

**State of California
AIR RESOURCES BOARD**

EXECUTIVE ORDER VR-101-R

Relating to Certification of Vapor Recovery Systems

**Franklin Fueling Systems, Inc.
Phil-Tite/EBW/FFS Phase I Vapor Recovery System**

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 the filling of underground gasoline storage tanks (Phase I EVR system), in its Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities (CP-201) as last amended November 9, 2015, 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 I EVR systems with emission standards;

WHEREAS, Franklin Fueling Systems, Inc. (FFS) requested and was granted certification of the Phil-Tite Phase I Vapor Recovery System (Phil-Tite system) pursuant to CP-201 on June 19, 2001, by Executive Order VR-101-A, and last modified on June 1, 2018, by Executive Order VR-101-Q;

WHEREAS, Husky requested modifications to the certification to certify the Husky Model 5885 Pressure/Vacuum Vent Valve for gasoline and 85% Ethanol/15% gasoline fuel blend (E85);

WHEREAS, additional time is necessary to gather and evaluate information needed to complete the certification renewal of the Husky Model 5885 pressure-vacuum (P/V) vent valve;

WHEREAS, CP-201 provides that the CARB Executive Officer shall issue an Executive Order if he 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 Phil-Tite/EBW/FFS System, with all of the requirements set forth in CP-201, and results in a vapor recovery system which is at least 98.0 percent efficient when tested pursuant to test procedure TP-201.1, Volumetric Efficiency for Phase I Systems (July 26, 2012);

NOW, THEREFORE, IT IS HEREBY ORDERED that the Phil-Tite/EBW/FFS System is certified to be at least 98.0 percent efficient when installed and maintained as specified herein and in the following exhibits. Exhibit 1 contains a list of the certified components. Exhibit 2 contains the performance standards and specifications, typical installation drawings, and maintenance intervals for the Phil-Tite/EBW/FFS System as installed in a gasoline dispensing facility (GDF). Exhibit 3 contains the manufacturing performance specifications. Exhibit 4 contains the manufacturer warranties. Exhibit 5 is the below-grade vaulted tank configuration.

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 component(s) to the initial purchaser. The warranty shall be passed on to each subsequent purchaser within the warranty period. The warranty shall include 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, Husky, and OPW shall meet the manufacturing performance specifications as provided in Exhibit 3.

IT IS FURTHER ORDERED that the certified Phil-Tite/EBW/FFS System shall be installed, operated, and maintained in accordance with the CARB Approved Installation, Operation, and Maintenance Manual. Equipment shall be inspected at the interval specified and per the procedures identified in the CARB Approved Installation, Operation, and Maintenance Manual. A copy of the Executive Order and the CARB Approved Installation, Operation, and Maintenance Manual shall be maintained at each GDF where a certified Phil-Tite/EBW/FFS 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 manufacturer's certification application or documents and certified hereby is prohibited and deemed inconsistent with this certification, and is subject to enforcement action, 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 be made a condition of certification. The owner or operator of the Phil-Tite/EBW/FFS System shall conduct, and pass, the following tests no later than 60 days after startup and at least once every three (3) years after startup testing, 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-201.1B, Static Torque of Rotatable Phase I Adaptors (October 8, 2003); and
- Depending on the system configuration, either TP-201.1C, Leak Rate of Drop Tube/Drain Valve Assembly (October 8, 2003) or TP-201.1D, Leak Rate of Drop Tube Overfill Prevention Devices and Spill Container Drain Valves (October 8, 2003).

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 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 the most recent versions of the test procedures listed above, may be used if determined by the Executive Officer or delegate, in writing, to yield comparable results. Testing the Pressure/Vacuum (P/V) vent valve will be at the option of the Districts. If P/V vent valve testing is required by the District, the test shall be conducted in accordance with TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves (October 8, 2003) and Exhibit 2.

IT IS FURTHER ORDERED that the Phil-Tite/EBW/FFS System shall be compatible with gasoline in common use in California at the time of certification, including E-85 (85% ethanol/15% gasoline) for specific components listed in Exhibit 1. Any modifications to comply with future California gasoline requirements shall be 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.

IT IS FURTHER ORDERED that the throughput of GDFs permitted to dispense E-85 shall not exceed 1.2 million gallons per year (100,000 gallons per month). Such GDFs shall be equipped with PV-Zero-E85 P/V vent valve or Husky 5885 P/V vent valve.

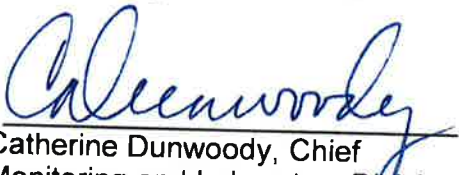
IT IS FURTHER ORDERED that the certification of the Phil-Tite/EBW/FFS System with the exception of the Husky Model 5885 P/V vent valve shall remain valid through May 31, 2021.

IT IS FURTHER ORDERED that to provide the Executive Officer with the necessary time to fully gather and evaluate information to make a determination regarding the renewal certification of the Husky Model 5885 P/V vent valve consistent with Sections 17.3 and 17.4 of CP 201, the certification of the Husky Model 5885 P/V vent valve is extended for one year from the date when this Executive Order is signed.

IT IS FURTHER ORDERED that Executive Order VR-101-Q issued on June 1, 2018, is hereby superseded by this Executive Order. Phil-Tite/EBW/FFS Systems certified under Executive Orders VR-101-A to Q 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. This Executive Order shall apply to new installations or major modification of existing Phase I systems.

IT IS FURTHER ORDERED that Executive Order VR-103-G issued on June 3, 2013, is hereby superseded by this Executive Order. EBW Phase I Vapor Recovery Systems certified under Executive Order VR-103-A through G may remain in use at existing installations up to May 31, 2021.

Executed at Sacramento, California, this 3rd day of June 2019.


Catherine Dunwoody, Chief
Monitoring and Laboratory Division

Attachments:

- Exhibit 1 Franklin Fueling Systems (Phil-Tite/EBW/FFS) Phase I Vapor Recovery System Equipment List
- Exhibit 2 Installation, Maintenance and Compliance Specifications
- Exhibit 3 Manufacturing Performance Standards and Specifications
- Exhibit 4 Manufacturer Warranties
- Exhibit 5 Vaulted Aboveground Storage Tank Configuration (*Optional*)

Modification Highlights for Executive Order VR-101-R

NOTE: Global change for Executive Order and Installation, Operation, and Maintenance Manual; changed revision letter from Q to R.

Part I: Executive Order

Legal Language:

- Extended certification of the Husky Model 5885 P/V vent valve by one year from the date when Executive Order VR-101-R is signed.
- Husky Model 5885 P/V vent valve is added for E85 applications

Part II: Exhibit I

- Added Husky 5885 PV approved for E85

**State of California
AIR RESOURCES BOARD**

EXECUTIVE ORDER VR-101-Q

Relating to Certification of Vapor Recovery Systems

**Franklin Fueling Systems, Inc.
Phil-Tite/EBW/FFS Phase I Vapor Recovery System**

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 the filling of underground gasoline storage tanks (Phase I EVR system), in its Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities (CP-201) as last amended April 23, 2015, 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 I EVR systems with emission standards;

WHEREAS, Franklin Fueling Systems, Inc. (FFS) requested and was granted certification of the Phil-Tite Phase I Vapor Recovery System (Phil-Tite system) pursuant to CP-201 on June 19, 2001, by Executive Order VR-101-A, and last modified on May 29, 2017, by Executive Order VR-101-P;

WHEREAS, additional time is necessary to gather and evaluate information needed to complete the certification renewal of the Husky Model 5885 pressure-vacuum (P/V) vent valve;

WHEREAS, Husky requested amendment of the Installation, Operation, and Maintenance Manual for the Husky Model 5885 P/V vent valve;

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 Phil-Tite/EBW/FFS System, as amended to include the components listed above, conforms with all of the requirements set forth in CP-201, and results in a vapor recovery system which is at least 98.0 percent efficient when tested pursuant to test procedure TP-201.1, Volumetric Efficiency for Phase I Systems (July 26, 2012);

NOW, THEREFORE, IT IS HEREBY ORDERED that the Phil-Tite/EBW/FFS System is certified to be at least 98.0 percent efficient when installed and maintained as specified herein and in the following exhibits. Exhibit 1 contains a list of the certified components. Exhibit 2 contains the performance standards and specifications, typical installation drawings, and maintenance intervals for the Phil-Tite/EBW/FFS System as installed in a gasoline dispensing facility (GDF). Exhibit 3 contains the manufacturing performance specifications. Exhibit 4 contains the manufacturer warranties. Exhibit 5 is the below-grade vaulted tank configuration.

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 component(s) to the initial purchaser. The warranty shall be passed on to each subsequent purchaser within the warranty period. The warranty shall include 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, Husky, and OPW shall meet the manufacturing performance specifications as provided in Exhibit 3.

IT IS FURTHER ORDERED that the certified Phil-Tite/EBW/FFS System shall be installed, operated, and maintained in accordance with the CARB Approved Installation, Operation, and Maintenance Manual. Equipment shall be inspected at the interval specified and per the procedures identified in the CARB Approved Installation, Operation, and Maintenance Manual. A copy of the Executive Order and the CARB Approved Installation, Operation, and Maintenance Manual shall be maintained at each GDF where a certified Phil-Tite/EBW/FFS 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 manufacturer's certification application or documents and certified hereby is prohibited and deemed inconsistent with this certification, and is subject to enforcement action, 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 be made a condition of certification. The owner or operator of the Phil-Tite/EBW/FFS System shall conduct, and pass, the following tests no later than 60 days after startup and at least once every three (3) years after startup testing, 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-201.1B, Static Torque of Rotatable Phase I Adaptors (October 8, 2003); and
- Depending on the system configuration, either TP-201.1C, Leak Rate of Drop Tube/Drain Valve Assembly (October 8, 2003) or TP-201.1D, Leak Rate of Drop Tube Overfill Prevention Devices and Spill Container Drain Valves (October 8, 2003).

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 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 the most recent versions of the test procedures listed above, may be used if determined by the Executive Officer or delegate, in writing, to yield comparable results. Testing the Pressure/Vacuum (P/V) vent valve will be at the option of the Districts. If P/V vent valve testing is required by the District, the test shall be conducted in accordance with TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves (October 8, 2003) and Exhibit 2.

IT IS FURTHER ORDERED that the Phil-Tite/EBW/FFS System shall be compatible with gasoline in common use in California at the time of certification, including E-85 (85% ethanol/15% gasoline) for specific components listed in Exhibit 1. Any modifications to comply with future California gasoline requirements shall be 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.

IT IS FURTHER ORDERED that GDF installations permitted for E-85 fuel that use the PV-Zero-E85 P/V vent valve shall be subject to a throughput limitation of 1.2 million gallons per year (100,000 gallons per month).

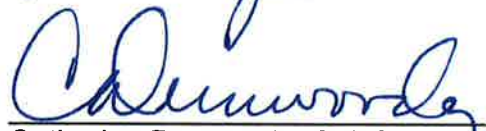
IT IS FURTHER ORDERED that the certification of the Phil-Tite/EBW/FFS System with the exception of the Husky Model 5885 P/V vent valve shall remain valid through May 31, 2021.

IT IS FURTHER ORDERED that to provide the Executive Officer with the necessary time to fully gather and evaluate information to make a determination regarding the renewal certification of the Husky Model 5885 P/V vent valve consistent with Sections 17.3 and 17.4 of CP 201, the certification of the Husky Model 5885 P/V vent valve is extended for one year from the date when this Executive Order is signed.

IT IS FURTHER ORDERED that Executive Order VR-101-P issued on May 29, 2017, is hereby superseded by this Executive Order. Phil-Tite/EBW/FFS Systems certified under Executive Orders VR-101-A to P 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. This Executive Order shall apply to new installations or major modification of existing Phase I systems.

IT IS FURTHER ORDERED that Executive Order VR-103-G issued on June 3, 2013, is hereby superseded by this Executive Order. EBW Phase I Vapor Recovery Systems certified under Executive Order VR-103-A through G may remain in use at existing installations up to May 31, 2021.

Executed at Sacramento, California, this 1st day of June 2018.



Catherine Dunwoody, Chief
Monitoring and Laboratory Division

Attachments:

- Exhibit 1 Franklin Fueling Systems (Phil-Tite/EBW/FFS) Phase I Vapor Recovery System Equipment List
- Exhibit 2 Installation, Maintenance and Compliance Specifications
- Exhibit 3 Manufacturing Performance Standards and Specifications
- Exhibit 4 Manufacturer Warranties
- Exhibit 5 Vaulted Aboveground Storage Tank Configuration (*Optional*)

EXHIBIT 1

Franklin Fueling Systems (Phil-Tite/EBW/FFS) Phase I Vapor Recovery System Equipment List

NOTE:

(Gas/E85) = Identifies that these components are approved for standard gasoline and E85 fuel blends.

(Gas) = Identifies that these components are only approved for standard gasoline fuel blends.

Equipment

**Spill Container
(Phil-Tite Series
Spill Containers)**

Manufacturer/Model Number

Phil-Tite 85000 and 85000-1 Series (Gas/E85)

85W0X and 85W0X-1 legend:

W represented by:

1=replacement spill container

X represented by:

0 = product spill container

0-EXT = product spill container w extension collar

1 = vapor spill container

1-EXT = vapor spill container w extension collar

**Spill Container
(Defender Series
Spill Containers)**

EBW Defender 705 Series (Gas/E85)

Defender 705 Series Legend (Gas/E85)

7055XYZAB where XYZAB is represented by:

X = containment

4 = single wall

5 = double wall

Y = installation

2 = multipoint bucket

5 = direct bury

Z = interstitial monitoring method

0 = no sensor/gauge (i.e. single wall)

1 = I2 monitor (float gauge, visual)

2 = TSP-ULS (electronic sensor)

A = spill container base thread

0 = NPSM (straight thread)

1 = NPT (taper thread)

B = drain valve

1 = with drain valve (typical on product/fill side)

2 = without drain valve (typical on vapor side)

**Spill Container
(EBW Series Spill
Containers)**

EBW 7XX-49Y-0Z (Gas)

XX indicates spill bucket gallon size:

05 = 5 Gallon

15 = 15 Gallon

Y indicates level and base material:

0 = grade level with cast iron base (5 gallon)

2 = below grade level with cast iron base

(5 and 15 gallon)

Exhibit 1 (Continued)

<u>Equipment</u>	<u>Manufacturer/Model Number</u>
	Z indicates drain valve: 1 = drain valve 2 = no drain valve
Spill Container Lid (Phil-Tite Series Spill Containers)	Phil-Tite 85011 (Gas/E85) (Not required with sump configuration lid, see Figure 2B in Exhibit 2)
Spill Container Lid (Defender and EBW Series Spill Containers)	EBW 7054401X (Gas/E85) X = Lid Color, Varies
Replacement Drain Valve (Phil-Tite Series Spill Containers)	Phil-Tite 85400 (Gas/E85)
Replacement Drain Valve (Defender Series Spill Containers)	EBW 70533729 (Gas/E85).
Replacement Drain Valve (EBW Series Spill Container)	EBW 70533719 (Gas)
Drain Valve Blank Kit (EBW Series Spill Container)	EBW 90022
Drain Valve Isolation Kit (EBW Series Spill Containers)	EBW 70825501
Drain Valve Isolation Test Kit (EBW Series Spill Containers)	EBW 90079
Product Adaptor	Phil-Tite SWF-100-B (Gas) Phil-Tite SWF-100-SS (Gas/E85)
Vapor Adaptor	Phil-Tite SWV-101-B (Gas) Phil-Tite SWV-101-SS (Gas/E85)
Riser Adaptor	Phil-Tite M/F 4X4 (Gas/E85) Phil-Tite M/F 4X4-R (Gas/E85)

Exhibit 1 (Continued)

<u>Equipment</u>	<u>Manufacturer/Model Number</u>
Riser Support Bracket	Phil-Tite M 1600 (Gas/E85)
Drop Tube Riser Clamp (Defender Series Spill Containers)	FFS 70550901EC (Gas/E85)
Dust Cap	Morrison Brothers 323C-0100ACEVR (vapor) (Gas/E85) Morrison Brothers 305C-0100ACEVR (product)(Gas/E85) OPW 1711T-EVR (vapor) (Gas/E85) OPW 634TT-EVR (product) (Gas/E85) OPW 634LPC (product) (Gas) OPW 1711LPC (vapor) (Gas) CompX CSP1-634LPC (product) (Gas) CompX CSP3-1711LPC (vapor) (Gas) CompX CSP2-634LPC (product) (Gas) CompX CSP4-1711LPC (vapor) (Gas) EBW 77720102 (product) (Gas/E85) EBW 77720202 (product) (Gas/E85) EBW 30430103 (vapor) (Gas/E85) EBW 30420006 (vapor) (Gas/E85)
Pressure/Vacuum Vent Valve	FFS PV-Zero 407215901 (Gas/E85) Husky 5885 (Gas) OPW 723V (Gas)
Tank Gauge Port Components	Veeder-Root 312020-952 (cap and adaptor kit) (Gas/E85) Morrison Brothers 305XPA1100AKEVR (cap and adaptor kit) (Gas/E85) Morrison Brothers 305-0200AAEVR (replacement adaptor) (Gas/E85) Morrison Brothers 305XP-110ACEVR (replacement cap) (Gas/E85) EBW 90037-E (In Tank Probe Cap and Adapter Kit) (Gas/E85)
Drop Tube Overfill Prevention Device¹	Defender Series OPV 70859X9YZ (Gas/E85) Defender Series OPV legend: X = upper drop tube length: 1 = 5 feet 2 = 10 feet Y = Tube compatibility: 0 = Gas 2 = Gas/E85 Z = lower drop tube length: 1 = 8 feet 2 = 10 feet

Exhibit 1 (Continued)

<u>Equipment</u>	<u>Manufacturer/Model Number</u>
	EBW 70849X1Y (Gas)
	EBW 70849X3Y (Gas/E85)
	X represented by: 1 = 5 foot length upper drop tube section 2 = 10 foot length upper drop tube section
	Y represented by: 1 = 8 foot length bottom thread on section drop tube 2 = 10 foot length bottom thread on section drop tube
Drop Tube¹	OPW 61-T (various lengths) (Gas)(Phil-Tite Series Spill Containers only) EBW 7822041X-2 (X = various lengths) (Gas) EBW 7822043X-2 (X = various lengths) (Gas/E85)
Riser Offset¹	Phil-Tite M-6050-X (x = various offsets) (Gas/E85)
Double Fill¹ Tank Riser Configuration	Phil Tite (configuration only) (Gas/E85) Defender (configuration only) (Gas/E85)
Tank Bottom Protector¹	Phil-Tite TBP-3516-E (Gas/E85)
Emergency Vent	Exhibit 5 (for below-grade vaulted tank configuration)
Fuel Lock¹	McGard FL1 – Stick Only Fuel Lock (125007) (Gas) McGard FL2 – Stick/Sampling Fuel Lock (125008) (Gas)
Bladder Plug	McGard PSI104 (Gas)

¹ If these components are installed or required by regulations of other agencies, only those components and model numbers specified above shall be installed or used.

Exhibit 1 (Continued)

Table 1
Components Exempt from Identification Requirements

Component Name	Manufacturer	Model Number
Drop Tube	OPW EBW EBW	61-T Straight Drop Tube (Gas) 7822041X-2 (X = various lengths) (Gas) 7822043X-2 (X = various lengths) (Gas/E85)
Dust Caps	Morrison Brothers	323C-0100ACEVR (vapor)* (Gas/E85) 305C-0100ACEVR (product)* (Gas/E85)
Tank Gauge Port Components	Veeder-Root	312020-952 (cap & adaptor) (Gas/E85)
	Morrison Brothers	305XPA1100AKEVR (cap and adaptor kit) (Gas/E85) 305-0200AAEVR (replacement adaptor) (Gas/E85) 305XP-1100ACEVR (replacement cap) (Gas/E85)
	EBW	90037-E (In Tank Probe Cap and Adaptor Kit) (Gas/E85)
Riser Adaptor	Phil-Tite	M/F 4X4 (Gas/E85) M/F 4X4-R (Gas/E85)
Riser Offset	Phil-Tite	M-6050-X (X = various offsets) (Gas/E85)
Riser Support Bracket	Phil-Tite	M-1600 (Gas/E85)
Spill Container Lid	Phil-Tite EBW	85011 (Gas/E85) 7054401X (Gas/E85)
Sump/Sump Lids	Varies	Varies (Gas/E85)
Drop Tube Riser Clamp	FFS	70550901EC (Gas/E85)
Replacement Drain Valve	EBW	EBW 70533729 EBW 70533719
Drain Valve Blank Kit	EBW	90022
Fuel Lock	McGard	FL1, FL2

* Morrison Brothers dust caps identified as 323C EVR and 305C EVR respectively.

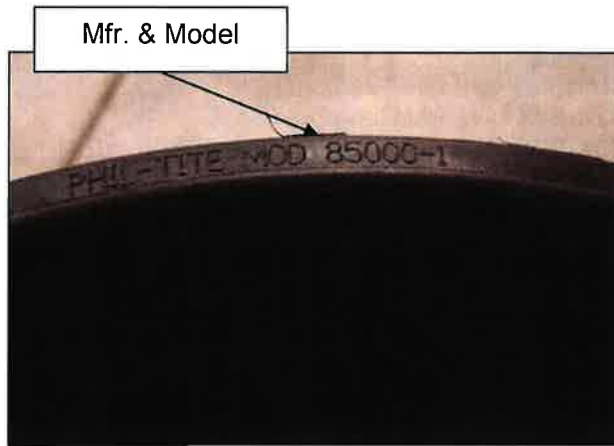
The component in Table 2 may not be installed as a new or replacement part on or after September 1, 2002. This component, if installed prior to September 1, 2002, may be used for the remainder of its useful life.

Table 2

Component Name	Manufacturer	Model Number
Drop Tube	Emco Wheaton	A0020 (various lengths) (Gas)

Exhibit 1 (Continued)

Component Identification and Location



Component Identification and Location



**Defender 705 Series Spill Container-
double wall (Gas/E85 Compatible)**



**Defender 705 Series Spill Container-
single wall (Gas/E85 Compatible)**

Exhibit 1 (Continued)

Component Identification and Location



Spill Container EBW 7XX-49Y-0Z

Exhibit 1 (Continued)

Component Identification and Location



**Phil-Tite Model SWF-100-B
Product Adaptor**



**Phil-Tite Model SWV-101-B
Vapor Adaptor**

Exhibit 1 (Continued)

Component Identification and Location



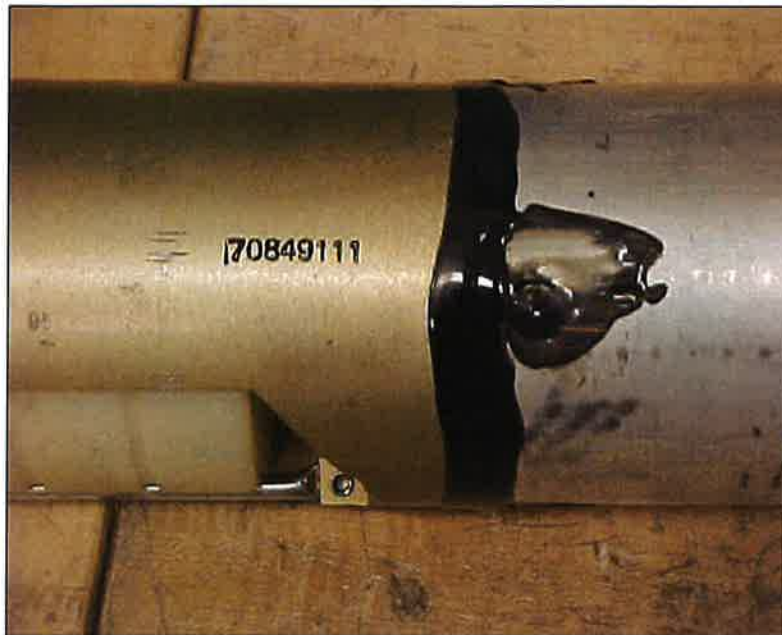
Phil-Tite SWF-100-SS Fill Adaptor



Phil-Tite SWF-101-SS Fill Adaptor

Exhibit 1 (Continued)

Component Identification and Location



**EBW Model 70849X1Y Overfill Prevention Device
(Gas Compatible)**



**EBW 70849X3Y Autolimiter
(Gas/E85 Compatible)**

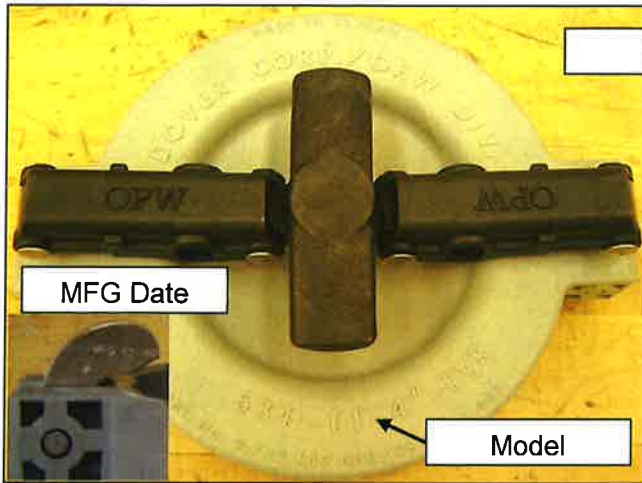
Exhibit 1 (Continued)

Component Identification and Location

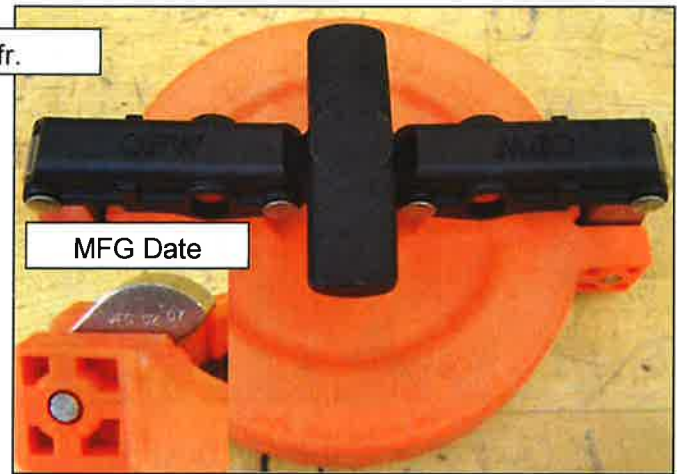


Exhibit 1 (Continued)

Component Identification and Location



OPW 634-TT-EVR Product Dust Cap
(Gas/E85 Compatible)



OPW 1711-T-EVR Vapor Dust Cap
(Gas/E85 Compatible)



OPW 634LPC Product Dust Cap
(Gas Compatible)



OPW 1711LPC Vapor Dust Cap
(Gas Compatible)

Exhibit 1 (Continued)

Component Identification and Location



EBW 77720102 Product Dust Cap
(Gas/E85)



EBW 30430103 Vapor Dust Cap
(Gas/E85)



EBW 77720202 Product Dust Cap
(Gas/E85 Compatible)



EBW 30420006 Vapor Dust Cap
(Gas/E85)

Exhibit 1 (Continued)

Component Identification and Location



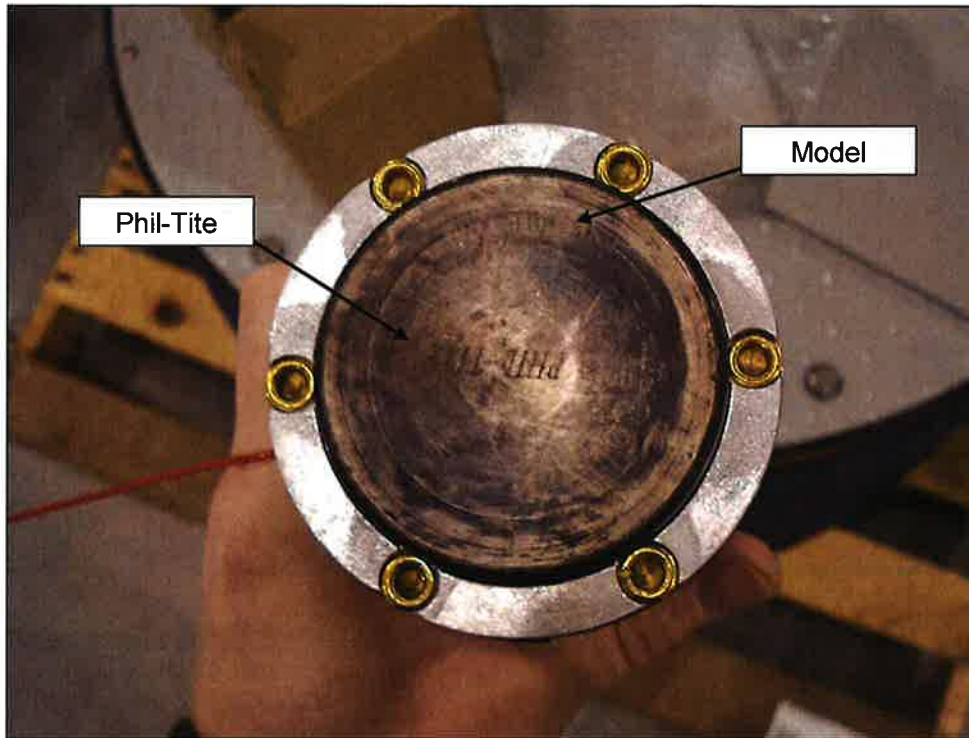
**Morrison Brothers 323C EVR
Vapor Dust Cap
(Gas/E85 Compatible)**



**Morrison Brothers 305C EVR
Product Dust Cap
(Gas/E85 Compatible)**

Exhibit 1 (Continued)

Component Identification and Location



Phil-Tite TBP-3516-E (Gas/E85) Series Tank Bottom Protector

Exhibit 1 (Continued)

Component Identification and Location



CompX CSP1-634LPC Product Dust Cap



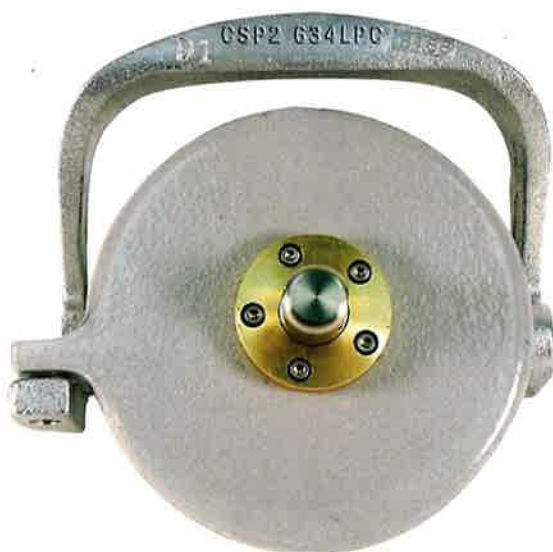
CompX CSP3-1711LPC Vapor Dust Cap
(Gas Only)



CompX Tank Commander Lid
Locks onto CSP1-634LPC and CSP3-1711LPC Dust Caps

Exhibit 1 (Continued)

Component Identification and Location



CompX CSP2-634LPC Product Dust Cap



CompX CSP4-1711LPC Vapor Dust Cap
(Gas Only)



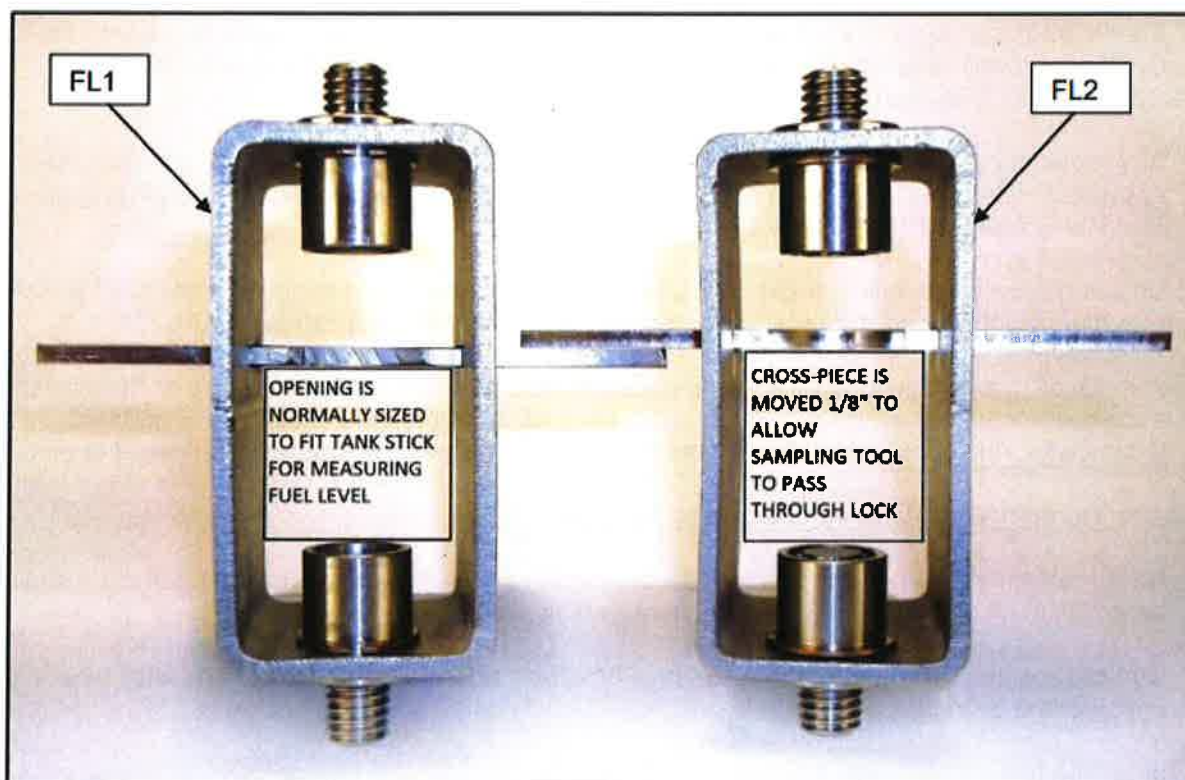
CompX Tank Commander Lid
Locks onto CSP2-634LPC and CSP4-1711LPC Dust Caps

Exhibit 1 (Continued)

Component Identification and Location



McGard Fuel Lock Installation Position¹



McGard Fuel Lock (FL1 on Left, FL2 on Right)

¹ Optional component, but if installed this picture shows the correct installation location in the pipe just below the Product Rotatable Adaptor in the drop tube.

