

**EPA Objections to and Comments on the Proposed
Title V Operating Permit for Luke Air Force Base**

April 30, 2004

Objection Issues

The following remarks are the basis for EPA's objection to the Title V permit proposed by the Maricopa County Environmental Services Department (MCESD) for Luke Air Force Base (LAFB).

- a. The permit contains conditions that are overly general and not specific to the operations at this particular facility. For example, Condition 33.B.4 states:

The Permittee shall comply with one of the following for all applications of surface coatings that do not qualify for one of the exemptions listed below:

- a) Meet the emission limits specified in Table 33-1, herein.*
b) Operate an Emission Control System (ECS) in accordance with County Rule 336 306.1 when applying a coating that exceeds the VOC limits in Table 33-1.
c) Qualify for an exemption described below.

While SIP Rule 336 allows facilities to use any of the three compliance options listed above, the permit must correctly include each allowable compliance option at the facility. If more than one option is desired, emission limits and standards must be included in the permit for each operational mode. Also, the permit must accurately reflect the source's compliance obligations under all requirements applicable to the change in operation. The proposed permit does not satisfy these requirements and therefore fails to meet the standard in 40 CFR 70.6(a)(1) that it contain emission limitations and standards to assure compliance with all applicable requirements at the time of permit issuance. Furthermore, such general permit language coupled with any missing conditions and the permit shield could create enforcement problems regarding the source's obligation to comply with all of the applicable requirements. For example, as the permit is written, the Permittee would have the option of using a control device for controlling emissions but would not be obligated to comply with other requirements of Rule 336 that are not included in the permit, such as the control efficiency requirements of Section 306.1, the O&M plan requirements of Sections 306.2 through 306.4, and the ECS recording requirements of Section 502.

EPA has previously raised this issue with MCESD with regard to other facilities. As we stated in a letter from Gerardo Rios to Al Brown, dated March 20, 2003, it is possible to incorporate various compliance options in a permit as alternative operating scenarios (AOS). Under an AOS, the applicant would have to provide to the

permitting authority all the necessary information relevant to each scenario so that the permitting authority could adequately permit the facility. The Permittee would then be able to switch between compliance options without triggering a permit modification provided that they maintained an on-site operating log documenting any change in the operating scenario.

The proposed permit contains several unspecific or generalized conditions that must be revised to address the operations at this specific facility; a complete list of those permit conditions is provided below:

- 29.B.3.a (for SIP Rule 351)
- 29.B.4.b (for SIP Rule 350)
- 29.B.4.g (for SIP Rule 351)
- 32.B (for SIP Rule 34)
- 33.B.4 (for SIP Rule 336)
- 35.B.4 (for SIP Rule 348)
- 35.B.5 (for SIP Rule 348)
- 37.A.2 (for SIP Rule 312)

If MCESD does not wish to develop alternative operating scenarios for each one, the source must choose specific compliance options and the permit must be revised to reflect those choices.

- b. Section 8.D(9) of the TSD states that LAFB submitted a letter asking that the activities at buildings 247, 339, and 415 be deemed insignificant. While the TSD acknowledges that a County rule for particulate matter applies to these sources (Rule 311), it states that because they are intermittent sources, each having controlled emissions of less than one ton per year, the only requirements imposed on the activities at these buildings will be weekly visible emission readings, the use of control devices, and operation according to approved O&M plans.

County Rule 100 §200.58 defines an insignificant activity as:

any activity, process, or emissions unit that is not subject to a source-specific applicable requirement, that emits no more than 0.5 ton per year of hazardous air pollutants (HAPs) and no more than 2 tons per year of a regulated air pollutant, and that is either included in Appendix D (List of Insignificant Activities) of these rules or is approved as an insignificant activity under Rule 200 of these rules. Source-specific applicable requirements include requirements for which emissions unit-specific information is needed to determine applicability.

While the calculations provided in LAFB's October 27, 2003 letter show that the activities at each of the three buildings have relatively low PM emissions, EPA does not consider them insignificant for the following reasons:

- i. Both the TSD and LAFB's letter state that there are no source-specific rules that apply to the woodworking activities at the base. EPA disagrees. While Rule 311 does apply to a variety of process sources that emit particulate matter, EPA does not consider the rule to be

"generally applicable" because the source must provide emissions unit-specific information in order for MCESD to determine whether the source is in compliance with the rule. Appendix D of Maricopa County's rules states that "Pursuant to Rule 200 of these rules, a Title V source, in a permit application, may, rather than supplying detailed information, list and generally group its insignificant activities. However, an application may not omit information regarding insignificant activities that is needed to determine: (1) applicability of or to impose any applicable requirement; (2) **whether the source is in compliance with applicable requirements**; or (3) the fee amount required under these rules."

