COMPLIANCE ADVISORY

Veeder Root ISD Software – ORVR Recognition Issue

February 4, 2022

WHO DOES THIS ADVISORY APPLY TO:

Gasoline dispensing facilities (GDF) that have a **Veeder Root monitoring console with In Station Diagnostic (ISD) software**. GDFs with ISD software installed are permitted to dispense more than 600,000 gallons of gasoline annually.

IF THIS ADVISORY APPLIES TO MY GDF, WHAT DO I HAVE TO DO?

No later than March 31, 2023, complete Option #1 or Option #2. The District recommends that the chosen option is implemented when the facility already has a service contractor on-site for other repairs or regular testing. **Failing to complete an option by the deadline may result in enforcement.**

District inspectors will verify current compliance at GDFs during regular inspections, but the District would appreciate a courtesy notification when a facility corrects this problem. Please send a brief email to gdf@ysaqmd.org with the following information:

- Facility name and address
- Date of repair work
- Specify if software was updated (Option 1) **or** if ACCEPT HIGH ORVR is ENABLED (Option 2).

BACKGROUND:

GDFs permitted by the District are required to construct and maintain the vapor recovery equipment in accordance with District Rule 2.22 and relevant California Air Resources Board (CARB) Certification Procedures and Executive Orders (EO). Part of the required enhanced vapor recovery (EVR) system for GDFs that are permitted to dispense more than 600,000 gallons of gasoline is a monitoring console with ISD software installed. One function of the ISD software monitors whether vehicles fueling events are for vehicles dispensing gasoline at the facility are equipped with Onboard Refueling Vapor Recovery systems (ORVR) or not, and conducts calculations to determine if the amount of vapor recovered during vehicle fueling meets expected vapor recovery specifications.

Veeder Root is one of the main manufacturers of GDF monitoring consoles with ISD, and Veeder-Root's ISD system contains an Onboard Refueling Vapor Recovery (ORVR) penetration table which is used by ISD software to provide an annual estimate of expected ORVR-equipped vehicles at GDFs. This table is used to provide expectations for the ratio of ORVR fueling events to non-ORVR fueling events at each ISD monitored fueling position.

CURRENT SITUATION:

The current ORVR penetration table utilized by Veeder-Root's ISD system software was not programmed to extend beyond December 31, 2021. On January 1, 2022, all ISD monitored fueling positions may post "No Test (N)" results if a software update or a setting change is not made to the ISD system (described below). **In short, the Veeder Root ISD software will not operate as designed and certified.**

SOLUTIONS

Option #1 - Update the ISD software to version 1.06 for a GDF equipped with a balance EVR system (CARB EO VR-204) and to version 1.07 for a GDF equipped with an assist EVR System (CARB EO VR-202). This option may only be performed by an ICC and Veeder Root certified service technician, and requires a cold start of the Veeder Root console, immediate monitoring certification testing, and compliance with other requirements of the Certified Unified Program Agency (CUPA). This is most likely the more expensive option.

- Contact the Yolo County CUPA at Environmental.Health@yolocounty.org or (530) 666-8646. In Yolo County, Veeder Root console cold starts require an immediate monitoring system certification, and submittal of a ***Description of Repair Work Completed*** form plus test results to the CUPA. For the form or questions about Yolo CUPA requirements, please contact the CUPA.

- Contact the Solano County CUPA at (707) 784-6765 or https://www.solanocounty.com/depts/rm/environmental_health/default.asp. In Solano County, Veeder Root console cold starts require an immediate monitoring system certification. For questions about Solano CUPA requirements, please contact the CUPA.

Option #2 – Update the Veeder Root ISD setting for **ACCEPT HIGH ORVR** to **ENABLED**. This option may only be performed by a Veeder Root certified service technician. This is likely a less expensive option.

ATTACHMENTS AND REFERENCE

- CARB EVR Informational Bulletin dated December 23, 2021
- CARB EXECUTIVE ORDER VR-202-AB dated December 23, 2021
- CARB EXECUTIVE ORDER VR-204-AA dated December 23, 2021
- SWRCB Advisory dated January 21, 2022
- Veeder Root Technical Support Notification

QUESTIONS

If you have specific questions about your situation, please contact district staff at (530) 757-3650.