Exhibit 2

Installation, Maintenance and Compliance Specifications

This Exhibit contains the installation, maintenance and compliance standards and specifications applicable to the Franklin Fueling System (FFS) Phase I system installed in a gasoline dispensing facility (GDF). Table 2-1 summarizes the compliance standard and specification with the corresponding test method. Table 2-2 describes the maintenance interval for the FFS Phase I System components.

General Specifications

1. Typical installations of the FFS Phase I system and system components are shown in Figures 2A through 2N.
2. The FFS Phase I system shall be installed, operated and maintained in accordance with the CARB Approved Installation, Operation and Maintenance Manual for the Franklin Fueling Systems, Inc. Phil-Tite/EBW/FFS Phase I Vapor Recovery System.
3. Any repair or replacement of system components shall be done in accordance with the CARB Approved Installation, Operation and Maintenance Manual for the Franklin Fueling Systems, Inc. Phil-Tite/EBW/FFS Phase I Vapor Recovery System..
4. Unless otherwise specified in this Executive Order (EO), the FFS Phase I system shall comply with the applicable performance standards and performance specifications in CP-201.
5. Installation, maintenance and repair of system components, including removal and installation of such components in the course of any required tests, shall be performed by FFS certified technicians. Additional certifications may be required in accordance with District requirements.

Pressure/Vacuum Vent Valves For Storage Tank Vent Pipes

1. No more than three certified pressure/vacuum vent valves (P/V valves) listed in Exhibit 1 shall be installed on any GDF underground storage tank system.
2. Compliance determination of the following P/V valve performance specifications shall be at the option of the districts:
 - a. The leak rate of each P/V valve shall not exceed 0.05 cubic feet per hour (CFH) at 2.00 inches of H₂O positive pressure and 0.21 CFH at -4.00 inches of H₂O negative pressure as determined by TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves (October 8, 2003).
 - b. The positive pressure setting is 2.5 to 6.0 inches of H₂O and the negative pressure setting is 6.0 to 10.0 inches of H₂O as determined by TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves (October 8, 2003).
3. Compliance determination of the P/V valve performance specifications in items 2a and 2b for the FFS PV-Zero P/V vent valve shall be conducted with the valve remaining in its installed position on the vent line(s). The PV-Zero portion of the CARB-Approved Installation, Operation and Maintenance Manual for the Franklin Fueling Systems Phil-Tite/EBW/FFS) Phase I Vapor Recovery System outlines the equipment needed to test the valve in its installed position.

4. A manifold may be installed on the vent pipes to reduce the number of potential leak sources and P/V valves installed. Vent pipe manifolds shall be constructed of steel pipe or an equivalent material that has been listed for use with gasoline. If a material other than steel is used, the GDF operator shall make available information demonstrating that the material is compatible for use with gasoline. One example of a typical vent pipe manifold is shown in Figure 2F. This shows only one typical configuration; other manifold configurations may be used. For example, a tee may be located in a different position, or fewer pipes may be connected, or more than one P/V valve may be installed on the manifold.
5. Each P/V valve shall have permanently affixed to it a yellow, gold, or white colored label with black lettering stating the following specifications:

Positive pressure setting: 2.5 to 6.0 inches H₂O
Negative pressure setting: 6.0 to 10.0 inches H₂O
Positive Leakrate: 0.05 CFH at 2.0 inches H₂O
Negative Leakrate: 0.21 CFH at -4.0 inches H₂O
6. Each FFS PV-Zero P/V valve installed shall have permanently affixed to it a label that identifies that it is compatible with E85.

Rotatable Product and Vapor Recovery Adaptors

1. Rotatable product and vapor recovery adaptors shall be capable of at least 360-degree rotation and have an average static torque not to exceed 108 inch-pounds (9 foot-pounds). Compliance with this requirement shall be demonstrated in accordance with TP-201.1B, Static Torque of Rotatable Phase I Adaptors (October 8, 2003).
2. The vapor adaptor poppet shall not leak when closed. Compliance with this requirement shall be verified by the use of commercial liquid leak detection solution, or by bagging, when the vapor containment space of the underground storage tank is subjected to a non-zero gauge pressure. (Note: leak detection solution will detect leaks only when positive gauge pressure exists.)

Vapor Recovery and Product Adaptor Dust Caps

Dust caps with intact gaskets shall be installed on all Phase I tank adaptors.

Spill Container Drain Valve

The spill container drain valve is configured to drain liquid directly into the drop tube and is isolated from the underground storage tank ullage space. The leak rate of the drain valve shall not exceed 0.17 CFH at 2.00 inches H₂O. Depending on the presence of the drop tube overfill prevention device, compliance with this requirement shall be demonstrated in accordance with either TP-201.1C, Leak Rate of Drop Tube/Drain Valve Assembly (October 8, 2003), or TP-201.1D, Leak Rate of Drop Tube Overfill Prevention Device and Spill Container Drain Valve (October 8, 2003).

Drop Tube Overfill Prevention Device

1. The Drop Tube Overfill Prevention Device (overfill device) is designed to restrict the flow of gasoline delivered to the underground storage when liquid levels exceed a specified capacity. The drop tube overfill device is not a required component of the vapor recovery system, but may be installed as an optional component of the system. Other requirements may apply.

2. The leak rate of the overfill device shall not exceed 0.17 CFH at 2.00 inches H₂O when tested as in accordance with TP-201.1D, Leak Rate of Drop Tube Overfill Prevention Device and Spill Container Drain Valves (October 8, 2003).
3. The discharge opening of the fill pipe must be entirely submerged when the liquid level is six inches above the bottom of the tank as shown in Figures 2A and 2D.

Riser Adaptor

For "Phil-Tite" series spill container installations, the Riser Adaptor shall provide a machined surface on which a gasket can seal and ensures that the seal is not compromised by an improperly cut or improperly finished riser. A Threaded Riser adaptor shall be installed on the following required connections. As an option, the adaptor may be installed on other connections.

- a. Product Spill Container (required)
- b. Vapor Recovery Spill Container (required)
- c. Tank Gauging Components (required)

For "Defender Series" spill container installations, the Riser Adaptor should only be used with the NPSM (straight thread) base. The Riser Adaptor should not be used with the Defender Series Base with NPT (tapered thread) base. This is applicable for both the vapor and fill/product sides. Field conditions will dictate which base to use. If the existing riser is not cut square, those conditions will require the riser adaptor.

Vapor Recovery Riser Offset

1. The vapor recovery tank riser may be offset from the tank connection to the vapor recovery Spill Container provided that the maximum horizontal distance (offset distance) does not exceed twenty (20) inches. One example of an offset is shown in Figure 2E.
2. A vapor recovery riser shall be offset up to 20 inches horizontal distance with use of commercially available, four (4) inch steel pipe fittings, a Phil-Tite Model M-6050 Vapor Riser Offset, or a combination of the two products. An example of a Phil-Tite Model M-6050 configuration is shown in Figure 2E.

Tank Gauge Port Components

The tank gauge adaptor and cap are paired. Therefore, an adaptor manufactured by one company shall be used only with a cap manufactured by the same company.

Warranty

Each manufacturer listed in Exhibit 1 shall include a warranty tag with the certified component(s). The manufacturer warranty tag, included with each component, shall be provided to the service station owner/operator at the time of installation.

Connections and Fittings

All connections and fittings not specifically certified with an allowable leak rate shall not leak. The absence of vapor leaks shall be verified with the use of commercial liquid leak detection solution

(LDS), or by bagging, when the vapor containment space of the underground storage tank is subjected to a non-zero gauge pressure. (Note: leak detection solution will detect leaks only when positive gauge pressure exists).

Double Fill Configuration

A Defender and or Phil-Tite Double Fill Configuration shall be allowed for installation provided that no more than two fill points are installed on any single underground storage tank and that no offset of the vapor recovery riser pipe is installed. An example of this configuration is shown in Figure 2C.

Maintenance Records

Each GDF operator or owner shall keep records of maintenance performed at the facility. Such record shall be maintained on site or in accordance with district requirements or policies. Additional information may be required in accordance with district requirements or policies. The records shall include the maintenance or test date, repair date to correct test failure, maintenance or test performed, affiliation, telephone number, name and Certified Technician Number of individual conducting maintenance or test. An example of a Phase I Maintenance Record is shown in Figure 2O.

**Table 2-1
Gasoline Dispensing Facility Compliance Standards and Specifications**

Component / System	Test Method	Standard or Specification
Rotatable Phase I Adaptors	TP-201.1B	Minimum, 360-degree rotation Maximum, 108 pound-inch average static torque
Overfill Prevention Device	TP-201.1D	≤0.17 CFH at 2.00 inches H ₂ O
Spill Container Drain Valve	TP-201.1C or TP-201.1D	≤0.17 CFH at 2.00 inches H ₂ O
P/V Valve ¹	TP-201.1E	Positive pressure setting: 2.5 to 6.0 inches H ₂ O Negative pressure setting: 6.0 to 10.0 inches H ₂ O Positive Leakrate: 0.05 CFH at 2.0 inches H ₂ O Negative Leakrate: 0.21 CFH at -4.0 inches H ₂ O
Vapor Recovery System	TP-201.3	As specified in TP-201.3 and/or CP-201
Connections and fittings certified without an allowable leak rate	Leak Detection Solution or bagging	No leaks

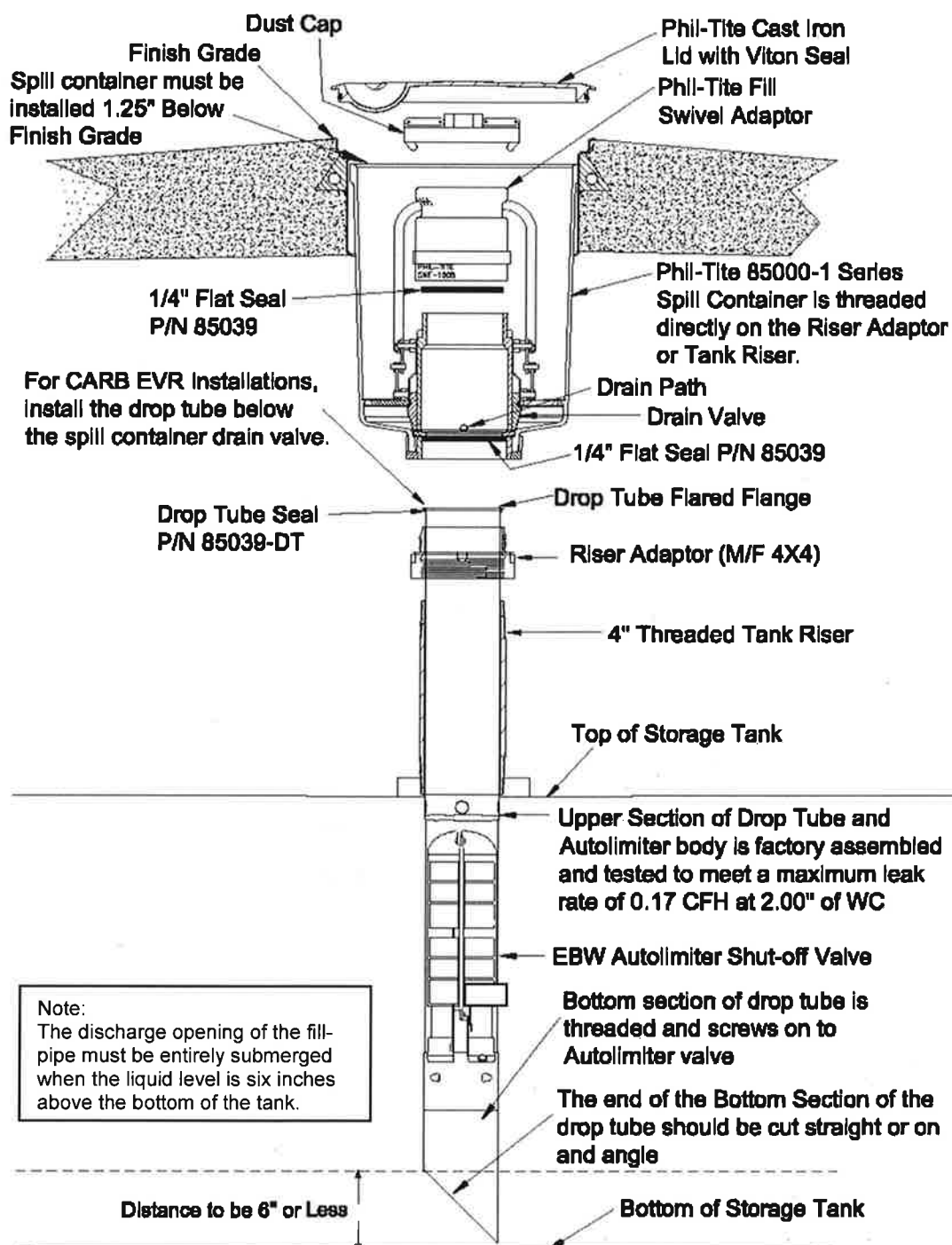
¹ Compliance determination is at the option of the district.

Table 2-2
Maintenance Intervals for System Components²

Manufacturer	Component	Maintenance Interval
All Models	Dust Caps	Annual
All Models	In Tank Gauge Port Probe Cap and Adaptor Kit	Annual
FFS	Drop Tube Overfill Prevention Device 70849X1Y series Drop Tube Overfill Prevention Device 70849X3Y series Drop Tube Overfill Prevention Device 70859X9YZ series	Annual
FFS	782 Straight Drop Tube	Annual
Husky	Pressure/Vacuum Vent Valve	Annual
FFS	Pressure/Vacuum Vent Valve	Annual
OPW	Pressure/Vacuum Vent Valve	Annual
OPW	61-T Straight Drop Tube	Annual
FFS	Spill Container (all models)	Every 3 years
FFS	SWF-100-B Product Adaptor SWF-100-SS Product Adaptor	Annual
FFS	SWV-101-B Vapor Adaptor SWV-101-SS Vapor Adaptor	Annual

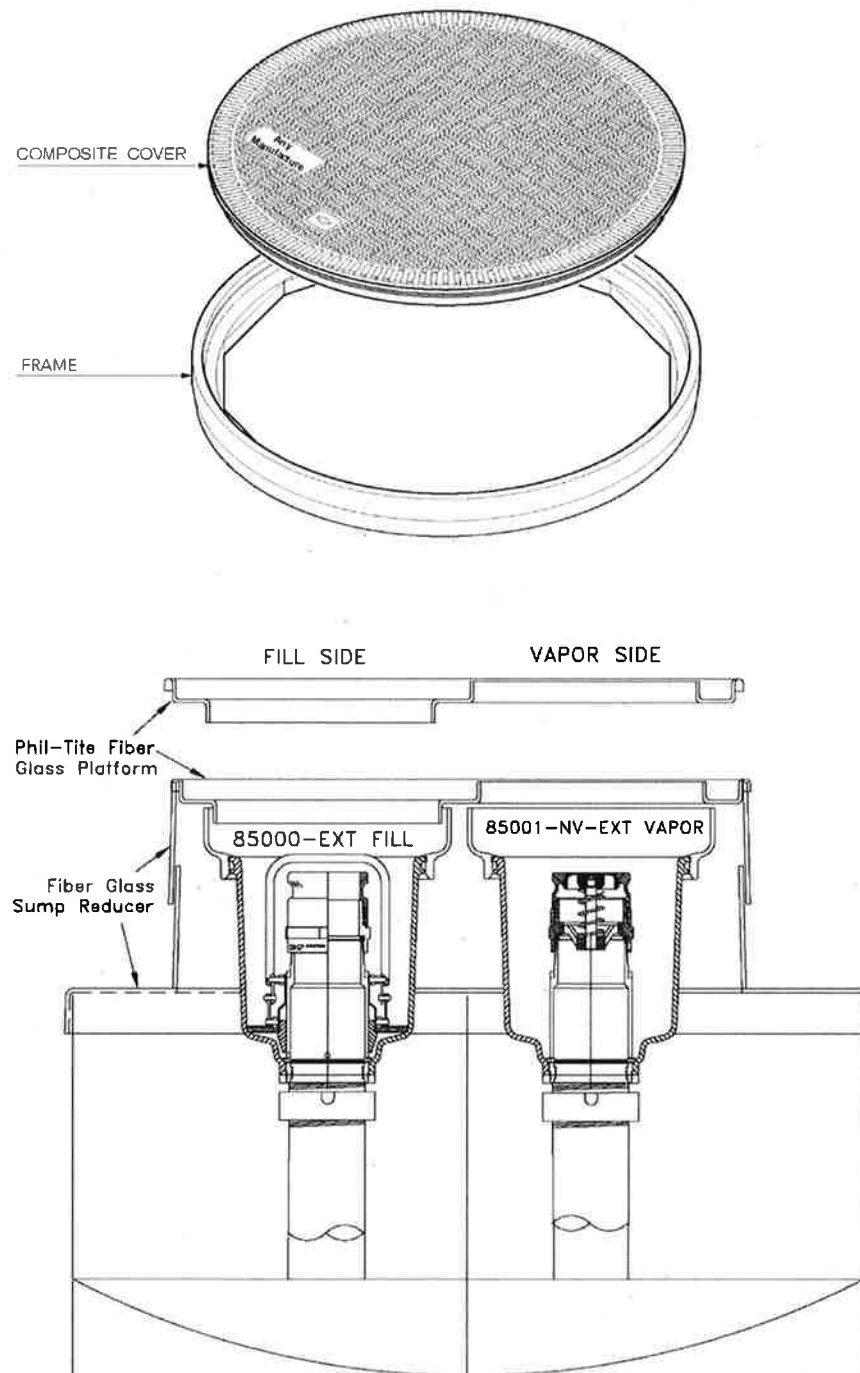
² Maintenance must be conducted within the interval specified from the date of installation and at least within the specified interval thereafter.

Figure 2A
Typical Product Side Installation of Phil-Tite System Using EBW Autolimiter II 70849X Series
(Defender OPV series 70859X9YZ alternate component)³



³ McGard FL1 or FL2 Fuel lock (Optional- Not Pictured), if installed, would be positioned inside the riser seal (or pipe nipple) below the rotatable adaptor.

Figure 2B
Alternate Phil-Tite Sump Configuration⁴



⁴ McGard FL1 or FL2 Fuel lock (Optional- Not Pictured), if installed, would be positioned inside the riser seal (or pipe nipple) below the rotatable adaptor.

Figure 2C
Typical Defender/Phil-Tite Double Fill Configuration

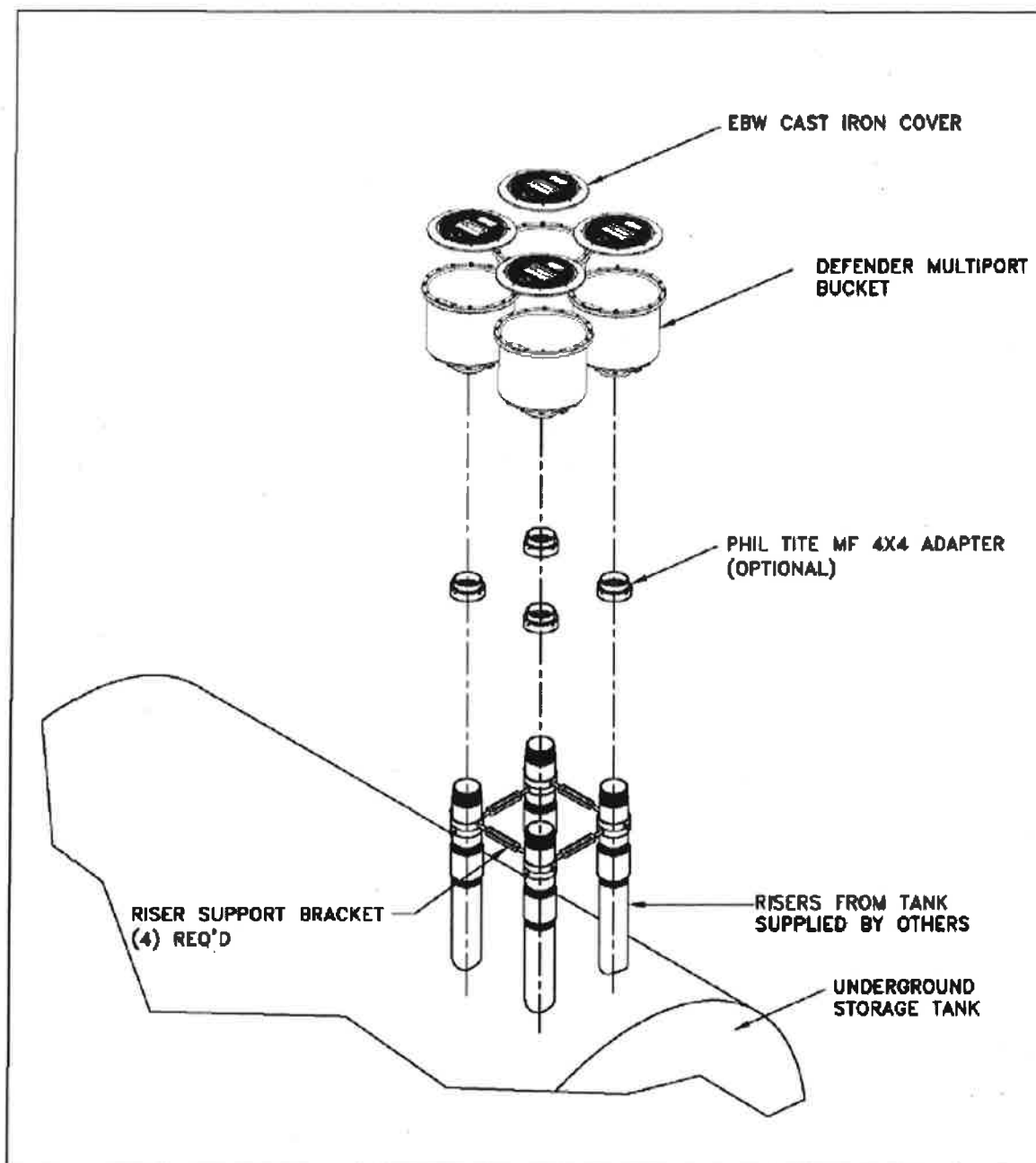
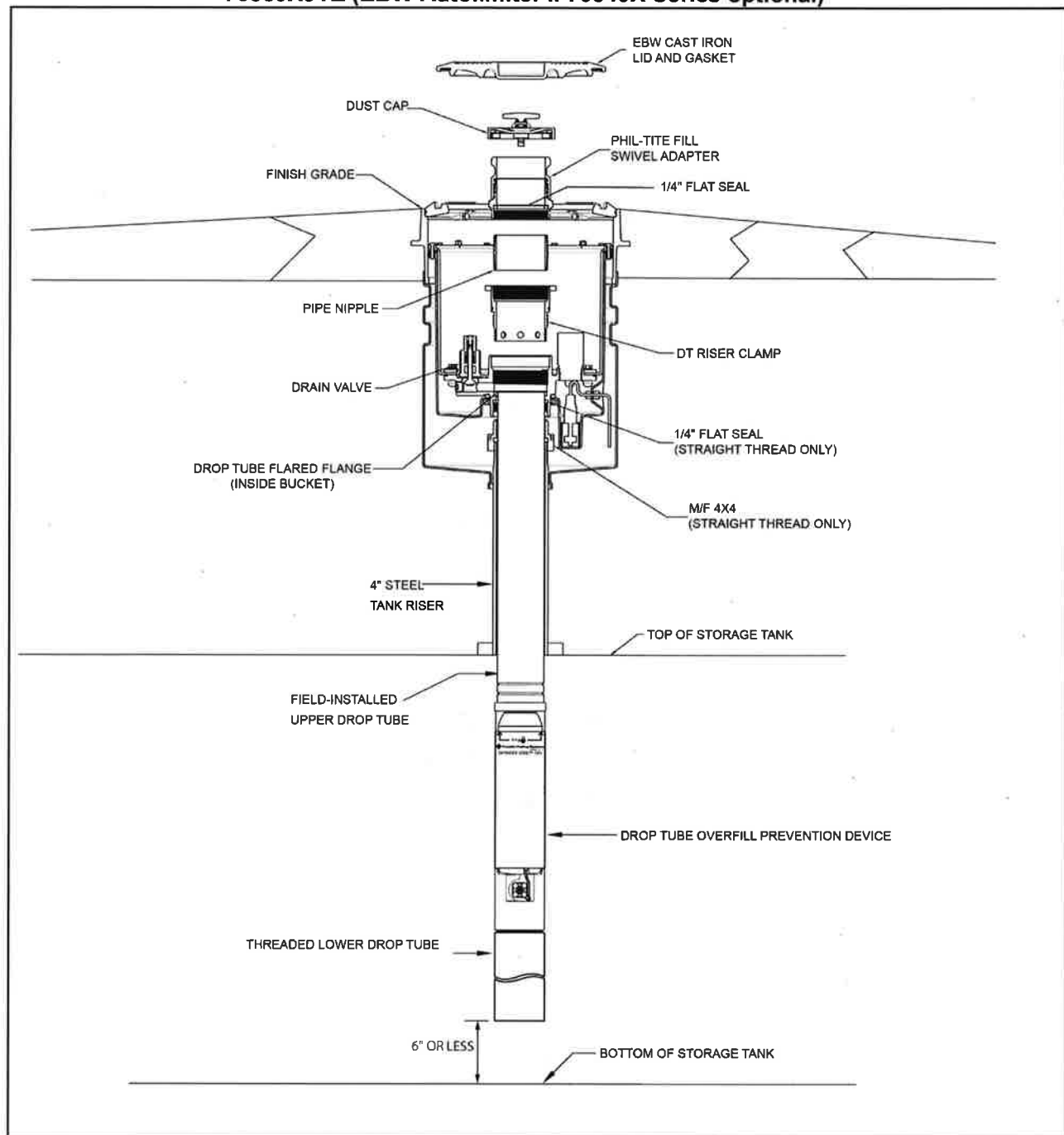


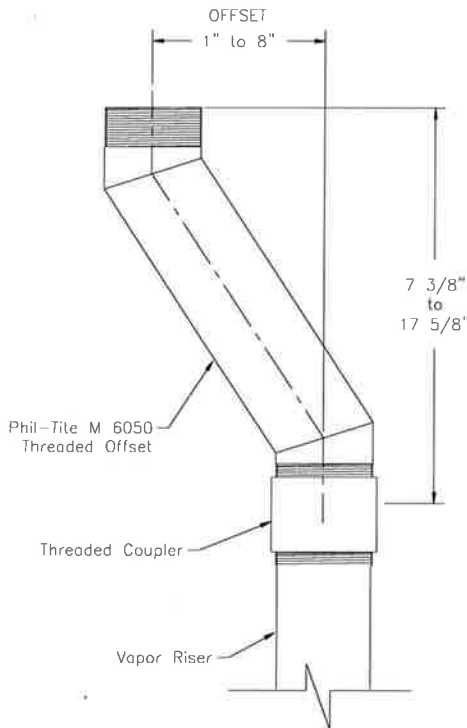
Figure 2D
Typical Product Installation of Defender Series Spill Container Using Defender OPV series
70859X9YZ (EBW Autolimiter II 70849X Series optional)⁵



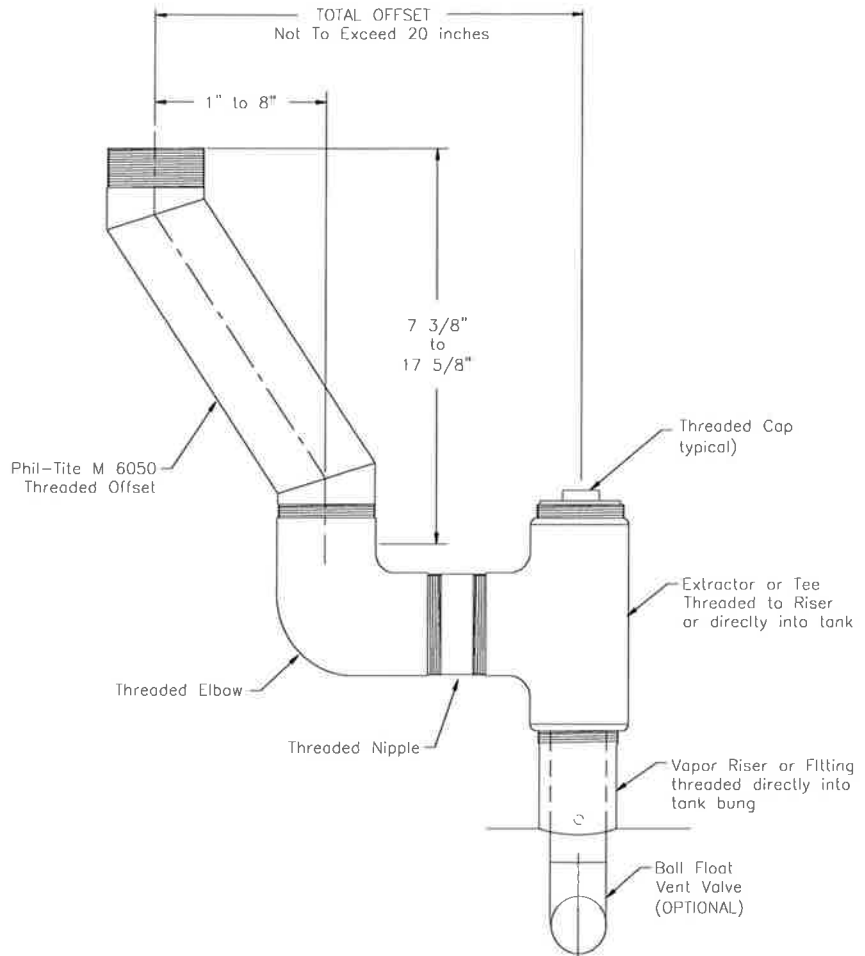
⁵ McGard FL1 or FL2 Fuel lock (Optional- Not Pictured), if installed, would be positioned inside the riser seal (or pipe nipple) below the rotatable adaptor.

