SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Final Staff Report

Proposed Amended Rule 461- Gasoline Transfer and Dispensing

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EXECUTIVE SUMMARY

The proposed amendments to South Coast Air Quality Management District (AQMD) Rule 461 - Gasoline Transfer and Dispensing ensure the timely implementation of Phase II Enhanced Vapor Recovery (EVR), as required under State law. The EVR regulation requires all gasoline dispensing facilities (GDFs) in the AQMD to implement Phase II EVR on or before April 1, 2009. The proposed amendments also enhance rule clarity and enforceability in several areas including contractor certification, approval of tester accountability and compliance testing.

Approximately 4,500 GDFs in the AQMD and 13,000 GDFs statewide will need to upgrade to EVR Phase II vapor recovery by April 1, 2009. The large number of GDFs needing to upgrade their vapor recovery equipment within the next 12 months will require a concentrated effort by the GDFs, certified installation and testing contractors and regulatory agencies. Proper timing, commitment and follow-up are critical to meeting the deadline.

Proposed Amended Rule (PAR) 461 will require the owner/operator of any existing GDF that has not demonstrated compliance with CARB certified Phase II EVR on or before October 1, 2008, to submit a compliance plan and associated fees by October 1, 2008. The objective of the compliance plan is to ensure that GDF owners start planning for the required updates and outline the increments of progress of Phase II EVR implementation to assure compliance with CARB deadline of April 1, 2009. The compliance plan shall specify the increments of progress necessary to meet the compliance date. Alternatively, the owner/operator of any existing GDF that submits by September 1, 2008, a complete application for a permit to construct and operate a CARB certified Phase II EVR system that demonstrates the installation and testing of the system on or before April 1, 2009, will not have to submit the compliance plan.

PAR 461 will delay the implementation of EVR for equipment dispensing E85 until April 1, 2012. This will allow time for CARB to certify EVR systems for the transfer and dispensing of E85.

PAR 461 will require that all contractors installing, modifying or repairing any CARB certified Phase II EVR system or components shall have successfully completed the applicable manufacturer and the International Code Council (ICC) training programs, or any equivalent state certification program that may be developed in the future for the replacement of components. The requirement for obtaining relevant certification shall take effect six months after such tests certification becomes available. These proposed amendments are needed to increase enforceability and ensure emissions reductions through use of third party testers and certifications, consistency through a statewide certification process and ensuring that testers are certified under the latest requirements and standards.

To reduce the number of days a new or modified GDF may operate in noncompliance, PAR 461 will require that owner/operators must demonstrate through performance testing that the vapor recovery equipment complies with the rule requirements prior to dispensing gasoline.

To address the complaints from GDF operators and vapor recovery testers concerning the reverification tests schedules, the proposed amendments offer a more flexible reverification test schedule set on the specific month (not the specific day) for future testing.

Furthermore, the proposed amendments improve the accountability of the testers with reoccurring violations, and contractors who install or repair vapor recovery systems.

PAR 461 also includes other minor amendments to enhance the clarity and the enforceability of the rule.

BACKGROUND

Rule 461 was adopted on January 9, 1976, to regulate gasoline vapor emissions into the atmosphere from gasoline transfer and dispensing facilities (GDFs). The rule has been amended seventeen (17) times to enhance the efficiencies of the vapor recovery systems and rule enforceability. The last amendment took plane on June 3, 2005, and aimed to implement California Health and Safety Code Section 40724 which requires best available retrofit control technology for agricultural sources.

The GDFs emit vapors that contain volatile organic compounds (VOCs) and toxic air contaminants (TACs) such as benzene, toluene and xylene. These emissions are regulated by the Enhanced Vapor Recovery (EVR) regulations of the California Air Resources Board (CARB) and the South Coast Air Quality Management District (AQMD) Rule 461 – Gasoline Transfer and Dispensing. GDF's are the second largest VOC emission source category under the AQMD's regulatory authority, following architectural coatings. VOC components react in the atmosphere photochemically to form several secondary air pollutants including ozone, a major ingredient of smog.

Gasoline vapor recovery requirements were adopted by CARB in 1974. The vapor recovery includes both Phase I and Phase II vapor recovery systems. The Phase I vapor recovery system recovers gasoline vapor generated during the transfer of gasoline from a tank truck to the GDF storage tank (bulk drop). The Phase II vapor recovery system recovers gasoline vapor generated during the refueling of motor vehicles and from the storage of gasoline at the GDF. The requirements for vapor recovery systems are defined in executive orders issued by CARB for the specific systems and established 95 percent control efficiency for the vapor recovery systems. The vapor recovery requirements were subsequently amended due to changes in the equipment and the maintenance requirements to maintain the required efficiency.

The gasoline vapor recovery includes both the balance and the vacuum assist systems. The balance system operates on the principle of vapor displacement during vehicle refueling. It uses the slight pressure that is created in the vehicle fuel tank by incoming gasoline liquid and the slight vacuum created in the underground storage tank by the departing gasoline liquid to pull the vapor out of the vehicle tank and transfer it to the underground storage tank, as illustrated in Figure 1. The balance system requires a tight seal between the faceplate of the nozzle and the vehicle fillpipe.

The vacuum assist system utilizes a pressure inducing device, such as a vacuum pump or vapor collection unit, to enable the nozzle to capture vapor from the vehicle fueling tank during vehicle refueling and create the flow of vapor back to the underground storage tank Unlike the balance system, a tight seal at the nozzle fillpipe interface is not necessary for vapor recovery. Figure 2 represents the vacuum assist vapor recovery system. The effectiveness of a vacuum assist system depends on its ability to maintain the ratio of the collected vapor to the dispensed gasoline liquid (V/L) within the specification of the executive order of the system.

In 1999, several field inspections and audits conducted jointly by CARB and air districts staff have uncovered several problems with the performance and durability of the vapor recovery

components at the GDFs. As a result, CARB staff acknowledged the need for expanding the certification duration of the vapor recovery system and enhancing the tests requirements during the certification procedure (CP-201) to thoroughly address the vapor recovery concerns which triggered the adoption of the EVR regulations.

Figure 1 – Balance Vapor Recovery System

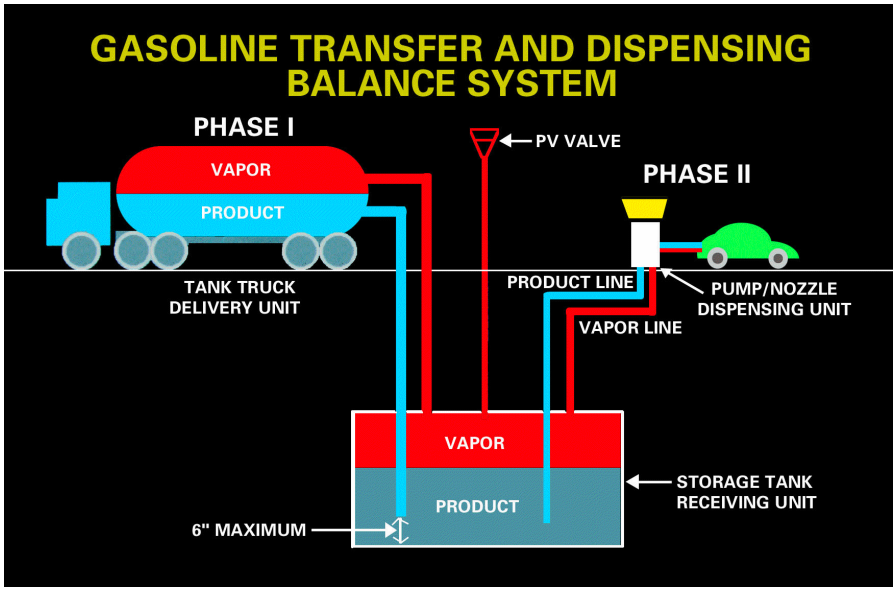
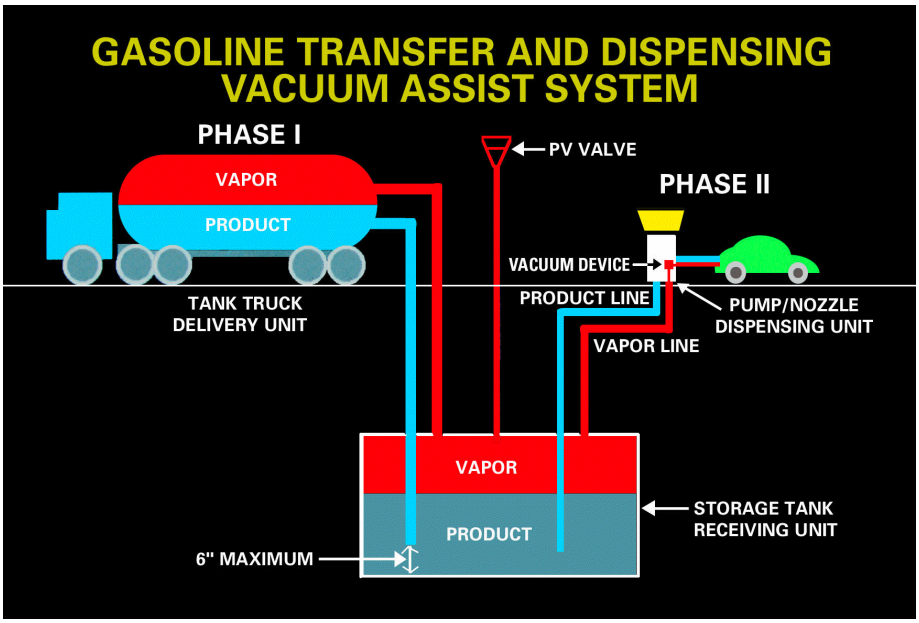


Figure 2 – Vacuum Assist Vapor Recovery System



The EVR regulations became state law on April 1, 2001, and have been amended several times since to address specific issues. These requirements resulted in the phasing-out of less effective existing equipment and will require the installation of equipment that meets the EVR requirements. Health and Safety Code § 41945 allows four years from the date of adoption of a more stringent standard for existing facilities to comply with the newly adopted standard. New facilities or facilities undergoing major modifications are required to meet new standards immediately after their adoption

EVR is being phased-in and includes the following six modules for both Phase I and Phase II vapor recovery systems:

- Module 1: Phase I vapor recovery (CP-201, Section 3.1 - 3.6)
- Module 2: Phase II Vapor Recovery (CP-201, Sections 4.1 - 8)
- Module 3: On-Board Refueling Vapor Recovery Compatibility (CP-201, Section 4.4)
- Module 4: Liquid Retention and Nozzle Spitting (CP-201, Section 4.8)
- Module 5: Spillage and Dripless Nozzle (CP-201, Section 4.3 and 4.7
- Module 6: In-Station Diagnostics (CP-201, Section 10)

A discussion of each module can be located in the Control Technology – Enhanced Vapor Recovery Appendix of this report.

The EVR for Phase I (one module) included the improvements of the spill containment and covers; rotatable product and vapor adaptors; and pressure vacuum vent valve. With the four year phased-in period as provided under Health and Safety Code, the Phase I module for both the balance and the vacuum assist systems was fully implemented on April 1, 2005.

The EVR for Phase II (five modules) includes, among others, the onboard refueling vapor recovery (ORVR) compatibility, and the in-station diagnostic (ISD). The ORVR compatibility module recognizes that new vehicles equipped with the ORVR system ~~and~~ routes gasoline vapor displaced during vehicle fueling to the onboard canister on the vehicle instead of returning the vapor to the storage tank at the facility. The ISD is designed to provide continuous real-time monitoring of vapor collection and containment efficiencies; alert the GDF operator when a failure mode is detected so that corrective action can be taken; shut down the dispensers, if repairs are ignored; and provide compliance records.

