Executive Orders VR-203-N and VR-204-N
Balance Phase II EVR Systems

EXHIBIT 15
VST Green Machine Compliance Test Procedure

Definitions common to all certification and test procedures are in:

D-200 Definitions for Vapor Recovery Procedures

For the purpose of this procedure, the term "ARB" refers to the State of California Air Resources Board, and the term "ARB Executive Officer" refers to the Executive Officer of the ARB or his or her authorized representative or designate.

1) PURPOSE AND APPLICABILITY

1.1 This procedure will assess the performance of the VST *Green Machine* by determining the concentration of hydrocarbons (HCs) being emitted from the processor and the *Green Machine*'s capability to control Underground Storage Tank (UST) pressure. This test will be referred to as the "GM Bag Test".

1.2 This test will also assure that the *Green Machine's* continuous monitoring function is working properly. This test is known as the "Continuous Monitoring Test".

1.3 This procedure is applicable for compliance testing but should not commence within 3 hours after a fuel delivery or within an hour after the Green Machine has been operating.

1.4 This procedure may be conducted while the station is operating.

2) PRINCIPLE AND SUMMARY OF TEST PROCEDURE

For the "GM Bag Test", the NOVA portable HC Analyzer "zero" and "span" will need to be set. Once the analyzer is set, the Tedlar bags will be purged with Nitrogen prior to use in the compliance test. Finally, the GM Bag Test will be run and the results compared to the required maximum level of HCs as measured by the NOVA.

The Continuous Monitoring Test uses the VST *Green Machine* Controller to test the amperage for the Vacuum/Motor Pump. This test will simulate a motor fault. If there is no current sensed, a "Fuel Alarm LX" will show on the Veeder Root TLS-350 display.

3) EQUIPMENT AND SUPPLIES

3.1 VST *Green Machine* Compliance Test kit
- 3.1.1 Tedlar sample bag
- 3.1.2 Flare Cap
- 3.1.3 Propane regulator

3.2 NOVA portable H/C analyzer and sample lines
3.3 Vacuum Pump and Lines
3.4 Bottle of consumer grade Propane

3.5 Supply of standard compressed Nitrogen
3.6 Pressure regulator (Nitrogen Regulator)

4) PRE-TEST REQUIREMENTS

Tedlar Bag Preparation:

4.1 Place the Tedlar bag on a flat surface.
4.2 Using the Nitrogen gas cylinder, connect the cylinder to the bag via the line provided. Use 5 psi or less to fill the bag.

