

## NOTICE OF FINAL RULEMAKING

### MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS REGULATION III – CONTROL OF AIR CONTAMINANTS

#### RULE 353: STORAGE AND LOADING OF GASOLINE AT A GASOLINE DISPENSING FACILITY

The Maricopa County Air Quality Department (MCAQD) revised Rule 353 (Storage and Loading of Gasoline at a Gasoline Dispensing Facility). The Control Officer is posting this Notice of Final Rulemaking on the MCAQD website as required by A.R.S. § 49-471.07(G). This notice includes the preamble, as prescribed in A.R.S. § 49-471.05, and the full text of the final rule. This notice also includes a list of all previous notices posted on the Maricopa County Enhanced Regulatory Outreach Program (EROP) website addressing the proposed rule and the concise explanatory statement prescribed in A.R.S. § 49-471.07, subsection B.

#### PREAMBLE

**1. Statutory authority for the rulemaking:**

A.R.S. §§ 49-112, 49-474, 49-479 and 49-480

**2. Name and address of department personnel with whom persons may communicate regarding the rulemaking:**

Name: Scott Kahldon or Kimberly Butler  
Maricopa County Air Quality Department  
Planning and Analysis Division

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Submit Comments At: <http://maricopa.gov/FormCenter/Regulatory-Outreach-17/Citizen-Comments-94>

**3. Rulemaking process:**

This rulemaking (AQ-2017-009-Rule 353) followed procedures identified in state statutes and the Maricopa County EROP Policy:

County Manager Briefing:	December 2017
Board of Health Meeting to Initiate Regulatory Change:	February 25, 2019
Stakeholder Workshops:	August 20, 2018 May 21, 2020
Notice of Proposed Rulemaking:	June 12, 2020
Board of Health Meeting to Recommend Approval to the Board of Supervisors:	July 27, 2020

Board of Supervisors Formal Meeting to set the  
Public Hearing:

October 07, 2020

Board of Supervisors Public Hearing:

November 18, 2020

**4. Explanation of the rule, including the control officer's reasons for initiating the rulemaking:**

Rule 353 limits emissions of volatile organic compounds (VOCs) during storage and loading of gasoline at a gasoline dispensing facility (GDF). Rule 353 applies to the storage and loading of gasoline in a stationary gasoline storage tank at a GDF with a capacity of more than 250 gallons, including, but not limited to underground gasoline storage tanks, above ground storage tanks, and those stationary gasoline storage tanks located at airports and marinas.

The MCAQD revised Rule 353 to address rule deficiencies identified by the U.S. Environmental Protection Agency (EPA) to secure full approval of Rule 353 as a revision to the Arizona State Implementation Plan (SIP).

On May 4, 2016, portions of Maricopa County were designated as a moderate nonattainment area with respect to the 2008 National Ambient Air Quality Standards for Ozone. Section 182(b)(2) of the Clean Air Act requires jurisdictions that are classified as "moderate" or higher nonattainment to implement reasonable available control technology (RACT) for all categories of VOC sources covered by a Control Technique Guideline (CTG) document as well as all other major stationary sources of VOCs that are located within in the nonattainment area. EPA defines RACT as "the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility". The EPA provides guidance on RACT for VOCs through their CTGs, which offer State and local air pollution control authorities information that assists in determining VOC-RACT for air quality rules. In addition, the EPA reviews SIP-approved air quality rules from other air districts with ozone nonattainment areas to assist in determining VOC-RACT for air quality rules.

In November 2016, Rule 353 was revised to implement RACT for sources of VOCs. The revised rule was submitted to the EPA in June of 2017, as part of the SIP Revision for the Maricopa County Air Quality Department Ozone Rules contained in the Arizona SIP. The EPA reviewed Rule 353 and provided the MCAQD with written rule approvability and rule improvement comments for the rule. EPA staff informed MCAQD staff they would be using a conditional approval process to act on Rule 353 and the MCAQD would need to draft a commitment letter outlining revisions to Rule 353 to address the rule approvability comments.

On January 28, 2019, the MCAQD submitted a Letter of Commitment for Conditional Approval of the Maricopa County RACT SIP to the EPA. Based on the commitment letter, the EPA published a proposed conditional approval of Rule 353 in the Federal Register on September 23, 2019 (Docket ID; EPA-R09-OAR-2019-0493). The proposed conditional approval rulemaking was available for a 30-day comment period, and two comments were submitted to the EPA. The proposed conditional approval referenced a Technical Support Document (TSD) which included a thorough review of Rule 353 and MCAQD's commitments. The TSD outlined EPA's two (2) official rule approvability comments ("rule deficiencies") - which precluded full approval of the rule into the SIP - as well as 13 rule revision recommendations, which were not the basis for rule disapproval but were

recommended for the rulemaking for Rule 353. Revisions addressing both the EPA's identified deficiencies and recommendations were made to Rule 353 (included in this notice). A link to EPA's TSD is located under Section 5 of this notice.

EPA's final conditional approval was published on February 26, 2020. The effective date of the final rule was March 27, 2020. The MCAQD plans to submit the revised rule to the EPA for approval and if the EPA approves the rule, the identified deficiencies will be cured, and the rule will be approved as part of the Arizona SIP.

Details about the EPA's identified deficiencies and the MCAQD's remedies are described below, followed by the EPA rule recommendations and the MCAQD's revisions to address the recommendations. One item to note is the rule deficiencies and rule recommendations are numbered the same way as they are numbered in the EPA Technical Support Document. The EPA Technical Support Document includes rule deficiencies and rule recommendations for both Rule 353 and Rule 352. As a result, the rule deficiencies and rule recommendations for Rule 353 do not start off with deficiency number 1 and rule recommendation number 1 because the deficiencies and rule recommendations for Rule 352 are listed first. The rule deficiencies for Rule 353 start off with deficiency number 8 and the rule recommendations start off with rule recommendation number 10.

#### Deficiency 8:

Section 103.2 exempts the loading of aviation gasoline at airports from the rule's gasoline transfer requirements. As this category is not exempted from other analogous California district rules or the applicable CTGs, this exemption should either be removed, or the District should demonstrate why it is necessary and how it will not interfere with RFP or other requirements of the Act.

#### Remedy 8:

The MCAQD corrected this deficiency by deleting Section 103.2, the exemption for the loading of aviation gasoline at airports.

#### Deficiency 9:

Section 103.6 exempts an owner or operator from verifying that the gasoline cargo tank has a valid MC vapor tightness certification decal and from verifying specified work practice requirements when loading gasoline, if the GDF is unattended or there is only one owner or operator present. As there may be one attendant at a GDF in many instances for a variety of reasons, this exemption is overly broad and challenging to verify or enforce. We recommend that the District remove, or narrow this exemption.

#### Remedy 9:

The MCAQD corrected this deficiency by adding Section 305.1 to specify that it is the responsibility of the owner or operator of a gasoline cargo tank equipped with vapor recovery, and the responsibility of the owner or operator of a gasoline storage tank equipped with vapor recovery to ensure that vapor recovery equipment is properly connected during the loading of gasoline. The MCAQD also deleted Section 103.6.

#### Recommendation 10:

Section 219 specifies vapor tight status is determined by a "suitable detector." We recommend clarifying or defining the term "suitable detector."

Revision 10:

The MCAQD revised and renumbered Section 219 to Section 218 and included specific types of detectors in the definition.

Recommendation 11:

Section 501.3 includes the term "certified operator," however the term is not defined in the rule. We recommend either defining or removing that term. Additionally, section 501.3 is confusing, as it requires a determination of whether a "vapor leak" exists whenever a "vapor leak" is detected. We recommend considering whether the second "vapor leak" reference should instead be "vapor tight condition."

Revision 11:

The MCAQD is not requiring that an operator of an Optical Gas Imaging (OGI) be certified but only that the OGI be calibrated prior to identifying a potential leak. The MCAQD revised Section 501.3 to clarify the use of an OGI.

Recommendation 12:

Section 505.1 references 40 CFR 60.18(g) for OGI. We recommend also referencing (h) and (i), as those parts also include relevant requirements when using an OGI.

Revision 12:

The MCAQD added subsections (h) and (i) to Section 506.1 to include the relevant requirements when using an OGI.

Recommendation 13:

Section 504.1(a) authorizes control efficiency to be determined by any "CARB-approved test methods." We recommend amending this provision to reference either EPA-approved CARB test methods, or the CARB test methods listed in section 505.3.

Revision 13:

The MCAQD revised the requirements in Section 504.1 to reference EPA-approved CARB test methods in Section 505.3 (renumbered to 506.3- EPA Approved CARB Certification and Test Procedures).

Recommendation 14:

We recommend adding 1) language that requires gasoline dispensing be discontinued immediately when any liquid leaks, visible vapors, or significant odors are observed and not be resumed until the observed issue is repaired, and 2) language that prohibits the use of a Stage I vapor recovery system that has any defects that substantially impair effectiveness of the vapor recovery equipment, including defects listed in R3-7-1007 (D), and applicable Stage I defects incorporated by reference in California Code of Regulation 94006.

Revision 14:

The MCAQD added Section 305.1.f to include the requirement to discontinue loading gasoline if a liquid or vapor leak is observed and Section 306.2.c to prohibit the use of a vapor recovery system that has any defects that substantially impair the effectiveness of the system.

Recommendation 15:

The CTG applicable to vapor recovery systems and cargo tanks includes the requirement that vapor collection and vapor processing equipment be designed and operated to prevent gauge pressure in the cargo tank from exceeding 18 inches of water and prevent vacuum from exceeding 6 inches of water. As the CTG is applicable to cargo tanks loading fuel at gasoline delivery facilities, we recommend including this requirement in Rule 353.

Revision 15:

The MCAQD added Section 305.2 to include a requirement for the owner or operator of the gasoline cargo tank to prevent gauge pressure in the cargo tank from exceeding 18 inches of water column and prevent vacuum from exceeding 6 inches of water column.

Recommendation 16:

Although the rule specifies Stage I vapor recovery system replacement components must be CARB certified (sections 301.1 and 305.2) and specifies certain components be CARB certified (sections, 305.2(b)-(d)), it is not clear whether the rule requires new Stage I vapor recovery installations be CARB certified. We recommend clarifying in the rule that for vapor recovery systems to be sold, or installed in the district, the vapor recovery system and piping must be CARB certified.

Revision 16:

The MCAQD deleted Section 301.1 and added Sections 303.1 and 303.6 to clarify that all vapor recovery components and systems are to be CARB-certified.

Recommendation 17:

Section 505.2(a) and (b) incorporate by reference ASTM D323-15a and ASTM D4953-15. EPA does not automatically approve the latest ASTM method for use. We recommend referencing the most recent ASTMs that are EPA-approved (ASTM D323-06 and ASTM D4953-06).

Revision 17:

The MCAQD renumbered Section 505.2 to Section 506.2 and revised the ASTM Standards to the EPA approved ASTM Standards.

Recommendation 18:

Section 301.1(a)(2) includes an "or" at the end of the provision, leading to ambiguity regarding whether all requirements in section 301.1 (a), (b), and (c) are required, or only requirements in section 301.1 (c) and (a) or (b). We recommend clarifying the requirement by deleting "or" in section 301.1(a)(2).

Revision 18:

The MCAQD deleted Section 301.1.a and added Section 303.6 to clarify the CARB component requirements.

Recommendation 19:

Section 303.1(j), 303.2(g), and 401.1(a) all refer to a spill containment receptacle, however the term is not defined. We recommend adding a definition for the term.

Revision 19:

The MCAQD added the definition of a “spill containment receptacle” in new Section 211.

Recommendation 20:

Section 501.1(e) references a required annual leak detection test in section 401, however, section 401 requires weekly inspections of various vapor recovery components, including checking vapor tight seals, and does not refer to an annual leak detection test. We recommend correcting or clarifying this reference.

Revision 20:

The MCAQD deleted this requirement since it is not applicable to this rule nor included in the SIP approved Rule 353.

Recommendation 21:

Section 504.3(c) references weekly inspections in section 305.2, however, section 305.2 does not require weekly inspections. We recommend reviewing whether section 401 should be referenced instead.

Revision 21:

The MCAQD renumbered Section 504.3 to Section 505.3 and revised the reference to Section 401 (Inspections) instead of Section 305.2.

Recommendation 22:

Section 505.1(d) references EPA Method 25 and its submethods in 40 CFR 60, Appendix A. It is not clear which "submethods" the District intends to reference (e.g., EPA method 25A, 25B, 25C, 25D, or 25E). We recommend clarifying this provision by referring specifically to the intended test method.

Revision 22:

The MCAQD deleted the phrase “and its submethods” and added EPA Methods 25A and 25B to the list of EPA Test Methods in Section 506.1 in order to clarify the submethods that are applicable to Rule 353.

Additional revisions were made to address stakeholder and staff comments, which can be discerned in the “strikeout and underline” version of the rule included in this notice and described in all Stakeholder Workshop notices and workshop slides/presentations that are posted on the EROP website.

**5. Studies relied on in the control officer's evaluation of or justification for the rule and where the public may obtain or review the studies, all data underlying the studies, any analysis of the studies and other supporting material.**

United States Environmental Protection Agency Region IX Air Division (2019). Technical Support Document for EPA's Rulemaking for the Arizona State Implementation Plan Regarding Rule 353, "Storage and Loading of Gasoline at Gasoline Dispensing Facilities."

<https://www.regulations.gov/document?D=EPA-R09-OAR-2019-0493-0003>

U. S. Environmental Protection Agency, "Design Criteria for Stage I Vapor Control Systems – Gasoline Service Stations" November, 1975,

[https://www3.epa.gov/airquality/ctg\\_act/197511\\_voc\\_epa450\\_r-75-102\\_stage-1\\_service\\_stations.pdf](https://www3.epa.gov/airquality/ctg_act/197511_voc_epa450_r-75-102_stage-1_service_stations.pdf)

**6. An economic, small business and consumer impact statement:**

The following discussion addresses each of the elements required for an economic, small business and consumer impact statement, as prescribed by A.R.S. §§ 41-1055, subsections A, B and C, and 41-1035:

**An identification of the rulemaking, including all of the following:**

This rulemaking revised Rule 353.

**(a) The conduct and its frequency of occurrence that the rule is designed to change.**

The MCAQD revised Rule 353 to remedy deficiencies identified by the EPA. This rulemaking is required to secure approval of Rule 353 into the Arizona SIP. The revisions are explained in more detail in Item #4 of this notice.

**(b) The harm resulting from the conduct the rule is designed to change and the likelihood it will continue to occur if the rule is not changed.**

The MCAQD revised Rule 353 to remedy deficiencies identified by the EPA. This rulemaking is required to secure approval of Rule 353 into the Arizona SIP and avoid sanctions and imposition of a Federal Implementation Plan (FIP) under the Clean Air Act.