GDFs with underground storage tanks will need to upgrade to EVR Phase II vapor recovery. Approximately 4,500 GDFs (3,300 retail GDFs and 1,200 non-retail GDFs) in the AQMD and 13,000 GDFs statewide will need to obtain permits to construct and operate, install CARB certified equipment by a certified contractor, and demonstrate compliance with the EVR requirements by April 1, 2009 (the end of the four year phase-in period).

Prior to the implementation of the ORVR requirements in 2005, approximately half of the GDFs were operating balance vapor recovery systems and the other half were operating vacuum assist vapor recovery systems. However, a large percentage of GDF operators changed their vapor recovery from the vacuum assist to the balance system primarily due to the lower cost of ORVR compatibility. As a result, approximately 3,000 retail GDFs now operate the balance vapor recovery system representing approximately 90 percent of the total retail GDFs in the AQMD. The number of the GDFs that operate vacuum assist systems is approximately 400 facilities, which represent approximately 10 percent of the total GDFs in the AQMD.

To date, two EVR Phase II systems are CARB certified. The Franklin Fueling System (FFS), also known as Healy, and the Vapor Systems Technology (VST) for use with the vacuum assist and the balance vapor recovery systems, respectively. Other EVR Phase II systems are being tested and evaluated by CARB for possible certification. Both FFS and VST systems manufacturers have stated that they will be able to meet the equipment demand; however, there is a potential shortage of certified installation and certified testing contractors if the majority of GDF operators do not take appropriate steps in a timely manner to purchase, install and test their EVR systems to comply with state law and wait until the April 1, 2009 deadline approaches.

AFFECTED INDUSTRY

There are approximately 3,300 retail GDFs, 1,200 non-retail GDFs (with underground storage tanks) and 500 non-retail GDFs (with above ground storage tanks) in the AQMD, dispensing about 7 billion gallons of gasoline annually. Non-retail GDFs or consumer accounts are located in many business with motor pools, car dealership, agriculture operations, and governmental facilities. Over 95 percent of the throughput is from the retail GDFs. Currently, the EVR regulations only apply to GDFs with underground storage tanks (USTs). AQMD records indicate that all retail GDFs and approximately 70 percent of the non-retail GDFs are equipped with USTs.

Table 1 and Table 2 lists the number and percentage of retail and non-retail GDFs and gasoline throughput by county, respectively, based on the AQMD and CARB Emissions Inventory.

Table 1

Distribution of Retail Gasoline Dispensing Facilities in AQMD

County	# of Retail GDFs	% of Retail GDFs	Annual Throughput (K gallons)	% of throughput
Los Angeles	2046	62	3,990,000	60
Orange	561	17	1,263,500	19
Riverside	396	12	798,000	12
San Bernardino	297	9	598,000	9
TOTAL	3,300	100	6,649,500	100

Table 3 illustrates the number and the percentage of GDFs that operate the balance and the vacuum assist systems in the AQMD.

Table 2

Distribution of Non-Retail Gasoline Dispensing Facilities in AQMD

County	# of Non-Retail GDFs	% of Non-Retail GDFs	Annual Throughput (K gallons)	% of throughput
Los Angeles	744	62	300,000	60
Orange	204	17	95,000	19
Riverside	144	12	60,000	12
San Bernardino	108	9	45,000	9
TOTAL	1,200	100	500,000	100

Table 3

Number and Percentage of GDFs with the Balance and the Vacuum Assist Systems in the AQMD (Equipped with Underground Storage Tank)

TYPE OF GDFs	VAPOR RECOVERY SYSTEM	
	Balance System	Vacuum Assist System
Retail	2,900	400
Non-Retail	1,200	
Total/Percentage	4,100 (91%)	400 (9%)

PROPOSED AMENDMENTS

The proposed amendments seek to assure the implementation of Phase II EVR systems on or before CARB deadline of April 1, 2009. The proposed amendments include the following:

1. Compliance Plan or AQMD Permit stating the increment of progress for implementation of CARB Phase II EVR due on September 1, 2008, or October 1, 2008, respectively, for GDFs yet to be upgraded.
2. Delay implementation of EVR for the dispensing of E85 until April 1, 2012.
3. Contractors' certifications which include both the manufacturers and the International Code Council (ICC) certifications.
4. Re-training and disqualifying testers that continually violate testing procedures.
5. Require successful performance tests prior to dispensing gasoline into motor vehicles.
6. Provide more flexible test schedules to be within the same months in a year, not the specific day within that month.
7. Clarify rule language and removal of past due dates.

Compliance Plan/Permit for Implementation of CARB Certified Phase II EVR Systems

Approximately 4,500 GDFs in the AQMD and 13,000 GDFs statewide will need to upgrade to EVR Phase II vapor recovery by April 1, 2009. GDFs within the basin must get a permit to construct and operate from the AQMD, as well as other appropriate governmental agencies (such as City Planning Department and Fire Department), before starting construction or modification of the facility, install CARB certified equipment by a certified contractor, and demonstrate compliance with the EVR requirements through performance testing, again all by April 1, 2009. Only contractors/installers who are certified both by the equipment manufacturer and by the International Code Council (ICC) as approved vapor recovery installers (test available in the next few months) are allowed to perform system installations and repairs. The large numbers of GDF owners/operators applying for permits will put an unusually high demand on the certified contractors/installers, and performance testing resources to demonstrate compliance; both in the AQMD and statewide. Due to fixed, limited resources, GDFs must plan for extra time to comply and start the process as soon as possible.

Staff proposes the requirement of a compliance plan under Rule 461 to ensure compliance with state law that GDFs operate CARB certified Phase II EVR equipment on or before April 1, 2009, based on all of the industry and regulatory hurdles previously stated. The owner/operator of any existing GDF that has not demonstrated compliance with CARB certified Phase II EVR on or before October 1, 2008, is required to submit a compliance plan and associated fees by October 1, 2008. The objective of the compliance plan is to urge GDF operators to plan out the upgrade process and outline the increments of progress of Phase II EVR implementation to ensure compliance with the CARB deadline of April 1, 2009. The compliance plan shall include at a minimum the following milestones:

I. Permit Applications

Submit complete applications for permit to construct and operate CARB certified Phase II EVR systems. The required applications include AQMD applications forms including Form 400-a, 400-E-11 and 400-CEQA, and other applications required to obtain permits form the local city/county planning and building divisions, the fire department or the Certified Unified Program Agencies (CUPA). The required applications shall be submitted at least two months prior to the equipment installation to allow for permit reviews.

II. Place Purchase Order

Place purchase orders of CARB certified Phase II EVR within seven days of receiving AQMD permits. This will allow for timely equipment deliveries.

III. Installation Contract

Sign installation contracts with a certified contractor at least one month prior to the equipment installation date. The installation agreement shall specify the schedule for construction and installation of certified Phase II EVR equipment, that the contractor meets all qualifications for installation of the equipment, and a completion date of no later than April 1, 2009. This will confirm the contractor availability.

IV. Testing Contract

Sign testing contracts for the Phase II EVR system to verify compliance with the applicable executive order requirements at least one month prior to the equipment installation. The testing contract shall specify that the tester meets all qualifications for conducting the tests, and specify a testing completion date. This will confirm the tester availability.

V. Equipment Installation Date

The date by which the Phase II EVR system will be installed.

VI. Equipment Testing

The objective of testing the Phase II EVR system is to verify compliance with the applicable CARB Executive Orders requirements.

VII. Declaration

Declare that owner/operator understands that a GDF will not be allowed to dispense gasoline without a certified Phase II EVR system on and after April 1, 2009. Such declaration does not preclude the owner/operator rights to seek administrative relief under Regulation V- Procedure before the Hearing Board.

PAR 461 states that the Executive Officer shall not approve the compliance plan unless the plan shows that the installation and testing of compliance CARB certified Phase II EVR can be reasonably expected on or before April 1, 2009, and that the owner/operator submits the declaration regarding the operation of the GDF on or after April 1, 2009, without a CARB certified Phase II EVR system that has been installed and tested demonstrating compliance with state law.

In lieu of the compliance plan requirement, an owner/operator may submit the required permit applications for an AQMD permit to construct and operate stating the increment of progress required in the compliance plan for the implementation of Phase II EVR, provided the complete permit application is submitted by September 1, 2008.

Staff foresees that there will be significant resource demand if a considerable numbers of GDFs owners/operators wait until near the April 1, 2009 deadline to start installation. On the other hand, state law prohibits any air pollution district from requiring an earlier installation deadline. As a result, staff is proposing that GDFs owners/operators start construction no later than March 1, 2009, and start testing no later than March 21, 2009, under the compliance plan or the conditional permit unless the owners/operators can demonstrate through signed contracts that the upgrades can be completed on time. The declaration by the GDF owners/operators will also serve as a reminder for the GDF cannot lawfully dispense gasoline into motor vehicles on or after April 1, 2009, without the required Phase II EVR upgrades.

Also, PAR 461 will state that the owners/operators of GDFs are required to maintain all records to demonstrate compliance with the approved compliance plan. Failure to comply with dates set forth in an approval compliance plan constitutes a violation of this rule.

E85 EVR Implementation

Staff proposes to delay the implementation of the EVR requirements for the dispensing of E85 to April 1, 2012. This should allow for the development and CARB certification of EVR systems for E85.

Contractors Certifications

The proposed amendments [subparagraphs (c)(3)(C)] require that all contractors installing, modifying or repairing any CARB certified Phase II EVR system or components to have successfully completed the applicable manufacturer and the International Code Council (ICC) training programs, or an equivalent state certification program required for the replacement of components. The requirement for obtaining relevant certification shall take effect six months after such tests certification becomes available. GDF operators and their direct employees often replace defective nozzles, hoses and breakaways themselves instead of hiring contractors. In such instances, proposed subparagraph (c)(3)(D) exempts these individuals from the proposed subparagraph (c)(3)(C) and instead requires them to complete and pass the applicable manufactures training program and any other relevant training and certification programs designed for the operators of GDF. The proposed amendment allows six months for the operators and their employees to become certified after the upcoming certification program becomes available. Proof of the contractor certification shall be submitted to the owner/operator of the GDFs prior to operation, maintained in the facility records and become available to the District's staff upon request.

These proposed amendments are needed to increase enforceability and ensure emissions reductions through use of third party testers and certifications, consistency through a statewide certification process and ensuring that contractors are certified under the latest requirements and standards.

Disqualifying Testers that Continually Violate AQMD Rules

Rule 461 requires owner/operators of GDFs to conduct periodic performance and reverification tests to demonstrate compliance. Depending on the annual throughput of the GDF, these tests are required on a semiannual or annual basis. Field observations and review of test reports by staff over the last several years has shown that some testers have conducted tests and submitted test results that are not compliant with testing procedures. Some of these deficiencies are improper use of the test method or use of outdated test method(s), such as flow rate and pressure, testers that are not certified at the time of the test, and/or the use of out of calibration test equipment or not using the required test equipment. Many of these deficiencies are associated with the same testers on a continuing and ongoing basis. In fact, over the last 12 months, AQMD has issued 20 notices of violation and obtained five orders of abatement for testers that have had recurrent violations of Rule 461. Currently, subparagraph (e)(3) does not include a provision to address the testers who continue to do unsatisfactory work.

Inaccurate performance or reverification tests may result in noncompliant vapor recovery systems operating for six or 12 months and cause significant excess emissions of VOC and toxics into the atmosphere.

The potential emissions from GDF operations as a result of inaccurate performance or reverification tests can be estimated based on the following assumptions:

I. The potential emissions calculation was conducted for retail-GDFs which represent approximately 95 percent of the total gasoline throughput in the AQMD's jurisdiction. The gasoline throughputs range from ten million gallons per year for large capacity GDFs, four million gallons per year for medium capacity GDFs and 500,000 gallons per year for small capacity GDFs.

