SAN DIEGO AIR POLLUTION CONTROL DISTRICT
COMPLIANCE DIVISION
10124 OLD GROVE ROAD
SAN DIEGO CA 92131-1649
PHONE (858) 586-2650 FAX (858) 586-2651

APCD USE ONLY
SECTOR
ID#
NOV#

LIQUID REMOVAL

Exhibit 5 of VR-203-XX and VR-204-XX (long version)

☐ **Renewal Testing** (Contractor only) ☐ **Compliance Witness** (District only) ☐ **Compliance Testing** (District only) ☐ **Engineering Evaluation** (Contractor only)

Facility Name:_____ **A/C or PO Number:**_____ **Time of Test:**_____
(Record exact time of test in order to demonstrate proper test sequencing as required in Attachment L)

(Number of nozzles x grades per nozzle) Total grade points onsite:	[A] Grade points not tested due to low flowrate (<6.0 gpm):	[C] Grade points not tested for any other reason (eg. Defects):	# of grade points LR tested that passed:
Pre-Inspection[1]: Hoses in compliance? ☐ YES ☐ NO	[B] Grade points not tested due to high flowrate (>10.0 gpm):	Total number of grade points LR tested: (excluding boxes [A],[B],&[C])	# of grade points LR tested that failed:

Fueling Point & Grade[2] (87/89/91)	Hose Make & Model	Hose Serial Number[3]	Volume Added to Hose[4] (mL) (VI)	Gallons Dispensed[5] (gal) (G)	Time to Dispense[6] (sec) (T)	Volume After Dispensing[7] (mL) (VF)	Volume Drained with No Dispensing[8] (mL) (VND)	Wall Adhesion[9] (mL) (VW)	Dispensing Rate[10] (gal/min)	Liquid Removal Rate[11] (mL/gal)	Liquid Removal Average[12] (If Appl) (mL/gal)	Pass (P) or Fail (F) or Non-Test (NT)[13]	Comments[14]

Exhibit 5 of VR-203-X and VR-204-X Option 2 (long version)

Facility Name:_____ **A/C or PO Number:**_____ **Time of Test:**_____

(Record exact time of test in order to demonstrate proper test sequencing as required in Attachment L)

Fueling Point & Grade[2] (87/89/91)	Hose Make & Model	Hose Serial Number[3]	Volume Added to Hose[5] (mL) (VI)	Gallons Dispensed[6] (gal) (G)	Time to Dispense[7] (sec) (T)	Volume After Dispensing [8] (mL) (VF)	Volume Drained with No Dispensing[9] (mL) (VND)	Wall Adhesion [10] (mL) (VW)	Dispensing Rate[11] (gal/min)	Liquid Removal Rate[12] (mL/gal)	Liquid Removal Average[13] (If Appl) (mL/gal)	Pass (P) or Fail (F) or Non-Test (NT)[14]	Comments[15]

---

[1] *Inspect hoses for slits, tears and any Title 17 defects for hanging hardware specified in Exhibit 2 of VR-203-XX or VR-204-XX. Replace defective hoses prior to proceeding with the test.*

[2] *Fueling Point and Grade: Indicate which fueling point (e.g. 1, 2, 3, etc...) and fuel grade (i.e. 87, 89 or 91) is being tested. All gasoline hoses shall be tested. If unihose dispensers are installed, then the liquid removal test shall be performed on the grade with the lowest flow rate. To determine the lowest flow rate, perform the flow rate check on each grade prior to liquid removal testing. Attach the flow rate test results (i.e. Attachment E) to this form.*

[3] *The hose serial number comes from the hose with the liquid removal device.*

[4] *The amount of gasoline added to the hose (VI), in milliliters*

[5] *The amount of gasoline dispensed (G), in gallons, recorded to the nearest hundredth (i.e. 0.01). Note: the liquid extraction device shall be located at the bottom of the loop while dispensing.*

[6] *Elapsed time during dispensing (T), in seconds*

[7] *The amount of gasoline drained out of the hose after dispensing completed (VF), in milliliters. Note the plug shall be installed and the dispenser deactivated while measuring gasoline.*

[8] *The amount of gasoline drained out of the hose after adding 150mL of gasoline (VND), in milliliters. Note that dispensing shall not have been conducted between adding the gasoline and before draining the hose.*

[9] *Wall adhesion is the amount of gasoline lost when dispensing had not occurred (VW). Wall adhesion:* $VW = 150 - VND$, *in milliliters*

[10] *Dispensing Rate:* $GPM = \frac{G}{T} * 60 \frac{\text{sec}}{\text{min}}$, *in gallons per minute, to the nearest hundredth (i..e. 0.01)*

[11] *Liquid Removal Rate:* $VR = \frac{(VI - VW) - VF}{G}$, *in milliliters per gallon, to the nearest hundredth (i.e. 0.01).*

[12] *If the liquid removal rate is between 4.5 and 5.0 mL/gal, conduct the test two additional times. Do not make adjustments to the gasoline dispensing or vapor recovery lines until all three test runs have been completed. Calculate the numerical average of the three test runs. If the average V/L value of these three test runs is within the allowable limits, compliance has been verified.*

[13] *If the liquid removal rate is greater than 5 mL/gal, the grade point complies with the specifications. Non-tests include: Nozzle spouts that are damaged such that the spout plug cannot fit in the nozzle spout or refueling points not capable of achieving dispensing rates required for conducting the liquid removal test, as specified in Exhibit 2 of applicable ARB Executive Order (between 6.0 and 10.0 gpm).*

[14] *Comments (e.g. reason for non-test, equipment adjustments, etc.)*