Dispenser sump free of fuel, water, and debris.* [20.5.5.10 NMAC]			
Dispenser sump liner in serviceable condition. [20.5.5.10.A NMAC]			
Dispenser sump sensor at proper height and orientation. [20.5.6.8 NMAC & 20.5.6.23 NMAC]			
Loading rack secondary containment in serviceable condition. [20.5.5.10 NMAC]			
Loading rack secondary containment free of fuel, water, and debris.* [20.5.5.10 NMAC]			
Fuel in Oil/Water separator or collection sump at loading rack is properly disposed [20.5.5.10]			
All fuel, water, and debris removed from tank system have been properly disposed. [20.5.5.10]			

Comments and Follow Up Needed:

*** Sumps must be checked within one week of a rainfall event.**

Operator Name _____ Certification Class _____ Signature _____

APPENDIX-4

AST System Release Detection Response Checklist

Facility: Las Cruces International Airport	Emergency Contact: 575-496-6491
Address: 8705 Gasoline Alley	Operator Contact:575-526-6341

The following are circumstances where the method(s) of release detection used to monitor petroleum storage tank systems monthly in accordance with Part 6of 20.5 NMAC indicate that an incident has occurred.

An incident can be either suspected or a confirmed release of regulated substances to the environment. A suspected release is anything other than a “pass” result from any method of release detection plus any other condition as described in Section 701 of 20.5.6 NMAC. Owners and operators are required to report such incidents to the Petroleum Storage Tank Bureau within 24 hours of discovery.

Also, owners and operators are required to report any spills or overfills of 25 gallons or more that occur during the transfer of regulated substances either to the tank or from the tank system.

Check all the following that apply to your petroleum storage tank system.

AST System Release Detection Response Checklist

Release Detection Method Used	Indicators that Incident Occurred
Automatic Tank Gauging System (ATG)	Failed monthly 0.2gph leak test
Interstitial Monitoring with ATG System	Alarm activated or tripped due to presences of fuel or water in tank’s or piping interstice.
	Fuel is found in the sumps associated with underground piping.
Electronic Interstitial Monitoring	Alarm activated or tripped due to presence of fuel or water in tank’s or piping interstice.
	Fuel is found in the sumps associated with underground piping.
Visual Interstitial Monitoring	Fuel is found in the tank’s interstice during monthly inspection.
	Fuel is found in the sumps associated with underground piping.
Annual Line Tightness Test	Failed annual test.
Line Leak Detector	Activation or tripping causing flow of fuel to be reduced to 3.0 gph.
Monthly Visual Inspection	Fuel found leaking from tank and/or piping.
	Fuel found inside secondary containment system.
	Surface staining observed around tank, piping, or outside of secondary containment system.
	Loss of 25 gallons or more of fuel.

APPENDIX-5

AST System Release Detection Response Checklist

Investigation & Corrective Action:

1. The presence of a petroleum product in any or all interstices or sumps will be investigated to determine the source and if any repairs are needed.
2. Alarms will be investigated to determine if the equipment has malfunctioned, an operator error has occurred, or an actual release of product is occurring.
3. Once it is determined what has happened, appropriate action will be taken, which could be repairing the equipment, or stopping and repairing the leak.
4. As stated previously, if any of these circumstances occur at your underground storage tank facility, then you are required to report them to the Petroleum Storage Tank Bureau.
5. The Bureau has on its website (<http://www.nmenv.state.nm.us/ust/leakweek.html>) a listing of Bureau personnel who receive incident reports.
6. Open the "Leak of the Week" list and contact the appropriate Bureau staff person who is scheduled on the incident report date.

APPENDIX-6
Water Disposal Form

1. Facility Information

Name:	Date:
Address:	
City, State, Zip:	

2. Water Information

A. Water removed from the following: (Check all that apply)

- Concrete Secondary Containment Earthen Dike Field
 AST Interstice (Space in between walls of double-walled tank)
 Dispenser Sump Transition Sump Turbine Sump
 AST UST

B. Water had visible sheen? (Yes) or (No)

C. Water with visible sheen properly disposed of? (Yes) or (No)

D. Was water tested before disposal? (Yes) or (No)

E. Volume of water/liquid: _____ gallons.

3. Disposal Information

A. Disposal Method: _____

B. Disposal location and/or company: _____

4. Certification

I certify that I have personally examined and I am familiar with the information in this document, and I believe that the information is true, accurate and complete.

Owner or Owner's Authorized Representative

Date

APPENDIX 7

Checklist: Responses to Incidents & Emergency Situations

The following are responses that will be made by on-site personnel.

A. Fire in or around the AST systems, response:

- A site map can be found in Appendix 2, it indicates where the emergency assembly area is in case the Bulk Fuel Storage Facility has to be evacuated.
- Fire extinguishers are located by the SW corners of both Tank #1 and Tank #2.
- Put the fire out safely, call 911 and report the incident to the Airport Manager.

B. Fire in AST systems that cannot be safely put out with extinguishers, response:

- Sound an alarm to alert personnel of the fire.
- Shut Off Power: Go to the Northwest corner of the facility and turn off the power to the AST systems at the breaker box, if possible. The two breakers are marked and located in the bottom right of the box.
- Evacuate personnel from to the area designated as the emergency assembly area along with all other on-site personnel.
- Call 911.
- Inform Airport Manager: 575-496-6491.
- Notify Bureau, if a release occurred as a result of the fire.