II. The reverification testing frequencies are semiannual for ten and 4 million gallons per year GDFs and annual for 500,000 gallons per year GDFs.

III. The potential emissions are calculated as the emissions that could result between performance and reverification tests or two consecutive reverification tests and are based on the California Air Pollution Control Officers Association (CAPCOA) emission factor (17.22 pounds of VOC per 1000 gallons dispensed gasoline).

IV. The failure of vapor recovery systems efficiency can range between 25 and 100 percent (complete failure).

The potential VOC emissions were calculated using the following equation:

Potential VOC Emissions (tons) = Total throughput (gallons) x Emission Factor (lbs/1,000 gallons) x Test Frequency x Percentage of Vapor Recovery Efficiency failure x 1/2000 (pounds per ton)*

** 1 for annual and ½ for semiannual test frequency*

For example, the potential VOC emission for a GDF with a 10 million gallons throughput and 100 percent failure of the vapor recovery system efficiency can be calculated as follows:

Potential VOC Emissions = $10x10^6$ x 17.22/1000 x ½ x 1 x 1/2000 = 43.05 tons per 6 months

The potential VOC emissions from GDFs as a result of inaccurate performance or reverification test are shown in Table 4.

To minimize potential excess VOC emissions, staff proposes to add the following requirements for performance and reverification testers:

I. Successful completion of the AQMD' Orientation Class and the International Code Council (ICC) tester certification or equivalent state certification during the previous twenty four (24) months;

II. Within any six months, if a tester receives two notices of violation for failure to conduct performance or reverification tests in accordance with applicable CARB testing procedure as specified in subparagraph (e)(3)(A), the tester shall cease conducting performance and reverification tests after receiving the second notice of violation until such time the tester successfully re-completes the AQMD's Testers Orientation class; and

III. Within any 12 months, the tester shall not have committed more than three violation for failure to conduct performance or reverification tests in accordance with applicable CARB testing procedures as specified in subparagraph (e)(3)(A). Any tester who has been proved to have violated four or more times with a 12 month

period is one that has demonstrated his inability to adhere to testing procedures and therefore should not be allowed to conduct any more tests at GDFs.

Table 4

Potential VOC Emissions form GDFs
Caused by Inaccurate Performance or Reverification Tests

% of Vapor Recovery Failure	Potential VOC Emission* (tons)		
	10 Million Gal./yr. GDF	4 Million Gal./yr. GDF	500,000 Gal./yr. GDF
25	11.76	4.31	1.08
50	21.53	8.61	2.15
75	32.29	12.92	3.23
100	43.05	17.22	4.31

**For GDFs with annual throughput of ten and four millions gallons per year which require semiannual testing, the potential VOC emissions are calculated for six months. For GDFs with 500,000 gallons per year throughput which require annual testing, the potential VOC emissions are calculated for12 months.*

Performance Test

Currently, subparagraph (e)(1) requires owner/operator of a new or altered GDF to conduct and successfully pass the performance tests required by the applicable CARB Executive Order and AQMD permits within 30 calendar days after the initial operation. Staff field observations revealed that in many cases owners/operators of new or altered GDFs conduct the applicable performance tests immediately after the installation/alteration and prior to full operation. However, since the current rule allows owner/operators 30 days to test, some tests are conducted on the 30th day. Many of these tests have indicated equipment failures. There is an air quality benefit to test and verify the compliance of the new/altered vapor recovery system prior to operation to assure the integrity of the vapor recovery system and compliance with the applicable requirements. Potentially, a GDF may operate in violation of the rule requirements for up to 30 days.

Compliance data collected by AQMD indicate that in 2006, one year after the CARB EVR Phase I requirement was put in place, there were 16 notices of violation issued for GDFs failing to demonstrate compliance with Rule 461 based on their performance test(s). Therefore, staff proposes an amendment to require owner/operator of a new or altered GDF to conduct and successfully pass the applicable performance tests prior to dispensing gasoline into motor vehicles.

The proposed amendments allow the owner/operator of a new or altered GDF that failed the performance test to isolate (tagged out of service) the defective vapor recovery component(s) and operate the compliant components, providing that the defective vapor recovery component will not compromise the integrity of the vapor recovery system of the GDF.

Flexibility in Reverification Test Schedules

Presently, clauses (e)(2)(B)(i) and (ii) require owners/operators of GDFs to conduct semiannual or annual reverification tests based on their maximum monthly throughput. The current rule language set the reverification test schedule to a specific date. However, many testers and owners/operators of GDFs found that meeting that specific test day was troublesome and impractical. To address these concerns, the staff proposes that a more flexible reverification test schedule set on a specific month (not day) of the testing. All GDFs shall conduct the reverification tests after six or twelve months of the initial performance test based on their maximum monthly throughput. The tests shall be conducted within the six or 12 month period specified, but shall not go beyond the scheduled anniversary month established. Failure to conduct the reverification test on the preset schedule will represent a violation of this rule but will not alter or change the schedule.

The following is an example of the testing schedule under the proposed amendment. An operator of a new GDF conducts and passes its performance test on January 15, 2008. Since this is a new facility and there is no operating record, the proposed amendment will require a semi-annual test for this facility until such time it establishes an annual throughput record. Accordingly, this facility will have to conduct reverification tests within the months of July 2008 and January 2009 (not necessarily July 15, 2008). From January 2009 on, the facility testing schedule will be the month of January and July dependent on the past annual throughput records (whether or not the maximum monthly throughput during the preceding 12 months was over 100,000 gallons). Assuming the facility conducts a reverification test in February 2009 (instead of in January in violation of the rule requirement), the actual test date will not alter the due date for the next test. This proposal allows more flexibility in scheduling tests for GDF operators and assures that necessary tests are not delayed due to non-compliance actions.

EMISSION REDUCTIONS

The current proposed amendments are to ensure the timely implementation of Phase II EVR consistent with the CARB deadline of April 1, 2009, and to ensure compliance with other existing requirements in Rule 461. The proposed amendments seek to maintain the emission reduction from previous rule amendments; however, no additional emission reductions are claimed from these proposed amendments.

COST ANALYSIS

PAR 461 requires GDF owners/operators to demonstrate they operate compliant EVR Phase II vapor recovery systems by April 1, 2009. Those owners/operators that cannot install and test their certify Phase II EVR systems by October 1, 2008, will need to file a compliance plan showing how they intend to achieve compliance with the rule requirement by April 1, 2009.

Currently in the AQMD, it is estimated that there are approximately 3,300 retail facilities and 1,200 non-retail facilities, for a total of 4,500 facilities with UST's. Of the 4,500 facilities, approximately 1,000 have already submitted applications for EVR Phase II. Assuming that 60 percent of the remaining 3,500 facilities (2,100 facilities) will have certified Phase II EVR systems installed and in compliance by October 1, 2008, 40 percent or 1,400 facilities will have to file a compliance plan with the AQMD. According to Rule 306 – Plan Fees, amended May 4,

2007, an owner/operator will have to pay a plan filing fee of $107.88 and an evaluation fee of $377.57, for a total of $485.45. Since these plans will essentially be an outline of milestones showing progress towards meeting compliance, staff does not anticipate any additional time and materials charges for the approval of the plans.

Therefore, based on the aforementioned assumptions, the total costs incurred by the facilities not able to meet the October 1, 2008 deadline will be: Total Cost ($) = 1,400 facilities x $485.45 = $679,630.

INCREMENTAL COST- EFFECTIVENESS ANAYLSIS

Under Health and Safety Code Section §40920.6, the AQMD is required to perform an incremental cost analysis when adopting a Best Available Retrofit Control Technology (BARCT) rule or feasible measure required by the California Clean Air Act. To perform this analysis, the AQMD must (1) identify one or more control options achieving the emission reduction objectives for the proposed rule, (2) determine the cost effectiveness for each option, and (3) calculate the incremental cost effectiveness for each option. To determine incremental costs, the AQMD must "calculate the difference in the dollar costs divided by the difference in the emission reduction potentials between each progressively more stringent potential control option as compared to the next less expensive control option." Proposed amendments to Rule 461 ensure implementation of state law requirement to which there are no alternative. Further, the proposed amendments do not result in additional emission reductions and as such incremental cost-effectiveness is not applicable.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Pursuant to the California Environmental Quality Act (CEQA) and AQMD Rule 110, an Environmental Assessment (EA) is being prepared for proposed amended Rule 461 and will be circulated for review. Responses to any comments on the Draft EA during the public hearing and review and comment period will be prepared and will be incorporated into the EA.

SOCIOECONOMIC ANALYSIS

The proposed amendments to Rule 461 require the owner/operator of any existing GDF that cannot complete installation and testing of its Phase II EVR by October 1, 2008 submit a compliance plan to identify increments of progress toward Phase II EVR implementation by April 1, 2009. GDF owner/operators include those in the business of retail gasoline sales, and companies that maintain facilities that refuel their motor vehicle fleets such as rental car companies, public agencies, public and private utilities and various commercial and industrial operators. No emission reductions are expected from the proposed amendments. However, the amendments are necessary to ensure the emission reductions from previous rule amendments are achieved and those emission reductions are necessary to attain the ambient air quality standards.

Out of the 4,500 GDFs facilities in the District, approximately 1,000 have already submitted applications for EVR Phase II. Based on the staff's estimate, 60 percent of the remaining 3,500 facilities (2,100 facilities) are expected to complete installation and testing of their Phase II EVR by October 1, 2008. As a result, the remaining 1,400 facilities (40%) will have to file a compliance plan with the AQMD. According to current Rule 306─Plan Fees, an owner/operator

will have to pay a one-time plan filing fee of $107.88 and another one-time evaluation fee of $377.57 for a total of $485.45. Since these plans will essentially be an outline showing progress toward meeting compliance, staff does not anticipate any additional time and materials charges for the approval of the plans. Based on the above assumptions, the total one-time cost of the proposed amendments is estimated at $679,630 (1,400 facilities times $485.45). These costs are not expected to have any impact on employment and the economy. Since Phase II EVR is required by state law, there is no alternative. However, if this proposal is not adopted, it is expected that a number of GDF owner/operators will not meet the required deadline and will seek variance relief from the AQMD Hearing Board. The cost of a variance is significantly higher than that of the plan. The variance filing fee would be $1,302.11 and the minimum excess emissions fee would be $159.11 per day of non-compliance for each GDF owner/operator seeking and granted a variance.

COMPARATIVE ANALYSIS

California Health and Safety Code Section 40727.2 requires the comparative analysis with any federal or other AQMD rules that apply to the same equipment or source type as the proposed amendments. There are no other AQMD rules that apply to gasoline transfer and dispensing operations. There are no federal Phase II vapor recovery requirements for GDFs. The federal program is to recover the vapors from motor vehicle fuelling through ORVR.

COMMENTS AND RESPONSES

The following is the staff responses to the public comments received during PAR 461 Public Workshop held on January 29, 2008 and the subsequent the comment period ending February 6, 2008.

Comment 1

We have serious concerns with the hurried timetable for the amending the rule. As currently proposed, the amendments will go from initial publication (January 17, 2008) to final adoption (March 7, 2008) in only seven weeks. While we recognize that stakeholders always have general access to AQMD staff, the only official opportunity for public input was the Public Workshop on January 29th, less than two weeks after the proposed amendments were released. These proposed amendments will have a major impact on GDF owner/operators - they are not merely "administrative" changes; therefore, the opportunity for significant input from the regulated community is warranted. We respectfully request that this rulemaking be delayed for a least one month in order to allow for that discussion with stakeholders.

