TITLE 17. CALIFORNIA AIR RESOURCES BOARD

NOTICE OF PUBLIC HEARING TO CONSIDER THE ADOPTION OF A PROPOSED REGULATION FOR THE MANAGEMENT OF HIGH GLOBAL WARMING POTENTIAL REFRIGERANTS FOR STATIONARY SOURCES

The Air Resources Board (ARB or Board) will conduct a public hearing at the time and place noted below to consider adoption of a proposed regulation for the management of high global warming potential refrigerants for stationary sources.

DATE: December 9, 2009

TIME: 9:00 a.m.

PLACE: California Environmental Protection Agency
Air Resources Board
Byron Sher Auditorium
1001 I Street
Sacramento, California 95814

This item will be considered at a two-day meeting of the Board, which will commence at 9:00 a.m. on December 9, 2009, and may continue at 8:30 a.m., on December 10, 2009. Please consult the agenda for the meeting, which will be available at least ten days before December 9, 2009, to determine the day on which this item will be considered.

If you require special accommodations or language needs, please contact the Clerk of the Board at (916) 322-5594 or by facsimile at (916) 322-3928 as soon as possible, but no later than 10 business days before the scheduled Board hearing. TTY/TDD/Speech to Speech users may dial 711 for the California Relay Service.

INFORMATIVE DIGEST OF PROPOSED ACTION AND POLICY STATEMENT OVERVIEW

Sections Affected: Proposed adoption of new subarticle 6, sections 95380, 95381, 95382, 95383, 95384, 95385, 95386, 95387, 95388, 95389, 95390, 95391, 95392, 95393, 95394, 95395, 95396, 95397, and 95398 of subchapter 10, article 4, title 17, California Code of Regulations (CCR).

Background:
The California Global Warming Solutions Act of 2006 (Assembly Bill 32 (AB 32); Stats. 2006, Chapter 488) created a comprehensive, multi-year program to reduce greenhouse gas (GHG) emissions in California. ARB staff is proposing a regulation that would reduce GHG emissions associated with stationary, non-residential refrigeration equipment and resulting from the installation and servicing of refrigeration and air-conditioning (R/AC) appliances.

While not a discrete sector of the California economy, the high-GWP GHG sector consists of a broad range of sources that emit gases that have hundreds to thousands of times the climate impact as carbon dioxide (CO_2). High-GWP refrigerants serve an important purpose as refrigerants in stationary heating, ventilation, and air conditioning (HVAC), mobile vehicle air conditioning (MVAC), and refrigeration. High-GWP gases are also used as foam-blowing agents, in electrical transmission, as fire suppressants, in consumer products, and in the semiconductor industry.

For the purposes of the proposed regulation, high-GWP refrigerants include: 1) any refrigerant with a global warming potential value equal to or greater than 150, or 2) any refrigerant that is an ozone depleting substance (ODS). High-GWP refrigerants include chlorofluorocarbons (CFC), hydrochlorofluorocarbons (HCFC), hydrofluorocarbons (HFC) and perfluorocarbons (PFC). CFC and HCFC are classes of ODS. Hydrofluorocarbon refrigerants are non-ozone depleting substitutes for ODS refrigerants. PFC are also non-ozone depleting compounds and may be in use in industrial refrigeration applications. Generally, all of these classes of chemicals have very high global warming potentials, with potencies in the range of 500 to 10,000 times greater than that of CO_2.

The proposed regulation focuses on the largest source of emissions from the high-GWP sector – large commercial refrigeration systems, which have extensive GHG emission potential. Refrigeration systems are a primary source of emissions from the stationary source high-GWP GHG sector; the United States Environmental Protection Agency (U.S. EPA) estimates that 37 percent of the stationary refrigeration and air-conditioning related emissions of high-GWP gases are from stationary, large commercial refrigeration systems.

Of all refrigeration systems using more than 50 pounds of a high-GWP refrigerant that were reported to the South Coast Air Quality Management District (SCAQMD) under their Rule 1415, on average, 29 percent leak annually. These leaking refrigeration systems lost, on average, 65 percent of their refrigerant charge annually. In many cases owners and operators of refrigeration systems can benefit financially from using the refrigerant best management practices required by the proposed regulation, because these systems would ultimately consume less refrigerant.

As a result of the Montreal Protocol's phaseout of ODS, these gases have typically been replaced with ODS substitutes such as hydrofluorocarbons (HFC) and perfluorocarbons (PFC). For example, HFC blends with higher GWPs are currently being used to replace HCFC-22 as a refrigerant. While ODS have negative impacts for both climate change and stratospheric ozone, ODS substitutes do not deplete the ozone but are typically potent GHG.

