State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER VR-204-Z

Relating to Certification of Vapor Recovery Systems

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

WHEREAS, the California Air Resources Board (CARB) 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 system) in its Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities (CP-201) as last amended June 4, 2019, incorporated by reference in Title 17, California Code of Regulations, Section 94011;

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

WHEREAS, Vapor System Technologies (VST) requested and was granted certification of the Balance Phase II Vapor Recovery System Including ISD (Balance System) pursuant to CP-201 on April 1, 2008, by Executive Order VR-204-A; and last modified on November 5, 2019, by Executive Order VR-204-Y;

WHEREAS, CP-201 provides that the CARB Executive Officer shall issue an Executive Order if he or she determines that the vapor recovery system including modifications, conforms to all of the applicable requirements set forth in CP-201;

WHEREAS, EMCO Wheaton (EMCO) requested an amendment of the Balance Phase II EVR System Executive Order VR-203 to include the EMCO Reconnectable Breakaway Coupling as an alternate component;

WHEREAS, Executive Order 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 (GDF); and

WHEREAS, I, Catherine Dunwoody, Chief of the Monitoring and Laboratory Division, find that the Balance Phase II EVR System Including ISD conforms with all requirements set forth in CP-201, 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 (July 26, 2012).

NOW, THEREFORE, IT IS HEREBY ORDERED that the Balance Phase II EVR System including ISD is 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 a CARB-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 System including ISD. Exhibit 2 contains the performance standards, specifications, and typical installation drawings applicable to Balance Phase II EVR System Including ISD 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 (FFS) 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 CP-201. 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 Wheaton Retail, OPW, ContiTech USA, Veeder-Root, Hirt, and Franklin Fueling System including INCON shall meet the manufacturing performance specifications as provided in Exhibit 3.

IT IS FURTHER ORDERED that the certified Balance Phase II EVR System including ISD shall be installed, operated, and maintained in accordance with the CARB Approved Installation, Operation, and Maintenance Manual for the Balance System as certified by Executive Order VR-204-Y. Equipment shall be inspected weekly, quarterly, and annually per the procedures identified in the CARB Approved Installation, Operation, and Maintenance Manual. These inspections shall also apply to systems certified by Executive Orders VR-204-A to Y. A copy of the Executive Order and the CARB Approved Installation, Operation and Maintenance Manual shall be maintained at each GDF where a certified Balance 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 pursuant to the process for Executive Order amendments set forth in Section 18 of CP-201 and approved in writing by the Executive Officer or his delegate. Any sale, offer for sale, or installation of any system or component without CARB's approval as set forth above is subject to enforcement action.

IT IS FURTHER ORDERED that the following requirements are made a condition of certification. The owner or operator of the Balance System shall conduct and pass the following tests no later than 60 days after startup and at least once in each 12 month period, using the following test procedures. Shorter time periods may be specified by the District.

- TP-201.3, Determination of 2 Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities (July 26, 2012);
- 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)*.

Districts may specify the sequence of the above tests. Notification of testing, and submittal of test results, shall be done in accordance with District requirements and pursuant to policies established by that District. 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 CARB Executive Officer or his 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 System shall conduct, and pass, the following test no later than 60 days after startup using Exhibit 7, Nozzle Bag Test Procedure. Notification of testing, and submittal of test results, shall be done in accordance with District requirements and pursuant to the policies established by that District. 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 the CARB Executive Officer or his delegate, in writing, to yield equivalent results.

IT IS FURTHER ORDERED that, except as provided above, Districts at their discretion will specify the testing, related sequencing, and testing frequency of the nozzle vapor valves. If nozzle vapor valve tests are required by the District, the test shall be conducted in accordance with Exhibit 7, Nozzle Bag Test Procedure.

IT IS FURTHER ORDERED that the Balance System shall be compatible with gasoline in common use in California at the time of certification. The Balance 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 his delegate.

IT IS FURTHER ORDERED that the certification of Balance Systems is valid through December 1, 2023.

IT IS FURTHER ORDERED that Executive Order VR-204-Y issued on November 5, 2019, is hereby superseded by this Executive Order. Balance Phase II EVR Systems including ISD certified under Executive Order VR-204-A through Y may remain in use at existing installations up to four years after the expiration date of this Executive Order when the certification is not renewed.

IT IS FURTHER ORDERED that 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 6th day of May 2020.

Catherine Dunwoody, Chief
Monitoring and Laboratory Division

Attachments:

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
- ContiTech USA
- 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