Response 1

The objectives of the proposed amendments are to ensure the timely implementation of Phase II EVR on or before April 1, 2009, as required by state law, provide flexible testing schedules and improve enforceability and clarity of the rule language. There are no additional emission reduction requirements associated with the proposal. Staff acknowledges the rulemaking for PAR 461 is on a fast track, but is necessary to avoid the potential of significant noncompliance in April 2009. Although the past is not always an absolute indicator of the future, GDFs did not comply with the state mandated underground storage tank removal and replacement

requirements in the 1990's and the deadline for Phase I EVR implementation in 2005. It is staff intention, through Phase II EVR implementation requirements in PAR 461, to require GDF owner/operators to take substantive steps to comply with the April 1, 2009 requirements, to avoid a repeat of the AQMD Hearing Board experience with the previously mentioned programs and the associated excess emissions affecting this industry. A delay in bringing PAR 461 to the Governing Board would only reduce the time GDFs need to take the necessary steps to comply by April 2009. Based on input at and subsequent to the public workshop, staff has modified its proposal to address the industry's concerns, which is discussed in the following comments and responses.

Comment 2

The proposed requirement for a GDF to demonstrate compliance with EVR standards or submit a compliance plan, by October 1, 2008, is unworkable. We have several concerns with the AQMD's basic approach to the requirement for a compliance plan. Rather than providing a positive incentive for GDF owner/operators to comply with EVR requirements in a timely and efficient manner, the proposed approach would simply impose a disincentive for not having done so six months before the state's statutory EVR Phase II deadline. We do not believe that this approach is an effective way to motivate owner/operators to implement EVR requirements in an orderly manner and that even a well-intentioned owner/operator, acting in good faith, will be held responsible for each and every aspect of the EVR upgrade process even if circumstances beyond their control prevent them from achieving compliance.

Response 2

The intent of the proposed amendments is not to penalize owners/operators of GDFs that are making good faith efforts and progress to implement Phase II EVR on or before April 1, 2009, but rather to ensure their compliance by the state's mandated date.

In an effort to acknowledge that the timely action taken is good, staff has amended its proposal to add subdivision (j) that exempts owner/operators that have applied for a permit to comply with Phase II EVR under a pre-specified schedule prior to them having to submit a compliance plan.

To date, only a small fraction of GDFs have taken serious steps toward installing their Phase II EVR upgrades. Given the complexity and time demands of this permitting and contracting process, it will be very difficult, at best, for the remaining GDF universe to make its deadlines unless they initiate a well thought planning and execution to install these upgrades right away. For example, GDFs must get a permit to construct and operate from the AQMD, as well as other appropriate governmental agencies (such as City Planning Department and Fire Department), before starting construction or modification of the facility, install CARB certified equipment by a certified contractor, and demonstrate compliance with the EVR requirements through performance testing, again all by April 1, 2009. Only contractors/installers who are certified both by the equipment manufacturer and by the International Code Council (ICC) as approved vapor recovery installers (test available in the next few months) are allowed to perform system installations and repairs. The large numbers of GDF owners/operators applying for permits will put an unusually high demand on the certified contractors/installers, and performance testing resources to demonstrate compliance; both in the AQMD and statewide. Due to fixed, limited resources, GDFs must plan for extra time to comply and start the process as soon as possible. Based on staff's analysis, field experience and public testimony at the public workshop, the practical minimum time required for the implementation of Phase II EVR starting from the

applications submittal to the installation and testing is approximately six months. Both permits and plans can be modified. However, the requests for changes must continue to demonstrate compliance with the April 1, 2009 date.

Comment 3

Requiring a compliance plan by October 1, 2008, six months prior to the regulatory deadline is a good tool to prompt the regulated community to plan their EVR projects in advance. However, it inserts an almost arbitrary compliance deadline, in advance of the actual April 1, 2009 deadline, and requires interim deadlines for specific tasks, with default deadlines/dates, if the applicant does not provide dates for each task. Default increment of progress dates should be provided as examples or suggestions, not hard dates to be incorporated into plans, since the dates and timeframes may not be applicable to all facilities. There was also discussion at the public workshop of the issuance of NOVs for missed interim deadlines. We propose that the compliance plan be made optional and not mandatory, and that the AQMD utilize it as a positive incentive to assist affected facilities to come into compliance. For those facilities that wish to utilize this option, AQMD could charge a fee for assistance in assembling and/or reviewing their plans.

Response 3

As stated in Response 2, staff has determined that the practical minimum time required for the implementation of Phase II EVR starting from the planning stages, applications submittal to the equipment purchase, installation and testing is approximately six months. To comply on or before April 1, 2009, staff has determined that GDF owner/operators must start the process no later than October 1, 2008. The compliance plan was not mandatory, but only required of those GDFs that did not comply with the Phase II EVR standards by October 1, 2008. However, based on comments received at the public workshop, staff has revised PAR 461 by adding an alternative to the compliance demonstration and compliance plan options of October 1, 2008; GDF owner/operators can submit a complete approvable permit application by September 1, 2008.

Staff believes that GDF owner/operators who delay their substantive planning until October 1, 2008, need to spell out specific increment of progress deadlines for each specific task, only if the applicant does not provide dates for each task that demonstrate a high level of success to comply with the April 1, 2009 Phase II EVR compliance date. Staff also believes GDFs that delay proper early planning and choose the compliance plan option must be even more diligent in meeting interim deadlines since by that time, any delays could result in a GDF failing to comply with the Phase II EVR standards by April 1, 2009. Therefore, the compliance plan must be an enforceable document with increments of progress to ensure a high level of success in meeting the April 1, 2009 deadline. For extenuating circumstances, GDF owner/operators can seek administrative relief from the Hearing Board, pursuant to Regulation V – Procedure Before the Hearing Board.

Comment 4

The AQMD states in the preliminary draft staff report that they have the authority to amend Rule 461 and that the proposed amendments to Rule 461 are consistent with other regulations. The AQMD acknowledges that state law prohibits an air district from adopting more stringent regulations than those in State law. The AQMD's proposal for compliance plans is a punitive measure that can be avoided only by demonstrating compliance by October 2008 - six months

earlier that the deadline in ARB regulations. That deadline is more stringent than state regulations and the accelerated compliance deadline is at odds with the state's April 1, 2009 deadline.

Response 4

Staff disagrees. As staff has stated in the staff report and in previous responses to comments, timely planning and implementation is needed to ensure compliance with the state mandated Phase II EVR compliance date of April 1, 2009. The compliance plan is simply a demonstration that the GDF owner/operator can meet the April 1, 2009 deadline. Nothing in the compliance plan requires an earlier compliance date. In response to the comments received, staff has revised PAR 461 by adding an alternative to the compliance demonstration and compliance plan options of October 1, 2008; GDF owner/operators acting in good faith and that have submitted a complete approvable permit application by September 1, 2008 that demonstrates the GDF will comply with the state's April 1, 2009 deadline need not submit a compliance plan.

Comment 5

We are requesting that one optional compliance plan per company, agency, or utility be submitted, rather than a separate compliance plan for each GDF. Many of the GDFs are under common ownership and EVR Phase II systems are the same for many of those GDFs, and the information can be incorporated into a single plan document. The air permit applications would continue to be submitted by individual GDFs.

Response 5

The purpose of the compliance plan is to state the increments of progress for the implementation of Phase II EVR for each individual GDF. Each specific location will most likely have its own circumstances, including but not limited to, the Phase II EVR system selected, and installation and testing schedules, which cannot be outlined in one single compliance plan. The AQMD will prepare a standard template compliance plan to assist GDFs subject to the requirements of PAR 461 Phase II EVR implementation.

Comment 6

The effective Phase II EVR deadline to demonstrate compliance with Phase II EVR by October 1, 2008, in order to avoid submitting a compliance plan, which would be imposed by the proposed amendments, would preclude consideration of new potentially viable solutions that are currently being evaluated by the ARB. These system(s) might be worthy of consideration by an owner/operator.

Response 6

As stated in Response 2, PAR 461 has been revised to allow owner/operators acting in good faith that have submitted an application for a permit to construct and operate, on or before September 1, 2008, to comply with Phase II EVR to forego submitting a compliance plan on or before October 1, 2008. Staff encourages and welcomes the development and certification of all new CARB certified Phase II EVR systems. Staff agrees that these new potential system(s) might be worthy of consideration by a GDF owner/operator. Both permits and plans can be modified after issuance by the AQMD, consistent with Engineering and Compliance Policies and Procedures and Regulation III - Fees. However, any requests for changes must continue to demonstrate compliance with the April 1, 2009 date.

Comment 7

A site that is in the process of implementing Phase II EVR (with an approved AQMD permit) will not likely prepare a compliance plan but may experience a last-minute problem. Such a site should not be found to be in violation of the requirement to submit a plan. This provision will likely cause major problems.

Response 7

A permit to construct and operate can be modified after issuance by the AQMD, pursuant to Regulation III – Fees, and Engineering and Compliance Policies and Procedures regarding permit issuance and revisions. Depending on the specific issue for delay and potential changes to the proposed equipment, an additional permit application and fees may be required. Alternatively, administrative relief pursuant to Regulation V – Procedure Before the Hearing Board may be sought to allow additional time to resolve any last minute problems. However, any requests for changes must continue to demonstrate compliance with the April 1, 2009 date.

Comment 8

Paragraph (i)(4) gives an applicant the right to apply for a modification of terms/conditions of a compliance plan for Phase II EVR; it should also provide for a change of equipment. It should be clarified that the owner/operator may use permits or contracts to demonstrate that the revised plan will still meet compliance requirements.

Response 8

Regarding the change of equipment, please refer to Response 7. Staff agrees that the owner/operator may use permits or contracts to demonstrate that the revised plan will still meet compliance requirements, and reflected this in paragraph (i)(4).

Comment 9

There is no allowance for an owner/operator who wants to cease operations as of April 1, 2009, and then later reconstruct an existing site. They should not be required to submit either permit applications or a compliance plan. If these sites are candidates for reconstruction after April 1, 2009, they would submit permit applications at that time.

Response 9

GDF owner/operators who will permanently cease operations before April 1, 2009, are required to submit a compliance plan on or before October 1, 2008. The plan will require the GDF owner/operator to irrevocably surrender their permit to operate on or before April 1, 2009 and declare their knowledge that it is a violation of this rule to dispense gasoline after that date. Once a permit to operate is surrendered, any new operation at that location will require a new application for permit to construct and operate and will need to comply with all applicable AQMD Rules and Regulations, including but no limited to Regulation XIII - New Source Review and Regulation XIV - New Source Review for Toxics, as a new start-up facility. Staff has revised PAR 461 to waive the compliance plan fees for this specific situation.

Comment 10

Mention is made of other governmental agencies that must review applications and issue permits for Phase II EVR upgrades**.** Subparagraph (i)(l)(A) suggests that permit applications to the AQMD and other regulatory agencies must be submitted simultaneously. This is not generally done because some local agencies want to see the AQMD permit to construct as proof that an

alteration is related to air quality requirements. It needs to be recognized that, because these other agencies are involved in the permit approval process, there can be considerable delays in obtaining permits to construct. It is suggested in the proposed rule amendments that a two-month time frame be allowed for permit acquisition. It needs to be understood that permits must be obtained from other agencies as well and that there can be considerable delays in obtaining permits to construct. Lastly, the ordering of equipment should be pegged to the receipt of all necessary permits.