Figure 2E
Typical Phil-Tite Model M-6050 Vapor Recovery Riser Offset

Offset Using Straight Riser

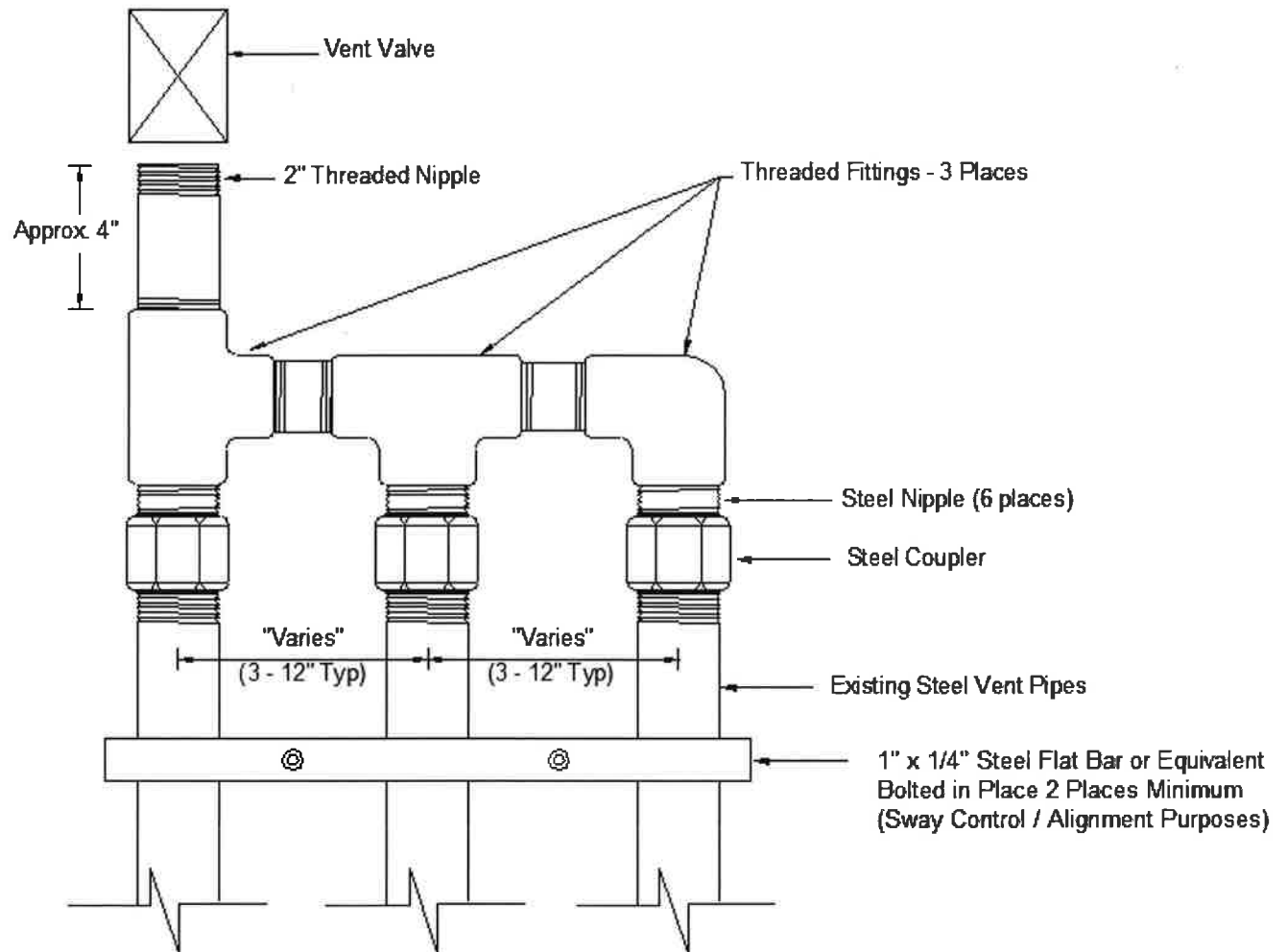


Offset Using Ball Float



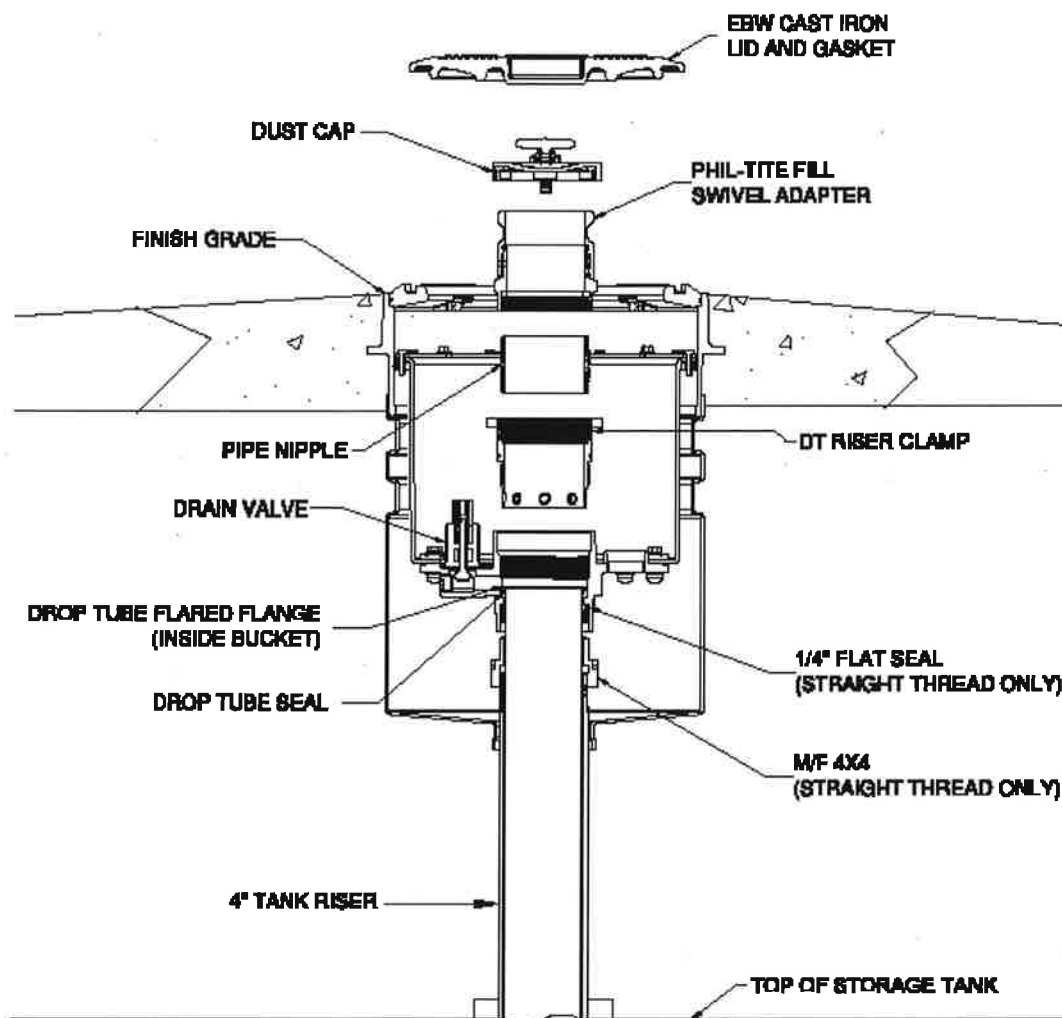
Note: These figures represent instances where a vapor recovery riser has been offset in order to construct a two-point Phase I vapor recovery system. The figure on the right illustrates an offset using a 90-degree elbow. However, in some instances, elbows less than 90 degrees may be used. All fittings and pipe nipples shall be 4-inch diameter similar to those of the spill container and rotatable Phase I adaptors in order to reduce back pressure during a gasoline delivery.

**Figure 2F
Typical Vent Pipe Manifold**



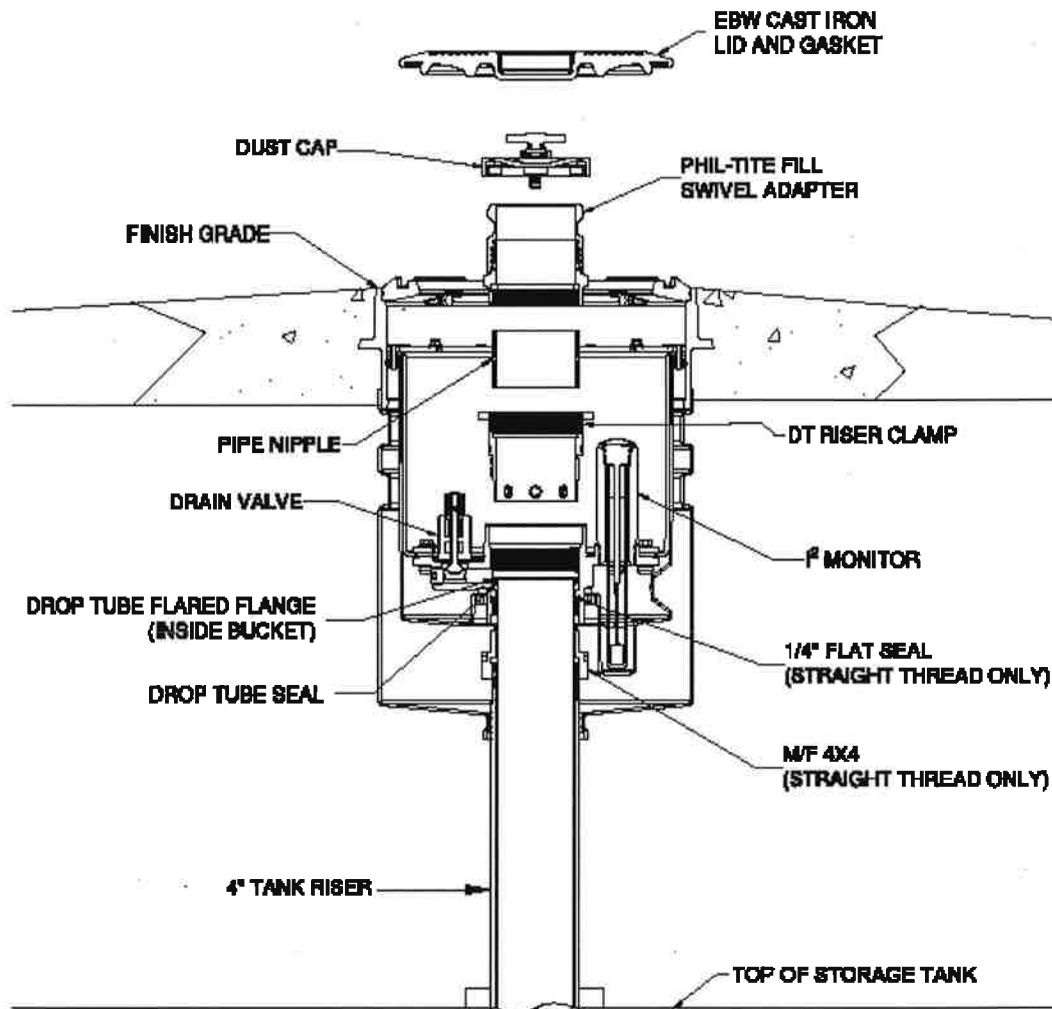
Note: This shows one typical configuration; other manifold configurations may be used. For Example, a tee may be located in a different position, or fewer pipes may be connected, or more than one P/V valve may be installed on the manifold

Figure 2G
Typical Product Side Installation of Defender Series Spill Container: Single Wall Direct Bury Configuration⁶



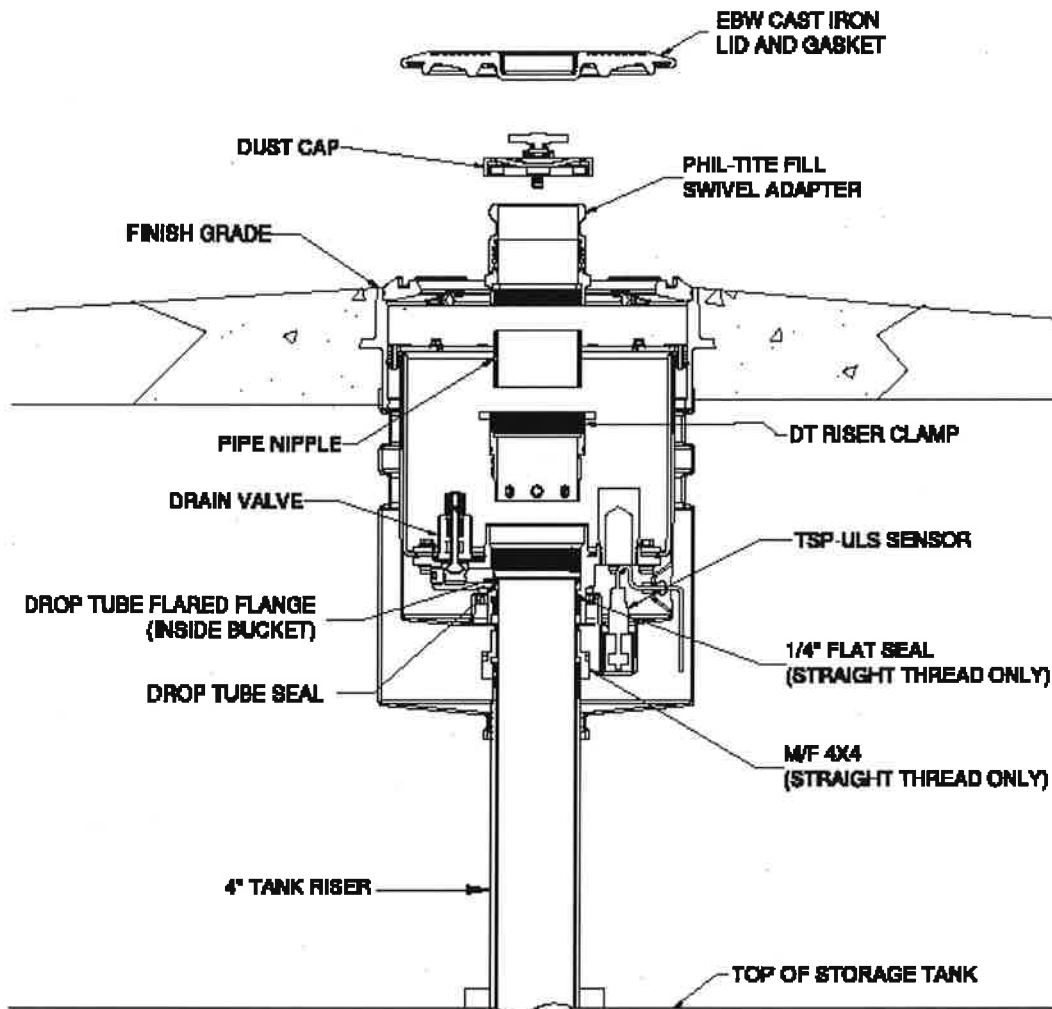
⁶ McGard FL1 or FL2 Fuel lock (Optional- Not Pictured), if installed, would be positioned inside the riser seal (or pipe nipple) below the rotatable adaptor.

Figure 2H
Typical Product Side Installation of Defender Series Spill Container: Double Wall Direct Bury Configuration with I² Monitor⁷



⁷ McGard FL1 or FL2 Fuel lock (Optional- Not Pictured), if installed, would be positioned inside the riser seal (or pipe nipple) below the rotatable adaptor.

Figure 21
Typical Product Side Installation of Defender Series Spill Container: Double Wall Direct Bury
Configuration with TSP-ULS Liquid Sensor⁸



⁸ McGard FL1 or FL2 Fuel lock (Optional- Not Pictured), if installed, would be positioned inside the riser seal (or pipe nipple) below the rotatable adaptor.

Figure 2J
Typical Vapor Recovery Side Installation of Defender Series Spill Container Single Wall Direct Bury Configuration

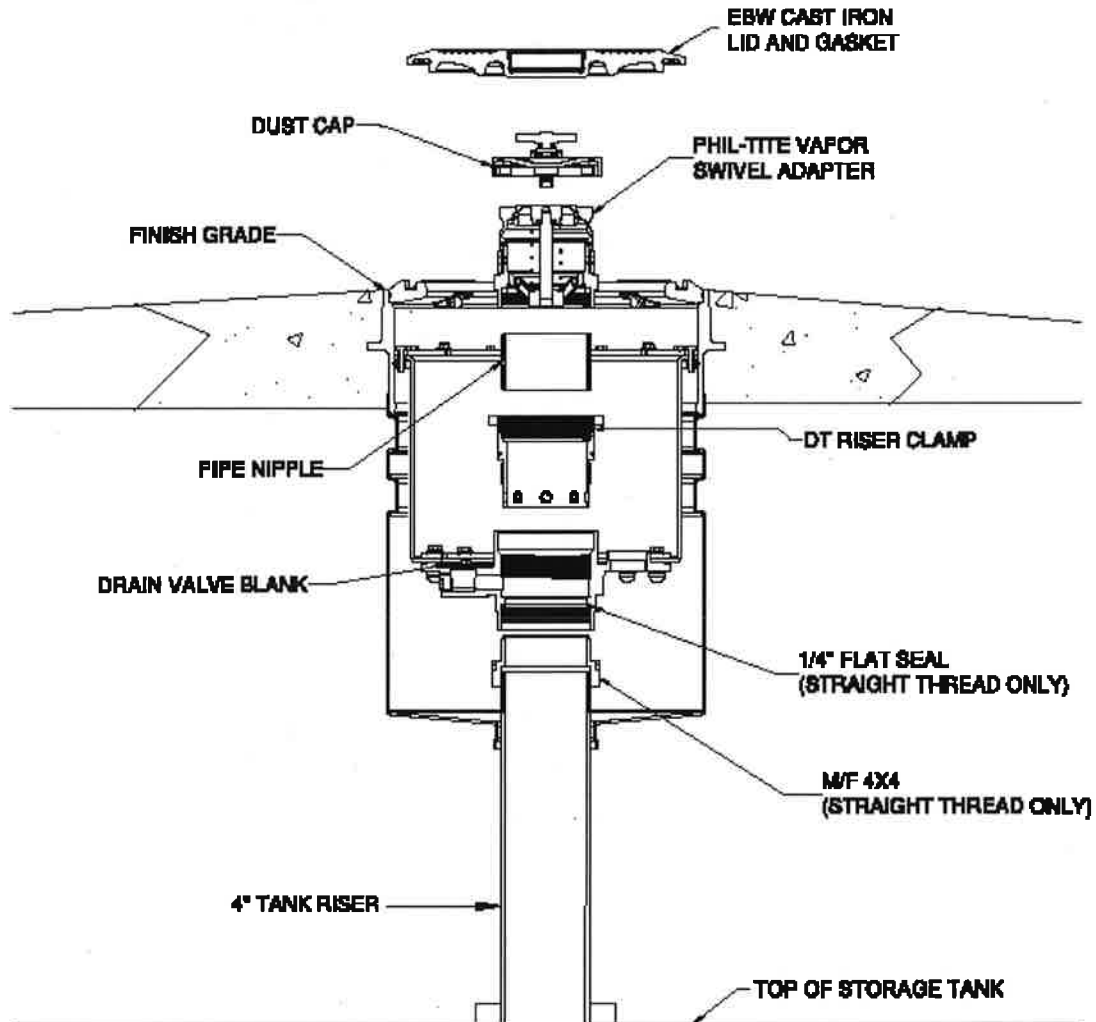


Figure 2K
Typical Vapor Recovery Side Installation of Defender Series Spill Container Double Wall Direct Bury Configuration with I² Monitor

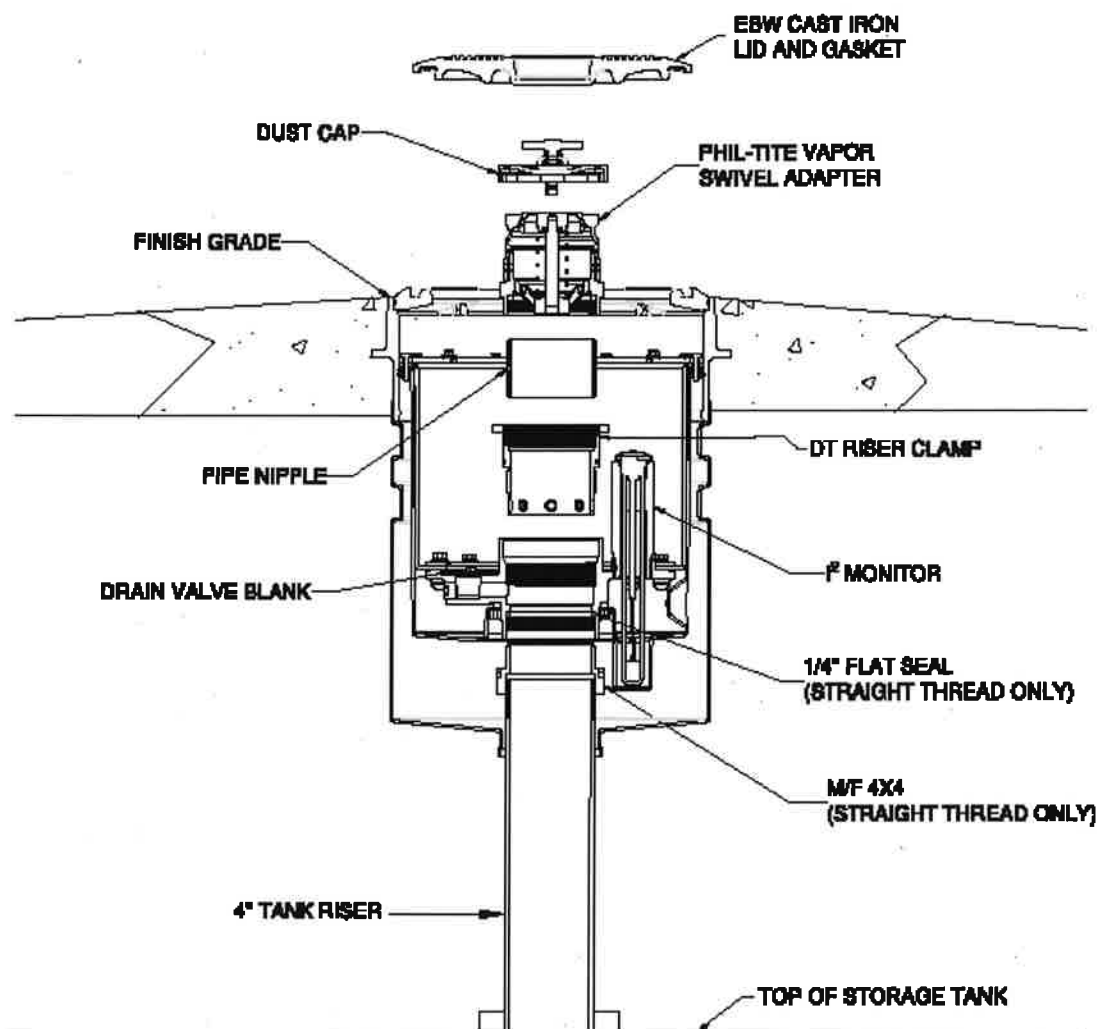


Figure 2L
Typical Vapor Recovery Side Installation of Defender Series Spill Container Double Wall Direct Bury Configuration with TSP-ULS Liquid Sensor

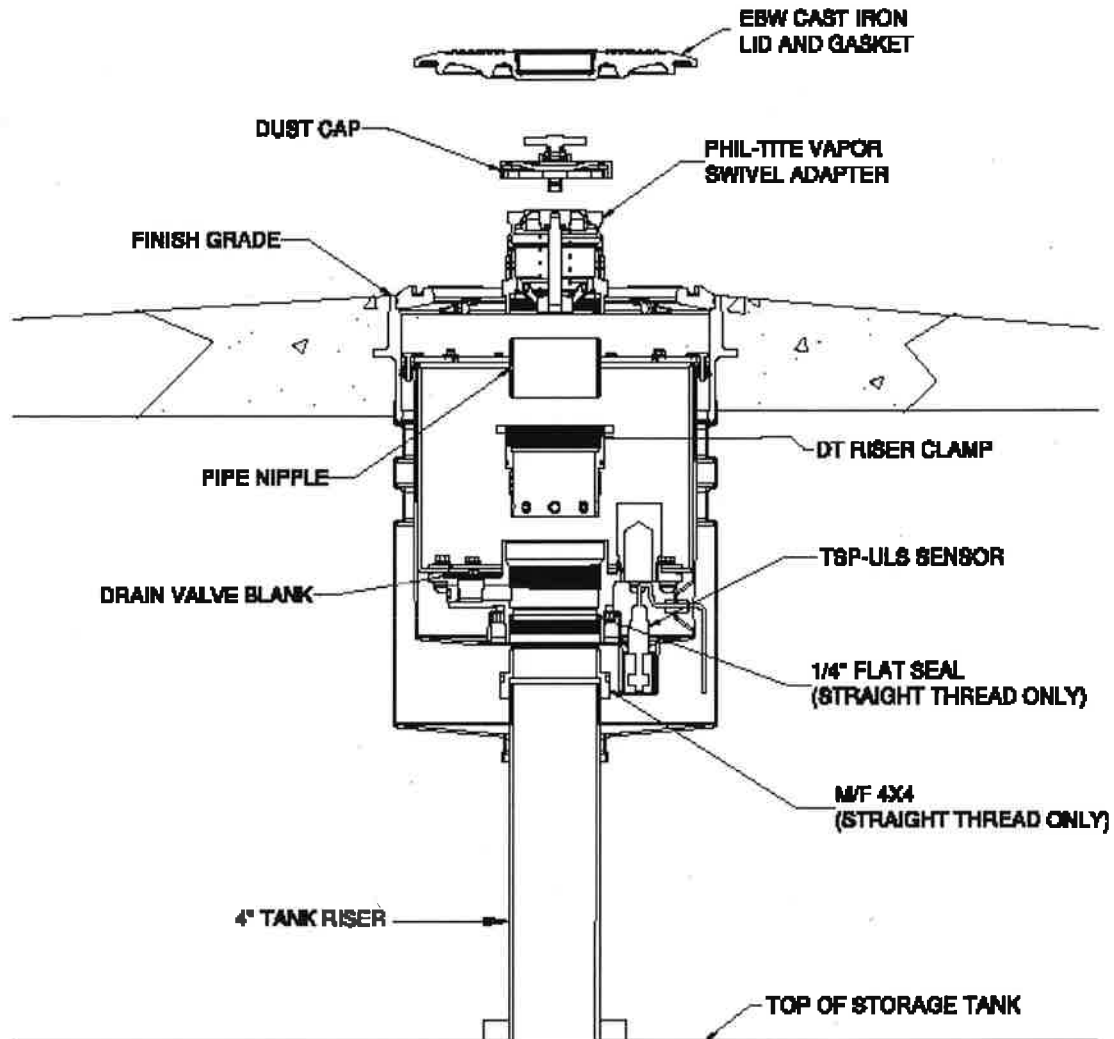
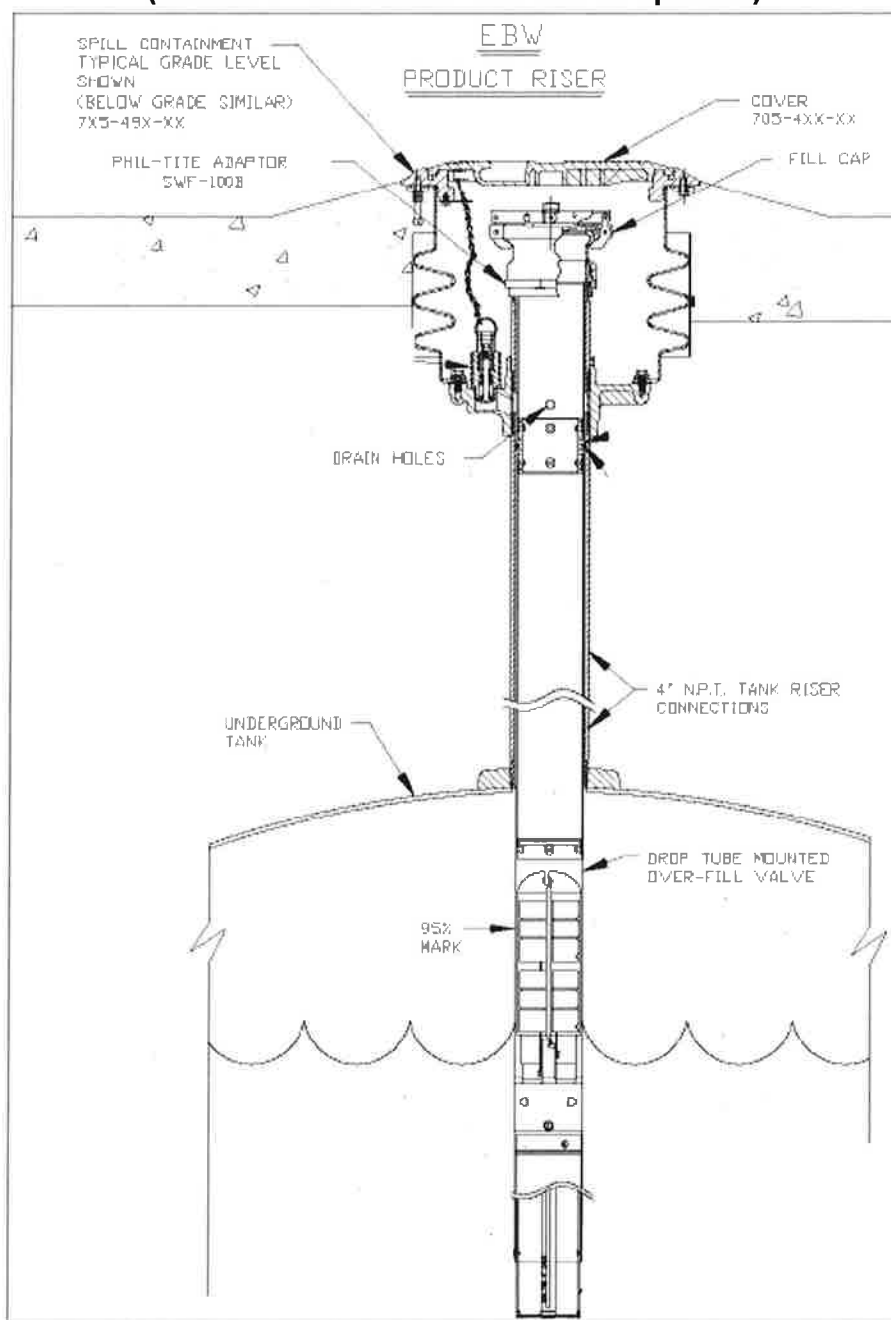


Figure 2M
Typical Product Side Installation using EBW system
(Defender OPV series 70859X9YZ optional)⁹



⁹ McGard FL1 or FL2 Fuel lock (Optional- Not Pictured), if installed, would be positioned inside the riser seal (or pipe nipple) below the rotatable adaptor.

