

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER VR-204-N

Balance Phase II Enhanced Vapor Recovery (EVR) Systems  
Including In-Station Diagnostics (ISD) Systems

WHEREAS, the California Air Resources Board (ARB) has established, pursuant to California Health and Safety Code sections 25290.1.2, 39600, 39601 and 41954, certification procedures for systems designed for the control of gasoline vapor emissions during motor vehicle fueling operations (Phase II EVR vapor recovery systems) in CP-201, **Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities** (Certification Procedure) as last amended May 25, 2006, incorporated by reference in title 17, California Code of Regulations, section 94011;

WHEREAS, ARB has established, pursuant to California Health and Safety Code sections 39600, 39601, 39607, and 41954, test procedures for determining the compliance of Phase II vapor recovery systems with emission standards;

WHEREAS, Vapor Systems Technologies (VST), Inc. requested amendment of the VST Phase II Enhanced Vapor Recovery (EVR) System Executive Order VR-204 to include the INCON ISD System as an alternate ISD System for use with the Franklin Fueling Systems (FFS) Clean Air Separator and VST nozzles;

WHEREAS, the INCON ISD System software version 1.3.0 does not support multi-hose (six pack) dispenser configurations and is therefore limited for use with unihose dispensers;

WHEREAS, Veeder-Root Company (Veeder-Root) requested amendment of the VST Phase II EVR System Executive Order VR-204 to include an optional security feature known as "Maintenance Tracker" and a low powered wireless vapor pressure sensor as an alternate component;

WHEREAS, VST requested amendment of the VST Phase II EVR System Executive Order VR-204 including In-Station Diagnostics (ISD) system, to include the Green Machine Vapor Processor as an alternate processor;

WHEREAS, OPW requested amendment of the VST Phase II EVR System Executive Order VR-204 to include a re-connectable balance OPW breakaway as an alternate component;

WHEREAS, EMCO Wheaton Retail requested amendment of the VST Phase II EVR System Executive Order VR-204 to include EMCO Wheaton Retail hanging hardware (nozzle and safe break valve) for use with the Franklin Fueling Clean Air Separator and Veeder-Root ISD System;

WHEREAS, ARB staff has changed the title of this Executive Order from "Vapor Systems Technologies (VST), Inc. Phase II Enhanced Vapor Recovery (EVR) Including Veeder-Root

In-Station Diagnostics (ISD)” to “Balance Phase II Enhanced Vapor Recovery (EVR) Systems Including In-Station Diagnostics (ISD) Systems;”

WHEREAS, the Certification Procedure provides that the ARB Executive Officer shall issue an Executive Order if he or she determines that the vapor recovery system conforms to all of the applicable requirements set forth in the Certification Procedure;

WHEREAS, G-01-032 delegates to the Chief of the Monitoring and Laboratory Division the authority to certify or approve modifications to certified Phase I and Phase II vapor recovery systems for gasoline dispensing facilities; and

WHEREAS, I, Cynthia L. Castronovo, Acting Chief of the Monitoring and Laboratory Division, find that the Balance Phase II EVR Systems, as modified herein, conforms with all requirements set forth in the Certification Procedure, including compatibility when fueling vehicles equipped with onboard refueling vapor recovery systems, and results in a vapor recovery system which is at least 95 percent efficient and shall not exceed 0.38 pounds of hydrocarbons per 1,000 gallons of gasoline transferred when tested pursuant to TP-201.2, ***Efficiency and Emission Factor for Phase II Systems*** (October 8, 2003).