Response 10

PAR 461 does not require applications to be submitted simultaneously. It requires the applicant to specify the latest date by which all necessary applications are submitted to the appropriate regulatory agencies and adequate time ahead of planned construction to afford agencies adequate time for evaluation and approval. Staff has contacted and requested some local fire agencies and Certified Uniform Program Agency (CUPA) to require proof of application submittal to AQMD and not necessarily the approved AQMD permit. Most contacted agencies have responded positively to such request. Staff will continue to work with local agencies to obtain a similar agreement. Additionally, staff acknowledges that the acquisition of permit from local agencies may take at least two months; GDF owner/operators need to plan accordingly. However, in view of multi-agency permit approvals, staff has revised paragraph (i)(2) to state that GDF owner/operators shall incorporate into their compliance plan or permit application an Phase II EVR equipment order (purchase) date of "within 7 days of receiving all required permits."

Comment 11

Paragraph (i)(3) establishes the need for the AQMD to make a subjective decision regarding the "reasonable expectation" of meeting the Phase II EVR compliance date of April 1, 2009. Language regarding the certification should be clarified to reflect the AQMD's true intent.

Response 11

The term "reasonably expected," as stated in paragraph (i)(3), allows GDF owner/operators flexibility in achieving compliance with the Phase II EVR on or before the state deadline of April 1, 2009. Subparagraph (i)(2) establishes the minimum timeframes or the latest date for the application submittal, equipment purchase, contracts signings, installation, and performance testing that the AQMD would consider reasonable.

Comment 12

The AQMD's proposal for a signed declaration from persons submitting a compliance plan could be deemed a waiver of one's rights under state law and AQMD rules. Subparagraph (i)(l)(G) and paragraphs (i)(3) and (i)(4) require an owner/operator to sign a statement to the effect that the GDF will not be allowed to operate after April 1, 2009, unless a certified Phase I1 EVR system has been installed and tested. We appreciate the verbal clarification offered at the Public Workshop that these signed statements or certifications would not be deemed a waiver of one's right to seek a variance. However, we believe that the language of these sections of the proposed rule should be revised to reflect the AQMD's stated intent.

Response 12

Staff has added a clarification to the final staff report stating "Such declaration does not preclude the owner/operator right to seek administrative relief under Regulation V- Procedure Before the Hearing Board." However, the Hearing Board is empowered to decide each case based on its

own merits. Nothing in this Rule is intended to limit their power or bind them to any specific ruling.

Comment 13
The signed declaration at the end of each compliance plan would not be necessary, if the plans are made optional. The requirement to discontinue use of GDF's without EVR Phase II is understood to be part of the regulation and outreach efforts, not part of the compliance plan. There is also the concern that signing the declaration would waive any rights to go before the Hearing Board for a variance at a future date.

Response 13
As stated in Response 2, PAR 461 has been revised to include the option to submit an application for a permit to construct and operate, on or before September 1, 2008, or submit a compliance plan on or before October 1, 2008. However, both the permit application option and the compliance plan option require that the GDF owner/operator declare that owner/operator to sign a statement (for a compliance plan) or a permit condition (as part of the permit application) to the effect that the GDF will not be allowed to operate after April 1, 2009, unless a certified Phase II EVR system has been installed and tested. The signing of a declaration or acceptance of a permit condition does not preclude the owner/operator rights to seek administrative relief under Regulation V- Procedure Before the Hearing Board. However, the Hearing Board is empowered to decide each case based on its own merits. Nothing in this Rule is intended to limit their power or bind them to any specific ruling.

Comment 14
The description in the staff report of compliance plan milestone requirements appears to be more stringent than the rule language. For example, for the Permit Applications milestone, the staff report says to submit complete packages of required applications from multiple agencies, while the rule in Section (i)(1) asks for a date by which complete application packages will be submitted by the owner/operator to each agency.

Response 14
Staff disagrees. Both the proposed amendments rule language and the draft staff report require owners/operators of GDFs to submit complete applications package for permit to construct and operate of CARB certified Phase II EVR to the AQMD and other local city/county planning and building divisions, the fire department or the Certified United Program Agencies (CUPA). PAR 461 allows GDF owner/operators to select dates for each milestone. However, PAR does list "no later than dates" which staff believes are the last date to ensure compliance with the April 1, 2009 state mandated date to comply with the Phase II EVR requirements.

Comment 15
Remove the requirement to sign installation contracts and testing contracts at least one month before equipment installation. If the installer and tester can perform these tasks earlier than one month after contract signing, why make them wait?

Response 15
PAR 461 allows GDF owner/operators to select dates for each milestone. However, PAR does list "no later than dates" which staff believes are the last date to ensure compliance with the April 1, 2009 state mandated date to comply with the Phase II EVR requirements. If a task is

completed early, it is certainly meeting the "no later" date and is compliant with the plan. Therefore, PAR 461 does not require installers and testers to wait or delay the progress in complying with the Phase II EVR requirements.

Comment 16

A failure to comply with the dates in a compliance plan is a violation of the rule. A failure to comply with an interim date while fully complying with the Phase II EVR requirements by April 1, 2009, has no negative air quality implications and does not warrant an NOV. There are so many factors that are beyond the control of an owner/operator that a less onerous, more supportive approach is warranted.

Response 16

Paragraphs (i)(1), (2) and (4) allows owners/operators of GDFs to choose their compliance dates, provides example of the compliance dates and permit the modification of the compliance dates, respectively, which minimize or eliminate any chance for a violation of the compliance plan requirements. On the other hand, a failure to comply with a date could lead to failure to comply with the Phase II EVR implementation on April 1, 2009, which has negative air quality implications.

Comment 17

In the preliminary draft staff report, the AQMD has failed to consider the total cost of preparing and submitting a compliance plan. In addition to the standard fees for plan submission, the GDF owner/operator will have to devote time and resources *(e.g.,* potentially hiring a contractor or consultant).

Response 17

The AQMD will design a streamlined Phase II EVR compliance plan template outlining the increments of progress, such as the application submittal date, equipment purchase date, installation and testing dates. In addition, staff will be available to assist GDF owners/operators, as appropriate. The compliance plan option will not require any additional steps or tasks (except for completing a compliance plan application form and a streamlined template form) over and above those that the GDF owner/operator would need to complete in order to comply with the Phase II EVR state mandate. The need to hire a consultant or contractor ***solely*** for the purpose of completing AQMD compliance plan forms is not warranted.

Comment 18

The preliminary draft staff report stated that the objective of the proposed amendments, including the potential compliance plan, is to "urge" GDF operators to plan the EVR upgrade process. We submit that a more effective, and more positive, approach for promoting the orderly implementation of EVR requirements would be to institute a phased approach that begins with an actual incentive (i.e., "a carrot", as the AQMD has previously described). Those owner/operators who, for whatever reason, choose not to take advantage of the incentive, would be faced with increasingly less attractive alternatives (i-e., "a stick") - which should be further reason for them to take advantage of the incentive for timely permit application and implementation of the necessary upgrades. Our specific suggestions regarding an overall approach for a smooth transition to the April 1, 2009 compliance deadline are as follows:

1. Provide an incentive - in the form of a rebate of a substantial portion of the permit application fees for GDFs that submit applications between April 1, 2008 and October 1,

2008. The rebate would be contingent upon the facility achieving full compliance in a timely manner. To provide equitable treatment for facilities already having permit applications on file, they would be given a credit against future fees (e.g., permit renewal).

2. Require that owner/operators who file permit applications on or after October 1, 2008, also submit a statement which includes the increments of progress and proposed milestones that would demonstrate compliance by April 1, 2009 together with the associated normal AQMD permitting fees.

Response 18

The proposed amendments provide an incentive to GDF owner/operators who will complete the implementation of Phase II EVR on or before October 1, 2008; those GDFs that comply with the Phase II EVR requirements by that date do not have to submit a compliance plan and the associated fees. Staff further modified its initial proposal to add an incentive to act early and submit a complete permit application that demonstrates compliance by April 1, 2009

It has been suggested that the AQMD provided financial incentive for early compliance, by the AQMD refunding a substantial portion of the permit application fees for demonstration of early compliance or apply the fee reduction as a credit for future permit fee renewals. The total permit processing fee is less than two percent of the installed cost of a Phase II EVR system and staff believes this may not be a significant financial incentive to motivate early compliance. On the other hand, if a large number of GDF owner/operators take advantage of this incentive, as suggested, the impact on the AQMD revenues could be $1 million to $3 million depending on the number of GDFs seeking the rebate or credit and the percentage of the fee reduced. As a primarily fee-based organization, the AQMD would likely need to increase rates to other fee payers to recover the revenue shortfall. There would be some concern how to make the required findings that such a fee rate increase would be necessary and equitable. For these reasons, staff does not recommend a fee rebate or credit for demonstration of early compliance.

Comment 19

The AQMD needs to provide for some permitting flexibility with regard to both modifications to milestone dates and potential changes in equipment selection as owner operators move toward compliance by April 1, 2009. Paragraph (i)(4) of the proposed amended rule seems to provide an allowance for an owner/operator to modify the milestone dates contained in a compliance plan. We believe that this type of flexibility is necessary, appropriate, and helpful. However, the provision for flexibility needs to be broadened in two respects: First, the concept of flexibility regarding milestone dates also needs to apply to the permit process outside of the context of a compliance plan. Second, there needs to be permitting flexibility regarding equipment substitution.

Response 19

The compliance plan does not carry any details of permitted equipment. So changes to planned equipment will not affect the validity of the compliance plan so long as the schedule remains achievable. However, a change of the plan will be necessary if the schedule is impacted negatively.

A permit to construct and operate can be modified after issuance by the AQMD, pursuant to

Regulation III – Fees, and Engineering and Compliance Policies and Procedures regarding permit issuance and revisions. Depending on the specific issue for delay and potential changes to the proposed equipment, an additional permit application and fees may be required. Alternatively, administrative relief pursuant to Regulation V – Procedure Before the Hearing Board may be sought to allow additional time to resolve any last minute problems. However, any requests for changes must continue to demonstrate compliance with the April 1, 2009 date.

Comment 20
We believe that, in its outreach efforts to affected industry, the AQMD may also wish to emphasize the high cost of seeking a variance, along with the uncertainty that a variance would be granted.

Response 20
It is true that GDF owners/operators that do not comply with the Phase II EVR requirements and seek administrative relief from the Hearing Board will incur additional monetary costs. In addition, Regulation V – Procedure Before the Hearing Board, states the process regarding the seeking and granting of a variance; a petitioner should not presuppose any decision of the Hearing Board or, if granted a variance, the conditions under which a GDF may continue to operate in noncompliance of the Phase II EVR requirements on or after April 1, 2009.

The AQMD will continue its outreach to GDF owners/operators to regarding the state mandated requirements of Phase II EVR.

Comment 21
The description of the purpose of ISD in the preliminary draft staff report is incorrect. ISD systems do not monitor "vapor collection and containment efficiencies". According the to ARB, "ISD systems are designed to provide continuous real time monitoring of critical gasoline vapor recovery system parameters and components ..." (ARB/CAPCOA letter on ISD enforcement policy, June 27, 2006)

Response 21
Staff has revised the draft staff report to reflect this comment.

Comment 22
We feel that it would also be appropriate to give greater recognition to the presence of a new element to the EVR II vapor recovery system; ISD. This new diagnostic tool should receive positive attention in Rule 461 as it will provide the GDF owner/operator with the means of recognizing problems with the vapor recovery system.

AQMD staff has informed us that the Rule requires the issuance of a Notice of Violation (NOV) if an AQMD inspector tests the facility and finds that it is not operating within compliance. If the facility has an ISD system and there is a "green light" indicating normal operation and the air district finds the GDF out of compliance, we feel that it is inappropriate to issue an NOV that goes on the record of the facility and imposes fines as if the GDF were found to be negligent in some way. It would seem that a Notice to Comply would be a more appropriate approach to this circumstance if the GDF owner/operator had met all other requirements under Rule 461. This concern extends to situations where a GDF owner/operator experiences an ISD warning or alarm and takes appropriate steps to address such warnings or alarms.