In order to determine whether or not the source is complying with Rule 311, the permitting authority needs to know the source specific particulate emitting equipment and the process weight rates so it can determine the applicable limit under Section 301.1 of the rule. Changes in the process weight rate or the addition of new equipment could result in changes to the allowable emissions as well as to the potential to emit of the source. Rule 311 also requires the installation of an approved emissions control system if the source is not able to comply with the rule. In this case LAFB is using cyclones. In order for MCESD to verify that the source is in compliance with Rule 311, it is necessary to know the size and capacity of the emissions generating equipment, the design characteristics of the control devices and the actual emissions from the control equipment. Thus it would be inappropriate to state that Rule 311 is a generally applicable rule because source specific information is necessary to verify and continue to assure compliance with its requirements.

- ii. The activities that take place at buildings 247, 339, and 415 are not included in Appendix D of the Maricopa County Rules, which lists approved insignificant activities. In such cases, Rule 100 §200.58 states that a source may request that the activities be considered insignificant under Rule 200. However, before an activity can be classified as insignificant under these provisions, Rule 200 §308.1 requires approval from both the Control Officer and the Administrator of the EPA; EPA has not granted the request.

EPA has raised this issue with MCESD in the past; consistent with our past discussions and in accordance with the comments above:

- i. MCESD should revise Section 31 of the permit to include the specific requirements from the applicable O&M plans along with any other testing and monitoring requirements that are necessary to assure

compliance with the emission limit of Rule 311. Without such requirements, the permit fails to include the emission limitations and standards that assure compliance with all applicable requirements as stated in 40 CFR 70.6(a)(1).

- ii. The equipment list in Appendix A of the permit should be revised so it identifies each piece of woodworking equipment that is vented to a control device or to the atmosphere. In the proposed permit, the woodworking equipment is grouped together and is identified only by the building in which the woodworking activities occur.
 - iii. Statements in the TSD regarding the classification of the activities at buildings 247, 339, and 415 as insignificant should be removed and replaced with a demonstration of how the conditions added pursuant to paragraph i. above assure compliance with Rule 311.
- c. Section 7.D.7.k.ii of the TSD states that the activities at building 318 were deleted from the emissions calculations for the woodworking activities because the equipment in the building is insignificant per County Rule 100. The TSD does not provide sufficient information to make that determination. In the absence of the information and for the reasons stated above, the activities at building 318 should be included in the emissions calculations and treated in the permit in the same manner as the other woodworking activities at buildings 247, 339, and 415.
- d. In early 2004, EPA received notification of a minor modification to Permit #8602890, currently held by LAFB. The notification was dated December 19, 2003 and contains updated equipment lists for several base operations including woodworking, solvent degreasing, abrasive blasting, emergency power generation, organic liquid storage, vehicle refinishing, and aerospace manufacturing and rework.

A comparison of the most recent equipment lists in the notification and the equipment list in the permit revealed that several pieces of existing equipment (i.e., existing before the permit modification) are missing from the permit. There are at least 10 instances where the list of solvent degreasers in the permit is inconsistent with the list from the permit modification. Inconsistencies include existing equipment at the base that is not included in the Title V permit, tank capacities that differ between the two lists, and instances where the notification indicates that degreasers were removed but are still listed in the proposed permit.

By excluding multiple emissions sources and their respective applicable requirements from the Title V permit, the proposed permit fails to meet the Part 70 standard that each permit assure compliance with all applicable requirements; MCESD must revise both the permit and TSD to include all of the LAFB's emission units and the

requirements to which they are subject.

- e. 40 CFR 70.6(a)(1)(i) requires that Title V permits contain references to the origin of and authority for each term and condition. The references for the following conditions are missing and should be added:
- 20.E.2
 - 22.C.5.b
 - 23.D.9.b
 - 23.E.1.g
 - 24.B.2
 - 24.C.1
 - 28.D.1
 - 31.D.5.b
 - 31.D.6
 - 34.C.8
 - 34.E.2
 - 40.A.5.b

Suggested Revisions

The following comments provide suggestions for additional improvements that can be made to the proposed permit.