CALIFORNIA AIR RESOURCES BOARD

Informational Bulletin

~~Enhanced Vapor Recovery~~

Optional Veeder-Root In-Station Diagnostic (ISD) Software Update

December 23, 2021

Optional Update for Veeder-Root ISD Software for

Assist and Balance Phase II Enhanced Vapor Recovery (EVR) Systems

The intent of this informational bulletin is to alert gasoline dispensing facility (GDF) stakeholders of an optional software update to the Veeder-Root ISD system. This bulletin is intended for local air district inspectors, GDF owners/operators, and service technicians performing work on the Veeder-Root ISD system. GDF owners/operators should contact their local air district to verify the software update is not mandatory.

Veeder-Root's ISD system contains an Onboard Refueling Vapor Recovery (ORVR) penetration table which is used by ISD software to provide an annual estimate of ORVR vehicle percentages at GDFs. This table is used to provide expectations for the ratio of ORVR fueling events to non-ORVR fueling events at each ISD monitored fueling position. The current ORVR penetration table that is being utilized by Veeder-Root's ISD system software does not extend beyond December 31, 2021. On January 1, 2022, all ISD monitored fueling positions may post "No Test (N)" results if a software update or a setting change is not made to the ISD system (described below). The ISD software would be updated to version 1.06 for GDF equipped with a balance EVR system and to version 1.07 for GDF equipped with an assist EVR System. Both are currently under evaluation by CARB and are expected to be certified before the end of 2021.

The following consoles may be affected:

- Veeder-Root TLS-350 series consoles
- Gilbarco EMC consoles
- Red Jacket ProPlus/ProMax consoles

GDF owners/operators may also use an alternative method in lieu of updating the ISD software – **check with your local air district to confirm**. The "NO TEST (N)" results described above can be avoided if the ISD system setting "ACCEPT HIGH ORVR" is programmed to "ENABLED." This setting is typically used for sites which have a higher ORVR percentage dispensing rate than estimated by the ORVR penetration table. When "ACCEPT HIGH ORVR" is set to "ENABLED," all ISD assessments will continue to occur and all ISD warnings and alarms will be posted. Only a service technician or a person who complies with the appropriate Veeder-Root and district training requirements can make this change.

This alternative method can be used as a solution, if approved by the local air district, or until the GDF owners/operators can update the ISD software to the new software version. To lessen the impact to GDF operations, it is recommended that if a GDF owner/operator plans to update the ISD software that it be done during the next required annual site monitor certification required by the local CUPA. Again, please check with your local air district.

Figure 1 shows an example of the “NO TEST” result that may occur.

Figure 1: Daily Details Report Example

OVERALL STATUS :WARN EVR VAPOR COLLECTION :WARN
EVR VAPOR CONTAINMENT :WARN
ISD MONITOR UP-TIME :100%
EVR/ISD PASS TIME : 37% VAPOR PROCESSOR :PASS

Status Codes: (W)Warn (F)Fail (D)Degradation Fail (G)Gross Fail
(ISD-W)ISD Self-Test Warning (ISD-F)ISD Self-Test Fail (N)No Test

	ISD	ISD	---CONTAINMENT TESTS---					STAGE		---COLLECTION TESTS		
	EVR	%UP	GROSS	DGRD	MAX	MIN	LEAK	I	VAPOR	FP1	FP2	FP3
DATE	STATUS	TIME	95%	75%	"WC	"WC	CFH	XFR	PRCSR	BLEND	BLEND	BLEND
12/29/21	W	100%	0.2N	-0.5N	0.3	-2.7	13W		PASS	0.97	0.87	0.99
12/30/21	W	100%	0.0N	-0.5N	0.2	-3.3	17W		PASS	0.90	1.02	0.97
12/31/21	W	100%	0.2N	-0.5N	3.0	-2.8	15W		PASS	0.91	0.94	1.06
01/01/22	W	100%	0.1N	-0.5N	0.3	-2.8	15W		PASS	1.07N	0.82N	0.93N
01/02/22	W	100%	0.0N	-0.4N	0.0	-5.0	16W		PASS	0.89N	0.89N	1.21N
01/03/22	PASS	100%	0.1N	-0.4N	0.2	-2.2	19N		PASS	0.89N	1.11N	1.12N
01/04/22	PASS	100%	0.2	-0.4N	5.0	-2.6	14N		PASS	0.95	0.92	1.13
01/05/22	PASS	100%	0.1	-0.4N	0.2	-2.5	12N		PASS	0.83	0.74	0.97