The majority of ODS substitutes are Kyoto gases and are thus included in the California AB 32 GHG inventory. Emissions of Kyoto Protocol gases are increasing as ODS are phased out and are replaced by ODS substitutes. In total, the high-GWP sector, based on an average 2002 -2004 emissions inventory, is estimated to represent approximately three percent of the statewide anthropogenic GHG inventory. However, the sector is

growing rapidly primarily due to the increased use of ODS substitutes. Under a business-as-usual scenario high-GWP gases are expected to be the fastest growing GHG sector in the California GHG inventory and are anticipated to more than triple to reach over 46 $MMTCO_2E$ by 2020 – 8 percent of the total estimated California GHG inventory.

The low cost of many high-GWP refrigerants, as well as a lack of incentives for emission control, have resulted in the common practice of re-charging leaky, poorly designed, and/or poorly maintained systems without attempting repair. Although ODS refrigerant prices are expected to rise as they are phased out of production, currently low costs and the lack of enforced regulations limiting releases have led to low recovery and reclamation rates for many high-GWP refrigerants. As a result, refrigerant venting occurs during maintenance or end-of-life disposal. In sum, the Refrigerant Management Program's leak detection and monitoring, leak repair, and retrofit and retirement components offer an integrated strategy for achieving significant reductions from the commercial refrigeration sector.

DESCRIPTION OF THE PROPOSED REGULATORY ACTION

The proposed regulation is designed to: 1) reduce emissions of high-GWP refrigerants from stationary, non-residential refrigeration equipment, 2) reduce emissions resulting from the installation and servicing of refrigeration and air-conditioning (R/AC) appliances using high-GWP refrigerants, and 3) verify emission reductions.

The proposed regulation applies to: 1) any person who owns or operates a stationary refrigeration system that uses more than 50 pounds of a high-GWP refrigerant; 2) any person who installs, repairs, maintains, services, replaces, recycles, or disposes of a R/AC appliance; and 3) any person who distributes or reclaims high-GWP refrigerants.

The proposed regulation specifies: 1) stationary refrigeration refrigerant management practices, 2) R/AC appliance required service practices, and 3) refrigerant distributor, wholesaler, and reclaimer requirements.

Stationary Refrigeration Refrigerant Management Practices

The proposed stationary refrigeration management practices apply to any refrigeration system that uses more than 50 pounds of a high-GWP refrigerant. The applicable requirements vary based on the amount of high-GWP refrigerant used by a refrigeration system, known as the refrigerant charge size. Refrigeration systems are categorized based on the refrigerant charge size as a large refrigeration system, medium refrigeration system, or small refrigeration system.

All facilities with a refrigeration system with a refrigerant charge size greater than 50 pounds will be required to register, with the initial registration due date based on the refrigeration system with the largest refrigerant charge size in operation at a facility. Facilities with a refrigeration system in operation with a refrigerant charge of 200 pounds or greater will be also required to pay an annual implementation fee at the time

of registration, which is also based on the refrigeration system with the largest refrigerant charge size in operation at a facility.

All owners or operators of facilities with a refrigeration system(s) in operation with a refrigerant charge size greater than 50 pounds will be required to comply with refrigerant leak detection and monitoring, refrigerant leak repair, and refrigeration system retrofit or retirement requirements.

Under the proposed regulation, owners or operators of facilities with a refrigeration system(s) in operation with a refrigerant charge size greater than 50 pounds will be subject to recordkeeping and reporting requirements. Requirements include maintaining records on refrigeration system service and leak repair and refrigerant purchase and use. Owners or operators of facilities with a refrigeration system(s) in operation with a refrigerant charge of 200 pounds or greater will be required to annually report this information to ARB.

Refrigeration and Air-Conditioning Appliance Required Service Practices

The proposed regulation includes required service practices that apply to any person installing, maintaining, servicing, repairing, modifying, or disposing of a R/AC appliance that uses a high-GWP refrigerant.

The majority of required service practices are based on rules promulgated by the United States Environmental Protection Agency (U.S. EPA) under the federal Clean Air Act (CAA). These rules forbid intentional venting and require refrigerant recovery using approved equipment and procedures and refrigerant evacuation. These existing federal requirements currently apply only to ODS refrigerants, except for the prohibition on intentional venting, which is applicable to ODS substitute refrigerants. The proposed regulation would extend these requirements to all high-GWP refrigerants. Required service practices not based on existing rules promulgated by U.S. EPA include restrictions on adding refrigerant to a R/AC appliance, use of approved refrigerants, and refrigerant recovery from refrigerant cylinders.