While there may not be enough evidence regarding the ISD's capabilities to relieve some of the Rule 461 inspection and re-verification testing at this time, the AQMD certainly has enough evidence that the ISD is appropriately indicating gross failures of the vapor recovery system. We would like to have the opportunity to further discuss this matter with staff relative to adjusting the Rule or obtaining a better understanding of the type of NOV that may be more appropriate to this situation.

If this issue cannot be addressed in the proposed amendments to Rule 461, we strongly suggest that the AQMD establish an enforcement policy regarding ISD that is consistent with the ARB'S intent for requiring ISD in the first place. The June 2006 CAPCOA/ARB joint recommendation for an ISD enforcement policy, applicable during the ARB's ISD in use evaluation, was that an air district take enforcement action (i.e., issue an NOV) if a GDF owner operator ignores an ISD alarm or resets the ISD system without taking appropriate corrective action. We have agreed with that recommendation. We submit that an owner/operator should be able to rely on the ISD system to inform them of any serious non-compliance. Therefore, assuming an ISD "green-light" scenario, we believe that while a negative result of an air district's manual test cannot be ignored, it is more appropriately a candidate for a Notice to Comply.

Response 22

Staff recognizes the role of the ISD as a monitoring and alerting tool of the vapor recovery system in GDFs, but not a compliance determination tool. As agreed among CARB, CAPCOA and regulated entities, ISD will not be used as a compliance tool. Accordingly, the parameters set within ISD are much broader than the EVR regulations. Therefore, it is inappropriate to base any compliance determination on ISD status other than those already agreed upon. Staff will continue to work on the issue of ISD "green-light" scenario and discuss within the AQMD and with CAPCOA as part of a statewide effort.

Comment 23

We support the contractor training certification requirements, but are concerned that it may not be available in the near term which will delay the start-up and completion of projects by the 2009 deadline.

Response 23

The contractors training requirements include the AQMD’s Tester Orientation Class, the applicable manufacturers training program, and the International Code Council (ICC) tester certifications. (or equivalent state certifications). All these training and certifications programs are currently available. As other appropriate training and certification programs are developed, PAR 461 states that those training and the certification will be required six months after such training/certifications become available.

Comment 24

We support the proposed amendments that require additional testing and certification for all vapor recovery system contractors as well as imposing greater accountability for test contractors that continue to fail to follow required test procedures. These changes will bring a better quality of installation, maintenance, repair and testing to the EVR II program.

Response 24
The enhanced contractor training and certification, as well as the proposed corrective actions for testers with multiple violations will bring better quality of installation, maintenance and repair of the enhanced vapor recovery systems, and ensure the validity of the test results. These proposed amendments ensure the full emission reduction benefits of the rule.

Comment 25
Installer/contractors must pass "any relevant state certification program, through the ICC . . ." The rule should specify that the relevant ICC certification test is the one for vapor recovery system installation and maintenance contractors.

Response 25
Staff disagrees. Staff believes that it is and will continue to be quite apparent which certification requirements that are applicable to each specific type of contractor. In addition, keeping the rule language more general precludes the need to amend Rule 461 in the future as certifications are developed or revised; the time between the new/revised certifications being published and the future amendments to Rule 461 to incorporate these changes will potentially lead to confusion and noncompliance of those contractors in the AQMD.

Comment 26
There are proposed requirements for GDF owner/ operators who replace their own hanging hardware. Mention is made of "relevant" certification requirements. It would be appropriate to clarify that the relevant certification requirements would be those specifically tailored for GDF owners/operators. A certification program for GDF owner/operators does not currently exist.

Response 26
See previous response. Subparagraph (c)(3)(D) require the owners/operators of GDFs or their direct employees to successfully obtain the applicable manufacture training and certifications programs or any relevant state certification programs prior to repairing any defective nozzle, hose and breakaways with new or CARB certified re-manufactured components. The same subparagraph states that the training and the certifications requirement take effect six months after such training/certifications become available.

Comment 27
Pertaining to drive-offs; PAR 461 requires GDF s owner/operators to perform reverification tests prior to placing affected equipment back in service. The current rule requires reverification testing within 24 hours of placing affected equipment back in service. Equipment has to be placed in service in order to be tested (but it does not necessarily have to be in service for customers). The proposed language should be clarified accordingly.

Response 27
Staff agrees that equipment such as breakaways have to be placed in service long enough to conduct the applicable reverification test; the GDF owner/operator shall not dispense gasoline until the facility has successfully passed the test. PAR 461 will be revised to clarify this issue.

Comment 28
We do not support the need to require testing prior to operation: 1) Many owner/operators conduct the applicable performance tests immediately after installation/alteration and prior to full

operation" and 2) that in the entire year 2006 there were only 16 incidents of non-compliance. This failure rate equates to only slightly more than one per month. The facts hardly justify the proposed change requiring that testing be performed prior to operation.

Response 28
Staff found that there is an air quality benefit to conduct the performance tests for new and altered GDFs to verify their compliance with the applicable executive orders standards. Based on the current rule requirement, the GDF may operate in violation of the rule requirements for up to 30 days with the potential of significant excess emissions. Additionally, the new requirement will cause only a minimum impact since many owners/operators of new or altered GDFs already conduct the applicable performance tests immediately after the installation/alteration and prior to full operation.

Comment 29
There is a proposed provision for additional initial tests and reverification tests required by AQMD permits. The language provides the opportunity for rulemaking by permit condition, and that is both objectionable and improper. Testing requirements must be specified in Rule 461. The language provides an opportunity for rule-making by permit condition, and that is objectionable and improper. Testing requirements must be specified in Rule 461.

Response 29
The requirements being added to the permits for GDFs are tests to confirm ISD operability. These tests are consistent with those recommended by the CAPCOA Vapor Recovery subcommittee. GDF owner/operators have the option of contesting any test requirement that they believe is improper.

Comment 30
Presently, new or rebuilt facilities are required to test the vapor recovery system within 30 days of installation completion. The PAR 461 proposed requirement would be to perform a performance test at new or recently retrofitted facilities prior to placing them into service. It is our opinion that this will exacerbate the testing contractor availability problem as it will take away flexibility in scheduling this required testing as the number of EVR II systems being installed increased between now and April 1, 2009. For sites with ISD, post installation testing of the ISD system operation as required in the EVR II system Executive Order is appropriate. A properly operational ISD will pick up any major installation problems.

Response 30
New and altered GDFs are required to conduct the applicable performance tests prior to initial operations (proposed amendment) or within 30 calendar days after initial operation (current rule requirement). Accordingly, the proposed amendment has no impact on the number of the required performance tests but only their scheduling. The current requirements are being abused to allow operations of GDFs that may not be compliant with all applicable requirements, thereby causing excess emissions that could have been avoided. GDF owners/operators must plan accordingly to avoid excess emissions.

Comment 31
In justifying the need to reduce the testing period from within 30 days of operation to conduct the performance tests prior t dispensing gasoline, staff stated in the preliminary draft staff report

that a vapor recovery system can be subject to a complete failure. We are hard-pressed to think of situations involving a total failure (i.e., a completely uncontrolled gasoline dispensing operation). If, indeed, such failures occur, they would be extremely rare.

Response 31
The purpose of the analysis was to illustrate the full range of impacts of inaccurate performance or reverification tests and the excess VOC and toxic emissions that may potentially result form operating a noncompliant vapor recovery system for six or twelve months. Staff agrees that complete failure of an enhanced vapor recovery system is rare, but it is the worst case scenario that demonstrates the maximum potential excess emissions that could occur. It is also noted that a small opening in the vapor line of a balance system can render the whole system ineffective as it negates any vacuum that may have existed in the storage tank.

Comment 32
Mention is made in the preliminary draft staff report of the conversion of vacuum-assist systems to balance systems because of the "lower cost of ORVR compatibility. However this is not entirely true. We believe that most of the conversions from vacuum assist to balance-type systems were made because balance systems are inherently fORVR-compatible. The conversions from vacuum assist to balance were not inexpensive.

Response 32
Staff concurs that the conversion from vacuum assist to balance system are inherently ORVR compatible and are less costly relative to operating the vacuum assist systems at that time.

Comment 33
The descriptions in Table 2 of the preliminary draft staff report are not clear. Retail Gasoline Operations (RGOs) are either owned by the major oil companies or by individual dealers. RGOs owned by the majors are either operated by them (as company stores) or by independent dealers who lease the RGO. We believe that the number of RGOs owned by the majors is small; very likely less than twenty percent. The number of RGOs owned and operated by the majors is even smaller.

Response 33
The information presented in the referenced table was derived from both AQMD and CARB data from several years ago. Staff has deleted the table from the staff report.

Comment 34
Permit applications for GDF upgrades should be processed by the AQMD's GDF permit engineers. Petroleum refineries may operate small GDFs. We suggests that, for the sake of expediency and efficiency, any permit applications for these facilities should be processed by the AQMD's dedicated GDF permitting staff rather than by the refinery/energy group

Response 34
The AQMD will take all necessary steps to ensure the timely evaluation of permit applications for Phase II EVR and the proper issuance of permits according to state and federal requirements.

Comment 35

EVR Phase I systems must have a minimum volumetric efficiency of 98 percent and an emission factor of not exceeding 0.15 lbs per 1000 gallons. Although Phase I EVR systems are certified at these performance levels, it is not feasible for a GDF site to make such a demonstration. The rule already requires that systems be maintained and operated in accordance with manufacturer's specifications and the Executive Orders. The requirement should be for a "... system as capable of recovering or processing displaced vapors by at least 98 percent. ASTs and mobile fuelers have a required efficiency of 95 percent for Phase I systems. The rule should require the equipment to be "capable" of 95 percent efficiency.

Response 35

Subparagraph (c)(1)(A) states that Phase I EVR is certified to achieve a minimum volumetric efficiency of 98 percent and an emission factor not exceeding 0.15 pounds per 1,000 gallons. Owners/operators of GDFs are not required to demonstrate the efficiency level of the Phase I EVR but are required to install, operate and maintain CARB certified Phase I EVR. Subparagraphs (c)(1)(B) & (C) require a minimum volumetric efficiency of 95 percent for aboveground storage tank and mobile fueler, respectively. These requirements are in the current rule, but have only been moved within the rule to improve the clarity and flow of the Rule 461.

Comment 36

EPA has addressed the ORVR use in corporate fleet in memorandum dated November 28, 2007, and supports an exemption from Phase II EVR when 95 percent of fleet vehicles are equipped with ORVR. This exemption was recently adopted by three California air districts, BAAQMD, SJVAPCD and SDAPCD. Additionally, CARB has recently certified one Phase II EVR for the balance system (VST) which would be compatible with the non-retail GDFs. The availability of equipment and certified contractors represent a real challenge in the implementation process. Based on the preceding information, we are proposing an exemption from Phase II EVR for non-retail gasoline dispensing facilities where at least 90 percent of the vehicles refueled at the facility in any time period are under common ownership ("captive" fleet), and equipped with ORVR." Specific recordkeeping may be required to demonstrate continued compliance with this exemption.

Response 36

Staff has reviewed the federal and state recommendation concerning Phase II exemption for non-retail GDFs where 95 percent of vehicles refueled are equipped with ORVR. While properly operating, ORVR technology can be instrumental in reducing emissions during refueling; staff has concerns about the lack of information relative to the long term efficiency and durability of such systems and therefore, is not supportive of an open-ended exemption. Instead, staff will propose a limited deferral of the installation of Phase II EVR to select non-retail GDFs with high ORVR penetration. This deferral will allow the collection of additional data to better assess the efficiency of ORVR systems.

