

ANTELOPE VALLEY AIR QUALITY MANAGEMENT DISTRICT

RULE 1415 -- REDUCTION OF REFRIGERANT EMISSIONS FROM STATIONARY REFRIGERATION AND AIR CONDITIONING SYSTEMS

(Adopted: 06/07/91; Amended: 10/14/94)

(a) Purpose

The purpose of this rule is to reduce emissions of Class I and Class II refrigerants from stationary refrigeration and air conditioning systems by requiring persons subject to this rule to reclaim, recover, or recycle refrigerant and to minimize refrigerant leakage.

(b) Applicability

This rule is applicable to any person who owns or operates a refrigeration system, as defined in this rule. This rule is also applicable to any person who installs, replaces, services, disposes, audits, or relocates a refrigeration system, to any person who services or maintains recycling and recovery equipment, and to any person who recycles, recovers, reclaims, or sells refrigerant. All amendments to this rule adopted as of October 14, 1994 shall take effect as of October 14, 1994.

(c) For purposes of this rule, the following definitions shall apply:

- (1) **ADDITIONAL REFRIGERANT CHARGE** is the quantity of refrigerant (in pounds) charged to a refrigeration system in order to bring the system to a full-capacity charge and replace refrigerant which has leaked.
- (2) **APPROVED RECOVERY EQUIPMENT** is equipment for refrigerant recovery that is certified by the Environmental Protection Agency pursuant to the requirements of Part 82 of Title 40 of the Code of Federal Regulations.
- (3) **APPROVED RECYCLING EQUIPMENT** is any refrigerant recycling equipment that is certified by Underwriters Laboratories, or another independent testing organization as approved by the Executive Officer's designee, and is certified by the Environmental Protection Agency pursuant to the requirements of Part 82 of Title 40 of the Code of Federal Regulations.
- (4) **AUDIT** is an annual inspection of the refrigeration systems containing Class I refrigerants conducted to:
 - (A) identify leaks pursuant to a District-approved method (Section (2)(A)); and
 - (B) ensure proper operation pursuant to manufacturer's specification.

- (5) CERTIFIED AUDITOR for the purpose of this Rule is a person that:
- (A) has the following current, valid, and applicable U.S. Environmental Protection Agency certificate provided in accordance with Part 82 of Title 40 of the Code of Federal Regulations:
 - (i) a Type II Technician certificate for high or very high pressure refrigeration systems and a Type III Technician certificate for low pressure refrigeration systems; or
 - (ii) a Universal Technician certificate, or
 - (B) until June 30, 1995, has successfully completed a District-approved course in conducting inspections and generating records for compliance with this rule, and has a current, valid, written certification from the Executive Officer's designee.
- (6) CERTIFIED RECLAIMER is a person who holds a current, valid, and applicable reclaimer certificate in accordance with Part 82 of Title 40 of the Code of Federal Regulations.
- (7) CERTIFIED TECHNICIAN is a person who on and after November 14, 1994 has the following current valid, and applicable U.S. Environmental Protection Agency certificate provided in accordance with Part 82 of Title 40 of the Code of Federal Regulations:
- (i) a Type II Technician certificate for high or very high pressure refrigeration systems; or
 - (ii) a Type III Technician certificate for low pressure refrigeration systems; or
 - (iii) a Universal Technician certificate.
- (8) CLASS I REFRIGERANT is any compound or any combination of compounds designated by U.S. Environmental Protection Agency as a CLASS I refrigerant pursuant to 42 U.S.C. 7671(a).
- (9) CLASS II REFRIGERANT is any compound or any combination of compounds designated by U.S. Environmental Protection Agency as a CLASS II refrigerant pursuant to 42 U.S.C. 7671(a).
- (10) DISPOSE is to discard refrigerant in any manner, except destruction by incineration or by a treatment method specifically approved by the U.S. Environmental Protection Agency for handling such refrigerant without releasing it to the atmosphere.
- (11) High pressure refrigeration system is a refrigeration system that uses a refrigerant with a boiling point between -50 and 10 degrees Centigrade at atmospheric pressure (29.9 inches of mercury).