Refrigerant Distributor, Wholesaler, and Reclaimer Requirements

The proposed regulation includes prohibitions that are based on rules promulgated by U.S. EPA that apply to refrigerant distributors, wholesalers, and reclaimers. These existing federal requirements currently apply only to ODS refrigerants; the proposed regulation would extend the requirements to all high-GWP refrigerants. Prohibitions not based on existing rules promulgated by U.S. EPA include sale of only approved refrigerants and refrigerant recovery from refrigerant cylinders.

Under the proposed regulation, refrigerant distributors, wholesalers, and reclaimers will be subject to recordkeeping and reporting requirements. Requirements include maintaining records of high-GWP refrigerant purchases, sales, shipments, and reclamation for refrigerant reclaimers. Refrigerant distributors, wholesalers, and reclaimers will also be required to annually report this information to ARB.

EMISSION REDUCTIONS

Staff estimates that implementation of the proposed regulation would reduce emissions of Kyoto gases by 7.1 million metric tonnes of carbon dioxide equivalent ($MMTCO_2E$) annually by 2020. In addition, this regulation is anticipated to reduce emissions of ozone-depleting substances by an additional 0.9 $MMTCO_2E$ annually by 2020, as compared to business as usual.

COMPARABLE FEDERAL REGULATIONS

A primary goal in the development of the proposed regulation is to ensure that its requirements are consistent with existing rules applicable to ODS refrigerants in U.S. EPA regulations (Code of Federal Regulations, Title 40, Part 82, Subpart F) and the SCAQMD regulations (Rule 1415). The proposed regulation builds on the existing rules and expands their applicability to include all high-GWP refrigerants.

The management of refrigerants is currently covered by rules promulgated by U.S. EPA under the federal CAA. Section 608 of the CAA includes requirements applicable to refrigerant use during stationary heating, ventilation, and air conditioning (HVAC) servicing, while Section 609 includes requirements specific to refrigerant use during mobile vehicle air conditioning (MVAC) servicing. These sections were included in the CAA in order to address stratospheric ozone depletion from ODS.

Section 608 of the CAA specifies required service practices that maximize the recycling of ODS during the service of stationary HVAC systems. Section 608 includes requirements specific to venting, approved equipment, technician training and certification, recordkeeping, certification requirements, and sales restrictions.

Section 609 of the CAA is similar to Section 608, but is specific to management of refrigerants while maintaining, servicing, repairing, or disposing of MVAC systems. Section 609 includes requirements specific to venting, evacuation, reclamation, equipment certification, refrigerant leaks, technician certification, sales restrictions, certification by owners of recycling and recovery equipment, reclaimer certification, safe disposal, and recordkeeping.

Final rules promulgated by U.S. EPA under section 608 of the CAA were published on May 14, 1993 (58 Federal Register (FR) 28660) and establish a recycling program for ozone-depleting refrigerants recovered during the servicing and maintenance of R/AC appliances. Together with the prohibition on venting during the maintenance, service, repair, and disposal of class I and class II ODS (January 22, 1991; 56 FR 2420), these rules were intended to substantially reduce the production and emissions of ozone-depleting refrigerants. The final rule on venting and sales of refrigerant substitutes (March 12, 2004; 69 FR 11946) sustained the prohibition against venting HFC and PFC refrigerants.

Federal rules specific to refrigerant cylinder management are based on the CAA and U.S. Department of Transportation (DOT) cylinder specifications. The CAA prohibits the sale of ODS refrigerants, except to a U.S. EPA certified technician or the employer of a certified technician. DOT regulations applicable to refrigerant management include: 1)

Title 49: Transportation, Part 173, Shippers, General Requirements of Shipments and Packaging; and 2) Title 49, Transportation, Part 178, Specifications for Packagings, Subpart C, Specifications for Cylinders. These regulations outline requirements specific to cylinder type, size, service pressure, test pressure, size limitation, maximum water capacity, pressure of contents, material (steel or aluminum), and markings.

Similar to U.S. EPA's requirements under Section 608 of the CAA, the SCAQMD has adopted Rule 1415 which is aimed at reducing emissions of ozone-depleting refrigerants from stationary R/AC systems. The Rule 1415 requires any person within SCAQMD's jurisdiction, who owns or operates a refrigeration or air-conditioning system, to minimize refrigerant emissions. A refrigeration system is defined for the purposes of the rule as 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. Equipment found to be leaking any ODS refrigerant must be repaired within 14 days.