NOTE: Dates were changed from MM/DD to MM/DD/YY on the Daily Details Report

Figure 1 shows that all fueling points are passing up until 12/31/21. On 1/1/22, all fueling points post a “No Test (N)” result after the V/L ratio. This is a result of the expired ORVR penetration table in the current software version and the “ACCEPT HIGH ORVR” is set to “DISABLED”. On 1/4/22, after the ISD system setting “ACCEPT HIGH ORVR” is set to “ENABLED”, the “No Test (N)” results no longer post.

If you have questions regarding this informational bulletin, please contact your local air district or CARB vapor recovery program staff at (916) 327-0900 or via email at vapor@arb.ca.gov.

State of California

AIR RESOURCES BOARD

EXECUTIVE ORDER VR-202-AB

Relating to Certification of Vapor Recovery Systems

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

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 vapor recovery systems with emission standards;

Whereas, Franklin Fueling Systems, Inc. (FFS) requested and was granted certification of the Assist Phase II EVR System including ISD pursuant to the CP-201 on August 31, 2005, by Executive Order VR-202-A, and last modified on October 21, 2021, by Executive Order VR-202-AA;

Whereas, Veeder-Root, Inc. (Veeder-Root) requested a ISD software revision to address an issue with the algorithm pertaining to the Onboard Refueling Vapor Recovery (ORVR) recognition portion of the ISD software;

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, 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 Assist Phase II EVR System including ISD, as amended to include the modification listed above, 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 does 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 Assist Phase II EVR System including ISD 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 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 the Assist Phase II EVR System including ISD. Exhibit 2 contains the performance standards, specifications, typical installation drawings, and maintenance intervals applicable to the Assist Phase II EVR System including ISD as installed in a GDF. Exhibit 3 contains the manufacturing specifications. Exhibit 4 is the test procedure for verifying performance of the Healy Clean Air Separator. Exhibit 5 is the vapor to liquid ratio test procedure for verifying performance of the Healy 900 Nozzle. Exhibit 6 is the manufacturer warranties. Exhibit 7 is the nozzle bag test procedure. Exhibit 8 provides Required Items in Conducting TP-201.3. Exhibit 9 is the Veeder-Root ISD Operability Test Procedure. Exhibit 10 is the INCON ISD Operability Test Procedure. Exhibit 11 is the procedure for verifying performance of the Liquid Condensate Trap. Exhibit 12 is the Veeder-Root Maintenance Tracker (optional). Exhibit 13 is the below-grade vaulted tank configuration. Exhibit 14 is the dispenser integrity test. Exhibit 15 is the test procedure for verifying the performance of the ARID Permeator AT-150 processor.

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 FFS, ContiTech USA, Inc., Veeder-Root, VST and ARID shall meet the manufacturing performance specifications as provided in Exhibit 3.

It is further ordered that the certified Assist Phase II EVR System including ISD shall be installed, operated, and maintained in accordance with the CARB Approved Installation, Operation, and Maintenance (IOM) Manual. Equipment shall be inspected weekly, quarterly, and annually per the procedures identified in the CARB Approved IOM Manual. These inspections shall also apply to systems certified by Executive Orders VR-202-A through AA. A copy of this Executive Order and the CARB Approved IOM

Manual shall be maintained at each GDF where an Assist Phase II EVR System including ISD is installed.

It is further ordered that equipment listed in Exhibit 1, unless exempted, shall be clearly identified by permanent identification number showing the manufacturer's name and model 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 CARB Executive Officer or his or her 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 Assist Phase II EVR System including ISD 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);
- Exhibit 8, Required Items in Conducting TP-201.3;
- Exhibit 4, Determination of Static Pressure Performance of the Healy Clean Air Separator *(applicable, if a Clean Air Separator is installed)*;
- Exhibit 5, Vapor to Liquid Volume Ratio;
- Exhibit 9 or Exhibit 10, Veeder-Root or INCON ISD Operability Test Procedure;
- Exhibit 11, Liquid Condensate Trap Compliance Test Procedure (if applicable);
- Exhibit 14, Dispenser Integrity Test;
- Exhibit 15, Determination of Performance of the ARID Permeator AT-150 Processor *(applicable, if a Permeator AT-150 is installed).*

