Air Quality Update

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NEW EPA REFRIGERANT REGULATIONS UNDER 40 CFR PART 84, SUBPART C

On December 10, 2024, the U.S. Environmental Protection Agency (EPA) updated its refrigerant management rules under Code of Federal Regulations (CFR) Title 40 Part 84, Subpart C. These rules impose stricter limits on the use of reclaimed refrigerants and lower compliance thresholds. The rules become effective January 1, 2026.

Key Updates Under the New EPA Refrigerant Regulations

Effective 2026, units with 15 pounds or more of refrigerants with a Global Warming Potential (GWP) greater than 53 will be subject to the rules. This includes common hydrofluorocarbons (HFCs), such as R-134a, R-404A, and R-410A. The new threshold is more stringent than California's 50-pound limit.

Starting January 1, 2025, high-GWP HFCs will be restricted in new aerosols, foams, and equipment. New fire suppression system requirements, including training and reporting, begin in 2026.

Also beginning in 2026, automatic leak detection (ALD) systems will be required for equipment with more than 1,500 pounds of refrigerant with a GWP greater than 53. This is more stringent than the California Air Resources Board's (CARB's) 2,000-pound threshold for refrigerants with a GWP over 150.

Any time refrigerant is added (except for new installations, retrofits, or seasonal variances), a leak rate check must be performed. If the leak rate exceeds: 1) 20% for commercial refrigeration; 2) 30% for industrial process refrigeration; or 3) 10% for comfort cooling or other systems, then the facility must:

- Repair the leak within 30 days (for most systems) or 120 days (for industrial processes where shutdown is required to make the repair);
- Conduct initial and follow-up verification tests; and
- Perform inspections:
  - Every 3 months for systems with over 500 pounds; and
  - Annually for systems with 15 to 500 pounds.

Systems with leak rates over 125% of their charge must be reported to the EPA by March 1st each year.

Effective January 1, 2026, refrigerant may not be sold, labeled, or reported as reclaimed if it contains more than 15% virgin-regulated substance by weight.

Facilities must maintain appliance records, including charge size, service and repair dates, and verification test results, for 3 years after retirement. Reporting is required for repair extensions, equipment retirements, and exclusions for purged refrigerant.

What These Changes Mean for CARB-Registered Refrigerants

The updated EPA regulations set stricter thresholds than CARB for refrigerant quantities and ALD systems. Units with over 15 pounds of refrigerants or with a high GWP will require tracking and reporting. Reclaimed refrigerants will need to meet new limits on virgin content, and ALD systems will be required for new units installed beginning in 2026 and for existing units by January 1, 2027.

Air Quality Tip

South Coast Air Quality Management District (SCAQMD) Rule 209 prohibits the transfer of permits. Facilities must submit an application for a change of owner/operator within 1 year from the last annual renewal of the permit under the previous owner/operator to avoid permit cancellation. If permits are cancelled, new permits must be obtained that meet current rule requirements for new equipment, including meeting the most current Best Available Control Technology (BACT) requirements.

Upcoming Online EH&S Training Offered by Yorke Engineering (3-Hour Sessions)

- Southern California Air Quality Regulations, Permitting, and Compliance Seminar: November 4, 6, 11, 12, and 13, 2025
  Class Info at: https://yorkeengr.com/classes

Upcoming Due Dates for 2025/2026*

- RECLAIM APEP (Cycle 2) 8/29/25
- CARB LCFS Verification Statement..8/31/25
- Title V – 500-SAM.....8/31/25
- CARB LCFS Q2 Fuel Report.....9/30/25
- SCAQMD 1110.2 Quarterly.....10/15/25
- RECLAIM Quarterly (Cyc. 1 & 2)..10/30/25
- CARB GHG Cap-and-Trade Annual Compliance Surrender 11/1/25
- CARB LCFS Q3 Fuel Report.....12/31/25
- CARB Off-Road Diesel Compliance by Fleet Average or BACT (All Fleets).. 1/1/26
- CARB Off-Road Diesel Fleet Phase-Outs: Tier 0 (Medium)/Tier 1 (Large).....1/1/26
- SB 261 Climate-Related Financial Risk Disclosure Reporting.....1/1/26
- SCAQMD 1110.2 Quarterly.....1/15/26
- RECLAIM Quarterly (Cycle 2).....1/30/26
- SCAQMD 218 CEMS Report 1/30/26
- CARB On-Road TRUCRS Reporting for Flexibility Options ...1/31/26
- SCAQMD Annual WAIRE Report...1/31/26
- Title V – 500-SAM.....2/28/26
- Title V – Application for Permit Renewal – Due 180 Days Prior to Permit Expiration