Rule 1415 requires biennial reporting from owners and operators of stationary R/AC systems holding more than 50 pounds of an ozone-depleting refrigerant. Specific information to be collected includes: number of R/AC systems in operation; type of refrigerant in each refrigeration system; amount of refrigerant in each R/AC system; date of the last annual audit or maintenance performed for each R/AC system; and the amount of additional refrigerant charged to each R/AC system every year.

AVAILABILITY OF DOCUMENTS AND AGENCY CONTACT PERSONS

The Board staff has prepared a Staff Report – Initial Statement of Reasons (ISOR) - for the proposed regulatory action, which includes a summary of the economic and environmental impacts of the proposal. The report is entitled "Initial Statement of Reasons for Adoption of a Proposed Regulation for the Management of High Global Warming Potential Refrigerants for Stationary Sources." The Executive Summary provides an overview of the proposed regulation.

Copies of the ISOR and the full text of the proposed regulatory language may be accessed on the ARB's website listed below, or may be obtained from the Public Information Office, Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, First Floor, Sacramento, California 95814, (916) 322-2990, at least 45 days prior to the scheduled hearing on December 9, 2009.

Upon its completion, the Final Statement of Reasons (FSOR) will be available and copies may be requested from the agency contact persons identified in this notice, or may be accessed on ARB's website listed below.

Inquiries concerning the substance of the proposed regulation may be directed to the designated agency contact persons: Pamela Gupta, Manager of the Greenhouse Gas Reduction Strategy Section, at (916) 327-0604 or Chuck Seidler, Air Pollution Specialist, at (916) 327-8493.

Further, the agency representative and designated back-up contact persons to whom nonsubstantive inquiries concerning the proposed administrative action may be directed are Lori Andreoni, Manager, Board Administration and Regulatory Coordination Unit, (916) 322-4011, or Amy Whiting, Regulations Coordinator, (916) 322-6533. The Board has compiled a record for this rulemaking action, which includes all the information upon which the proposal is based. This material is available for inspection upon request to the contact persons.

This notice, the ISOR and all subsequent regulatory documents, including the FSOR, when completed, are available on ARB's website for this rulemaking at www.arb.ca.gov/regact/2009/gwprmp09/gwprmp09.htm

COSTS TO PUBLIC AGENCIES AND TO BUSINESSES AND PERSONS AFFECTED

The determinations of the Board's Executive Officer concerning the cost or savings necessarily incurred in reasonable compliance with the proposed regulatory action are presented below.

The ARB's Executive Officer has determined that the proposed regulatory action would impose a mandate on State and local agencies and would create costs, as defined in Government Code section 11346.5(a)(6), to state and local agencies. Any such costs should be minimal, and affected State and local agencies should be able to absorb these costs within existing budgets and resources. Because the requirements imposed by the regulation are generally applicable to all entities subject to the regulation, the proposed regulatory action imposes no costs on local agencies that are required to be reimbursed by the State pursuant to part 7 (commencing with section 17500), division 4, title 2 of the Government Code, and does not impose a mandate on local agencies that is required to be reimbursed pursuant to Section 6 of Article XIII B of the California Constitution.

The Executive Officer has also determined that the proposed regulation will not create costs or savings in federal funding to the State, costs or mandate to any school district whether or not reimbursable by the State pursuant to part 7 (commencing with section 17500), division 4, title 2 of the Government Code. The proposed regulation may create non-discretionary savings for some State or local agencies because reduced refrigerant leaks will translate into less refrigerant being purchased, resulting in an overall cost savings.

The Executive Officer has determined that the proposed regulatory action would create a total potential cost impact to the ARB (including cost of agreements with local air districts to help enforce the regulation) of $ 0.4 million starting in fiscal year 2010-11, an additional $0.7 million starting in fiscal year 2012-13, and an additional $1.2 million starting in fiscal year 2014-15 to reach a total of $2.3 million in fiscal year 2014-15 and each year thereafter. The annual implementation fees specified in the regulation are set to ensure that anticipated expenses equal anticipated revenue derived from the fees.

The costs of the program are associated with new ARB staff positions as well as funds for fee-for-service agreements with local air districts for administration and enforcement activities. ARB staff has conducted a preliminary survey of air districts to determine how each air district is likely to participate in the Refrigerant Management Program. Air districts representing approximately 94 percent of the State's population responded that they are likely to enforce the regulation within their jurisdictions.