**(c) The estimated change in frequency of the targeted conduct expected from the rule change.**

The MCAQD revised Rule 353 to remedy deficiencies identified by the EPA. This rulemaking is required to secure approval of Rule 353 into the Arizona SIP. As with other rules, the MCAQD will use education, outreach, and other compliance assurance tools to increase the number of people in compliance with the revised rule. The MCAQD strives to achieve the highest possible compliance rates.

**A brief summary of the information included in the economic, small business and consumer impact statement.**

The economic, small business and consumer impact statement addresses each of the elements required for an economic, small business and consumer impact statement, as prescribed by A.R.S. §§ 41-1055, subsections A, B and C, and 41-1035.

**Name and address of agency employees who may be contacted to submit or request additional data on the information included in the economic, small business and consumer impact statement.**

Name: Scott Kahldon or Kimberly Butler  
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Planning and Analysis Division

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Phoenix, AZ 85012

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Fax: (602) 506-6179

Email: AQPlanning@maricopa.gov

Submit Comments At: <http://maricopa.gov/FormCenter/Regulatory-Outreach-17/Citizen-Comments-94>

**An identification of the persons who will be directly affected by, bear the costs of or directly benefit from the rulemaking.**

This rulemaking will directly affect businesses in Maricopa County that store and load gasoline in a stationary gasoline storage tank at a GDF with a capacity of more than 250 gallons, including, but not limited to underground gasoline storage tanks, above ground storage tanks, and those stationary gasoline storage tanks located at airports and marinas.

The revised Rule 353 updates and clarifies existing rule provisions and definitions to reduce confusion and improve understanding and readability. The MCAQD considered the implications of the amendments to the regulated entities, and the implementing agency considers none of the rule revisions have potentially significant economic impacts.

**A cost benefit analysis of the following:**

**(a) The probable costs and benefits to the implementing agency and other agencies directly affected by the implementation and enforcement of the rulemaking.**

This rulemaking should not impose any new costs on the MCAQD or on any other agencies affected by the rulemaking.

**(b) The probable costs and benefits to a political subdivision of this state directly affected by the implementation and enforcement of the rulemaking.**

This rulemaking should not impose any new costs on political subdivisions of this state affected by the rulemaking.

**(c) The probable costs and benefits to businesses directly affected by the rulemaking, including any anticipated effect on the revenues or payroll expenditures of employers who are subject to the rulemaking.**

The MCAQD revised Rule 353 to remedy deficiencies identified by the EPA. This rulemaking is required to secure approval of Rule 353 into the Arizona SIP for RACT and avoid sanctions and imposition of a FIP under the Clean Air Act.

The MCAQD anticipates that increased clarity provided by the Rule 353 revisions will provide a benefit to the regulated community; it will take less time for sources subject to



the rule to understand and comply with the rule, which leads to increased compliance, which leads to decreased costs of compliance to the regulated community. The MCAQD does not anticipate these rule revisions to have a significant impact on a person's income, revenue, or employment in this state.

**A general description of the probable impact on private and public employment in businesses, agencies and political subdivisions of this state directly affected by the rulemaking.**

This rulemaking should have no impact on private or public employment in businesses, agencies, and political subdivisions of this state.

**A statement of the probable impact of the rulemaking on small businesses. The statement shall include:**

**(a) An identification of the small businesses subject to the rulemaking.**

Small businesses subject to this rulemaking are those in Maricopa County that store and load gasoline in a stationary gasoline storage tank at a GDF with a capacity of more than 250 gallons, including, but not limited to underground gasoline storage tanks, above ground storage tanks, and those stationary gasoline storage tanks located at airports and marinas.

**(b) The administrative and other costs required for compliance with the rulemaking.**

This rulemaking updates and clarifies existing rule provisions and definitions to reduce confusion and improve understanding and readability. The MCAQD considered the implications of the amendments to the regulated entities and the implementing agency and deemed that none of the rule revisions have potentially significant economic impacts.

**(c) A description of the methods that the agency may use to reduce the impact on small businesses.**

**i. Establish less stringent compliance or reporting requirements in the rule for small businesses.**

This rulemaking does not impose any significant new compliance requirements on small businesses and does not establish any significant new reporting requirements for small businesses.

**ii. Establish less stringent schedules or deadlines in the rule for compliance or reporting requirements for small businesses.**

This rulemaking does not impose any significant new compliance requirements on small businesses and does not establish any significant new reporting requirements for small businesses.

**iii. Consolidate or simplify the rule's compliance or reporting requirements for small businesses.**

This rulemaking does not impose any significant new compliance requirements on small businesses and does not establish any significant new reporting requirements for small businesses.

**iv. Establish performance standards for small businesses to replace design or operational standards in the rule.**

This rulemaking is unlikely to impose any new design or operational requirements on small businesses.

**v. Exempt small businesses from any or all requirements of the rule.**

This rulemaking does not impose any significant new requirements on small businesses.

**(d) The probable cost and benefit to private persons and consumers who are directly affected by the rulemaking.**

This rulemaking should not result in any significant costs for private persons and consumers.

**A statement of the probable effect on state revenues.**

The rulemaking will not impose increased monetary or regulatory costs on other state agencies, political subdivisions of this state, persons, or individuals so regulated. Without costs to pass through to customers, there is no projected change in consumer purchase patterns and, thus, no impact on state revenues from sales taxes.

**A description of any less intrusive or less costly alternative methods of achieving the purpose of the rulemaking, including the monetizing of the costs and benefits for each option and providing the rationale for not using nonselected alternatives.**

The purpose of this rulemaking was to revise Rule 353 to remedy deficiencies identified by the EPA. This rulemaking is required to secure approval of Rule 353 into the State Implementation Plan (SIP) for RACT and avoid sanctions and imposition of a Federal Implementation Plan (FIP) under the Clean Air Act.

**A description of any data on which a rule is based with a detailed explanation of how the data was obtained and why the data is acceptable data.**

Not applicable.

**7. The effective date of the rule:**

The effective date of this rulemaking was November 18, 2020.

**8. Such other matters as are prescribed by statute and that are applicable to the county or to any specific rule or class of rules:**

Under A.R.S. § 49-479(C), a county may not adopt a rule or ordinance that is more stringent than the rules adopted by the Director of the Arizona Department of Environmental Quality (ADEQ) for similar sources unless it demonstrates compliance with the applicable requirements of A.R.S. §49-112.

§ 49-112 County regulation; standards

§ 49-112(A)

When authorized by law, a county may adopt a rule, ordinance or regulation that is more stringent than or in addition to a provision of this title or rule adopted by the director or any board or commission authorized to adopt rules pursuant to this title if all of the following requirements are met:

1. The rule, ordinance or regulation is necessary to address a peculiar local condition.
2. There is credible evidence that the rule, ordinance or regulation is either;
  - (a) Necessary to prevent a significant threat to public health or the environment that results from a peculiar local condition and is technically and economically feasible.
  - (b) Required under a federal statute or regulation, or authorized pursuant to an intergovernmental agreement with the federal government to enforce federal statutes or regulations if the county rule, ordinance or regulation is equivalent to federal statutes or regulation.
3. Any fee or tax adopted under the rule, ordinance or regulation does not exceed the reasonable costs of the county to issue and administer the permit or plan approval program.

§ 49-112(B)

When authorized by law, a county may adopt rules, ordinances or regulations in lieu of a state program that are as stringent as a provision of this title or rule adopted by the director or any board or commission authorized to adopt rules pursuant to this title if the county demonstrates that the cost of obtaining permits or other approvals from the county will approximately equal or be less than the fee or cost of obtaining similar permits or approvals under this title or any rule adopted pursuant to this title. If the state has not adopted a fee or tax for similar permits or approvals, the county may adopt a fee when authorized by law in the rule, ordinance or regulation that does not exceed the reasonable costs of the county to issue and administer that permit or plan approval program.

The MCAQD is in compliance with A.R.S. §§ 49-112(A) and (B). Rule 353 meets A.R.S. § 49-112(A)(1) by demonstrating that the rule is necessary to address a peculiar local condition, in that Maricopa County fails to meet the 2008 8-hour NAAQS for ozone. Rule 353 meets the requirements of A.R.S. § 49-112(A)(2)(b), in that Maricopa County is required by federal law to revise existing rules to address RACT for the Storage and Loading of Gasoline at Gasoline Dispensing Facilities. As there is no new fee or tax associated with this rulemaking, the MCAQD also affirms that Rule 353 meets the requirements of A.R.S. § 49-112 (A)(3) and A.R.S § 49-112 (B).

**9. List of all previous notices posted to the Maricopa County EROP website addressing the rule and a concise explanatory statement, as prescribed by A.R.S. § 49-471.07, subsection B:**

**(a) List of all previous notices posted to the Maricopa County EROP website addressing the rule:**

<u>Notice</u>	<u>Date of Posting</u>
Briefing Notification to County Manager	January 26, 2018
Notice of Stakeholder Workshop	August 03, 2018
	May 5, 2020

Notice of Board of Health Meeting to Initiate Regulatory Change:	February 08, 2019
Notice of Proposed Rulemaking	June 12, 2020
Notice of Board of Health Meeting to Make Recommendation to the Board of Supervisors:	July 13, 2020
Notice of Public Hearing	October 7, 2020

**(b) The following discussion addresses each of the elements required for a concise explanatory statement, as prescribed by A.R.S. § 49-471.07, subsection B:**

**i. A description of any change between the proposed rule or ordinance, the final rule or ordinance or notice of final supplemental rule or ordinance.**

The following changes were made after the Notice of Proposed Rulemaking was published on June 12, 2020.

1. The MCAQD added the word “CARB” to Section 306.2.c(1) to clarify equipment maintenance and use requirements. The section reads as follows:

Section 306.2.c(1): Tank vent pipes that are not the proper height or properly capped with CARB-approved pressure and vacuum vent valves.

2. The MCAQD added a definition for Vapor Recovery System (VR System) to Section 218 to clarify the use of the term in the rule. The 2016 version of Rule 353 contains a definition similar to this definition. The definition reads as follows:

Section 218: VAPOR RECOVERY SYSTEM (VR SYSTEM): At a stationary GDF, the use of installed vapor recovery equipment designed to reduce by at least 95% the VOC vapor that would otherwise be displaced into the atmosphere from a stationary gasoline dispensing tank when gasoline is delivered into the tank by a gasoline cargo tank. This reduction may be done either by using a vapor balance system or by processing the vapors on site with an emission processing device.

3. The MCAQD revised the section number for Vapor Tight from 218 to 219 due to the addition of the definition of Vapor Recovery System (VR System).
4. The MCAQD removed the requirement that only a State of Arizona licensed Vapor Recovery Registered Service Representative can install an above ground or underground storage tank or vapor recovery system components as state rules do not require the installation of vapor recovery equipment to be performed by a State of Arizona Licensed Vapor Recovery Registered Service Representative. Only vapor recovery testing is required to be performed by licensed personnel. This requirement was numbered Section 302.1 in the draft rule included in the Notice of Proposed Rulemaking.
5. The MCAQD revised section 303.1 to clarify a CARB-certified VR system must also be operated and maintained per the applicable CARB Executive Orders. The section reads as follows:

303.1 Install, operate, and maintain a CARB-certified VR System per the applicable CARB Executive Orders including the corresponding CARB approved Installation, Operation and Maintenance Manual.

6. The MCAQD deleted “vapor loss control equipment” in Section 306.1 and replaced it with the term “VR system” to make the requirement more specific. The section reads as follows:

306.1 Gasoline vapors displaced from a stationary gasoline storage tank during the loading of gasoline, shall be handled by a CARB-certified VR System.

**ii. A summary of the comments and arguments for and against the notice and the county’s response to the comments and arguments.**

The following discussion evaluates the arguments for and against the rule and includes responses to comments received on the rule or the preamble in the Notice of Proposed Rulemaking. The MCAQD received written comments from three stakeholders. All of the comments were reviewed and evaluated by the MCAQD.

**Comment #1:** Attached is my redlined Rule 353 mainly done to clarify the questions we had during our meeting today.

[Redlined Rule 353 provided by the commenter](#)

**Response #1:** Below is a response to each proposed revision in the redlined Rule 353 provided by the commenter. Proposed revisions in the redlined Rule 353 are numbered in the right-hand margin and a response to each numbered revision is listed below. Each response is linked to the proposed revision it corresponds to in the redlined Rule 353.

- 1.1 The MCAQD considered your proposal about adding an exemption for “portable gasoline dispensing tanks” and determined the addition of the exemption to the rule was not necessary. Having said that, the MCAQD revised the definition of “stationary gasoline storage tank” to further clarify which stationary gasoline storage tanks are regulated under the rule. The phrase: “Any such tank that is connected to permanent piping and not moved to another service location within any twelve (12)-month period will be considered a stationary gasoline storage tank” was added to the definition. The MCAQD believes the addition of this phrase will help stakeholders understand which gasoline storage tanks are regulated under this rule.
- 1.2 The MCAQD considered your proposed revision to the definition of stationary gasoline dispensing tank and made a revision to the definition similar to what you proposed. First, the MCAQD revised the term itself to “stationary gasoline storage tank”. Second, the MCAQD added the phrase: “Any such tank that is connected to permanent piping and not moved to another service location within any twelve (12)-month period will be considered a stationary gasoline storage tank” to the definition. The MCAQD believes the addition of this phrase will help stakeholders understand which gasoline storage tanks are regulated under this rule.
- 1.3 The MCAQD considered your proposed revision and added the date December 2, 2016 to the provision to clarify the date by which a newly manufactured above ground storage tank must have a spill containment receptacle installed.

- 1.4 The MCAQD considered your proposed revision but did not remove the term “approved”.
- 1.5 The MCAQD considered your proposed revision but did not add the proposed language; however, the MCAQD revised some of the language under the section titled “Determining Vapor Tight Status” (section 502) for further clarity. The language states: “An owner or operator or Control Officer shall follow the test procedure in Section 502.1 to determine the vapor tight status of vapor loss control equipment or spill containment equipment at a stationary GDF or on a gasoline cargo tank.”
- 1.6 The MCAQD considered your proposed revision and determined the term “substantial” is too subjective; therefore, the language was not added.

**Comment #2:** [Our Company] supports the proposed rule changes for 350, 351, 352, and 353. [Our Company] would also like to recommend that the rules include a definition for "Mobil Storage Tank" to address the use of Mobil fueling stations that are on the order of a few thousand gallons in capacity.

**Response #2:** The MCAQD thanks you for your support of the proposed rule changes to Rules 350, 351, 352 and 353. Regarding your comment about adding a definition of “mobile storage tank”, the MCAQD considered your comment and determined the addition of this term to the rules was not necessary. Having said that, the MCAQD revised the definition of “stationary gasoline storage tank” in Rule 353, and added the same revised definition to Rule 352, to further clarify which stationary gasoline storage tanks are regulated under the rules. The phrase: “Any such tank that is connected to permanent piping and not moved to another service location within any twelve (12)-month period will be considered a stationary gasoline storage tank” was added to the definition. The MCAQD believes the addition of this phrase will help stakeholders understand which gasoline storage tanks are regulated under this rule. A similar revision to the definition of “stationary gasoline storage tank” was not made to rule 350 because gasoline is not regulated under Rule 350 and was not made to Rule 351 because it regulates the storage of large quantities of gasoline.

