MONTEREY BAY AIR RESOURCES DISTRICT
24580 Silver Cloud Court, Monterey, CA 93940
(831) 647-9411, www.mbard.org

VAPOR TO LIQUID VOLUME RATIO TEST
HEALY PHASE II EVR SYSTEMS – ROOTS METER OPTION

Exhibit 5 of ARB E.O. VR-201 and VR-202

☐ Renewal Testing ☐ Engineering Startup/Evaluation

SOURCE INFORMATION			TEST COMPANY INFORMATION		
Facility (DBA)/Site Address:		Facility Representative/Title:	Company Name/Address		Company Representative
Print Name & DBA		Print Name	Print Name		Print Name
Street Address		Title	Street Address		Signature
City	Zip	Phone No.	City	Zip	Phone No.
District Test Witness:		☐P/O ☐A/C Number::	Date of Test:		ICC Cert. No:
Applicable ARB E.O. (circle one) VR-201 or VR-202			Time of Test		Phase II Manufacturer Cert No:

Tee Connection Test Results (Section 6.1): _____ ft^3	**Pre-Test 3 Minute Leak Check (Section 6.4):**
Date of Last Gas Volume Meter Calibration:	Initial Pressure: ("wc) _____ (5.00 "wc maximum)
Gas Volume Meter Serial #:	Final Pressure: ("wc) _____ (4.95 "wc minimum)
Correction Factor for Gas Volume Meter (Section 9.3):	**Post-Test 3 Minute Leak Check: (Section 8.3)**
Date of Last Pressure Measurement Device Calibration:	Initial Pressure ("wc) _____ (5.00 "wc maximum)
	Final Pressure ("wc) _____ (4.95 "wc minimum)
	If Post Test Leak Check fails, all V/L test results between Pre & Post Test Leak Checks are invalid

Are at least 2 gallons of product introduced into the system through each dispenser riser prior to conducting this test? ☐YES ☐NO

Fuel Grade Point[1]	Nozzle[2]	Initial Dispenser Totalizer[3] G_i (Gallons)	Final Dispenser Totalizer[4] G_f (Gallons)	Total Gasoline Pumped (Gallons)	Time[5] **t** (Seconds)	Dispensing Rate[6] Q_g (GPM)	Initial Meter Reading[7] V_i (ft^3)	Final Meter Reading[8] V_f (ft^3)	**V/L**[9]	**V/L** Average[10] (if necessary)	Pass/ Fail[11]

Fuel Grade Point[1]	Nozzle[2]	Initial Dispenser Totalizer[3] G_i (Gallons)	Final Dispenser Totalizer[4] G_f (Gallons)	Total Gasoline Pumped (Gallons)	Time[5] **t** (Seconds)	Dispensing Rate[6] Q_g (GPM)	Initial Meter Reading[7] V_i (ft^3)	Final Meter Reading[8] V_f (ft^3)	**V/L**[9]	**V/L** Average[10] (if necessary)	Pass/ Fail[11]

[1]*Grade point: This test shall be performed for all fueling points*

[2]*Model and Serial Number of the nozzle (found below nozzle handguard)*

[3]*Initial totalizer reading from the dispenser (G_i), in gallons*

[4]*Final totalizer reading from the dispenser (G_f), in gallons*

[5]*Elapsed time during dispensing (t), in seconds*

[6]*Dispensing Rate*: $Q_g = \left[\frac{G_f - G_i}{t} \right] \times 60$, *in gallons per minute*

[7]*Inital gas volume meter reading (V_i), in cubic feet*

[8]*Final gas volume meter reading (V_f), in cubic feet*

[9]$V/L = \left[\frac{y(V_f - V_i)}{G_f - G_i} \right] \times 7.481$

[10]*If the V/L Volumetric Ratio is between 0.76 – 0.94, or greater than or equal to 1.16, conduct the test two additional times. Do not make adjustments to the gasoline dispensing or vapor recovery lines until all three runs have been completed. Adjustments of the V/L test equipment, including the V/L adaptor and nozzle, are allowed as necessary to ensure measurement accuracy. If the V/L test equipment is adjusted, then the prior test run results for that grade point tested should be not used. 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.*

[11]*If the V/L Volumetric Ratio is between 0.95 – 1.15, the grade points complies with the specifications.*