NOW, THEREFORE, IT IS HEREBY ORDERED that the Balance Phase II EVR Systems Including ISD Systems are certified to be at least 95 percent efficient and do not exceed 0.38 pounds of hydrocarbon per 1,000 gallons of gasoline transferred in attended and/or self-service mode when used with an ARB-certified Phase I vapor recovery system and installed, operated, and maintained as specified herein and in the following exhibits. Exhibit 1 contains a list of the equipment certified for use with Balance Phase II EVR Systems including ISD Systems. Exhibit 2 contains the performance standards, specifications, and typical installation drawings applicable to Balance Phase II EVR Systems Including ISD Systems as installed in a gasoline dispensing facility (GDF). Exhibit 3 contains the manufacturing performance specifications and warranties. Exhibit 4 provides items required in conducting TP-201.3. Exhibit 5 is the liquid removal test procedure. Exhibit 6 provides items required in conducting TP-201.4. Exhibit 7 is the nozzle bag test procedure. Exhibit 8 is VST ECS hydrocarbon sensor verification test procedure. Exhibit 9 is the test procedure for determining VST ECS vapor processor activation pressure. Exhibit 10 is the Veeder-Root vapor pressure sensor verification test procedure. Exhibit 11 is the Veeder-Root vapor polisher operability test procedure. Exhibit 12 is the Veeder-Root vapor polisher hydrocarbon emissions verification test procedure. Exhibit 13 is the Hirt VCS 100 Processor with Indicator Panel Operability Test Procedure. Exhibit 14 is the Franklin Fueling Systems Clean Air Separator static pressure performance test procedure. Exhibit 15 is the VST Green Machine Compliance Test Procedure. Exhibit 16 is the Liquid Condensate Trap compliance test procedure. Exhibit 17 is the Veeder-Root ISD vapor flow meter operability test procedure. Exhibit 18 is accessing PMC and ISD parameters at gasoline dispensing facilities (GDFs) with Veeder-Root’s “Maintenance Tracker” security feature installed & enabled. Exhibit 19 is the INCON ISD vapor flow meter operability test procedure. Exhibit 20 is the INCON vapor pressure sensor verification test procedure.

IT IS FURTHER ORDERED that compliance with the applicable certification requirements, rules and regulations of the Division of Measurement Standards of the Department of Food and Agriculture, the Office of the State Fire Marshal of the Department of Forestry and Fire

Protection, the Division of Occupational Safety and Health of the Department of Industrial Relations, and the Division of Water Quality of the State Water Resources Control Board are made conditions of this certification.

IT IS FURTHER ORDERED that each component manufacturer listed in Exhibit 1 shall provide a warranty for the vapor recovery components to the initial purchaser. The warranty shall be passed on to each subsequent purchaser within the warranty period. The warranty shall include the ongoing compliance with all applicable performance standards and specifications and shall comply with all warranty requirements in Section 16.5 of the Certification Procedure. Manufacturers may specify that the warranty is contingent upon the use of trained installers. The manufacturer warranty tag, included with each component, shall be provided to the service station owner/operator at the time of installation.

IT IS FURTHER ORDERED that every certified component manufactured by VST, EMCO, OPW, Goodyear, Veeder-Root, Hirt, and Franklin Fueling Systems including INCON shall meet the manufacturing performance specifications as provided in Exhibit 3.

IT IS FURTHER ORDERED that the certified Balance Phase II EVR Systems Including ISD Systems shall be installed, operated, and maintained in accordance with the **ARB Approved Installation, Operation, and Maintenance Manual**. Equipment shall be inspected weekly, quarterly, and annually per the procedures identified in the **ARB Approved Installation, Operation, and Maintenance Manual**. These inspections shall also apply to systems certified by Executive Orders VR-204-A to M. A copy of the Executive Order and the **ARB Approved Installation, Operation and Maintenance Manual** shall be maintained at each GDF where a certified Balance Phase II EVR System Including ISD System is installed.

IT IS FURTHER ORDERED that equipment listed in Exhibit 1, unless exempted, shall be clearly identified by a permanent identification showing the manufacturer's name, model number, and serial number.

IT IS FURTHER ORDERED that any alteration in the equipment parts, design, installation, or operation of the system provided in the manufacturers' certification application or documents and certified hereby is prohibited and deemed inconsistent with this certification, unless the alteration has been submitted in writing and approved in writing by the Executive Officer or Executive Officer delegate.