1. General Comments

- a. Objection a. above contains a list of eight conditions for federally enforceable requirements that must be revised. In addition to those, the permit contains three similar conditions for requirements that are locally enforceable only. When MCESD revises the conditions as outlined in our objection, EPA recommends that the following conditions be addressed in the same manner:
- 34.C.10 (County Rule 345)
 - 36.B.6 (County Rule 331)
 - 37.B.1.a (County Rule 312)
- b. Conditions 20.E.2, 22.C.5.b, 23.D.9.b, 31.D.5.b, and 40.A.5.b all allow the Permittee to use a variation of EPA Method 9 when conducting visible emissions readings. Because origin and authority citations were not included for these conditions, EPA can not determine what basis MCESD has for allowing such a variation. In addition to including the citations in the permit as required by our objection, MCESD should provide a statement in the TSD that justifies the origin and validity of the Method 9 variation.

2. Peak Shaving Generator

- a. Condition 23.B.2 exempts equipment used to train individuals in opacity observations from opacity standards. It is not clear how this condition applies to the peak shaving generator. If the base uses such training equipment, it should be specifically identified in the permit along with all other requirements to which it is subject. If the base does not use this equipment, conditions regarding its use should not be in the permit.

3. **Soil Vapor Extraction System (Building 353)**

- a. County Rule 330 §503.3 requires that the Permittee maintain daily records of the O&M Plan's key system operating parameters, account for any periods when the control device was not operating, and maintain records of all maintenance performed according to the plan. While the facility's approved O&M plan contains requirements for recording the operating hours, air ratio, fuel ratio, and maintenance activities in a permanent log, the proposed permit does not require that these records be kept. The permit should be revised so that it includes these recordkeeping requirements. If MCESD wishes to reference the requirements in the plan, the plan should be included in the permit in some manner (e.g., as an appendix). Otherwise, the conditions should be incorporated into the permit.
- b. The permit requires that LAFB measure the destruction efficiency of the IC engine on a monthly basis. For each month that the efficiency is determined to be less than 99%, Condition 24.D.3 implies that the IC engine and SVE system should be shut down but the permit does not explicitly state that LAFB is required to do so. In such an event, the permit requires only that (within an unspecified period of time) LAFB calibrate the engine and perform another test to verify the destruction efficiency. EPA recommends that Condition 24.C.2 be revised so that if the monthly tests yield a destruction efficiency below 99%, LAFB is required to shut down the system immediately. The condition should also require LAFB to calibrate and re-test the engine before returning it to normal operation.
- c. Condition 24.B requires that the exhaust from the IC engine be vented to a catalyst without bypass. However, it does not specify which kind of catalyst must be used and does not contain any operational requirements such as efficiencies that must be achieved or limits that must be met. The condition should be revised so it contains specifications that will ensure the catalyst is serving its intended purpose.

4. **Wastewater Treatment Plant**

- a. Condition 25.D.2 should be revised to read, "The Permittee shall include records of any property line H₂S monitoring required by Permit Condition **25.C.2.**"

5. **Soil Vapor Extraction System (Building 177)**

- a. The permit limits the VOC emissions from the SVE GAC canister to 0.184 pounds per day. To demonstrate compliance with this limit, Condition 28.D.1 requires monthly sampling of the VOC concentration and states that whenever a VOC concentration is detected, the activated carbon shall be replaced.

Because condition 28.D.1 does not specify a concentration limit, this condition is interpreted to mean that detection of any amount of VOC in the system exhaust

requires replacement of the GAC cannister. Even when the GAC cannister is relatively new, it is unrealistic to expect that there will not be any VOC emissions in the exhaust. Such a condition could lead to unnecessary or excessive replacements of the GAC. Moreover, without a specific concentration limit, the monitoring requirement in the permit does not directly establish compliance or non-compliance with the daily VOC limit. EPA recommends that MCESD include a concentration limit in condition 28.D.1, which will both demonstrate compliance with the VOC limit in Condition 28.B.1 and trigger the requirement to replace the GAC cannister.

- b. Condition 28.E requires that any VOC emissions detected during or after monthly maintenance of the SVE system be reported as excess emissions in accordance with Condition 10 of the permit. Condition 10 provides affirmative defense for excess emissions that occur during startup and shutdown or that result from equipment malfunction and does not apply to emissions generated under normal operations that exceed limits established by County or SIP rules or by the permit.

Provided that MCESD revises Condition 28.D.1 as requested in comment 5.a above, Condition 28.E should require that the Permittee report any exceedances of the newly established concentration limit in accordance with Condition 16 of the permit.

6. Fuel Storage Tanks

- a. According to LAFB's permit application, the tanks at buildings 350, 351, 356, 359, and 366 comprise a loading facility that supplies fuel to tanker trucks for delivery to various locations around the base. If not for the low vapor pressure of JP-8, this loading facility would be considered a bulk terminal under SIP rules 350 §202 and 351 §203, and would be subject to the requirements of rules 350 and 351.

