

Eastern Kern Air Pollution Control District

Rule 412

**GASOLINE TRANSFER INTO STATIONARY STORAGE CONTAINERS,
DELIVERY VESSELS, AND BULK PLANTS**

Rule 412.1

TRANSFER OF GASOLINE TO VEHICLE FUEL TANKS

DRAFT STAFF REPORT

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VERSION

I. RULE DESCRIPTION

A. Rule 412

Rule 412 requires underground gasoline storage containers be equipped with a California Air Resource Board (CARB) certified Phase I vapor recovery system, a permanent submerged fill pipe, and a pressure-vacuum relief valve with specified operational settings. Aboveground storage tanks are required to be equipped with a pressure vacuum valve set to within 10 percent of the maximum allowable working pressure of the tank. Bulk plants and loading racks are required to be equipped with a CARB) certified Phase I vapor recovery system.

B. Rule 412.1

Rule 412.1 requires that tanks subject to Rule 412 also be equipped with a CARB-certified Phase II Vapor Recovery system subject testing and prompt replacement of damaged Phase II components.

II. BACKGROUND

Rules 412 and 412.1 were last amended in May of 1991 and November 1992 respectively. Many changes to state and local Regulation have taken place since the last amendments to these rules. Proposed amendments are not expected to result in additional vapor control requirements beyond what's already required by the California Air Resources Board (CARB) Enhance Vapor Recovery Executive Orders. Additionally, Rule amendments are not anticipated to provide emission reductions. The main goal for changes to these Rules is to incorporate changes to state requirements already included in CARB Executive orders and add phase II exemption for small vehicle fleets using Onboard Refueling Vapor Recovery (ORVR) under Rule 412.1.

A. Emission Control Techniques

There are two main types of vapor recovery systems utilized to control vapor losses from the transfer and storage of gasoline. The Phase I systems (Rule 412) control vapor losses during the transfer of gasoline from delivery vessels to storage tanks. On the other hand, the Phase II systems (Rule 412.1), controls vapor losses from the transfer of gasoline into motor vehicle fuel tanks. VOC emissions at gasoline dispensing facilities occur during loading (filling of storage tanks), breathing losses from vent valves, and vapor releases during refueling emitted at the vehicle/nozzle interface. When the storage tank is being filled the gasoline introduced, displaces the vapor already contained in the storage tank. Similarly, when the dispenser is being used, gasoline introduced into the vehicle tank displaces the gasoline vapor already contained in the tank. If the vapor recovery system does not adequately collect the displaced vapor, the vapor is emitted into the atmosphere. Standing losses may also occur, in the form of vapor losses resulting from pressure changes occurring within the storage tank due to atmospheric temperature fluctuations. Aboveground storage tanks are especially susceptible to standing losses.

Since 1998, motor vehicles are now manufactured with Onboard Refueling Vapor Recovery (ORVR) systems, which are intended to capture vapor being displaced from the vehicle tanks during vehicle refueling. The system transfers vapor into an onboard carbon canister until it can be released and burned as fuel inside combustion chamber. However, some Phase II systems designed to detect gasoline vapor in the vehicle fuel

tank proved incompatible with ORVR which did not properly control emissions during filling of vehicle tank. CARB Certification Procedure for vapor recovery systems at gasoline dispensing facilities (CP-201) required that all Phase II systems be compatible with ORVR as of March 1, 2006. When the dispenser is not being used, gasoline vapor can be emitted through holes or tears in the vapor return path, through the nozzle or vapor-processing unit if these components do not work effectively, or through the pressure vacuum relief valve when tank pressure rises above three inches water column. An operator can minimize VOC emissions from gasoline dispensing facilities or bulk plants by using CARB certified Phase I and CARB certified Phase II vapor recovery systems and maintaining the systems and all of their components in good repair. An operator can demonstrate that these systems are in good repair by passing performance tests, which determine the system's condition and identify any malfunctioning components of the system.

B. Vapor Recovery for Aboveground Storage Tanks

As mentioned before, aboveground storage tanks are different than underground storage tanks in that aboveground storage tanks are particularly susceptible to standing losses. The California Air Resources Board (CARB) has developed a certification procedure to address vapor recovery for aboveground storage tanks. As of 2014, new facilities with aboveground storage tanks were required to install Standing Loss Control (SLC) for control of vapor growth resulting from daily temperature fluctuations, Phase I and Phase II vapor recovery system that were certified under ARB's certification procedure for specific facilities (CP-205). CP-205 requires Phase I vapor recovery systems to achieve 98 percent volumetric efficiency and Phase II vapor recovery systems achieve 95 percent efficiency. Manufacturers of Phase I and Phase II vapor recovery systems for aboveground storage containers would be required to design systems with EVR so that these systems are held to the same stringency standards as underground storage container vapor recovery systems. The three different types of certifications that are issued for aboveground storage tanks are: 1) standing loss controls; 2) standing loss controls and Phase I; 3) standing loss controls, Phase I, and Phase II. Standing loss controls for existing facilities were required to achieve an efficiency of 60 percent while standing loss controls for new facilities will be required to function at 90 percent efficiency.

III. PROPOSED RULE AMENDMENTS

The California Health and Safety Code (CH&SC) Section 40914(a)(2) states that ozone attainment plans should include All Feasible Control Measures (AFCMs). CARB interprets "every feasible control measure to mean that, at a minimum, air districts must consider regulations that have been successfully implemented elsewhere. Districts should consider not only technological factors, but also social, environmental, economic (e.g., cost effectiveness), and energy factors which prevail in a district, along with the resources realistically available to a district to adopt, implement, and enforce the measures."

In the context of rule development, District staff compared the current control technology against control technology promulgated in other districts, as well as reviewing the federal, and state requirement for gasoline storage and dispensing operation. District determined the proposed amendments will be as stringent as currently required state and federal requirements.

A. Proposed Amendments to Rule 412

1. Section I (Applicability) would be amended to include clarification that this rule only applies to storage tanks with capacities larger than 250 gallons.
2. Section II (Definitions) would have 15 definitions added. Most of these definitions are used as a reference to added language in Rule sections III through V, including the following: APCO, CARB, Background, Component, Delivery vessel, EPA, Emergency, Switch loading, and Vehicle. Another added definition is aviation gasoline which is a slightly different product than gasoline. A separate definition of aviation gasoline would be added to Rule 412. This definition would echo the terminology used by CARB. Similarly, the definition of gasoline would be modified to match terminology used by CARB. Other revisions to the definition section would include changing “loading facility” definition to “loading operation”, which would more accurately describe those units that are included in the rule requirements. Loading operation will refer to the aggregation of loading rack equipment as defined in Rule 102 (definitions) including the vapor control equipment.

The definition of leak would be revised to match CARB terminology. Within the leak definition, the allowable vapor leak concentration would be a reading of no greater than 10,000 parts per million by volume (ppmv), with the exception that in the instance of a repair, replacement, or sampling of process fluid, emissions may exceed this limit. The proposed change would align the definition of leak with ARB’s for vapor leaks of vapor recovery systems. Leaks associated with delivery vessels would be treated the same way. Therefore, the definition of vapor tight and vapor leak will be removed to prevent redundancy. The definition of “major modification” would be added to this section. The proposed definition is taken directly from CARB document D-200 “Definitions for Vapor Recovery Procedures.” District staff believes that this definition most accurately reflects the appropriate use of this term relative to Phase I vapor control systems and gasoline storage containers. Lastly, District staff would add the definition of excess organic liquid drainage in order to decrease the quantity of liquid deemed excessively drained at 10 milliliters. Definitions would be renumbered as necessary.