Figure 2N
Typical Vapor Recovery Installation using EBW system

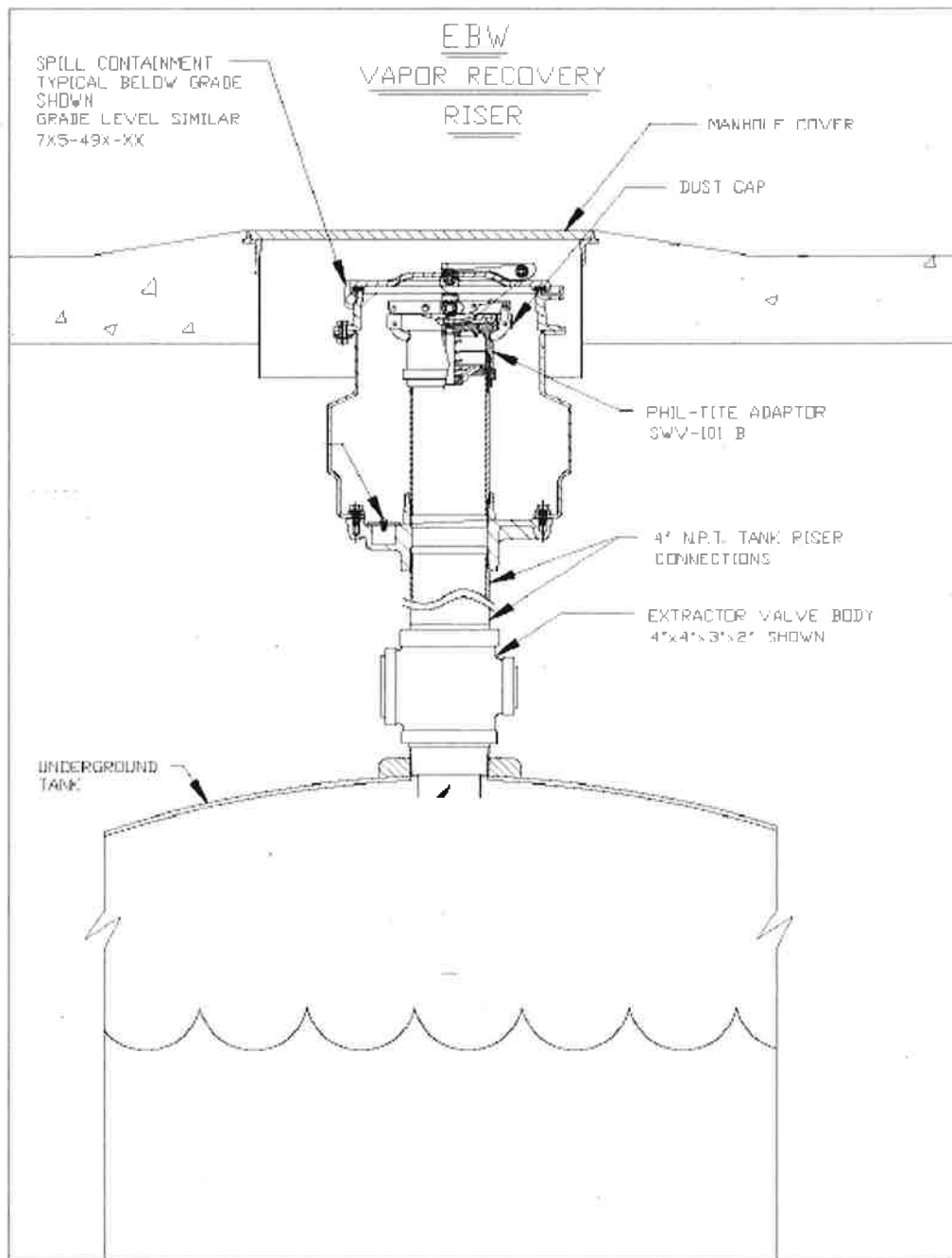


Figure 20

Example of a GDF Phase I Maintenance Record

Date of Maintenance/ Test/Inspection/ Failure	Repair Date to Correct Test Failure	Maintenance/Test/Inspection Performed and Outcome	Affiliation	Name and Certification Technician Number of Individual Conducting Maintenance or Test(s)	Telephone Number

EXHIBIT 3

Manufacturing Performance Standards and Specifications

The Franklin Fueling Systems system and all components shall be manufactured in compliance with the performance standards and specifications in CP-201, as well as the requirements specified in this Executive Order. All components 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 his delegate. Unless specified in Exhibit 2 or in the CARB approved Installation, Operation and Maintenance Manual for the Phil-Tite/EBW/FFS Phase I Vapor Recovery System, the requirements of this section apply to the manufacturing process and are not appropriate for determining the compliance status of a GDF.

Pressure/Vacuum Vent Valves for Storage Tank Vent Pipes

1. Each Pressure/Vacuum Vent Valve (P/V valve) shall be performance tested at the factory for cracking pressure and leak rate at each specified pressure setting and shall be done in accordance with TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves (October 8, 2003).
2. Each P/V valve shall be shipped with a card or label stating the performance specifications listed in Table 3-1, and a statement that the valve was tested to, and met, these specifications.
3. Each P/V valve shall have permanently affixed to it a yellow, gold, or white colored label with black lettering listing the positive and negative pressure settings and leak rate standards listed in Table 3-1. The lettering of the positive and negative pressure settings and leak rate standards on the label shall have a minimum font size of 20.

Rotatable Product and Vapor Recovery Adaptors

1. The rotatable product and vapor recovery adaptors shall not leak.
2. The product adaptor cam and groove shall be manufactured in accordance with the cam and groove specifications shown in Figure 3A of CP-201.
3. The vapor recovery adaptor cam and groove shall be manufactured in accordance with the cam and groove specifications shown in Figure 3B of CP-201.
4. Each product and vapor recovery adaptor shall be tested at the factory to, and met, the specifications listed in Table 3-1 and shall have affixed to it a card or label listing these performance specifications and a statement that the adaptor was tested to, and met such specifications.

Spill Container and Drain Valves

Each Spill Container Drain Valve shall be tested at the factory to, and met, the specification listed in Table 3-1 and shall have affixed to it a card or label listing the performance specification and a statement that the valve was tested to, and met such performance specification.

Drop Tube Overfill Prevention Device

Each Drop Tube Overfill Prevention Device shall be tested at the factory to, and met, the specification listed in Table 3-1 and shall have affixed to it a card or label listing the performance specification and a statement that the device was tested to, and met, such performance specification.

**Table 3-1
Manufacturing Component Standards and Specifications**

Component	Test Method	Standard or Specification
Rotatable Phase I Adaptors	TP-201.1B	Minimum, 360-degree rotation Maximum, 108 pound-inch average static torque
Rotatable Phase I Adaptors	Micrometer	Cam and Groove Specifications (CP-201)
Overfill Prevention Device	TP-201.1D	≤0.17 CFH at 2.00 inches H ₂ O
Spill Container Drain Valve	TP-201.1C or TP-201.1D	≤0.17 CFH at 2.00 inches H ₂ O
Pressure/Vacuum Vent Valve	TP-201.1E	Positive Pressure: 2.5 to 6.0 inches H ₂ O Negative Pressure: 6.0 to 10.0 inches H ₂ O Leak rate: ≤ 0.05 CFH at +2.0 inches H ₂ O ≤ 0.21 CFH at -4.0 inches H ₂ O

EXHIBIT 4

Manufacturer Warranties

This exhibit includes the manufacturer warranties for all components listed in Exhibit 1, including replacement parts and subparts. The manufacturer warranty tag, included with each component, shall be provided to the service station owner/operator at the time of installation.

Franklin Fueling Systems Warranty Statement and Tag

Franklin Fueling Systems (FFS) Enhanced Vapor Recovery (EVR) products are offered for sale under the brand names of Healy, INCON, Phil-Tite, EBW, and Franklin Fueling Systems (collectively referred to as "FFS EVR products"). FFS EVR products are fully tested at the time of manufacture to meet the applicable performance standards and specifications to which it was certified by the California Air Resource Board (CARB) for the duration of the warranty period, as indicated in the related CARB Executive Order (EO). Performance standards and specifications are listed in Exhibit 2 (System/Compliance Specifications) and Exhibit 3 (Manufacturing Performance Standards) in the related CARB EO.

FFS warrants that FFS EVR products installed in California will conform to the warranty terms and conditions required by the California Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities (CP-201) with respect to (a) transferability of warranties for FFS EVR products, (b) design changes to FFS EVR products, (c) performance specifications of the FFS EVR products, and (d) duration of the warranty period of FFS EVR products.

FFS EVR products are warranted to the initial purchaser, and any subsequent purchaser within the warranty period, for workmanship, performance, and materials when properly installed, used and maintained in accordance with the CARB Approved Installation, Operation, and Maintenance Manuals by certified technicians or an owner/operator as defined in the related CARB EO and to generally accepted industry standards.

FFS reserves the right to make changes in the design or to make additions or improvements with respect to FFS EVR products without incurring any obligation to modify or install same on previously manufactured products, upon written approval from CARB.

FFS reserves the right to change or cancel all or any part of this limited warranty, upon written approval from CARB. Any such change or cancellation will be effective for products sold by FFS after the date of such change or cancellation. No agents, distributors, dealers, or employees of FFS are authorized to make modifications to this warranty or to make additional warranties with respect to any FFS EVR products. Accordingly, any statements made by individuals, whether oral or written, shall not constitute a warranty of FFS and shall not be relied upon.

FFS warrants the workmanship and materials of FFS EVR products to be free of defects, at the time of sale by FFS, for a period of one year (12 months) from the date of installation. When warranty for FFS EVR products cannot be verified to date of installation, claims will be honored for a period of fifteen (15) months from the date of purchase. When warranty for FFS EVR product cannot be verified to date of installation or date of purchase, claims will be honored for a period of eighteen (18) months from date of manufacture by FFS (for location of date of manufacture on components, see related CARB EO Exhibit 1 – Equipment List). In all cases, installation date or purchase date will require providing formal documentation to FFS as evidence of applicable warranty coverage or date of manufacture will be used to determine

duration of warranty period. Formal documentation may include, but is not limited to, FFS authorized service company and distributor work orders, startup/installation documentation, maintenance logs, and/or sales receipts.

FFS shall not be liable for any loss or damage whatsoever, including, without limitation, loss in profits, loss in sales, loss of fuel or other products, loss of use of equipment, facilities or service, costs of environmental remediation, diminution in property value, or any other special, incidental or consequential damages of any type or nature, and all such losses or damages are hereby disclaimed and excluded from this limited warranty.

Use of non-FFS replacement parts, the unauthorized addition of non-FFS items to FFS EVR products, and the unauthorized alteration of FFS EVR products will void warranty. FFS shall, as to each defect, be relieved of all obligations and liabilities under a components warranty if the FFS EVR products have been operated with any accessory, equipment, or a part not specifically approved by FFS and not manufactured by FFS to FFS design and specifications.

FFS EVR product warranty shall not apply to any products which have been mishandled, incorrectly installed or applied, altered in any way, which has been repaired by any party other than qualified technicians, or when such failure is due to misuse or conditions of use (such as, but not limited to, blown fuses, sheared breakaway screws, corrosion damage, negligence, accidents, or normal wear of plastic/rubber parts including scuff guards and seals). FFS EVR product warranty shall not apply to acts of terrorism, acts of war, or acts of God (such as, but not limited to, fire, flood, earthquake, or explosion). Unless otherwise expressly provided in a specific FFS written warranty, FFS does not provide coverage for labor or shipping charges, shall not be liable for any costs or charges attributable to any product testing, maintenance, installation, repair or removal, or any tools, supplies, or equipment need to install, repair, or remove any FFS EVR product.

Other than those FFS EVR products specifically designated for fuel concentrations of 85% ethanol with 15% gasoline (E85), FFS EVR product warranty shall not cover any components that have been in contact with fuel concentrations greater than 15% ethanol or 15% methanol by volume (up to E15/M15).

Claims for FFS EVR product warranty must be submitted in writing promptly after discovery of a defect with a Returned Goods Authorization (RGA) Number from FFS. FFS will honor warranty claims processed through FFS authorized service companies and distributors only. FFS will honor warranty claims submitted no more than thirty (30) days after the end of the applicable warranty period. Product returned for warranty inspection must be shipped freight prepaid to FFS's facilities, with the RGA Number indicated on the returned product, to the following address for inspection:

INCON branded products:
Franklin Fueling Systems, Inc.
ATTN: Warranty Department
34 Spring Hill Road
Saco, ME 04072 USA

All other FFS EVR Products:
Franklin Fueling Systems, Inc.
ATTN: Warranty Department
3760 Marsh Road
Madison, WI 53718 USA

Franklin Fueling Systems, upon inspection and after determination of a warranty defect, will at its option, repair or replace defective parts returned to FFS's facility or where the product is in use. Repaired or replaced parts will be returned freight prepaid by FFS.

A copy of this limited warranty is to be retained with the equipment, on-site with the facility owner/operator.

Component Model Number : _____
Component Date of Manufacturer : _____
Component Install Date : _____
Facility Name : _____
Facility Address : _____
Installer Name : _____
Installer Signature : _____

Morrison Bros. Co. Warranty Statement and Tag

WARRANTY— All Morrison products are thoroughly tested before shipment and meet all applicable performance standards and specifications of related ARB executive orders and vapor recovery procedures of CP-206 (Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities Using Aboveground Storage Tanks) or CP-201 (Certification Procedure for Vapor Recovery Systems at Dispensing Facilities). This warranty shall include the ongoing compliance with all applicable performance standards and specifications for the duration of the warranty. Only material found to be defective in manufacture will be repaired or replaced. Claims must be made within one year from the date of installation, and Morrison Bros. Co. will not allow claims for labor or consequential damage resulting from purchase, installation or misapplication of the product. This warranty will include the initial purchaser and any subsequent purchasers of the initial equipment within the warranty period. This warranty registration must remain with the equipment and be provided to the end user. If a warranty claim needs to be pursued, a copy of this information and the invoice of these products to the purchaser must be supplied to Morrison for verification.

Installation Date: _____
Name Of Installer/Contractor _____
Installation Company: Name _____
Address _____
City _____ State _____ Zip _____
Business At Installation Site: Name _____
Address _____
City _____ State _____ Zip _____
Morrison Product(s) I.D Numbers With Date Of Manufacture _____

Date of manufacture can be found on the product identification label applied to the finished product. This warranty registration must remain with the equipment and be provided to the end user. If a warranty claim needs to be pursued, a copy of this information and the invoice of these products to the purchaser must be supplied to Morrison for verification.

OPW STANDARD PRODUCT WARRANTY TAG

Notice: FlexWorks by OPW, Inc., VAPORSAVER™ and all other OPW products must be used in compliance with all applicable federal, state, provincial and local laws, rules and regulations. Product selection is the sole responsibility of the customer and/or its agents and must be based on physical specifications and limitations, compatibility with the environment and material to be handled. All illustrations and specifications in this literature are based on the latest production information available at the time of publication. Prices, materials and specifications are subject to change at any time, and models may be discontinued at any time, in either case, without notice or obligation.

OPW warrants solely to its customer (the initial purchaser and any subsequent purchasers within the warranty period) that the following products sold by OPW will be free from defects in materials and workmanship under normal use and conditions for the periods indicated:

PRODUCT	WARRANTY PERIOD
FlexWorks Primary Pipe	10 years from date of manufacture
All Products and replacement parts installed in the State of California Certified to California CP-201 and/or CP-206 Standards*	1 year from-date of installation (proof of purchase from certified contractors/technicians required) OPW warrants ongoing compliance with the standards and specifications for the duration of the warranty period required by the State of California; this limited warranty is under the condition the equipment was installed and maintained by trained and certified contractors/technicians unless noted in Installation Manual
All other Products and replacement parts	1 year from date of manufacture**
*Products certified to California CP-201 and/or CP-206 Standards have been factory tested and met all applicable performance standards and specifications and will have an OPW registration card enclosed/attached to the product	

OPW's exclusive obligation under this limited warranty is, at its option, to repair, replace or issue credit (in an amount not to exceed the list price for the product) for future orders for any product that may prove defective within the applicable warranty period. (Parts repaired or replaced under warranty are subject to prorated warranty coverage for remainder of the original warranty period). Complete and proper warranty claim documentation and proof of purchase required. All warranty claims must be made in writing and delivered during the applicable warranty period to OPW at OPW 9393 Princeton-Glendale Road Hamilton, Ohio, USA 45011, Attention: Customer Service Manager. No products may be returned to OPW without its prior written authority.

This limited warranty shall not apply to any FlexWorks or VAPORSAVER™ product unless it is installed by an OPW attested installer and all required site and warranty registration forms are completed and received by OPW within 60 days of installation. This limited warranty also shall not apply to any FlexWorks, VAPORSAVER™ or other OPW product: unless all piping connections are installed with a nationally-recognized or state-approved leak detection device in each tank and dispenser sump (which are not for storage and from which all discharge hydrocarbons must be removed, and the systems completely cleaned, within 24 hours); unless testable sumps utilize FlexWorks pipe and access fittings; unless a sump inspection log or an EPA recommended/required checklist is maintained and the results are furnished to OPW upon request; and unless OPW is notified within 24 hours of any known or suspected product failure and is provided with unrestricted access to the product and the site. This limited warranty also shall not apply to any product which has been altered in any way, which has been repaired by anyone other than a service representative authorized by OPW, or when failure or defect is due to: improper installation or maintenance (including, without limitation, failure to follow FlexWorks Quick Reference Manual Installation Guide and all product warning labels); abuse or misuse; violation of health or safety requirements; use of another manufacturer's, or otherwise unauthorized, substances or components; soil or other surface or subsurface conditions; or fire,

flood, storm, lightning, earthquake, accident or any other conditions, events or circumstances beyond OPW's control.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND ALL OTHER WARRANTIES INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY EXCLUDED.

OPW shall have no other liability whatsoever, whether based on breach of contract, negligence, gross negligence, strict liability or any other claim, including, without limitation, for special, incidental, consequential or exemplary damages or for the cost of labor, freight, excavation, clean-up, downtime, removal, reinstallation, loss of profit, or any other cost or charges. No person or entity is authorized to assume on behalf of OPW any liability beyond this limited warranty. This limited warranty is not assignable.

**** Date of manufacture on this product is located (*location will be specific to each component*)**



North America Toll Free - TELEPHONE: (800) 422-2525 - Fax:
(800) 421-3297 - Email: domestic-sales@opw-fc.com

9393 Princeton-Glendale Road
Hamilton, Ohio 45011

International - TELEPHONE: (513) 870-3315 or (513) 870-3261 -
Fax: (513) 870-3157 - Email: intl-sales@opw-fc.com
www.opwglobal.com

Comp X TANK Commander Warranty Statement and Tag

Seller warrants to the initial and subsequent purchasers, for a period of one year from date of installation, that the Products sold hereunder will, at the time of delivery: (a) comply with the ARB CP-201 standards and specifications for the duration of the warranty period for such Products in effect at the time of shipment or such other specifications as are expressly agreed upon by Seller and Buyer in writing; (b) be adequately contained, packaged, and labeled; and (c) conform to any promises and affirmations of fact made on the container and label. In the event that any such Products fail to conform to the foregoing warranty, Seller will, at its option, repair or replace such nonconforming Products, or credit Buyer for an amount not to exceed the original sales price of such Products. Shipping costs incurred in returning such nonconforming Products to Seller shall be borne by Seller, but Seller shall in no event be liable for any inspection, handling, or packaging costs incurred by Buyer in connection with such Products. Buyer's negligence, misuse, improper installation, or unauthorized repair or alteration, shall void this warranty. The TANK Commander Warranty tag is located on the inside cover of the product.

Warranty Tag

TANK Commander TC-1

1 year warranty from date of installation

Date of manufacture _/ _/ _

The CompX TANK Commander product was factory tested and meets the standards and specifications to which it was certified by the California Air Resources Board (CARB) as indicated in the related CARB Phase I EVR Executive Orders.

Husky Corporation Warranty Statement and Tag

VAPOR PRODUCTS – Husky Corporation will, at its option, repair, replace, or credit the purchase price of any Husky manufactured product which proves upon examination by Husky, to be defective in material and/or workmanship for a period of one (1) year of installation or fifteen (15) months from the manufacture date of shipment by Husky, whichever occurs first. The warranty period on repaired or replacement vapor recovery products is only for the remainder of the warranty period of the defective product.

EVR PRODUCTS – With respect to EVR products installed in California, for a period of one (1) year from the date of installation, Husky warrants that the product will be free from defects in materials and workmanship (if the installation date is in question or indeterminable, Husky will warrant the product for 12 months from sale by Husky). Husky confirms that the warranty is transferable to a subsequent purchaser within the warranty period. However, the warranty does not follow the product from its initial installation location to succeeding locations. Husky confirms these products are warranted to meet the performance standards and specifications to which it was certified by CARB for the duration of the warranty. EVR products must be installed per CARB Executive Order and must follow the Husky Installation Instructions or the warranty is void. The warranty tag included with the EVR product must be provided to the end user at installation. A completed warranty tag and installation documentation is required to be returned with the product to be eligible for warranty consideration.

CONVENTIONAL PRODUCTS – Husky Corporation will, at its option, repair, replace, or credit the purchase price of any Husky manufactured product which proves upon examination by Husky, to be defective in material and/or workmanship for a period of one (1) year from the manufacture date of shipment by Husky.

Buyer must return the products to Husky, transportation charges prepaid. This Warranty excludes the replaceable bellows, bellows spring assembly, spout assembly and scuff guard, unless (i) damage is obvious when the product is removed from shipping carton and (ii) the defective product is returned to Husky prior to use. This warranty does not apply to equipment or parts which have been installed improperly, damaged by misuse, improper operation or maintenance, or which are altered or repaired in any way.

The warranty provisions contained herein apply only to original purchasers who use the equipment for commercial or industrial purposes. There are no other warranties of merchantability, fitness for a particular purpose, or otherwise, and any other such warranties are hereby specifically disclaimed.

Husky assumes no liability for labor charges or other costs incurred by Buyer incidental to the service, adjustment, repair, return, removal or replacement of products. Husky assumes no liability for any incidental, consequential, or other damages under any warranty, express or implied, and all such liability is hereby expressly excluded.

Husky reserves the right to change or improve the design of any Husky fuel dispensing equipment without assuming any obligations to modify any fuel dispensing equipment previously manufactured.



WARRANTY TAG

Husky Corporation
2325 Husky Way
Pacific, Mo 63069
(800) 325-3558

Station Name: _____

Store #: _____ Date: _____

City: _____ State: _____

Service Contractor: _____

Service Tech: _____

Distributor: _____

No warranty accepted without warranty tag filled out completely and attached to product.

Husky General Fueling Products:

Model #: _____

Serial #: _____

Installation Date: _____

Manufacturer Lot #: _____

Work order # (if applicable): _____

RGA #: _____

Form #009179-6 03/2013

FRONT VIEW

FOR REFERENCE ONLY

Reason for Return (check all applicable):

- | | |
|---|---|
| <input type="checkbox"/> Leaking Fuel Around Spout | <input type="checkbox"/> Failed Pressure Decay Test |
| <input type="checkbox"/> Leaking Fuel In Trigger Area | <input type="checkbox"/> Leaking Fuel at Hose Inlet |
| <input type="checkbox"/> Keeps Shutting Off | <input type="checkbox"/> Mechanical Malfunction |
| <input type="checkbox"/> Will Not Shut Off | <input type="checkbox"/> Dispenses Fuel Without Pulling Lever |

Notes / Comments: _____

EVR products installed in California are warranted for 1 year from the date of installation. Manufacturing data can be found on the product data tag attached to the product. Husky confirms the product was tested at the factory and met all applicable performance standards in CP-201 including Pressure Setting: 2.5-6.0 in W.C., Vacuum Setting: 6.0 - 10.0 in W.C. and Leak Rate: 0.05 CFH @ +2.0 in W.C. and 0.21 CFH @ -4.0 in W.C. Please provide installation documentation such as a purchase order, an invoice or a receipt at time of claim.

BACK VIEW

Veeder-Root Warranty Statement and Tag

This warranty applies only when the product is installed in accordance with Veeder-Root's specifications. This warranty will not apply to any product which has been subjected to misuse, negligence, accidents, systems that are misapplied or are not installed per Veeder-Root specifications, modified or repaired by unauthorized persons, or damage related to acts of God. Veeder-Root is not liable for incidental, consequential, or indirect damages or loss, including, without limitation, personal injury, death, property damage, environmental damages, cost of labor, clean-up, downtime, installation and removal, product damages, loss of product, or loss of revenue or profits. This warranty applies to the initial purchaser and any subsequent purchaser for the duration of the warranty period. **THE WARRANTY CONTAINED HEREIN IS EXCLUSIVE AND THERE ARE NO OTHER EXPRESS, IMPLIED, OR STATUTORY WARRANTIES. WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.**

CAP AND RING ADAPTOR

We warrant that this product shall be free from defects in material and workmanship and is compliant with all applicable performance standards and specifications for which it has been certified, for a period of one (1) year from the date of installation. During the warranty period, we or our representative will repair or replace the product, if determined by us to be defective, at the location where the product is in use and at no charge to the purchaser.

Warranty Card Language**EQUIPMENT WARRANTY**

Veeder-Root warrants that this product shall be free from defects in material and workmanship and is compliant with all applicable performance standards and specifications for which it has been certified, for a period of one (1) year from date of installation.

Date of manufacture:

This component was tested at the time of manufacture and meets all the applicable performance standards and specification to which it was certified: EO VR-101 and EO VR-102.

For detailed warranty terms see EO VR101 or EO VR-102 warranty exhibits on the ARB Web site at <http://www.arb.ca.gov/vapor/eo-evrphase1.htm>

McGard Warranty Statement and Tag

McGard Fuel Locks are fully tested at the time of manufacture to meet the applicable performance standards and specifications to which it was certified by the California Air Resource Board (CARB) for the duration of the warranty period, as indicated in the related CARB Executive Order (EO). Performance standards and specifications are listed in Exhibit 2 (System/Compliance Specifications) and Exhibit 3 (Manufacturing Performance Standards) in the related CARB EO.

McGard warrants that McGard Fuel Lock products installed in California will conform to the warranty terms and conditions required by the California Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities (CP-201) with respect to (a) transferability of warranties for McGard Fuel Locks, (b) design changes to McGard Fuel Locks, (c) performance specifications of the McGard Fuel Locks, and (d) duration of the warranty period of McGard Fuel Locks.

McGard Fuel Locks are warranted to the initial purchaser, and any subsequent purchaser within the warranty period, for workmanship, performance, and materials when properly installed, used and maintained in accordance with the CARB Approved Installation, Operation, and Maintenance Manuals by certified technicians as defined in the related CARB EO and to generally accepted industry standards.

McGard reserves the right to make changes in the design or to make additions or improvements with respect to McGard Fuel Locks without incurring any obligation to modify or install same on previously manufactured products, upon written approval from CARB.

McGard reserves the right to change or cancel all or any part of this limited warranty, upon written approval from CARB. Any such change or cancellation will be effective for products sold by McGard after the date of such change or cancellation. No agents, distributors, dealers, or employees of McGard are authorized to make modifications to this warranty or to make additional warranties with respect to any McGard Fuel Locks. Accordingly, any statements made by individuals, whether oral or written, shall not constitute a warranty of McGard and shall not be relied upon.

McGard warrants the workmanship and materials of McGard Fuel Locks to be free of defects, at the time of sale by McGard, for a period of one year (12 months) from the date of installation. When warranty for McGard Fuel Locks cannot be verified to date of installation, claims will be honored for a period of fifteen (15) months from the date of purchase. When warranty for McGard Fuel Locks cannot be verified to date of installation or date of purchase, claims will be honored for a period of eighteen (18) months from date of manufacture by McGard (date of manufacture is engraved on side of lock body). In all cases, installation date or purchase date will require providing formal documentation to McGard as evidence of applicable warranty coverage or date of manufacture will be used to determine duration of warranty period. Formal documentation may include, but is not limited to McGard authorized service company

and distributor work orders, startup/installation documentation, maintenance logs, and/or sales receipts.

McGard shall not be liable for any loss or damage whatsoever, including, without limitation, loss in profits, loss in sales, loss of fuel or other products, loss of use of equipment, facilities or service, costs of environmental remediation, diminution in property value, or any other special, incidental or consequential damages of any type or nature, and all such losses or damages are hereby disclaimed and excluded from this limited warranty.

Use of non-McGard replacement parts, the unauthorized addition of non-McGard items to McGard Fuel Locks, and the unauthorized alteration of McGard Fuel Locks will void warranty. McGard shall, as to each defect, be relieved of all obligations and liabilities under a components warranty if the McGard Fuel Locks have been operated with any accessory, equipment, or a part not specifically approved by McGard and not manufactured by McGard to McGard design and specifications.

McGard Fuel Lock warranty shall not apply to any products which have been mishandled, incorrectly installed or applied, altered in any way, which has been repaired by any party other than qualified technicians, or when such failure is due to misuse or conditions of use (such as, but not limited to, blown fuses, sheared breakaway screws, corrosion damage, negligence, accidents, or normal wear of plastic/rubber parts including scuff guards and seals). McGard Fuel Lock warranty shall not apply to vandalism, theft, acts of terrorism, acts of war, or acts of God (such as, but not limited to, fire, flood, earthquake, or explosion). Unless otherwise expressly provided in a specific McGard written warranty, McGard does not provide coverage for labor or shipping charges, shall not be liable for any costs or charges attributable to any product testing, maintenance, installation, repair or removal, or any tools, supplies, or equipment need to install, repair, or remove any McGard Fuel Lock.