Districts may specify the sequencing 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 the CARB Executive Officer or his or her 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 Assist Phase II EVR System including ISD shall conduct,

and pass, the following tests no later than 60 days after startup using Exhibit 7, Nozzle Bag Test Procedure. TP-201.4, Dynamic Back Pressure (July 3, 2002), shall be conducted in accordance with the conditions listed in item 1 of the Vapor Recovery Piping Configurations Section of Exhibit 2. Districts have the authority to require conducting of Exhibit 5, Vapor to Liquid Volume Ratio, in lieu of TP-201.4, Dynamic Back Pressure (July 3, 2002), provided that at least two gallons of product are introduced into the system through each dispenser riser prior to conducting the test. 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 Assist Phase II EVR System including ISD shall be compatible with gasoline in common use in California at the time of certification. The Assist Phase II EVR System including ISD is not compatible with gasoline containing more than 15 percent methanol, 15 percent ethanol, or 15 percent methyl tertiary butyl ether. Any modifications to comply with future California gasoline requirements shall be approved in writing by the CARB Executive Officer or his or her delegate.

It is further ordered that Assist Phase II EVR System including ISD installations using the ARID Permeator AT-150 Processor must use Veeder-Root version 1.06 or a subsequent version.

It is further ordered that the certification of the Assist Phase II EVR System including ISD is valid through December 1, 2023.

It is further ordered that Executive Order VR-202-AA issued on October 21, 2021, is hereby superseded by this Executive Order. Assist or Healy Phase II EVR Systems including ISD certified under Executive Order VR-202-A through AA 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. Veeder-Root ISD version 1.01 shall not remain in use after July 1, 2012, for multi-product dispensers with fuel blending, and INCON ISD versions 1.0.0 and 1.1.0 shall not remain in use after January 1, 2014, for multi-hose dispensers.

It is further ordered that this Executive Order shall apply to new installations or major modifications of Phase II Systems with a throughput of more than 600,000 gallons per year and replacements of Veeder-Root or INCON ISD at existing gasoline dispensing facilities. 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 23rd day of December, 2021.

Catherine Dunwoody, Chief
Monitoring and Laboratory Division

Attachments (see next page)

Attachments:

Exhibit 1	Equipment List
Exhibit 2	System Specifications
Exhibit 3	Manufacturing Performance Standards and Specifications
Exhibit 4	Determination of Static Pressure Performance of the Healy Clean Air Separator
Exhibit 5	Vapor to Liquid Volume Ratio
Exhibit 6	Manufacturer Warranties
Exhibit 7	Nozzle Bag Test Procedure
Exhibit 8	Required Items in Conducting TP-201.3
Exhibit 9	Veeder-Root ISD Operability Test Procedure
Exhibit 10	INCON VRM Operability Test Procedure
Exhibit 11	Liquid Condensate Trap Compliance Test Procedure
Exhibit 12	Veeder-Root Maintenance Tracker (Optional)
Exhibit 13	Below-Grade Vaulted Tank Configuration
Exhibit 14	Dispenser Integrity Test
Exhibit 15	Determination of Performance of the ARID Permeator AT-150 Processor

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER VR-204-AA

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 May 6, 2020, by Executive Order VR-204-Z;

Whereas, Veeder-Root, Inc. (Veeder-Root) requested a ISD software revision to address an issue with the algorithm pertaining to the Onboard Refueling Vapor Recovery (ORVR) recognition portion of the ISD software;

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, 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, 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, as amended to include the modification listed above, conforms with all requirements set forth in CP-201, including compatibility when fueling vehicles equipped with on-board refueling vapor recovery systems, and results in a vapor recovery system which is at least 95 percent efficient and does 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 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 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 (IOM) for the Balance System as certified by Executive Order VR-204-AA. Equipment shall be inspected weekly, quarterly, and annually per the procedures identified in the CARB Approved IOM Manual. These inspections shall also apply to systems certified by Executive Orders VR-204-A to Z. A copy of the Executive Order and the CARB Approved IOM 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-Z issued on May 6, 2020, is hereby superseded by this Executive Order. Balance Phase II EVR Systems including ISD certified under Executive Order VR-204-A through Z 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 23rd day of December 2021.