- (12) Low pressure refrigeration system is a refrigeration system that uses a refrigerant with a boiling point above 10 degrees Centigrade at atmospheric pressure (29.9 inches of mercury).
- (13) MAINTENANCE is an annual service of the refrigeration system containing Class II refrigerants conducted to:
 - (A) ensure proper operation pursuant to manufacturer's specification; and
 - (B) assess the overall integrity of the refrigeration system to detect leaks.
- (14) PERSON is any firm, business establishment, association, partnership, corporation, or individual, whether acting as principal, agent, employee, or in any other capacity, including any governmental entity or charitable organization.
- (15) RECLAIM is to process refrigerant to a level equivalent to new product specifications in accordance with applicable requirements of the U.S. Environmental Protection Agency contained in Part 82 of Title 40 of the Code of Federal Regulations.
- (16) RECOVER is to remove refrigerant, in any condition, from a system and to store it in an external container, without necessarily testing or processing it in any way.
- (17) RECYCLE is to clean refrigerant for reuse by oil separation and single or multiple passes through moisture-absorption devices, such as replaceable core filter-driers which reduce moisture, acidity, and particulate matter.
- (18) REFRIGERANT LEAK is any discharge of refrigerant from a refrigeration system, recovery equipment, or recycling equipment into the atmosphere.
- (19) REFRIGERATION SYSTEM is any non-vehicular equipment used for cooling or freezing, which holds more than 50 pounds of, any combination of Class I and/or Class II refrigerant, including, but not limited to, refrigerators, freezers, or air conditioning equipment or systems.
- (20) SELF-CONTAINED RECOVERY EQUIPMENT is any refrigerant recovery equipment that is capable of removing the refrigerant from a refrigeration system without the assistance of components contained in the refrigeration system.
- (21) Very high pressure refrigeration system is a refrigeration system that uses a refrigerant with a boiling point below -50 degrees Centigrade at atmospheric pressure (29.9 inches of mercury).

(d) Requirements

- (1) On and after January 1, 1992, no person shall install, service, modify, or dispose of any refrigeration system, or perform any related repairs or modifications that may cause release of Class I or Class II refrigerants unless that person meets all of the following requirements:
 - (A) Recovers, recycles, or reclaims the refrigerant, using approved recycling or recovery equipment for that type of refrigeration unit, and employs procedures for which the recycling or recovery equipment was approved by the U.S. Environmental Protection Agency. Recovery and recycling equipment shall be used as specified by the recovery or recycling equipment manufacturer unless manufacturer's specifications are in conflict with the equipment approved procedures. Refrigerant may be returned to the refrigeration system from which it is recovered from or to another refrigeration system owned by the same person without being recycled or reclaimed.
 - (B) Satisfies job site evacuation of Class I and Class II refrigerants during recycling, recovering, reclaiming, or disposing in accordance with applicable regulations of the U.S. Environmental Protection Agency as contained in Part 82, Subpart F, Section 82.156, of Title 40 of the Code of Federal Regulations then in effect including, but not limited to, "Required Levels of Evacuation for Air Conditioning and Refrigeration Equipment". De minimis refrigerant releases associated with a good faith attempt to recycle or recover refrigerants are allowed provided that required practices or requirements in accordance with regulations then in effect of the U.S. Environmental Protection Agency contained in Part 82, Subpart F, Section 82.156 and Section 82.158, and Part 82, Subpart B of Title 40 of the Code of Federal Regulation are followed.;
 - (C) Has at least one piece of approved, self-contained recovery equipment available at their place of business;
 - (D) On or after October 14, 1994, any person who owns or operates an approved recycling or recovery equipment:
 - (i) Shall not operate any approved recycling or recovering equipment except for the maintenance or repair of such equipment, unless the equipment has been tested for and been determined to have no leaks within the past six months as determined by a method approved by the Executive Officer's designee. Leaks in recycling, recovering, or charging equipment shall be repaired within 2 working days after the leak is first detected, unless the equipment does not leak if its use is discontinued;

