BY ORDER OF THE COMMANDER
56TH FIGHTER WING (AETC)

LUKE AIR FORCE BASE INSTRUCTION 32-7003

9 OCTOBER 2013
Certified Current on 21 November 2016
Civil Engineering

AIR QUALITY COMPLIANCE PROCEDURES

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RELEASABILITY: There are no releasability restrictions on this publication.

OPR: 56 CES/CEIEC

Certified by: 56 CES/CC
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Pages: 31

Supersedes: LUKEAFBI 32-7003, 11 October 2006

This instruction establishes procedures and responsibilities for implementing AFI 32-7040, *Air Quality Compliance*, at Luke Air Force Base (AFB), Arizona, and implement AFPD 32-70, *Environmental Quality*. This instruction provides procedures for the operating, monitoring, record keeping, reporting, management practices and regulatory requirements of air pollutants regulated by Maricopa County. Air emission tracking will be accomplished through a team effort and efficient management practices and controls. These measures are the responsibility of each and every member of the 56th Fighter Wing (FW), including tenant units. This instruction applies to all personnel who authorize, procure, issue, or use material containing Regulated Air Pollutants and/or Hazardous Air Pollutants (HAPs). **This publication applies to the U. S. Air Force Reserve units and members attached or assigned to Luke AFB.** Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional's chain of command. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

SUMMARY OF CHANGES

The revisions include: Deleted Sections; Peak Shaving Generator (Title V Permit Condition 23) and Soil Vapor Extraction System at Building 177 (Title V Permit Condition 24). Added the following new sections: Facility Wide Requirements, General Purpose Generators (Title V Permit Condition 19b), and Cutback and Emulsified Asphalt (Title V Permit Condition 30).

1. References.

1.1. Maricopa County Air Pollution Department (MCAPD) Rules and Regulations.

1.2. Luke AFB Title V Air Quality Operating Permit.

1.3. Luke AFB Dust Control Block Permit.

1.4. Luke AFB Instruction 32-7002.

2. Responsibilities. The agencies listed below will be responsible for compliance with the procedures stated herein.

2.1. The 56 CES/CEIEC, Air Program, will:

2.1.1. Be the Office of Primary Responsibility (OPR) for this instruction.

2.1.2. Resolve any resource, training, procedural or enforcement problems submitted by the 56 FW and tenant units.

2.1.3. Manage all air emission records for the 56 FW and tenant units for a minimum of 5 years.

2.1.4. Compile and report all air emission data from user organizations annually to Maricopa MCAPD.

2.1.5. Review all Volatile Organic Compound (VOC) and other information entered into the Enterprise Environmental, Safety, and Occupational Health-Management Information System (EESOH-MIS) necessary to ensure all data is accurate to complete the annual emission inventory.

2.1.6. Conduct periodic inspections of work centers to ensure compliance with this Instruction.

2.1.7. Review Hazardous Material Authorization Requests for all Government Purchase Card (GPC) and supply purchases to ensure all necessary information is entered into EESOH-MIS.

2.1.8. Approve all facilities for spray painting operations prior to start-up.

2.1.9. Ensure a current permit is posted.

2.2. Civil Engineering Squadron will:

2.2.1. Coordinate and manage information tracking for data entered into the EESOH-MIS and serve as the EESOH-MIS onsite manager.

2.2.2. Input EESOH-MIS data entries necessary to track hazardous materials usage and stockage.

2.3. 56th Supply Squadron will:

2.3.1. Assign a control number for all GPC purchases.

2.3.2. Ensure specific cage (manufacturer) information is forwarded to the Hazardous Materials Office HAZMO to load into EESOH-MIS for authorized GPC purchases and

NSN products issued to user organizations when the product cage is different from the product cage that was authorized through the Hazardous Material Authorization process.

2.3.3. Provide a Material Safety Data Sheet (MSDS) to the user when a product is issued from supply that is a different cage from what was submitted for original Hazardous Material Authorization process.

2.4. User Organizations will:

2.4.1. Comply with the base air regulations and recordkeeping requirements outlined in Paragraphs 3 through 24.

2.4.2. Submit record keeping requirements on time to 56 CES/CEIEC, Air Programs, if applicable.

2.4.3. Conduct random work center inspections to ensure compliance with the policies stated in Paragraphs 3 through 24.

3. Facility Wide Requirements.

3.1. 56 CES/CEIEC or an individual designated by 56 CES/CEIEC staff will perform weekly inspections for the opacity inspections required under the Title V permit.

3.2. A single odor log will be maintained to cover the odor log requirements under the Title V permit.

4. Emergency Generators (Title V Permit Condition 19a).

4.1. Operational Limits:

4.1.1. Operation of emergency engines will be limited to no more than 100 hours each calendar year for purposes of maintenance checks and readiness.

4.1.2. Except for routine testing, emergency generators shall be used only when normal power service fails from the serving utility; if onsite electrical transmission or onsite power generation equipment fails; emergency pumping of water resulting from a flood fire, lightening strikes; lighting airport runways; or sewage overflow mitigation and/or prevention. Emergency generators shall not be used for peak shaving or if the power interruption is due to a voluntary reduction by the power company. Limit the operation of each diesel generator to no more than 500 hours per year including 100 hours for maintenance checks and readiness.

4.1.3. Do not use any fuel that contains greater than 0.05% sulfur by weight.

4.2. No emergency generator will be operated unless it has a cumulative run time meter installed and working properly.

4.3. If any emergency engine is modified or reconstructed after July 11, 2005, the engine shall comply with the requirements of 40 CFR 60 subpart IIII.

4.4. Recordkeeping Procedures:

4.4.1. Keep accurate daily run time usage records for each emergency generator showing the date the unit was operated, start up and shut down time and cumulative monthly run time. Include a description of what the engine was being used for including any maintenance performed on each generator.

4.4.2. A list of all equipment with total hours ran per calendar month must be provided to CEIEC for the submission of the annual emissions inventory, semi-annual compliance report, and ongoing permit compliance.

4.4.3. Keep records of all fuel used for the operation of the emergency generators which documents the sulfur content of the fuel. These documents can be in the form of MSDS's, technical data sheets from the vendor (and/or sampling), or sales records that include the sulfur content specifications of the fuel.

4.4.4. All generators must be accurately inventoried. 56 CES/CEIEC maintains a current equipment list and must be updated when a generator is purchased, moved, or deleted from the base inventory. 56 CES Power Production must update CEIEC of any changes in equipment.

4.5. Generators manufactured after 2007, must be Tier certified by EPA and maintained according to the manufacturer's written instructions or procedure. Only those changes allowed by the manufacture shall be made to any engine.

5. General Purpose Generators (Title V Permit Condition 19b).

5.1. Operational Limits:

5.1.1. Operation of all general purpose generators will not exceed 4,380 hour per any twelve consecutive month time period.

5.1.2. Do not use any fuel that contains greater than 0.05% sulfur by weight.

5.1.3. Preventative maintenance or tuning procedures will be performed as recommended by the engine manufacturer and must include the following:

5.1.3.1. Change the lubricating oil and filter once every three months or after no more than 300 hours of operation whichever occurs last.

5.1.3.2. Clean the inlet air filter once every three months or after no more than 300 hours of operation and replace every 1,000 hours of operation or every year whichever occurs last.

5.1.3.3. Clean the fuel filter once every year or replace (if cartridge type) once every 1,000 hours of operation whichever occurs last.

5.1.3.4. Check and adjust the valves, spark plugs, spark timing, and carburetor mixture (as applicable) once every year or after no more than 1,000 hours of operation whichever occurs last.

5.1.3.5. Replace spark plugs and ignition points after 3,000 hours of operation or every year whichever occurs last.

5.1.3.6. Change coolant after 3,000 hours of operation or every year whichever occurs last.

5.1.3.7. Check for leaks and restrictions in the exhaust system after 3,000 hours of operation or every year whichever occurs last.

5.2. No general purpose generator will be operated unless it has a cumulative run time meter installed and working properly.

5.3. Monitoring and Recordkeeping Requirements:

5.3.1. Maintain a log including engine combustion type, manufacturer, model designation, rated brake horsepower, serial number and engine location.

5.3.2. A list of all equipment with total hours ran per calendar month must be provided to CEIEC for the submission of the annual emissions inventory, semi-annual compliance report, and ongoing permit compliance.

5.3.3. Keep records of all fuel used for the operation of the emergency generators which documents the sulfur content of the fuel. These documents can be in the form of MSDS's, technical data sheets from the vendor (and/or sampling), or sales records that include the sulfur content specifications of the fuel.

