Executive Order VR-202-AH

Assist Phase II EVR System
Including In-Station Diagnostic (ISD) System

EXHIBIT 3

Manufacturing Performance Standards and Specifications

SECTION I
Assist Phase II System

The Assist Phase II EVR System Including In-Station Diagnostic (ISD) Systems and all components shall be manufactured in compliance with the performance standards and specifications in CP-201 (amended April 23, 2015), as well as the requirements specified in this Executive Order. All components (Exhibit 1) shall be manufactured as certified; no change to the equipment, parts, design, materials or manufacturing process shall be made unless approved in writing by the Executive Officer or Executive Officer delegate. Unless specified in **Exhibit 2** or in the **CARB Approved Installation, Operation and Maintenance Manual**, the requirements of this section apply to the manufacturing process and are not appropriate for determining the compliance status of a gasoline dispensing facility.

1. NOZZLES

Every nozzle shall be tested at the factory. Every nozzle shall have affixed to it a card or label stating the performance specifications listed below, and a statement that the nozzle was tested to, and met, the following specifications.

1.1. The nozzle vapor valve leak rate shall not exceed 0.038 cubic feet per hour (CFH) at a pressure of +2 inches H O when tested in accordance with the latest version of TP-201.2B.

1.2. The nozzle vapor valve leak rate shall not exceed 0.10 CFH at a vacuum of -100 inches H O when tested in accordance with the latest version of TP-201.2B.

1.3. The nozzle automatic shut off feature is tested at all service clip settings (either two or three) as well as handheld in accordance with Underwriters Laboratories (UL) Standard 842.

1.4. The nozzle is tested in accordance with the California Department of Food and Agriculture Division of Measurement Standards Article 2 (DMS 6-6-97).

1.5. The nozzle is manufactured to specifications that passed the following tests during the CARB certification evaluation:

- TP-201.2C - Spillage from Phase II Systems
- TP-201.2D - Post Fueling Drips from Nozzles
- TP-201.2E - Gasoline Liquid Retention in Nozzles and Hoses

1.6. The nozzle is manufactured to meet the Vapor to Liquid Ratio as specified in Exhibit 2.

1.7. The terminal end of each nozzle shall be manufactured in accordance with the specifications referenced in Section 4.7.3 of CP-201.

2. INVERTED COAXIAL HOSES

Every inverted coaxial hose is tested for continuity and pressure tests in accordance with UL Standard 330.

3. HOSE ADAPTORS

Every hose adaptor is tested for continuity and pressure tests in accordance with UL Standard 567.

4. RECONNECTABLE BREAKAWAY COUPLINGS

Every re-connectable breakaway coupling is tested for continuity and pressure tests in accordance with UL Standard 567.

5. FLOW LIMITER

Every flow limiter is tested to 50 pounds per square inch (psi) liquid pressure to verify maximum gasoline flow rate limited to 10.0 gpm.

6. VP1000 VACUUM PUMPS

6.1. a. Every vacuum pump is pressure tested in accordance with UL Standard 79.

6.2. b. Every vacuum pump is manufactured to the exact specifications that passed all tests conducted during the CARB certification.

6.3. c. Every MC100 control module is tested in the factory to verify proper operation.

7. PASSIVE TANK PRESSURE MANAGEMENT SYSTEM

7.1. a. The Clean Air Separator tank is designed, constructed, tested, inspected and stamped per the American Society of Mechanical Engineers (ASME) Code Section VIII, Division 1, 2001 Edition, 2003 Addendum.

7.2. b. Every Clean Air Separator bladder is performance and pressure tested using the Clean Air Separator Performance Test to ensure its integrity.

8. ACTIVE TANK PRESSURE MANAGEMENT SYSTEM

8.1. Every Permeator AT-150 processor is performance and pressure tested using the following three tests to ensure proper operation:

- **Vacuum Pump Motor Rotation** Verifies Clockwise Motor Rotation
- **Low Oil Level** Verifies that insufficient oil level will trigger audible and visual alarm on Control panel.
- **Pressure Integrity** Verifies that all internal components have been installed correctly

SECTION II
In-Station Diagnostics Systems
Manufacturing Performance Standards and Specifications

Option 1
Veeder-Root ISD System

The Veeder-Root ISD System and all components shall be manufactured in compliance with the performance standards and specifications in CP-201 (amended January 9, 2013), as well as the requirements specified in this Executive Order. All components (Exhibit 1) shall be manufactured as certified; no change to the equipment, parts, design, materials or manufacturing process shall be made unless approved in writing by the Executive Officer or Executive Officer delegate. Unless specified in Exhibit 2 or in the **CARB Approved Installation, Operation and Maintenance Manual,** the requirements of this section apply to the manufacturing process and are not appropriate for determining the compliance status of a gasoline dispensing facility.

1. TLS CONSOLE

1.1. a. Every Veeder-Root TLS Console equipped with MAG Series Tank Inventory Probe Sensor is built, tested and manufactured as an Automatic Tank Gauge System. The TLS Console should be tested by a recognized independent testing organization as a UST fuel leak detection system meeting Volumetric Tank Tightness Testing Method standards.

1.2. b. Every Veeder-Root TLS Console has been designed and manufactured to have an Operating Temperature Range of 32°F to 113°F (0°C to 45°C) and Storage Temperature Range of –40°F to 165°F (-40°C to 74°C).

1.3. c. Every Veeder-Root TLS Console system including software, sensors and modules have been designed and is Underwriters Laboratories (UL), Canadian Standards Association (CSA), and Canadian Underwriters Laboratories (cUL) approved for operation near potentially hazardous fuel storage tanks.