IT IS FURTHER ORDERED that the following requirements are made a condition of certification. The owner or operator of the Balance Phase II EVR System Including ISD System shall conduct and pass the following tests no later than 60 days after startup and at least once in each twelve month period, using the following test procedures:

- TP-201.3, **Determination of 2 Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities** (March 17, 1999);
- TP-201.4, **Dynamic Back Pressure** (July 3, 2002) in accordance with the condition listed in item 1 of the Vapor Collection section of Exhibit 2;
- Exhibit 4, **Required Items in Conducting TP-201.3**;
- Exhibit 5, **Liquid Removal Test Procedure**;

- Exhibit 6, **Required Items in Conducting TP-201.4;**
- Exhibit 8, **VST ECS Hydrocarbon Sensor Verification Test Procedure** (if a VST ECS membrane processor is installed);
- Exhibit 9, **Determination of VST ECS Processor Activation Pressure** (if a VST ECS membrane processor is installed);
- Exhibit 10, **Veeder-Root Vapor Pressure Sensor Verification Test Procedure;**
- Exhibit 11, **Veeder-Root Vapor Polisher Operability Test Procedure** (if a Veeder-Root Vapor Polisher is installed);
- Exhibit 12, **Veeder-Root Vapor Polisher Hydrocarbon Emissions Verification Test Procedure** (if a Veeder-Root Vapor Polisher is installed);
- Exhibit 13, **Hirt VCS 100 Processor with Indicator Panel Operability Test Procedure** (if a Hirt VCS 100 processor is installed);
- Exhibit 14, **Franklin Fueling Systems Healy Clean Air Separator Static Pressure Performance Test Procedure** (if a Clean Air Separator is installed);
- Exhibit 15, **VST Green Machine Compliance Test Procedure** (if a Green Machine is installed);
- Exhibit 16, **Liquid Condensate Trap Compliance Test Procedure** (if a Liquid Condensate Trap is installed);
- Exhibit 17, **Veeder-Root ISD Vapor Flow Meter Operability Test Procedure** (if Veeder-Root ISD is installed);
- Exhibit 18, **Accessing PMC and ISD Parameters at Gasoline Dispensing Facilities (GDFs) with Veeder-Root's "Maintenance Tracker" Security Feature Installed & Enabled** (if Maintenance Tracker is installed);
- Exhibit 19, **INCON; ISD Vapor Flow Meter Operability Test Procedure** (if INCON ISD is installed); and
- Exhibit 20, **INCON; Vapor Pressure Sensor Verification Test Procedure** (if INCON ISD is installed).

Local districts at their option may specify the testing frequency and related sequencing of the above tests. Notification of testing, and submittal of test results, shall be done in accordance with local district requirements and pursuant to policies established by that district. Local districts may require the use of alternate test form(s), provided they include the same minimum parameters identified in the datasheet referenced in the test procedure(s). Alternative test procedures, including most recent versions of the test procedures listed above, may be used if determined by ARB Executive Officer or Executive Officer delegate, in writing, to yield equivalent results.

IT IS FURTHER ORDERED that the following requirements are made a condition of certification. The owner or operator of the Balance Phase II EVR System Including ISD System shall conduct, and pass, the following tests no later than 60 days after startup using the following test procedure: Exhibit 7, **Nozzle Bag Test Procedure**. Notification of testing, and submittal of test results, shall be done in accordance with local district requirements and pursuant to the policies established by that district. Alternative test procedures, including most recent versions of the test procedures listed above, may be used if determined by the ARB Executive Officer or Executive Officer delegate, in writing, to yield equivalent results.

IT IS FURTHER ORDERED that, except as provided above, local districts at their option will specify the testing, related sequencing, and testing frequency of the nozzle vapor valves. If

the district requires the nozzle vapor valve be tested, the test shall be conducted in accordance with Exhibit 7, **Nozzle Bag Test Procedure**.