5.3.4. All generators must be accurately inventoried. 56 CES/CEIEC maintains a current equipment list and must be updated when a generator is purchased, moved, or deleted from the base inventory. 56 CES Power Production must update CEIEC of any changes in equipment.

6. Jet Engine Test Cells (Title V Permit Condition 19c).

6.1. The total amount of fuel used and the number any type of engine must be logged on a monthly basis, and sent to the Air Program Manager by the 10th of the following month.

6.2. In accordance with Maricopa County Air Pollution Control Rule 100 Section 504, records shall be maintained for five years rather than the period of time otherwise required under the Air Force Records Disposition Schedule.

7. External Combustion Sources: Boilers, Heaters, Spray Paint booth Dryers, and Bake Off Ovens (Title V Permit Condition 20).

7.1. Operational Limitations and Standards: Do not use any fuel that contains greater than 0.05% sulfur by weight in any permitted equipment at the facility.

7.2. The base shall keep a facility wide record of natural gas usage.

8. Fuel Storage Tanks Diesel and JP-8 (Title V Permit Condition 21a).

8.1. Affected Sources: JP-8 and Diesel Tanks greater than 250 gallons in the POL yard.

8.2. Operational Limitations: Do not store any volatile organic liquid (VOL) in these storage tanks that:

8.2.1. Have a true vapor pressure greater or equal to 2.18 psi (15.0 kPa) for a tank with a capacity greater than or equal to 19,812 gallons (75 m^3) but less than 39,625 gallons (150 m^3).

8.2.2. Have a true vapor pressure greater or equal to 0.5 psi (3.5 kPa) for a tank with a capacity greater than or equal to 39,889 gallons (151 m^3).

8.2.3. Have a true vapor pressure greater than 1.5 psi (10.3 kPa).

8.3. Monitoring and Recordkeeping:

8.3.1. Keep copies of records readily accessible showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept for the life of the source.

8.3.2. At the request of the inspector, test the true vapor pressure of the volatile organic liquid stored in the affected storage tanks. The Reid vapor pressure shall be determined using American Society for Testing and Materials (ASTM) Method D 323-90.

8.4. Reporting: Notify 56 CES/CEIEC when the maximum true vapor pressure exceeds the limits specified in 8.2 above.

9. Fuel Storage Tanks – Gasoline (Title V Permit Condition 21b).

9.1. Affected Sources: Gasoline tanks listed in the approved equipment list

9.2. Allowable Emissions: Vapor loss from the source at any point in time shall not exceed 10,000 ppm as methane as measured by an organic vapor analyzer or combustible gas detector.

9.3. Allowable Throughput: The delivery of gasoline to all tanks which dispense gasoline into motor vehicles or other gasoline fueled engines will not exceed 100,000 gallons per month.

9.4. Handling Requirements: Gasoline must be handled in a manner that would prevent vapor releases to the atmosphere for extended periods of time. Measures taken include:

9.4.1. Minimize gasoline spills;

9.4.2. Clean up spills as expeditiously as practical;

9.4.3. Cover all open gasoline containers and all gasoline storage tank fill pipes with gasketed seal when not in use;

9.4.4. Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

9.5. Operational Limitations and Standards:

9.5.1. Each tank shall be equipped with a permanent submerged fill pipe that has a discharge opening which is completely submerged when the liquid level is six inches above the tank bottom. Threads, gaskets, and mating surfaces of the fill pipe assembly shall be designed and maintained tight. There shall be no liquid or vapor leakage at the joints of the assembly.

9.5.2. Prevent driver/deliverers from connecting the delivery hose coupling to a fill pipe coupling with so much twisting force that the fill pipe assembly is loosened. One method of complying is to have a California Air Resources Board certified swivel coupling as part of the fill pipe assembly.

9.5.3. Fill pipe caps shall have a securely attached, intact gasket. The cap and its gasket shall always function properly, latch completely so that it cannot then be easily twisted by hand, and have no structural defects. The cap of a gasoline fill pipe shall always be fastened securely on the fill pipe except immediately before, during, and immediately after:

9.5.3.1. "Sticking" the tank to measure gasoline depth.

9.5.3.2. Delivering gasoline into the tank.

9.5.3.2.1. Conducting testing, maintenance or inspection on the gasoline/vapor

system. Pipe caps shall not be unfastened or removed unless every other fill pipe is either securely capped or connected to a delivery hose.

9.5.4. Gasoline storage and receiving operations shall be leak free. Specifically, no liquid gasoline escape of more than three drops per minute is allowed. This includes leaks through the walls of piping, fittings, fill hose(s), and vapor hose(s). There shall be no excess gasoline drainage from the end of a fill hose or a vapor hose. Specifically, not more than two teaspoonfuls of gasoline shall be lost in the course of a connection or disconnection process.

9.5.5. Spill containment systems such as recessed basins surrounding the tank fill neck, including gaskets shall be kept vapor-tight. The outer surface of the spill containment basin shall have no holes or cracks and shall not allow vapors to pass from the dispensing tank through it to the atmosphere. Spill containment receptacles shall be kept clean and free of foreign material at all times.

9.6. Spill Containment: If the spill containment is equipped with a passageway to allow material trapped by the containment system to flow into the interior of the dispensing tank the passageway shall be kept vapor tight at all times unless in use. Any plunger/stopper assembly shall be checked to ensure that it is unimpeded and sealing correctly. The bottom of the receptacle shall be designed and kept such that no puddles of gasoline are left after draining through the passageway has ceased. Assure that before a delivery vessel leaves the premises after a delivery, any gasoline in a dispensing tank's spill containment receptacle has been removed. Any gasoline that has been taken out of a spill receptacle as a free liquid or as absorbed into/onto other material removed from the receptacle shall be contained in such a way that VOC emission is prevented. Disposal in conformance with applicable hazardous waste rules is sufficient to meet this requirement.

9.7. Vapor Loss Control Measures Required:

9.7.1. Ensure all vapor loss control equipment is installed as required, operated as recommended by the manufacturer, and maintained leak free, vapor tight and in good working order. Base personnel and drivers of a delivery vessel have the responsibility to assure that vapor recovery equipment is properly connected and in use at all times while gasoline is actively being transferred. Base personnel will resfuse delivery of gasoline if the delivery vessel does not bear a current pressure test certification decal. On coaxial systems, both spring-loaded and fixed coaxial fill tubes will be maintained cording to manufacturer standards and operated only if no obstruction of the vapor line is present.

9.7.2. Vapor Recovery System: The displaced gasoline vapors or gases shall be handled by an Approved Stage I Vapor Recovery System.

9.7.3. No vapor or liquid will be allowed to escape through the dispensing tank's outer surfaces or from any of the joints where the tank is connected to the pipes, wires, or other systems. Delivery operations will be vapor tight, meaning organic vapors will be less than 10,000 ppm or less than 20% of the lower explosive limit when measured with an organic vapor analyzer or combustible gas detector.

9.7.4. Tanks and fittings will also be less than 10,000 ppm or less than 20% of the lower explosive limit when measured with an organic vapor analyzer or combustible gas detector, expect for the outlet of a pressure/vacuum relief valve.

9.7.5. Overfill prevention equipment will be will be less than 10,000 ppm or less than 20% of the lower explosive limit when measured with an organic vapor analyzer or combustible gas detector. Any device mounted within the fill pipe will prevent vapor from the vapor space above the gasoline within the tank from penetrating into the pill pipe or through any of the fill pipe assembly into the atmosphere.

9.8. Vapor Loss Control Measures: Base personnel will not allow the transfer of gasoline from any delivery vessel into a stationary dispensing tank with a capacity of more than 250 gallons unless the following is met:

9.8.1. The tank is equipped with a permanent submerged fill pipe.

9.8.2. Displaced gasoline vapors or gases are handled by an approved stage I vapor recovery system.

9.8.3. Delivery operations are leak free and vapor tight. Disconnects of gasoline delivery hoses are cone without excess organic liquid drainage.

9.9. Equipment Maintenance and Use Required:

9.9.1. All vapor loss control equipment shall be installed as required, operated as recommended by the manufacturer and maintained leak free, vapor tight and in good working order:

9.9.1.1. Both the owner/operator of the vessel delivering the gasoline to the fuel dispensing tank, equipped with a vapor recovery, and Luke AFB are responsible for assuring that proper vapor recovery equipment is connected during every such delivery.

9.9.1.2. Luke AFB will refuse delivery of gasoline from a delivery vessel which does not bear a current pressure test certification decal issued by Maricopa County.

9.9.1.3. Both spring loaded and fixed coaxial fill tubes shall be maintained and operated so that there is no obstruction of vapor passage from the tank to the delivery vessel.