3. *Section III (Exemptions)*
Under Section III, (Exemptions) language providing two exemptions which were included as part of previous compliance schedule, would be removed since these expired in 1993 as are no longer applicable. Furthermore, existing exemptions for facilities with gasoline storage containers in existence or installed prior to July of 1975 would have language added making the exemption contingent on there being no major modifications as defined in Section II (Definitions). The change aligns with the way District staff has interpreted this exemption and modification of other permitted operations.
4. *Section IV (Requirements)*
Requirements section would undergo significant reorganization to allow improved understanding of the rule requirements for the range of facilities subject to this rule, with sections renumbered as necessary. Additionally, in current version of Rule 412, provisions related to aboveground storage containers, underground

storage containers, and bulk plants are mixed together. Proposed changes would group the requirements for each type of equipment separately. Changes to each category section are summarized below:

- a. Section IV.A (Gasoline Storage and Loading):
Requirements indicating the use of CARB certified vapor recovery equipment (already required by current rule) will be restated as a separate subsection. District staff would include the requirement that all CARB-certified vapor recovery systems are maintained in accordance with their CARB Executive Orders and as required by the applicable manufacturer specifications. This language is already included in permit conditions for such source categories. Currently, CARB does not certify vapor recovery equipment exclusively used to aviation gasoline storage. Language indicating requirements for the storage of aviation gasoline requirements was added. District staff would incorporate parameters for vacuum and pressure for the pressure-vacuum relief valve requirement to match CARB's Certification for Vapor Recovery Systems at Gasoline Dispensing Facilities (CP-201). This section would also address underground storage of aviation gasoline. The most recent revision to CP-201 requirements specifically exempts aviation gasoline, so District staff is proposing that the emissions be controlled by a Phase I system with a control efficiency of 95 percent. This control level was chosen to reflect the currently-certified aviation gasoline Phase I systems. Also, facilities with underground storage tanks would have all underground piping configurations and underground storage installations inspected by the District staff before backfilling. This provides an opportunity to spot construction problems that could lead to certification test failures and require retrenching the piping. Furthermore, operators would need to telephone the District three days before backfill.
- b. Section IV.B (Underground Storage Tanks):
In addition to restating current requirements for underground storage containers, all CARB certified Phase I vapor recovery systems will be required to achieve a minimum of 98 percent volumetric efficiency, which is the minimum efficiency that CARB currently certifies Phase I vapor recovery systems. Pressure-vacuum relief valves specification and vapor recovery efficiency requirement were incorporated in accordance with CARB executive orders. Reference to required applicable performance standards was also incorporated in this section.
- c. Section IV.C (Aboveground Storage Tanks):
Currently, the only Rule requirement for aboveground storage tanks is the installation of a pressure/vacuum vent valve. Hence, proposed rule amendment seeks to reflect additional CARB certified phase I and standing loss control requirements pursuant to CARB executive orders. Rule 412 already requires that aboveground storage containers be equipped with an ARB Certified Phase I vapor recovery system. ARB now certifies Phase I vapor recovery systems to be equipped with EVR and standing loss controls. New facilities would be required to utilize a system that CARB has certified as equipped with Phase I EVR and standing loss controls in accordance with existing CARB executive order requirements. The requirements for aboveground storage containers would be revised to reflect work that CARB has accomplished to develop a certification procedure (CP-206) for the

regulation of standing losses, Phase I vapor recovery, and Phase II vapor recovery for aboveground storage containers. District staff would change the required settings for pressure vacuum relief valves to match the provisions of CP-206. Other changes that are brought about by CP-206, such as requirements to upgrade to EVR and standing loss controls, do not warrant any changes to rule language.

d. Section IV.D (inspection schedule):

District currently requires owners and operators to conduct maintenance inspections in accordance with CARB executive orders. Inspection requirements are currently listed in as permit conditions. District is proposing such maintenance schedule be incorporated into the proposed rule amendments. Inspections would be based on the previous year's highest average monthly throughput and will continue to apply to all facilities with Phase I vapor recovery systems.

e. Section IV.E (Gasoline Bulk Plants and Loading Racks at Bulk Plants):

Bulk plant and loading rack requirements would be revised for clarity. The requirement for bulk plants to have a vapor recovery system would be revised to state that the vapor recovery system shall control emissions from the loading operation. Since gasoline transfers would have CARB certified vapor control equipment available while aviation gasoline would not, rule language would reflect this difference. District staff would also move the requirement that loading racks not create back pressure for delivery vessels, from the sections pertaining to delivery vessels. In addition to the renumbering of sections and language adjustments in bulk plant requirements, District staff would include an additional requirement that gasoline must be in a closed, non-leaking container to prevent the escape of gasoline vapors into the atmosphere. Proposed amendments would also include leak testing frequency for bulk plants. The proposed version would require semi-annual leak-testing and leak tests would need to be conducted in accordance with EPA Method 21 using only a portable hydrocarbon detection instrument. Current rule does not contain requirements are for leak testing. The proposed rule will also require bulk plant operators to repair leaks within seven business days; District staff would modify this requirement allowing bulk plant operators to remove components from VOC service when it is not possible to repair them within the allotted time. New language would require that all leaks be identified by a waterproof tag, displaying the date and time of inspection, date and time of leak detection, and for gas leaks, the leak concentration. District staff believes this requirement more appropriately belongs among other bulk plant and loading rack requirements.

f. Section IV.F (Delivery Vessels):

Language will be added to this section stating delivery vessels be equipped with a CARB certified vapor recovery systems for cargo tanks in addition to the valid State of California decals currently required by this Rule. The use of CARB certified vapor recovery system is required pursuant to California Health and Safety Code section 41962. CARB requires decals for cargo tanks that are used on highways. District staff would add the requirement that all delivery vessels, on-highway and off-highway, be equipped with CARB

certified systems and that those systems be maintained in accordance with the applicable CARB Executive Order.

g. General:

District staff would add language requiring vapor collection equipment be installed and maintained leak-free, with no excess organic liquid drainage at disconnect.

5. *Section V (Administrative Requirements)*

In Section V (Administrative Requirements), several provisions would be added, while others would be removed or simplified, and sections would be renumbered as needed. Effective on rule adoption date, all bulk plants would maintain daily records of gasoline throughput. All records required to demonstrate compliance would be retained for five years and made available on site during normal business hours to District staff upon request.

Section V.B would outline the performance test requirements along with the schedule of notification.

Section V.C. would reference appropriate test methods to be used in accordance with CARB executive order. Appropriate CARB test procedures would be cited. Operators would be allowed to use alternative test methods if approved by the APCO.

6. *Section VI (Compliance Schedule)*

The compliance schedule in Section IV (Compliance Schedule) would be removed and replaced with a schedule specifying compliance with all sections of the rule upon rule adoption unless otherwise specified in the rule.

B. Proposed Amendments to Rule 412.1

1. Section I (Applicability) no changes.

2. *Section II (Definitions)*

Section 3.0 (Definitions) District is proposing to add 18 definitions for clarification of terms used within the requirements of Rule 412.1. Similar to Rule 412, most of these additions are definitions used as a reference to added language in Rule sections III through V, including the following: APCO, ASTM, Background, CARB, Component, E85 fuel, Emergency, EPA, ICC, In-Station Diagnostics (ISD), IOM manual, Liquid Condensate Trap, Major Defect, Phase II Vapor Recovery System, Portable Hydrocarbon Detection Instrument, Vehicle, and Vehicle Fleet. The definition of leak would be reformulated for consistency with Rule 412. Definition for "Major defect" would be added to clarify the location of the major defect list and note that CARB maintains this list. The definitions leak-free will be removed since no references to these terms exist in the proposed rule language. Additionally, District staff would modify several definitions for clarification. The term "gasoline storage and dispensing facility" would be changed to "gasoline storage and dispensing operation", this is because many locations where gasoline transfer occurs are not considered gasoline storage and dispensing facilities.

3. *Section 4.0 (Exemptions)*

In Section 4.0 (Exemptions), an exemption would be added to ensure that all exemption for Rule 412 also be exempt from 412.1. This change would better highlight the fact that Rule 412 and 412.1 are interconnected. Two additional exemptions would be added to this Rule. The first would allow operators of facilities with vehicle fleets having 90 percent of their vehicles equipped with ORVR to no longer maintain or not install Phase II vapor recovery. ORVR systems serve a similar function as Phase II vapor recovery, so the new exemption does not reduce current rule requirements and does not increase emissions. Please see Rule Section IV.A for more information about ORVR. This added exemption is due to an EPA memorandum dated December 12, 2006. Although the memorandum speaks specifically to rental car fleets, other types of operations with car fleets would have similar operations and emission control would be similar. The second exemption would be added for E-85 dispensing operations. Currently, no vapor recovery systems have been approved for storage tanks serving E-85 dispensing facilities. Additionally, E85 facilities would be exempt from phase II requirements since the refueled vehicles compatible with E-85 are also predominately equipped with on-board refueling vapor recovery. Since ORVR essentially performs the same function as Phase II vapor recovery system and each of them is required to achieve a minimum vapor control efficiency of 95%, the removal of Phase II vapor recovery system for E85 fuel dispensing operation would not result in relaxation of current Rule requirements and will not result in an increase in emissions.