**Comment #3:** MCAQD will now require stage I for aviation gasoline (removing exemption for airports). State rules define a motor vehicle as one that does not ride on rails or through the air.

**Response #3:** The MCAQD removed the exemption for the loading of aviation gasoline at airports in order to remedy a deficiency identified by the EPA in their September 23, 2019 rulemaking on Rule 353.

**Comment #4:** The MCAQD definition of GDF is much more broad than the state definition. MCAQD Section 206 - Gasoline dispensing facility means any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine, including a nonroad vehicle or nonroad engine used solely for competition. These facilities include, but are not limited to, facilities that dispense gasoline into on- and off-road, street, or highway motor vehicles, lawn equipment, boats, test engines, landscaping equipment, generators, pumps, and other gasoline fueled engines and equipment. [40 CFR § 63.11132] This includes all stationary gasoline storage tanks and associated equipment located on

one or more contiguous or adjacent properties under the control of the same owner or operator under common control.). 2. ARS 3-3511 - "Gasoline dispensing site" means any site where gasoline is dispensed into a motor vehicle fuel tank from any stationary storage vessel. AAZ R3-7-1010 "Motor vehicle" means any vehicle equipped with a spark-ignited internal combustion engine, except vehicles that run on or are guided by rails, and vehicles that are designed primarily for travel through air or water.

**Response #4:** The MCAQD's definition for GDF closely matches the definition for GDF found in 40 CFR § 63, Subpart CCCCCC—National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities. The MCAQD retained this definition in order to maintain consistency between local and federal definitions.

**Comment #5:** The definition of CARB approved may differ. Under state statutes, both pre-EVR and EVR CARB equipment is allowed. Therefore, we interpret this to mean that if CARB approved equipment at some point in time, it is allowed for use in Arizona even if CARB no longer allows the equipment to be used. Under the MCAQD rule, it could be interpreted that only equipment currently certified by CARB may be used. When CARB issues new executive orders, they supersede previous executive orders issued and site owners have 4 years to replace any equipment that is no longer certified under the new executive order. Additionally, CARB no longer allows the use of any pre-EVR equipment. If this interpretation is taken by MCAQD, I would venture to guess that much equipment in use in Arizona would need replaced.

**Response #5:** The MCAQD definition of CARB-CERTIFIED in rule 353 states: "A vapor control system, subsystem, or component that has been specifically approved by system configuration and manufacturer's name and model number in an executive order of the California Air Resources Board (CARB), pursuant to Section 41954 of the California Health and Safety Code." The key phrase in this definition is "has been specifically approved" indicating equipment approved under previous executive orders are allowed. The definition does not use the term "currently" certified.

**Comment #6:** I believe MCAQD used to require vapor testing for ethanol flex fuel (EFF, formerly E85). It appears the definition of gasoline has been removed. Does that mean EFF tanks no longer require vapor testing?

**Response #6:** MCAQD reviewed previous versions of Rule 353 and did not see any provisions specific to vapor testing for ethanol flex fuel, nor does the 2016 version of the rule contain a provision specific to vapor testing for ethanol flex fuel. The definition of gasoline was removed from Rule 353 because it was added to Rule 100 (General Provisions and Definitions) of the Maricopa County Air Pollution Control Rules and Regulations.

**Comment #7:** State rules do not require the installation of vapor recovery equipment to be performed by a State of Arizona Licensed Vapor Recovery Registered Service Representative. Only vapor testing is required to be performed by licensed personnel. For this reason, we have many (possibly most of) construction contractors that are not licensed with our agency. Rule 302.1.

**Response #7:** The MCAQD deleted section 302.1 as the state rules do not require the installation of vapor recovery equipment to be performed by a State of Arizona Licensed Vapor Recovery Registered Service Representative.

**Comment #8:** Rule 303.5 - After November 2, 2016, clearly identify each new or newly installed component with a permanent identification affixed by the certified manufacturer or rebuilder. This appears to be retroactive, requiring all equipment to be identified. This might be difficult for some older equipment. Recommend, for equipment installed after November 2, 2016.

**Response #8:** The language in Section 303.5 is not intended to be retroactive and will not be enforced retroactively.

**Comment #9:** It appears you are moving away from the use of the term "Stage I Vapor Recovery System" to instead use "Vapor loss control equipment." Not sure if 103.2 should be changed to state "Vapor Loss Control Equipment" instead of "Vapor Recovery System (VR System)

**Response #9:** The MCAQD added a definition for Vapor Recovery System (VR System) to clarify the use of the term in the rule. The 2016 version of Rule 353 contains a definition similar to this definition.

**Comment #10:** Section 306.2(C)(1) - may want to specify CARB-approved pressure and vacuum vent valves.

**Response #10:** The MCAQD added the word "CARB" to Section 306.2(C)(1) to clarify the meaning of the term "approved" in the provision.

**Comment #11:** Inspection frequency/content and exemption throughputs may differ slightly.

**Response #11:** The MCAQD is aware there are slight differences between this language and the State statute; however, most of this language has been incorporated into the Arizona State Implementation Plan so the MCAQD retained these requirements as is.

**Comment #12:** Rule 401(a)(7) requires inspections by site operators to evaluate if a site is vapor tight. The requirement to look for a leak using site, sound, smell, or soapy water as indicated in Section 501 appears to be reasonable. However, if they think they might have a leak, they are instructed to follow Section 502, which requires a Combustible Gas Detector or Organic Vapor Analyzer. I am not sure it seem reasonable for sites to own and operate this type of equipment. I do not know if testing companies have this equipment as it is not required for our annual testing. This would differ from our rules, which require CARB-certified test procedures for the equipment to be followed when determining if the equipment meets the collection efficiency mandated by CARB.

**Response #12:** The MCAQD considered your comment and is aware there are differences in the equipment used for the test procedures in determining a vapor tight status; however, this requirement is in the SIP and has been in this rule since the 1990's. Many other air districts contain a similar requirement for determining vapor tight status. In addition, all facilities are not required to own this type of equipment,



only to have access to one if they identify a leak at the facility. Therefore, no changes were made.

**Comment #13:** The State does not incorporate any EPA, any ASTM, or CARB test methods TP 201.1, TP 201.1A. Additionally, we do not allow Bay Area or San Diego test procedures. An annual test is required at all regulated sites using CARB test procedures for the 2" Pressure Decay (TP 201.3), the PV Vent Valve cracking pressure and leak rate ( TP 201.1E), and the Tie-tank test (TP 201.3C).

**Response #13:** The MCAQD considered your comment and appreciates your observation, but the MCAQD maintained the test methods incorporated within the rule.

## EXACT WORDING OF THE RULE

### MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS REGULATION III – CONTROL OF AIR CONTAMINANTS

#### RULE 353 STORAGE AND LOADING OF GASOLINE AT A GASOLINE DISPENSING ~~FACILITIES~~ FACILITY (GDF)

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Revised 07/13/1988; Revised 04/06/1992; Revised 06/16/1999; Revised 09/25/2013; Revised 11/02/2016; and **Revised 11/18/2020**

**MARICOPA COUNTY  
AIR POLLUTION CONTROL REGULATIONS  
REGULATION III – CONTROL OF AIR CONTAMINANTS**

**RULE 353  
STORAGE AND LOADING OF GASOLINE AT A GASOLINE DISPENSING FACILITIES FACILITY (GDF)**

**SECTION 100 – GENERAL**

- 101 PURPOSE:** To limit emissions of volatile organic compounds (VOCs) during storage and loading of gasoline at a gasoline dispensing ~~facilities~~ facility (GDF).
- 102 APPLICABILITY:** This rule applies to the storage and loading of gasoline in a stationary gasoline storage tank at an owner or operator who operates a gasoline dispensing facility (GDF) at which gasoline is stored in and loaded into stationary gasoline dispensing tanks with a capacity of more than 250 gallons (946 l); including, but not limited to underground gasoline storage tanks, above ground storage tanks, and those stationary gasoline storage tanks located at airports and marinas.
- 103 EXEMPTIONS:**
- 403.1 This rule does not apply to the storage and loading of the following fuels:
- a. Diesel.
  - b. Liquefied petroleum gas (LPG).
- 403.2 ~~Aviation Gasoline Loaded At Airports: The loading of aviation gasoline into stationary storage tanks at airports, and the subsequent loading of aviation gasoline within the airport, is exempt from Section 304 and Section 305.1 of this rule. The storage of aviation gas at airports is subject to this rule.~~
- 403.3 ~~Bulk Gasoline Plant Or Bulk Gasoline Terminal: This rule does not apply to a bulk gasoline plant or a bulk gasoline terminal as defined in Rule 351 of these rules.~~
- 403.4 **103.1 Stationary Gasoline Dispensing Storage Tanks for Farm Operations:** An owner or operator of a Any stationary gasoline dispensing storage tank used exclusively for the dispensing of fuel into fueling of implements of agricultural equipment used in normal farm operations must comply with Section 302 is only subject to Sections 302.3 through 302.8. (General Housekeeping Requirements), but is exempt from all other requirements of this rule.
- 403.5 **103.2 Stage 1 Vapor Recovery System (VR System):** The VR System system provisions of Section 305 of this rule Section 303 (General Requirements for Controlling Gasoline Vapors at a Gasoline Dispensing Facility (GDF)) shall not apply to the following a gasoline dispensing facility that meets the requirements of 103.2.a. or a stationary gasoline dispensing tanks storage tank that meets the requirements of 103.2.b.

- a. **Non-Resale Gasoline Dispensing Facilities Facility:** Any stationary GDF receiving less than 120,000 gallons (454,250 l) of gasoline in any twelve (12) consecutive calendar months, dispensing no resold gasoline, and having each stationary gasoline dispensing tank equipped with a permanent submerged fill pipe, is exempt from Section 305 of this rule. A facility shall become subject to the provisions of Section 305 of this rule by exceeding the 120,000 gallon (454,250 l) threshold and shall remain subject to such provisions even if annual amount of gasoline received later falls below this threshold.
- (1) Has a throughput of less than 120,000 gallons of gasoline in any twelve (12) consecutive calendar months.
  - (2) Does not dispense any resold gasoline.
  - (3) Is equipped with a permanent submerged fill pipe. Where, because of government regulation including, but not limited to, Fire Department codes, a permanent submerged fill pipe cannot be installed, the gasoline shall be loaded into the tank using a nozzle extension that reaches within six inches (6") of the tank bottom.
  - (4) Shall become subject to the provisions of Section 303 (General Requirements For Controlling Gasoline Vapors at a Gasoline Dispensing Facility (GDF)) by meeting or exceeding the 120,000 gallon throughput in any twelve (12) consecutive calendar months and shall remain subject to such provisions even if annual throughput later falls below this threshold.
- b. **Stationary Gasoline Storage Tank:** Tanks With a Capacity of 1000 Gallons Or Less: Any stationary gasoline storage tank having a capacity of 1000 gallons or less which was installed prior to October 2, 1978, provided that such tank is equipped with a permanent submerged fill pipe is exempt from Section 306 (Control of VOC Vapors) of this rule. Where, because of government regulation including, but not limited to, Fire Department codes, a permanent submerged fill pipe cannot be installed, the gasoline shall be loaded into the stationary gasoline storage tank using a nozzle extension that reaches within six inches (6") of the tank bottom.
- (1) Has a capacity of 1000 gallons or less.
  - (2) Was installed prior to October 2, 1978.
  - (3) Is equipped with a permanent submerged fill pipe. Where, because of government regulation including, but not limited to, Fire Department codes, a permanent submerged fill pipe cannot be installed, the gasoline shall be loaded into the tank using a nozzle extension that reaches within six inches (6") of the tank bottom.

403.6 **Loading Of Gasoline:** The owner or operator of a stationary GDF that is unattended or when there is only one owner or operator under control of the stationary GDF present, the owner or operator of the stationary GDF is exempt from Section 304 of this rule.

**SECTION 200 – DEFINITIONS:** For the purpose of this rule, the following definitions shall apply, in addition to those definitions found in Rule 100 (General Provisions and Definitions) of

~~these rules. the Maricopa County Air Pollution Control Rules and Regulations.~~ In the event of any inconsistency between any of the Maricopa County ~~air pollution control rules,~~ Air Pollution Control Rules and Regulations, the definitions in this rule take precedence.

~~201 AVIATION GASOLINE (AVGAS): A type of gasoline used to fuel a piston engine aircraft.~~

~~202~~ **201 CARB-CERTIFIED:** A vapor control system, subsystem, or component that has been specifically approved by system configuration and manufacturer's name and model number in an executive order of the California Air Resources Board (CARB), pursuant to Section 41954 of the California Health and Safety Code.

~~203~~ **202 COAXIAL VAPOR BALANCE SYSTEM:** A type of vapor balance system in which the gasoline vapors are removed through the same ~~opening through which~~ fill pipe connection as the fuel is delivered.

~~204~~ **203 DUAL-POINT VAPOR BALANCE SYSTEM:** A type of vapor balance system in which the ~~storage stationary gasoline storage~~ tank is equipped with an entry port for a gasoline fill pipe and a separate exit port for a vapor connection.

~~205~~ **204 EXCESS GASOLINE DRAINAGE:** ~~More than 10 milliliters (2 teaspoonsful) of liquid gasoline lost from the end of a fill hose or vapor hose in the process of connecting or disconnecting the hose; or any quantity of gasoline escaping out the end of such a hose that wets any area(s) on the ground having an aggregate area greater than 113 square inches, or the perimeter of which would encompass a circle of 12 inches (30.5 cm) diameter. This does not include drainage into a fill pipe's spill containment receptacle. The quantity of gasoline that drains out of the end of a gasoline loading hose or gasoline vapor recovery hose during the process of connecting or disconnecting that is one or more of the following:~~

**204.1** More than 0.34 fluid ounces or two teaspoonsful (2 tsp) of liquid gasoline lost from the end of the gasoline loading hose or gasoline vapor recovery hose. This does not include drainage into a fill pipe's spill containment receptacle.

**204.2** Wets any area(s) on the ground having an aggregate area greater than 113 square inches (113 in<sup>2</sup>).

**204.3** The perimeter of which would encompass a circle of twelve inches (12") diameter or larger. This does not include drainage into a fill pipe's spill containment receptacle.