9.10. Monitoring and Recordkeeping Requirements:

9.10.1. Luke AFB must inspect the following weekly:

9.10.1.1. External fittings of tank fill pipe assemblies and vapor valves to assure that cap, gasket, and piping are intact and are not loose.

9.10.1.2. Spill containment receptacles for fuel accumulation.

9.10.2. Keep weekly records of fill pipe, vapor valve, and spill containment inspection to be kept. The findings of such weekly inspections shall be permanently entered in a record or logbook by the end of Saturday of the following week. These records and any reports or supporting information required by this instruction shall be retained in accordance with Maricopa County Air Pollution Control Rule 100 Section 504, for five years rather than the period of time otherwise required under the Air Force Records Disposition Schedule. Records of the past 12 months shall be in a readily accessible location and must be made available to the County without delay upon verbal or written request.

10. Bulk Plants and Terminals (Title V Permit Condition 21c).

10.1. Affected Sources: Aboveground storage tank (AST) located at Bldg. 368 and underground storage tank (UST) at Bldg 335

10.2. Operational Limitations and Standards:

10.2.1. Fill pipes: The tank must be fitted with submerged fill pipes and a pressure/vacuum valves that are set within ten percent of the tanks' maximum, safe working-pressure.

10.2.2. The tank shall be equipped with a vapor recovery system that collects and returns displaced vapors to the delivery vessel using vapor tight fittings and lines.

10.2.3. Fuel transfers:

10.2.3.1. Transfer to fuel tank: Do not transfer gasoline from a delivery vessel into a tank exceeding 250 gallons capacity unless the delivery vessel bears a current county pressure-test decal and uses a vapor balance system equipped with fittings which are vapor tight.

10.2.3.2. Transfer from fuel tank: Do not transfer gasoline from a tank exceeding 250 gallons capacity into a delivery vessel unless the loading rack and the delivery vessel use a vapor balance system equipped with fittings which are vapor tight.

10.2.4. Requirements for tank vapor loss control devices:

10.2.4.1. Loading shall be accomplished in a manner that prevents the gauge pressure from exceeding 18 inches of water (33.6 mm Hg) and vacuum from exceeding 6 inches of water (11.2 mm Hg) in the tank truck. Ensure that the vapor recovery system required by this permit condition is connected between the delivery vessel and the storage tank during all fuel transfers.

10.2.4.2. Loading shall be accomplished in a manner that prevents overfills, fugitive liquid leaks or excess organic liquid drainage. Luke AFB personnel shall observe all parts of the transfer and shall discontinue the transfer if any leaks are observed. Measures shall be taken to prevent liquid leaks from the loading device when it is not in use, and to complete drainage before the loading device is disconnected. During loading or unloading operations, potential leak sources shall be vapor tight as demonstrated by the test procedure described below.

10.2.4.3. Loading operations shall be accomplished in such a manner that the displaced vapor and air will be vented only to the vapor collection/processing system, which shall be operated gas-tight and in a manner such that the vapor processing capacity is not exceeded. Diaphragms used in vapor storage tanks shall be maintained gas-tight.

10.2.4.4. Vapor transfer lines shall be equipped with fittings that are vapor tight and that automatically and immediately close upon disconnection. Vapor balance systems shall be designed to prevent any vapors collected at one loading rack from passing to another loading rack.

10.2.5. Repair and retesting requirement: If the vapor recovery equipment fails, notify 56 CES/CEIEC for repair and retesting:

10.2.5.1. Concentrations at or above the lower explosive limit must be brought into compliance within 24 hours of detection.

10.2.5.2. Leak concentrations between 10,000 ppm and 50,000 ppm, as methane for vapor collection/processing equipment subject to gas-tight standard shall be brought into compliance within 5 days of detection.

10.2.5.3. Leaks must be tested after presumed leak-correction within 15 minutes of recommencing use; if leak standards are exceeded in this test, the use of the faulty equipment shall be discontinued within 15 minutes until correction is verified by retesting.

10.2.6. Equipment maintenance and operating practices: All equipment associated with delivery and loading operations shall be maintained to be leak free, vapor tight and in good working order. Gasoline shall not be spilled, discarded in sewers, stored in open containers, or handled in any other manner that would result in evaporation to the atmosphere. Purging of vapors is prohibited.

10.2.7. Handling requirements: Luke personnel will not allow gasoline to in a manner that would result in vapor released to the atmosphere for extended periods of time including minimizing gasoline spills, cleaning up spills as expeditiously as practicable; covering all open gasoline containers and all gasoline storage tank fill pipes with gasket type seal when not in use; and minimizing gasoline sent to open waste collection systems such as oil/water separators.

10.3. Monitoring and Recordkeeping Requirements:

10.3.1. The total amount of gasoline received each month shall be recorded by the end of the following month. Keep accurate records of liquids stored in such tanks including either the true or the Reid vapor pressure ranges of each such liquid. The temperature of the contents of each affected tank located at bulk terminals shall be recorded at least weekly and the true vapor pressure of each shall be recorded at least once each month. In accordance with Maricopa County Air Pollution Control Rule 100 Section 504, records shall be maintained for five years rather than the period of time otherwise required under the Air Force Records Disposition Schedule.

10.4. Administrative Requirements:

10.4.1. The primary seal will be available for inspection of the County. However, if prior thereto the secondary seal is removed or if the tank is drained and cleaned for any reason, it shall be made available for inspection at that time. Luke personnel will provide notification to the County no less than 7 working days prior to removal of the secondary seal. Luke personnel shall perform a complete inspection the primary seal and the floating roof, including measurement of the gap area and maximum gap, whenever the tank is emptied for non operation reasons or at least every five years, whichever is more frequent.

10.4.2. Perform monthly inspections, while vapor is being transferred, for liquid and vapor leaks and for faulty equipment. In these monthly inspections detection methods incorporating sight, sound, smell and/or touch may be used.

10.4.3. A log book shall be signed by the owner or operator, or responsible user as delegated by the Air Program Manager, at the completion of each monthly inspection for equipment leaks. A section of the log shall contain a list, summary description, or diagram(s) showing the location of all equipment in gasoline service at the facility.

10.5. Exemptions: When VOC vapors are present within a non-exempt delivery vessel, the vapor containment equipment may be opened while performing operations required by County rules or other statutory entities but restricted as follows:

10.5.1. Wait at least 3 minutes after on-loading is complete or delivery vessel has stopped before opening hatch or other vapor seal.

10.5.2. Close hatch or other sealing device within 3 minutes of opening.

10.5.3. Limit wind speed at the hatch or sealing device to not more than 3 mph.

10.6. Testing Requirements:

10.6.1. Leak detection tests shall be conducted annually, as directed by the Air Program Manager, according to MCAPD procedures.

11. Gasoline Delivery Vessel (C-300) Testing and Use (Title V Permit Condition 22).

11.1. Do not store or transport gasoline in or otherwise use or operate any gasoline delivery vessel unless it is designed and maintained to be vapor tight and leak free.

11.2. The driver/operator of a gasoline delivery vessel shall:

11.2.1. Thoroughly drain a fill hose and a vapor recovery hose into the dispensing tank before disconnecting it from the tank's fittings;

11.2.2. Connect and disconnect fill hoses and vapor recovery hoses in such a way as to prevent excess gasoline drainage (more than two teaspoonfuls) from escaping from the hose in one connect/disconnect cycle.

11.2.3. Spills and any gasoline that is deposited in or on an area other than within the dispensing tank shall be collected and contained. This can include, but is not limited to, the correct use of buckets and/or absorbent material designed for the purpose, and the correct disposal of the collected gasoline.

11.3. For gasoline dispensing tanks that are equipped with a Stage I Vapor Recovery System:

11.3.1. During delivery, the vessel operator shall not remove the lid of a fill tube unless every other fill tube either has a lid fastened in place or a delivery hose connecting it to the delivery vessel.

11.3.2. Connect a vapor recovery hose before connecting any gasoline delivery hose.

11.3.3. Disconnect a delivery hose from a tank before disconnecting the vapor recovery hose.

11.3.4. Restriction on multiple connections: A delivery vessel must not simultaneously have more than one gasoline delivery hose connected, unless each delivery hose is connected to a dispensing tank's two-point system that already has a vapor hose connecting it to the vessel.

11.4. If a delivery vessel's vapor hose is connected to a vapor return line that is not part of a two-point system, then there shall not be more than one gasoline delivery hose connected to the vessel, and no other hoses connected to a fill tube; viz., no more than one compartment of the delivery vessel shall be emptied at a time.

11.5. A gasoline delivery vessel shall first pass the Maricopa County Pressure Test before delivering or unloading gasoline within Maricopa County, and to continue, must pass the Maricopa County Pressure Test each year thereafter.