MCESD should add requirements to Section 29.A of the permit that:

- i. prohibit LAFB from using the tanks to store any organic liquid with a vapor pressure greater than 1.5 psia;
- ii. require LAFB to measure the vapor pressure of the liquids now stored in the tanks to demonstrate initial compliance with the vapor pressure limit;
- iii. require LAFB to measure the vapor pressure any time the type of material stored in the tanks is changed; and
- iv. require LAFB to maintain records of the materials stored in the tanks and their vapor pressures.

Such requirements are necessary because the permit contains a shield for rules 350 and 351, which states that compliance with the terms of the permit shall be deemed

compliance with the rules. If MCESD issued the permit as it is currently written, LAFB could change the contents of the tanks and become subject to the requirements of the rules but not have any compliance obligations because of the shield. The suggested requirements would require LAFB to obtain a permit revision prior to triggering rules 350 and 351, and give MCESD the opportunity to add the applicable requirements to the permit.

- b. LAFB's application indicates that the tank at building 367 receives diesel fuel from an outside contractor and then supplies a truck that delivers the fuel to other tanks on the base. If not for the low vapor pressure of diesel fuel, this operation would be considered a bulk plant under SIP rules 350 §201 and 351 §203. For the reasons stated above in comment 6.a, the tank should be restricted to the storage of materials with a vapor pressure below 1.5 psia.
- c. For all of the tanks identified in Section 29.A of the permit, the Permittee is claiming an exemption from the requirements of NSPS Subpart Kb due to the vapor pressure of the tank contents. As a result, conditions 29.A.1 and 29.A.3 place limits on the vapor pressure of the material that can be stored in the tanks and require that LAFB report any exceedances of the limits within five days. These conditions are not practically enforceable because the permit does not require any monitoring of the vapor pressures nor does it contain any recordkeeping requirements. The monitoring and recordkeeping requirements that are recommended in comment 6.a would make these conditions practically enforceable.
- d. *For the purposes of this comment, the tanks at buildings 177, 335, 1018, and 2201 shall be identified as Group 1, and the tank at building 368 shall be identified as Group 2.*

According to the TSD and LAFB's permit application, the Group 1 tanks are used for dispensing gasoline (i.e. fueling motor vehicles) and the Group 2 tank stores fuel for later distribution around the base by means of a delivery vessel. Because they are used for different purposes, the two groups of tanks are subject to different applicable requirements. Specifically, the Group 1 tanks are subject to SIP Rule 353 (Transfer of Gasoline Into Stationary Storage Dispensing Tanks), and the Group 2 tank is subject to SIP rules 350 (Storage of Organic Liquids at Bulk Plants and Terminals) and 351 (Loading of Organic Liquids). Despite the difference in the requirements that apply to each of the groups, the proposed permit does not distinguish between the two and inappropriately subjects all of the tanks to rules 350, 351, and 353. MCESD should revise the permit so that it imposes the appropriate requirements on each of the sources. For this purpose, EPA recommends separating the tanks into the two groups identified above and moving one of the groups and its requirements to a third subsection (i.e., 29.C) of Section 29.

- e. Section 29.B.1 identifies the UST at Building 1018 as subject to the requirements of Section 29 but the tank is not in the equipment list. MCESD should add this tank to the list in Appendix A of the permit.
- f. Condition 29.B.3.b is wrongly worded. It should be revised to state, “The Permittee shall not transfer gasoline *from a tank* exceeding 250 gallons *into a delivery vessel* unless...”

7. Bulk Fuel Loading Operations

- a. Condition 30.B.4 does not originate from the SIP approved version of Rule 352; it should be identified as “locally enforceable only” in the permit.
- b. Conditions 30.B.12 and 30.B.13 are mislabeled as requirements from SIP Rule 352 §301 and §302, respectively. The requirements in these conditions actually originate from SIP Rule 353, which applies to the transfer of gasoline into stationary dispensing tanks. Because the dispensing tanks at the facility receive gasoline from different delivery vessels, including vessels from outside sources, the requirements of SIP Rule 353 should be placed on the tanks in Section 29 of the permit, rather than on the base’s delivery vessel in Section 30. As a result, the requirements in Conditions 30.B.12 and 30.B.13 should be incorporated into Section 29.
- c. The following requirements from SIP Rule 352 have been omitted from Section 30 of the permit and should be added:
 - i. the vapor recovery requirements of §301
 - ii. the gasoline delivery vessel leak test requirements of §302.1 through §302.4
 - iii. the testing requirements of §401.1.
- d. The authority and origin citation for Condition 30.C.2 refers to SIP Rule 501, which does not exist. The appropriate citation for this requirement is SIP Rule 352 §502.