~~206 GASOLINE: Any petroleum distillate, petroleum distillate/alcohol blend, petroleum distillate/organic compound blend, or alcohol having a Reid vapor pressure between 4.0 and 14.7 psi (200–760 mm Hg.), as determined by Section 504.2 of this rule, and which is used as a fuel for internal combustion engines.~~

~~207~~ **205 GASOLINE CARGO TANK:** A delivery tank truck or railcar which is loading or unloading gasoline, or which has loaded or unloaded gasoline on the immediately previous load. ~~[40 CFR § 63.11132] This includes any hoses the vessel~~ gasoline loading hose(s) the gasoline cargo tank carries through which deliveries must be made the loading of gasoline occurs.

- 208 **206** **GASOLINE DISPENSING FACILITY (GDF):** Any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine, including a nonroad vehicle or nonroad engine used solely for competition. These facilities include, but are not limited to, facilities that dispense gasoline into on- and off-road, street, or highway motor vehicles, lawn equipment, boats, test engines, landscaping equipment, generators, pumps, and other gasoline fueled engines and equipment. [40 CFR § 63.11132] This includes all stationary gasoline storage tanks and associated equipment located on one or more contiguous or adjacent properties under the control of the same owner or operator under common control.
- 209 **207** **GASOLINE VAPORS:** Vapors, originating from liquid gasoline, that are usually found in mixture with air. Included are any droplets of liquid gasoline or gasoline vapor condensate that are entrained by the vapor.
- 210 **208** **LEAK-FREE:** A condition in which there is no liquid gasoline escape or seepage of more than ~~3~~ three (3) drops per minute from gasoline storage, handling, ~~and~~ or ancillary equipment, including, but not limited to, seepage and escapes from above ground fittings. This does not include any excess gasoline drainage due to the disconnecting or connecting of either a gasoline loading hose from a gasoline fill line or a vapor recovery hose from a vapor line.
- 211 **209** **MARICOPA COUNTY ~~(MC)~~ VAPOR TIGHTNESS TEST:** The complete pressure, vacuum, and vapor-valve testing of a gasoline cargo tank that is performed according to Maricopa County specifications as described in Rule 352 (Gasoline Cargo Tank Testing and Use) of these rules.
- 212 **210** **POPPETTED DRY BREAK:** A type of vapor loss control equipment that opens only by connection to a mating device to ensure that no gasoline vapors escape from the stationary gasoline ~~dispensing~~ storage tank before the gasoline vapor recovery line is connected.
- 213 **PURGING:** ~~Removing, cleaning, or scouring out gasoline vapors from all or a portion of a gasoline cargo tank by active or passive means and emitting the vapors into the atmosphere.~~
- 214 **STAGE 1 VAPOR RECOVERY SYSTEM (VR SYSTEM):** ~~At a stationary GDF, the use of installed vapor recovery equipment designed to reduce by at least 95% the VOC vapor that would otherwise be displaced into the atmosphere from a stationary gasoline dispensing tank when gasoline is delivered into the tank by a gasoline cargo tank. This reduction may be done either by capturing the displaced vapors within the gasoline cargo tank, and or by processing the vapors on site with an emission processing device.~~
- 211** **SPILL CONTAINMENT RECEPTACLE:** An enclosed container around:
- 211.1** A gasoline fill pipe that is designed to collect any liquid gasoline spillage resulting from the connection, flow of gasoline during loading, or the disconnection between the gasoline delivery hose and the fill pipe.
- 211.2** A vapor return riser connection that is designed to collect any liquid gasoline spillage resulting from the connection, the condensation of gasoline vapor during vapor

recovery, or the disconnection between the vapor recovery hose and the popped valve.

215 **212** **STATIONARY GASOLINE DISPENSING STORAGE TANK:** Any stationary tank or reservoir used to store, but not transport gasoline. ~~which dispenses gasoline directly into a motorized vehicle's fuel tank, dispenses gasoline into an aircraft's fuel tank, or dispenses gasoline into a watercraft's fuel tank that directly fuels its engine(s).~~ Any such tank that is connected to permanent piping and not moved to another service location within any twelve (12)-month period will be considered a stationary gasoline storage tank.

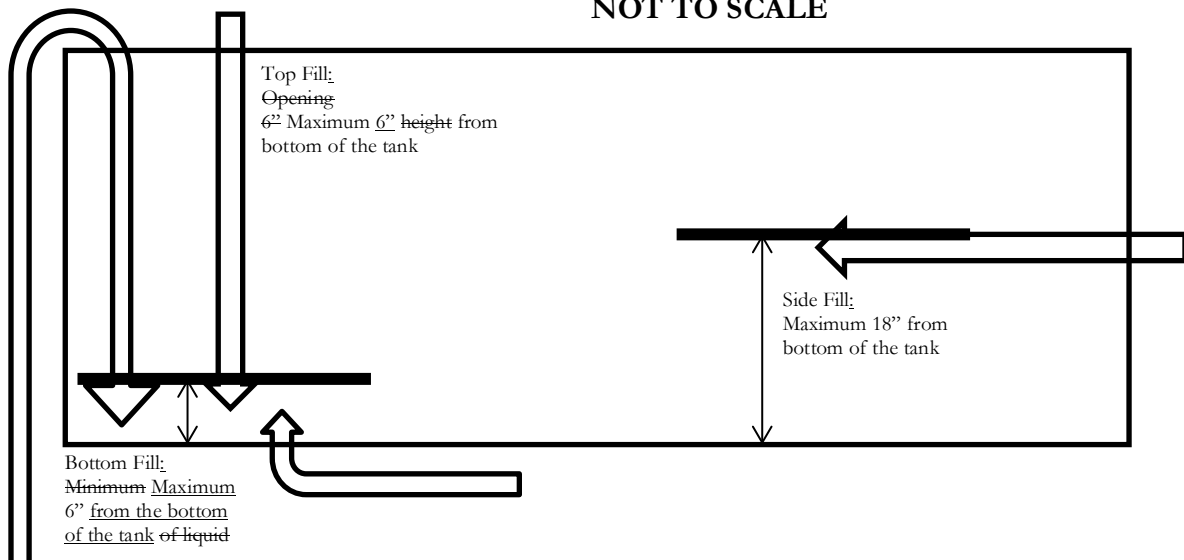
216 **213** **SUBMERGED FILL:** Any ~~discharge fill~~ pipe or nozzle extension which meets at least one of the applicable specification specifications below:as follows:

216.1 **213.1** **Top-Fill or Bottom-Fill:** The end of the ~~discharge fill~~ pipe or nozzle extension is totally submerged when the liquid level is six (6) inches ~~(15 cm)~~ from the bottom of the stationary gasoline storage tank.

216.2 **213.2** **Side-Fill:** ~~At its highest point within the stationary gasoline dispensing tank less 2,000,000 gallon capacity, the~~ The end of the discharge pipe or nozzle extension is totally submerged when the liquid level is eighteen (18) inches from the bottom of the stationary gasoline storage tank (46 cm). A side-fill pipe that is greater than 18" from the bottom of the stationary storage tank shall remain submerged at all times.

### Submerged Fill Diagram

NOT TO SCALE



217 **TANK CAPACITY:** ~~The maximum volume of liquid gasoline a particular tank is allowed to store while still complying with all applicable rules, including local, state, and Federal rules.~~

214 **THROUGHPUT:** The amount of gasoline received.

215 **UNDERGROUND STORAGE TANK (UST):** Any one or combination of tanks (including connecting underground pipes) that is used to contain an accumulation of



gasoline, and the volume of which (including the volume of gasoline in the underground pipes) is 10 percent or more beneath the surface of the ground. [40 CFR § 280.12]

**216** **VAPOR BALANCE SYSTEM:** Vapor loss control equipment that collects vapors displaced from the loading of gasoline into:

**216.1** A gasoline cargo tank and routes the collected vapors to a stationary gasoline storage tank; or

**216.2** A stationary gasoline storage tank and routes the collected vapors to the gasoline cargo tank from which the stationary gasoline storage tank is loaded; or

**216.3** A gasoline cargo tank and routes the collected vapors to the gasoline cargo tank from which the gasoline cargo tank is loaded.

218 **217** **VAPOR LOSS CONTROL EQUIPMENT:** Any piping, vapor recovery hose(s), hoses, equipment, or devices which are used to collect, store, and/or process VOC vapors at a ~~bulk gasoline plant, bulk gasoline terminal, service station or other~~ gasoline dispensing facility, or any other operation handling gasoline.

**218** **VAPOR RECOVERY SYSTEM (VR SYSTEM):** At a stationary GDF, the use of installed vapor recovery equipment designed to reduce by at least 95% the VOC vapor that would otherwise be displaced into the atmosphere from a stationary gasoline dispensing tank when gasoline is delivered into the tank by a gasoline cargo tank. This reduction may be done either by using a vapor balance system or by processing the vapors on site with an emission processing device.

**219** **VAPOR TIGHT:** A condition in which ~~a suitable detector~~ an organic vapor analyzer (OVA) at the site of (potential) leakage of vapor shows less than 10,000 ppmv as methane when calibrated with methane or the detector or a combustible gas detector (CGD) shows less than ~~4/5~~ one-fifth (1/5) lower explosive limit (LEL) when calibrated with a gas specified by the manufacturer and used according to the manufacturer's instructions.

## SECTION 300 – STANDARDS

301 **MANUFACTURERS, SUPPLIERS, AND OWNER OR OPERATOR:**

301.1 ~~A manufacturer, supplier, owner or operator shall not supply, offer for sale, sell, install or allow the installation of an above ground or underground storage tank, any type of VR System or any of its components unless the tank, system and components meet the following:~~

a: ~~Replacement Components for a VR System: After June 16, 1999, a VR System for which there is a CARB specification shall be replaced with components that comply with one of the following:~~

(1) ~~The equipment is supplied by the manufacturer as a CARB-certified component; or~~

(2) ~~The equipment is rebuilt by a person who is authorized by CARB to rebuild that specific CARB-certified component; or~~

- ~~b. All vapor recovery lines from stationary gasoline dispensing tanks shall be equipped with CARB certified, spring loaded, vapor tight, poppetted dry breaks.~~
  - ~~e. After November 2, 2016, each new or rebuilt installed component shall be clearly identified with a permanent identification affixed by the certified manufacturer or rebuilder.~~
- 301.2 Only a State of Arizona licensed Vapor Recovery Registered Service Representative (RSR) shall install an above ground or underground storage tank or vapor recovery system components.
- 301.3 An owner or operator shall not:
  - a. Install a coaxial fill pipe in a new installation (after June 16, 1999); or
  - b. Reinstall a coaxial fill pipe during any changes to the stationary gasoline dispensing tank when the top of the tank is exposed and the vapor port bung is pre-configured to accept vapor recovery piping.
- 301.4 The owner or operator of a stationary gasoline dispensing tank shall verify that vapor recovery equipment (unless exempted by this rule) is properly connected and in use at all times while gasoline is actively being loaded. If the stationary GDF is unattended or there is only one owner or operator under control of the stationary GDF on site, the owner or operator of the gasoline cargo tank is responsible for the proper connection and use of the vapor recovery equipment (unless exempted by this rule) while gasoline is being actively loaded.
- 301.5 An owner or operator shall only load, allow the loading, or provide equipment for the loading of gasoline from only a gasoline cargo tank identified with a valid Maricopa County (MC) Vapor Tightness Test decal into any stationary gasoline storage tank.
- 302 **GENERAL HOUSEKEEPING REQUIREMENTS:** An owner or operator shall not store gasoline or permit the loading of gasoline in any stationary gasoline dispensing tank located above or below ground unless all of the following conditions are met:
  - 302.1 Minimize gasoline spills;
  - 302.2 Clean up spills as expeditiously as practicable;
  - 302.3 Cover all open gasoline containers and all gasoline storage tank fill pipes with a gasketed seal when not in use;
  - 302.4 Minimize gasoline sent to waste collection systems that collect and transport gasoline to reclamation and recycling equipment, such as oil/water separators;
  - 302.5 Properly dispose of any VOC containing material.
- 301 **FEDERAL STANDARDS:** An owner or operator of a GDF shall meet the applicable federal standards of performance set forth in the national emission standards for hazardous air pollutants (NESHAP), but not limited to 40 CFR Part 63, Subpart CCCCCC—National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities, as adopted and incorporated by reference in Rule 370 (Federal Hazardous Air Pollutant Program) of the Maricopa County Air Pollution Control Regulations.

**302**     **GENERAL REQUIREMENTS AT A GASOLINE DISPENSING FACILITY**

**(GDF):** The owner or operator of a GDF shall:

- 302.1** Install a permanent submerged fill pipe. Where because of government regulation, including, but not limited to, Fire Department codes, such a permanent submerged fill pipe cannot be installed, a nozzle extension that reaches within six inches (6") of the tank bottom shall be used to fill the tank.
  - a.** A side-fill pipe that is greater than 18" from the bottom of the stationary storage tank shall remain submerged at all times. Documentation demonstrating the side-fill pipe is submerged at all times shall be made available to the Control Officer during the course of a site visit.
- 302.2** Maintain all containers, stationary storage tanks, and equipment associated with the storage and loading of gasoline to be:
  - a.** Leak-free.
  - b.** Vapor tight.
  - c.** In good working order.
- 302.3** Minimize gasoline spills.
- 302.4** Clean up spills as expeditiously as practicable.
- 302.5** Cover all open gasoline containers and storage tanks when not in use.
- 302.6** Minimize the amount of gasoline sent to waste collection systems that collect and transport gasoline to reclamation and recycling equipment such as an oil/water separator.
- 302.7** Properly dispose of any VOC containing material.

**303**     **GENERAL REQUIREMENTS FOR CONTROLLING GASOLINE VAPORS AT A GASOLINE DISPENSING FACILITY (GDF):** The owner or operator of a GDF shall:

- 303.1** Install, operate, and maintain a CARB-certified VR System per the applicable CARB Executive Orders including the corresponding CARB approved Installation, Operation and Maintenance Manual.
- 303.2** Install a dual-point vapor balance system for any stationary gasoline storage tank installed or modified after June 16, 1999.
- 303.3** Change out the coaxial vapor balance system to a dual-point vapor balance system with separate fill and vapor connection points whenever the top of the stationary gasoline storage tank is exposed and the vapor port bung is pre-configured to accept vapor recovery piping.
- 303.4** Not reinstall a coaxial vapor balance system if the stationary gasoline storage tank is preconfigured to accept vapor recovery piping.
- 303.5** After November 2, 2016, clearly identify each new or newly installed component with a permanent identification affixed by the certified manufacturer or rebuilder.

**303.6** Install replacement CARB-certified components that meet at least one of the following:

- a. Supplied by the manufacturer as a CARB-certified component.
- b. Rebuilt by a person who is authorized by CARB to rebuild that specific CARB-certified component.
- c. Meets the manufacturer's specifications as certified by CARB using test methods incorporated by reference in Section 506 (Test Methods Incorporated by Reference).

**303.7** Install a pressure-vacuum vent valve:

- a. Per manufacturer's specifications; and
- b. Maintain a pressure-vacuum vent valve per manufacturer's specifications.