11.6. Each gasoline delivery vessel shall clearly display a valid MCAQD air quality decal that is permanently mounted near the front on the right (passenger) side of the vessel.

11.7. Do not purge gasoline vapors into the atmosphere from a delivery vessel unless the following conditions are met:

11.7.1. VOC emissions shall be reduced at least 90% by weight, including capture and processing, by a control device permitted by MCAQD.

11.7.2. Such purging shall be done only after all delivery valves are opened and any liquid gasoline outflow is captured in a container having an attached lid which is kept closed when not receiving or pouring gasoline.

11.7.3. Purging is done only after all delivery valves are opened and any VOC-liquid flow is captured in a container which is kept closed when not in use.

11.8. Opening Hatches on Nonexempt Vehicles:

11.8.1. Owners/operators, their contractors, and authorized government agents may open vapor containment equipment on a nonexempt gasoline delivery vessel while performing operations required by governmental agencies, but shall be restricted as follows, unless approved in advance by the inspector:

11.8.1.1. Wait at least three minutes after unloading is complete and after a delivery vessel has stopped before opening its hatch or other vapor seal.

11.8.1.2. Reclose hatch or other sealing device within three minutes of completing the required procedures.

11.8.1.3. Limit windspeed at opened hatch or other opened sealing device to not more than 3 mph (1.34 m/sec), using a barrier if necessary.

11.8.2. Hatches of a delivery vessel may be open for monitoring to prevent overflow during the period that the vessel is receiving gasoline from a tank or other source, if so required by a local fire code or other ordinance.

11.8.3. Connecting coaxial fittings: Requirements for first connecting a vapor hose before a gasoline delivery hose do not apply to coaxial vapor recovery connection fittings.

11.9. Vapor Recovery Required:

11.9.1. Do not store or transport gasoline in or otherwise use or operate any delivery vessel unless such vessel is designated and maintained to be vapor tight and leak free.

11.10. Monitoring and Recordkeeping Requirements:

11.10.1. Maintain records of all certification, testing, and repairs where such records must be maintained in a legible, readily available condition for at least five years after the date the testing and repair is completed. The records of the certification testing will be recorded in both of the following documents: the "Application for Air Pollution Vapor Recovery Certification" and the "Tank Truck Leak Certification Check List". Luke AFB subcontracts a MCAPD approved contractor to complete above two documents.

11.10.2. Maricopa County may at any time monitor a delivery vessel, including the vapor collection system, for vapor and liquid leaks to ascertain if it is vapor tight and leak free. Leakage of vapor exceeding 1/5 of the lower explosive limit, or 10,000 ppm as methane, shall be an exceedance of the vapor-tight MCAPD standard.

11.11. Testing Requirements:

11.11.1. Tests required by the SIP Rules 352 shall be conducted by the owner or operators, or by a consultant, at the expense of the owner or operator. Prior to testing the County shall be noticed of the date, time and location of the testing and the County may at any time observe the tests.

12. Abrasive Blasting and Sanding Activities at Building 907 (Title V Permit Condition 23).

12.1. Abrasive Blasters:

12.1.1. All abrasive blasting operations shall use confined blasting to control air emissions:

12.1.2. All abrasive blasters must be accurately inventoried. 56 CES/CEIEC maintains a current equipment list and must be updated when an abrasive blaster is purchased, moved, or replaced. It is the user's responsibility to notify 56 CES/CEIEC when the aforementioned change has occurred.

12.1.3. Abrasive blasters must have a written maintenance plan to ensure equipment is working properly. Typically, an O & M Plan is provided by the manufacturer. Shop specific written procedures may be produced to fulfill this requirement.

12.1.4. Specific conditions for confined abrasive blasting with a forced air exhaust:

12.1.4.1. Dry abrasive blasting in a confined enclosure with a forced exhaust shall be conducted by venting to an Emission Control System (ECS) with a submitted and approved Operation and Maintenance Plan (O & M Plan) on file with the MCAPD.

12.1.4.2. The ECS shall be operated and maintained in accordance within operating parameters specified in the MCAPD approved O & M Plan most recently approved in writing by the inspector. The O & M Plan contains the operating parameters and maintenance procedures acceptable to the inspector. The MCAPD approved O & M Plan must be kept on-site for any ECS used.

12.1.4.3. Work Practices: At the end of the work shift, the owner or operator shall clean up spillage, carryout, and/or track out of any spent abrasive material with a potential to be transported during a wind event.

12.1.5. Recordkeeping requirements (for blasting operations that occur periodically). Keep the following records onsite and maintain all of the specified records in accordance

with Maricopa County Air Pollution Control Rule 100 Section 504, for five years rather than the period of time otherwise required under the Air Force Records Disposition Schedule. User shall make them available to the control officer upon request:

12.1.5.1. The date the blasting occurs;

12.1.5.2. The blasting equipment that is operating;

12.1.5.3. A description of the type of blasting;

12.1.5.4. A description of the ECS associated with the blasting operation;

12.1.5.5. The type and amount of solid abrasive material consumed on a monthly basis. Include name of certified abrasive used, as applicable;

12.1.5.6. Keep a copy of the most recent California Air Resources Board certification list, if applicable, on file.

12.1.5.7. Maintain records of the key system operating parameters for the ECS required by the MCAPD approved O & M Plan.

12.1.6. If there is a reason to suspect that the surface that is to be abraded is covered in lead and a California Air Resources Board certified abrasive blasting media is intended to be used as the control device, contact 56 CES/CEIEC for conducting testing to determine if the lead content of the paint is less than 0.1%.

12.2. Sanding Procedures:

12.2.1. All sanding must be done using a vacuum sander and sanding residue must be disposed of in an appropriate manner.

13. Aerospace Manufacturing and Rework at Buildings 922, 1018, and 1019 (Title V Permit Condition 24).

13.1. Operational Limitations and Standards:

13.1.1. Do not use or operate any spray painting or spray coating equipment unless one of the following conditions is met:

13.1.1.1. Operate all spray coating equipment inside an enclosure which has at least three sides a minimum of eight feet in height and able to contain any object(s) being coated.

13.1.1.2. The direction of the spray will be in a horizontal or downward pointing manner so that overspray is directed at the walls or floor of the enclosure. No spraying shall be conducted within three feet of any open end and/or within two feet of the top of the enclosure.

13.1.1.3. For enclosures with three sides and a roof, or for complete enclosures, direct the spray into the enclosure so that the overspray is directed away from any opening in the enclosure. No spraying shall be conducted within three feet of any open end and/or within two feet of any open top of the enclosure. The Bioenvironmental Engineering Flight conducts an evaluation of all confined spaces prior to commencement of painting.

13.1.2. Any spray booth or enclosure with forced air exhaust must have an average overspray removal efficiency of at least 92% by weight, as specified in writing by the manufacturer, for the type of material being sprayed. No gaps, sags or holes shall be present in the filters.

13.1.3. Do not apply any surface coating including any VOC-containing materials added to the original coating supplied by the manufacturer, which contain VOC in excess of the limits in Tables 24-1 and 24-2 of the Title V Permit. The exception for this is at building 922, where the VOC emissions are vented to a MCAPD approved fabric filter and activated carbon absorption system and the system achieves a capture and control efficiency of at least 81%. Each control system shall be operated according to the MCAPD approved O & M Plan.

13.1.4. Use one or more of the following application techniques in applying any primer or topcoat to aerospace vehicles or components: brush coating; cotton-tipped swab application; or high volume low pressure (HVLP) spraying.

13.1.5. Cleaning procedures:

13.1.5.1. Hand-wipe cleaning operations shall utilize an aqueous cleaning solvent, or have a VOC composite vapor pressure less than or equal to 24 inches of water (45 mm Hg) at 68°F (20°C).

13.1.5.2. For flush cleaning of parts, assemblies, and coating unit components, the used cleaning solvent (except for semi-aqueous cleaning solvents) must be emptied into an enclosed container or collection system that is kept closed when not in use or captured with wipers, provided they comply with the VOC handling requirements below.

13.1.5.3. All spray guns must be cleaned by one or more of the following methods:

13.1.5.3.1. Enclosed spray gun cleaning system, provided that it is kept closed when not in use and leaks are repaired within 14 days from when the leak is first discovered. If the leak is not repaired by the 15th day after detection, the solvent shall be removed and the enclosed cleaner shall be shut down until the leak is repaired or its use is permanently discontinued;

13.1.5.3.2. Unatomized discharge of solvent into a waste container that is kept closed when not in use;

13.1.5.3.3. Disassembly of the spray gun and cleaning in a vat that is kept closed when not in use; or

13.1.5.3.4. Atomized spray into a waste container that is fitted with a device designed to capture atomized solvent emissions.