Figure 1: Tedlar Bag with Connections

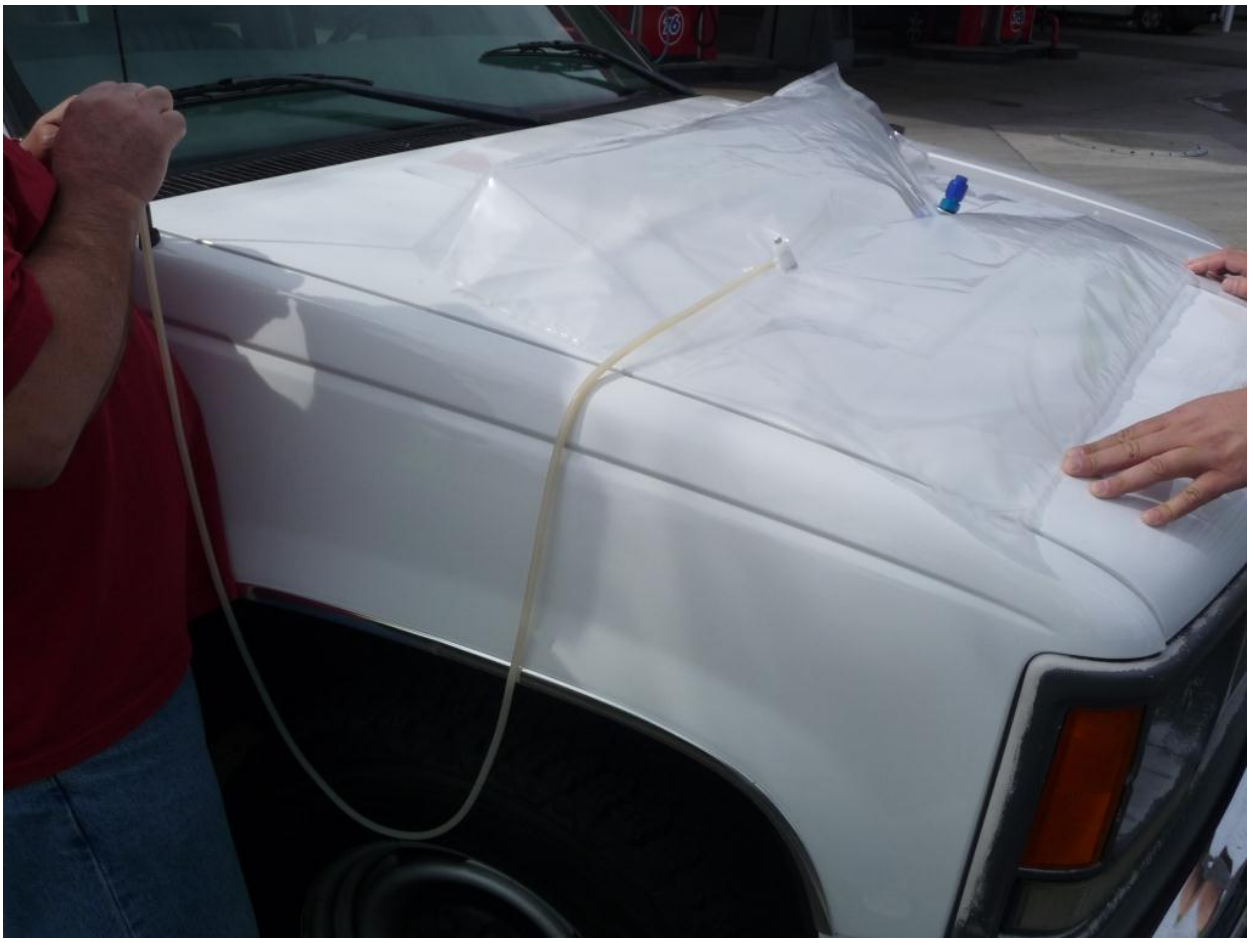

Figure 2: Tedlar Bag Connected to Nitrogen

4.3 Fill the bag approximately two-thirds full of Nitrogen.
4.4 Cap the large hose fitting on the bag with the flare cap that is provided.

Figure 3: Large Cap with Flare Fitting

4.5 Allow the Nitrogen to remain in the bag for 5 minutes.
4.6 Connect the vacuum pump to the sample port via the provided line.

Figure 4: Attach Tedlar Bag to Vacuum Pump to Evacuate the Nitrogen

4.7 Purge the bag using a vacuum pump, until the bag is completely evacuated.

4.8 The bag is now purged and ready for use. Conduct this procedure before and after every test.

NOVA Calibration:

4.9 Follow the manufacturer's instructions for calibrating the NOVA.

Test Set-Up:

4.10 Remove the 1" plug from the test port on the *Green Machine* and close the ball valve on the air outlet.

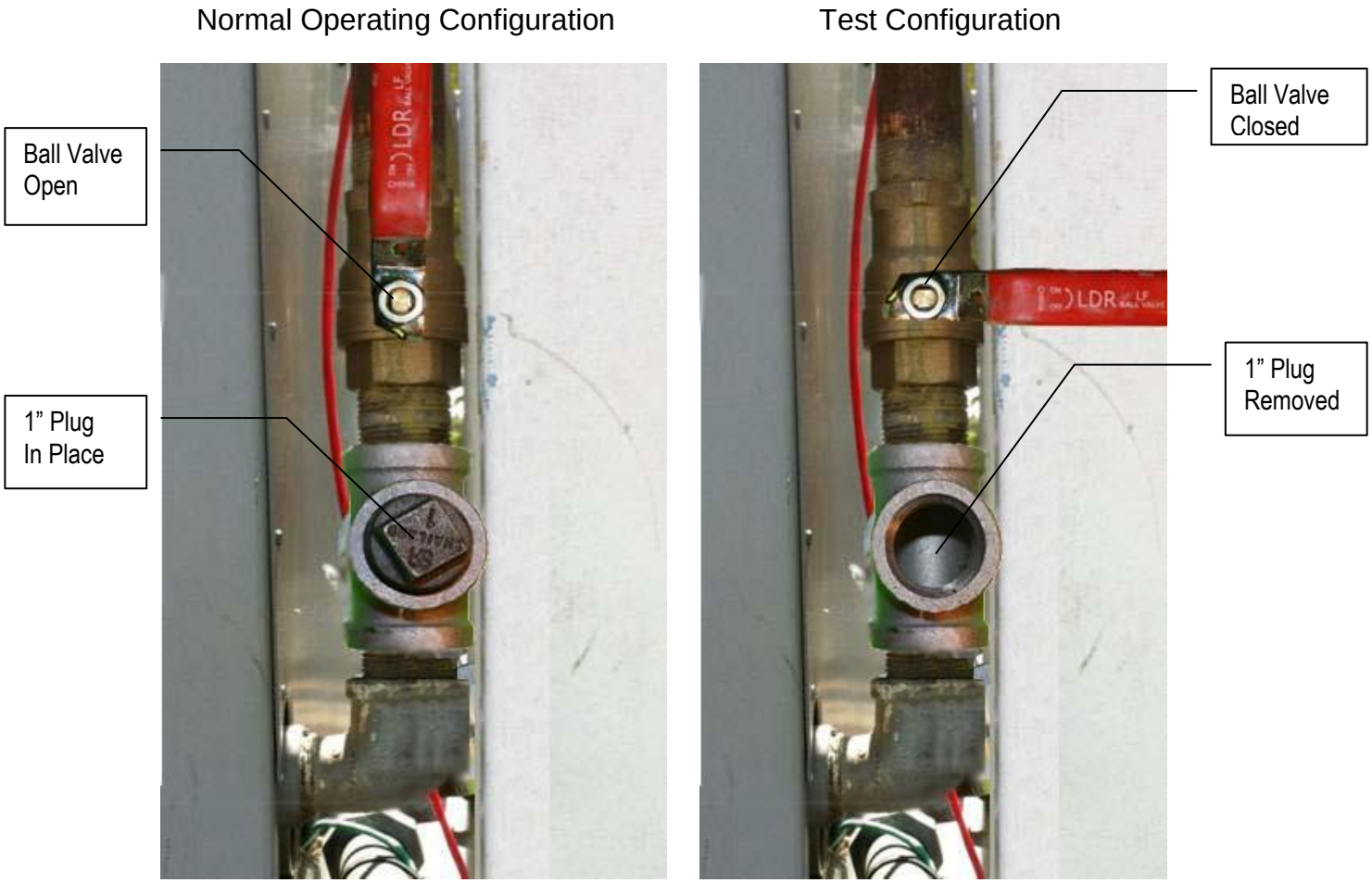

Figure 5: Ball Valve and 1" Plug on Test Port

4.11 Connect the provided test hose to the pipe tee on the air outlet.

Figure 6: Test Hose on 1" Test Port

5) TEST PROCEDURE

Continuous Monitoring:

5.1 Press the F3 button on the VST *Green Machine* Controller. The panel will display "CONTINUOUS MONITOR TEST". The *Green Machine* will not go into the RUN mode. After 30 seconds, the VST *Green Machine* Controller will display "TEST COMPLETE/CHECK FOR ALARM".

Figure 7: F3 Displays "Cont. Monitor Test"

Figure 8: End of Test Message

5.2 Check the Veeder Root TLS-350 for an alarm. A red light will flash and the alarm will read “FUEL ALARM LX”, with “X” being the liquid sensor channel that the *Green Machine* is using as the input for the *Green Machine* motor fault. Record on the test data sheet provided at the end of this procedure if the alarm occurred or not, and attach the alarm printout if available.