4. *Section IV (Requirements)*

As in Rule 412, language of Rule 412.1 would be reorganized to improve understanding of the rule requirements. First, throughout this section, District staff would include the requirement that all CARB-certified vapor recovery systems are maintained in accordance with their CARB Executive Orders and as required by the applicable manufacturer specifications. Similar to Rule 412, a new section would be added for installation requirements with provisions for pre-backfill inspections, and owner/operators maintenance inspections schedule Table in accordance with CARB executive orders. Inspections would be based on the previous year's highest average monthly throughput and would affect all facilities with Phase I vapor recovery systems. Section for maintenance and repair requirements will be changed to incorporate new provisions along with the existing maintenance and repair requirements. The proposed requirements for Liquid condensate traps and In-Station Diagnostics (ISD) requirements will also be incorporated mirroring requirements set forth in CARB executive orders and incorporated into other District Rules. Language throughout Section IV (Requirements) would be adjusted to reflect new terms that have been added to Section II (Definitions), remove redundancies, and to aid in understanding rule provisions. Sections would be renumbered to accommodate changes and compliance dates added as needed.

5. *Section V (Administrative Requirements)*

Requirements under section V would be separated for exempt and non-exempt operations. For exempt operations, District staff is proposing addition of language allowing facilities with vehicle fleets to remove Phase II vapor recovery systems if

their facility qualifies for an exemption as a vehicle fleet facility whose 90% of vehicles are equipped with ORVR. Exempt vehicle fleet facilities would be required to keep records of the make, model, model year, and vehicle identification number of all vehicles being refueled at the facility. For non-exempt operations, facilities that are subject to Section V would be required to maintain monthly throughput records, test results, information on testers, and inspection results onsite for a minimum of three years and make them APCO upon request. This requirement is tailor in accordance with District recordkeeping requirements listed in permit conditions.

Within the testing requirement section (Section V.C), staff would make several changes in accordance with current requirements of CARB executive orders. The requirements that all periodic performance tests be performed at start up and thereafter, as required by ARB Executive Order and installations and maintenance manual, would be added, as well as the need to pass all tests that are conducted. Old compliance dates would be removed and language would be added clarifying which facilities are subject to the annual Dynamic Back-Pressure Test.

Facilities with aboveground storage tanks that have integral dispensers (non-remote) need not conduct this test unless otherwise required under ARB Executive Order. The vapor return piping on an aboveground tank that has an integral dispenser is very short and is installed by the manufacturer at the assembly plant. As a result, there are no low points in the vapor path where liquid can collect and cause a blockage. Therefore, dynamic backpressure testing is unnecessary. In addition, language requiring District notification seven days prior to performance testing added as well as language requiring performance test within 60 days of new equipment installation or modification. Under section V.D (Test methods) District staff recommends CARB testing methods be listed as required by the CARB executive orders. Provisions would be added to allow for variation of test methods if approved by APCO and EPA.

6. *Section VI (Compliance Schedule)*

Expired compliance dates carried over from last Rule amendment would be removed from compliance schedule section. The compliance schedule would have additional sections added allowing time to comply, if necessary, for facilities not previously subject to the rule requirements (exempt), and those already subject to the rule requirements. Additionally, a new section would be added for those owners of vehicle fleets that qualify for an exemption under Section III (Exemptions). Prior to requesting operating under the exemption, vehicle fleet operators would need to modify their Permit to Operate conditions to allow such operations pursuant to District Rule 412.

IV. RULE CONSISTENCY ANALYSIS

Pursuant to Section 40727.2 of the California Health and Safety Code (CH&SC), prior to adopting, amending, or repealing a rule or regulation, the District is required to perform a written analysis that identifies and compares the air pollution control elements of amended rules with the corresponding elements of existing or proposed District and EPA rules, regulations, and guidelines that apply to the same source category. District staff found that the proposed amendments and requirements of these rules would not conflict with federal rules, regulations, or policies covering similar stationary sources. The rule

consistency analysis is presented as an appendix to the final draft staff report. The proposed amendments would not conflict with federal rules, regulations, or policies covering similar stationary sources.

V. EMISSION REDUCTION AND COST EFFECTIVENESS ANALYSIS

No emission reduction or increases are expected as a result of Rule modifications. Therefore, the emission reductions will not be quantified for the purpose of this rule amendment project and will therefore not be quantified or claimed in the State Implementation Plan (SIP). Additionally, there are no anticipated costs associated with the proposed amendments to District Rule 412 and 412.1. Proposed amendments are not expected to result in additional vapor control requirements beyond what's already required by CARB Vapor Recovery Executive Orders.

VI. SOCIOECONOMIC IMPACTS

CHSC Section 40728.5 exempts districts with a population of less than 500,000 persons from the requirement to assess the socioeconomic impacts of proposed rules. Eastern Kern County population is below 500,000 persons. Additionally, this section does not apply to the adoption, amendment, or repeal of any rule or regulation that results in any less restrictive emissions limits if the action does not interfere with the district's adopted plan to attain ambient air quality standards, or does not result in any significant increase in emissions." Proposed amendments do not significantly affect air quality or strengthen emission limitations beyond those already enforced, nor does it result in a significant increase in emissions; therefore, no socioeconomic analysis is required.

VII. ENVIRONMENTAL IMPACTS

Both the California Environmental Quality Act (CEQA) and CARB policy require an evaluation of the potential adverse environmental impacts of proposed amendments to Rules 412 and 412.1. Based on the lack of evidence to the contrary, District staff has concluded that the proposed amendments to these rules will not have any significant adverse effects on the environment. Staff recommends filing a Notice of Exemption under the provisions of Public Resource Code 15061(b)(3).

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APPENDIX A:

AMENDED RULE 412

**Gasoline Transfer into Stationary Storage Containers, Delivery Vessels, and Bulk
Plants**

RULE 412 ~~—Gasoline Transfer into Stationary Storage Containers, Delivery Vessels, and Bulk Plants~~ - Adopted 4/18/72, Amended 12/17/74, 6/17/75, 6/20/78, 6/29/81, 1/9/89, 5/6/91, XX/XX/2021

I. **Applicability**

~~This Rule applies to the transfer of gasoline into stationary storage tanks, gasoline delivery vessels and gasoline bulk plants.~~ This rule applies to stationary storage containers including storage containers located at bulk plants with capacities greater than 250 gallons; This Rule also applies to gasoline delivery vessels and those storage containers that are not subject to control requirements of Rule 411.

II. **Definitions**

A. APCO: Air Pollution Control Officer as defined in Rule 102 (Definitions)

B. CARB: California Air Resources Board

C. CARB Certified: A vapor recovery system, equipment, or any component thereof, for which the CARB has evaluated its performance and issued a valid Executive Order pursuant to California Health and Safety Code Section 41954. Each component of a system that is a separate CARB certified item cannot be replaced with a non-certified item or other items that are not certified for use with the particular system. Except for qualified repairs, a CARB certified component shall be as supplied by the qualified manufacturer. A rebuilt component shall not be deemed as CARB certified unless the person who rebuilds the component is authorized by CARB to rebuild the designated CARB certified component.

D. CARB Certified Phase I Vapor Recovery System: A vapor recovery system which has been certified by ~~the California Air Resources Board~~ CARB pursuant to Section 41954 of the California Health and Safety Code.

E. Aviation Gasoline: Gasoline used as fuel for aircraft that cannot be legally used as fuel for motor vehicles.

F. Background: The ambient concentration of organic compounds determined at least two (2) meters upwind from any component to be inspected and which is uninfluenced by any specific emission permit unit.

G. Component: Includes, but is not limited to, any valve, fitting, threaded connection, pump, pressure relief device, pipe, flange, hatch, sight-glass, meter, or seal of a fluid system in VOC service.

H. Delivery Vessel: Any cargo container having a volumetric capacity in excess of 120 gallons that is used for the transportation of gasoline or aviation gasoline. This term includes pumps, meters, valves, fittings, piping, and other appurtenances attached to a gasoline storage container on a vehicle and used in connection with the gasoline/aviation gasoline being transported. Containers used exclusively for aviation gasoline in agricultural operations, with an annual throughput of 1,000 gallons or less, will not be considered delivery vessels for the purpose of this rule.