13.1.6. All fresh and used VOC containing material, including but not limited to cleaning solvents, coatings, thinners, rags, and their residues, shall be stored in closed, leak free, legibly labeled containers when not in use. In addition, the owner or operator must implement handling and transfer procedures to minimize spills during filling and transferring the cleaning solvent to or from enclosed systems, vats, waste containers, and other cleaning operation equipment that hold or store fresh or used cleaning solvents.

13.1.7. All cans of paint, solvent or other VOC containing material must have the lid in place when the material is not in use. **At no time are containers to be air-dried**. If a paint container becomes empty, any excess material may be poured out or wiped out into the proper hazardous waste container and the lid replaced. The container will not be left unattended and inverted to drain. The emptied container with the lid tightly sealed will be disposed of as solid waste.

13.1.8. Personnel performing painting or cleaning operations must have annual training on proper paint application techniques and VOC training. This training will be annotated in personnel's AF Form 55, *Employee Safety and Health Record*.

13.2. Monitoring and Recordkeeping Requirements:

13.2.1. Inspect each filter installed on a spray booth or enclosure for gaps, sags or holes prior to each use. If any gaps, sags or holes are observed in any of the filters, immediately repair or replace the filter and record the name of the inspector, the location of filtering system containing the filter, and the time and date that the filter was replaced. Otherwise, record the name of the inspector, the location of the filtering system containing the filter, *a statement that no gaps, sags or holes were observed*, and the time and date that the filter was inspected.

13.2.2. Maintain on file and make available to the County upon request, a copy the manufacturer's specifications verifying that the average overspray removal efficiency for the filter is at least 92%

13.2.3. Maintain a current list of aerospace coatings in use, VOC content as applied and records of the monthly usage of such materials in pounds per gallon or grams per liter. In addition, maintain a current list of:

13.2.3.1. All aqueous and semi-aqueous hand-wipe cleaning solvents used with corresponding water contents.

13.2.3.2. All vapor pressure compliant hand-wipe cleaning solvents in use with their respective vapor pressures or, for blended solvents, VOC composite vapor pressures and records of the monthly usage of such cleaning solvents.

13.2.3.3. All hand-wipe cleaning processes using cleaning solvents with a vapor pressure greater than 24 inches of water (45 mm Hg) and records of the monthly usage of such cleaning solvents.

13.2.4. Visually inspect the seals and all other potential sources of leaks from the spray gun cleaner at least once per month while the spray gun cleaner is in operation. Records of these inspections shall be kept and made available upon request by the MCAPD.

13.2.5. A MCAPD approved O & M Plan for any ECS, their monitoring devices, and emission processing equipment will be followed to include recordkeeping requirements, periodic maintenance requirements and operating procedures. The MCAPD approved O & M Plan must be kept on-site for any ECS used. If equipment is replaced, a new O & M Plan will be submitted for approval by the Air Program Manager prior to resuming operations.

13.2.6. A log shall be maintained of the monthly tests of the activated carbon panels located in building 922, in accordance with Maricopa County Air Pollution Control Rule

100 Section 504, for five years rather than the period of time otherwise required under the Air Force Records Disposition Schedule. The report shall state the available surface area of the activated carbon derived from each test. If a test result shows the available surface area of the activated carbon to be below 10%, spray painting will cease until the carbon in the panels is replaced with new or regenerated activated carbon.

14. Vehicle Refinishing at Buildings 291, (Title V Permit Condition 25).

14.1. Allowable Emissions Limitations:

14.1.1. Do not apply a coating on a previously finished automobile/light-duty vehicle in Maricopa County unless the coating's VOC content complies with the applicable limits in Table 25-1 of Title V Permit Condition 25. Vehicle-body appurtenances such as mirrors, trim strips, license-plate frames, etc., used to replace or supplement existing appurtenances on an automobile/light-duty vehicle bodies may be coated with coatings that meet the applicable VOC limits in Table 25-1, even if the item has never been coated or used. The recoating of a section of a light-duty vehicle that is not part of its body/chassis, its body's appurtenances, nor its wheels, shall comply with the VOC limits of Table 25-3 of Title V Permit Condition 25. This includes drive-train, steering gear, suspension, etc.

14.1.2. Do not apply refinish coating to any section or appurtenance of the body or chassis of a heavy truck unless that coating complies with the VOC limits in Table 25-1. At the time of (re)placement, the Luke AFB personnel may coat heavy truck body appurtenances such as mirrors, trim strips, license-plate frames, wheel covers, etc., with coatings that meet the applicable VOC limits in Table 25-2, or the requirements of item a below, if the item is about to be used to replace or supplement existing appurtenances, even if the item has never previously been coated or used. Luke AFB may coat a heavy truck panel, a juncture of panels, or a body appurtenance using a coating with a VOC content that does not exceed 4.55 lb VOC/gal (546 g VOC/L), provided that the coatings as applied meet the following requirements:

14.1.2.1. The coating shall be applied from a reservoir having a gross volume not exceeding 1.2 liters (5 cups) and containing no more than 1.1 quart (1 liter) of coating.

14.1.2.2. The complete topcoat of a single stage finish shall not use more than one liter.

14.1.2.3. The complete topcoat of a multi-stage finish shall not exceed two liters.

14.1.2.4. The total of all non-topcoat coatings, including wash and primers shall not exceed one liter.

14.1.2.5. Wash Primers may have up to 6.5 lb VOC/gal (780 g VOC/L).

14.2. Operational Limitations and Standards:

14.2.1. Any spray booth or enclosure with forced air exhaust must have an average overspray removal efficiency of at least 92% by weight, as specified in writing by the manufacturer, for the type of material being sprayed. No gaps, sags or holes shall be present in the filters.

14.2.2. The recoating of a section of mobile equipment or a heavy-duty vehicle, including a heavy truck, that is not part of its body/chassis, its wheels, nor appurtenances, shall comply with the VOC limits of Table 25-1 of the Title V Permit. This includes drive-train, steering gear, suspension, etc.

14.2.3. Do not refinish mobile equipment or any heavy-duty vehicle that is not a heavy truck unless the coating as applied conforms to the VOC limits in Table 25-3 of the Title V Permit, except that pre-treatment acid etchant wash shall conform to the VOC limits of row 1 in Table 25-2, herein.

14.2.4. When adding VOC-containing thinner, reducer, or other diluent to any refinish coating regulated by either Table 25-1 or Table 25-2 of the Title V Permit, do not add such diluents in proportions higher than those specified or recommended by the instructions provided by the supplier of the coating.

14.2.5. When cleaning or preparing a surface of a vehicle or mobile equipment for coating using a wipe method or other non-dip method, do not use a material with a VOC content as applied of more than 1.4 lb VOC/gal (167.8 g VOC/L). Neither surface-cleaning nor surface-preparation material that contains VOC shall be applied by means of motor-compressed air if applied in a mist or (finely atomized) spray.

14.2.6. Operate and maintain in proper working order all production and cleaning equipment in which VOC-containing materials are used or stored.

14.2.7. Do not apply any coating with a VOC content exceeding 3.0 lb VOC/gal (360 g VOC/L) using a spray gun, unless a low pressure spray gun or system (such as HVLP) is employed.

14.2.8. A spray gun other than the type described above may be used if:

14.2.8.1. Applying materials that have a VOC content not exceeding 3.0 lb VOC/gal (360 g VOC/L) as applied, less water and non-precursor compounds.

14.2.8.2. Such guns are designed and used solely for detailing and/or touch-up, and have a maximum reservoir capacity of 8.8 fluid ounces (250 milliliters).

14.2.8.3. Such guns are used to apply adhesives.

14.2.9. Maintain in calibration, in good working order and in operation, the spray booth and overspray filter described in the facility's MCAPD approved O & M Plan.

14.2.10. Manual and Automatic Spray Gun Cleaning:

14.2.10.1. All solvent used to manually clean spray guns shall be collected into a container which shall be immediately closed after all the solvent has been collected. All solvent used for line cleaning shall be pumped or drained into a container kept closed when not in use. Tanks used for stripping off coating or for cleaning objects shall be covered when not in use. Solvent dragout shall be minimized by tilting or rotating the object to drain off any pools of solvent before removing the object from above the tank.

14.2.10.2. Manual cleaning outside of the cleaning machine is allowed if the cleaning machine is used immediately after manual cleaning, and if done without spraying cleaning solvent with the gun. A cleaning machine is not required to clean a paint gun

if the gun is cleaned with water or a cleaning mixture that is more than half water by weight or volume.