303 **304** **GASOLINE STORAGE EQUIPMENT AND OPERATION REQUIREMENTS:** An owner or operator of a gasoline storage tank with a capacity of more than 250 gallons shall:

303.4 **304.1** **Underground Storage Tank (UST):** By December 2, 2016, an UST with a capacity more than 250 gallons (946 l) must meet all of the following conditions unless exempt from the VR System requirements per Section 103.5 of this rule:

- a. The UST is equipped and maintained according to Section 301 of this rule; Equip and maintain the UST according to Section 302 (General Requirements at a Gasoline Dispensing Facility (GDF)) and Section 303 (General Requirements for Controlling Gasoline Vapors at a Gasoline Dispensing Facility (GDF)).
- b. For an existing stationary GDF, maintain a dual-point VR System or a coaxial vapor balance system. For new installations (after June 16, 1999) or modifications to an existing stationary GDF (after June 16, 1999), install and maintain a dual-point vapor balance system with separate fill and vapor connection points;
- c. A pressure vacuum vent is installed and maintained per manufacturer's specifications;
- d. The VR System is maintained and operated. Maintain and operate a VR system according to the manufacturer's specifications and the applicable CARB Executive Orders including the corresponding CARB approved Installation, Operation and Maintenance Manual.
- e. A permanent submerged fill pipe is installed and maintained to ensure the highest point of the discharge opening is no more than six inches (6") from the bottom of the UST;
- f. Each fill pipe is equipped. Equip each fill pipe with gasketed vapor tight cap.
- g. After December 2, 2016, each poppetted dry break is equipped with vapor tight seal and with a gasketed vapor tight cap.
- h. Each gasketed vapor tight cap is maintained in a closed position except when the fill pipe or poppetted dry break it serves is actively in use.

- i- **f.** ~~The~~ Ensure the fill pipe assembly, including the fill pipe, fittings and gaskets, is maintained to prevent vapor leakage from any portion of the VR System; is:
  - ~~(1) Intact and not loose.~~
  - ~~(2) Vapor tight.~~
- j- **g.** ~~A spill containment receptacle is installed and maintained free of standing liquid, debris and other foreign matter. The spill containment receptacle shall be equipped with an integral drain valve or other CARB-certified equipment, to return spilled gasoline to the UST. The drain valve shall be maintained closed and free of vapor emissions at all times except when the valve is actively in use. Ensure each spill containment receptacle is:~~
  - ~~(1) Kept vapor tight.~~
  - ~~(2) Free of standing gasoline.~~
  - ~~(3) Free of standing liquid.~~
  - ~~(4) Free of debris.~~
  - ~~(5) Free of foreign matter.~~
  - ~~(6) Free of cracks and rust.~~
  - ~~(7) If the spill containment receptacle is equipped with an integral drain valve to return spilled gasoline to the UST, the drain valve shall be:~~
    - ~~(a) CARB-certified equipment.~~
    - ~~(b) Closed except when the valve is actively in use.~~
    - ~~(c) Vapor tight.~~
- h. Fill Pipe Obstructions:**
  - (1) Permanently remove any type of screen and/or other obstruction in a fill pipe assembly unless it is specifically allowed by a Maricopa County Air Pollution Permit or is CARB-certified, as referenced in Section 506 (Test Methods Incorporated by Reference).
  - (2) Temporarily remove a screen or other obstruction that is allowed by a Maricopa County Air Pollution Permit or by CARB prior to inspection by the Control Officer to allow for any measurements required to verify compliance with this rule.

**303.2 304.2 Above Ground Storage Tank (AST):** ~~By December 2, 2016, an AST with a capacity more than 250 gallons (946 l) must meet all of the following conditions:~~

- ~~a. A permanent submerged fill pipe is installed and maintained to ensure the highest point of the discharge opening is no more than six inches (6") from the bottom of the AST. If the AST is side filled, the fill pipe discharge opening is no more than 18 inches (18") above the tank bottom; Equip and maintain the AST according to Section 302 (General Requirements at a Gasoline Dispensing Facility (GDF)) and Section 303 (General Requirements for Controlling Gasoline Vapors at a Gasoline Dispensing Facility (GDF)).~~

- b. ~~Install and maintain a~~ A pressure-vacuum vent ~~is valve installed and maintained~~ per manufacturer's specifications;
- c. ~~Equip each~~ Each fill pipe ~~is equipped~~ with a gasketed vapor tight cap;
- d. ~~Maintain all~~ All threads, gaskets, and mating surfaces of the fill pipe assembly ~~to:~~ shall prevent liquid or vapor leakage at the joints of the assembly;
  - (1) ~~Be intact and not loose.~~
  - (2) ~~Be maintained leak-free.~~
  - (3) ~~Prevent vapor leakage at the joints of the assembly. Vapor leakage can be identified using one or more of the methods found in Section 501 (Identifying a Potential Vapor Leak).~~
- e. ~~Keep each~~ Each gasketed vapor tight cap ~~is maintained~~ in a closed position except when actively in use;
- f. **An AST Manufactured Prior to November 2, 2016;** ~~if~~ ~~If~~ an AST ~~that was~~ manufactured prior to November 2, 2016, is equipped with a spill containment receptacle, ~~it~~ ~~the~~ spill containment receptacle shall be: ~~maintained to be free of~~ standing liquid, debris and other foreign matter. ~~On or after November 2, 2016,~~ a newly installed AST shall be equipped with a spill containment receptacle that is maintained to be free of standing liquid, debris and other foreign matter;
  - (1) ~~Kept vapor tight.~~
  - (2) ~~Free of standing gasoline.~~
  - (3) ~~Free of standing liquid.~~
  - (4) ~~Free of debris.~~
  - (5) ~~Free of foreign matter.~~
  - (6) ~~Free of cracks and rust.~~
- g. ~~A spill containment receptacle is installed at each fill pipe;~~ and **An AST Manufactured On or After December 2, 2016:** An AST that was manufactured on or after December 2, 2016, shall be equipped with a spill containment receptacle that is:
  - (1) ~~Kept vapor tight.~~
  - (2) ~~Free of standing gasoline.~~
  - (3) ~~Free of standing liquid.~~
  - (4) ~~Free of debris.~~
  - (5) ~~Free of foreign matter.~~
  - (6) ~~Free of cracks and rust.~~
- h. ~~Ensure any~~ Any overfill prevention equipment ~~shall be~~ ~~is~~ approved, installed and maintained vapor tight to the atmosphere. Any device mounted within the fill pipe shall be so designed and maintained so that no vapor from the vapor space

above the gasoline within the tank can penetrate into the fill pipe or through any of the fill pipe assembly into the atmosphere.

304 ~~LOADING OF GASOLINE: Prior to accepting a load of gasoline, an owner or operator of a stationary GDF shall verify all of the following unless exempted in Section 103 of this rule:~~

~~304.1 The gasoline cargo tank clearly displays a valid Maricopa County Vapor Tightness Certification decal that is permanently mounted near the front on the right (passenger) side of the vessel.~~

~~304.2 The owner or operator of the gasoline cargo tank connects the vapor recovery hose prior to connecting loading hose.~~

**305 LOADING OF GASOLINE:**

**305.1 General Requirements for the Loading of Gasoline:** The owner or operator of a gasoline cargo tank and the owner or operator of the gasoline storage tank shall ensure:

- a. All parts of the gasoline loading process are observed.
- b. Dry break couplings:
  - (1) Are leak-free.
  - (2) Are vapor tight.
  - (3) Automatically and immediately close upon disconnect.
- c. Proper connection of:
  - (1) The vapor recovery hose.
  - (2) The gasoline loading hose.
- d. Gasoline is loaded:
  - (1) Using submerged fill.
  - (2) In a leak free manner.
- e. Appropriate measures are implemented to prevent:
  - (1) Overfill.
  - (2) Excess gasoline drainage.
- f. The loading of gasoline is stopped immediately, and not resumed until the observed issue is repaired, if:
  - (1) A liquid leak is observed.
  - (2) A vapor leak is observed.
- g. Proper disconnection of:
  - (1) The vapor recovery hose to prevent excess gasoline drainage.
  - (2) The gasoline loading hose to prevent excess gasoline drainage.

- h. Use of a bucket or other effective capture device to catch any gasoline dripping during the connection or disconnection of the gasoline loading hose and the vapor recovery hose.
- i. Collection and containment of any gasoline that escapes, drips, spills, or leaks in a manner that will prevent evaporation into the atmosphere.

**305.2** The owner or operator of the gasoline cargo tank shall load gasoline to prevent:

- a. The gauge pressure from exceeding eighteen inches (18") of water column (33.6 mm Hg) pressure in the gasoline cargo tank.
- b. The vacuum pressure from exceeding six inches (6") of water column (11.2 mm Hg) in the gasoline cargo tank.

305 **306 CONTROL OF VOC VAPORS:**

305.1 **306.1** Gasoline vapors displaced from a stationary gasoline dispensing storage tank while being loaded during the loading of gasoline, shall be handled by a CARB-certified VR System, unless the tank is exempted by Section 103.5 of this rule:

305.2 VR System Configuration:

- a. Replacement: After June 16, 1999, no part of a VR System for which there is a CARB specification shall be replaced with anything but CARB-certified components.
- b. Vapor Valves:
  - (1) All vapor recovery lines from a stationary gasoline dispensing tank shall be equipped with CARB-certified, spring-loaded, vapor-tight, poppetted dry breaks.
  - (2) Vapor valves shall be inspected pursuant to Section 401 of this rule to determine if closure is complete and gaskets are intact; a record shall be made pursuant to Section 502 of this rule.
- c. AST: After June 16, 1999, an AST shall have CARB-certified fittings wherever CARB so specifies.
- d. By December 2, 2016, each AST and UST shall use CARB-certified fittings exclusively wherever CARB so specifies, and:
  - (1) Shall have its own separate, functioning dual-point vapor return line;
  - (2) Is allowed to have a combination vapor recovery system that in addition to having a separate dual-point vapor recovery line, also has vapor piping/fittings linking it to one or more (other) stationary gasoline dispensing tanks.

305.3 **306.2 Equipment Maintenance and Use Required:**

- a. All vapor loss control equipment shall be:
  - (1) CARB-certified.
  - (2) Installed as required.



- ~~(2) (3)~~ Operated as recommended by the manufacturer; ~~and.~~
- ~~(3) (4)~~ Maintained to be: leak-free, vapor tight and in good working order.
  - ~~(a)~~ Leak-free.
  - ~~(b)~~ Vapor tight.
  - ~~(c)~~ In good working order.
- b. Coaxial Vapor Balance Systems: Both spring-loaded and fixed coaxial fill pipes shall be:
  - ~~(1)~~ Maintained according to the standards of their manufacturer(s); ~~and.~~
  - ~~(2)~~ ~~Be operated~~ Operated so that there is no obstruction of vapor passage from the stationary gasoline ~~dispensing storage~~ tank to the gasoline cargo tank.
- c. The owner or operator of a gasoline dispensing facility shall not use a vapor recovery system that has any defects that substantially impair(s) effectiveness of the vapor recovery equipment including, but not limited to:
  - ~~(1)~~ Tank vent pipes that are not the proper height or properly capped with CARB-approved pressure and vacuum vent valves.
  - ~~(2)~~ A vapor recovery system that is not properly installed or maintained as evidenced by the following:
    - ~~(a)~~ Spill containment buckets are cracked, rusted, or not clean and empty of liquid; sidewalls are not attached or are otherwise improperly installed; and drain valves are non-functioning or do not seal.
    - ~~(b)~~ A fill adaptor collar or vapor poppet (dry break) is loose, damaged, or has a fill or vapor cap that is not installed or is missing, broken, or not securely attached.

**306.3** The owner or operator of a gasoline dispensing facility is allowed to have a combination vapor recovery system for any stationary gasoline storage tank installed or modified after June 16, 1999 that, in addition to having a separate dual-point vapor recovery line, also has vapor piping/fittings linking it to one or more (other) stationary gasoline storage tanks at a GDF.

## SECTION 400 – ADMINISTRATIVE REQUIREMENTS

**401 INSPECTIONS:** The owner or operator of a GDF shall conduct inspections as indicated below. A record shall be made pursuant to ~~Section 503 of this rule.~~ Section 504 (GDF Recordkeeping).

**401.1** The inspection shall include, but is not limited to all of the following:

- a. ~~The~~ Verify the spill containment receptacle receptacles are: shall be:
  - ~~(1)~~ Free of cracks, rust and defects;
  - ~~(2)~~ Free of foreign material;
  - ~~(3)~~ Empty of liquid, including gasoline;

- ~~(4) If necessary, installed with a drain valve that properly seals.~~
  - (1) Free of standing gasoline.
  - (2) Free of standing liquid.
  - (3) Free of debris.
  - (4) Free of foreign matter.
  - (5) Free of cracks and rust.
  - (6) Equipped with a properly sealing drain valve if the receptacles contain a drain valve.
  - (7) Vapor tight. Determine if a potential vapor leak exists by using one of the test procedures in Section 501 (Identifying a Potential Vapor Leak). If a vapor leak is identified, determine the vapor tight status using the test procedure in Section 502 (Determining Vapor Tight Status).
- b. ~~The~~ Verify the external fittings of the fill pipe assembly are: ~~shall be:~~
- (1) Intact and not loose;
  - (2) Covered with a gasketed cap that fits securely onto the fill pipe.
  - (3) Vapor tight. Determine if a potential vapor leak exists by using one of the test procedures in Section 501 (Identifying a Potential Vapor Leak). If a vapor leak is identified, determine the vapor tight status using the test procedure in Section 502 (Determining Vapor Tight Status).
- c. Verify the external fittings of the vapor recovery pipe assembly are:
- (1) Intact and not loose.
  - (2) Covered with a gasketed cap that fits securely onto the fill pipe.
  - (3) Vapor tight. Determine if a potential vapor leak exists by using one of the test procedures in Section 501 (Identifying a Potential Vapor Leak). If a vapor leak is identified, determine the vapor tight status using the test procedure in Section 502 (Determining Vapor Tight Status).
- e. d. ~~The~~ Verify the poppetted dry break is: ~~shall be:~~
- (1) Equipped with a vapor tight seal;
  - (2) Covered with a gasketed cap that fits securely onto the poppetted dry break.
  - (3) Closed completely.
  - (4) Vapor tight. Determine if a potential vapor leak exists by using one of the test procedures in Section 501 (Identifying a Potential Vapor Leak). If a vapor leak is identified, determine the vapor tight status using the test procedure in Section 502 (Determining Vapor Tight Status).

**401.2** The inspections shall be conducted:

- a. At least once per calendar week; or

- b. If the ~~gasoline dispensing facility~~ GDF receives a load of gasoline loads less than once per calendar week, ~~the inspection shall take place~~ upon completion of the receipt of the load of gasoline.