1.4. d. Every TLS Console system including software, sensors and modules have been designed and tested in accordance with ISO-9001 manufacturing quality standards.

2. ISD SOFTWARE

2.1. Every Veeder-Root TLS Console with ISD software is manufactured to the specifications that passed the operational test and is compliant with CP-201 ISD performance standards and specifications.

2.2. Every Veeder-Root TLS Console with ISD software has been designed, manufactured and tested to continually monitor the connectivity and operability status of all ISD sensors and modules. All TLS Console ISD software has been designed, manufactured and tested to issue a visual,

audible as well as printed notification upon failure of the connectivity or operability status of ISD sensors and modules.

3. VAPOR FLOW METER

Every Veeder-Root ISD Vapor Flow Meter is designed, tested and manufactured to interface to the TLS Console system. The ISD Vapor Flow Meter has been designed and tested for measuring flow between 1 - 30 GPM in HC concentrations between 0 – 100% saturation across a –40°F to 150°F (-40°C to 65°C) operating range.

4. VAPOR PRESSURE SENSOR

Every Veeder-Root ISD Vapor Pressure Sensor is designed, tested and manufactured to interface to the TLS Console system. The ISD Vapor Pressure Sensor has been designed and tested for measuring vapor pressure between –5 to +5 IWC in HC concentrations between 0 – 100% saturation across a –40°F to 150°F (-40°C to 65°C) operating range.

5. TANK INVENTORY PROBE SENSOR

Every Veeder-Root MAG Series Tank Inventory Probe Sensor is designed, tested and manufactured to interface to the TLS Console System. The MAG Series Tank Inventory Probe Sensor has been designed and tested to have an Operating Temperature Range of -40°F to 140°F (-40°C to 60°C) and Storage Temperature Range of –40°F to 165°F (-40°C to 74°C).

6. TLS CONSOLE MODULES (Including optional Maintenance Tracker)

Every Veeder-Root TLS Console system module has been designed and tested to interface to the TLS Console System. The TLS Console system modules have been designed, tested and manufactured to have an Operating Temperature Range of 32°F to 113°F (0°C to 45°C) and Storage Temperature Range of –40°F to 165°F (-40°C to 74°C).

7. VEEDER-ROOT RF WIRELESS COMPONENTS

7.1. Wireless communication is tested between transmitter and receiver.

7.2. Communication is tested between receiver and RF box over communication wire.

7.3. Communication is tested between transmitter and sensor over communication wire.

7.4. Transmitter and receiver board addressing capability is verified.

7.5. Battery voltage is checked to conform to requirements.

Option 1
INCON Vapor Recovery Monitoring (VRM)

The INCON VRM System and all components shall be manufactured in compliance with the performance standards and specifications in CP-201 (amended January 9, 2013), as well as the requirements specified in this Executive Order. All components (Exhibit 1) shall be manufactured as certified; no change to the equipment, parts, design, materials or manufacturing process shall be made unless approved in writing by the Executive Officer or Executive Officer delegate. Unless specified in Exhibit 2 or in the **CARB Approved Installation, Operation and Maintenance Manual**, the requirements of this section apply to the manufacturing process and are not appropriate for determining the compliance status of a gasoline dispensing facility.

1. CONSOLE

1.1. Every INCON Console has been designed and manufactured to have an Operating Temperature Range of 32°F to 104°F (0°C to 40°C) and Storage Temperature Range of -4°F to 140°F (-20°C to 60°C).

1.2. Every INCON Console system including software, sensors and modules have been designed and is Underwriters Laboratories (UL) approved for operation near potentially hazardous fuel storage tanks.

1.3. Every INCON Console system including software, sensors and modules have been designed and tested in accordance with ISO-9001 manufacturing quality standards.

2. VRM SOFTWARE[1]

2.1. Every INCON Console with VRM software is manufactured to the specifications that passed the operational test and is compliant with CP-201 ISD performance standards and specifications.

2.2. Every INCON Console with VRM software has been designed, manufactured and tested to continually monitor the connectivity and operability status of all sensors and modules. All Console VRM software has been designed, manufactured and tested to issue a visual, audible as well as printed notification upon failure of the connectivity or operability status of sensors and modules.

3. VAPOR FLOW METER

Every INCON Vapor Flow Meter is designed, tested and manufactured to interface to the INCON Console. The Vapor Flow Meter has been designed and tested for measuring flow between 1 - 100 GPM in HC concentrations between 0 – 100% saturation across a -40°F to 140°F (-40°C to 60°C) operating range.

[1] INCON/TS-VRM software Versions 1.0.0 and 1.1.0 are approved for and shall be used or installed only with uni-hose dispensers.

4. VAPOR PRESSURE SENSOR

Every INCON Vapor Pressure Sensor is designed, tested and manufactured to interface to the INCON Console. The Vapor Pressure Sensor has been designed and tested for measuring vapor pressure between -8 to +8 IWC in HC concentrations between 0 – 100% saturation across a -40°F to 140°F (40°C to 60°C) operating range.

5. CONSOLE MODULES

Every Console system module has been designed and tested to interface to the INCON Console. The Console system modules have been designed, tested and manufactured to have an Operating Temperature Range of 32°F to 104°F (0°C to 40°C) and Storage Temperature Range of -4°F to 140°F (-20°C to 60°C).

6. DATA TRANSFER UNIT

Every INCON Data Transfer Unit is designed and tested to interface to the INCON Console and to each other. The Data Transfer Unit has been designed and tested to transmit data signals over a 120 VAC power line across a -20°F to 140°F (-28.9°C to 60°C) operating range.