**Due dates listed are statutory dates; sometimes dates are extended when on a weekend/holiday.*

SCAQMD RULE 1147: NO_x REDUCTIONS FROM MISCELLANEOUS SOURCES

For full details on info below, go to: https://www.aqmd.gov/docs/default-source/rule-book/support-documents/Rule1147/rule-1147-guidance-document.pdf?sfvrsn=6

On March 7, 2025, the SCAQMD released a guidance document on Rule 1147 (linked above). The following provides general information on the rule's requirements.

Rule 1147 Overview

The purpose of Rule 1147 is to establish nitrogen oxides (NO_x) emission limits for applicable equipment and to define compliance timelines based on the unit's age and current emissions.

Rule 1147 applies to gas-fired and liquid-fueled combustion equipment units that require a permit and are not regulated under other rules within Regulation XI. Covered equipment includes ovens, dryers, afterburners, incinerators, and similar combustion units.

The rule sets NO_x and carbon monoxide (CO) limits via two tables: Table 1 for interim compliance and Table 2 for final (generally lower) emission limits. New equipment must meet Table 2 limits upon installation, while in-use equipment transitions are based on burner age and permit status.

For specific limits by equipment type, refer to SCAQMD Rule 1147: https://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1147.pdf

Unit Categories and Deadlines

In-use units are divided into the following two categories:

- **12-year units:** Units without an existing permit condition to limit NO_x emissions to the Table 1 limits. These units must meet Table 2 limits when the burner reaches 12 years of age.
- **32-year units:** Units that either have a permit condition limiting emissions to the Table 1 limits, or have had a permit application submitted by June 1, 2022, to restrict emissions to the Table 1 limits and have verified compliance through source testing. These units must meet Table 2 limits when the burner reaches 32 years of age.

Facilities with five or more units may qualify for staggered compliance deadlines through 2028.

Source Test Requirements

All applicable units must conduct an initial source test and subsequent recurring tests according to unit size:

- **Units < 10 million British thermal units per hour (MMBtu/hr):** Test every 60 months;
- **Units 10 to < 40 MMBtu/hr:** Test every 36 months; and
- **Units ≥ 40 MMBtu/hr:** Test every 12 months.

The initial source test requirement may be satisfied by a previous SCAQMD-approved source test conducted within the applicable recurring test frequency and before May 6, 2022. For example, a 20-MMBtu/hr unit tested within 36 months before May 6, 2022, may use that test as its initial source test.

Under certain circumstances, manufacturer certification of the unit may be accepted in lieu of initial source testing, provided this option is disclosed in the permit application and approved by the SCAQMD.

Implications for RECLAIM Facilities

Equipment at Regional Clean Air Incentives Market (RECLAIM) facilities are subject to the 12-year and 32-year permitting timelines described above. Applicable equipment operated at a RECLAIM facility shall not exceed 102 parts per million by volume (ppmv) of NO_x, corrected to 3% oxygen. If a facility transitions out of the RECLAIM program, initial source testing must be conducted within 24 months of being designated as a "Former RECLAIM Facility," unless a permit condition requires testing prior to RECLAIM exit.

Permit Applications and Compliance Timing

Rule 1147 requires permit applications for units subject to Table 2 limits to be submitted by July 1st of the year the unit's burner reaches the applicable age threshold (12 or 32 years). Equipment upgrades to meet Table 2 limits must be installed within 12 months of permit issuance.

Facilities with multiple units have options to stagger compliance deadlines according to schedules defined by unit count.