14.2.11. Store all VOC-containing materials, including but not limited to waste coatings, waste solvents and their residues, and rags in closed containers. A container must have a legible label identifying the container's contents and shall be kept closed except when contents are added or removed. Disposal of waste or surplus VOC-containing materials shall be done in a manner that inhibits VOC evaporation, such as having these materials hauled off site in sealed containers.

14.3. Monitoring and Recordkeeping Requirements:

14.3.1. Luke AFB must notify the county by February 28th if any of the following quantities are exceeded for the previous calendar year:

14.3.1.1. Used a total of 1000 gallons of coating (with reducer and hardener)

14.3.1.2. Received a total of 1300 gallons of cleaning solvent, lacquer thinner and wash-thinner.

14.3.1.3. Disposed of more than 1000 gallons of 6000 pounds to hazardous waste collection.

14.3.1.4. Submitted a total exceeding 9000 pounds of VOC in the facility's most recently completed Maricopa County annual air-emission inventory form.

14.3.2. Keep the records described below, in a consistent and complete manner and shall make them available to the MCAPD without delay during normal business hours.

14.3.3. Maintain written records in the facility that give the name or code number of each VOC-containing product and its VOC content as received. VOC content shall be expressed in pounds of VOC per gallon (or grams/liter), less water and non-precursors, excepting waterborne cleaners that shall include the water. Any one of the following may be used to meet these requirements as long as all VOC-containing refinishing products are accounted for:

14.3.3.1. An up-to-date hardcopy (in writing) list prepared for that facility.

14.3.3.2. Current MSDS or product data sheets showing the VOC content.

14.3.3.3. Purchase documentation that gives VOC content, such as invoices and/or receipts showing VOC content.

14.3.3.4. Current, dated manufacturer's publications such as charts or lists which show VOC content, with the products used in the facility highlighted or otherwise clearly marked.

14.3.4. Purchase records showing the volume of each VOC-containing refinishing-related product purchased shall be kept available for the current and the previous year. Actual invoices and receipts showing the volume of the material purchased will suffice in place of ledger-style records. Records required by this section of the permit shall be retained in accordance with Maricopa County Air Pollution Control Rule 100 Section 504, for five years rather than the period of time otherwise required under the Air Force Records Disposition Schedule. Records can be obtained through EESOH-MIS.

14.3.5. The spray booth shall be operated and maintained in accordance with the operating parameters specified in the currently approved O&M Plan.

14.3.6. Maintain on file and make available to the County upon request, a copy of the manufacturer's specifications verifying that the average overspray removal efficiency for the filter is at least 92%.

14.3.7. On each day that an ECS is used, record the amount and VOC content of the material for which the ECS was used. On each day an ECS is used, make a permanent record of the operating parameters of the key systems as required by the O & M Plan described below. For each day or period in which the O & M Plan requires that maintenance be performed, a permanent record shall be made of the maintenance actions taken within 24 hours of maintenance completion.

14.3.8. Maintain the MCAPD approved O & M Plan for the ECS and their monitoring devices. Comply with all the identified actions and schedules provided in each O & M Plan. The MCAPD approved O & M Plan must be kept onsite for each ECS used.

15. Surface and Spray Coating Operations (Title V Permit Condition 26).

15.1. Affected sources include spray paint booths except for aerospace and vehicle refinishing booths.

15.1.1. All spray painting operations including the use of spray cans for touch up painting will not be performed outside. These operations must be conducted in an approved facility.

15.1.2. Approved facilities are required to have three sides (a minimum of eight feet in height) and long enough to fully contain the object being painted. Spray shall be directed away from any opening in the enclosure. No spraying shall be conducted within three feet of any open end and/or within two feet of the top of the enclosure.

15.1.3. If the spray painting operation is located inside a confined space (i.e. Building) there must be proper ventilation for worker's health. The Bioenvironmental Engineering Flight conducts an evaluation of all confined spaces prior to commencement of painting.

15.1.4. Any spray paint booth or enclosure with forced air exhaust system must have filters with an overspray removal efficiency of at least 92%. No gaps, sags or holes shall be present in the filters.

15.1.5. Any coating containing more than 240 g/L of VOC will use an HVLP spray gun.

15.1.6. Spray gun cleaning will be done by disassembling the gun and other equipment and cleaning in a container which remains covered at all times except when the equipment is being handled or with a commercially sold gun cleaning machine

15.1.7. No solvents with vapor pressures over 35 mmHg at 20 degrees centigrade shall be used.

15.2. Each spray paint booth has a MCAPD approved O & M Plan that contains the required recordkeeping, monitoring, and maintenance procedures specific to each spray paint booth to ensure they are working properly. The MCAPD approved O & M Plan must be kept on-site at each spray paint booth.

16. Architectural Coating (Title V Permit Condition 27)

16.1. Operational Limits

16.1.1. Luke shall not apply any architectural coating manufactured after July 13, 1988 which is recommended for use as a bituminous pavement sealer unless it is an emulsion type coating.

16.1.2. Luke shall not apply any non-flat architectural coating manufactured after July 13, 1990, which contains more than 2.1 lbs (250 grams/liter [g/l]) of VOCs per gallon (gal) of coating, excluding water and any colorant added to tint bases. These limits do not apply to specialty coatings

16.1.3. Luke shall not apply any architectural coating that exceeds the limits for Specialty Coatings in section 27.c.iii. of the Title V permit. Limits are expressed in pounds of VOC per gal of coating as applied, excluding water and any colorant added to tint bases.

16.1.4. Luke shall not apply any flat architectural coating which contains more than 2.1 lbs (250 g/l) of VOC/gal of coating, excluding water and any colorant added to tint bases. These limits do not apply to specialty coatings

16.2. Recordkeeping

16.2.1. Luke shall keep the material list of all coatings used. The material list must contain the name of each coating, short description of the material, lbs of VOCs per gal of coating, excluding water and colorant added to tint bases and amount used. If the coating is exempt from the VOCs content requirements, the justification for the determination shall be documented and kept on file.

17. Solvent Degreasing Operations (Title V Permit Condition 28).

17.1. Equipment and Solvent Requirements:

17.1.1. All cleaning machines must be one of the following types.

17.1.1.1. Batch loaded cold cleaners with remote reservoir;

17.1.1.2. Batch loaded cold cleaners without a remote reservoir (such as solvent dip tank).

17.1.1.3. Use only low VOC cleaner. A low VOC cleaner is any solution or homogeneous suspension that, as used, contains less than 0.42 lb VOC/gal (50 g VOC/L) of material or is at least 95% water by weight or volume;

17.1.2. Solvent handling requirements: All cleaning-solvent, including solvent soaked materials, shall be kept in closed leak-free containers that are opened only when adding or removing material. Rags used for wipe cleaning shall be stored in closed containers when not in use. Each container shall be clearly labeled with its contents. If any cleaning-solvent escapes from a container:

17.1.2.1. Wipe up or otherwise remove immediately if in accessible areas.

17.1.2.2. For areas where access in not feasible during normal production, remove as soon as reasonably possible.

17.1.2.3. Unless records show that VOC-containing cleaning material was sent offsite for legal disposal, it will be assumed that it evaporated on site.

17.1.3. Provide a leak-free container (degreaser) for the solvents and the articles being cleaned. The VOC-containment portion shall be impervious to VOC-containing liquid and vapors. No surface of any freeboard required by this rule shall have an opening or duct through which VOC can escape to the atmosphere except as required by OSHA.

17.2. Operating and Signage Requirements:

17.2.1. When cleaning with cleaning-solvents other than Low-VOC Cleaners:

17.2.1.1. Comfort fans shall not be used near cleaning machines;

17.2.1.2. Do not remove any device designed to cover the solvent unless processing work in the cleaning machine or maintaining the machine;

17.2.1.3. Drain cleaned parts for at least 15 seconds after cleaning or until dripping ceases, whichever is later;

17.2.1.4. If using a cleaning-solvent spray system:

17.2.1.4.1. Use only a continuous, undivided stream (not a fine, atomized, or shower type spray).

17.2.1.4.2. Pressure at the orifice from which the solvent emerges shall not exceed ten pounds psi gauge (psig) and shall not cause liquid solvent to splash outside the solvent container.

17.2.1.4.3. In an in-line cleaning machine, a shower-type spray is allowed, provided that the spraying is conducted in a totally confined space that is separated from the environment.

17.2.1.4.4. Exceptions to the above subsections 17.2.1.4.1 through 3 are provided for in Section 17.5 below.

17.2.1.5. Do not cause agitation of a cleaning-solvent in a cleaning machine by merging with air or other gas. Covers shall be placed over ultrasonic cleaners when the cleaning cycle exceeds 15 seconds.