Rule 412 Strikeout Underline

- I. Emergency: A fire, flood, earthquake, or other similar catastrophe.
- J. EPA: United States Environmental Protection Agency.
- ~~A.K. Excess Organic Liquid Drainage: More than 10 milliliters liquid drainage which is not contained by a CARB certified spill container. Such liquid drainage for disconnect operations shall be determined by computing the average drainage from three consecutive disconnects at any one loading arm, as capable of recovering or processing displaced gasoline vapors to an efficiency of ninety five (95) percent or greater.~~
- L. Gasoline: Any organic liquid, including petroleum distillates and alcohols having a Reid vapor pressure of four (4) pounds per square inch absolute or greater, which is used as a motor vehicle fuel or any fuel which is commonly or commercially known or sold as gasoline, including aviation gasoline.
- M. Gasoline Bulk Plant: Any loading facility and associated unloading facilities racks, storage tanks and vapor recovery systems (s) used to load less than 20,000 gallons in any one day of gasoline to delivery vessels (i.e., tank trucks or trailers).
- N. Gasoline: Any organic liquid, including petroleum distillates and alcohols having a Reid vapor pressure of four (4) pounds per square inch absolute or greater, which is used as a motor vehicle fuel or any fuel which is commonly or commercially known or sold as gasoline, including aviation gasoline.
~~Any petroleum distillate or petroleum distillate/alcohol blend or alcohol having a true vapor pressure of 1.5 psia or greater under actual storage conditions used as a motor fuel.~~
- O. Gasoline Vapors: Volatile Organic Compounds in the displaced vapors including any entrained liquids.
- ~~B. _____~~
- ~~C. Gasoline: Any petroleum distillate or petroleum distillate/alcohol blend or alcohol having a true vapor pressure of 1.5 psia or greater under actual storage conditions used as a motor fuel.~~
- ~~D. Gasoline Vapors: Volatile Organic Compounds in the displaced vapors including any entrained liquids.~~
- P. Loading -Operation Facility: Any aggregate or combination of organic liquid loading and vapor control equipment from the connection at the inlet of the organic liquid pump to and including the hose end connector at the portable delivery tanks and the discharge of the vapor control device(s).
- Q. Loading Rack: As defined in Rule 102 (Definitions).
- R. Major Modification: One of the following –
1. The addition, replacement, or removal of an underground storage container, or a modification that causes the container top to be unburied, is considered a major modification, or
 2. The replacement of an aboveground storage container. The installation of an aboveground storage container after retrofitting with standing loss controls or the exchange of an aboveground storage container for a standing loss control

Rule 412 Strikeout Underline

retrofitted aboveground storage container of equal capacity to comply with the requirements of CP-206 is not a major modification.

S. Submerged Fill Pipe: —Any fill pipe, the discharge opening of which is entirely submerged when the liquid level is 6 inches above the bottom of the container. "Submerged fill pipe" when applied to a container which is loaded from the side is defined as any fill pipe the discharge opening of which is entirely submerged when the liquid level is 18 inches above the bottom of the container.

T. Switch Loading: The transfer of diesel fuel into a delivery vessel or storage container with a capacity over 250 gallons which previously contained gasoline.

F.U. Vehicle: As described in Rule 102.

~~G. Vapor Tight: Any emission of less than or equal to 10,000 ppm when measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21.~~

~~H. Vapor Leak: A reading in excess of 10,000 ppm as methane measured at a distance of one centimeter using a portable hydrocarbon detection instrument in accordance with EPA Method 21.~~

Rule 412 Strikeout Underline

III. Exemptions

~~A. Except for the provisions of Section V.A.1, the requirements of this rule shall not apply to the following operations: The requirements of Subsection IV.A.1. shall be subject to the following exceptions:~~

1. The transfer of gasoline into any stationary storage container with a capacity of 550 gallons or less used exclusively for fueling of implements of husbandry as such vehicles are defined in Division 16 (Section 36000 et seq.) of the California Vehicle Code, if such container is equipped with a permanent submerged fill pipe.
2. The transfer of gasoline into any stationary storage container having a capacity of 2,000 gallons or less which was installed prior to July 1, 1975, if such container is equipped with a permanent submerged fill pipe, and provided no major modification is made on the container.
- ~~3. The transfer of gasoline into any stationary container when such container is served by a delivery vessel previously exempted by the Control Officer pursuant to Subsection III.B. of this Rule, if such container is equipped with a permanent submerged fill pipe. This exemption expires on May 1, 1993.~~
- ~~4.3.~~ The transfer of gasoline into any stationary storage container in existence prior to July 1, 1975 which is equipped with an offset fill pipe if such container is equipped with a permanent submerged fill pipe.

~~B. Until May 1, 1993, the following facilities shall be exempt from the requirements of Subsections IV.B.1 and IV.B.2:~~

- ~~1. The owner or operator of any bulk loading facility not subject to the provisions of Rule 413—Organic Liquid Loading which was in operation on or before July 1975, and for which the annual throughput to stationary storage containers that are not exempted by Subsection III.A.1 and III.A.2 does not exceed 500,000 gallons, may petition the Control Officer to have the facility's delivery vessels and other independently owned gasoline delivery vessels which are exclusively serviced at such facility exempted from the provisions of Subsection IV.A.1. The owner or operator of such a facility must petition annually to renew such exemptions.~~

~~IV. Requirements~~

IV.

A. Gasoline Storage and Loading

1. No person shall transfer or permit the transfer of gasoline from any delivery vessel into any stationary storage container subject to requirements of this rule unless:
 - a. Such container, except those used for aviation gasoline, is equipped with an CARB certified permanent submerged fill pipe and utilizes an CARB certified Phase I vapor recovery system that is maintained and operated according to manufacturer specifications and the applicable CARB Executive Order; or

- b. Containers used for aviation gasoline are equipped with a permanent submerged fill pipe and a Phase I vapor recovery system that is certified (or was previously certified) to meet a minimum volumetric control of 95%.
2. Any vent pipe on a stationary gasoline storage container shall be equipped with a pressure-vacuum relief valve in accordance with the requirements set forth in Sections IV.C and IV.D, as applicable.
3. Vent pipes may be manifolded, as per the applicable CARB Executive Order, to a single pressure-vacuum relief valve. The pressure-vacuum relief valve shall be properly installed and maintained according to manufacturer specifications and the applicable CARB Executive Order.
4. Operators shall have all underground storage container installations and all underground piping configurations inspected by District staff prior to backfilling unless requirement is waived in writing by APCO. The operator shall notify the District by telephone or other District-approved method at least three business days prior to the backfilling.

A. Gasoline Storage Tanks:

- ~~1. A person shall not transfer or permit the transfer of gasoline from any delivery vessel (i.e., tank truck or trailer) into any stationary storage container with a capacity of more than 250 gallons unless such container is equipped with a permanent submerged fill pipe and a CARB-certified Phase I vapor recovery, system which is maintained and operated according to the manufacturers specifications.
A person shall not place, store, or hold in any above ground tank with a capacity of more than 250 gallons any gasoline unless such tank is equipped with a pressurevacuum valve set to within 10 percent of the maximum allowable working pressure of the tank.~~

B. Underground Storage Containers

1. Unless otherwise specified in the applicable CARB Executive Order, for an underground storage container that contains gasoline and is located at a bulk plant, the container shall be equipped with an CARB certified pressure-vacuum relief valve set at 3.0±0.5 inches water column pressure relief and 8.0±2.0 inches water column vacuum relief.
2. Unless otherwise specified in the applicable CARB Executive Order, for an underground storage container that contains aviation gasoline and is located at a bulk plant, the container shall be equipped with a pressure vacuum relief valve set at 3.0±0.5 inches water column pressure relief and 8.0±2.0 inches water column vacuum relief.
3. For an underground storage container that contains gasoline and is not located at a bulk plant, the container shall be equipped with a CARB certified Phase I vapor recovery system that is certified to have a minimum volumetric control efficiency of 98%.
4. For an underground storage container that contains aviation gasoline and is not located at a bulk plant, the container shall be equipped with a permanent submerged fill pipe and a Phase I vapor recovery system that is certified (or was previously certified) to meet a minimum volumetric control of 95%.
5. Operators of underground storage containers not located at bulk plants shall conduct and pass the applicable performance tests specified in Sections V.C.4 through V.C.7 to determine compliance at least once every 36 months, (no more than 30 days before or after the required performance test date) unless otherwise required under CARB Executive Order or Rule 412.1(Transfer of Gasoline into Motor Vehicle Fuel Tanks).