Other than those McGard Fuel Locks specifically designated for fuel concentrations of 85% ethanol with 15% gasoline (E85), McGard Fuel Lock product warranty shall not cover any components that have been in contact with fuel concentrations greater than 15% ethanol or 15% methanol by volume (up to E15/M15).

Claims for McGard Fuel Lock warranty must be submitted in writing promptly after discovery of a defect with a Returned Goods Authorization (RGA) Number from McGard. McGard will honor warranty claims processed through McGard authorized service companies and distributors only. McGard will honor warranty claims submitted no more than thirty (30) days after the end of the applicable warranty period. Product returned for warranty inspection must be shipped freight prepaid to McGard's facilities, with the RGA Number indicated on the returned product, to the following address for inspection:

McGard LLC, ATTN: Warranty Department, 3875 California Road, Orchard Park, NY 14127 USA

McGard, upon inspection and after determination of a warranty defect, will at its option, repair or replace defective parts returned to McGard's facility or where the product is in use. Repaired or replaced parts will be returned freight prepaid by McGard.

A copy of this limited warranty is to be retained with the equipment, on-site with the facility owner/operator.

Component Model Number:

Component Date of Manufacturer:

Component Install Date:

Facility Name:

Facility Address:

Installer Name:

Installer Signature:

Exhibit 5

VAULTED ABOVEGROUND STORAGE TANK CONFIGURATION (Optional)

This exhibit allows an alternate tank storage configuration for the Phase I EVR system. A vaulted aboveground storage tank (AST) may be installed in substitute for a conventional underground storage tank (UST). The figures in this exhibit provide examples of typical vaulted AST configurations.

General Specifications

Alternate typical vaulted AST configurations for the Phase I EVR Systems are shown in Figures 5-1, 5-2, 5-3, and 5-4.

Unless otherwise specified in this Executive Order (EO), the vaulted AST configuration shall comply with the applicable performance standards and performance specifications in CP-201. The emergency vent shall be a certified vent listed in the Phase I EVR Executive Orders for ASTs and shall be installed, operated, maintained and meet any performance requirements specified in the applicable AST Executive Order.

Figure 5-1: Front Sectional Views of Typical Vaulted AST

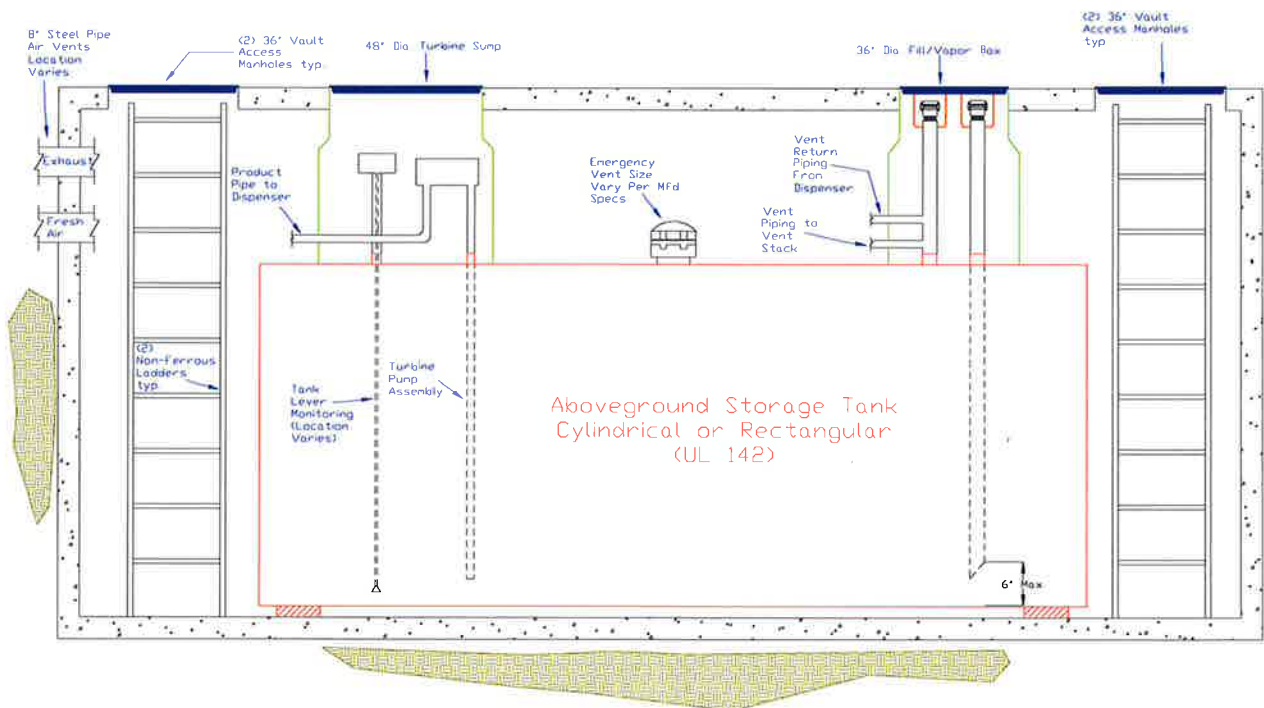


Figure 5-2: Top Sectional View of Typical Vaulted AST

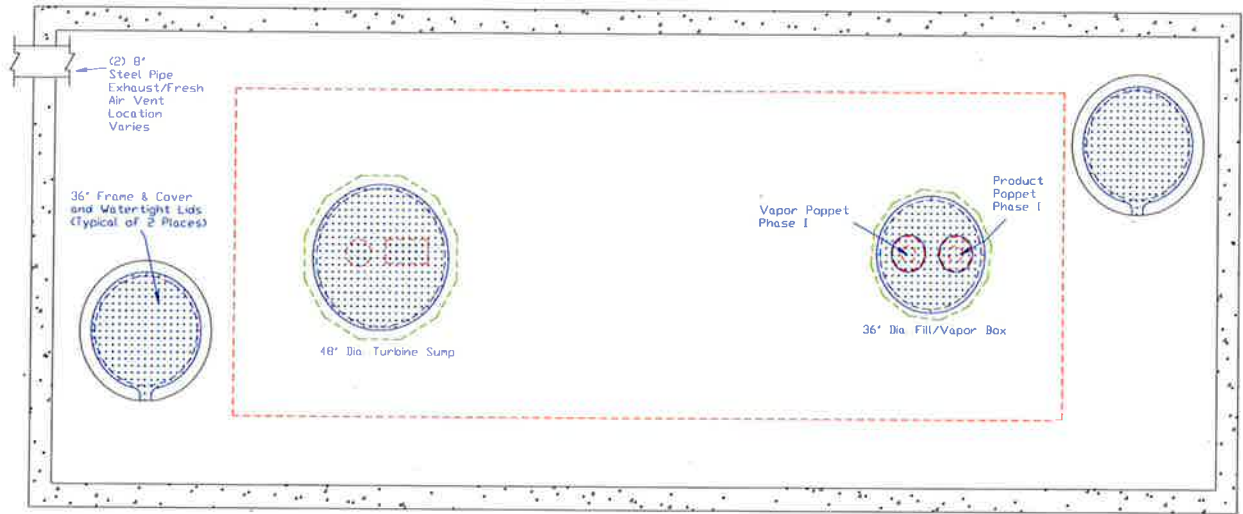


Figure 5-3: End Sectional View of Typical Vaulted AST

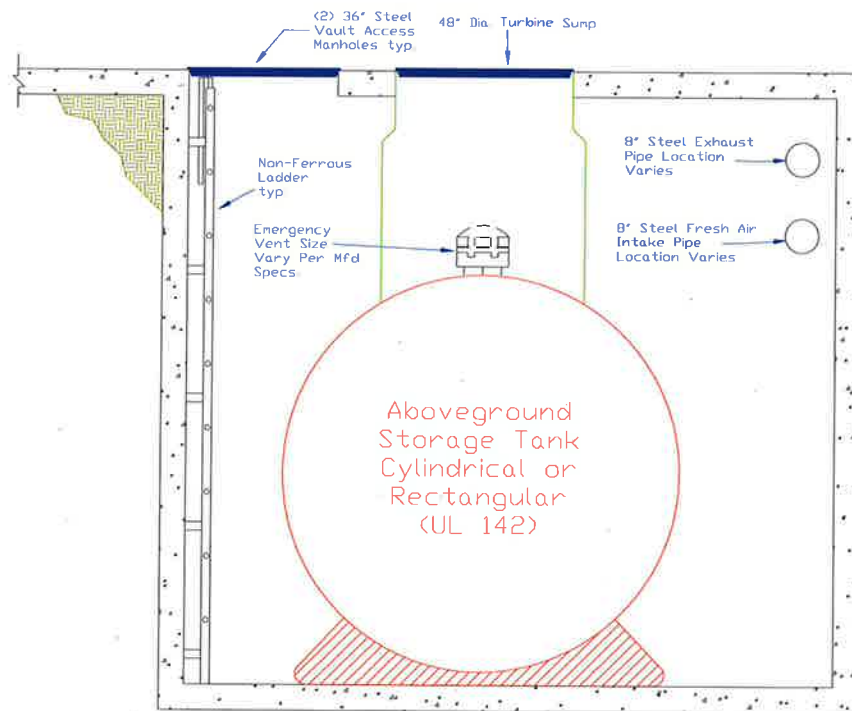


Figure 5-4: Sectional Views of Typical Vaulted AST (Ventilation)

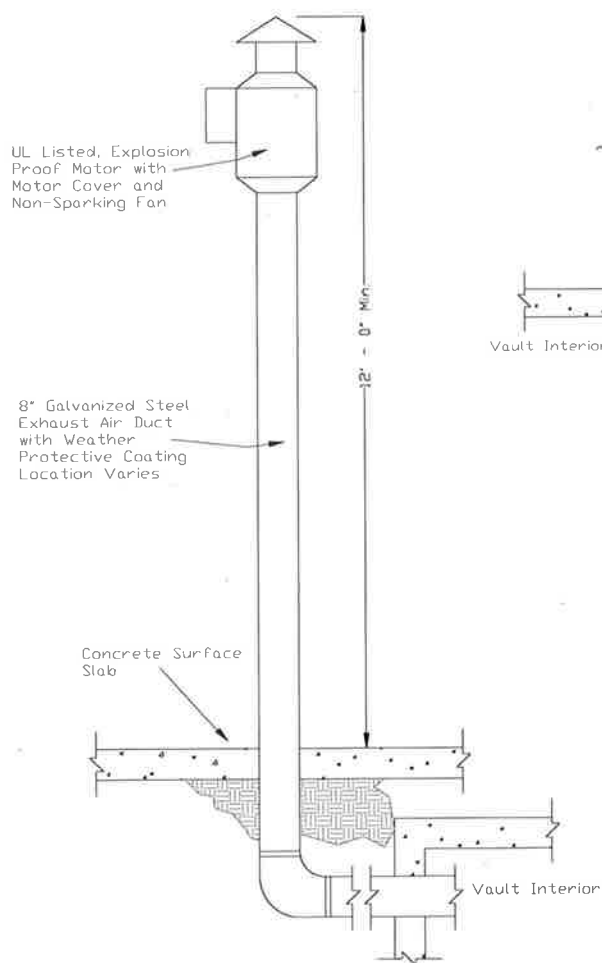


Figure 5-4a: Typical Exhaust

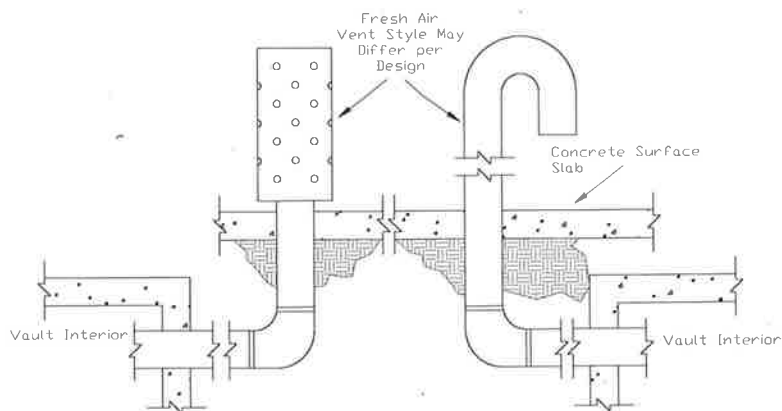


Figure 5-4b: Typical Fresh Air Intake

**State of California
AIR RESOURCES BOARD**

~~DRAFT~~ EXECUTIVE ORDER VR-102-S

Relating to Certification of Vapor Recovery Systems

**OPW Phase I Vapor Recovery System
(Including Remote-Fill and Remote-Additive Configuration)**

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 the filling of underground gasoline storage tanks, in its Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities (CP-201), as last amended November 9, 2015, 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 I vapor recovery systems with emission standards;

WHEREAS, OPW Fueling Components, Inc. (OPW) requested and was granted certification of the OPW Phase I Vapor Recovery System (OPW System) pursuant to CP-201 by Executive Order VR-102-A, first issued on October 10, 2002, and last modified on June 1, 2018, by Executive Order VR-102-R;

WHEREAS, Husky requested modifications to the certification to certify the Husky Model 5885 Pressure/Vacuum Vent Valve for gasoline and 85%/15% gasoline/ethanol fuel blend (E85);

WHEREAS, additional time is necessary to gather and evaluate information needed to complete the certification renewal of the Husky Model 5885 pressure-vacuum (P/V) vent valve;

WHEREAS, CP-201 provides that the CARB Executive Officer shall issue an Executive Order if he 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 OPW Phase I Vapor Recovery System (including components that are compatible with E85 fuel blends), as amended to include the components listed above, conforms with all of the requirements set forth in CP-201, and results in a vapor recovery system which is

at least 98.0 percent efficient as tested in accordance with test procedure TP-201.1, Volumetric Efficiency for Phase I Systems (July 26, 2012); and

NOW THEREFORE, IT IS HEREBY ORDERED that the OPW System is certified to be at least 98.0 percent efficient when installed and maintained as specified herein and in the following exhibits. Exhibit 1 contains a list of the certified components. Exhibit 2 contains the performance standards and specifications, typical installation drawings, and maintenance intervals for the OPW System as installed in a GDF. Exhibit 3 contains the manufacturing specifications. Exhibit 4 contains the manufacturer warranties. Exhibit 5 is the below-grade vaulted tank configuration.

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 component(s) 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's 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 the certified OPW system shall be installed, operated, and maintained in accordance with the CARB Approved Installation, Operation, and Maintenance Manual. Equipment shall be inspected annually per the procedures identified in the CARB Approved Installation, Operation, and Maintenance Manual. This inspections requirement shall also apply to systems certified by Executive Orders VR-102-A to R. A copy of this Executive Order and the CARB Approved Installation, Operation, and Maintenance Manual shall be maintained at each GDF where a certified OPW 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 manufacturer's certification application or documents and certified hereby is prohibited and deemed inconsistent with this certification, and is subject to enforcement action, 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 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 be made a condition of certification. The owner or operator of the OPW system shall conduct and pass the following tests no later than 60 days after startup and at least once every three (3) years after startup testing, 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-201.1B, Static Torque of Rotatable Phase I Adaptors (October 8, 2003); and
- Depending on the system configuration, either TP-201.1C, Leak Rate of Drop Tube/Drain Valve Assembly (October 8, 2003) or TP-201.1D, Leak Rate of Drop Tube Overfill Prevention Devices and Spill Container Drain Valves (October 8, 2003).

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 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). Alternate test procedures, including the most recent versions of test procedures listed above, may be used if determined by the CARB Executive Officer or delegate, in writing, to yield equivalent results. Testing the Pressure/Vacuum (P/V) vent valve will be at the option of the Districts. If P/V vent valve testing is required by the District, the test shall be conducted in accordance with TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves (October 8, 2003) and Exhibit 2.

IT IS FURTHER ORDERED that the OPW system shall be compatible with gasoline in common use in California at the time of certification, including E85 (85% ethanol/15% gasoline) for specific components listed in Exhibit 1. Any modifications to comply with future California gasoline requirements shall be approved in writing by the CARB Executive Officer or his delegate.

IT IS FURTHER ORDERED that the throughput of GDFs permitted to dispense E-85 shall not exceed 1.2 million gallons per year (100,000 gallons per month). Such GDFs shall be equipped with PV-Zero-E85 P/V vent valve or Husky 5885 P/V vent valve.

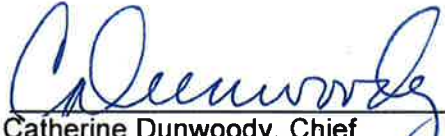
IT IS FURTHER ORDERED that the certification of the OPW Phase I Vapor Recovery System with the exception of the Husky Model 5885 P/V vent valve shall remain valid through May 31, 2021.

IT IS FURTHER ORDERED that to provide the Executive Officer or delegate with the necessary time to fully gather and evaluate information to make a determination regarding the renewal certification of the Husky Model 5885 P/V vent valve consistent with Sections 17.3 and 17.4 of CP-201, the certification of the Husky Model 5885 P/V vent valve is extended for one year from the date when this Executive Order is signed.

IT IS FURTHER ORDERED that Executive Order VR-102-R, issued on June 1, 2018, is hereby superseded by this Executive Order. OPW Phase I Vapor Recovery Systems certified under Executive Orders VR-102-A through R may remain in use at existing

installations for up to four year after the expiration date of this Executive Order when the certification is not renewed. This Executive Order shall apply to new installations or major modification of existing Phase I Systems.

Executed at Sacramento, California, this 3rd day of June 2019.


Catherine Dunwoody, Chief
Monitoring and Laboratory Division

Attachments:

- Exhibit 1 OPW Phase I Vapor Recovery System Equipment List
- Exhibit 2 Installation, Maintenance and Compliance Standards and Specifications
- Exhibit 3 Manufacturing Performance Standards and Specifications Manufacturer
- Exhibit 4 Warranties
- Exhibit 5 Vaulted Aboveground Storage Tank Configuration (*Optional*)

Modification Highlights for Executive Order VR-102-S

NOTE: Global change for Executive Order and Installation, Operation, and Maintenance Manual; changed revision letter from R to S.

Part I: Executive Order

Legal Language:

- Extended certification of the Husky Model 5885 P/V vent valve by one year from the date when Executive Order VR-102-S is signed.
- Husky Model 5885 P/V vent valve is added for E85 applications

Part II: Exhibit I

- Added Husky 5885 PV approved for E85

**State of California
AIR RESOURCES BOARD**

EXECUTIVE ORDER VR-102-R

Relating to Certification of Vapor Recovery Systems

**OPW Phase I Vapor Recovery System
(Including Remote-Fill and Remote-Additive Configuration)**

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 the filling of underground gasoline storage tanks, in its Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities (CP-201), as last amended April 23, 2015, 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 I vapor recovery systems with emission standards;

WHEREAS, OPW Fueling Components, Inc. (OPW) requested and was granted certification of the OPW Phase I Vapor Recovery System (OPW System) pursuant to CP-201 by Executive Order VR-102-A, first issued on October 10, 2002, and last modified on May 29, 2017, by Executive Order VR-102-Q;

WHEREAS, additional time is necessary to gather and evaluate information needed to complete the certification renewal of the Husky Model 5885 pressure-vacuum (P/V) vent valve;

WHEREAS, Husky requested amendment of the Installation, Operation, and Maintenance Manual for the Husky Model 5885 P/V vent valve;

WHEREAS, CP-201 provides that the CARB Executive Officer shall issue an Executive Order if he 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 OPW Phase I Vapor Recovery System (including components that are compatible with E85 fuel blends), as amended to include the components listed above, conforms with all of the requirements set forth in CP-201, and results in a vapor recovery system which is at least 98.0 percent efficient as tested in accordance with test procedure TP-201.1, Volumetric Efficiency for Phase I Systems (July 26, 2012); and

NOW THEREFORE, IT IS HEREBY ORDERED that the OPW System is certified to be at least 98.0 percent efficient when installed and maintained as specified herein and in the following

exhibits. Exhibit 1 contains a list of the certified components. Exhibit 2 contains the performance standards and specifications, typical installation drawings, and maintenance intervals for the OPW System as installed in a GDF. Exhibit 3 contains the manufacturing specifications. Exhibit 4 contains the manufacturer warranties. Exhibit 5 is the below-grade vaulted tank configuration.

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 component(s) 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's 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 the certified OPW system shall be installed, operated, and maintained in accordance with the CARB Approved Installation, Operation, and Maintenance Manual. Equipment shall be inspected annually per the procedures identified in the CARB Approved Installation, Operation, and Maintenance Manual. This inspections requirement shall also apply to systems certified by Executive Orders VR-102-A to Q. A copy of this Executive Order and the CARB Approved Installation, Operation, and Maintenance Manual shall be maintained at each GDF where a certified OPW 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 manufacturer's certification application or documents and certified hereby is prohibited and deemed inconsistent with this certification, and is subject to enforcement action, 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 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 be made a condition of certification. The owner or operator of the OPW system shall conduct and pass the following tests no later than 60 days after startup and at least once every three (3) years after startup testing, 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-201.1B, Static Torque of Rotatable Phase I Adaptors (October 8, 2003); and

- Depending on the system configuration, either TP-201.1C, Leak Rate of Drop Tube/Drain Valve Assembly (October 8, 2003) or TP-201.1D, Leak Rate of Drop Tube Overfill Prevention Devices and Spill Container Drain Valves (October 8, 2003).

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 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). Alternate test procedures, including the most recent versions of test procedures listed above, may be used if determined by the CARB Executive Officer or delegate, in writing, to yield equivalent results. Testing the Pressure/Vacuum (P/V) vent valve will be at the option of the Districts. If P/V vent valve testing is required by the District, the test shall be conducted in accordance with TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves (October 8, 2003) and Exhibit 2.

IT IS FURTHER ORDERED that the OPW system shall be compatible with gasoline in common use in California at the time of certification, including E85 (85% ethanol/15% gasoline) for specific components listed in Exhibit 1. Any modifications to comply with future California gasoline requirements shall be approved in writing by the CARB Executive Officer or his delegate.

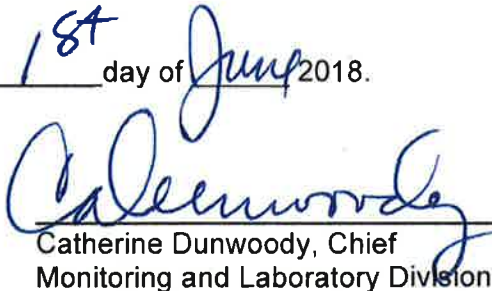
IT IS FURTHER ORDERED that GDF installations permitted for E85 fuel that use the PV-ZERO-E85 P/V vent valve shall be subject to a throughput limitation of 1.2 million gallons per year (100,000 gallons per month).

IT IS FURTHER ORDERED that the certification of the OPW Phase I Vapor Recovery System with the exception of the Husky Model 5885 P/V vent valve shall remain valid through May 31, 2021.

IT IS FURTHER ORDERED that to provide the Executive Officer or delegate with the necessary time to fully gather and evaluate information to make a determination regarding the renewal certification of the Husky Model 5885 P/V vent valve consistent with Sections 17.3 and 17.4 of CP-201, the certification of the Husky Model 5885 P/V vent valve is extended for one year from the date when this Executive Order is signed.

IT IS FURTHER ORDERED that Executive Order VR-102-Q, issued on May 29, 2017, is hereby superseded by this Executive Order. OPW Phase I Vapor Recovery Systems certified under Executive Orders VR-102-A through Q may remain in use at existing installations for up to four year after the expiration date of this Executive Order when the certification is not renewed. This Executive Order shall apply to new installations or major modification of existing Phase I Systems.

Executed at Sacramento, California, this 18th day of June 2018.


Catherine Dunwoody, Chief
Monitoring and Laboratory Division

See next page for attachments.

Attachments:

- Exhibit 1** OPW Phase I Vapor Recovery System Equipment List
- Exhibit 2** Installation, Maintenance and Compliance Standards and Specifications
- Exhibit 3** Manufacturing Performance Standards and Specifications
- Exhibit 4** Manufacturer Warranties
- Exhibit 5** Vaulted Aboveground Storage Tank Configuration (*Optional*)

Exhibit 1

OPW Phase I Vapor Recovery System Equipment List

Equipment

Manufacturer/Model Number

(GAS/E85) = Identifies that these components are approved for standard gasoline & E85 fuel blends

Spill Containers¹

Direct Bury Spill Container OPW 1-Series (GAS/E85)

(Figure 1-1)

1-2100 Series

1WW-21XXY-ZEVR -G

1-2200 Series

1WW-22XQZ-G

1-3100 Series

1WW-3VVUTZ-G

1-Series legend

WW A or Blank (Aluminum Cover)

C (cast Iron or Ductile)

SC (Sealable Cover, Cast Aluminum)

PC (Plow Ring Rain Tight Cast Iron Ductile, 1-2000 only)

PSC (Plow Ring Sealable Cover, Cast Aluminum, 1-2200 only)

XX 00 (5 Gal)

X 0 (5 Gal)

Y C (Cast Iron Base)

Blank (composite base)

Z D (drain valve)

P (plug)

VV 1 (5 gallon)

15 (15 gallon)

7 (5 gallon, steel cover)

U 0 (no gauge)

1 (float gauge)

2 (sensor)

3 (float and sensor)

4 (alternate sensor)

T 1 (single wall, cast iron 2100 style base)

2 (double wall)

3 (single wall, cast iron 3100 style base)

Q 0 (flange adaptor, cast iron base)

4 (no flange, 4" thread cast iron base)

G Color (varies)

¹ Drain valves are an optional component for OPW 1-Series product spill containers. If a drain valve is not installed in the OPW 1-Series product spill container, then either an OPW factory installed drain plug or OPW field drain plug kit 1DP-2100 must be installed.

Exhibit 1 (continued)

OPW Phase I Vapor Recovery System Equipment List

<u>Equipment</u>	<u>Manufacturer/Model Number</u>
Spill Containers	Multiport Spill Container OPW 1-Series (GAS/E85) (Figure 1-2) 1-2100SH Series 1-2100Y-ZSH P700 Series P7MM-HHKK P500 Series P5MM-ZHHBJJJ P5MM-NN-HHKK 1-Series legend MM 11 (Composite Base) 11C (Cast Iron Base) 61 (Cast Iron Base) 61C (Cast Iron Base) NN Blank (5 gallon) 15 (15 gallon) HH EVR (Enhanced Vapor Recovery) FL (Fibrelite) KK DV (drain valve) PL (plug) Y C (Cast Iron Base) Blank (composite base) Z D (drain valve) P (plug) JJJ -14 (14" center spacing) BUCKET (16" or larger center spacing)
Replacement Drain Valve Kit	OPW 1DK-2100 (GAS/E85)
Replacement Drain Plug Kit	OPW 1DP-2100 (can be used with any OPW 1-Series Spill Containers) (Figure 1-3 and Figure 1-4)
Dust Caps	OPW 634LPC (product) (GAS/E85) (Figure 1-5) OPW 1711LPC (vapor) (GAS/E85) (Figure 1-6)

Exhibit 1 (continued)**OPW Phase I Vapor Recovery System Equipment List**

<u>Equipment</u>	<u>Manufacturer/Model Number</u>
Dust Caps (continued)	OPW 634TT-EVR (product) (GAS/E85) (Figure 1-7)
	OPW 1711T-EVR (vapor) (GAS/E85) (Figure 1-8)
	CompX CSP1-634LPC (Figure 1-9)
	CompX CSP3-1711LPC (vapor) (Figure 1-10)
	CompX CSP2-634LPC (product) (Figure 1-11)
	CompX CSP4-1711LPC (vapor) (Figure 1-12)
Product Adaptor	OPW 61SALP (Figure 1-13)
	OPW 61SALP-MA (GAS/E85) (Figure 1-15)
Vapor Adaptor	OPW 61VSA (Figure 1-14)
	OPW 61VSA-MA (GAS/E85) (Figure 1-16)
Pressure/Vacuum Vent Valve	FFS PV-Zero (GAS/E85) (Figure 1-17)
	OPW 723V (Figure 1-18)
	Husky 5885 (Figure 1-19)
Jack Screw Kit	OPW 61JSK-4410 (Only used with Composite Base Spill Container) (Figure 1-20)
	OPW 61JSK-44CB (Only used with Cast Iron Base Spill Container) (Figure 1-20)
	OPW 61JSK-4RMT (Only Used on Remote-Fill Configuration) (Figure 1-20)
	OPW 71JSK-44MA (GAS/E85) (Figure 1-21)
	OPW 71JSK-4RMT (GAS/E85) (Figure 1-21)
Face Seal Adaptor	OPW FSA-400
	OPW FSA-400-S (GAS/E85) (Figure 1-22)
Drop Tube	OPW 61T (various lengths)
	OPW 61T-SS (various lengths) (GAS/E85)

Exhibit 1 (continued)

OPW Phase I Vapor Recovery System Equipment List

<u>Equipment</u>	<u>Manufacturer/Model Number</u>
Drop Tube Overfill Prevention Device ²	OPW 61SO (Figure 1-23) OPW 61SOM-412C-EVR (GAS/E85) OPW 71SO (Figure 1-24) OPW 71SO Testable (Figure 1-25) OPW 71SOM-412C (GAS/E85) (Figure 1-26)
Multiport	OPW (Configuration Only)
Remote Fill	OPW (Configuration Only)
Remote Additive Fill	OPW (Configuration Only)
Tank Bottom Protector²	OPW/Pomeco 6111-1400
Tank Gauge Port Components²	OPW 62M (Cap and Adaptor) (Figure 1-27) OPW 62M-MA (GAS/E85) (Figure 1-28) Morrison Brothers 305XPA1100AKEVR (GAS/E85) (cap & adaptor kit) Morrison Brothers 305-0200AAEVR (GAS/E85) (replacement adaptor) Morrison Brothers 305XP-110ACEVR (GAS/E85) (replacement cap) Veeder-Root 312020-952 (cap & adaptor)
Fuel Lock²	McGard FL1 – Stick Only Fuel Lock (125007) (GAS) (Figure 1-29) McGard FL2 – Stick/Sampling Fuel Lock (125008) (GAS) (Figure 1-29)
Bladder Plug	McGard PSI104
Emergency Vent	Exhibit 5 (for below-grade vaulted tank configuration)

² If these components are installed or required by regulations of other agencies, only those components and model numbers specified above shall be installed or used.

Exhibit 1 (continued)

**Table 1-1
Components Exempt from Identification Requirements**

Component Name	Manufacturer	Model Number
Product Adaptor	OPW	61SALP-MA (GAS/E85)
Vapor Adaptor	OPW	61VSA-MA (GAS/E85)
Replacement Drain Valve	OPW	1DK-2100
Replacement Drain Plug Kit	OPW	1DP-2100
Jack Screw Kit	OPW	61JSK-4410* 61JSK-44CB* 61JSK-4RMT* OPW 71JSK-44MA (GAS/E85) OPW 71JSK-4RMT (GAS/E85)
Tank Gauge Port Component (Cap and Adaptor)	Morrison Brothers	305XPA1100AKEVR (cap & adaptor kit) 305-0200AAEVR (replacement adaptor) 305XP-110ACEVR (replacement cap)
	Veeder-Root	Veeder-Root 312020-952 (cap & adaptor)
	OPW	62M-MA (GAS/E85)
Drop Tube	OPW	61-T 61T-SS (various lengths) (GAS/E85)
Tank Bottom Protector	OPW/Pomeco	6111-1400
Sump / Sump Lids / Spill Container Covers	Varies	Varies
Fuel Lock	McGard	FL1, FL2

* OPW 61JSK MFG date shall be stamped on each jack screw.