17.2.1.6. Do not place porous or absorbent materials in or on a cleaning machine. This includes, but is not limited to, cloth, leather, wood, and rope. No object with a sealed wood handle, including a brush, is allowed;

17.2.1.7. The ventilation rate at the cleaning machine shall not exceed 65 cfm per square foot of evaporative surface (20 $m^3/min/m^2$), unless that rate must be changed to meet a standard specified and certified by a Certified Safety Professional, a Certified Industrial Hygienist, or a licensed professional engineer experienced in ventilation, to meet health and safety requirements.

17.2.1.8. Limit the vertical speed of mechanical hoists moving parts in and out of the cleaning machine to a maximum of 2.2 inches per second (5.5 cm/sec) 11 ft/min (3.3 m/min).

17.2.1.9. Do not mix two different solvents together prior to consulting with 56 CES/CEIEC first for approval.

17.2.2. When using cleaning-solvent, other than Low-VOC Cleaner, in any solvent cleaning machine (degreaser) or dip tank, at a minimum, post the following applicable instructions, or its equivalent within 3.25 feet (1 meter) of the machine:

17.2.2.1. "Keep cover closed when parts are not being handled." (This is not required for remote reservoir cleaners.)

17.2.2.2. "Drain parts until they can be removed without dripping."

17.2.2.3. "Do not blow off parts before they have stopped dripping."

17.2.2.4. "Wipe up spills and drips as soon as possible; store used spill rags [or 'wiping material'] in covered container."

17.2.2.5. "Don't leave cloth or any absorbent materials in or on this tank."

17.2.2.6. For cleaning machines with moving parts such as hoists, pumps, or conveyors, post: "Operating instructions can be obtained from _____" (state where the instructions are available).

17.3. Required solvent specifications: All cleaning solvents, except Low-VOC Cleaners, shall be conforming solvents. A conforming solvent is one that has a total VOC vapor pressure at 68ºF (20ºC) not exceeding 0.53 inches of water (1 mm Hg) maximum total VOC vapor pressure.

17.4. Batch Cleaning Machines: Equip each batch cleaning machine with remote reservoir including the cabinet type(s), with the following:

17.4.1. A sink-like work area or basin which is sloped sufficiently towards the drain so as to prevent pooling of cleaning-solvent.

17.4.2. A single, unimpeded drain opening or cluster of openings served by a single drain for the cleaning-solvent to flow from the sink into the enclosed reservoir. Such opening(s) shall be contained within a contiguous area not larger than 15.5 square inches (100 cm^2).

17.4.3. Provide a means for drainage of cleaned parts such that the drained solvent is returned to the cleaning machine.

17.4.4. Equip each batch cleaning machine without a remote reservoir with all of the following:

17.4.4.1. An internal drainage rack or other assembly that confines within the freeboard all cleaning-solvent dripping from parts and returns it to the hold of the cleaning machine (degreaser).

17.4.4.2. An impervious cover which prevents cleaning-solvent vapors in the cleaning machine from escaping into the air/atmosphere when not processing work in the cleaning machine. The cover shall be fitted so that in its closed position the cover is between the cleaning-solvent and any lip exhaust or other safety vent, except that such position of cover and venting may be altered by an operator for valid concerns of flammability established in writing and certified to by a Certified Safety

Professional or a Certified Industrial Hygienist to meet health and safety requirements.

17.4.4.3. The freeboard height shall be not less than 6 inches (15.2 cm). Freeboard height for batch cleaning machines is the vertical distance from the solvent/air interface to the least elevated point of the top-rim when the cover is open or removed, measured during idling mode.

17.4.4.4. The freeboard zone shall have a permanent, conspicuous mark that locates the maximum allowable solvent level which conforms to the applicable freeboard requirements.

17.5. Special Non-Vapor Cleaning Requirements:

17.5.1. Operate and equip the devices as follows when blasting or misting with conforming solvents:

17.5.1.1. The device shall have internal drainage, a reservoir or sump, and a completely enclosed cleaning chamber, designed so as to prevent any perceptible liquid from emerging from the device; and

17.5.1.2. The device shall be operated such that there is no perceptible leakage from the device except for incidental drops from drained, removed parts.

17.5.2. Use a sealed system for all blasting or misting with a non-conforming solvent.

17.5.3. Cleaning systems using cleaning-solvent that emerges from an object undergoing flushing with a visible mist or at a pressure exceeding ten psig, shall comply as follows:

17.5.3.1. For conforming solvents, use a containment system that is designed to prevent any perceptible cleaning-solvent liquid from becoming airborne outside the containment system, such as a completely enclosed chamber.

17.5.3.2. Use a sealed system for non-conforming solvents.

17.6. Monitoring and Recordkeeping Requirements:

17.6.1. Any cleaning-solvent subject to the vapor-pressure limits of County Rule 331 §304.1 shall have on site the written value of the total VOC vapor-pressure of each such solvent by November 1, 1999, in one of the following forms:

17.6.1.1. A manufacturer’s technical data sheet.

17.6.1.2. A manufacturer’s safety data sheet (MSDS).

17.6.1.3. Actual test results. NOTE: In order to maintain accurate usage records for all solvent tanks/gun cleaners on base, an agreement has been made with Safety Kleen to provide the information necessary to meet Title V Permit requirements.

17.6.2. GPC service invoices will serve as the primary record keeping mechanism. The authorized GPC cardholder, the person signing the invoice when service has been completed or the authorizing official must ensure that Safety Kleen measures the amount of new solvent placed into the bath/cleaner. The invoice records the quantities of both waste materials and clean solvent delivered in gallons.

17.6.3. Once Safety Kleen has performed service and the aforementioned information is included on the invoice, a copy must be maintained by shop personnel in accordance with Maricopa County Air Pollution Control Rule 100 Section 504 for five years rather than the period of time otherwise required under the Air Force Records Disposition Schedule.

17.6.4. Record the amount of cleaning-solvent used at the end of each month for the previous month. Show the type and amount of each make-up and all other cleaning-solvent.

17.6.5. Annually document the use of concentrate that is used only in the formulation of Low VOC Cleaner.

17.7. Equipment Recordkeeping:

17.7.1. All solvent baths must be accurately inventoried. 56 CES/CEIEC maintains current equipment list and must be updated when a solvent bath or paint gun cleaner is purchased/leased or replaced. It is the users responsibility to notify 56 CES/CEIEC when the aforementioned change occurs

17.7.2. Records of the disposal/recovery of VOC containing waste materials must be kept in accordance with hazardous waste disposal statutes.

17.7.3. Maintain a current list of coatings adhesives, makeup solvents, and any other VOC-containing materials. The VOC content of each must be stated in either pounds per gallon or grams per liter.

17.7.4. Maintain monthly records of the amount of each coating, adhesive, makeup solvent, solvent used for surface preparation, for cleanup, and for the removal of materials, and any other VOC containing material used.

17.7.5. Record the type, amount, and method of disposing of VOC-containing materials on each day of disposal.

17.7.6. In accordance with Maricopa County Air Pollution Control Rule 100 Section 504, records shall be maintained for five years rather than the period of time otherwise required under the Air Force Records Disposition Schedule. These records must be available to the County inspector, upon request.

18. Solvent and Material Usage (Title V Permit Condition 31).

18.1. VOC Containing Material Purchase, Usage and Tracking Procedures:

18.1.1. Maricopa County Air Quality Regulations require that all users of VOC containing material maintain a current list of VOC containing material, including VOC content and amount used each month. The EESOH-MIS system will meet this requirement for VOC containing materials purchased, issued and used on base. In order to use the system effectively, the user must process the proper Hazardous Material Authorization Request procedures as outlined in Luke AFB Instruction 32-7002, *Hazardous Material Management*.

18.2. All cans of paint, solvent or other VOC containing material must have the lid in place when the material is not in use. At no time are containers to be air-dried. If a paint container becomes empty, any excess material may be poured out or wiped out into the proper hazardous waste container and the lid replaced. The container will not be left unattended and

inverted to drain. The emptied container with the lid tightly sealed will be disposed of as solid waste.

18.3. Equipment Clean Up:

18.3.1. Do not use any liquid materials containing more than ten percent volatile organic compounds for the cleanup of equipment unless the used cleaning liquids are collected in a container that is closed when not in use and is disposed of in a manner such that volatile organic compounds are not emitted into the atmosphere.

18.3.2. Alternatively, the equipment may be disassembled and cleaned in a solvent vat that is closed when not in use, or cleaned by other methods, if approved in writing by the County, which limit evaporation.