C. Aboveground Storage Containers

1. All aboveground storage containers shall be constructed and maintained in a leak-free condition.
2. All aboveground storage containers that contain gasoline shall be equipped with an CARB certified pressure vacuum relief valve set 3.0±0.5 inches water column pressure relief and 8.0±2.0 inches water column vacuum relief, unless:
 - a. Otherwise specified in the applicable CARB Executive Order, or
 - b. Such setting will exceed the vessel's maximum pressure rating.
3. All aboveground storage containers that contain aviation gasoline shall be equipped with pressure relief valves set at eight (8) ounces per square inch, unless:
 - a. Otherwise specified in the applicable CARB Executive Order or

- b. Such setting will exceed the vessel’s maximum pressure rating.
- 4. Operators of an aboveground storage container not located at a bulk plant shall conduct and pass the performance test specified in Section 6.4.8 to determine compliance at least once every 36 months, (no more than 30 days before or after the required performance test date) unless otherwise required under CARB Executive Order.

D. All Phase I vapor recovery systems shall be inspected according to the frequency specified in Table 1. The person conducting the inspections shall, at a minimum, verify the following:

- 1. That the fill caps and vapor caps are not missing, damaged, or loose;
- 2. That the fill cap gasket and vapor cap gaskets are not missing or damaged;
- 3. That the fill adapter and vapor adapter are securely attached to the risers;
- 4. That, where applicable, the spring-loaded submerged fill tube seals properly against the coaxial tubing, and the dry break (poppet-valve) is not missing or damaged; and
- 5. That the submerged fill tube is not missing or damaged.

Table 1 – Schedule of Maintenance Inspection

<u>Gasoline dispensed by the operation during largest monthly throughput of previous year</u>	<u>Frequency of Inspections</u>
<u>A. Retail Gasoline Outlets</u>	
<u>1. Less than 25,000 gallons</u>	<u>One day per week</u>
<u>2. 25,000 gallons or greater</u>	<u>Five days per week</u>
<u>B. Non-Retail Gasoline Outlets and other gasoline dispensing operations</u>	
<u>1. Less than 2,500 gallons</u>	<u>One day per month</u>
<u>2. 2,500 to less than 25,000 gallons</u>	<u>One day per week</u>
<u>3. 25,000 gallons or greater</u>	<u>Five days per week</u>

2.

B. Delivery Vessels:

- ~~1. No person shall operate, or allow the operation of a gasoline delivery vessel unless valid State of California decals, as required by Section 41962 of the Health and Safety Code and which attest to the vapor integrity of the tank are displayed.~~
- ~~2. No person shall store gasoline in or otherwise use or operate any gasoline delivery vessel unless such vessel is designed and maintained to be vapor tight. Any delivery vessel into which gasoline vapors have been transferred shall be filled only at a loading facility that is equipped with a system that prevents at least 95 percent by weight of the gasoline vapors displaced from entering the atmosphere.~~

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- ~~3. A person shall not load gasoline into any delivery vessel from any loading facility granted an exemption pursuant to Subsection III.B. unless such delivery vessel is loaded through a submerged fill pipe.~~

E. ~~C. Gasoline Bulk Plants and Loading Racks at Bulk Plants:~~

1. ~~No delivery vessel shall be loaded at a facility granted an exemption pursuant to Subsection III.B. of this Rule if any portion of the previous load was delivered to a stationary storage tank~~**Bulk plants not involved with aviation gasoline loading shall be equipped with a CARB Certified Stage I vapor recovery system for loading operations (loading rack).**
 - ~~a.~~
 2. ~~Bulk plants involved with aviation gasoline loading shall be equipped with a vapor recovery system that meets a minimum volumetric control of 90% when measured in accordance with the test method specified in Section V.C.9.~~
 3. ~~The vapor recovery system shall not cause the pressure in the delivery vessel to exceed 18 inches H₂O or 6 inches H₂O vacuum.~~
 4. ~~Operators shall store or dispose of gasoline in closed, non-leaking containers. The containers shall remain closed at all times except when depositing or removing the contents of the containers or when the container is empty.~~
 - ~~b. A person shall not operate any gasoline bulk plant which is not subject to the provisions of Rule 413—Organic Liquid Loading unless:~~
 - ~~a. The facility is equipped with a system or systems to prevent the release to the atmosphere of at least 95 percent by weight of the gasoline vapors displaced during the filling of the facility's stationary storage containers as certified by ARB pursuant to the requirements of Section 41954 of the State Health and Safety Code; and~~
 - ~~b. The facility is equipped with a pressure vacuum valve on the above-ground stationary storage containers with a minimum pressure valve setting of 8 ounces, provided that such setting will not exceed the container's maximum pressure rating.~~
 - ~~3. Gasoline vapors shall not be purged into the atmosphere.~~
 5. ~~The vapor recovery system shall not cause the pressure in the delivery vessel to exceed 18 inches H₂O or 6 inches H₂O vacuum.~~**Bulk Plant Leak Inspections**
 - a. ~~All bulk plants shall be constructed and maintained in a leak-free condition.~~
 - b. ~~All bulk plants shall be inspected for leaks at least once in every six-month period (from four to eight months apart) in accordance with the test procedure specified in Section V.C.2.~~
 - c. ~~All loading racks located at bulk plants shall be inspected for leaks during product transfer at the frequency required in Section IV.E.5.b above.~~
 - d. ~~If any storage container, storage container component, or loading rack component is found to leak during an inspection, the inspection frequency shall be changed to quarterly until the unit has successfully passed five consecutive~~

quarterly inspections. Thereafter, the quarterly inspection may revert to the applicable inspection frequency specified in Section IV.E.5.b.

6. Bulk Plant Leak Repair

- a. Upon detection of a leaking component, the operator shall affix to that component a weatherproof readily visible tag with the date and time of leak detection, the date and time of leak measurement, and for gas leaks, the leak concentration in ppmv.
- b. The tag shall remain affixed to the component until all the conditions specified in Sections IV.E.6.c and IV.E.6.d below have been met.
- c. All leaking components shall be repaired or replaced within seven (7) business days after the leak is detected. If the component cannot be repaired within seven (7) business days, the operator must remove the leaking component(s) from VOC service.
- d. Upon returning a leaking component to service, the following conditions must be met.
 - i. The component must be re-inspected using the test method specified in Section V.C.2; and
 - ii. The component must be found to be in compliance with the requirements of this rule.

F. Delivery Vessels

1. All delivery vessels shall have a CARB certified vapor recovery system for cargo containers. Cargo container vapor recovery systems shall be maintained and tested in accordance with manufacturer specifications and any applicable CARB Executive Orders.
2. No person shall operate, or allow the operation of a delivery vessel unless valid State of California decals which attest to the vapor integrity of the container are displayed.
3. No person shall store gasoline in, otherwise use, or operate any gasoline delivery vessel unless such vessel is designed and maintained to be leak-free. Any delivery vessel into which gasoline vapors have been transferred shall be filled only from loading racks or other delivery vessels that are equipped with a CARB certified vapor recovery system.
4. The hatch on a delivery vessel shall be equipped with a leak-free cover and the hatch shall not be opened for visual inspection unless at least three minutes have elapsed since loading or unloading has stopped. The dome hatch, once opened, shall not be held open longer than three minutes, except as directed by local, state, or federal agencies having jurisdiction.

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5. Gasoline vapors shall not be purged into the atmosphere. This includes relieving container pressure by manually “popping” the poppet valve on the truck-mounted vapor return line.
6. Switch loading shall not be conducted unless such transfer is made using a permanently installed CARB certified vapor recovery system.
7. During loading of the delivery vessel, the truck-mounted vapor return line shall be connected to a vapor recovery system that meets the requirements of this rule for the vapor recovery systems.

4.

G. — ~~D.~~ — General:

1. ~~1.~~ Vapor-return and/or vapor recovery systems used to comply with the requirements of this Rule shall comply with all safety, fire, weights and measures, and other applicable codes and/or regulations.
2. Loading equipment and vapor collection equipment shall be installed, maintained, and operated such that it is leak-free, with no excess organic liquid drainage at disconnect.