Comment 37

The proposed amendments should include a Phase II EVR exemption for E-85 refueling facilities.

Response 37
Staff has revised paragraph (c)(4) to postpone the requirements of Phase II EVR for the dispensing of E-85 until April 1, 2012. Staff anticipates that the additional time (from the EVR Phase II state mandated compliance date of April 1, 2009) is needed for industry to develop and CARB to certify Phase I and Phase II equipment for the dispensing of E-85.

Comment 38
Independent marketers such as CIOMA represent the majority of the GDFs today and carry the burden of compliance and upgrades costs for negligible emissions reductions. For example, it costs over $50,000 per facility to upgrade to the new CARB Phase II EVR certified system that designed to recover an additional 3 percent or increase the efficiency of our current balance system form 95 percent to 98 percent.

Response 38
The requirement to operate CARB certified Phase II EVR equipment by April 1, 2009, is mandated by state law. The total throughput of all GDFs in the AQMD is currently estimated as seven billion gallons per year with a potential of uncontrolled emissions of approximately 170 tons per day. As a result, increasing the control efficiency Phase I by 3 percent represents a significant reduction in VOC emissions to the atmosphere in the AQMD (approximately 45 percent of all gasoline dispensed and associated emission occur in the AQMD) and throughout California.

Comment 39
There are discussions within your district that you may require all GDFs to install ISD regardless of throughput. We respectively request that you honor the CARB ISD exemption for those GDFs below the 600,000 G.P.Y. throughputs as the law currently written.

Response 39
The AQMD is not proposing to change the applicability or requirements for ISD as part of this rulemaking.

Comment 40
Subparagraph (b)(12) defines Enhanced Vapor Recovery. The reference CARB CP 201 (Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities) should be Sections 3 through 9, delete Section 10 and remove the exclusion to the standards for ORVR compatibility.

Response 40
Staff has revised PAR 461 as requested.

Comment 41
Subparagraph (c)(3)(D) states that "the owner/operator ... or their direct employees are not considered installers/contractors ... provided that person has successfully completed any relevant ... program...." We suggest revising this sentence to say "~~provided~~ unless that person has successfully completed any relevant ... program...." Shouldn't this paragraph also require manufacturer's certification to be consistent with subparagraph (c)(3)(C)?

Response 41
Subparagraph (c)(3)(C) establishes training and certification requirements for installers/contractors of GDF systems whereas subparagraph (c)(3)(D) establishes training and certification requirements for GDF owner/operators or their employees that complete minor repairs at the GDF. The training and certifications are different and specific to the person doing the major versus minor work at the GDF. Staff believes that the term "provided" is more appropriate.

Comment 42
The pressure-vacuum relief valve settings stated in clause (c)(3)(l)(iii) have been modified for EVR systems. See May 2006 CP-201 for revised criteria.

Response 42
Staff has revised PAR 461 as requested.

Comment 43
The amendments to the EVR regulations in the December 2002 rulemaking were related to the EVR technology review. The July 2004 rulemaking clarified the requirements relating to unihose dispensers. The November 2004 rulemaking provided an extended schedule to comply with the (ORVR) compatibility requirements. The May 2006 rulemaking clarified the certification process for system modifications and modified equipment specifications and test procedures for (P/V) valves. None of these rulemakings were related to equipment reliability or additional emission reductions. We suggest that staff clarify this issue in the preliminary draft staff report.

Comment 43
Staff has revised the preliminary draft staff report to address this comment.

Comment 44
A reference should be provided for the CAPCOA emission factor of 17.22 lbs/1,000 gallons stated in the preliminary draft staff report. This emission factor appears high as the ARB annual average emission factor is 8.4 lbs/1,000 gallons dispensed.

Response 44
The uncontrolled emission factor of 17.22 lbs/1,000 gallons is the total of the following four uncontrolled emission factors associated with GDFs: loading emission factor - 8.4 lbs/1000 gallons, breathing emission factor - 0.10 lbs/1,000 gallons, refueling emission factor - 8.3 lbs/1,000 gallons and spillage emission factor - 0.42 lbs/1.000 gallons. These emission factors are published in the CAPCOA Air Toxic "Hot Spot" Program, Appendix A, Section 4 – No Control, and are used by the AQMD engineering staff to quantify uncontrolled emissions from GDFs.

Comment 45
EVR does not necessarily substitute 95% efficiency with an emission limit. As provided in CP-201, systems certified under summer fuel conditions must meet both the efficiency and emission factor requirements. Systems certified using winter fuel must meet either the efficiency or the emission factor. We suggest that staff clarify this issue in the preliminary draft staff report.

Response 45
Staff has revised the preliminary draft staff report to address this comment.

Comment 46
State law requires that GDFs comply with the Phase II EVR requirements by April 1, 2009. In addition, state law also requires GDFs to install ISD by September 1, 2009, and September 2010, depending on the annual gasoline throughput for their facility. For all practical purposes, it would be better to upgrade our facility with both Phase II EVR and ISD at the same time. Therefore, w respectfully request that you consider working with CIOMA, WSPA, CAPCOA and CARB in moving the Phase II EVR deadline from April 1, 2009 to September 1, 2009.

Response 46
Staff will continue to work with all parties to addresses all issues regarding the implementation of Phase II EVR and ISD. However, it needs to be emphasized that the emission reductions associated with Phase II EVR are needed and needed sooner than later for the AQMD to achieve federal and state clean air act requirements, as required by law.

DRAFT FINDINGS

The draft findings include necessity, authority, clarity, consistency, non-duplication and reference, as defined in Health and Safety Code Section §40727. The draft findings are as follows:

Necessity - The AQMD Governing Board finds and determines that Proposed Amended Rule 461-Gasoline Transfer and Dispensing is necessary in order to implement the CARB requirements of the Phase II EVR system in a timely manner and implemented in a manner that achieves the emission reductions achieved from previous rule amendments.

Authority - The AQMD Governing Board obtains its authority to adopt, amend or repeal rules and regulations from Health and Safety Code §§40000, 40001, and 40440.

Clarity - The AQMD Governing Board finds and determines that Proposed Amended Rule 461 is written and displayed so that the meaning can be easily understood by persons directly affected by it.

Consistency – The AQMD Governing Board finds and determines that Proposed Amended Rule 461 is in harmony with, and not in conflict with or contradictory to, existing statutes, court decisions, or federal or state regulations.

Non-Duplication – The AQMD Governing Board has determined that Proposed Amended Rule 461 does not duplicate the state or federal regulation but seek to assure the implementation of the CARB Phase II EVR regulations on or before its deadline of April 1, 2009.

Reference - In adopting these proposed amendments, the AQMD Governing Board references the following statutes which AQMD hereby implements, interprets or makes specific: Health and Safety Code Sections §§40001 and 40440.

CONCLUSION

The proposed amendment to Rule 461 ensures the prompt implementation of Phase II EVR and establishes increments of progress to meet CARB Phase II EVR deadline by April 1, 2009. The rule amendment also ensures the air quality benefits associated from previous amendments in reducing the emissions of VOC and toxics (benzene) from gasoline transfer and dispensing operations in the AQMD.

REFERENCES

1. California Air Resources Board, "Enhanced Vapor Recovery, Staff Report" February 4, 2000, 117pp.
2. California Air Resources Board, "Update On Enhanced Vapor Recovery (EVR) and In-Station Diagnostics (ISD) at Gasoline Dispensing Facilities, Presentation" August 2, 2007.

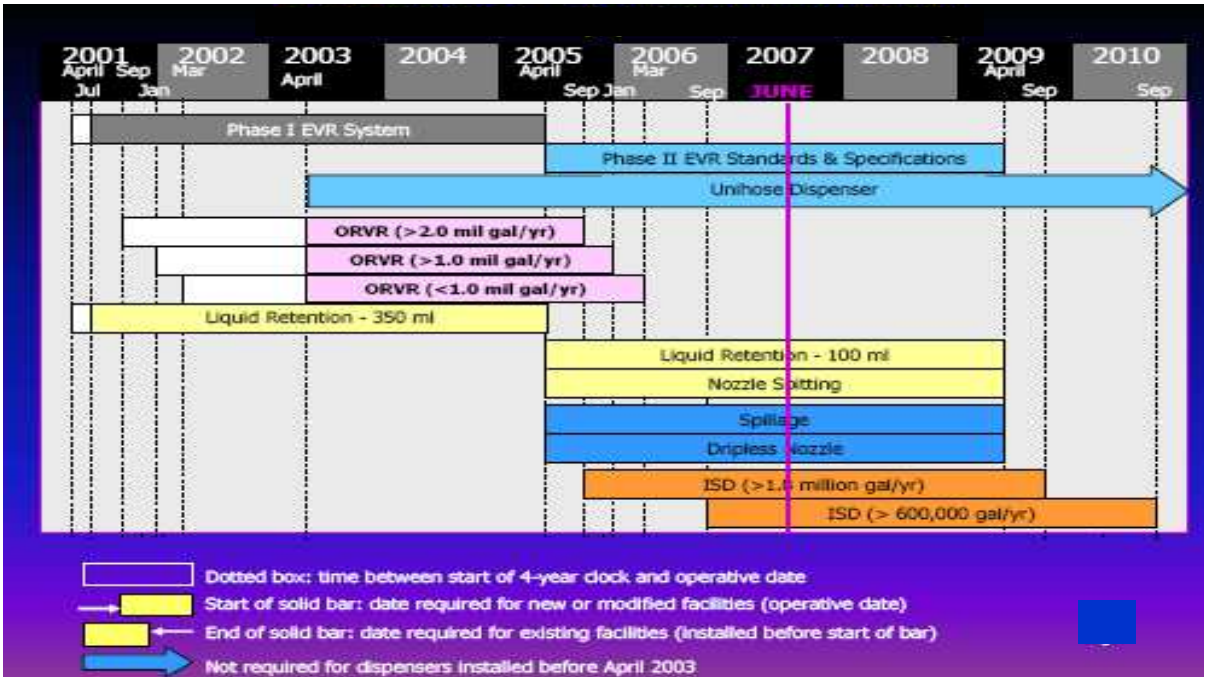
Appendix

Control Technology
Enhanced Vapor Recovery

Enhanced Vapor Recovery

The objectives of the EVR are to upgrade the performance standards for both Phase I and Phase II vapor recovery systems and provide GDFs with vapor recovery systems with enhanced leak control. The implementation of the EVR Phase I was completed in April 2005 and the implementation of Phase II are progressing. The EVR includes the following six modules for both Phase I and Phase II vapor recovery systems:

Figure 1 - EVR Timeline (Updated June 2006)



Module 1: Phase I Vapor Recovery

The objective of EVR Phase I is to improve the vapor recovery efficiency of Phase I from 95 percent to 98 percent which is equivalent to an emission limit of 0.15 lbs/1,000 gallons using a summer uncontrolled emissions rate of 7.6 lbs/1,000 gallons (CP-201, Section 3.1).

Presently, five EVR Phase I systems have been certified by CARB: Phil Tite (E.O. VR-101), OPW (E.O. VR-102), EBW (E.O. VR-103), CNI Manufacturing (E.O. VR-104), and EMCO Wheaton Retail (E.O. VR-105). All EVR Phase I certified systems include rotating adaptors, spill containment box, submerged fill tubes with side drain valves, pressure-vacuum (P/V) relief valves (threaded not slip-on). Additionally, the EVR requires that Phase I components must be compatible with fuel blends that are commonly used in California and that all connectors and fittings to be leak-free.