Figure 1-1
Direct Bury Spill Container OPW 1-Series (GAS/E85)

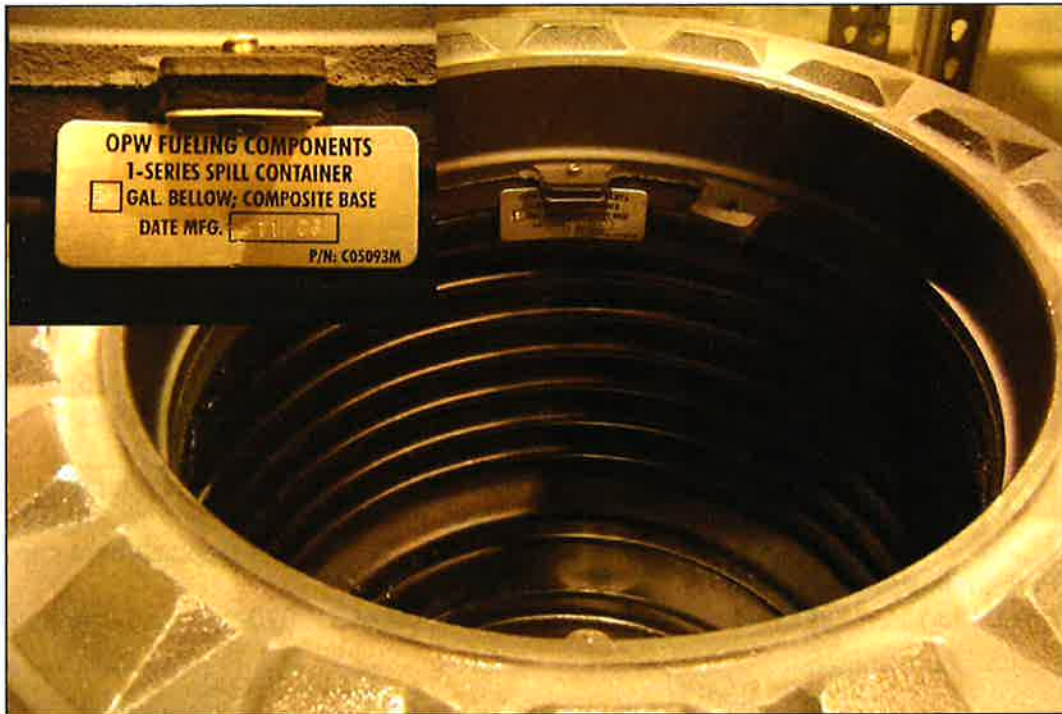


Figure 1-2
Multiport Spill Container OPW 1-Series (GAS/E85)



Figure 1-3
1DP-2100 Drain Plug Kit



Figure 1-4
1DP-2100 Field Installed Drain Plug



Figure 1-5
OPW 634LPC Product Dust Cap



Figure 1-6
OPW 1711LPC Vapor Dust Cap

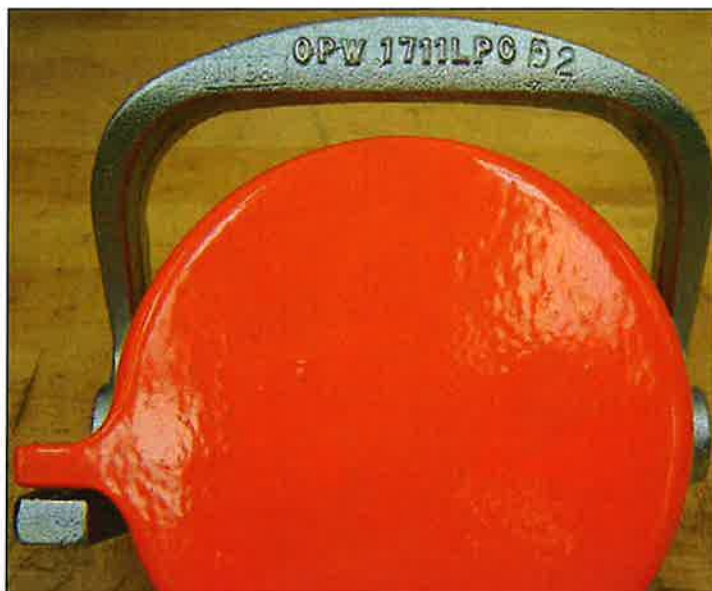


Figure 1-7
OPW 634-TT-EVR Product Dust Cap

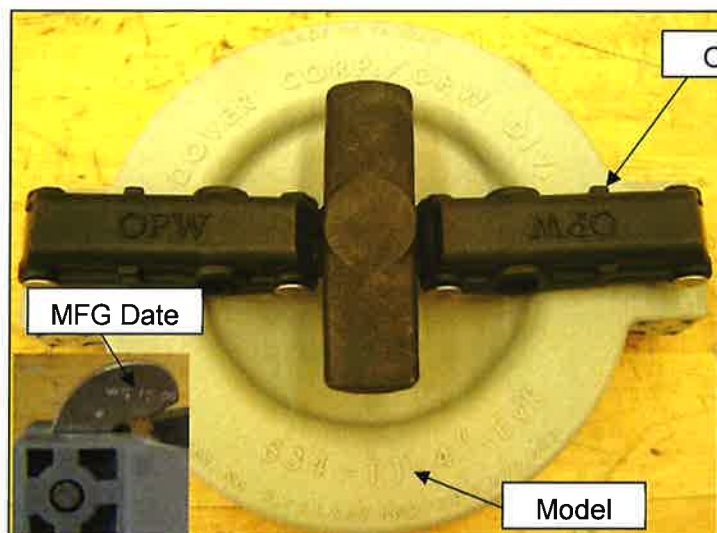


Figure 1-8
OPW 1711-T-EVR Vapor Dust Cap

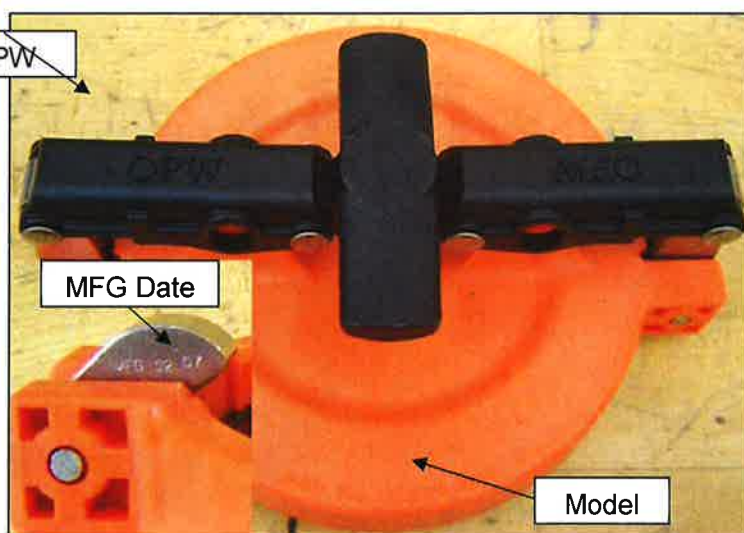


Figure 1-9
CompX CSP1-634LPC Product Dust Cap



Figure 1-10
CompX CSP3-1711LPC Vapor Dust Cap



CompX Tank Commander Lid
Locks onto CSP1-634LPC and CSP3-1711LPC Dust Caps



Figure 1-11
CompX CSP2-634LPC Product Dust Cap



Figure 1-12
CompX CSP4-1711LPC Vapor Dust Cap



CompX Tank Commander Lid
Locks onto CSP2-634LPC and CSP4-1711LPC Dust Caps



Figure 1-13
OPW 61SALP Product Adaptor



Figure 1-14
OPW 61VSA Vapor Adaptor



Figure 1-15
OPW 61SALP-MA Product Adaptor (GAS/E85)



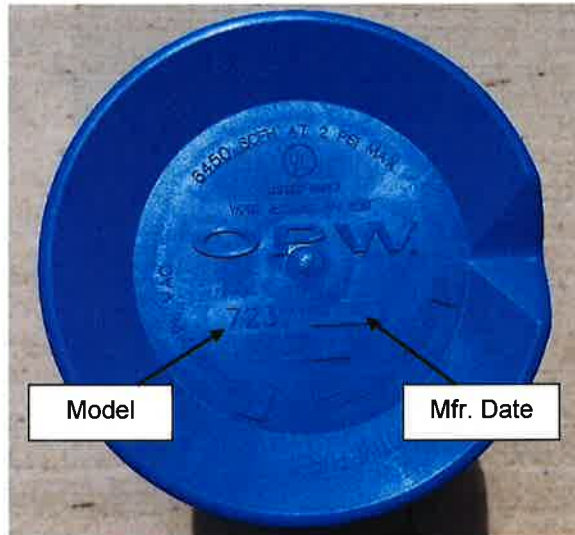
Figure 1-16
OPW 61VSA-MA Vapor Adaptor (GAS/E85)



Figure 1-17
FFS PV-Zero P/V Vent Valve (GAS/E85)
(Model and Serial Number on White Tag)



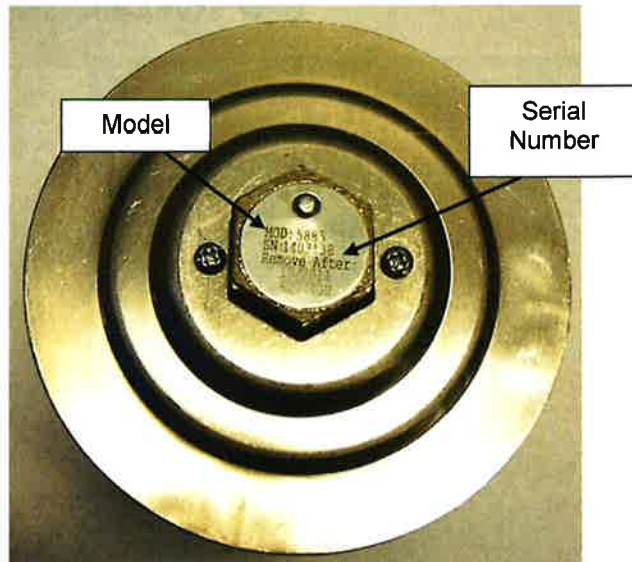
Figure 1-18
OPW 723V P/V Vent Valve



Model

Mfr. Date

Figure 1-19
Husky 5885 P/V Vent Valve
(Husky Name on Bottom Flange)



Model

Serial
Number

Figure 1-20
OPW 61JSK Jack Screw

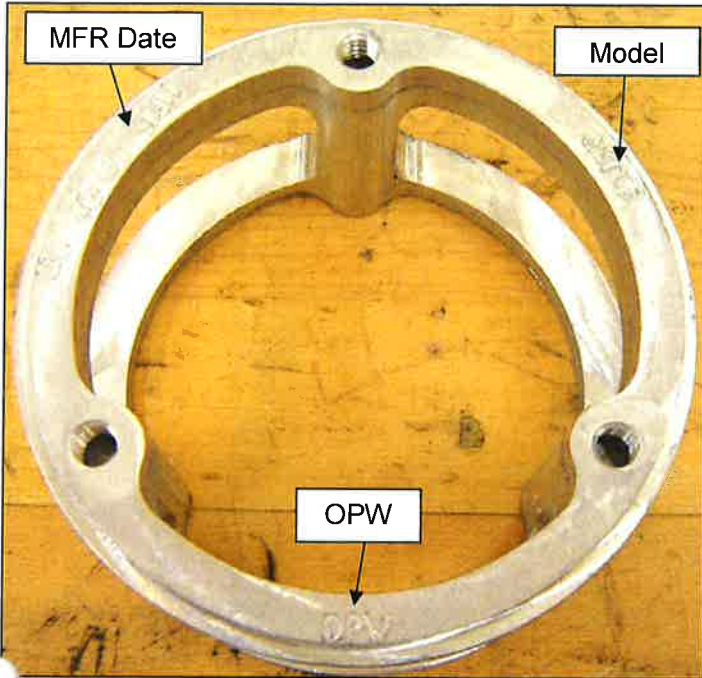


Figure 1-21
71JSK-44MA Jack Screw Kit (GAS/E85)
71JSK-4RMT Jack Screw Kit (GAS/E85)



Figure 1-22
OPW FSA-400-S Face Seal Adaptor (GAS/E85)



Figure 1-23
OPW 61SO Overfill Prevention Devices



Figure 1-24
OPW 71SO Overfill Prevention Devices



Figure 1-25
71SO Testable Drop Tube



Top View of 71SO Testable
Drop Tube



Figure 1-26
OPW 71SOM-412C Overfill Prevention Device (GAS/E85)



Figure 1-27
OPW 62M Cap and Adaptor
(Only Cap is identified)



Figure 1-28
OPW 62M-MA Tank Gauge Port Component (GAS/E85)

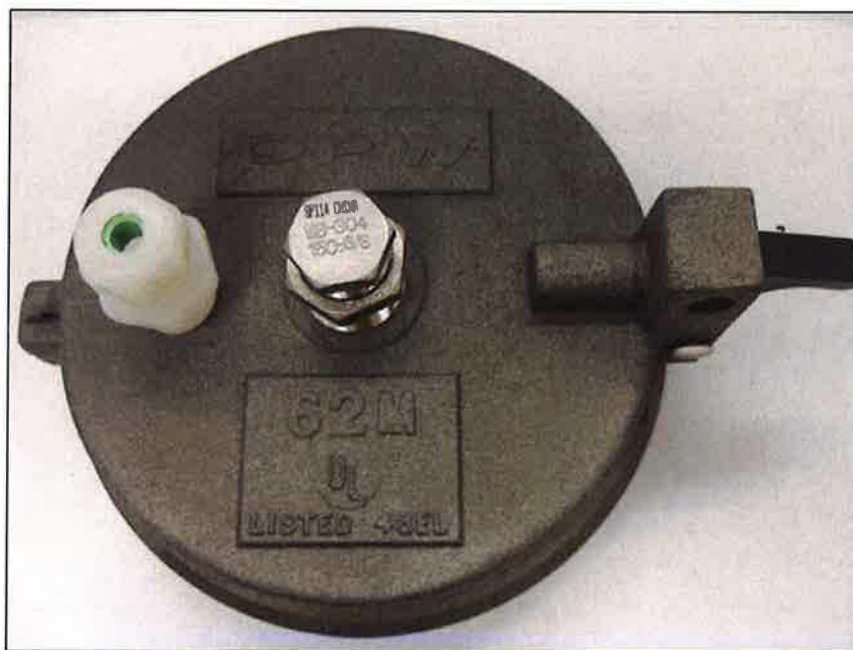
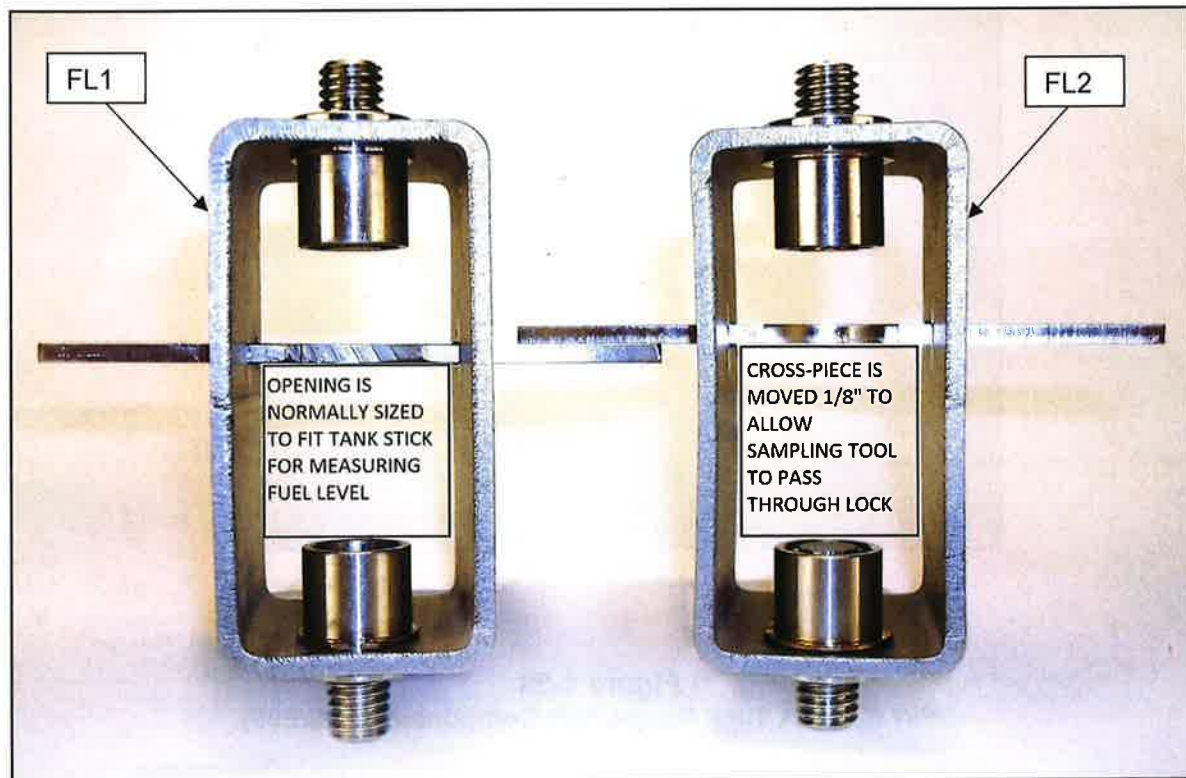


Figure 1-29
McGard Fuel Lock (FL1 on Left, FL2 on Right)



McGard Fuel Lock Installation Position³



³ Optional component, but if installed this picture shows the correct installation location in the pipe just below the Product Rotatable Adaptor in the drop tube.

Exhibit 2

Installation, Maintenance, and Compliance Standards and Specifications

This exhibit contains the installation, maintenance and compliance standards, and specifications applicable to an OPW system installed in a gasoline dispensing facility (GDF).

General Specifications

1. Typical installations of the OPW system are shown in Figures 2-1 and 2-2.
2. Typical installation of the OPW remote fill system is shown in Figures 2-4 and 2-5. Typical installation of the OPW remote additive fill system is shown in Figure 2-6.
3. The OPW system shall be installed, operated, and maintained in accordance with the CARB-Approved Installation, Operation, and Maintenance Manual for the OPW Phase I Vapor Recovery System. Table 2-1 lists the maintenance intervals of OPW system components.
4. Any repair or replacement of system components shall be done in accordance with the CARB-Approved Installation, Operation, and Maintenance Manual for the OPW Phase I Vapor Recovery System.
5. The OPW system shall comply with the applicable performance standards and performance specifications in Table 2-2.
6. Installation, maintenance, and repair of system components, including removal and installation of such components in the course of any required tests, shall be performed by OPW Certified Technicians.

Pressure/Vacuum Vent Valves For Storage Tank Vent Pipes¹

1. No more than three certified pressure/vacuum vent valves (P/V valves) listed in Exhibit 1 shall be installed on any GDF underground storage tank system.
2. Compliance determination of the following P/V valve performance specifications shall be at the option of the districts:
 - a. The leak rate of each P/V valve shall not exceed 0.05 cubic feet per hour (CFH) at 2.00 inches of H₂O positive pressure and 0.21 CFH at 4.00 inches of H₂O negative pressure as determined by TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves (October 8, 2003).
 - b. The positive pressure setting is 2.5 to 6.0 inches of H₂O and the negative pressure setting is 6.0 to 10.0 inches of H₂O as determined by TP-201.1E Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves (October 8, 2003).

¹ The requirement that the vent pipe manifold be installed at a height not less than 12 feet above the grade stated in Executive Orders VR-102-A through VR-102-E is rescinded.

3. Compliance determination of the P/V valve performance specifications in items 2a and 2b for the FFS PV-Zero P/V vent valve shall be conducted with the valve remaining in its installed position on the vent line(s). The PV-Zero portion of the IOM outlines the equipment needed to test the valve in its installed position.
4. A manifold may be installed on the vent pipes to reduce the number of potential leak sources and P/V valves installed. Vent pipe manifolds shall be constructed of steel pipe or an equivalent material that has been listed for use with gasoline. If a material other than steel is used, the GDF operator shall make available, information demonstrating that the material is compatible for use with gasoline. One example of a typical vent pipe manifold is shown in Figure 2-7. This shows only one typical configuration; other manifold configurations may be used. For example, a tee may be located in a different position, or fewer pipes may be connected, or more than one P/V valve may be installed on the manifold.
5. Each P/V valve shall have permanently affixed to it a yellow, gold, or white colored label with black lettering stating the following specifications:

Positive pressure setting: 2.5 to 6.0 inches H₂O
Negative pressure setting: 6.0 to 10.0 inches H₂O
Positive Leakrate: 0.05 CFH at 2.0 inches H₂O
Negative Leakrate: 0.21 CFH at -4.0 inches H₂O

Rotatable Product and Vapor Recovery Adaptors

1. Rotatable product and vapor recovery adaptors shall be capable of at least 360-degree rotation and have an average static torque not to exceed 108 pound-inch (9 pound-foot). Compliance with this requirement shall be demonstrated in accordance with TP-201.1B, Static Torque of Rotatable Phase I Adaptors (October 8, 2003).
2. The vapor adaptor poppet shall not leak when closed. Compliance with this requirement shall be verified by the use of commercial liquid leak detection solution or by bagging, when the vapor containment space of the underground storage tank is subjected to a non-zero gauge pressure. (Note: leak detection solution will detect leaks only when positive gauge pressure exists.)

Vapor Recovery and Product Adaptor Dust Caps

Dust caps with intact gaskets shall be installed on all Phase I tank adaptors.

Product Spill Container Drain Valve

The spill container drain valve, if installed shall be configured to drain liquid directly into the drop tube and shall be isolated from the underground storage tank ullage space. The leak rate of the drain valve shall not exceed 0.17 CFH at 2.00 inches H₂O. Depending on the presence of the drop tube overfill prevention device, compliance with this requirement shall be demonstrated in accordance with either TP-201.1C, Leak Rate of Drop Tube/Drain Valve Assembly (October 8, 2003), or TP-201.1D, Leak Rate of Drop Tube Overfill Prevention Devices and Spill Container Drain Valves (October 8, 2003).

Product Spill Container Drain Plug (Optional)

The product spill container drain plug, either an OPW factory or field installed OPW 1DP-2100 drain plug, shall not leak. The absence of vapor leaks shall be verified with the use of commercial liquid leak detection solution (LDS) when the vapor space of the fill pipe is subjected to a positive gauge pressure.

Drop Tube Overfill Prevention Device

1. The Drop Tube Overfill Prevention Device (overfill device) is designed to restrict the flow of gasoline delivered to the underground storage tank when liquid levels exceed a specified capacity. The overfill device is not a required component of the vapor recovery system, but may be installed as an optional component. Other regulatory requirements may apply.
2. The leak rate of the overfill device shall not exceed 0.17 CFH at 2.00 inches H₂O when tested in accordance with TP-201.1D, Leak Rate of Drop Tube Overfill Prevention Devices and Spill Container Drain Valves (October 8, 2003).
3. For the 71SO Testable overfill prevention device, the threaded test plug shall not leak. The absence of vapor leaks shall be verified with the use of commercial liquid leak detection solution (LDS) when the vapor space of the underground storage tank is subjected to a positive gauge pressure.
4. The discharge opening of the fillpipe must be entirely submerged when the liquid level is six inches above the bottom of the tank as shown in Figure 2-1.

Face Seal Adaptor²

The Face Seal Adaptor shall provide a machined surface on which a gasket can seal and ensures that the seal is not compromised by an improperly cut or improperly finished riser. A Face Seal Adaptor shall be installed on the following required connections. As an option, the adaptor may be installed on other connections.

- a. Product Spill Container (required)
- b. Tank Gauging Components (required)
- c. Vapor Recovery Spill Container (optional)
- d. Rotatable Adaptors (optional)

Double Fill Configuration

OPW Double Fill Configuration shall be allowed for installation provided that no more than two fill and two vapor return points are installed on any single underground storage tank and that no offset of the vapor recovery riser pipe is installed. An example of an OPW Dual Fill configuration is shown in Figure 2-3.

² Face Seal Adaptor is not required with double wall 1-3100 and 1-2200 series spill containers.

Remote Fill Configuration

1. No liquid condensate traps are allowed with this configuration.
2. For new installations and existing installations undergoing major modifications, the Phase I vapor return piping from the remote vapor access point to the tank shall have a minimum slope of one-eighth (1/8) inch per foot of pipe run. A slope of one-quarter (1/4) inch or more per foot of pipe run is recommended wherever feasible. For existing installations, the Phase I vapor return piping from the remote vapor access point to the tank shall be installed so that any liquid in the line will drain toward the storage tank.
3. For new installations and existing installations undergoing major modifications, the Phase I vapor return piping from the remote vapor access point to the tank shall have a minimum nominal internal diameter of four inches (4" ID). For existing installations, the Phase I vapor return piping from the remote vapor access point to the tank shall have a minimum nominal internal diameter of three inches (3" ID).
4. The submerged fillpipe riser shall be fitted with a 4" pipe cap or if the submerged fillpipe riser is used as a port to manually gauge the fuel level in the UST (sticking port), a 62M cap and adaptor, as specified in Exhibit 1, shall be installed.

Remote Additive Fill Configuration

Any gasoline additive can be used only if prior to use, OPW provides a written response that the additive is compatible with the OPW Phase I system. OPW can be contacted at:

www.opwglobal.com/TechSupport/TechnicalServiceAssistance.aspx

Vapor Recovery Riser Offset

1. The vapor recovery tank riser may be offset from the tank connection to the vapor recovery Spill Container provided that the maximum horizontal distance (offset distance) does not exceed 20 inches. One example of an offset is shown in Figure 2-8.
2. The vapor recovery riser shall be offset up to 20 inches horizontal distance with use of commercially available, 4 inch diameter steel pipe fittings.

Tank Gauge Port Components

The tank gauge adaptor and cap are paired. Therefore, an adaptor manufactured by one company shall be used only with a cap manufactured by the same company.

Warranty

Each manufacturer listed in Exhibit 1 shall include a warranty tag with the certified component(s). The manufacturer warranty tag, included with each component, shall be provided to the service station owner/operator at the time of installation.

Connections and Fittings

All connections and fittings not specifically certified with an allowable leak rate shall not leak. The absence of vapor leaks shall be verified with the use of commercial liquid leak detection solution (LDS) or by bagging, when the vapor containment space of the underground storage tank is subjected to a non-zero gauge pressure. (Note: leak detection solution will detect leaks only when positive gauge pressure exists).

Maintenance Records

Each GDF operator or owner shall keep records of maintenance performed at the facility. Such record shall be maintained on site or in accordance with district requirements or policies. Additional information may be required in accordance with district requirements or policies. The records shall include the maintenance or test date, repair date to correct test failure, maintenance or test performed, affiliation, telephone number, name and Certified Technician Number of individual conducting maintenance or test. An example of a Phase I Maintenance Record is shown in Figure 2-9.

Table 2-1
Maintenance Intervals for System Components³
(Reference Exhibit 1 for list of certified components)

Manufacturer	Component	Maintenance Interval
OPW	Pressure/Vacuum Vent Valve	Annual
Husky	Pressure/Vacuum Vent Valve	Annual
FFS	Pressure/Vacuum Vent Valve	Annual
All Manufacturers	Tank Gauge Components	Annual
OPW	Dust Caps (all models)	Annual
CompX	Dust Caps (all models)	Annual
OPW	61-T Straight Drop Tube	Annual
OPW	Rotatable Phase I Adaptors	Annual
OPW	Drop Tube Overfill Prevention Valve	Annual
OPW	Spill Containers (all models)	Annual

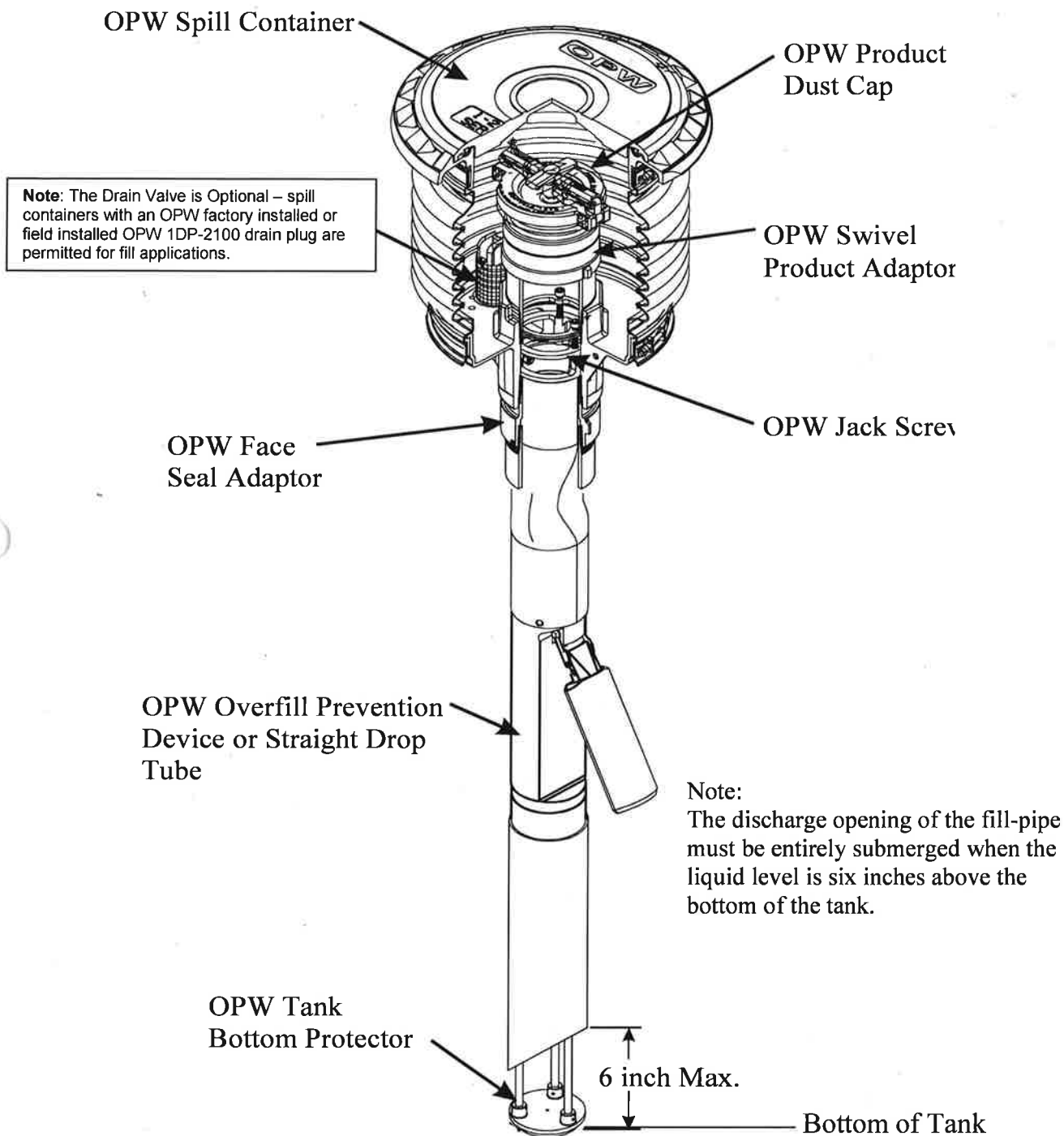
Table 2-2
Gasoline Dispensing Facility Compliance Standards and Specifications

Component / System	Test Method	Standard or Specification
Rotatable Phase I Adaptors	TP-201.1B	Minimum, 360-degree rotation Maximum, 108 pound-inch average static torque
Overfill Prevention Device	TP-201.1D	≤0.17 CFH at 2.00 in H ₂ O
Spill Container Drain Valve	TP-201.1C or TP-201.1D	≤0.17 CFH at 2.00 in H ₂ O
P/V Valve ⁴	TP-201.1E	Positive pressure setting: 2.5 to 6.0 in H ₂ O Negative pressure setting: 6.0 to 10.0 in H ₂ O Positive Leakrate: 0.05 CFH at 2.0 in H ₂ O Negative Leakrate: 0.21 CFH at -4.0 in H ₂ O
Gasoline Dispensing Facility	TP-201.3	As specified in TP-201.3 and/or CP-201
Connections and fittings certified without an allowable leak rate	Leak Detection Solution or Bagging	No leaks

³ Maintenance must be conducted within the interval specified from the date of installation and at least within the specified interval thereafter.