V. **Administrative Requirements**

A. Record Keeping:

1. All data necessary to demonstrate qualifications for the exemptions allowed in this Rule shall be maintained on the premise at all times and shall be submitted for District review upon request. Such records shall include exemption status and volume delivered to each stationary storage container serviced.
2. Bulk Plants and Loading Racks: A record of all inspections and all actions conducted on any part of the storage container or loading racks shall be maintained in chronological order showing date of inspection, description and location of any equipment replaced, and a description of the problem which required repair.
3. All bulk plants shall maintain daily gasoline throughput records.
4. All records required to demonstrate compliance with the requirements of this rule shall be retained on the premises for a minimum of five (5) years and made available on site during normal business hours to the District upon request.

B. Testing Requirements

1. Operators shall conduct all performance tests required by CARB Executive Order and facility installation and operations manual as per the frequency outline therein.
2. Each CARB certified Phase I vapor recovery system shall be performance tested within 60 days of completion of installation or modification.
3. Bulk plants involved with aviation gasoline loading subject to Section IV.F.1.b shall be performance tested within 60 days of completion of installation or modification.
4. Operators shall notify the District at least seven (7) days prior to any performance testing.
5. Operators shall submit all performance test results to the District within 30 days of test completion.

C. Test Methods:

1. The Reid Vapor Pressure of gasoline shall be determined in accordance with ASTM D 5191-01.
2. Measurements of leak concentrations, excepting delivery vessels, shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane.

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- a. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use.
- b. The operator shall record the calibration date of the instrument.
3. Measurements of leak concentrations for delivery vessels shall be conducted according to the CARB Test Procedure for Determination of Leaks, TP-204.3.
4. Static Leak Test for Underground Tanks: CARB Test Procedure TP-201.3.
5. Static Torque of Rotatable Phase I Adaptors: CARB Test Procedure TP 201.1B.
6. Leak Rate of Drop Tube/Drain Valve Assembly: CARB Test Procedure TP 201.1C.
7. Leak Rate of Drop Tube Overflow Protection Devices and Spill Container Drain Valves: CARB Test Procedure TP 201.1D.
8. Static Leak Test for Aboveground Tanks: CARB Test Procedure TP-206.3 or CARB Test Procedure TP-201.3B as applicable.
9. Determination of Emission Factor of Vapor Recovery Systems of Bulk Plants: CARB Test Procedure TP-202.1.

D. Versions of Test Methods

All test procedures shall be conducted in accordance with the latest version of the test procedures, or their equivalents as approved in writing by the APCO and EPA.

~~B.~~

- ~~1. Compliance with the vapor recovery requirements of this Rule shall be demonstrated using California Air Resources Board (CARB) Method 202.~~
- ~~2. True vapor pressure shall be determined using Reid vapor pressure ASTM Method No. D-323-82 at storage temperature.~~
- ~~3. The test method to determine vapor tightness of delivery vessels shall be EPA Method 27.~~

VI. Compliance Schedule

~~A.~~ The owner or operator of any stationary storage container or gasoline loading facility which is subject to this Rule and which is installed, constructed or modified ~~on~~ **before** or after the effective date of this regulation shall comply with the provisions of this Rule at the ~~time of installation~~ **time of adoption unless otherwise specified in the Rule.**

~~B.~~ The owner or operator of any stationary storage container or any loading facility previously exempted from the vapor recover requirements of this Rule shall achieve compliance according to the following schedule:

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~~1. By August 1, 1991, submit a completed application for an Authority to Construct for the installation of the needed gasoline vapor recovery system.~~

~~2. By May 1, 1992, submit to the Control Officer evidence that all necessary contracts for design, procurement, and installation of the required vapor recovery systems have been negotiated and signed, or evidence that orders for the purchase of component parts necessary to accomplish the necessary gasoline vapor recovery system have been issued.~~

~~3. By January 1, 1993, complete on site construction or installation of the required gasoline vapor recovery systems.~~

~~4. By May 1, 1993 be in full compliance with the requirements of this Rule.~~

~~C. The owner operator of any equipment subject to the requirements of this Rule prior to~~

~~May 6, 1991 shall be in compliance with all applicable requirements before January 9, 1991.~~

APPENDIX B:

AMENDED RULE 412.1

Transfer of Gasoline to Vehicle Fuel Tanks

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RULE 412.1 Transfer of Gasoline to Vehicle Fuel Tanks - Adopted 12/17/74, Amended 6/17/75, 12/30/75, 6/7/77, 6/20/78, 1/9/79, 6/26/79, 12/15/80, 1/9/89, 11/9/92, XX/XX/2021

I. Applicability

This Rule applies to the transfer of gasoline into vehicle fuel tanks from stationary storage containers subject to the requirements of Rule 412 (Gasoline Transfer into Stationary Storage Containers, Delivery Vessels and Bulk Plants).

II. Definitions

A. APCO: Air Pollution Control Officer as defined in Rule 102 (Definitions)

B. ASTM: American Society for Testing and Materials.

C. Background: The ambient concentration of organic compounds determined at least two (2) meters upwind from any component to be inspected and which is uninfluenced by any specific emission permit unit.

D. CARB: California Air Resources Board

E. CARB-Certified Phase II Vapor Recovery System: a vehicle refueling vapor recovery system certified by the California Air Resources Board, pursuant to Section 41954 of the Health and Safety Code, as capable of collecting and controlling displaced gasoline vapors at an efficiency of at least ninety five (95) percent by weight. A vapor recovery system, equipment, or any component thereof, for which the CARB has evaluated its performance and issued a valid Executive Order pursuant to California Health and Safety Code Section 41954. Each component of a system that is a separate CARB certified item cannot be replaced with a non-certified item or other items that are not certified for use with the particular system. Except for qualified repairs, an CARB certified component shall be as supplied by the qualified manufacturer. A rebuilt component shall not be deemed as CARB certified unless the person who rebuilds the component is authorized by CARB to rebuild the designated CARB certified component.

F. Component: Includes, but is not limited to, any valve, latch, fitting, pressure relief device, hose, nozzle, dispenser, or module in VOC service.

G. E85 Fuel: A blend of 85 percent ethanol and 15 percent gasoline, having a Reid vapor pressure of four (4) pounds per square inch absolute or greater, which is used as a motor vehicle fuel.

H. Emergency: A fire, flood, earthquake, or other similar catastrophe.

A-I. EPA: United States Environmental Protection Agency.

B-J. Gasoline: Any organic liquid, including petroleum distillates and alcohols having a Reid vapor pressure of four (4) pounds per square inch, absolute or greater, which is

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~~as determined by ASTM Test Method D323-82 and used as a motor vehicle fuel or any fuel which is commonly or commercially known or sold as gasoline, including aviation gasoline.~~

~~E.K. Gasoline Storage and Dispensing Facility~~Operation: Aan aggregate of one or more stationary storage containers, and associated dispensing equipment, any of which is subject to the provisions of Rule 412 (Gasoline Transfer into Stationary Storage Containers, Delivery Vessels and Bulk Plants).

~~D.L. Gasoline Vapors: T~~he organic compounds in displaced vapors, including any entrained liquid gasoline.

M. Hold-Open Latch: The integral component of a gasoline dispensing nozzle permitting the nozzle to remain open without sustained effort by the ~~operator~~user.

N. ICC: The International Code Council.

O. In-Station Diagnostics (ISD): Equipment that provides continuous real-time monitoring of critical emission-related vapor recovery system parameters and components, and alerts the station operator when a failure mode is detected so that corrective action is taken.

P. IOM Manual: Installation, Operation, and Maintenance Manual.

Q. Leak: The dripping of VOC-containing liquid at a rate of more than three (3) drops per minute, or the detection of any gaseous or vapor emissions with a concentration or total organic compound greater than 10,000 ppmv, as methane, above background when measured in accordance with the test method in Section 6.5.4. Any liquid or gas coming from a component undergoing repair or replacement, or during sampling of process fluid from a component or equipment into a container is not considered sampling of a leak provided such activities are accomplished as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere.

R. Liquid Condensate Trap (knock-out pot, thief port): A device designed to collect liquid that condenses in the vapor return line in a manner that allows it to be evacuated and ensures that the vapor return line will not be blocked by the accumulation of liquid.

S. Major Defect: Any defect that meets the criteria of California Code of Regulations, Title 17, Division III, Chapter 1, Subchapter 8, Article 1, Section 94006 and is listed on ARB's Vapor Recovery Equipment Defects (VRED) list or is specified within the ARB's Executive Order certifying the vapor recovery system, as applicable.