**402 BURDEN OF PROOF:**

**402.1 Proving Exempt Status:** The burden of proof of eligibility for exemption from a provision of this rule is on the owner or operator. An owner or operator seeking such an exemption shall maintain adequate records and furnish them to the Control Officer upon request.

**402.2 Providing Proof of Equipment Compliance:** It is the responsibility of the owner or operator to provide proof, when requested by the Control Officer, that a vapor recovery system or its modifications meet the requirements of this ~~Rule 353~~ rule.

**403 CARB DECERTIFICATION:** An owner or operator shall not install or reinstall a component related to vapor recovery that has been decertified by CARB.

**404 OTHER AGENCIES' REQUIREMENTS:** Compliance with this rule does not relieve or otherwise affect the owner or operator's obligation to comply with any other applicable federal, state, or local legal requirement, including, but not limited to, rules promulgated by the Arizona Department of Agriculture, Weights and Measures Services Division; local fire department codes; and local zoning ordinances.

**SECTION 500 – MONITORING AND RECORDS:**

**501 IDENTIFYING A POTENTIAL VAPOR LEAK:** An owner or operator or Control Officer shall follow one or more of the test procedures in Section 501 to identify a potential vapor leak. If a potential vapor leak is detected, refer to Section 502 (Determining Vapor Tight Status) to determine the vapor tight status.

**501.1** For the purposes of identifying a potential vapor leak, the use of sight, sound, or smell are acceptable.

**501.2** Method 21-Determination of Volatile Organic Compound Leaks, Alternative Screening Procedure 8.3.3:

**a.** Spray a soap solution over all potential leak sources. The soap solution may be a commercially available leak detection solution or may be prepared using concentrated detergent and water. A pressure sprayer or squeeze bottle may be used to dispense the solution.

**b.** Observe the potential vapor leak site to determine if any bubbles are formed.

**(1)** If no bubbles are observed, the source is presumed to have no detectable vapor leak.

**(2)** If any bubbles are observed, the instrument techniques of Section 502 (Determining Vapor Tight Status) shall be used to verify if a vapor leak exists.

**501.3** Optical Gas Imaging: An owner or operator of a GDF may use a calibrated optical gas imaging instrument to identify a potential vapor leak.

**501.4 Combustible Gas Detector (CGD) or Organic Vapor Analyzer (OVA):** An operator of a calibrated CGD or an OVA may use the test procedure described in Section 502 (Determining Vapor Tight Status) to identify a potential vapor leak.

~~501~~ **502 DETERMINING VAPOR TIGHT STATUS:** An owner or operator or Control Officer shall follow the test procedure in Section 501.1 of this rule and shall use one or more of the methods listed in Sections 501.2 or 501.3 of this rule Section 502.1 to determine the vapor tight status of ~~on a VR System vapor loss control equipment~~ or spill containment equipment at a stationary GDF or on a gasoline cargo tank.

~~501.1~~ **502.1 Combustible Gas Detector (CGD) or Organic Vapor Analyzer (OVA) - Test Procedure:** ~~During loading of gasoline into stationary gasoline dispensing tanks, the Check the peripheries of all potential sources of leakage during the storage and loading of gasoline loading at the GDF are checked with a CGD or OVA as follows: indicated below. A CGD or an OVA meeting the specifications and performance criteria contained in EPA Method 21 and this section shall be used to determine vapor tight status.~~

- a. **Calibration:** Within four (4) hours prior to monitoring, the CGD or OVA shall be properly calibrated for a 20 percent ~~LEL~~ lower explosive limit (20% LEL) response or to 10,000 ~~ppm~~ ppmv with methane.
- b. **Probe Distance:** The probe inlet shall be:
  - (1) ~~one (1) inch (2.5 cm) or less from~~ At the surface of the potential leak source when searching for leaks.
  - (2) ~~The probe inlet shall be one (1) inch (2.5 cm) from~~ At the surface of the leak source when the highest detector reading is being determined for a discovered leak.
  - (3) At the closest practical probe distance when the probe is either obstructed from moving ~~within one (1) inch (2.5 cm) on the surface of an actual or potential leak source, the closest practicable distance shall be used~~ or if the source is a rotating shaft.
- c. **Probe Movement:** The probe shall be moved slowly, not faster than 1.6 inches per second ~~(4 centimeters per second)~~ (1.6"/sec). If there is any meter deflection at an actual or potential leak source, the probe shall be positioned to locate the point of highest meter response.
- d. **Probe Position:** The probe inlet shall be positioned in the path of the vapor flow from an actual or potential leak such that the central axis of the probe-tube inlet shall be positioned coaxially with the path of the most concentrated vapors.
- e. **Wind:** Wind shall be blocked as much as possible from the space being monitored. ~~The annual leak detection test required by Section 401 of this rule shall be valid only when wind speed in the space being monitored is five (5) mph or less.~~
- f. **Data Recording:** The highest detector reading and location for each incidence of detected leakage shall be recorded, along with the date and time. If no gasoline vapor is detected, that fact shall be entered into the record.

501.2 ~~Method 21-Determination of Volatile Organic Compound Leaks, Alternative Screening Procedure 8.3.3:~~

- a. ~~Spray a soap solution over all potential leak sources. The soap solution may be a commercially available leak detection solution or may be prepared using concentrated detergent and water. A pressure sprayer or squeeze bottle may be used to dispense the solution.~~
- b. ~~Observe the potential leak sites to determine if any bubbles are formed.~~
  - (1) ~~If no bubbles are observed, the source is presumed to have no detectable vapor leaks.~~
  - (2) ~~If any bubbles are observed, the instrument techniques of Section 501.1 of this rule shall be used to verify if a vapor leak exists.~~

501.3 ~~Optical Gas Imaging: A certified operator of a calibrated optical gas imaging device may use an optical gas imaging instrument to identify vapor leaks. If a vapor leak is detected, the instrument techniques listed in Section 501.1 of this rule shall be used to verify if a vapor leak exists.~~

502 **503** **COMPLIANCE INSPECTIONS:** Any stationary gasoline ~~dispensing~~ storage tank located at a GDF that is required by this rule to be equipped with a VR system may be subject to monitoring for vapor tightness and liquid leak tightness during any working hours. Such a tank may be opened for gauging or inspection when gasoline loading operations are not in progress, provided that such tank is part of an open system or is served by a positive-pressure relief valve with a relief setting not exceeding  $+1/2$  lb ~~psig~~ psi.

503 **504** **GDF RECORDKEEPING:** The owner or operator of each stationary GDF in Maricopa County shall maintain records as follows:

503.1 **504.1** ~~The total amount of gasoline received~~ Record the gasoline throughput each month ~~shall be recorded~~ by the end of the following month.

503.2 **504.2** ~~The owner or operator of a stationary GDF shall record~~ Record the weekly inspections in a permanent record or log book:

- a. By the end of Saturday of the following week; or
- b. ~~If the gasoline dispensing facilities a GDF receives a load of gasoline loads less than once per calendar week, the owner or operator shall~~ record the inspection within three days after the receipt of the load of gasoline.

503.3 **504.3** ~~These records and any reports or supporting information required by this rule or by the Control Officer shall be retained~~ Retain required records for at least five (5) years.

503.4 **504.4** ~~Records of the past twelve (12) months shall be; in a readily accessible location and must be made available to the Control Officer without delay upon verbal or written request.~~

- a. Readily accessible.
- b. Made available, without delay, to the Control Officer upon verbal or written request.

504 **505 COMPLIANCE DETERMINATION**

504.1 **505.1** Control efficiency of vapor loss control equipment ~~and vapor collection/processing systems~~ shall be determined according to EPA Method 2A and either EPA Method 25A or by ~~CARB-approved~~ EPA approved CARB test methods listed in Section 506 (Test Methods Incorporated by Reference). EPA Method 2B shall be used for vapor incineration devices.

504.2 **505.2** Vapor pressure of gasoline shall be determined using ~~ASTM D323-15a~~ ASTM D323 -06 Standard Test Method for Vapor Pressure of Petroleum Products (Reid Method) or ~~ASTM D4953-15~~ ASTM D4953 -06, Standard Test Method for Vapor Pressure of Gasoline and Gasoline-Oxygenate Blends (Dry Method). ~~ASTM D323-15a~~ ASTM D323 -06 shall be used for gasoline either containing no oxygenates or MTBE (methyl tertiary butyl ether) as the sole oxygenate. ~~ASTM 4953-15~~ ASTM 4953 -06 shall be used for oxygenated gasoline.

504.3 **505.3 Vapor Leaks:**

- a. If a determination of vapor tight status is to be made on a VR system or spill containment equipment at a stationary GDF or on a gasoline cargo tank at the GDF station, ~~at least one of the test methods listed in Section 501 of this rule~~ the test method in Section 502 (Determining Vapor Tight Status) shall be used.
- b. ~~Section 501.1 of this rule probe distance and movement parameters not withstanding, if~~ If it has been established that there are no other interfering vapor escapes, it is an exceedance if a reading by the Control Officer from an established vapor escape above 1/5 LEL (or 10,000 ~~ppm~~ ppmv as methane) is sustained for at least five (5) seconds, and the probe is either consistently further than ~~one (1) inch~~ one inch (1") from the source and/or the probe is consistently being moved faster than ~~four centimeters (4 cm)~~ 1.6 inches per second (1.6"/sec).
- c. The Control Officer may count it as a failure to perform weekly inspections pursuant to ~~Section 305.2 of this rule~~ Section 401 (Inspections) if foreign material is found in a spill containment receptacle and there is no record of an inspection's being performed in the preceding ten (10) days.

505 **506 TEST METHODS INCORPORATED BY REFERENCE:** The following test methods are approved for use for the purpose of determining compliance with this rule. The test methods are adopted by reference in Appendix G of the Maricopa County Air Pollution Control Regulations. Alternative test methods as approved by the Administrator or other EPA-approved test methods may be used upon prior written approval from the Control Officer. When more than one test method is permitted for the same determination, an exceedance under any method will constitute a violation. Copies of test methods referenced in this section are available at the Maricopa County Air Quality Department.

505.1 **506.1 EPA Test Methods:**

- a. EPA Methods 2a = ("Direct Measurement of Gas Volume Through Pipes and Small Ducts"), and 2b = ("Determination of Exhaust-Gas Volume Flow-Rate from Gasoline Vapor Incinerators"). (40 CFR Part 60, Appendix A)

- b. EPA Method 21 – Determination of Volatile Organic Compound Leaks. (40 CFR Part 60, Appendix A-7)
- c. EPA Method 21 – Determination of Volatile Organic Compound Leaks, Alternative Screening Procedure 8.3.3
- d. EPA Method 25 – (“Determination of Total Gaseous Nonmethane Organic Emissions as Carbon”) and its submethods. (40 CFR Part 60, Appendix A)
- e. EPA Method 25A – Gaseous Organic Concentration – Flame Ionization. (40 CFR Part 60, Appendix A)
- f. EPA Method 25B – Gaseous Organic Concentration – Infrared Analyzer. (40 CFR Part 60, Appendix A)
- e. g. EPA Method 27 – (“Determination of Vapor Tightness of Gasoline Delivery Tank Using Pressure-Vacuum Test”) in. (40 CFR Part 60, Appendix A)
- f. h. Optical Gas Imaging: Alternative Work Practice for Monitoring Equipment Leaks, 40 CFR § 60.18(g), (h) and (i) ~~An owner or operator may use an optical gas imaging instrument instead of a 40 CFR part 60, Appendix A-7, Method 21 to monitor for equipment volatile organic compound leaks.~~

~~505.2~~ **506.2 EPA Approved ASTM Standards:**

- a. ~~ASTM D323-15a~~ ASTM D323 - 06 “Standard Test Method for Vapor Pressure of Petroleum Products (Reid Method):
- b. ~~ASTM D4953-15~~ ASTM D4953 – 06 “Standard Test Method for Vapor Pressure of Gasoline and Gasoline-Oxygenate Blends (Dry Method)

~~505.3~~ **506.3 EPA Approved CARB Certification and Test Procedures for Gasoline Vapor Recovery Systems:**

- a. California Environmental Protection Agency, Air Resources Board Vapor Recovery Test Procedure TP-201.1B, Static Torque of Rotatable Phase 1 Adaptors, October 8, 2003 edition, California Air Resources Board, P.O. Box 2815, 2020 L. Street, Sacramento, California 95812-2815.
- b. California Air Resources Board Vapor Recovery Test Procedure TP-201.1, Volumetric Efficiency for Phase I Vapor Recovery Systems, adopted April 12, 1996, and amended February 1, 2001, and October 8, 2003.
- c. California Air Resources Board Vapor Recovery Test Procedure TP-201.1A, “Determination of Efficiency of Phase I Vapor Recovery Systems of Dispensing Facilities with Assist Processors<sup>2</sup>.”
- d. California Environmental Protection Agency, Air Resources Board Vapor Recovery Test Procedure TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves, October 8, 2003 edition.
- e. California Environmental Protection Agency, Air Resources Board Vapor Recovery Test Procedure TP-201.1C, Leak Rate of Drop Tube/Drain Valve Assembly, October 8, 2003, edition.

- f. California Environmental Protection Agency, Air Resources Board Vapor Recovery Test Procedure TP-201.1D, Leak Rate of Drop Tube Overfill Protection Devices and Spill Container Drain Valves, October 8, 2003 edition.
- g. California Air Resources Board Vapor Recovery Test Procedure TP-201.3, Determination of 2-Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities, adopted April 12, 1996, and amended March 17, 1999.
- h. Bay Area Air Quality Management District Source Test Procedure ST-30, Static Pressure Integrity Test—Underground Storage Tanks, adopted November 30, 1983, and amended December 21, 1994.

505.4 **506.4 Additional Test Methods:**

- a. ~~American Petroleum Institute Standard API STD 650 Welded Tanks for Oil Storage, Twelfth Edition, Includes Errata 1 (2013), Errata 2 (2014), and Addendum 1 (2014).~~
- b. **a.** San Diego County Air Pollution Control District Test Procedure TP-96-1, March 1996, Third Revision.