Catherine Dunwoody, Chief
Monitoring and Laboratory Division

Attachments: see next page.

Attachments:

General Requirements

Exhibit 1 Equipment

- 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 Specification

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
- OPA

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 Procedures

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

State Water Resources Control Board

January 21, 2022

To: All UST Stakeholders

Underground Storage Tank Systems Using In-Station Diagnostics May Cause Unintended Shutdown

The State Water Resources Control Board (State Water Board) is aware of a condition with some Veeder Root TLS-350 monitoring panels using In-Station Diagnostics (ISD) where a required data element expired as of December 31, 2021. The missing data can cause fuel position collection failures, which by California Air Resources Board executive order creates a full shut down of the underground storage tank (UST) systems. The software update to correct this condition can be ordered from Veeder Root and is available through its California distributers.

The State Water Board is reminding UST owners and operators that any monitoring panel software update must be installed by a service technician with a current International Code Counsel certification and the appropriate level of training from Veeder Root. The software update will require a full reprogramming (cold start) of the monitoring panel, which also requires a monitoring system certification immediately after the cold start and before the UST system becomes operational. UST owners and operators receiving the software update must contact their UPA upon completion of the software update and programming for any permitting, certifications, and additional directions. Failure to do so may result in enforcement action by the Unified Program Agency (UPA) or the State Water Board.

The State Water Board expects the software update to be installed as soon as it is available on UST systems experiencing system shut down. Updating a monitoring panel in accordance with UST regulations and guidelines to resolve this issue in advance of necessary permitting will result in no increase of risk of releases to the environment.

If you have questions regarding UST service technician or monitoring systems certification requirements, please contact Mr. Tom Henderson at (530) 908-5209 or Tom.Henderson@waterboards.ca.gov.

Sincerely,

Laura S. Fisher
UST Leak Prevention Unit &
Office of Tank Tester Licensing Manager

VEEDER-ROOT

Technical Support Notification

Optional In-Station Diagnostics (ISD) Software Upgrade in CA

Overview

Veeder-Root has released a new optional In-Station Diagnostics (ISD) software update that is applicable to ISD monitored facilities in California.

This optional software update to TLS-350 software version 336.02 and ISD Version 1.06 (Balance) or 1.07 (Assist) is due to the expiration of a California Air Resources Board (CARB) provided Onboard Refueling Vapor Recovery (ORVR) Penetration Table that is a component of Veeder-Root's ISD software. The ISD ORVR Penetration Table provides annual estimates of ORVR vehicle percentages at fueling facilities. The current ORVR Penetration Table that is being utilized by Veeder-Root's ISD system software **expired on December 31, 2021**. Without a software update to the ORVR Penetration Table, on January 1, 2022, there are two known issues that the site may experience:

1. They may post **NO TEST(N)** results on ISD Daily Reports and ISD Monthly Reports. See Sections A & B for additional information.
2. They may see an increase in **Collection Alarms and Shutdowns**. In this case, it is recommended that they upgrade the software. However, it is important to note that this will not correct all hose alarms and warnings due to failed hanging hardware or other blockages, but the TLS-350 will operate as it did prior to the end of 2021.

Upgrade Information

This optional software upgrade is not required by CARB or Veeder-Root. The alternative setting of the system, as described in Sections A & B, can be used until facilities have an opportunity to update their TLS-350 ISD software. To lessen the impact to facilities we recommend that this optional upgrade occur during the next required annual inspection.

Additionally, the State Water Resources Control Board issued a letter, dated January 21, 2022, that provides the guidance to update the software in advance of obtaining a permit:

The State Water Board expects the software update to be installed as soon as it is available on UST systems experiencing system shut down. Updating a monitoring panel in accordance with UST regulations and guidelines to resolve this issue in advance of necessary permitting will result in no increase of risk of releases to the environment.

See Section C for the entire letter.