8. Workshop Activities

- a. In Condition 31.C, rather than stating that all workshop exhaust must be vented into, “a Department approved particulate matter emission control system without bypass,” the permit should state specifically what emission control systems have been approved and must be used.
- b. Condition 31.D.6 requires that the Permittee monitor the emission control system, “as specified in the most recently Department approved O&M plan.” If MCESD wishes

to include the monitoring requirements by referencing the O&M plan, the plan should be included in the permit. Otherwise, the monitoring requirements in the O&M plan should be incorporated into the permit.

9. Solvent and Material Usage

- a. To identify the sources that are subject to the requirements of Section 32, Condition 32.A only says, “sources located basewide.” This is too vague and should be revised so that it identifies the specific facilities or operations that are subject to the solvent and material usage requirements in this section of the permit.
- b. As it is currently written, Condition 32.D may be misleading. Please revise it so that it reads, “The provisions of *Rule 330* shall not apply...”

10. Surface Coating Activities

- a. Section 33 of the permit is missing applicable requirements from SIP Rule 336. The following should be added to the permit:
 - i. the requirements of §302 regulating application methods for surface coatings; and
 - ii. the requirements of §303 regulating the cleanup of application equipment, including the vapor pressure limit specified in §303.2; Condition 33.C.2.d.2 requires recordkeeping to demonstrate compliance with §303.2 but the limit was not included in the permit
- b. Condition 33.C.1.b states that, “the Permittee shall not operate the spray booth if the magnahelic gauge registers greater than or equal to 0.5 millimeters of water” but it does not require that the Permittee actually inspect the gauge on any specified frequency. EPA recommends that MCESD revise this condition so that it requires LAFB to inspect the gauges on all spray booths before each use.
- c. Condition 33.C.2.d contains requirements that apply “unless the Permittee is able to achieve Small Surface Coating Status,” suggesting that such a designation is possible in the future. This condition is inconsistent with SIP Rule 336.

The requirements of Condition 33.C.2.d are included in the permit to demonstrate compliance with the VOC limits in Section 301 and Table 1 of the rule. Under Section 305.4, a small surface-coating source (SSCS) may be exempt from those limits provided that its VOC emissions never exceed 15 lb/day or 2 tpy. Once the SSCS thresholds are exceeded, a facility permanently loses the exemption. According to the emissions inventory in LAFB’s permit application, the base’s annual VOC

emissions from surface coating operations far exceed 2 tpy. As a result, LAFB cannot be classified as an SSCS despite any future reductions in VOC emissions; the language suggesting such a possibility should be stricken from Condition 33.C.2.d.

11. Vehicle Refinishing

- a. County rules 345 and 315 are not in the SIP but they listed as federally enforceable requirements in Section 34 of the permit. MCESD should revise the permit so that conditions originating from rules 345 and 315 are identified as “locally enforceable only.”

12. Solvent Degreasing Operations

- a. For the heated solvent degreasers, Section 36.B.1 of the permit inappropriately contains the requirements of County Rule 330 §304; County and SIP Rules 331, Solvent Cleaning, contain the applicable requirements for these sources. MCESD should replace the requirements in Section 36.B.1 of the proposed permit with those of Rule 331.
- b. Condition 36.B.3 contains the requirements of SIP Rule 331 §306.3 but only includes a reference to County Rule 331 §301. Please add a citation to SIP Rule 331 §306.3 to Condition 36.B.3.
- c. The requirement under SIP Rule 331 §306.11.c is missing and should be added to the permit.
- d. The permit contains requirements for several different types of degreasers, such as heated, cold, those with remote reservoirs, and those without remote reservoirs. Appendix A of the permit lists the degreasers very generally so it can not be determined what requirements apply to each one. To clarify this, MCESD should revise the equipment list so that it specifies what type of degreaser each one is.

13. Facility Wide Conditions

- a. The citation for Condition 19.A.4 is incorrect and should be changed from County Rule 320 §306.4 to §305; Section 306.4 does not exist.
- b. Condition 20.I requires that proof of the fuel sulfur content be provided if it is requested by the Control Officer but the permit does not require that such records be kept. The permit should be revised so that the Permittee must maintain records of the sulfur content of the fuel used at the facility. Also, Condition 20.I states that testing of the fuel oil sulfur content can be used to show compliance in lieu of the other options. It should be made clear that while testing the fuel is an option, records of the

results must still be maintained to demonstrate compliance with the requirement.