# Redlined Rule 353 provided by Commenter #1

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**MARICOPA COUNTY  
AIR POLLUTION CONTROL REGULATIONS  
REGULATION III – CONTROL OF AIR CONTAMINANTS**

**RULE 353  
STORAGE AND LOADING OF GASOLINE AT GASOLINE DISPENSING FACILITIES**

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Revised 07/13/1988; Revised 04/06/1992; Revised 06/16/1999; Revised 09/25/2013; and Revised 11/02/2016

**MARICOPA COUNTY  
AIR POLLUTION CONTROL REGULATIONS  
REGULATION III – CONTROL OF AIR CONTAMINANTS**

**RULE 353  
STORAGE AND LOADING OF GASOLINE AT GASOLINE DISPENSING FACILITIES**

**SECTION 100 – GENERAL**

- 101 PURPOSE:** To limit emissions of volatile organic compounds (VOCs) during storage and loading of gasoline at gasoline dispensing facilities.
- 102 APPLICABILITY:** This rule applies to an owner or operator who operates a gasoline dispensing facility (GDF) at which gasoline is stored in and loaded into stationary gasoline dispensing tanks with a capacity of more than 250 gallons (946 l), including those located at airports.
- 103 EXEMPTIONS:**
- 103.1** This rule does not apply to the storage and loading of the following fuels:
- a. Diesel.
  - b. Liquefied petroleum gas (LPG).
- 103.2 Aviation Gasoline Loaded at Airports:** The loading of aviation gasoline into stationary storage tanks at airports, and the subsequent loading of aviation gasoline within the airport, is exempt from Section 304 and Section 305.1 of this rule. The storage of aviation gas at airports is subject to this rule.
- 103.3 Bulk Gasoline Plant or Bulk Gasoline Terminal:** This rule does not apply to a bulk gasoline plant or a bulk gasoline terminal as defined in Rule 351 of these rules.
- 103.4 Stationary Gasoline Dispensing Tanks for Farm Operations:** Any stationary gasoline dispensing tank used exclusively for the fueling of implements of normal farm operations must comply with Section 302 (General Housekeeping Requirements), but is exempt from all other requirements of this rule.
- 103.5 Stage 1 Vapor Recovery System (VR System):** The VR System provisions of Section 305 of this rule shall not apply to the following stationary gasoline dispensing tanks:
- a. Non-Resale Gasoline Dispensing Facilities: Any stationary GDF receiving less than 120,000 gallons (454,250 l) of gasoline in any twelve (12) consecutive calendar months, dispensing no resold gasoline, and having each stationary gasoline dispensing tank equipped with a permanent submerged fill pipe, is exempt from Section 305 of this rule. A facility shall become subject to the provisions of Section 305 of this rule by exceeding the 120,000 gallon (454,250 l) threshold and shall remain subject to such provisions even if annual amount of gasoline received later falls below this threshold.
  - b. Stationary Gasoline Dispensing Tanks of 1000 Gallons (3785 l) or Less: Any stationary gasoline dispensing tank having a capacity of 1000 gallons (3785 l) or less which was installed prior to October 2, 1978, provided that such tank is equipped with a permanent submerged fill pipe is exempt from Section 305 of this rule. Where, because of government regulation including, but not limited to, Fire Department codes, such a fill pipe cannot be

installed, the gasoline shall be delivered into the tank using a nozzle extension that reaches within six (6) inches (15.24 cm) of the tank bottom.

**103.6 Loading of Gasoline:** The owner or operator of a stationary GDF that is unattended or when there is only one owner or operator under control of the stationary GDF present, the owner or operator of the stationary GDF is exempt from Section 304 of this rule.

**103.6 Portable Gasoline Dispensing Tanks:** Any gasoline dispensing tank that does not remain at one location for 12 consecutive months is considered a portable gasoline dispensing tank. If any portable gasoline dispensing tank remains at one location on a facility for longer than 12 consecutive months, it will be considered a stationary tank and these rules will apply.

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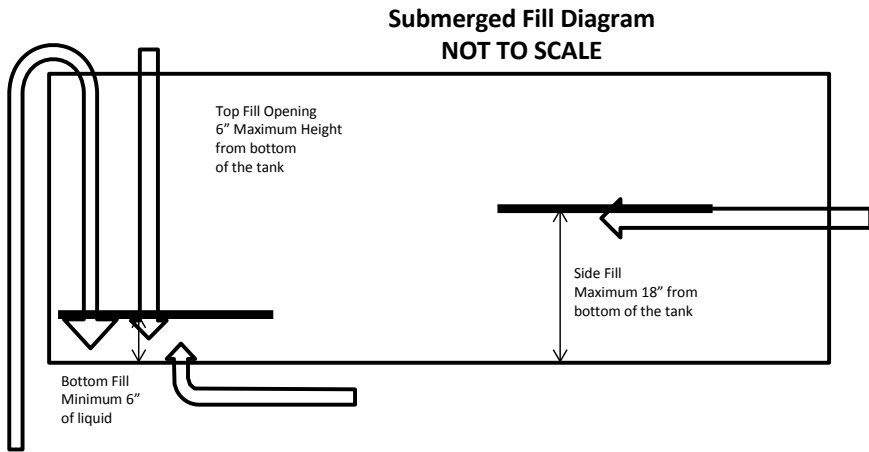
## Proposed revision 1.1

**SECTION 200 – DEFINITIONS:** For the purpose of this rule, the following definitions shall apply, in addition to those definitions found in Rule 100 (General Provisions and Definitions) of these rules. In the event of any inconsistency between any of the Maricopa County air pollution control rules, the definitions in this rule take precedence.

- 201 AVIATION GASOLINE (AVGAS):** A type of gasoline used to fuel a piston engine aircraft.
- 202 CARB-CERTIFIED:** A vapor control system, subsystem, or component that has been specifically approved by system configuration and manufacturer's name and model number in an executive order of the California Air Resources Board (CARB), pursuant to Section 41954 of the California Health and Safety Code.
- 203 COAXIAL VAPOR BALANCE SYSTEM:** A type of vapor balance system in which the gasoline vapors are removed through the same opening through which the fuel is delivered.
- 204 DUAL-POINT VAPOR BALANCE SYSTEM:** A type of vapor balance system in which the storage tank is equipped with an entry port for a gasoline fill pipe and a separate exit port for a vapor connection.
- 205 EXCESS GASOLINE DRAINAGE:** More than 10 milliliters (2 teaspoonsful) of liquid gasoline lost from the end of a fill hose or vapor hose in the process of connecting or disconnecting the hose; or any quantity of gasoline escaping out the end of such a hose that wets any area(s) on the ground having an aggregate area greater than 113 square inches, or the perimeter of which would encompass a circle of 12 inches (30.5 cm) diameter. This does not include drainage into a fill pipe's spill containment receptacle.
- 206 GASOLINE:** Any petroleum distillate, petroleum distillate/alcohol blend, petroleum distillate/organic compound blend, or alcohol having a Reid vapor pressure between 4.0 and 14.7 psi (200–760 mm Hg.), as determined by Section 504.2 of this rule, and which is used as a fuel for internal combustion engines.
- 207 GASOLINE CARGO TANK:** A delivery tank truck or railcar which is loading or unloading gasoline, or which has loaded or unloaded gasoline on the immediately previous load. This includes any hoses the vessel carries through which deliveries must be made.
- 208 GASOLINE DISPENSING FACILITY (GDF):** Any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine, including a nonroad vehicle or nonroad engine used solely for competition. These facilities include, but are not limited to, facilities that dispense gasoline into on- and off-road, street, or highway motor vehicles, lawn equipment, boats, test engines, landscaping equipment, generators, pumps, and other gasoline fueled engines and equipment.
- 209 GASOLINE VAPORS:** Vapors, originating from liquid gasoline, that are usually found in mixture with air. Included are any droplets of liquid gasoline or of gasoline vapor condensate that are entrained by the vapor.
- 210 LEAK-FREE:** A condition in which there is no liquid gasoline escape or seepage of more than 3 drops per minute from gasoline storage, handling, and ancillary equipment, including, but not limited to, seepage and escapes from above ground fittings.

- 211 **MARICOPA COUNTY (MC) VAPOR TIGHTNESS TEST:** The complete pressure, vacuum, and vapor-valve testing of a gasoline cargo tank that is performed according to Maricopa County specifications as described in Rule 352 of these rules.
- 212 **POPPEDED DRY BREAK:** A type of vapor loss control equipment that opens only by connection to a mating device to ensure that no gasoline vapors escape from the stationary gasoline dispensing tank before the vapor recovery line is connected.
- 213 **PURGING:** Removing, cleaning, or scouring out gasoline vapors from all or a portion of a gasoline cargo tank by active or passive means and emitting the vapors into the atmosphere.
- 214 **STAGE 1 VAPOR RECOVERY SYSTEM (VR SYSTEM):** At a stationary GDF, the use of installed vapor recovery equipment designed to reduce by at least 95% the VOC vapor that would otherwise be displaced into the atmosphere from a stationary gasoline dispensing tank when gasoline is delivered into the tank by a gasoline cargo tank. This reduction may be done either by capturing the displaced vapors within the gasoline cargo tank, and or by processing the vapors on site with an emission processing device.
- 215 **STATIONARY GASOLINE DISPENSING TANK:** Any stationary tank which dispenses gasoline directly into a motorized vehicle's fuel tank, dispenses gasoline into an aircraft's fuel tank, or dispenses gasoline into a watercraft's fuel tank that directly fuels its engine(s) and has been or is expected to be located at one location at any site for longer than 12 months.
- 216 **SUBMERGED FILL:** Any discharge pipe or nozzle which meets the applicable specification as follows:
  - 216.1 **Top-Fill or Bottom-Fill:** The end of the discharge pipe or nozzle is totally submerged when the liquid level is six (6) inches (15 cm) from the bottom of the tank.
  - 216.2 **Side-Fill:** At its highest point within the stationary gasoline dispensing tank less 2,000,000 gallon capacity, the end of the discharge pipe or nozzle is totally submerged when the liquid level is eighteen (18) inches (46 cm) from the bottom of the tank.

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- 217 **TANK CAPACITY:** The maximum volume of liquid gasoline a particular tank is allowed to store while still complying with all applicable rules, including local, state, and Federal rules.

- 218 VAPOR LOSS CONTROL EQUIPMENT:** Any piping, hoses, equipment, or devices which are used to collect, store and/or process VOC vapors at a service station or other gasoline dispensing facility.
- 219 VAPOR TIGHT:** A condition in which a suitable detector at the site of (potential) leakage of vapor shows less than 10,000 ppmv when calibrated with methane or the detector shows less than 1/5 lower explosive limit (LEL) when calibrated with a gas specified by the manufacturer and used according to the manufacturer's instructions.

### SECTION 300 – STANDARDS

#### 301 MANUFACTURERS, SUPPLIERS, AND OWNER OR OPERATOR:

- 301.1** A manufacturer, supplier, owner or operator shall not supply, offer for sale, sell, install or allow the installation of an above ground or underground storage tank, any type of VR System or any of its components unless the tank, system and components meet the following:
- a. Replacement Components for A VR System:** After June 16, 1999, a VR System for which there is a CARB specification shall be replaced with components that comply with one of the following:
    - (1) The equipment is supplied by the manufacturer as a CARB-certified component; or
    - (2) The equipment is rebuilt by a person who is authorized by CARB to rebuild that specific CARB-certified component; or
  - b.** All vapor recovery lines from stationary gasoline dispensing tanks shall be equipped with CARB-certified, spring-loaded, vapor tight, poppetted dry breaks.
  - c.** After November 2, 2016, each new or rebuilt installed component shall be clearly identified with a permanent identification affixed by the certified manufacturer or rebuilder.
- 301.2** Only a State of Arizona licensed Vapor Recovery Registered Service Representative (RSR) shall install an above ground or underground storage tank or vapor recovery system components.
- 301.3** An owner or operator shall not:
- a.** Install a coaxial fill pipe in a new installation (after June 16, 1999); or
  - b.** Reinstall a coaxial fill pipe during any changes to the stationary gasoline dispensing tank when the top of the tank is exposed and the vapor port bung is pre-configured to accept vapor recovery piping.
- 301.4** The owner or operator of a stationary gasoline dispensing tank shall verify that vapor recovery equipment (unless exempted by this rule) is properly connected and in use at all times while gasoline is actively being loaded. If the stationary GDF is unattended or there is only one owner or operator under control of the stationary GDF on-site, the owner or operator of the gasoline cargo tank is responsible for the proper connection and use of the vapor recovery equipment (unless exempted by this rule) while gasoline is being actively loaded.
- 301.5** An owner or operator shall only load, allow the loading, or provide equipment for the loading of gasoline from only a gasoline cargo tank identified with a valid Maricopa County (MC) Vapor Tightness Test decal into any stationary gasoline storage tank.

**302 GENERAL HOUSEKEEPING REQUIREMENTS:** An owner or operator shall not store gasoline or permit the loading of gasoline in any stationary gasoline dispensing tank located above or below ground unless all of the following conditions are met:

- 302.1** Minimize gasoline spills;
- 302.2** Clean up spills as expeditiously as practicable;
- 302.3** Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;
- 302.4** Minimize gasoline sent to waste collection systems that collect and transport gasoline to reclamation and recycling equipment, such as oil/water separators;
- 302.5** Properly dispose of any VOC containing material.

**303 GASOLINE STORAGE EQUIPMENT AND OPERATION REQUIREMENTS:**

**303.1 Underground Storage Tank (UST):** By December 2, 2016, an UST with a capacity more than 250 gallons (946 l) must meet all of the following conditions unless exempt from the VR System requirements per Section 103.5 of this rule:

- a.** The UST is equipped and maintained according to Section 301 of this rule;
- b.** For an existing stationary GDF, maintain a dual-point VR System or a coaxial vapor balance system. For new installations (after June 16, 1999) or modifications to an existing stationary GDF (after June 16, 1999), install and maintain a dual-point vapor balance system with separate fill and vapor connection points;
- c.** A pressure-vacuum vent is installed and maintained per manufacturer's specifications;
- d.** The VR System is maintained and operated according to the manufacturer's specifications and the applicable CARB Executive Orders including the corresponding CARB approved Installation, Operation and Maintenance Manual;
- e.** A permanent submerged fill pipe is installed and maintained to ensure the highest point of the discharge opening is no more than six inches (6") from the bottom of the UST;
- f.** Each fill pipe is equipped with gasketed vapor tight cap;
- g.** After December 2, 2016 each poppetted dry break is equipped with vapor tight seal and gasketed vapor tight cap;
- h.** Each gasketed vapor tight cap is maintained in a closed position except when the fill pipe or poppetted dry break it serves is actively in use;
- i.** The fill pipe assembly, including fill pipe, fittings and gaskets, is maintained to prevent vapor leakage from any portion of the VR System; and
- j.** A spill containment receptacle is installed and maintained free of standing liquid, debris and other foreign matter. The spill containment receptacle shall be equipped with an integral drain valve or other CARB-certified equipment, to return spilled gasoline to the UST. The drain valve shall be maintained closed and free of vapor emissions at all times except when the valve is actively in use.

