South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 · www.aqmd.gov

August 16, 2011

Gerardo Rios (R9AirPermits_sc@epa.gov)
Chief – Permit Office
U.S. EPA – Region IX – Air – 3
75 Hawthorne Street
San Francisco, CA 94105

Subject: American Airlines, Inc. (ID 800196) Title V Permit Revision

Dear Mr. Rios:

American Airlines, Inc. has proposed to revise their Title V permit by installing Jet-A Fuel Hydrant System, devices D156 and D157. This system will replace the system under device D128.

This is a scheduled air passenger transportation facility (NAICS 481111) located at 7000 World Way West, Los Angeles, CA 90045. This proposed permit revision is considered as a "de minimus significant permit revision" to their Title V permit. Attached for your review are the evaluation and permit for the proposed revision. With your receipt of the proposed Title V permit revision today, we will note that the EPA 45-day review period will begin on August 16, 2011.

If you have any questions concerning these changes, please call the processing engineer, Mr. Thai Tran at (909) 396-2562.

Sincerely,

Brian L. Yeh
Senior Manager
Mechanical, Chemical and Public Services
Engineering and Compliance

BLY:DR:TT
Enclosure

FACILITY PERMIT TO OPERATE
AMERICAN AIRLINES INC (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 3: FUELING					
System 1: ORGANIC LIQUID RECEIVING, STORAGE AND DISTRIBUTION UNDERGROUND					
BULK MATERIAL LOADING STATION, TERMINAL 4, JET FUEL (JPA), WITH 23 FUEL PITS, EACH WITH A 4" CLA-VAL VALVE, 2 ISOLATION VALVE PITS, 2 FLUSHING PITS & 1 VAULT WITH A/N:	D156				C1.13, E71.5, E71.6, K67.14, L341.1
FUGITIVE EMISSIONS, VALVES	D157				

* (1) (1A) (1B) Denotes RECLAIM emission factor
(2) (2A) (2B) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit
(4) Denotes BACT emission limit
(5) (5A) (5B) Denotes command and control emission limit
(6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit
(8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
(9) See App B for Emission Limits
(10) See section J for NESHAP/MACT requirements

** Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FACILITY PERMIT TO OPERATE
AMERICAN AIRLINES INC (EIS USE)

SECTION H: DEVICE ID INDEX

The following sub-section provides an index to the devices that make up the facility description sorted by device ID.

FACILITY PERMIT TO OPERATE
AMERICAN AIRLINES INC (EIS USE)

SECTION H: DEVICE ID INDEX

Device Index For Section H			
Device ID	Section H Page No.	Process	System
D156	1	3	1
D157	1	3	1

FACILITY PERMIT TO OPERATE
AMERICAN AIRLINES INC (EIS USE)

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

FACILITY CONDITIONS

F10.1 Material(s) that contain the following compound(s) shall not be used in this facility;

Hexavalent chromium

This condition shall only apply to spray coating applications.

[RULE 1401, 3-4-2005]

F14.1 The operator shall not use diesel fuel containing sulfur compounds in excess of 15 ppm by weight as supplied by the supplier.

[RULE 431.2, 5-4-1990; RULE 431.2, 9-15-2000]

F14.2 The operator shall not use liquid fuel containing sulfur compounds in excess of 0.5 percent by weight.

[RULE 431.2, 5-4-1990; RULE 431.2, 9-15-2000]

F48.1 The operator shall not use at this facility natural gas containing sulfur compounds calculated as H2S in excess of 16 parts in a million by volume.

[RULE 431.1, 6-12-1998]

F58.1 For the purposes of monitoring, recording, and reporting under RECLAIM, portable internal combustion engine(s) and turbine(s) operated at this facility shall be monitored by a non-resettable timer to accurately indicate the elapsed operating time of the equipment unless monitored by a fuel meter meeting the following requirements:

FACILITY PERMIT TO OPERATE
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The operator shall comply with the terms and conditions set forth below:

6. The fuel meters shall not be equipped with keypad or buttons that allow changes to the programming or data contained in the units. Portable keypad may be used by the manufacturer or its representatives for testing, maintenance, or repair purposes. In addition, access to the program and data contained in the units shall be passcode protected. This passcode shall only be made available to the manufacturer or its designated representatives.

5. An operation log shall be maintained to record every testing, maintenance, repair or calibration of a fuel meter. Each fuel meter log shall be positively identified for each fuel meter and the device it serves. The operation logs shall be kept at the facility for a minimum of three years after the end of each compliance year. These operation logs shall be made available to the Executive Officer or his representative upon demand.

3. The calculations of electronic flow computers, for display of flow measurement results, shall be verified at time of fuel meter calibration by KRAL-USA, Inc. or its designated representatives. Calibration results shall be maintained at the facility and made available to the Executive Officer or his representatives upon demand for a minimum of three years after the date of calibration.

7. Existing timer on each of the devices shall be maintained in good operation manner for a minimum of three years initial operation of the time meter. During this period, timer readings shall be made and recorded in the maintenance log on a quarterly basis.

1. The devices served by the fuel meters shall be electrically wired in such a manner that its operation cannot be initiated without the fuel meters first being activated.