IT IS FURTHER ORDERED that the Balance Phase II EVR Systems Including ISD Systems shall be compatible with gasoline in common use in California at the time of certification. The Balance Phase II EVR System Including ISD System is not compatible with gasoline that has a methanol content greater than 5 percent or an ethanol content greater than 10 percent. Any modifications to comply with future California gasoline requirements shall be approved in writing by the Executive Officer or Executive Officer delegate.

IT IS FURTHER ORDERED that the certification of Balance Phase II EVR Systems Including ISD is valid through April 1, 2014.

IT IS FURTHER ORDERED that Executive Order VR-204-M issued on March 30, 2012, is hereby superseded by this Executive Order. VST Phase II EVR Systems Including Veeder-Root ISD certified under Executive Order VR-204-A through M may remain in use at existing installations up to four years after the expiration date of this Executive Order. This Executive Order shall apply to new installations or major modification of Phase II Systems with a throughput of more than 600,000 gallons per year. The installation of the ISD System is not authorized on a GDF with a throughput of less than or equal to 600,000 gallons per year.

Executed at Sacramento, California, this 8<sup>TH</sup> day of February 2013.



Cynthia L. Castronovo

Acting Chief, Monitoring and Laboratory Division

Attachments: Next Page

## **General Requirements**

- Exhibit 1      Equipment List
- Hanging Hardware
  - Processors
  - Liquid Condensate Trap
  - ISD
    - Optional Wireless Components
    - Optional Maintenance Tracker Kit
- Exhibit 2      System Specifications
- Hanging Hardware
  - Processors
  - Pressure/Vacuum Vent Valves for Storage Tank Vents
  - Warranty
  - Vapor Recovery Piping Configurations
  - Dispensers
  - Liquid Condensate Traps
  - In-Station Diagnostics (ISD)
  - Phase I Systems
  - Maintenance Records
  - Vapor Recovery Equipment Defects
  - Veeder-Root ISD System Specifications
  - INCON ISD System Specifications
- Exhibit 3      Manufacturing Performance Specifications and Warranties
- Vapor Systems Technologies
  - EMCO Wheaton Retail
  - Veeder-Root
  - Goodyear
  - Hirt
  - Franklin Fueling Systems Including INCON ISD System
  - OPW

## **General Compliance Procedures**

- Exhibit 4      Required Items in Conducting TP-201.3
- Exhibit 5      Liquid Removal Test Procedure
- Exhibit 6      Required Items for Conducting TP-201.4
- Exhibit 7      Nozzle Bag Test Procedure

## **Processor Specific Compliance Procedures**

- Exhibit 8      VST ECS Hydrocarbon Sensor Verification Test Procedure
- Exhibit 9      VST ECS Determination of Processor Activation Pressure
- Exhibit 10      Veeder-Root Vapor Pressure Sensor Verification Test Procedure
- Exhibit 11      Veeder-Root Vapor Polisher Operability Test Procedure
- Exhibit 12      Veeder-Root Vapor Polisher Hydrocarbon Emissions Verification Test Procedure
- Exhibit 13      Hirt VCS 100 Processor with Indicator Panel Operability Test Procedure
- Exhibit 14      Franklin Fueling Systems Healy Clean Air Separator Static Pressure Performance Test Procedure

Exhibit 15 VST Green Machine Compliance Test Procedure

**LCT Specific Compliance Procedure**

Exhibit 16 Liquid Condensate Trap Compliance Test procedure

**ISD Specific Compliance Procedures**

Exhibit 10 Veeder-Root Vapor Pressure Sensor Verification Test Procedure

Exhibit 17 Veeder-Root ISD Vapor Flow Meter Operability Test Procedure

Exhibit 18 Accessing PMC and ISD Parameters at Gasoline Dispensing Facilities (GDFs) with Veeder-Root's "Maintenance Tracker" Security Feature Installed & Enabled

Exhibit 19 INCON ISD System Vapor Flow Meter Operability Test Procedure

Exhibit 20 INCON ISD System Vapor Pressure Sensor Verification Test Procedure