**303.2 Above Ground Storage Tank (AST):** By November 2, 2016, an AST with a capacity more than 250 gallons (946 l) must meet all of the following conditions:

- a. A permanent submerged fill pipe is installed and maintained to ensure the highest point of the discharge opening is no more than six inches (6") from the bottom of the AST. If the AST is side filled, the fill pipe discharge opening is no more than 18 inches (18") above the tank bottom;
- b. A pressure-vacuum vent is installed and maintained per manufacturer's specifications;
- c. Each fill pipe is equipped with a gasketed vapor tight cap;
- d. All threads, gaskets, and mating surfaces of the fill pipe assembly shall prevent liquid or vapor leakage at the joints of the assembly;
- e. Each gasketed vapor tight cap is maintained in a closed position except when actively in use;
- f. Prior to November 2, 2016, if an AST is equipped with a spill containment receptacle, it shall be maintained to be free of standing liquid, debris and other foreign matter. On or after December 2, 2016, a newly installed AST shall be equipped with a spill containment receptacle that is maintained to be free of standing liquid, debris and other foreign matter;
- g. A spill containment receptacle is installed at each fill pipe for any AST installed after December 2, 2016; and
- h. Any overflow prevention equipment shall be ~~approved~~, installed and maintained vapor tight to the atmosphere. Any device mounted within the fill pipe shall be so designed and maintained that no vapor from the vapor space above the gasoline within the tank can penetrate into the fill pipe or through any of the fill pipe assembly into the atmosphere.

**304 LOADING OF GASOLINE:** Prior to accepting a load of gasoline, an owner or operator of a stationary GDF shall verify all of the following unless exempted in Section 103 of this rule:

**304.1** The gasoline cargo tank clearly displays a valid Maricopa County Vapor Tightness Certification decal that is permanently mounted near the front on the right (passenger) side of the vessel.

**304.2** The owner or operator of the gasoline cargo tank connects the vapor recovery hose prior to connecting loading hose.

**305 CONTROL OF VOC VAPORS:**

**305.1** Gasoline vapors displaced from a stationary gasoline dispensing tank while being loaded shall be handled by a VR System, unless the tank is exempted by Section 103.5 of this rule.

**305.2 VR System Configuration:**

- a. Replacement: After June 16, 1999, no part of a VR System for which there is a CARB specification shall be replaced with anything but CARB-certified components.
- b. Vapor Valves:
  - (1) All vapor recovery lines from a stationary gasoline dispensing tank shall be equipped with CARB-certified, spring-loaded, vapor-tight, poppetted dry breaks.

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- (2) Vapor valves shall be inspected pursuant to Section 401 of this rule to determine if closure is complete and gaskets are intact; a record shall be made pursuant to Section 502 of this rule.
- c. AST: After June 16, 1999, an AST shall have CARB-certified fittings wherever CARB so specifies.
- d. By December 2, 2016, each AST and UST shall use CARB-certified fittings exclusively wherever CARB so specifies, and:
  - (1) Shall have its own separate, functioning dual-point vapor return line;
  - (2) Is allowed to have a combination vapor recovery system that in addition to having a separate dual-point vapor recovery line, also has vapor piping/fittings linking it to one or more (other) stationary gasoline dispensing tanks.

**305.3 Equipment Maintenance and Use Required:**

- a. All vapor loss control equipment shall be:
  - (1) Installed as required;
  - (2) Operated as recommended by the manufacturer; and
  - (3) Maintained leak-free, vapor tight and in good working order.
- b. Coaxial Systems: Both spring-loaded and fixed coaxial fill pipes shall be
  - (1) Maintained according to the standards of their manufacturer(s); and
  - (2) Be operated so that there is no obstruction of vapor passage from the stationary gasoline dispensing tank to the gasoline cargo tank.

**SECTION 400 – ADMINISTRATIVE REQUIREMENTS**

**401 INSPECTIONS:** The owner or operator of a GDF shall conduct inspections. A record shall be made pursuant to Section 503 of this rule.

The inspection shall include, but is not limited to all of the following:

- a. The spill containment receptacle shall be:
  - (1) Free of cracks, rust and defects;
  - (2) Free of foreign material;
  - (3) Empty of liquid, including gasoline;
  - (4) If necessary, installed with a drain valve that properly seals.
- b. The external fittings of the fill pipe assembly shall be:
  - (1) Intact and not loose;
  - (2) Covered with a gasketed cap that fits securely onto the fill pipe.

- c. The poppetted dry break shall be:
  - (1) Equipped with a vapor tight seal;
  - (2) Covered with a gasketed cap that fits securely onto the poppetted dry break.

The inspections shall be conducted:

- a. At least once per calendar week; or
- b. If the gasoline dispensing facility receives gasoline loads less than once per calendar week, the inspection shall take place upon completion of the receipt of the load of gasoline.

**402 BURDEN OF PROOF:**

**Proving Exempt Status:** The burden of proof of eligibility for exemption from a provision of this rule is on the owner or operator. An owner or operator seeking such an exemption shall maintain adequate records and furnish them to the Control Officer upon request.

**Providing Proof of Equipment Compliance:** It is the responsibility of the owner or operator, to provide proof, when requested by the Control Officer, that a vapor recovery system or its modifications meet the requirements of this Rule 353.

**403 CARB DECERTIFICATION:** An owner or operator shall not install or reinstall a component related to vapor recovery that has been decertified by CARB.

**404 OTHER AGENCIES' REQUIREMENTS:** Compliance with this rule does not relieve or otherwise affect the owner or operator's obligation to comply with any other applicable federal, state, or local legal requirement, including, but not limited to, rules promulgated by the Arizona Department of Agriculture, Weights and Measures Services Division; local fire department codes ; and local zoning ordinances.

**SECTION 500 – MONITORING AND RECORDS:**

**501 DETERMINING VAPOR TIGHT STATUS:** An owner or operator or Control Officer shall follow the test procedure in Section 501.1 of this rule and shall use one or more of the methods listed in Sections 501.2 or 501.3 of this rule to determine the vapor tight status on a VR System or spill containment equipment at a stationary GDF that receives more than 120,000 gallons (454,250 l) of gasoline in any twelve (12) consecutive calendar months or on a gasoline cargo tank on at least an annual basis or as requested by the Control Officer.

**501.1 Combustible Gas Detector (CGD) or Organic Vapor Analyzer (OVA) - Test Procedure:** During loading of gasoline into stationary gasoline dispensing tanks, the peripheries of all potential sources of leakage during loading at the GDF are checked with a CGD or OVA as follows:

- a. **Calibration:** Within four (4) hours prior to monitoring, the CGD or OVA shall be properly calibrated for a 20 percent LEL response or to 10,000 ppm with methane.
- b. **Probe Distance:** The probe inlet shall be one (1) inch (2.5 cm) or less from the potential leak source when searching for leaks. The probe inlet shall be one (1) inch (2.5 cm) from the leak source when the highest detector reading is being determined for a discovered leak. When the probe is obstructed from moving within one (1) inch (2.5 cm) of an actual or potential leak source, the closest practicable probe distance shall be used.
- c. **Probe Movement:** The probe shall be moved slowly, not faster than 1.6 inches per second (4 centimeters per second). If there is any meter deflection at an actual or potential leak source, the probe shall be positioned to locate the point of highest meter response.

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- d. **Probe Position:** The probe inlet shall be positioned in the path of the vapor flow from an actual or potential leak such that the central axis of the probe-tube inlet shall be positioned coaxially with the path of the most concentrated vapors.
- e. **Wind:** Wind shall be blocked as much as possible from the space being monitored. The annual leak detection test required by Section 401 of this rule shall be valid only when wind speed in the space being monitored is five (5) mph or less.
- f. **Data Recording:** The highest detector reading and location for each incidence of detected leakage shall be recorded, along with the date and time. If no gasoline vapor is detected, that fact shall be entered into the record.

**501.2 Method 21-Determination of Volatile Organic Compound Leaks, Alternative Screening Procedure 8.3.3:**

- a. Spray a soap solution over all potential leak sources. The soap solution may be a commercially available leak detection solution or may be prepared using concentrated detergent and water. A pressure sprayer or squeeze bottle may be used to dispense the solution.
- b. Observe the potential leak sites to determine if any bubbles are formed.
  - (1) If no bubbles are observed, the source is presumed to have no detectable vapor leaks.
  - (2) If any bubbles are observed, the instrument techniques of Section 501.1 of this rule shall be used to verify if a vapor leak exists.

**501.3 Optical Gas Imaging:** A certified operator of a calibrated optical gas imaging device may use an optical gas imaging instrument to identify vapor leaks. If a vapor leak is detected, the instrument techniques listed in Section 501.1 of this rule shall be used to verify if a vapor leak exists.

**502 COMPLIANCE INSPECTIONS:** Any stationary gasoline dispensing tank required by this rule to be equipped with a VR system may be subject to monitoring for vapor tightness and liquid leak tightness during any working hours. Such a tank may be opened for gauging or inspection when loading operations are not in progress, provided that such tank is part of an open system or is served by a positive-pressure relief valve with a relief setting not exceeding  $+\frac{1}{2}$  lb psig.

**503 GDF RECORDKEEPING:** The owner or operator of each stationary GDF in Maricopa County shall maintain records as follows:

The total amount of gasoline received each month shall be recorded by the end of the following month.

The owner or operator of a stationary GDF shall record inspections in a permanent record or log book:

- a. By the end of Saturday of the following week; or
- b. If the gasoline dispensing facilities receives gasoline loads less than once per calendar week, the owner or operator shall record the inspection within three days after the receipt of the load of gasoline.

These records and any reports or supporting information required by this rule or by the Control Officer shall be retained for at least five (5) years.

Records of the past twelve (12) months shall be in a readily accessible location and must be made available to the Control Officer without delay upon verbal or written request.

**504 COMPLIANCE DETERMINATION:**

Control efficiency of vapor loss control equipment and vapor collection/ processing systems shall be determined according to EPA Method 2A and either EPA Method 25A or 25B, or by CARB-approved test methods. EPA Method 2B shall be used for vapor incineration devices.

Vapor pressure of gasoline shall be determined using ASTM D323-15a Standard Test Method for Vapor Pressure of Petroleum Products (Reid Method) or ASTM D4953-15, Standard Test Method for Vapor Pressure of Gasoline and Gasoline-Oxygenate Blends (Dry Method). ASTM D323-15a shall be used for gasoline either containing no oxygenates or MTBE (methyl tertiary butyl ether) as the sole oxygenate. 93 ASTM 4953-15 shall be used for oxygenated gasoline.

**Vapor Leaks:**

- a. If a determination of vapor tight status is to be made on a VR system or spill containment equipment at a stationary GDF or on a gasoline cargo tank at the station, at least one of the test method's listed in Section 501 of this rule shall be used.
- b. Section 501.1 of this rule probe distance and movement parameters not with-standing, if it has been established that there are no other interfering vapor escapes, it is an exceedance if a reading by the Control Officer from an established vapor escape above 1/5 LEL (or 10,000 ppm as methane) is sustained for at least five (5) seconds, and the probe is either consistently further than one (1) inch from the source and/or the probe is consistently being moved faster than four centimeters (4 cm) per second.
- c. The Control Officer may count it as a failure to perform weekly inspections pursuant to Section 305.2 of this rule if substantial foreign material as determined by the Control Officer, is found in a spill containment receptacle and there is no record of an inspection's being performed in the preceding ten (10) days.

**505 TEST METHODS INCORPORATED BY REFERENCE:** The following test methods are approved for use for the purpose of determining compliance with this rule. The test methods are adopted by reference in Appendix G of the Maricopa County Air Pollution Control Regulations. Alternative test methods as approved by the Administrator or other EPA-approved test methods may be used upon prior written approval from the Control Officer. When more than one test method is permitted for the same determination, an exceedance under any method will constitute a violation. Copies of test methods referenced in this section are available at the Maricopa County Air Quality Department, 1001 N. Central Avenue, Suite 125, Phoenix, AZ 85004-1942.

**EPA Test Methods:**

- a. EPA Methods 2a ("Direct Measurement of Gas Volume Through Pipes and Small Ducts"), and 2b ("Determination of Exhaust-Gas Volume Flow-Rate from Gasoline Vapor Incinerators"). 40 CFR 60, Appendix A.
- b. EPA Method 21 - Determination of Volatile Organic Compound Leaks.
- c. EPA Method 21-Determination of Volatile Organic Compound Leaks, Alternative Screening Procedure 8.3.3
- d. EPA Method 25 ("Determination of Total Gaseous Nonmethane Organic Emissions as Carbon") and its submethods (40 CFR 60, Appendix A).

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- e. EPA Method 27 (“Determination of Vapor Tightness of Gasoline Delivery Tank Using Pressure-Vacuum Test”) in 40 CFR 60, Appendix A.
- f. Optical Gas Imaging: Alternative Work Practice for Monitoring Equipment Leaks, 40 CFR 60.18(g). An owner or operator may use an optical gas imaging instrument instead of a 40 CFR part 60, Appendix A-7, Method 21 to monitor for equipment volatile organic compound leaks.

**ASTM Standards:**

- a. ASTM D323-15a “Standard Test Method for Vapor Pressure of Petroleum Products (Reid Method).
- b. ASTM D4953-15 “Standard Test Method for Vapor Pressure of Gasoline and Gasoline-Oxygenate Blends (Dry Method)

**CARB Certification and Test Procedures for Gasoline Vapor Recovery Systems:**

- a. California Environmental Protection Agency, Air Resources Board Vapor Recovery Test Procedure TP-201.1B, Static Torque of Rotatable Phase 1 Adaptors, October 8, 2003 edition, California Air Resources Board, P.O. Box 2815, 2020 L. Street, Sacramento, California 95812-2815.
- b. California Air Resources Board Vapor Recovery Test Procedure TP-201.1,—Volumetric Efficiency for Phase I Vapor Recovery Systems, adopted April 12, 1996, and amended February 1, 2001, and October 8, 2003.
- c. California Air Resources Board Vapor Recovery Test Procedure TP-201.1A - “Determination of Efficiency of Phase I Vapor Recovery Systems of Dispensing Facilities with Assist Processors”.
- d. California Environmental Protection Agency, Air Resources Board Vapor Recovery Test Procedure TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves, October 8, 2003 edition.
- e. California Environmental Protection Agency, Air Resources Board Vapor Recovery Test Procedure TP-201.1C, Leak Rate of Drop Tube/Drain Valve Assembly, October 8, 2003, edition.
- f. California Environmental Protection Agency, Air Resources Board Vapor Recovery Test Procedure TP-201.1D, Leak Rate of Drop Tube Overfill Protection Devices and Spill Container Drain Valves, October 8, 2003 edition.
- g. California Air Resources Board Vapor Recovery Test Procedure TP-201.3,—Determination of 2-Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities, adopted April 12, 1996, and amended March 17, 1999.
- h. Bay Area Air Quality Management District Source Test Procedure ST-30—Static Pressure Integrity Test—Underground Storage Tanks, adopted November 30, 1983, and amended December 21, 1994.

**Additional Test Methods:**

- a. American Petroleum Institute Standard API STD 650 Welded Tanks for Oil Storage, Twelfth Edition, Includes Errata 1 (2013), Errata 2 (2014), and Addendum 1 (2014).

- b. San Diego County Air Pollution Control District Test Procedure TP-96-1, March 1996, Third Revision.