In developing this regulatory proposal, ARB staff evaluated the potential economic impacts on representative private persons or businesses and has estimated that this regulation would primarily affect approximately 26,000 facilities that use stationary refrigeration systems. Approximately 12,000 additional businesses may be impacted in the industries of refrigeration and air-conditioning maintenance and service, and refrigerant distribution, wholesale, and reclamation.

It is estimated that the proposed regulation will impact the affected facilities at a total gross cost, on average, of $49.0 million per year, based on estimated 2020 costs in terms of 2008 dollars. However, cost savings are expected to be $68.1 million per year for a net total savings of $19.1 million per year. These savings would result because reduced leaks translate into less refrigerant being purchased, and the reduced refrigerant cost would more than offset the cost of compliance. Estimated average cost to refrigeration and air-conditioning maintenance and service contractors and refrigerant distributors, wholesalers, and reclaimers is anticipated to be a total of $0.2 million per year.

The Executive Officer has made an initial determination that the proposed regulatory action would not have a significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states, or on representative private persons.

In accordance with Government Code section 11346.3, the Executive Officer has determined that the proposed regulatory action would not negatively affect the creation or elimination of jobs within the State of California, the creation of new businesses or elimination of existing businesses within the State of California, or the expansion of businesses currently doing business within the State of California. A detailed assessment of the economic impacts of the proposed regulatory action can be found in the ISOR.

The proposed regulation requires that all refrigerant leak repairs be performed by a U.S. EPA certified technician. Industry stakeholders have stated that there is currently a limited number of certified technicians, so the proposed regulation may have a positive business creation impact by creating greater demand for businesses and employment that requires U.S. EPA certified technicians.

The Executive Officer has also determined, pursuant to title 1, CCR, section 4, that the proposed regulatory action will affect small businesses.

In accordance with Government Code sections 11346.3(c) and 11346.5(a)(11), the Executive Officer has found that the reporting requirements of the regulation which apply to businesses are necessary for the health, safety, and welfare of the people of the State of California.

Before taking final action on the proposed regulatory action, the Board must determine that no reasonable alternative considered by the Board, or that has otherwise been identified and brought to the attention of the Board, would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.

SUBMITTAL OF COMMENTS

Interested members of the public may also present comments orally or in writing at the meeting and may be submitted by postal mail or by electronic submittal before the meeting. To be considered by the Board, written comments, not physically submitted at the meeting, must be received **no later than 12:00 noon, December 8, 2009,** and addressed to the following:

Postal mail: Clerk of the Board, Air Resources Board
1001 I Street, Sacramento, California 95814

Electronic submittal: http://www.arb.ca.gov/lispub/comm/bclist.php

Please note that under the California Public Records Act (Government Code section 6250 et seq.), your written and oral comments, attachments, and associated contact information (e.g., your address, phone, email, etc.) become part of the public record and can be released to the public upon request. Additionally, this information may become available via Google, Yahoo, and any other search engines.

The Board requests but does not require that 20 copies of any written statement be submitted and that all written statements be filed at least 10 days prior to the hearing so that ARB staff and Board Members have time to fully consider each comment. The board encourages members of the public to bring to the attention of staff in advance of the hearing any suggestions for modification of the proposed regulatory action.

STATUTORY AUTHORITY AND REFERENCES

This regulatory action is proposed under the authority granted in Health and Safety Code, sections 38501, 38510, 38560, 38562, 38563, 38580, 38597, 39600, 39601, and 41511. This action is proposed to implement, interpret, and make specific sections 38501, 38505, 38510, 38560, 38562, 38563, 38597, 38580, 39600, 39601, and 41511.

HEARING PROCEDURES

The public hearing will be conducted in accordance with the California Administrative Procedure Act, title 2, division 3, part 1, chapter 3.5 (commencing with section 11340) of the Government Code.

Following the public hearing, the Board may adopt the regulatory language as originally proposed, or with non substantial or grammatical modifications. The Board may also adopt the proposed regulatory language with other modifications if the text as modified is sufficiently related to the originally proposed text that the public was adequately placed on notice that the regulatory language as modified could result from the

proposed regulatory action; in such event the full regulatory text, with the modifications clearly indicated, will be made available to the public, for written comment, at least 15 days before it is adopted.

The public may request a copy of the modified regulatory text from the ARB's Public Information Office, Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, First Floor, Sacramento, California 95814, (916) 322-2990.

CALIFORNIA AIR RESOURCES BOARD

/s/

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James N. Goldstene
Executive Officer

Date: October 13, 2009

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs see our website at www.arb.ca.gov.