~~E.—~~

~~F. Leak Free: not having liquid (three drops per minute, or more), or vapor (10,000 ppmv as methane, or more) loss from gasoline dispensing or vapor collection components as determined by visual inspection and/or EPA Test Method 21.~~

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~~G.~~ T. Major Modification: Replacing, repairing, or upgrading 75%, or more of a CARB-Certified Phase II Vapor Recovery System.

U. Motor Vehicle: Any self-propelled vehicle registered for use on public highways.

V. Phase II Vapor Recovery System: A vapor recovery system that controls vapors during the transfer of gasoline from the gasoline dispensing operation to the vehicle and storage of gasoline vapors at the gasoline dispensing operation.

W. Portable Hydrocarbon Detection Instrument: A hand-held hydrocarbon analyzer that meets the criteria specified in US EPA Method 21, 40 CFR Part 60. The instrument shall be calibrated with methane.

~~H.~~

~~I.X.~~ Retail Service Station: Any new or existing gasoline storage and dispensing facility subject to payment of California Sales Tax on gasoline dispensed.

Y. Topping Off: Attempting to dispense gasoline into a motor vehicle fuel tank after a vapor recovery dispensing nozzle has automatically shut off. The filling of a vehicle tank which can be filled only after the seal between the fill pipe and the nozzle is broken, due to the nature and configuration of the fill pipe which causes premature shut-off of the dispensing nozzle, shall not be considered topping off.

Z. Vehicle: As described in Rule 102.

AA. Vehicle Fleet: A group of vehicles operated under the control of a single owner/operator.

~~J.~~

III. Exemptions

A. Except for the provisions of Section V.A, This Rule shall not apply to transfer of gasoline into motor vehicle fuel tanks from any gasoline storage and dispensing facility with a throughput of:

~~A.1.~~ 1. Less than or equal to 24,000 gallons per calendar year, and

2. Less than or equal to 10,000 gallons in any one month.

~~B.~~

3. A facility whose gasoline throughput exceed the level in Section A. or B. shall lose the exemption provided by this Section.

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B. The requirements of this rule shall not apply to gasoline storage containers that are exempt pursuant to Section III of Rule 412 (Gasoline Transfer into Stationary Storage Containers, Delivery Vessels, and Bulk Plants).

C. Except for Section V.A.3 and V.C, the requirements of this rule shall not apply to vehicle fleets where 90 percent of the vehicles are equipped with onboard refueling vapor recovery (ORVR) systems. To qualify for this exemption, the operator must also own the gasoline dispensing operation that services the vehicle fleet.

D. The requirements of this rule shall not apply to E85 fuel dispensing operations.

IV. Requirements

A. A person shall not transfer or permit the transfer of gasoline from a stationary storage container into a motor vehicle fuel tank with a maximum capacity of more than five (5) gallons unless the gasoline dispensing unit is equipped with and has in correct[MSO1] operation a CARB-Certified Phase II Vapor Recovery System.

1. All CARB certified Phase II vapor recovery systems shall be maintained according to CARB certifications and the manufacturer specifications applicable to the system.

A.2. All CARB certified Phase II vapor recovery systems and gasoline dispensing equipment shall be maintained without leaks as determined in accordance with the test method in Section V.D.4.

B. Inspections

1. Operators shall have all underground storage container installations and all underground piping configurations inspected by District staff prior to backfilling unless requirement is waived in writing by APCO. The operator shall notify the District by telephone or other District-approved method at least three business days prior to the backfilling.

2. The owner or operator of an CARB certified Phase II vapor recovery system shall conduct periodic maintenance inspections to ensure that components of the vapor recovery system are in proper operating condition.

3. The frequency of inspections shall be based on the operation's largest monthly gasoline throughput from the previous calendar year as indicated in Table 1.

Table 1 – Schedule of Maintenance Inspection

<u>Gasoline dispensed by the operation during largest monthly throughput of previous year</u>	<u>Frequency of Inspections</u>
<u>A. Retail Gasoline Outlets</u>	
<u>1. Less than 25,000 gallons</u>	<u>One day per week</u>

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<u>2. 25,000 gallons or greater</u>	<u>Five days per week</u>
<u>B. Non-Retail Gasoline Outlets and other gasoline dispensing operations</u>	
<u>1. Less than 2,500 gallons</u>	<u>One day per month</u>
<u>2. 2,500 to less than 25,000 gallons</u>	<u>One day per week</u>
<u>3. 25,000 gallons or greater</u>	<u>Five days per week</u>

4. The frequency of vapor path inspections shall be based on the amount of gasoline dispensed by the operation in a calendar month as indicated in Table 1.

5. The person conducting the inspections shall at a minimum, verify the following during inspections:

- a. That the fueling instructions required by Section IV.G are clearly displayed with the appropriate toll-free complaint phone number and toxic warning signs.
- b. That the following nozzle components are in place and in good condition as specified in the applicable CARB Executive Orders: faceplate/facecone, bellows, latching device spring, vapor check valve, spout (proper diameter/vapor collection holes), insertion interlock mechanism, automatic shut-off mechanism, hold open latch.
- c. That the hoses are not torn or crimped.
- d. That the vapor path of coaxial hoses associated with bellows equipped nozzles does not contain more than 100 ml of liquid, or as required by the applicable CARB Executive Order.
 - i. The amount of liquid in the vapor path shall be determined by lowering the gasoline dispensing nozzle into a container, opening the vapor check valve, and allowing the hose to drain until such time that no more liquid drains from the nozzle.
 - ii. The amount of liquid drained into the container shall be measured using a graduated cylinder or graduated beaker.

C. Maintenance and repair

~~B.~~ A person shall not operate any CARB-Certified Phase II Vapor Recovery System, or any portion thereof, containing a ~~defect listed in Section 94006 of Title 17 of the California Code of Regulations~~ major defect until the defect has been repaired, replaced, or adjusted as necessary to correct the defect, and the District has been notified, and has reinspected the system or has authorized its use pending reinspection. Upon identification of any major defect, the owner or operator shall tag ~~All such defects shall be tagged "out-of-service"~~ all dispensing equipment for which vapor recovery has been impaired. ~~upon detection and~~ A authorization to reuse equipment shall not include permission to operate prior to correction of defective components.

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~~C. All CARB-Certified Phase II Vapor Recovery Systems shall be maintained and operated to be leak free.~~

D. No person shall tamper with, or permit tampering with a CARB-Certified Phase II Vapor Recovery system in any way which could impair collection and/or disposal of gasoline vapors.

E. Gasoline storage and dispensing equipment used to comply with provisions of this Rule shall comply with all applicable codes and regulations, including safety, fire, weights and measures, etc..

F. An owner or operator of a retail service station subject to this Rule shall conspicuously post operating instructions for the system in the gasoline dispensing area. These instructions shall: 1) clearly describe how to correctly fuel vehicles using Phase II dispensing nozzles, 2) include a warning that topping off may result in spillage or recirculation of gasoline and is prohibited, and 3) prominently display the District's or CARB's toll-free telephone numbers, or both, and the information that such numbers can be used to register complaints regarding the operation of the vapor recovery system.

G. No person shall top off a motor vehicle fuel tank.

~~H. All retail service stations shall utilize hold-open latches on all gasoline dispensing nozzles. All hold-open latches shall be installed on the gasoline dispensing nozzle by the original manufacturer of the nozzle, or if retrofitted, shall be installed using components and procedures approved by the nozzle manufacturer.~~

H. Requirements of this Subsection shall not apply to facilities if use of hold-open latches is prohibited by law or a fire control authority.

I. All liquid removal devices required by CARB Executive Order shall be maintained to achieve a minimum liquid removal rate of five milliliters per gallon. This standard shall apply at dispensing rates exceeding five gallons per minute, unless a higher removal rate is specified in the applicable Executive Order.

J. Liquid Condensate Traps

Liquid condensate traps shall be used, if necessary, to keep the vapor return piping clear of any liquid blockage from the remote dispenser to the aboveground storage tank or when it is not possible to achieve the necessary slope from the dispenser to the underground storage tank.

1. Liquid condensate traps shall be used only when the minimum slope requirements of 1/8 inches per foot of run cannot be met due to the topography.