2. The fuel meters and temperature transducers shall be calibrated annually by the manufacturer, KRAL-USA, Inc. or its designated representatives. Dual fuel meters shall be calibrated on the same day, using the same equipment. The fuel meters shall be calibrated as specified by KRAL-USA, Inc. in the protocols submitted to the South Coast Air Quality Management District dated July 17, 2001 without deviation unless written approval is granted.

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The operator shall comply with the terms and conditions set forth below:

4. The fuel meters and its electronic components shall be sealed by the manufacturer, KRAL-USA, Inc., or its designated representatives. Such seal shall only be broken by the manufacturer or its authorized representative for purposes of testing, maintenance or repair purposes. The meter shall be re-sealed immediately after the completion of the test or repair.

[RULE 2012, 3-16-2001; **RULE 2012, 5-6-2005; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]**

DEVICE CONDITIONS

C. Throughput or Operating Parameter Limits

C1.13 The operator shall limit the loading rate of JETA fuel to no more than 11283333 gallon(s) in any one calendar month.

For the purpose of this condition, this limit shall be defined as the total combined loading rates for devices D156 and D128.

[RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996; RULE 1401, 9-10-2010]

[Devices subject to this condition : D156]

E. Equipment Operation/Construction Requirements

E71.5 The operator shall only operate this equipment to transfer jet-A fuel.

[RULE 1304(c)-Offset Exemption, 6-14-1996; RULE 1401, 9-10-2010]

[Devices subject to this condition : D156]

E71.6 The operator shall only operate this equipment to transfer fuel to aircraft.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

FACILITY PERMIT TO OPERATE
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The operator shall comply with the terms and conditions set forth below:

[Devices subject to this condition : D156]

K. Record Keeping/Reporting

K67.14 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Monthly loading rate of jet A fuel being transferred by this equipment

Total combined monthly loading rates for this equipment and that for device D128

Records shall be kept for minimum five years and made available upon request

[RULE 1304(c)-Offset Exemption, 6-14-1996; RULE 1401, 9-10-2010; **RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]**

[Devices subject to this condition : D156]

L. Expiration Date

L341.1 Within 90 days after start-up of this equipment, the following device(s) shall be removed from operation:

D128

[RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996]

[Devices subject to this condition : D156]

COMPANY NAME: AMERICAN AIRLINES, INC.

MAILING ADDRESS: P. O. BOX 92246
LOS ANGELES, CA 90009

EQUIPMENT LOCATION: 7000 WORLD WAY WEST
LOS ANGELES, CA 90045

EQUIPMENT DESCRIPTION:

JET A FUEL HYDRANT SYSTEM, TERMINAL 4, CONSISTING OF:

1. TWENTY THREE (23) HYDRANT FUELING PITS, EACH WITH ONE 4-INCH VALVE, CLA-VAL, MODEL 352 AP
2. TWO ISOLATION VALVE PITS
3. TWO FLUSHING PITS
4. T-4 VAULT

BACKGROUND:

This application was filed by American Airlines (AA) on 8/511 as a Class 1 for permit to installing a new fuel hydrant system at Terminal 4 in Los Angeles Airport (LAX). This system will replace the existing system currently under device D128 (A/N 312990) of the facility permit. The installation of this new system is a functionally identical replacement of the system under A/N 312990 because the new system will provide the same functions as the old system and that the modification will not cause emissions increase. According to the applicant, the old system will be permanently ceased from operation within two weeks after the new system is in operation. .

This system consists of 23 hydrant pits from the underground pipe fueling apron system connected to LAXFuel who is one of the main fuel distributing operators at LAX. Jet A fuel is drawn from fuel storage tanks (currently operated by LAXFuel) through networks of piping systems which include this hydrant fueling system. The hydrants are underground with their tips end in fiberglass pits flush to the ground level. When jet A fuel is transferred to an airplane, an operator connects a flexible hose to a hydrant via a dry break coupler. The other end of the hose is connected to the inlet of a pump on a portable hydrant cart. At the outlet of the pump, the operator connects one end of another flexible hose to the pump and the other end to the fuel tank of the airplane. Fuel is then bottom loaded from the fuel hydrant to the airplane fuel tank. There are several fuel tanks in each airplane. The tanks are located in the wings, body, and/or tail of the airplane.

The main emissions are from filling the airplane fuel tanks. These emissions are un-controlled because Federal Aviation Administration does not require them to be and that AQMD does not have jurisdictions on this type aviation source. It has been observed that there are very minimal spillages and, therefore, negligible emissions at the dry break couplers.

Filling loss emissions are from fuel vapor being displaced from the fuel tank when the fuel is pumped into the tank. The vapor is released at the tip of the wings. To reduce fire hazard, the vapor is released at a point furthest from the tank being filled. For example, when a fuel tank in the left wing is filled, the vapor is released at the tip of the right wing and versa versus.

A permit to construct is recommended.