C. Fuel leak or release of fuel from the AST systems, response:

- On-site personnel will use the AST Release Detection Response Checklist (Appendix 4), as an aid in determining when an incident has occurred and what needs to be done in response to these situations.

D. Accident involving vehicle impacting dispenser or tank, response:

- Go to Northwest corner of fuel farm, turn off the power to the AST Systems at the breaker box. The two breakers are marked and located in the bottom right of the box.
- From a safe distance, determine if there is an immediate threat of fire or explosion.
- If a fire breaks out as a result of the accident, then follow the responses in (A) above.
- If there appears to be no threat of fire or explosion, on-site personnel will determine if a release has occurred.
- If a leak is discovered, try to stop the leak without putting yourself at risk.
- A "spill kit" that includes absorbent materials and sandbags to be used as berms is in a container between Tank #1 and Tank #2.
- Call 911 and notify the Airport Manager: 575-496-6491.
- Airport Manager will notify Bureau of incident, if 25 gallons or more of fuel is leaked, and if the tanks require repair.

APPENDIX 8

Definitions

1. **Aircraft:** A vehicle designed for flight that is powered by liquid petroleum fuel.
2. **Aircraft Fuel Servicing:** The transfer of fuel into or from an aircraft.
3. **Aircraft Fuel Servicing Ramp or Apron:** Hard surface (concrete or asphalt) area of position at the airport used for aircraft fuel servicing.
4. **Aircraft Fuel Servicing Vehicle (Refueler):** A vehicle having a cargo tank (tank truck, tank trailer, tank semi-trailer) designed for or used in the transportation and transfer of fuel into or from an aircraft.
5. **Airport:** Las Cruces International Airport Operated by the City of Las Cruces, NM.
6. **Airport Fuel Dispensing Permit:** A biennial certification granted by the City of Las Cruces that permits specific organizations/persons to dispense and/or handle aviation fuel at the airport.
7. **Airport Fuel Handling Permit:** A biannual certification granted by the City of Las Cruces that permits specific persons to conduct aircraft fuel servicing at the airport.
8. **Airport Fuel Storage & Service Equipment Permit:** A biennial certification granted by the City of Las Cruces that validates the safety and suitability of equipment items to be used for aviation fuel storage, dispensing and handling at the airport.
9. **Airport Fueling System:** An arrangement of aviation fuel storage tanks, pumps, piping and associated equipment, such as filters, water separators or aircraft fuel servicing vehicles installed and/or operating at an airport and/or designed to service aircraft at fixed positions.
10. **Aviation Fuel:** Any petroleum fuel designed for and used by aircraft engines.
11. **Aviation Gasoline (Avgas):** Specifically blended fuels used to power reciprocating piston aircraft engines.
12. **Bulk Fuel Storage System (also Fuel Farm):** Above or below ground storage tanks equipped for receiving, storing and transferring fuel to truck fill stands and/or aircraft fuel servicing vehicles.
13. **City:** Refers to the City of Las Cruces, the owner and operator of the Airport
14. **Contaminants:** Substances, either foreign or native, introduced after the refining process that may be present in fuel that detract from its performance.
15. **Deadman Control:** Device that needs a positive, continuing action by a person to allow the flow of fuel, if released it shuts off automatically.
16. **Defueling:** Transfer of fuel from an aircraft to a tank vehicle or container through a hose.
17. **Emergency Fuel Shut-off:** A valve or switch manually actuated to stop the flow of fuel in an emergency.
18. **Fixed Base Operator (FBO):** FAA Designation for commercial aviation fuel dealers at airports.

19. **Flash Point:** Temperature at which a liquid gives off sufficient vapors to form an ignitable mixture in air. It is the lowest fuel temperature at which the vapor about the fuel will ignite.
20. **Labeled:** Equipment or materials containing an attached label, symbol or other identifying mark of an organization that is acceptable to the City. An example is Underwriter Laboratories (UL).
21. **Mis-fueling:** Accidental fueling of an aircraft or refueling tank vehicle with an improper grade of fuel.
22. **Overshoot:** The quantity of fuel passing through a valve after the deadman control is released.
23. **Over-wing Refueling:** Process whereby fuel is transferred into an aircraft by means of a nozzle into a fuel tank opening.
24. **Self-Fueling:** The dispensing of aviation fuels into fuel tanks of aircraft that are owned or operated by an authorized airport tenant, using tenant-owned equipment within the tenant's leasehold area.
25. **Self-Service Fueling:** The dispensing of aviation fuel into fuel tanks of aircraft by the operator of that aircraft using dispensing equipment contained in fixed cabinets that are owned and made available by authorized airport tenants within their leasehold area.
26. **Shall:** Indicates a mandatory requirement.
27. **Sump:** A low point in a system for collection and removal of water and solid contaminants.
28. **Underwing Refueling (also Single Point Refueling and Pressure Fuel Servicing):** A system used to fuel an aircraft by closed coupling under pressure.
29. **Volatility:** Refers to the tendency of a liquid fuel to evaporate or change into a vapor.
30. **Water Slug:** A large amount of free water.