2. When liquid condensate traps are installed on gasoline dispensing systems equipped with an ARB certified Phase II enhanced vapor recovery system, they shall meet the following requirements:

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- a. Maintained vapor tight;
- b. Accessible for inspection upon request;
- c. Capable of automatic evacuation of liquid; and
- d. Equipped with an alarm system in case of failure of the evacuation system

K. In-Station Diagnostics (ISD) System

1. The owner or operator shall not clear, or allow any other individual to clear, any ISD warning or failure alarms prior to taking appropriate action. The appropriate action shall be in accordance with the IOM manual for the Phase II vapor recovery system or an CARB Enforcement Advisory.
2. In the event of an ISD failure alarm and subsequent automatic shutdown of gasoline dispensing, the owner or operator shall not re-enable or allow the re-enabling of the affected fueling point(s) unless all troubleshooting, repairs and tests specified in the applicable CARB Executive Order and IOM for the Phase II vapor recovery system, have been successfully completed or are in the process of being completed and documented.
3. The owner or operator shall keep records of all alarms detected by the ISD system. The records shall include the following:
 - a. The alarm date;
 - b. The nature of the alarm;
 - c. Type of test and test date to verify the validity of ISD alarm;
 - d. Maintenance or repair date to correct the cause of the alarm;
 - e. Maintenance or repair performed to correct the cause of the alarm; and
 - f. Affiliation, telephone number, name and Certified Technician Identification Number of individual conducting maintenance or test.

V. Administrative Requirements

A. ~~A.~~ Recordkeeping and Reporting for Exempt Operations:

1. Each gasoline dispensing facility exempt pursuant to Section III.A shall maintain gasoline throughput records allowing gasoline throughput for any 30-day period to be continuously determined. These records shall be available upon request to the APCO and maintained on the premises for ~~3~~ 2 years.
2. Any gasoline dispensing operation previously exempt under Section III.A whose gasoline throughput exceeds the exemption levels in Sections III.A.1 and III.A.2 shall notify the District within 30 days of the date of exceeding the exemption levels.

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- ~~1.3. An operator claiming exemption under Section III.C shall keep a record of the make, model, model year, and vehicle identification number of all vehicles refueled at the gasoline dispensing operation. These records shall be maintained on the premises for at least 3 calendar years.~~
- ~~2. Verification that each CARB-Certified Phase II Vapor Recovery System meets or exceeds the requirements of tests specified in Subsection V.C. shall be maintained. These test results shall be dated and shall contain the names, addresses, and telephone numbers of person(s) responsible for system installation and testing.~~

B. B. Recordkeeping and Reporting for Non-Exempt Operations:

1. Verification that each CARB-Certified Phase II Vapor Recovery System meets or exceeds the requirements of tests specified in Subsection V.C shall be maintained. These test results shall be dated and shall contain the names, addresses, and telephone numbers of person(s) responsible for system installation and testing.
2. A person who performs repairs on any CARB certified Phase I or Phase II vapor recovery system shall provide to the owner or operator a repair log, which the owner or operator shall maintain on the premises for at least 3 years and which shall include all of the following:
 - a. Date and time of each repair;
 - b. The name and applicable certification numbers of the person(s) who performed the repair, and, if applicable, the name, address and phone number of the person's employer;
 - c. Description of service performed;
 - d. Each component that was repaired, serviced, or removed;
 - e. Each component that was installed as replacement, if applicable;
 - f. Receipts or other documents for parts used in the repair and, if applicable, work orders which shall include the name and signature of the person responsible for performing the repairs.
3. Each operator who is required to perform periodic maintenance inspections under Section IV.B shall maintain monthly gasoline throughput records on the premises for a minimum of 3 years, make them available on site during normal business hours to the APCO, CARB, or EPA upon request.

C. —Testing

1. Operators shall comply with the CARB certified Phase II vapor recovery system performance tests specified in Sections V.C.1.a through V.C.1.D and shall conduct all applicable performance tests at start up and thereafter (no more than

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30 days before or after the required compliance testing date) as required by the applicable CARB Executive Order and installation and operation dys.

- a. Conduct and pass a Static Leak Test of the CARB certified Phase II vapor recovery system at least once every twelve months.
 - b. Conduct and pass a Dynamic Back-Pressure Test of the CARB certified Phase II vapor recovery system at least once every twelve months. Aboveground storage tanks that have integral dispensers (non-remote) are exempt from this requirement unless otherwise required under the applicable CARB Executive Order.
 - c. For CARB certified Phase II vapor recovery systems with bellowsless nozzles, conduct and pass, as applicable, an Air-to-Liquid Volume Ratio Test or a Vapor-to-Liquid Ratio Test at least once every twelve months.
 - d. For CARB certified Phase II vapor recovery systems with a liquid removal device required by CARB Executive Orders, conduct and pass a Liquid Removal Test whenever the liquid in the vapor path exceeds 100 ml of liquid, or as required by the applicable CARB Executive Order. The amount of liquid in the vapor path shall be determined in accordance with the procedure specified in Section IV.B.4.d.i
2. The person responsible for conducting the tests specified in Section V.C shall use calibrated equipment meeting the calibration range and calibration intervals specified by the manufacturer, CARB Executive Order, or CARB test procedure.
 3. Each gasoline dispensing operation shall notify the District at least seven days prior to any performance testing.
 4. Each CARB certified Phase II vapor recovery system shall be tested within 60 days of completion of installation or modification.

~~Each facility subject to Subsection IV.A. shall be pressure tested to determine proper installation and function before startup, and thereafter as directed by the Control Officer if not consistently operated leak-free or a major modification is implemented.~~

D. C. Test Methods

1. Tests shall be conducted in accordance with the latest version of the following CARB and EPA approved test methods, or their equivalents as approved by the EPA, and the APCO.
 - a. Static Leak Test for Underground Tanks, CARB TP-201.3
 - b. Dynamic Back-Pressure Test, CARB TP-201.4
 - c. Air-to-Liquid Volume Ratio Test, CARB TP-201.5

d. Liquid Removal Test, CARB TP-201.6C

e. Static Leak Test for Aboveground Tanks, CARB TP-206.3 or TP201.3B as applicable.

2. Those vapor recovery systems whose CARB Executive Orders specify different tests to be performed instead of, or in addition to, the referenced test methods, or which, by their design, preclude the use of the referenced test methods, shall be tested in accordance with the test procedures specified in the applicable CARB Executive Orders or their equivalents as approved by the APCO and EPA.

3. The Reid Vapor Pressure of gasoline shall be determined in accordance with ASTM D5191-01.

4. Detection of leaks shall be in accordance with EPA Test Method 21.

~~Tests shall be conducted in accordance with test procedures found in CARB's "Test Procedures for Determination of the Efficiency of Gasoline Vapor Recovery Systems at Service Stations".~~

VI. Compliance Schedule

~~A. Any new gasoline dispensing system subject to this Rule shall comply with the provisions of this Rule at the time of installation.~~

~~B. Stationary storage containers greater than 2000 gallons capacity installed prior to July 1, 1975 and subject to Section IV, shall comply with the provisions of this Rule in accordance with the schedule of increments contained in Subsection VI.B. of Rule 412, unless subject to Subsection C, below.~~

~~C.~~ A. Any person becoming subject to the requirements of this Rule through loss of exemption shall comply with the following increments of progress:

1. Within thirty (30) days from November 9, 1992 or 30 days from the date of loss of exemption from this Rule, submit an application for Authority to Construct necessary vapor control equipment.

1. Testing for compliance with this rule shall be completed within 60 days of system start-up.

2.

B. Prior to operating under the exemption in Section III.C, operators shall modify their Permits to Operate conditions, to allow such operations, pursuant to District Rule 210.1 (New & Modified Stationary Source Review Rule).

C. Any person who becomes subject to the requirement of the installation and operation of an ISD system shall within 30 days of loss of exemption from ISD requirements, submit a complete application for an Authority to Construct.

Rule 412.1 Strikeout Underline

2. — For gasoline dispensing facilities having commenced construction on or before November 15, 1990, construction for compliance with this Rule shall begin no later than May 15, 1993, or within one hundred eighty (180) days after the date of loss of exemption from this Rule.

3. — Full compliance shall be demonstrated:

a. — by November 15, 1994, or within two years after the date of the loss of exemption for facilities having commenced construction on or before November 15, 1990, and

b. by May 15, 1993, for gasoline dispensing facilities having commenced construction after November 15, 1990.