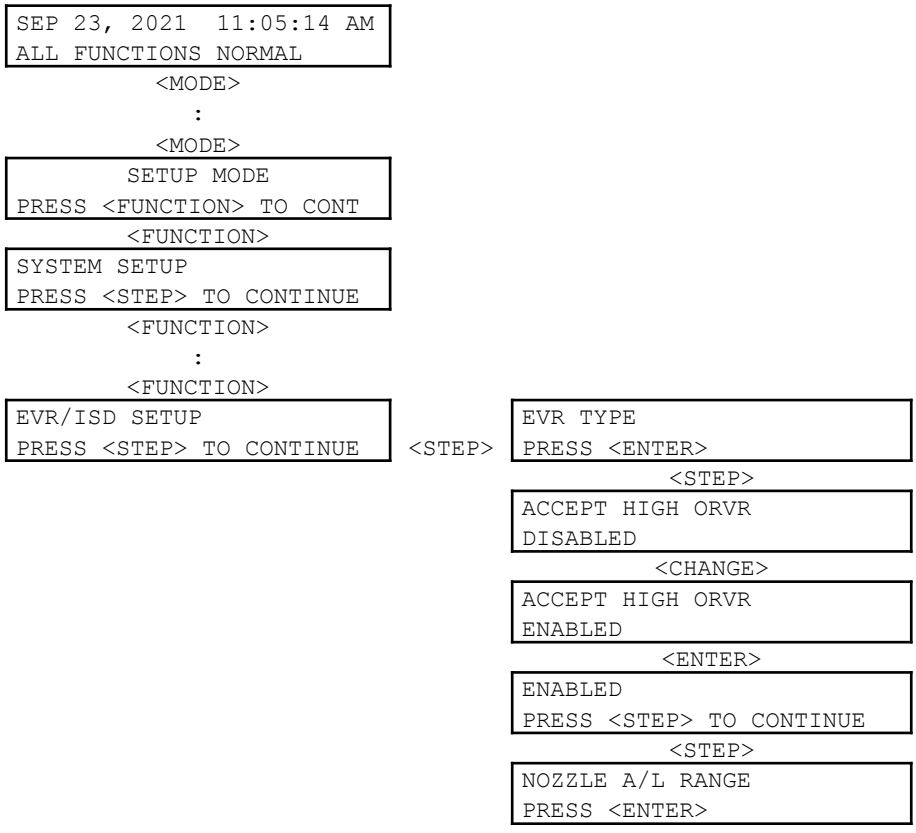
Section A: Enable High ORVR Option

Due to the expiration of the existing ORVR Penetration Table, an alternative procedure can be used in lieu of updating the ISD software. The NO TEST results described on the previous page can be avoided, if the ISD system setting **ACCEPT HIGH ORVR** is programmed to **ENABLED**. This setting is typically used for sites which have higher ORVR percentage dispensing than estimated by the ORVR Penetration Table. When **ACCEPT HIGH ORVR** is set to **ENABLED**, the system ISD Fueling Position Warnings and Alarms will still occur, and the Collection Results and Alarms will still be posted.

Note: Without the optional ISD software upgrade or the **ACCEPT HIGH ORVR** programming option, Fueling Position Collection Tests identified with **NO TEST(N)** are valid ISD Fueling Position Collection results.

Section B: Programming Steps to Enable ACCEPT HIGH ORVR Setting on the TLS-350 Front Panel

1. Press the **MODE** key until **SETUP MODE** is displayed.
2. Press the **FUNCTION** key. **SYSTEM SETUP** will be displayed.
3. Press the **FUNCTION** key multiple times until **EVR/ISD SETUP** is displayed.
4. Press the **STEP** key. **EVR TYPE** will be displayed.
5. Press the **STEP** key. **ACCEPT HIGH ORVR** will be displayed.
6. Press the **CHANGE** key. **DISABLED** will be changed to **ENABLED**.
7. Press the **ENTER** key. **ENABLED** will be displayed.
8. Press the **STEP** key. **NOZZLE A/L RANGE** will be displayed.



Section C: State Water Resources Control Board Correspondence

State Water Resources Control Board

January 21, 2022

To: All UST Stakeholders

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If you have questions regarding UST service technician or monitoring systems certification requirements, please contact Mr. Tom Henderson at (530) 908-5209 or Tom.Henderson@waterboards.ca.gov.

Sincerely,

Laura S. Fisher
UST Leak Prevention Unit &
Office of Tank Tester Licensing Manager

E. JOAQUIN ESQUIVEL, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR

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