

**MAXIMUM LEVELS OF CONTAMINANTS PERMISSIBLE IN REFRIGERANT PROCESSED THROUGH EQUIPMENT ADVERTISED AS  
"RECYCLING" EQUIPMENT**

Contaminants	Low-pressure (R-11, R-123, R-113) systems	R-12 systems	All other systems
Acid Content (by wt.) .....	1.0 PPM .....	1.0 PPM .....	1.0 PPM.
Moisture (by wt.) .....	20 PPM .....	10 PPM .....	20 PPM.
Noncondensable Gas (by vol.) .....	N/A .....	2.0% .....	2.0%.
High Boiling Residues (by vol.) .....	1.0% .....	0.02% .....	0.02%.
Chlorides by Silver Nitrate Test .....	No turbidity .....	No turbidity .....	No turbidity.
Particulates .....	Visually clean .....	Visually clean .....	Visually clean.

#### 9. Procedure for Updating Approval of Certification Organizations

EPA will continue to recognize the approval of the two existing testing organizations (*i.e.*, UL and ARI) to certify recovery/recycling equipment to the old standards at § 82.158(b)(1) and appendix B1 (based on ARI Standard 740-1993) until September 22, 2003.

The two equipment testing organizations that have been approved by EPA to certify equipment under the old standard at § 82.158(b)(1) are required to submit their intentions to certify equipment under the new standard at § 82.158(b)(2) in writing no later than 60 days after this final rule is published in the **Federal Register**.

However, these organizations need not resubmit the information on their test facilities, equipment testing expertise, long-term performance verification programs, knowledge of the standards, and objectivity that they submitted to become approved to certify under § 82.158(b)(1). Instead, they only need state their intention to test equipment under the new conditions of § 82.158 and submit information in those areas where their original application to certify equipment under § 82.158(b)(1) and appendix B1 (based on ARI Standard 740-1993) differs from the requirements at § 82.158(b)(2) and appendix B2 (based on ARI Standard 740-1995).

Upon receipt of the written notification, EPA will continue to recognize the approval of the two existing testing organizations to certify to the new standard at § 82.158(b)(2) and appendix B2 (based on ARI Standard 740-1995) without interruption.

EPA has also amended § 82.160 "Approved equipment testing organizations," by deleting the paragraph that essentially grandfathered recovery/recycling equipment tested by UL and ARI prior to their approval as equipment testing organizations. The paragraph has become obsolete since UL and ARI are the only two programs that were approved by EPA to certify

equipment under the conditions of § 82.158.

#### 10. Other Issues Raised by Commenters

One commenter argued that EPA should require that recovery cylinders sold with recycling equipment be supplied with fill-limiting devices to prevent overfilling of cylinders and the injury that can result. EPA decided not to require fill-limiting devices in the final rule published in May 1993, citing several technical problems then involved with their use. However, EPA recognizes that some of these problems may have been resolved; therefore, EPA may consider requesting comment on this issue in a future notice.

The same commenter suggested that the rule include test procedures for evaluating recovery and recycling equipment for use with the new blends entering the marketplace. EPA agrees that this is an important consideration in equipment certification, and the Agency therefore plans to address this issue in the section 608 rulemaking covering recycling of substitutes for CFC and HCFCs.

EPA received a comment stating that paragraph 12 of appendix B inappropriately indicates that the refrigerant recovery/recycling equipment standard is voluntary. Paragraph 12 inadvertently includes the paragraph on voluntary conformance from the ARI Standard 740; therefore, EPA has deleted this paragraph in Appendices B1 and B2, and wishes to clarify that the ARI standards referenced in 40 CFR part 82, subpart F are included into regulation by their adoption into the appendices of subpart F. The ARI standards are not Federal regulations, but the Agency has used them as the basis for Appendices A, B1, and B2. Therefore, the regulated community is required to adhere to the regulations contained in 40 CFR part 82, subpart F (including all applicable appendices), not the ARI standards themselves. This distinction is extremely pertinent for issues such as the previously discussed labeling

requirements for certified recovery and recycling equipment, where voluntary conformance to the marking and nameplate data of the ARI Standard 740-1995 does not satisfy the required labeling requirements of 40 CFR 82.158(h).

#### *G. Major and Minor Maintenance, Service, or Repair*

Effective July 13, 1993, technicians were required to evacuate air-conditioning and refrigeration equipment to established vacuum levels as stated in Table 1 of § 82.156. EPA also granted an exception to these evacuation requirements for non-major maintenance, service, or repair that did not include the removal of any major components and was not followed by the evacuation of the appliance to the environment, § 82.156(a)(1)(i). EPA believed that such repairs would result in very little release of refrigerant to the environment. EPA did not explicitly define "*non-major*" maintenance, service, or repair; instead EPA defined "*major*" maintenance, service, or repair as involving removal of the compressor, condenser, evaporator, or auxiliary heat exchanger coil. EPA specified removal of major equipment components, because at that time, EPA intended non-major maintenance, service, or repairs to include procedures that involve uncovering only a small opening in the appliance and that take place in a matter of minutes. After promulgation of the final rule, EPA received several requests for the Agency to expand and clarify the definition of "major maintenance, service, or repair" and explicitly define "non-major maintenance, service, or repair." The requesters believed that the definition of major maintenance, service, or repair was too narrow, excluding some types of repairs that result in considerable refrigerant release.

EPA agreed with the requesters that major maintenance, service, or repair had been defined too narrowly; therefore, EPA proposed in the NPRM to add definitions for "major repairs of