SCAQMD ADOPTED RULE CHANGES

For full details on changes below, go to: http://www.aqmd.gov/home/regulations/rules/recent-actions

- **Rule 1159.1: *Control of NO_x Emissions from Nitric Acid Tanks***

Applicability and Purpose

Rule 1159.1 was adopted by the Governing Board on December 6, 2024, and applies to owners and/or operators of facilities that have at least one permitted Nitric Acid Unit (NAU). Rule 1159.1 is applicable to RECLAIM, former RECLAIM, and non-RECLAIM facilities. The purpose of Rule 1159.1 is to reduce emissions of NO_x from NAUs. Rule 1159.1 defines an NAU as a tank, reactor, vessel, or other container where nitric acid decomposes at greater than 1,300 degrees Fahrenheit (°F) or reacts with metals. NAUs do not include containers used solely for storage or rinsing.

Compliance Pathways

Rule 1159.1 offers multiple pathways for compliance. Section (d)(1) provides the direct pathway of installing an air pollution control device (APCD) to meet a NO_x emission rate of 0.30 pound per hour (lb/hr) or an overall NO_x control efficiency of 99%. An alternative pathway in Section (d)(2)(A) provides an option to conduct source testing to meet an uncontrolled NO_x emission rate of 0.60 lb/hr, while Section (d)(2)(B) provides an option for annual nitric acid addition limits less than specified annual usage thresholds.

To comply with the nitric acid addition limit pathway, annual usage thresholds cannot be exceeded for more than 1 of the most recent 5 calendar years. Facilities electing to comply with the annual nitric acid addition pathway and subsequently exceed the threshold for 2 or more years must instead meet compliance through the APCD or source testing options.

Multiple APCDs

Facilities with multiple APCDs that elect to comply with the emission rate compliance pathway will be required to demonstrate that the combined NO_x emission rate does not exceed 0.90 lb/hr via a source test.

Compliance Deadlines

Rule 1159.1 "Table 1 – Implementation Schedule" has compliance dates that are determined based on the following:

- If the NAU(s) were issued a permit on or before date of rule adoption; or
- If the NAU(s) are issued a permit after the date of rule adoption.

Specific compliance deadlines must also be met for facilities exceeding the annual usage thresholds if selecting the nitric acid addition limit pathway.

Exemptions

General Rule 1159.1 requirements do not apply to cleaning tanks. Cleaning tanks are units that contain nitric acid used to remove surface contaminants from materials that are not expected to react with metals.

SCAQMD PROPOSED RULE CHANGES

- **Proposed Amended Rule (PAR) 1469: *Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations***

For full details on changes below, go to: *https://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/proposed-rules/rule-1469*

The SCAQMD has proposed amendments to Rule 1469, regulating hexavalent chromium emissions from chrome electroplating and chromic acid anodizing facilities. The changes proposed are to align with California's Airborne Toxic Control Measure (ATCM) and introduce stricter limits and compliance timelines.

Tier III Functional Plating Tanks

If PAR 1469 is adopted, starting January 1, 2026, functional chrome plating and chromic acid anodizing tanks will need to meet a lowered emission limit of 0.00075 milligram per ampere-hour (mg/amp-hr) (down from 0.0015 mg/amp-hr). Compliance would be achieved using add-on APCDs; in-tank methods alone, such as fume suppressants, would no longer be sufficient. Facilities would also be required to conduct source testing.

Decorative Chrome Plating

In the currently proposed amendments, decorative chromium electroplating will be required to phase out the use of hexavalent chromium by January 2, 2030. Facilities issued a Permit to Construct after January 1, 2029, for non-hexavalent chromium alternative equipment may qualify for an alternative phase-out date. In those cases, the facility would phase out hexavalent chromium by the earliest of: 1) the expiration date of the Permit to Construct for the alternative equipment; 2) the issuance date of the Permit to Operate for the alternative equipment; or 3) January 2, 2031.

Additional operational and recordkeeping requirements, including building enclosures, housekeeping, and use of covers or fume suppressants, are included in the proposed amendments.

Yorke Engineering, LLC specializes in air quality and environmental consulting for stationary and mobile sources, including dispersion modeling, health risk assessments, permitting, emission inventories, air quality compliance systems, etc. Yorke Engineering has assisted over 2,150 customers, including a wide variety of industrial facilities and government organizations throughout California.