18.4. VOC Containment and Disposal:

18.4.1. Do not store, discard, or dispose of VOC or VOC containing material in a way intended to cause or to allow the evaporation of VOC to the atmosphere. Reasonable measures shall be taken to prevent such evaporation that includes, but are not limited to, the following:

18.4.2. All materials from which VOC can evaporate, including fresh solvent, waste solvent and solvent-soaked rags and residues, shall be stored in closed containers when not in use.

18.4.3. Such containers one gallon and larger shall be legibly labeled with their contents.

18.4.4. Records of the disposal/recovery of such materials shall be kept. Records of hazardous waste disposal shall be kept in accordance with hazardous waste disposal statutes.

18.4.5. All materials from which VOC can evaporate, including fresh solvent, waste solvent and solvent-soaked rags and residues, shall be stored in closed containers when not in use. Such containers one gallon and larger shall be legibly labeled with their contents.

18.5. Monitoring and Recordkeeping:

18.5.1. Prior to the purchase/installation of an ECS, the organization will contact the Air Program Manager to ensure compliance with the MCAPD Rules and Permit.

18.5.2. Records of the disposal/recovery of VOC containing waste materials shall be kept. Records of hazardous waste disposal shall be kept in accordance with hazardous waste disposal statutes.

18.5.3. Discarded materials: Maintain records of the type, amount, and method of disposing of VOC-containing materials on each day of disposal.

18.5.4. Records required by these permit conditions shall be retained in accordance with Maricopa County Air Pollution Control Rule 100 Section 504, for five years rather than the period of time otherwise required under the Air Force Records Disposition Schedule and shall be made available to the MCAPD upon request.

19. Woodworking Activities (Title V Permit Condition 29).

19.1. Any woodworking equipment particulate matter exhaust captured through a centralized dust collection system such as those listed on the most current approved equipment list shall vent into an approved particulate matter ECS such as a baghouse or cyclone.

19.2. Each dust control system has a MCAPD approved O & M Plan that contains the required recordkeeping, monitoring, and maintenance procedures specific to each dust control system to ensure they are working properly. The MCAPD approved O & M Plan must be kept on-site near each dust control system.

20. Cutback and Emulsified Asphalt (Title V Permit Condition 30).

20.1. Operational Limits

20.1.1. Luke shall not use or apply the following materials for paving, construction, or maintenance of highways, streets, driveways, parking lots or for any other use to which County Rule 340 §300 and SIP Rule 340 §300 applies:

20.1.1.1. Rapid cure cutback asphalt.

20.1.1.2. Any cutback asphalt material, road oils, or tar which contains more than 0.5 percent by volume VOCs which evaporate at 500^{o}F (260 ^{o}C) or less using ASTM Test Method D 402-76.

20.1.1.3. Any emulsified asphalt or emulsified tar containing more than 3.0 percent by volume VOCs which evaporates at 500^{o}F (260^{o}C) or less as determined by ASTM Method D244-89.

20.1.2. Luke shall not store for use any emulsified or cutback asphalt product which contains more than 0.5 percent by volume solvent-VOC unless such material lot includes a designation of solvent-VOC content on data sheet(s) expressed in percent solvent-VOC by volume.

20.2. Exemptions:

20.2.1. The provisions of this Instruction shall not apply to asphalt that is used solely as a penetrating prime coat and which is not rapid cure cutback asphalt. Penetrating prime coats do not include dust palliatives or tack coats.

20.2.2. Luke may use up to 3.0 percent solvent-VOC by volume for batches of asphalt rubber which cannot meet paving specifications by adding heat alone only if request is made to the Control Officer, who shall evaluate such requests on a case-by-case basis. Complete records shall be kept and full information as supplied including savings realized by using discarded tires. Luke shall not exceed 1100 lbs (500 kilograms) usage of solvent-VOC in asphalt rubber in a calendar year unless it can be demonstrate that in the previous 12 months no solvent-VOC has been added to at least 95 percent by weight of all the asphalt rubber binder made by or caused to be made for Luke.

20.2.3. This Instruction does not apply to batches that yield 0.5 percent or less solvent-VOC evaporated using the test in County Rule 340 §502.1.

20.3. Monitoring and Recordkeeping:

20.3.1. Luke shall keep daily records of the amount and type of asphaltic/bituminous material received and used, as well as the solvent-VOC content of this material. Material Safety Data Sheets or technical data sheets shall be kept available.

21. Waste Water Treatment Plant (Title V Permit Condition 31).

21.1. Allowable Emission Limitations:

21.1.1. Do not emit hydrogen sulfide (H2S) beyond the premises of the plant at a concentration exceeding 0.03 parts per million by volume (ppmv) for any averaging period of 30 minutes or more.

21.2. Monitoring and Recordkeeping Requirements:

21.2.1. Odor log: Maintain a log of complaints of odors detected off-site. The log shall contain a description of the complaint, date and time that the complaint was received, and if given, name and/or phone number of the complainant. The logbook shall describe what actions were performed to investigate the complaint, the results of the investigation, and any corrective actions that were taken. Notify 56 CES/CEIEC if any complaints of odors have been received to determine if/when odor monitoring is necessary.

21.2.2. Odor Monitoring: Retain records of all property line odor monitoring that is conducted at the facility. The records shall contain the results of all the H2S sampling including the location, time each sample was taken, measured H2S concentrations, whether any noticeable odors were present, the general direction and estimated speed of the wind at the time the readings were taken and appropriate comments.

22. Fire Training Burn Permit.

22.1. Operating Procedures:

22.1.1. MCAQD and 56 CES/CEIEC must be notified 24 hours prior to engagement of the fire training area, of the time and duration of the training.

22.1.2. All activities must meet the conditions of the permit issued by MCAQD.

23. Earthmoving.

23.1. Operating Requirements:

23.1.1. A copy of the approved Dust Control Plan and Permit must be available on site.

23.1.2. The approved Dust Control Plan, including the federally approved Best Available Control Measures (BACMs) must be implemented.

23.1.3. A dust control plan that has been determined ineffective by MCAPD shall be revised within three working days of notification.

23.1.4. Any activity not identified in the approved dust control plan will not be accomplished until notification and approval from MCAPD has been received

23.1.5. Any haul truck carrying bulk material shall be required to cover the load with a tarp or other suitable enclosure.

23.1.6. All Earthmoving Permits shall be renewed annually, if the project has not been completed. Applications for permit renewal shall be submitted no later than 14 days prior to the expiration date of the original permit.

23.1.7. No activity shall discharge in to the ambient air emissions in excess of 20% opacity.

23.1.8. Notify 56 CES/CEIEC for any demolition of structures for possible asbestos abatement.

23.2. Recordkeeping Procedures:

23.2.1. A written log will be maintained each time an activity or combination of activities listed in the plot plan of the Dust Control Plan are performed and the actual application or implementation of the BACMs delineated in this Dust Control Plan.

23.2.2. The log will and supporting documentation must be kept on site and made available for review on request by the inspector.

23.2.3. Copies of the log and supporting documentation will be retained in accordance with Maricopa County Air Pollution Control Rule 100 Section 504, for five years rather than the period of time otherwise required under the Air Force Records Disposition Schedule.

23.2.4. When necessary to divert from what is listed, 56 CES/CEIEC must be notified to coordinate with Maricopa County.

24. Aircraft Tank Fuel Purging.

24.1. A monthly log must be kept recording the number of tanks (by size) purged, and sent to the Air Program Manager by the 10th of the following month.

24.2. In accordance with Maricopa County Air Pollution Control Rule 100 Section 504, records shall be maintained for five years rather than the period of time otherwise required under the Air Force Records Disposition Schedule.

MICHAEL D.ROTHSTEIN
Brigadier General, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 32-7040, *Air Quality Compliance and Resource Management*, 27 August 2007

AFPD 32-70, *Environmental Quality*, 20 July 1994

AFMAN 33-363, *Management of Records,* 1 March 2008

Luke AFB Title V Air Quality Operating Permit

Luke AFB Dust Control Block Permit

Luke AFB Instruction 32-7002, *13 December 2012*

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

AF Form 55, *Employee Safety and Health Record*

Abbreviations and Acronyms

AFMAN—Air Force Manual

AFRIMS—Air Force Records Information Management System

CFR—Code of Federal Regulations:

ECS—Emissions Control System

EESOH—MIS—Enterprise Environmental, Safety, and Occupational Health-Management Information System

EPA—Environmental Protection Agency

FW—Fighter Wing

GPC—Government Purchase Card

HAPs—Hazardous Air Pollutants

MCAPD—Maricopa County Air Pollution Department

MSDS—Material Safety Data Sheet

OPR—Office of Primary Responsibility

RDS—Records Disposition Schedule

VOC—Volatile Organic Compound

VOL—volatile organic liquid