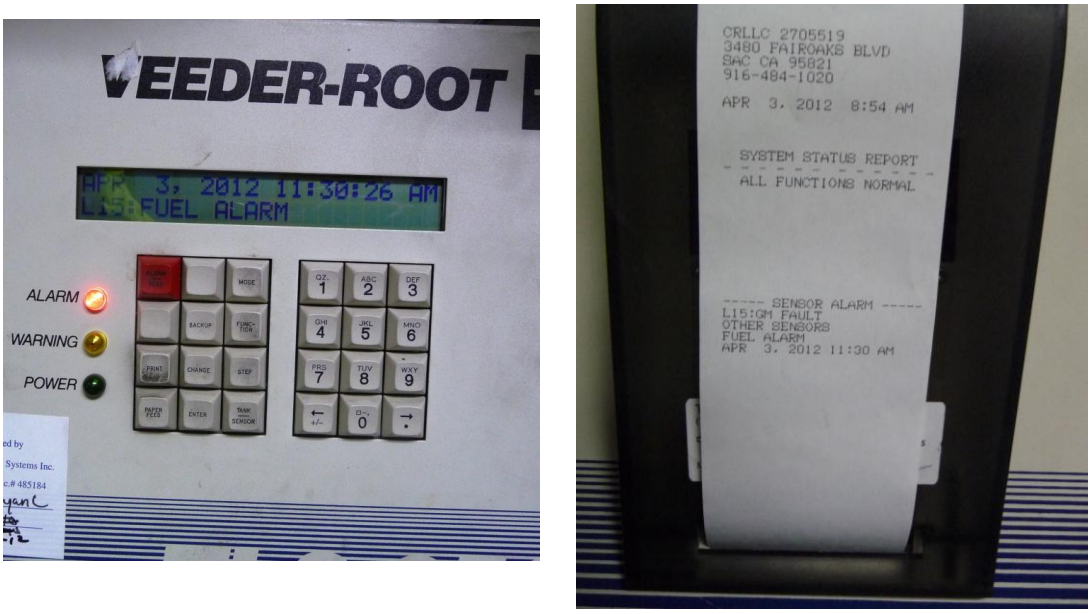

Figure 9: Green Machine Motor Fault TLS-350 Alarm

5.3 Confirm the alarm clears on the TLS-350. The TLS alarm may take a few minutes to clear. Clear the alarm by pressing the red alarm/test button on the TLS-350. Wait until the alarm clears, typically 10 – 60 seconds, and the TLS returns to normal operation.

5.4 Press F5 on the VST *Green Machine* Controller at any time to return to normal operation or the *Green Machine* will return to normal operation 30 seconds after the completion of the test.

GM Bag Test:

5.5 Prior to running the Bag Test, place the *Green Machine* in the Manual OFF Mode at the TLS-350.

5.6 Connect the Tedlar bag to the VST *Green Machine* outlet tee via the hose provided with the Compliance Test Kit.

Figure 10: Tedlar Bag attached to Green Machine

5.7 Press F4 on the VST *Green Machine* Controller. **DO NOT PRESS THE F4 BUTTON UNTIL THE BAG IS ATTACHED TO THE GREEN MACHINE AND READY TO COLLECT THE SAMPLE.** During the RUN cycle, the Tedlar bag should inflate while the sample is gathered. After the RUN cycle, record the time at the end of the collection in the appropriate place on the form at the end of this procedure. The VST *Green Machine* will begin the PURGE cycle next. Once in the PURGE cycle, attach the NOVA portable H/C analyzer to the Tedlar bag.

Figure 11: F4 – GM Bag Test

6) COMPLIANCE DETERMINATION

6.1 The GM Bag Tests should not be run within an hour of the VST *Green Machine* operating or within 3 hours of a fuel delivery. The Tedlar bag will have the full contents of one complete RUN of the VST *Green Machine*.

6.2 Once the VST *Green Machine* has cycled into the PURGE mode, connect the NOVA portable H/C analyzer to the sample port on the Tedlar bag via the provided tubing.

1. After allowing the sample in the bag to mix and stabilize for 3 minutes, open the valve on the Tedlar bag, turn on the NOVA sample pump and begin pulling the sample through the analyzer.
2. Allow the readings to stabilize, approximately another three minutes. Note and record the percentage of HCs seen by the NOVA on the form provided at the end of this document.
3. This reading must be equal to or less than 17%.
4. The bag must be sampled by the NOVA within an hour of taking the sample from the *Green Machine* in order to prevent degradation of the sample. Record the time of sampling on the test data sheet

Figure 12: Tedlar Bag attached to the Green Machine and NOVA

6.3 Once the reading has been recorded on the provided form, remove the bag and equipment from the VST *Green Machine*. Replace the 1” plug and return the ball valve to the “open” position. Purge the Tedlar Bag once again as shown in the Tedlar Bag Preparation section.

6.4 The VST *Green Machine* will return to normal operation 30 seconds after the completion of the test. Place the *Green Machine* back into Automatic Mode at the TLS-350.

6.5 If any of the above tests show the *Green Machine* out of compliance, perform diagnostic procedures found in the *Green Machine* Troubleshooting Manual.

Test Data Sheet for VST *Green Machine* Compliance Test	
Date:	
Facility:	**Test Company:**
Address:	**Test Personnel:**
City:	**VST/Veeder-Root Tech Cert # (as applicable)**
State:	**ICC or District Training Certificate (as applicable)**
Zip Code:	

Compliance Results			
Did the "Fuel Alarm LX" appear on the Veeder Root TLS-350? ***Attach alarm printout if available*** **(Step 5.2)**			
YES NO			
HC Value (Step 6.2.2)	**HC value equal to or below 17% (Step 6.2.3)**	**Collection End Time (Step 5.7)**	**Sampling End Time (Step 6.2)**
	Pass / Fail		