The EVR Phase I implementation started in April 2001 and was completed in April 2005. The VOC/toxic emission reductions associated with EVR Phase I implementation is estimated at 5.5

tons per day statewide and 2.41 tons per day in the AQMD. The emission reductions associated with the EVR Phase I in the AQMD is calculated based on the percentage of the total gallons of gasoline dispensed in the AQMD (7 billion per year) and the state (16 billion per year).

Module 2: Phase II Vapor Recovery

The EVR Phase II extends the certification tests and expands the tests requirements during certifications to thoroughly address the durability and reliability issues of the vapor recovery components. Additionally, the EVR limits the certification to four years with the renewal contingent on successfully addressing problems that have occurred during the four years.

The EVR Phase II systems comprise several new standards including ORVR compatibility, more stringent spillage and "dripless nozzles" requirements, in-station diagnostics, and storage tank pressure limits.

To control vapor pressure in the underground storage tanks (USTs) and minimize related fugitive emissions, the EVR established the USTs pressure profiles to monitor vapor pressure in the USTs during operations (excluding periods where pressure changes are due to Phase I operation such as a fuel drop). The pressure profiles include: 1) the daily average pressure shall not exceed 0.25 inches water column, 2) the daily high pressure shall not exceed 1.5 inches water column, and 3) the pressure difference during the non-excluded hours shall be within ± 0.05 inches water column. Upon the full implementation of the ISD systems, the pressure of the USTs will be continuously monitored. As provided in CP-201, systems certified under summer fuel conditions must meet both the efficiency and emission factor requirements. Systems certified using winter fuel must meet either the efficiency OR the emission factor.

EVR Phase II implementation commenced in April 2005 and is required by state law to be completed by April 2009. The VOC/toxic emission reductions associated with EVR Phase II (module 2) is estimated at 3.1 tons per day statewide and 1.36 tons per day in the AQMD.

Module 3: On-Board Refueling Vapor Recovery

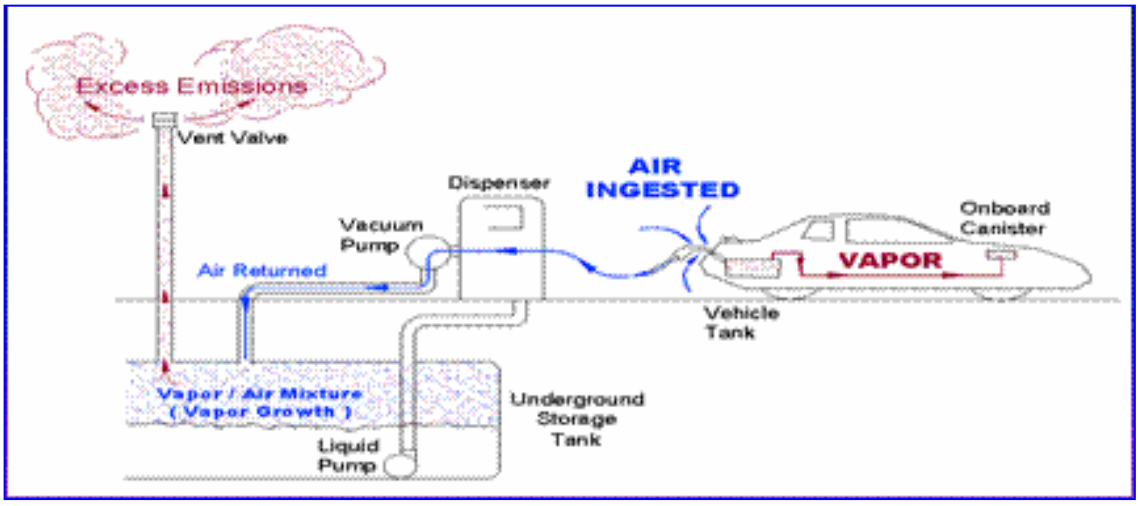
The ORVR is mandated by Title 13 California Code of Regulations (CCR), Section 1978 or 40 Code of Federal Regulation (CFR) Part 86. The ORVR systems were introduced in 1998 model vehicles and now it is required on new cars and light-duty trucks.

During motor vehicle refueling, the ORVR routes the vapors from the vehicle gas tank to an activated carbon packed canister, which adsorbs the vapors. The ORVR vapor recovery mechanism competes with the vapor pump function of the vacuum assist systems (such as Healy G-70-186), which may lead to air ingestion into the USTs, as illustrated in Figure (2). To avoid the air ingestion, the nozzles of the vacuum assist systems are equipped with sensors to detect the ORVR vehicles and the nozzle reduces the size of the vapor path to reduce the amount of air ingestion. The balance system does not utilize a vapor pump, so no forced air is ingested into the UST. During the vehicle operation, the ORVR draws the vapor (desorbs) into the engine intake and it is combusted.

The ORVR compatibility implementation started in April 2003 and was completed in April 2006. The VOC/toxic emission reductions associated with the ORVR compatibility is estimated

at 4.5 tons per day statewide and 1.97 tons per day in the AQMD.

Figure 2 – Potential Incompatibility of ORVR and Vacuum Assist System



Module 4: Liquid Retention and Nozzle Spitting

The liquid retention and nozzle spitting "pseudo spillage" is a previously unregulated source of VOC/toxic emissions. The emissions take place when liquid gasoline contained in the hanging hardware (nozzles and hoses) is allowed to evaporate into the atmosphere between the fueling of vehicles while the nozzle hangs on the dispenser.

The liquid retention limit of 350 ml/1,000 gallons was implemented in April 2001 and completed in April 2005. The liquid retention limits of 100 ml/1,000 gallons and the nozzle spitting requirements were implemented in April 2005 and scheduled to be completed in April 2009. The VOC/toxic emission reductions associated with the liquid retention and nozzle spitting is estimated at 0.2 tons per day statewide and 0.09 tons per day in the AQMD.

Module 5: Spillage and Dripless Nozzle

EVR reduced the spillage from 0.42 lbs/1,000 gallons to 0.24 lbs/1,000 gallons and limits the number of drops to one drop per fueling event.

Module 6: In-Station Diagnostics (ISD)

ISD provides continuous monitoring of important emission-related vapor recovery system parameters and components, and alerts the station operator when certain failure modes are detected so that corrective actions can be taken.

ISD provides two consecutive alerts; the first is the warning alert and the second is the failure alert. The warning alert requires the operator to notify a responsible company official or

designee, request service as soon as reasonably possible and keep records of the events. If the defective fueling points were not repaired, the failure alert will take place and will shutdown the defective fueling points of the entire system, in case of vapor recovery system failure. The failure alert requires the operator to repair or isolate and not use the defective fueling points and keeping records. The reset button of the ISD system shall not be used until all the defective fueling points are repaired or isolated and not used

The implementation of the ISD is phased-in based on the annual throughput of the GDFs. For GDFs with a throughput of more than 1.8 million gallons per year, the ISD implementation started in September 2005 and shall be completed by September 2009. For GDFs with a throughput of more than 600,000 gallons per year, the ISD implementation started in September 2006 and shall be completed by September 2010. The VOC/toxic emission reduction associated with the ISD implementation was estimated at 8.5 tons per day statewide and 3.72 tons per day in the AQMD.

The total VOC/toxic emission reductions associated with the implementation of EVR, including ISD, was estimated at 25.7 tons per day statewide and 11.24 tons per day in the AQMD.

CARB Certified Phase II EVR

I. Vacuum Assist Systems (Healy)

The Phase II EVR vacuum assist systems are manufactured by Franklin Fueling Systems (Healy) and was CARB certified on May 9, 2005. The certifications of the vacuum assist system include Executive Order VR-201-C for the Phase II EVR without the ISD and Executive Order VR-202-C for the Phase II EVR with the ISD.

The system major specifications include the Healy Model 900 nozzle, vapor collection, breakaway couplings, flow limiters and clean air separators.

The Healy Model 900 nozzle has an integral vapor valve to prevent the loss of vapor from the underground storage tank and prevent the ingestion of air into the system. The maximum allowable leak rates for the nozzle are 0.038 cubic feet per minute (CFM)) at a pressure of two inches water column and 0.10 CFM at a vacuum of one hundred inches water column.

The vapor to liquid (V/L) ratio of the system shall be 1.05 plus or minus 0.10 (0.95 to 1.15), measured at flow rate between six and ten gallons per minute (6.0-10.0 gpm).

In the event of a “drive off”, testing is required after reconnecting the breakaway to ensure proper operation and no observed leaks. The testing shall be conducted as specified in the Healy Systems Scheduled Maintenance Manual.

The flow limiter is required when the flow rate is greater than ten gallons per minute to comply with the U.S. EPA requirements.

The clean air separator is a passive tank pressure management system, with no electrical requirements. The separator shall be installed within 100 feet from the vent pipe(s), tested (leak-decay) and maintained vapor-tight and in proper operating configuration.

In the AQMD, as of January 9, 2008, there are 187 GDFs that have installed and are operating Phase II EVR vacuum assist systems. Additionally, there are approximately 700 permit applications pending for the Phase II.EVR vacuum assist systems and an additional 520 permits to construct have been issued.

II. Balance System (VST)

The EVR Phase II balance system without ISD is manufactured by the Vapor Systems Technology (VST) and was certified by CARB on November 5, 2007 (Executive Order VR-203-A). The Phase II EVR balance system with the ISD is scheduled for CARB certification in April 2008 (Executive Order VR-204 A).

Additionally, there are four Phase II EVR balance system permit applications pending and all include processors for ISD. The major components of the VST balance total system are:

VST ENVIRO-LOC Balance Nozzle

The VST balance nozzle, in general, is similar to the conventional balance nozzle that is currently in use. It includes both fluid and vapor passages and equipped with a boot, face plate and interlock device to assure a vapor-tight seal around the vehicle fill-pipe. The nozzle has an automatic shutoff to stop the liquid flow once the vehicle fill-pipe is filled with liquid. The new features of the VST balance nozzle are the positive seal of the vapor valve when the nozzle is not in use and a substantially dripless spout using a spring-based poppet valve.

VST ENVIRO-LOC Balance Vapor Recovery Hose Assembly

The VST balance system uses a coaxial hose assembly which includes an inner liquid hose 5/8 inch in diameter made of rubber, wire braid reinforcement and rubber outer cover and an outer vapor hose 1 ½ inches in diameter made of polyurethane. The hose assembly including the breakaway is around 10 feet long. The vapor hose includes a liquid removal device (VDV series) to remove condensate vapors and maintain a clear vapor path.

VST ENVIRO-LOC Balance Safety Breakaway

The breakaway device prevents substantial damage to the dispenser when a “drive off” occurs with the nozzle still in the vehicle fill-pipe. The VST breakaway consists of two halves, one attached to the whip hose and the other attached to the curb hose. The two halves of the breakaway are attached by two fracturable rings designed to break at 350 pounds load maximum. Each breakaway half has both fluid and vapor passages, and each passage has a spring-loaded poppet. Upon fracture of the rings and separation of the two halves, all of the spring-loaded poppets move to the seal position, which closes off both the liquid and vapor passages in both directions.

VST ENVIRO-LOC Balance ECS Membrane Processor

The VST ECS membrane processor controls the pressure in the UST to within limits specified by CARB. The membrane semi-permeability will allow air components such as oxygen, nitrogen, water vapor and less than 3.0 percent of hydrocarbon to vent to the atmosphere and concentrated hydrocarbon vapor to return to the UST. The membrane processor is designed to turn on

(operate) and off at 0.20 inch and -0.20 inch water column, respectively. Under normal operating conditions of the VST balance system, a negative pressure will be produced in the ullage space of the UST and the membrane processor will not need to operate. During periods of less activity, shutdown, presence of winter fuel (high vapor pressure), or other conditions that promotes the pressurization of the ullage, the membrane processor will operate to control the pressure in the ullage to an accepted level.