- (ii) Shall not alter the design of approved recovery and recycling equipment in a manner that would affect the equipment's ability to meet the certification standards set by the U.S. Environmental Protection Agency without resubmitting the altered design for approval testing. Until such altered equipment is tested by a U.S. Environmental Protection Agency approved testing facility and is shown to meet the certification standards set forth by the U.S. Environmental Protection Agency, equipment so altered shall not be considered approved; and,
 - (iii) Shall provide proof of certification for the recovery and recycling equipment from the U.S. Environmental Protection Agency to the Executive Officer's designee upon request.
- (E) On and after November 14, 1994 has the following current, valid and applicable U.S. Environmental Protection Agency certificate provided in accordance with Part 82 of Title 40 of the Code of Federal Regulations:
- (i) a Type II Technician certificate for high or very high pressure refrigeration systems; or
 - (ii) a Type III Technician certificate for low pressure refrigeration systems; or
 - (iii) a Universal Technician certificate.
- (2) No person shall operate a refrigeration system unless all of the following applicable requirements are met:
- (A) An annual audit has been conducted for refrigeration systems containing Class I refrigerant by a Certified Auditor to determine whether the system is operating pursuant to manufacturer's specifications and does not have refrigerant leaks. This audit shall commence no later than July 1, 1992, and every 12 months thereafter. At minimum, the annual audit shall require the following:
- (i) A leak test shall be conducted for refrigeration systems operating above atmospheric pressure using one of the following methods:
 - (I) Electronic halogen detector used in accordance with manufacturer's specifications;
 - (II) Fluorescent tracer dyes injected into the system according to manufacturer's specifications, and scanned with an ultraviolet lamp; or
 - (III) An alternate method approved by the Executive Officer's designee.
 - (ii) A leak test shall be conducted for refrigeration systems operating below atmospheric pressure by using one of the following methods:

- (I) Pressurizing the system by using an inert gas mixture with an indicator or by raising the temperature of the Evaporator; or
 - (II) An alternate method approved by the Executive Officer's designee.
 - (iii) Amount of refrigerant leak shall be determined, for each refrigeration system, by recording the total capacity of refrigerant charge in each refrigeration system, the quantity of any additional refrigerant charge to each refrigeration system, as defined in (c)(1), and the date of each charge. The quantity of additional refrigerant charge shall be determined by weighing the refrigerant charging container before and after each charge, using equipment that is accurate to the nearest pound.
 - (iv) An examination for deficiencies which may cause refrigerant leakage.
- (B) An annual maintenance program for refrigeration systems containing Class II refrigerants has been established to ensure that the system is operating pursuant to the manufacturer's specification and that it does not have any refrigerant leaks. This program shall consist of all of the following:
- (i) An inspection for leaks by a certified technician which includes an examination for deficiencies which may cause refrigerant leakage.
 - (ii) A written record of the quantity of any additional refrigerant charge to each refrigeration system. The quantity of additional refrigerant charge shall be determined by weighing the refrigerant charging container before and after each charge, using equipment that is accurate to the nearest pound.
- (C) A Registration Plan for the entire facility has been submitted to the District by January 1, 1996 and every two years thereafter. This Registration Plan shall contain:
- (i) number of refrigeration systems in operation;
 - (ii) type of refrigerants in each refrigeration system;
 - (iii) amount of refrigerant in each refrigeration system;
 - (iv) date of last annual audit or maintenance performed for each refrigeration system; and
 - (v) amount of refrigerant charged every year.
- (3) On and after January 1, 1992, any person who owns or operates a refrigeration system that has a refrigerant leak as defined in paragraph (c)(18) shall ensure that the leak is repaired no later than 14 calendar days after the leak has been discovered or should have been discovered. The owner or operator shall maintain a log of repair activities beginning at the time the leak is discovered and ending at the time when the leak has been repaired. The refrigeration system shall be

verified by a certified technician to be leak free before any refrigerant is added to the system.