⁴ Compliance determination is at the option of the district.

Figure 2-1
Typical Product Installation Using OPW System⁵



⁵ McGard FL1 or FL2 Fuel Lock (Optional - Not Pictured), if installed, would be positioned inside the riser seal (or pipe nipple) below the rotatable adaptor.

Figure 2-2
Typical Vapor Installation Using OPW System

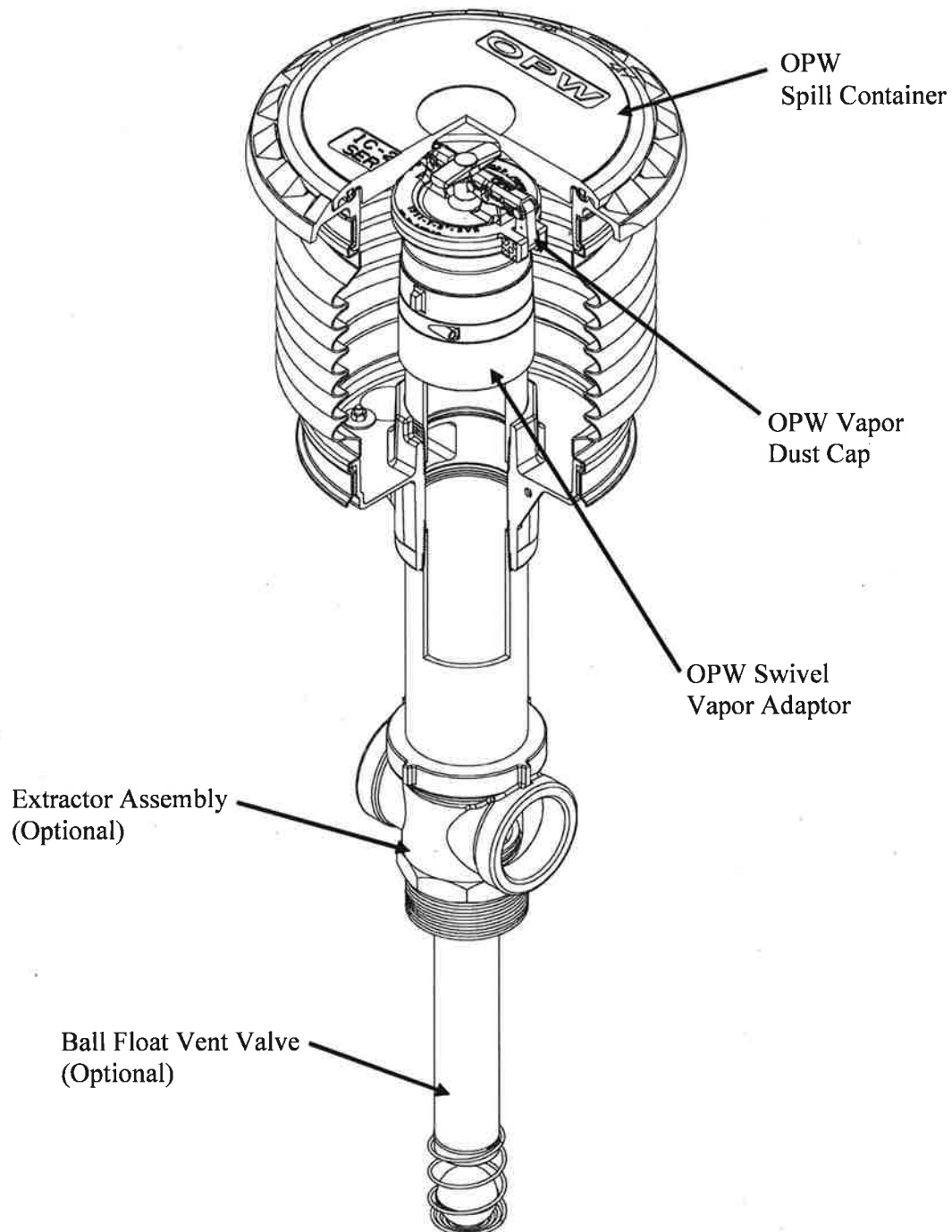


Figure 2-3
Typical OPW/POMECO Double Fill Configuration

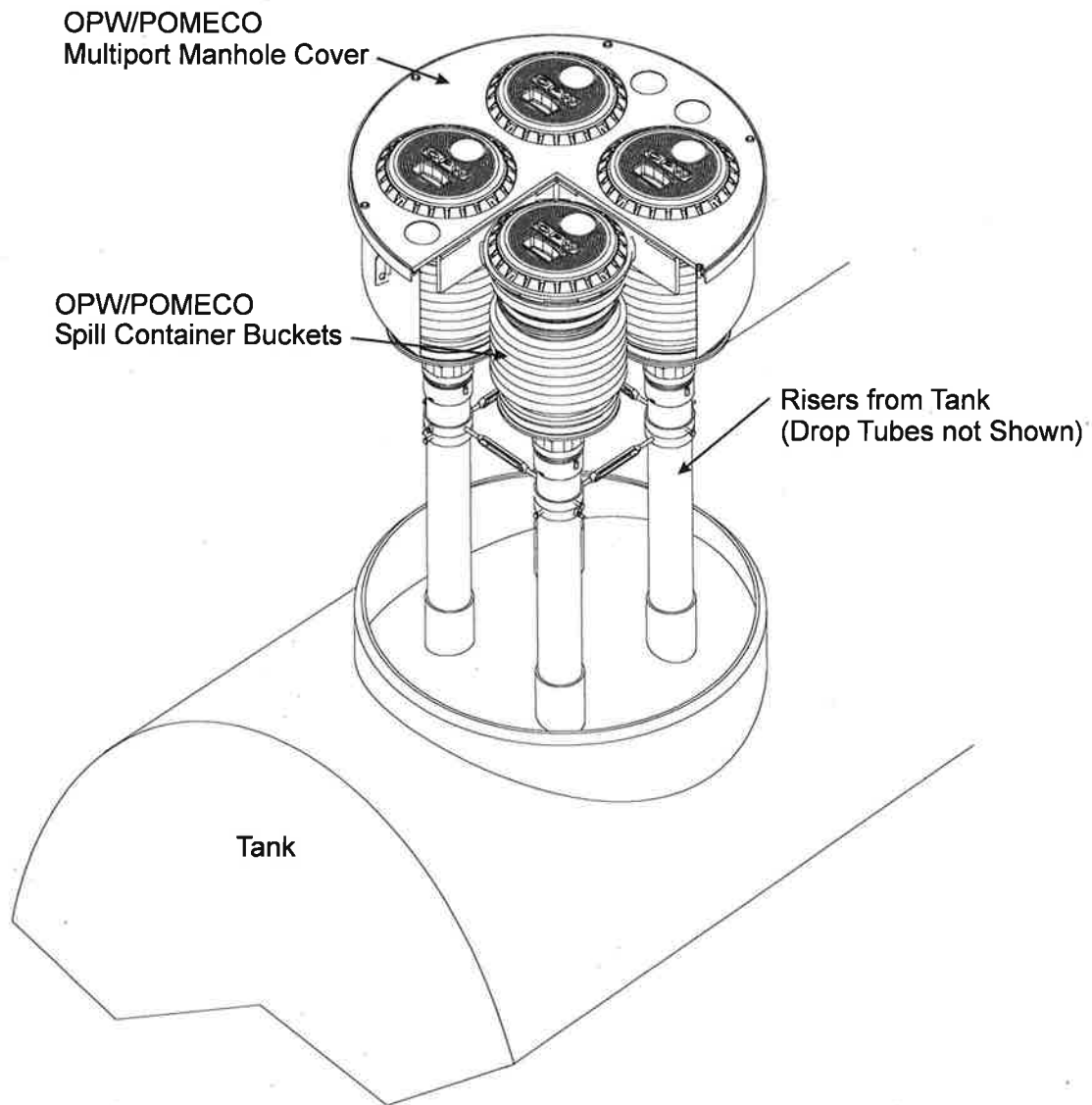


Figure 2-4
Typical Remote-Fill Access Point Configuration

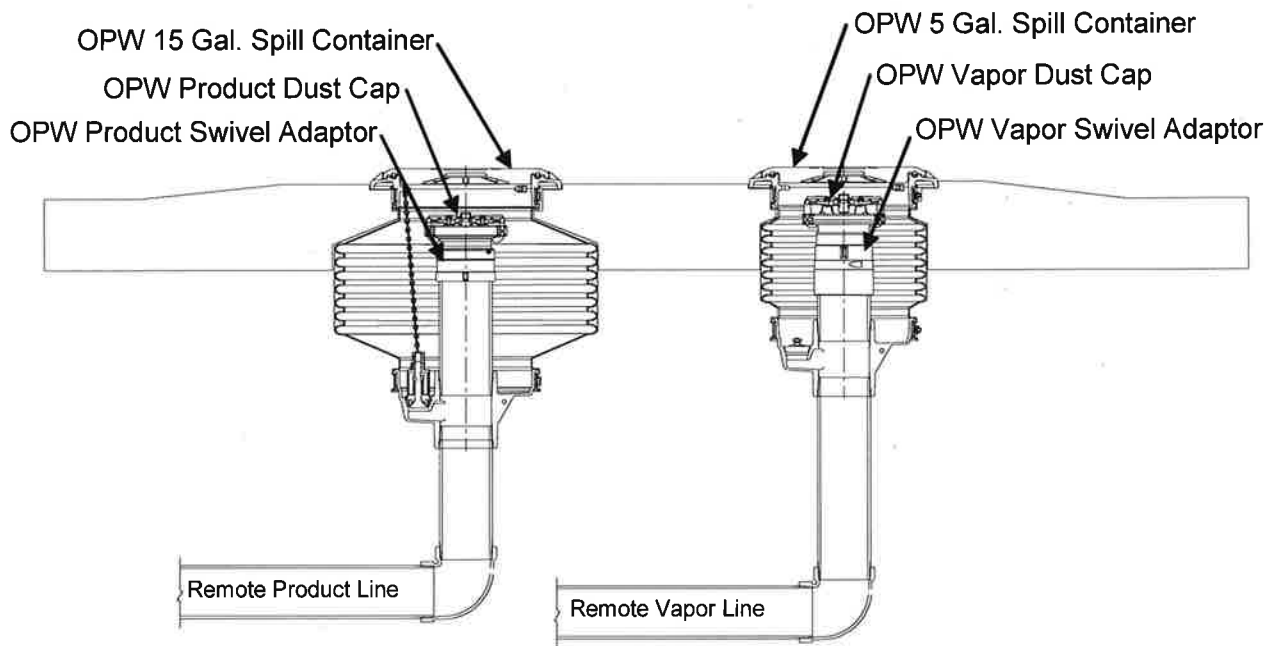


Figure 2-5
Typical Remote-Fill Tank Top Configuration

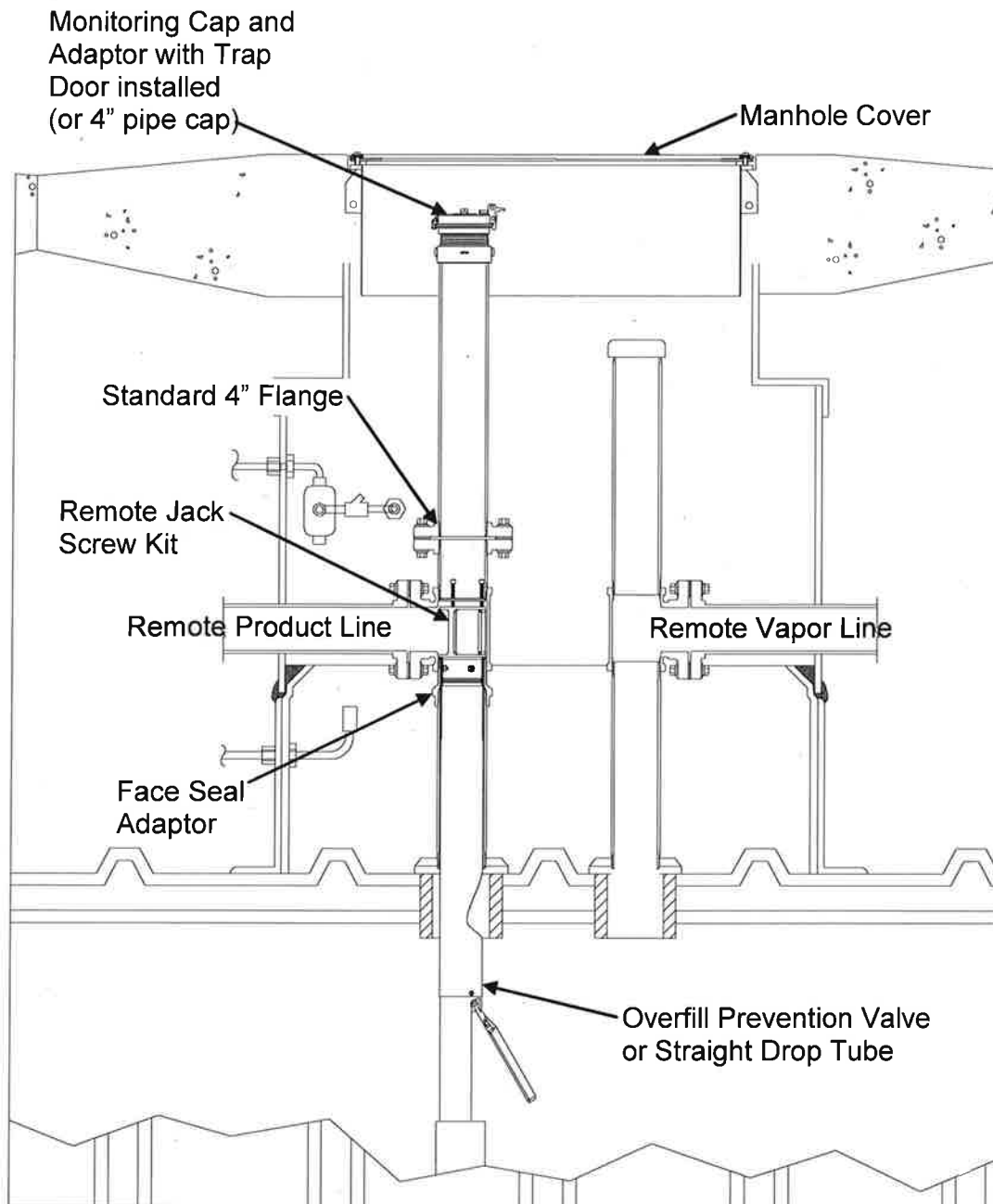
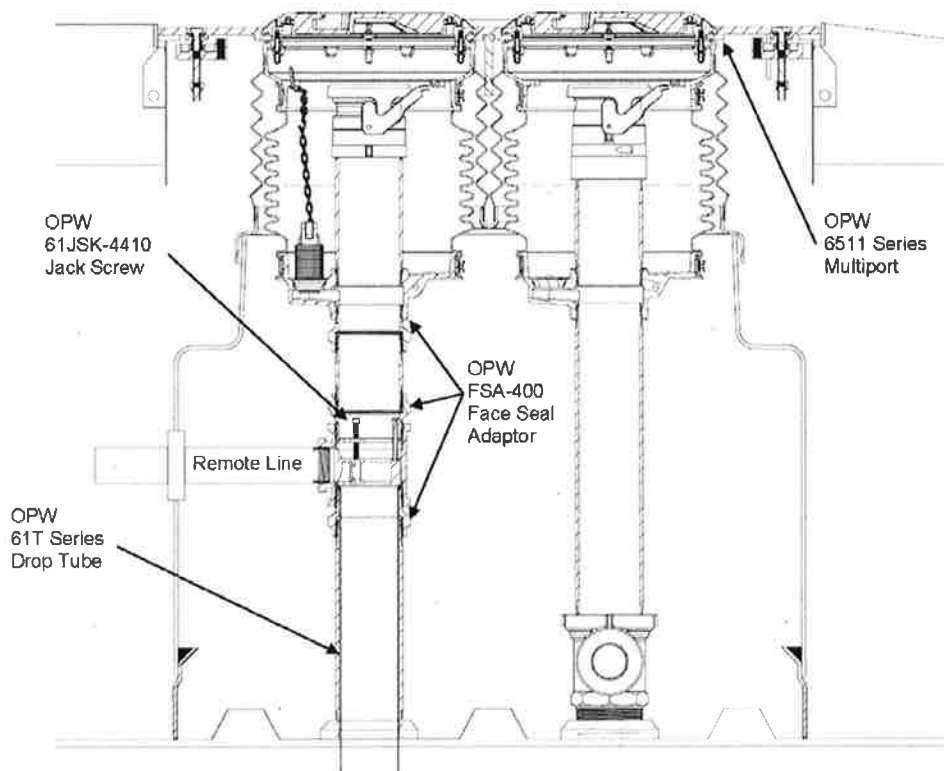
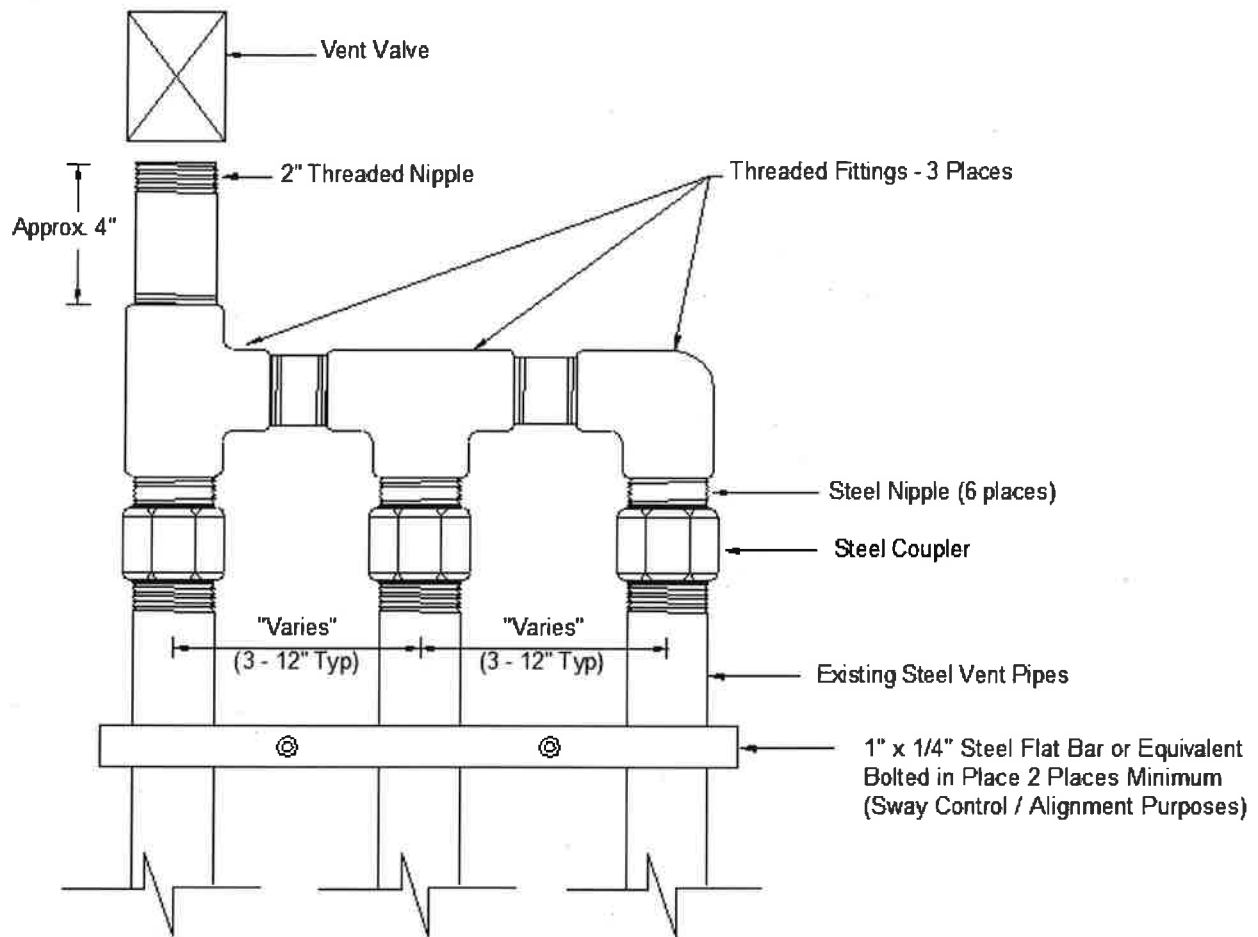


Figure 2-6
Typical Remote Additive Fill Configuration

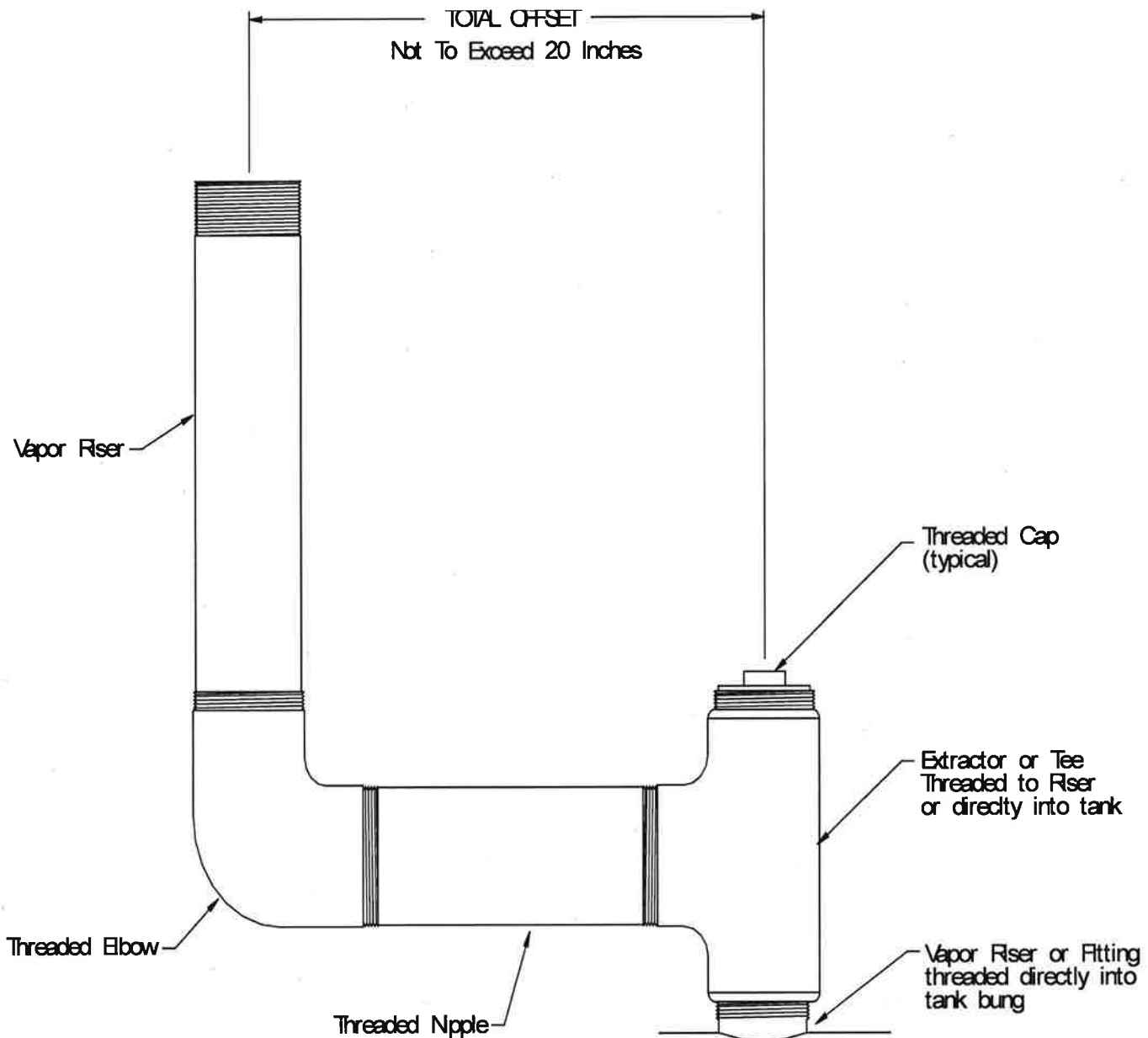


**Figure 2-7
Typical Vent Pipe Manifold**



Note: This shows only one typical configuration; other manifold configurations may be used. For example, a tee may be located in a different position, or fewer pipes may be connected, or more than one P/V valve may be installed on the manifold.

Figure 2-8
Typical Vapor Recovery Riser Offset



Note: This figure represents one instance where a vapor recovery riser has been offset in order to construct a two-point Phase I vapor recovery system. The above figure illustrates an offset using a 90-degree elbow. However, in some instances, elbows less than 90 degrees may be used. All fittings and pipe nipples shall be 4-inch diameter similar to those of the spill container and rotatable Phase I adaptors in order to reduce back pressure during a gasoline delivery.

Figure 2-9
Example of a GDF Phase I Maintenance Record

Date of Maintenance/ Test/Inspection/ Failure	Repair Date To Correct Test Failure	Maintenance/Test/Inspection Performed and Outcome	Affiliation	Name and Certified Technician Number of Individual Conducting Maintenance or Test	Telephone Number

Exhibit 3

Manufacturing Performance Standards and Specifications

The OPW system and all components shall be manufactured in compliance with the performance standards and specifications in CP-201, as well as the requirements specified in this Executive Order. All components 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 for the OPW Phase I Vapor Recovery System, the requirements of this section apply to the manufacturing process and are not appropriate for determining the compliance status of a GDF.

Pressure/Vacuum Vent Valves for Storage Tank Vent Pipes

1. Each pressure/vacuum vent valve (P/V valve) shall be tested at the factory for cracking pressure and leak rate at each specified pressure setting when tested in accordance with **TP-201.1E, *Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves*** (October 8, 2003).
2. Each P/V valve shall be shipped with a card or label stating the performance specifications listed in table 3-1, and a statement that the valve was tested to, and met, these specifications.
3. Each P/V valve shall have permanently affixed to it a yellow, gold, or white label with black lettering listing the positive and negative pressure settings and leak rate standards listed in Table 3-1. The lettering of the positive and negative pressure settings and leak rate standards on the label shall have a minimum font size of 20.

Rotatable Product and Vapor Recovery Adaptors

1. The rotatable product and vapor recovery adaptors shall not leak.
2. The product adaptor cam and groove shall be manufactured in accordance with the cam and groove specifications shown in Figure 3A of CP-201.
3. The vapor recovery adaptor cam and groove shall be manufactured in accordance with the cam and groove specifications shown in Figure 3B of CP-201.
4. Each product and vapor recovery adaptor shall be tested at the factory to, and met, the specifications listed in Table 3-1 and shall have affixed to it a card or label listing these performance specifications and a statement that the adaptor was tested to, and met, such specifications.

Spill Container and Drain Valves

Each Spill Container Drain Valve shall be tested at the factory to, and met, the specification listed in Table 3-1 and shall have affixed to it a card or label listing the performance specification and a statement that the valve was tested to, and met, such performance specification.

Drop Tube Overfill Prevention Device

Each Drop Tube Overfill Prevention Device shall be tested at the factory to, and met, the specification listed in Table 3-1 and shall have affixed to it a card or label listing the performance specification and a statement that the device was tested to, and met, such performance specification.

**Table 3-1
Manufacturing Component Standards and Specifications**

Component	Test Method	Standard or Specification
Rotatable Phase I Adaptors	TP-201.1B	Minimum, 360-degree rotation Maximum, 108 pound-inch average static torque
Rotatable Phase I Adaptors	Micrometer	Cam and Groove Specifications (CP-201)
Overfill Prevention Device	TP-201.1D	≤0.17 CFH at 2.00 inches H ₂ O
Spill Container Drain Valve	TP-201.1C or TP-201.1D	≤0.17 CFH at 2.00 inches H ₂ O
Pressure/Vacuum Vent Valve	TP-201.1E	Positive Pressure: 2.5 to 6.0 inches H ₂ O Negative Pressure: 6.0 to 10.0 inches H ₂ O Leak rate: ≤ 0.05 CFH at +2.0 inches H ₂ O Leak rate: ≤ 0.21 CFH at -4.0 inches H ₂ O

EXHIBIT 4

Manufacturer Warranties

This exhibit includes the manufacturer warranties for all components listed in Exhibit 1, including replacement parts and subparts. The manufacturer warranty tag, included with each component, shall be provided to the service station owner/operator at the time of installation.

Franklin Fueling Systems Warranty Statement and Tag

Franklin Fueling Systems (FFS) Enhanced Vapor Recovery (EVR) products are offered for sale under the brand names of Healy, INCON, Phil-Tite, EBW, and Franklin Fueling Systems (collectively referred to as "FFS EVR products"). FFS EVR products are fully tested at the time of manufacture to meet the applicable performance standards and specifications to which it was certified by the California Air Resource Board (CARB) for the duration of the warranty period, as indicated in the related CARB Executive Order (EO). Performance standards and specifications are listed in Exhibit 2 (System/Compliance Specifications) and Exhibit 3 (Manufacturing Performance Standards) in the related CARB EO.

FFS warrants that FFS EVR products installed in California will conform to the warranty terms and conditions required by the California Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities (CP-201) with respect to (a) transferability of warranties for FFS EVR products, (b) design changes to FFS EVR products, (c) performance specifications of the FFS EVR products, and (d) duration of the warranty period of FFS EVR products.