APPLICATION TRACKING

Application filed	8/05/11
Assigned to TT	8/10/11
Uploaded in CLASSLINK	8/13/11
Submitted to DR	8/16/11
Re-submitted to DR	
Submitted to EPA	
Final disposition	

CALCULATIONS

The applicant has requested to functionally identical replace the old system with the new one from which no emissions increase (also means no throughput increase as emissions are directly proportional to throughput).

Please note that previous evaluation assessed the emissions on the throughput of 11,283,333 gallons a month. In order to maintain no increase in emissions, this same throughput will be used and applied to the new system. A permit condition will be issued to limit the new system to this throughput.

Emissions from this system are from working (or loading) loss that occurs when the fuel is loaded into the air plane fuel tanks. EPA AP-42 Section 5.2 provides emission factor (EF) for loading loss emission from this operation as follows:

EF = 12.46 (S)(P)(M)/(T)

Where S: saturation factor (Table 5.2-1), =0.60, submerged loading: dedicated normal services
P: vapor pressure, psi @ 60 degree F = 0.0085
M: molecular weight, lb/lbmole = 130
T: temperature of liquid loaded, degree R = 520

EF = (12.46) (0.60) (0.0085) (130) / (520)
= 0.0158865 lb/1000gal

Working Loss = 11,283,333 gal/mo x 0.0158865 lb/1000gal = 179.25
= (179.25 lb/mo) (mo/30 dy) = 5.98 lb/dy

Please note that previous evaluation used different factors so the emissions were higher. The lower emissions assessed in this evaluation, however, shall not be treated as emissions reduction.

RULES EVALUATION:

This is installation is subject to all applicable rules and regulations including new source review, offset, modeling and risk assessment.

Rule 212: The replaced source of emission is not located within 1000 feet from a school, does not emit more emissions than the replaced source, nor generates more air toxic contaminants so public notification is not required.

Rule 401: The equipment is not expected to emit visible emissions.

Rule 402: The equipment is not expected to emit odorous emissions.

Rule 462: This rule is not applicable to liquid organic with vapor pressure less than 1.5 psia.

Reg. XIII: The installation triggers NSR review.

- The installation of this fueling system is exempt from emission offset and modeling pursuant to Rule 1304(a)(1) for being a functionally identical replacement. The installation does not result in maximum rating increase, no higher potential emissions. Please note that because AQMD does not have jurisdiction on controlling emissions from aircrafts including fueling them, and that EPA does not have emission control requirement on aircraft fueling, no BACT/LAER has been determined or required on this system. To minimize emissions, the applicant will bottom feed when filling the tanks and use hoses with tie connections and have dry-break mechanism to prevent spillage. A permit condition will be given to restrict this system from fueling anything other than aircraft.
- Since emission assessment based on jet-A fuel vapor pressure, a permit condition will be given to restrict this system from fueling any thing other than jet-A fuel.
- It is the District's policy, in a functionally identical replacement, to require the applicant to cease operation and surrender the permit of the old source of emission within 90 days after the first day the replacing source is put in operation. A permit condition will be issued to reflex these requirements.
- As indicated in the above bulleted item, there could be time the two systems are operated in a same month. To qualify the functionally identical replacement exemption, the total combined throughputs of the two systems during that month shall remain within 11,283,333 gallons. This will be a permit condition on the new system.

RULE 1401: The installation of the new fueling system is exempt from the requirements of this rule pursuant to Section (g)(1)(C) as this is a functionally identical replacement.

Regulation XX:

AA is a RECLAIM facility so it is subject to the requirements of this regulation. However, because fuel hydrant emits only non-RECLAIM pollutants so the installation of the fuel hydrant is not subject to the requirements of this regulation.

Regulation XXX:

Rule 3000 (b)(6):
The Title V permit revision caused by this equipment installation satisfies all the applicable conditions listed in this rule so, it constitutes a de minimis significant permit revision.

Rule 3002(a)(2):
This has been a TV facility and all of the applicable requirements for greenhouse gases have been incorporated. Installation of this equipment will not increase greenhouse gases, nor does it generate these gases to the level that would trigger additional requirements. This installation complies with this section of the rule.

Rule 3003: This permit revision is a de minimis significant permit revision and is subject to EPA review. The proposed permit will be submitted to EPA for comments. The permit will be issued once the equipment meets all applicable requirements.

RECOMMENDATIONS

FOR THIS APPLICATION THE FOLLOWING DISPOSITION IS RECOMMENDED:

Issue P/O with the following conditions

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the applications under which this permit is issued.

2. This equipment shall be properly maintained and kept in good operating conditions at all times.

3. Within 90 days after this system is in operation, the owner/operator of this equipment shall cease operation and surrender permit to operate the system under device D128 (application no. 312990).

4. This fuel hydrant system shall not transfer more than 11,283,333 gallons of Jet A fuel in any one calendar month.

5. The total combined monthly throughputs of this system and that under device D128 shall not exceed 11,283,333 gallons in any one month in which this system and that under device D128 are both operated.

6. This system shall only be used transfer jet-A fuel.

7. This system shall only be used transfer fuel to aircrafts.

8. The owner or operator of this equipment shall maintain a monthly fuel transfer records of this system and the combined throughputs of this system and that of the system under device D128. Records shall be kept for a minimum of five years and made available to District personnel upon request.