- (4) On or after November 14, 1994, no person shall sell, distribute, offer for sale or distribution, or purchase any Class I or Class II refrigerant for use as a refrigerant to any person unless:
 - (A) The buyer is certified pursuant to Part 82 of Title 40 of the Code of Federal Regulations;
 - (B) The refrigerant is sold only for eventual resale to certified technicians or to refrigeration system manufacturers;
 - (C) The refrigerant is contained in a refrigeration system; or
 - (D) The refrigerant is charged into a refrigeration system by a certified technician.
 - (5) Effective October 18, 1994 until May 15, 1995, no person shall sell or offer for sale any Class I or Class II refrigerant consisting wholly or in part of used refrigerant unless the refrigerant has been reclaimed by a certified reclaimer.
 - (6) No person reclaiming refrigerants shall release into the atmosphere more than 1.5 percent of the refrigerant received for reclamation.
- (e) Recordkeeping
- (1) On and after January 1, 1992, any person owning or operating any refrigeration system is required to maintain the following records for each refrigeration system:
 - (A) A report demonstrating compliance with paragraph (d)(2) and repairs required by paragraph (d)(3), which includes the following information:
 - (i) Date of annual audit and annual maintenance program;
 - (ii) All work completed for each refrigeration system to prevent or repair leaks, including results of leak testing and leak determinations;
 - (iii) Name(s) of the person who completed the inspection and repair, and name, address, and telephone number of the company the person is representing;
 - (iv) The permit number of the recycling or recovery equipment;
 - (v) The log of repair activities; and
 - (vi) Technician certificate type.
 - (B) A log of the quantity of each additional refrigerant charged to the refrigeration system and the date of each charge.

- (C) A log of malfunctions of the refrigeration system, other than that determined in section (d)(2) and (d)(3), including the following:
 - (i) The cause of the malfunction; and
 - (ii) The type of repairs required and the date the repairs were completed.
 - (D) If refrigerant is recycled off-site, a transportation bill-of-lading (or other transportation document as approved by the Executive Officer's designee) indicating the name and location of the facility from which the refrigerant is shipped, the quantity of refrigerant transported, destination (company name, phone number, and location) and date of transportation.
 - (E) The quantity (in pounds) of Class I or Class II refrigerants purchased or used in the District in a calendar year and the name and address of the refrigerant supplier.
- (2) On and after July 1, 1991, any person who receives refrigerant for recycling or reclaiming from off-site locations shall maintain copies of all transportation documents as required in section (e)(1)(D) for each shipment of refrigerant received.
 - (3) Records and reports required under sections (e)(1)(A), (e)(1)(B), and (e)(1)(C) shall be generated by a Certified Auditor or a certified technician. Annual audits and maintenance records shall be in a format approved in writing by the Executive Officer's designee.
 - (4) All persons who sell or distribute any Class I or Class II refrigerant shall retain invoices that indicate the name of the purchaser, the date of sale, and the quantity of refrigerant purchased.
 - (5) Purchasers of any Class I or Class II refrigerant who employ certified technicians shall provide evidence that at least one technician is properly certified to the wholesaler who sells them refrigerant. The wholesaler shall keep this information on file and may sell refrigerant to the purchaser or authorized representative even if such purchaser or authorized representative is not a properly certified technician. The purchaser must notify the wholesaler in the event that the purchaser no longer employs at least one properly certified technician.
 - (6) Reclaimers shall maintain records of the names and addresses of persons sending them material for reclamation and the quantity of the material (the combined mass in pounds of refrigerant and contaminants) sent to them for reclamation.
 - (7) Reclaimers shall maintain records of the quantity of material sent to them for reclamation, the mass in pounds of refrigerant reclaimed, and the mass in pounds of waste product.

- (8) On and after October 14, 1994, any person owning and operating an approved recycling or recovery equipment shall maintain the following records as required by paragraph (d)(1)(D), which includes the following information:
- (A) Date of semi-annual inspection;
 - (B) All work completed for each recycling or recovery system to prevent or repair leaks, including results of leak testing and leak determinations;
 - (C) Name(s) of the person who completed the inspection and repair, and name, address, and telephone number of the company the person is representing; and
 - (D) The permit number of the recycling or recovery equipment.
- (9) Records and reports as required under sections (e)(1), (e)(2), (e)(4), (e)(5), (e)(6), (e)(7), and (e)(8) shall be maintained for not less than 3 years after their creation and shall be made available to the Executive Officer's designee upon request.

[SIP: Not SIP]

This Page Intentionally Left Blank.