

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER VR-205-B

Vapor Systems Technologies, Inc.
Phase II Enhanced Vapor Recovery (EVR) System
with Hirt VCS 100 Thermal Oxidizer
Not Including In-Station Diagnostics (ISD)

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 its 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, Hirt Combustion Engineers, Inc. (Hirt) requested a modification to the certification of the Hirt VCS 100 Thermal Oxidizer as an alternate component for tank pressure management on the VST Phase II Enhanced Vapor Recovery (EVR) System Not Including In-Station Diagnostics (ISD), certified in Executive Order VR-205-A issued on May 6, 2009;

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;

WHEREAS, I, William V. Loscutoff, Chief of the Monitoring and Laboratory Division, find that the VST Phase II EVR System with Hirt VCS Thermal Oxidizer as modified 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** (May 2, 2008);

NOW, THEREFORE, IT IS HEREBY ORDERED that the VST Phase II EVR System with Hirt VCS 100 Thermal Oxidizer is certified to be at least 95 percent efficient and does 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 the VST Phase II EVR System with Hirt VCS 100 Thermal Oxidizer. Exhibit 2 contains the performance standards, specifications, and typical installation drawings applicable to the VST Phase II EVR System with Hirt VCS 100 Thermal Oxidizer as installed in a gasoline dispensing facility (GDF). Exhibit 3 contains the manufacturing performance standards and specifications. 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 the Hirt VCS 100 Processor Operability Test Procedure. Exhibit 9 is the VST and Hirt Warranties.

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 VST and Hirt shall provide a warranty for the vapor recovery system and components to the initial purchaser. The warranty shall be passed on to each subsequent purchaser within the warranty period. The manufacturer of components listed in Exhibit 1 not manufactured by VST or Hirt shall provide a warranty to each of their components certified herein. 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. VST, Hirt, or other manufacturers may specify that the warranty is contingent upon the use of trained installers.

IT IS FURTHER ORDERED that every certified component manufactured by VST and Hirt shall be performance tested by the manufacturer as provided in Exhibit 3.

IT IS FURTHER ORDERED that the certified VST Phase II EVR System with Hirt VCS 100 Thermal Oxidizer shall be installed, operated, and maintained in accordance with the **ARB Approved Installation, Operation, and Maintenance Manual**. A copy of this Executive Order and the **ARB Approved Installation, Operation and Maintenance Manual** shall be maintained at each GDF where the certified VST Phase II EVR System and Hirt VCS 100 Thermal Oxidizer are 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 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 VST Phase II EVR System with Hirt VCS 100 Thermal Oxidizer 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***; and
- Exhibit 8, ***Hirt VCS 100 Processor with Indicator Panel Operability Test Procedure***;

Local district 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. 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 the following requirements are made a condition of certification. The owner or operator of the VST Phase II EVR System shall conduct, and pass, the following test 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 VST Phase II EVR System shall be compatible with gasoline in common use in California at the time of certification. The VST Phase II EVR System is not compatible with gasoline that has a methanol content greater than 5 percent, an ethanol content greater than 10 percent, or a methyl tert butyl ether (MTBE) content greater than 15 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 the VST Phase II EVR System with Hirt VCS 100 Thermal Oxidizer is valid through April 1, 2012.

IT IS FURTHER ORDERED that Executive Order VR-205-A issued on May 6, 2009, is hereby superseded by this Executive Order. VST Phase II EVR Systems certified under Executive Order VR-205-A may remain in use at existing installations. This Executive Order shall apply to new installations or major modification of Phase II Systems with a throughput of less than or equal to 600,000 gallons per year. Use of this Executive Order for new installations or major modifications at a GDF with a throughput of more than 600,000 gallons per year is not authorized.

Executed at Sacramento, California, this 2th day of July 2009.


William V. Loscutoff, Chief
Monitoring and Laboratory Division

Attachments:

- Exhibit 1 Equipment List
- Exhibit 2 System Specifications
- Exhibit 3 Performance Standards and Specifications
- 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 7 Nozzle Bag Test Procedure
- Exhibit 8 Hirt VCS 100 Processor with Indicator Panel Operability Test Procedure
- Exhibit 9 Warranty