FFS EVR products are warranted to the initial purchaser, and any subsequent purchaser within the warranty period, for workmanship, performance, and materials when properly installed, used and maintained in accordance with the CARB Approved Installation, Operation, and Maintenance Manuals by certified technicians or an owner/operator as defined in the related CARB EO and to generally accepted industry standards.

FFS reserves the right to make changes in the design or to make additions or improvements with respect to FFS EVR products without incurring any obligation to modify or install same on previously manufactured products, upon written approval from CARB.

FFS reserves the right to change or cancel all or any part of this limited warranty, upon written approval from CARB. Any such change or cancellation will be effective for products sold by FFS after the date of such change or cancellation. No agents, distributors, dealers, or employees of FFS are authorized to make modifications to this warranty or to make additional warranties with respect to any FFS EVR products. Accordingly, any statements made by individuals, whether oral or written, shall not constitute a warranty of FFS and shall not be relied upon.

FFS warrants the workmanship and materials of FFS EVR products to be free of defects, at the time of sale by FFS, for a period of one year (12 months) from the date of installation. When warranty for FFS EVR products cannot be verified to date of installation, claims will be honored for a period of fifteen (15) months from the date of purchase. When warranty for FFS EVR product cannot be verified to date of installation or date of purchase, claims will be honored for a period of eighteen (18) months from date of manufacture by FFS (for location of date of manufacture on components, see related CARB EO Exhibit 1 – Equipment List). In all cases, installation date or purchase date will require providing formal documentation to FFS as evidence

of applicable warranty coverage or date of manufacture will be used to determine duration of warranty period. Formal documentation may include, but is not limited to, FFS authorized service company and distributor work orders, startup/installation documentation, maintenance logs, and/or sales receipts.

FFS shall not be liable for any loss or damage whatsoever, including, without limitation, loss in profits, loss in sales, loss of fuel or other products, loss of use of equipment, facilities or service, costs of environmental remediation, diminution in property value, or any other special, incidental or consequential damages of any type or nature, and all such losses or damages are hereby disclaimed and excluded from this limited warranty.

Use of non-FFS replacement parts, the unauthorized addition of non-FFS items to FFS EVR products, and the unauthorized alteration of FFS EVR products will void warranty. FFS shall, as to each defect, be relieved of all obligations and liabilities under a components warranty if the FFS EVR products have been operated with any accessory, equipment, or a part not specifically approved by FFS and not manufactured by FFS to FFS design and specifications.

FFS EVR product warranty shall not apply to any products which have been mishandled, incorrectly installed or applied, altered in any way, which has been repaired by any party other than qualified technicians, or when such failure is due to misuse or conditions of use (such as, but not limited to, blown fuses, sheared breakaway screws, corrosion damage, negligence, accidents, or normal wear of plastic/rubber parts including scuff guards and seals). FFS EVR product warranty shall not apply to acts of terrorism, acts of war, or acts of God (such as, but not limited to, fire, flood, earthquake, or explosion). Unless otherwise expressly provided in a specific FFS written warranty, FFS does not provide coverage for labor or shipping charges, shall not be liable for any costs or charges attributable to any product testing, maintenance, installation, repair or removal, or any tools, supplies, or equipment need to install, repair, or remove any FFS EVR product.

Other than those FFS EVR products specifically designated for fuel concentrations of 85% ethanol with 15% gasoline (E85), FFS EVR product warranty shall not cover any components that have been in contact with fuel concentrations greater than 15% ethanol or 15% methanol by volume (up to E15/M15).

Claims for FFS EVR product warranty must be submitted in writing promptly after discovery of a defect with a Returned Goods Authorization (RGA) Number from FFS. FFS will honor warranty claims processed through FFS authorized service companies and distributors only. FFS will honor warranty claims submitted no more than thirty (30) days after the end of the applicable warranty period. Product returned for warranty inspection must be shipped freight prepaid to FFS's facilities, with the RGA Number indicated on the returned product, to the following address for inspection:

INCON branded products:
Franklin Fueling Systems, Inc.
ATTN: Warranty Department
34 Spring Hill Road
Saco, ME 04072 USA

All other FFS EVR Products:
Franklin Fueling Systems, Inc.
ATTN: Warranty Department
3760 Marsh Road
Madison, WI 53718 USA

Franklin Fueling Systems, upon inspection and after determination of a warranty defect, will at its option, repair or replace defective parts returned to FFS's facility or where the product is in use. Repaired or replaced parts will be returned freight prepaid by FFS.

A copy of this limited warranty is to be retained with the equipment, on-site with the facility owner/operator.

Component Model Number : _____

Component Date of Manufacturer : _____

Component Install Date : _____

Facility Name : _____

Facility Address : _____

Installer Name : _____

Installer Signature : _____

Morrison Bros. Co. Warranty Statement and Tag

WARRANTY— All Morrison products are thoroughly tested before shipment and meet all applicable performance standards and specifications of related ARB executive orders and vapor recovery procedures of CP-206 (Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities Using Aboveground Storage Tanks) or CP-201 (Certification Procedure for Vapor Recovery Systems at Dispensing Facilities). This warranty shall include the ongoing compliance with all applicable performance standards and specifications for the duration of the warranty. Only material found to be defective in manufacture will be repaired or replaced. Claims must be made within one year from the date of installation, and Morrison Bros. Co. will not allow claims for labor or consequential damage resulting from purchase, installation or misapplication of the product. This warranty will include the initial purchaser and any subsequent purchasers of the initial equipment within the warranty period. This warranty registration must remain with the equipment and be provided to the end user. If a warranty claim needs to be pursued, a copy of this information and the invoice of these products to the purchaser must be supplied to Morrison for verification.

Installation Date: _____
Name Of Installer/Contractor _____
Installation Company: Name _____
Address _____
City _____ State _____ Zip _____
Business At Installation Site: Name _____
Address _____
City _____ State _____ Zip _____
Morrison Product(s) I.D Numbers With Date Of Manufacture _____

Date of manufacture can be found on the product identification label applied to the finished product. This warranty registration must remain with the equipment and be provided to the end user. If a warranty claim needs to be pursued, a copy of this information and the invoice of these products to the purchaser must be supplied to Morrison for verification.

OPW STANDARD PRODUCT WARRANTY TAG

Notice: FlexWorks by OPW, Inc., VAPORSAVER™ and all other OPW products must be used in compliance with all applicable federal, state, provincial and local laws, rules and regulations. Product selection is the sole responsibility of the customer and/or its agents and must be based on physical specifications and limitations, compatibility with the environment and material to be handled. All illustrations and specifications in this literature are based on the latest production information available at the time of publication. Prices, materials and specifications are subject to change at any time, and models may be discontinued at any time, in either case, without notice or obligation.

OPW warrants solely to its customer (the initial purchaser and any subsequent purchasers within the warranty period) that the following products sold by OPW will be free from defects in materials and workmanship under normal use and conditions for the periods indicated:

PRODUCT	WARRANTY PERIOD
FlexWorks Primary Pipe	10 years from date of manufacture
All Products and replacement parts installed in the State of California Certified to California CP-201 and/or CP-206 Standards*	1 year from-date of installation (proof of purchase from certified contractors/technicians required) OPW warrants ongoing compliance with the standards and specifications for the duration of the warranty period required by the State of California; this limited warranty is under the condition the equipment was installed and maintained by trained and certified contractors/technicians unless noted in Installation Manual
All other Products and replacement parts	1 year from date of manufacture**
*Products certified to California CP-201 and/or CP-206 Standards have been factory tested and met all applicable performance standards and specifications and will have an OPW registration card enclosed/attached to the product	

OPW's exclusive obligation under this limited warranty is, at its option, to repair, replace or issue credit (in an amount not to exceed the list price for the product) for future orders for any product that may prove defective within the applicable warranty period. (Parts repaired or replaced under warranty are subject to prorated warranty coverage for remainder of the original warranty period). Complete and proper warranty claim documentation and proof of purchase required. All warranty claims must be made in writing and delivered during the applicable warranty period to OPW at OPW 9393 Princeton-Glendale Road Hamilton, Ohio, USA 45011, Attention: Customer Service Manager. No products may be returned to OPW without its prior written authority.

This limited warranty shall not apply to any FlexWorks or VAPORSAVER™ product unless it is installed by an OPW attested installer and all required site and warranty registration forms are completed and received by OPW within 60 days of installation. This limited warranty also shall not apply to any FlexWorks, VAPORSAVER™ or other OPW product: unless all piping connections are installed with a nationally-recognized or state-approved leak detection device in each tank and dispenser sump (which are not for storage and from which all discharge hydrocarbons must be removed, and the systems completely cleaned, within 24 hours); unless testable sumps utilize FlexWorks pipe and access fittings; unless a sump inspection log or an

EPA recommended/required checklist is maintained and the results are furnished to OPW upon request; and unless OPW is notified within 24 hours of any known or suspected product failure and is provided with unrestricted access to the product and the site. This limited warranty also shall not apply to any product which has been altered in any way, which has been repaired by anyone other than a service representative authorized by OPW, or when failure or defect is due to: improper installation or maintenance (including, without limitation, failure to follow FlexWorks Quick Reference Manual Installation Guide and all product warning labels); abuse or misuse; violation of health or safety requirements; use of another manufacturer's, or otherwise unauthorized, substances or components; soil or other surface or subsurface conditions; or fire, flood, storm, lightning, earthquake, accident or any other conditions, events or circumstances beyond OPW's control.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND ALL OTHER WARRANTIES INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY EXCLUDED.

OPW shall have no other liability whatsoever, whether based on breach of contract, negligence, gross negligence, strict liability or any other claim, including, without limitation, for special, incidental, consequential or exemplary damages or for the cost of labor, freight, excavation, clean-up, downtime, removal, reinstallation, loss of profit, or any other cost or charges. No person or entity is authorized to assume on behalf of OPW any liability beyond this limited warranty. This limited warranty is not assignable.

** Date of manufacture on this product is located (*location will be specific to each component*)



North America Toll Free - TELEPHONE: (800)
422-2525 - Fax: (800) 421-3297 - Email:
domesticsales@opw-fc.com

9393 Princeton-Glendale
Road
Hamilton, Ohio 45011

International - TELEPHONE: (513) 870-3315
or (513) 870-3261 - Fax: (513)
870-3157 - Email: intlsales@opw-fc.com
www.opwglobal.com

Comp X TANK Commander Warranty Statement and Tag

Seller warrants to the initial and subsequent purchasers, for a period of one year from date of installation, that the Products sold hereunder will, at the time of delivery: (a) comply with the ARB CP-201 standards and specifications for the duration of the warranty period for such Products in effect at the time of shipment or such other specifications as are expressly agreed upon by Seller and Buyer in writing; (b) be adequately contained, packaged, and labeled; and (c) conform to any promises and affirmations of fact made on the container and label. In the event that any such Products fail to conform to the foregoing warranty, Seller will, at its option, repair or replace such nonconforming Products, or credit Buyer for an amount not to exceed the original sales price of such Products. Shipping costs incurred in returning such nonconforming Products to Seller shall be borne by Seller, but Seller shall in no event be liable for any inspection, handling, or packaging costs incurred by Buyer in connection with such Products. Buyer's negligence, misuse, improper installation, or unauthorized repair or alteration, shall void this warranty. The TANK Commander Warranty tag is located on the inside cover of the product.

Warranty Tag

TANK Commander TC-1

1 year warranty from date of installation

Date of manufacture __/__/____

The CompX TANK Commander product was factory tested and meets the standards and specifications to which it was certified by the California Air Resources Board (CARB) as indicated in the related CARB Phase I EVR Executive Orders.

Husky Corporation Warranty Statement and Tag

VAPOR PRODUCTS – Husky Corporation will, at its option, repair, replace, or credit the purchase price of any Husky manufactured product which proves upon examination by Husky, to be defective in material and/or workmanship for a period of one (1) year of installation or fifteen (15) months from the manufacture date of shipment by Husky, whichever occurs first. The warranty period on repaired or replacement vapor recovery products is only for the remainder of the warranty period of the defective product.

EVR PRODUCTS – With respect to EVR products installed in California, for a period of one (1) year from the date of installation, Husky warrants that the product will be free from defects in materials and workmanship (if the installation date is in question or indeterminable, Husky will warrant the product for 12 months from sale by Husky). Husky confirms that the warranty is transferable to a subsequent purchaser within the warranty period. However, the warranty does not follow the product from its initial installation location to succeeding locations. Husky confirms these products are warranted to meet the performance standards and specifications to which it was certified by CARB for the duration of the warranty. EVR products must be installed per CARB Executive Order and must follow the Husky Installation Instructions or the warranty is void. The warranty tag included with the EVR product must be provided to the end user at installation. A completed warranty tag and installation documentation is required to be returned with the product to be eligible for warranty consideration.

CONVENTIONAL PRODUCTS – Husky Corporation will, at its option, repair, replace, or credit the purchase price of any Husky manufactured product which proves upon examination by Husky, to be defective in material and/or workmanship for a period of one (1) year from the manufacture date of shipment by Husky.

Buyer must return the products to Husky, transportation charges prepaid. This Warranty excludes the replaceable bellows, bellows spring assembly, spout assembly and scuff guard, unless (i) damage is obvious when the product is removed from shipping carton and (ii) the defective product is returned to Husky prior to use. This warranty does not apply to equipment or parts which have been installed improperly, damaged by misuse, improper operation or maintenance, or which are altered or repaired in any way.

The warranty provisions contained herein apply only to original purchasers who use the equipment for commercial or industrial purposes. There are no other warranties of merchantability, fitness for a particular purpose, or otherwise, and any other such warranties are hereby specifically disclaimed.

Husky assumes no liability for labor charges or other costs incurred by Buyer incidental to the service, adjustment, repair, return, removal or replacement of products. Husky assumes no liability for any incidental, consequential, or other damages under any warranty, express or implied, and all such liability is hereby expressly excluded.

Husky reserves the right to change or improve the design of any Husky fuel dispensing equipment without assuming any obligations to modify any fuel dispensing equipment previously manufactured.

**WARRANTY TAG**

Husky Corporation
2325 Husky Way
Pacific, Mo 63069
(800) 325-3558

**Husky
General Fueling Products:**

Station Name: _____

Store #: _____ Date: _____

City: _____ State: _____

Service Contractor: _____

Service Tech: _____

Distributor: _____

*No warranty accepted without warranty tag filled out
completely and attached to product.*

Model #: _____

Serial #: _____

Installation Date: _____

Manufacturer Lot #: _____

Work order # (if applicable): _____

RGA #: _____

Form #009179-6 03/2013

FRONT VIEW

FOR REFERENCE ONLY**Reason for Return (check all applicable):**☐ Leaking Fuel Around Spout☐ Failed Pressure Decay Test☐ Leaking Fuel In Trigger Area☐ Leaking Fuel at Hose Inlet☐ Keeps Shutting Off☐ Mechanical Malfunction☐ Will Not Shut Off☐ Dispenses Fuel Without Pulling Lever

Notes / Comments: _____

EVR products installed in California are warranted for 1 year from the date of installation. Manufacturing data can be found on the product data tag attached to the product. Husky confirms the product was tested at the factory and met all applicable performance standards in CP-201 including Pressure Setting: 2.5-6.0 in W.C., Vacuum Setting: 6.0 - 10.0 in W.C. and Leak Rate: 0.05 CFH @ ±2 G in W.C. and 0.21 CFH @ -4.0 in W.C. Please provide installation documentation such as a purchase order, an invoice or a receipt at time of claim.

BACK VIEW

Veeder-Root Warranty Statement and Tag

This warranty applies only when the product is installed in accordance with Veeder-Root's specifications. This warranty will not apply to any product which has been subjected to misuse, negligence, accidents, systems that are misapplied or are not installed per Veeder-Root specifications, modified or repaired by unauthorized persons, or damage related to acts of God. Veeder-Root is not liable for incidental, consequential, or indirect damages or loss, including, without limitation, personal injury, death, property damage, environmental damages, cost of labor, clean-up, downtime, installation and removal, product damages, loss of product, or loss of revenue or profits. This warranty applies to the initial purchaser and any subsequent purchaser for the duration of the warranty period. **THE WARRANTY CONTAINED HEREIN IS EXCLUSIVE AND THERE ARE NO OTHER EXPRESS, IMPLIED, OR STATUTORY WARRANTIES. WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.**

CAP AND RING ADAPTOR

We warrant that this product shall be free from defects in material and workmanship and is compliant with all applicable performance standards and specifications for which it has been certified, for a period of one (1) year from the date of installation. During the warranty period, we or our representative will repair or replace the product, if determined by us to be defective, at the location where the product is in use and at no charge to the purchaser.

Warranty Card Language

EQUIPMENT WARRANTY

Veeder-Root warrants that this product shall be free from defects in material and workmanship and is compliant with all applicable performance standards and specifications for which it has been certified, for a period of one (1) year from date of installation.

Date of manufacture:

This component was tested at the time of manufacture and meets all the applicable performance standards and specification to which it was certified: EO VR-101 and EO VR-102.

For detailed warranty terms see EO VR101 or EO VR-102 warranty exhibits on the ARB Web site at <http://www.arb.ca.gov/vapor/eo-evrphase1.htm>

McGard Warranty Statement and Tag

McGard Fuel Locks are fully tested at the time of manufacture to meet the applicable performance standards and specifications to which it was certified by the California Air Resource Board (CARB) for the duration of the warranty period, as indicated in the related CARB Executive Order (EO). Performance standards and specifications are listed in Exhibit 2 (System/Compliance Specifications) and Exhibit 3 (Manufacturing Performance Standards) in the related CARB EO.

McGard warrants that McGard Fuel Lock products installed in California will conform to the warranty terms and conditions required by the California Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities (CP-201) with respect to (a) transferability of warranties for McGard Fuel Locks, (b) design changes to McGard Fuel Locks, (c) performance specifications of the McGard Fuel Locks, and (d) duration of the warranty period of McGard Fuel Locks.

McGard Fuel Locks are warranted to the initial purchaser, and any subsequent purchaser within the warranty period, for workmanship, performance, and materials when properly installed, used and maintained in accordance with the CARB Approved Installation, Operation, and Maintenance Manuals by certified technicians as defined in the related CARB EO and to generally accepted industry standards.

McGard reserves the right to make changes in the design or to make additions or improvements with respect to McGard Fuel Locks without incurring any obligation to modify or install same on previously manufactured products, upon written approval from CARB.

McGard reserves the right to change or cancel all or any part of this limited warranty, upon written approval from CARB. Any such change or cancellation will be effective for products sold by McGard after the date of such change or cancellation. No agents, distributors, dealers, or employees of McGard are authorized to make modifications to this warranty or to make additional warranties with respect to any McGard Fuel Locks. Accordingly, any statements made by individuals, whether oral or written, shall not constitute a warranty of McGard and shall not be relied upon.

McGard warrants the workmanship and materials of McGard Fuel Locks to be free of defects, at the time of sale by McGard, for a period of one year (12 months) from the date of installation. When warranty for McGard Fuel Locks cannot be verified to date of installation, claims will be honored for a period of fifteen (15) months from the date of purchase. When warranty for McGard Fuel Locks cannot be verified to date of installation or date of purchase, claims will be honored for a period of eighteen (18) months from date of manufacture by McGard (date of manufacture is engraved on side of lock body). In all cases, installation date or purchase date will require providing formal documentation to McGard as evidence of applicable warranty coverage or date of manufacture will be used to determine duration of warranty period. Formal documentation may include, but is not limited to McGard authorized service company and distributor work orders, startup/installation documentation, maintenance logs, and/or sales receipts.

McGard shall not be liable for any loss or damage whatsoever, including, without limitation, loss in profits, loss in sales, loss of fuel or other products, loss of use of equipment, facilities or service, costs of environmental remediation, diminution in property value, or any other special,

incidental or consequential damages of any type or nature, and all such losses or damages are hereby disclaimed and excluded from this limited warranty.

Use of non-McGard replacement parts, the unauthorized addition of non-McGard items to McGard Fuel Locks, and the unauthorized alteration of McGard Fuel Locks will void warranty. McGard shall, as to each defect, be relieved of all obligations and liabilities under a components warranty if the McGard Fuel Locks have been operated with any accessory, equipment, or a part not specifically approved by McGard and not manufactured by McGard to McGard design and specifications.

McGard Fuel Lock warranty shall not apply to any products which have been mishandled, incorrectly installed or applied, altered in any way, which has been repaired by any party other than qualified technicians, or when such failure is due to misuse or conditions of use (such as, but not limited to, blown fuses, sheared breakaway screws, corrosion damage, negligence, accidents, or normal wear of plastic/rubber parts including scuff guards and seals). McGard Fuel Lock warranty shall not apply to vandalism, theft, acts of terrorism, acts of war, or acts of God (such as, but not limited to, fire, flood, earthquake, or explosion). Unless otherwise expressly provided in a specific McGard written warranty, McGard does not provide coverage for labor or shipping charges, shall not be liable for any costs or charges attributable to any product testing, maintenance, installation, repair or removal, or any tools, supplies, or equipment need to install, repair, or remove any McGard Fuel Lock.

Other than those McGard Fuel Locks specifically designated for fuel concentrations of 85% ethanol with 15% gasoline (E85), McGard Fuel Lock product warranty shall not cover any components that have been in contact with fuel concentrations greater than 15% ethanol or 15% methanol by volume (up to E15/M15).

Claims for McGard Fuel Lock warranty must be submitted in writing promptly after discovery of a defect with a Returned Goods Authorization (RGA) Number from McGard. McGard will honor warranty claims processed through McGard authorized service companies and distributors only. McGard will honor warranty claims submitted no more than thirty (30) days after the end of the applicable warranty period. Product returned for warranty inspection must be shipped freight prepaid to McGard's facilities, with the RGA Number indicated on the returned product, to the following address for inspection:

McGard LLC, ATTN: Warranty Department, 3875 California Road, Orchard Park, NY 14127 USA

McGard, upon inspection and after determination of a warranty defect, will at its option, repair or replace defective parts returned to McGard's facility or where the product is in use. Repaired or replaced parts will be returned freight prepaid by McGard.

A copy of this limited warranty is to be retained with the equipment, on-site with the facility owner/operator.

Component Model Number:

Component Date of Manufacturer:

Component Install Date:

Facility Name:

Facility Address:

Installer Name:

Installer Signature:

VAULTED ABOVEGROUND STORAGE TANK CONFIGURATION (Optional)

General Specifications

1. Alternate typical vaulted AST configurations for the Phase I EVR Systems are shown in Figures 5-1, 5-2, 5-3, and 5-4.
2. Unless otherwise specified in this Executive Order (EO), the vaulted AST configuration shall comply with the applicable performance standards and performance specifications in CP-201. The emergency vent shall be a certified vent listed in the Phase I EVR Executive Orders for ASTs and shall be installed, operated, maintained and meet any performance requirements specified in the applicable AST Executive Order.

Figure 5-2: Top Sectional View of Typical Vaulted AST

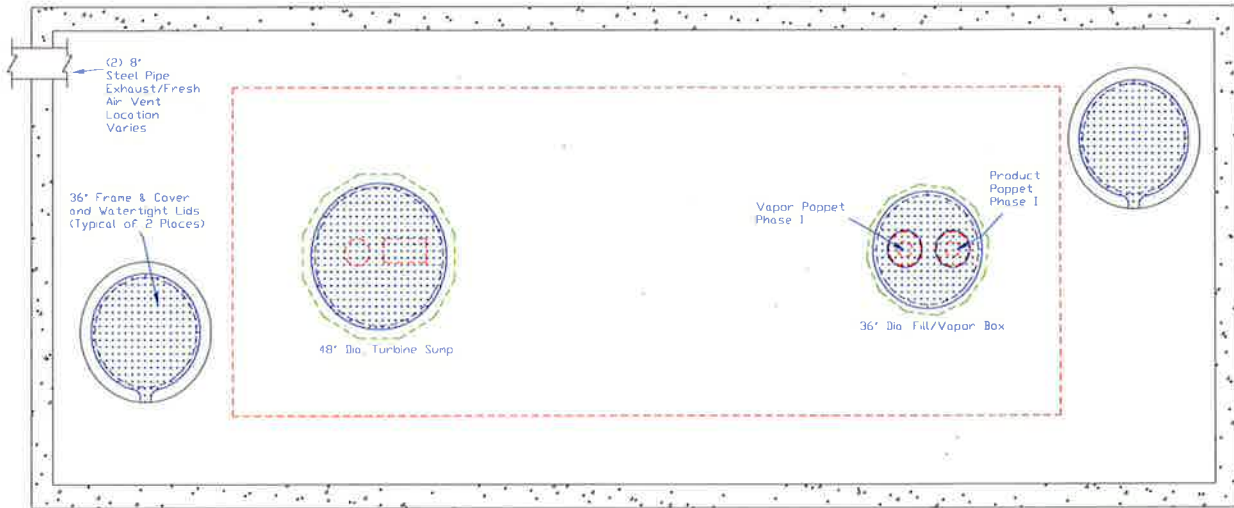


Figure 5-3: End Sectional View of Typical Vaulted AST

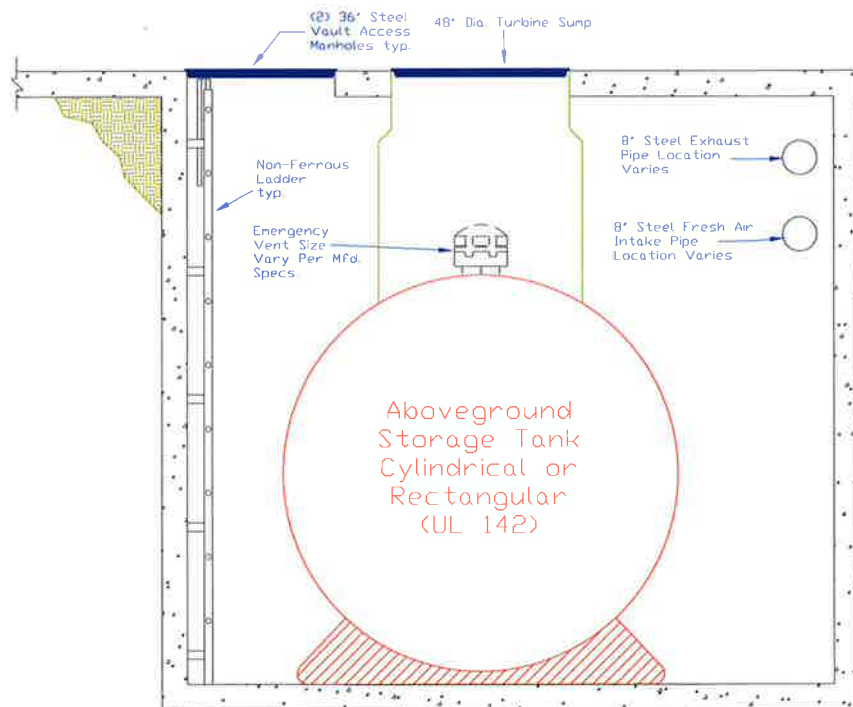


Figure 5-4: Sectional Views of Typical Vaulted AST (Ventilation)

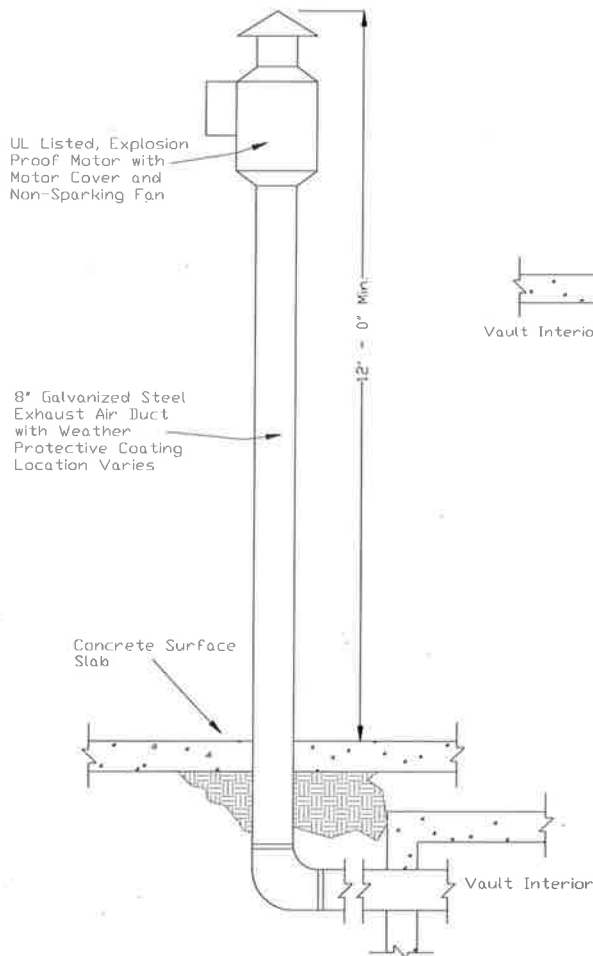


Figure 5-4a: Typical Exhaust

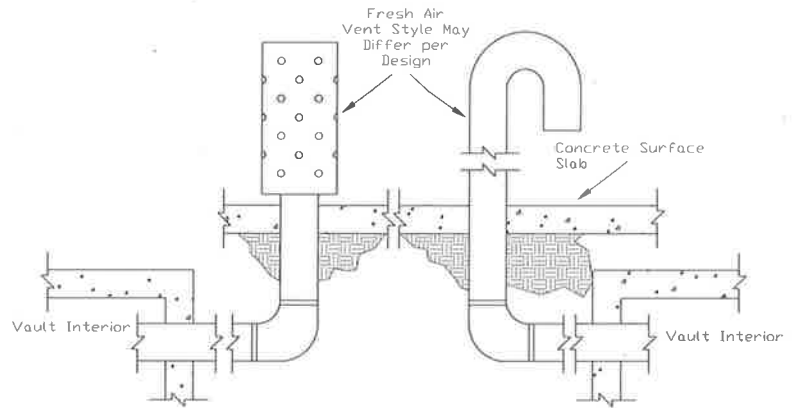


Figure 5-4b: Typical Fresh Air Intake

**State of California
AIR RESOURCES BOARD**

EXECUTIVE ORDER VR-104-J

Relating to Certification of Vapor Recovery Systems

**CNI Manufacturing, Inc.
CNI Manufacturing Phase I Vapor Recovery System**

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 the filling of underground gasoline storage tanks (Phase I system), in its Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities (CP-201) as last amended November 9, 2015, 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 I EVR systems with emission standards;

WHEREAS, CNI Manufacturing Inc. requested and was granted certification of the CNI Manufacturing Phase I Vapor Recovery System (CNI Manufacturing system) pursuant to CP-201 on September 26, 2003, by Executive Order VR-104-A, and last modified on June 1, 2018, by Executive Order VR-104-I;

WHEREAS, additional time is necessary to gather and evaluate information needed to complete the certification renewal of the Husky Model 5885 pressure-vacuum (P/V) vent valve;

WHEREAS, CP-201 provides that the CARB Executive Officer shall issue an Executive Order if he 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 CNI Manufacturing System, as amended to include the components listed above, conforms with all requirements set forth in CP-201 and results in a vapor recovery system which is at least 98.0 percent efficient when tested pursuant to test procedure TP-201.1, Volumetric Efficiency for Phase I Systems (July 26, 2012).

NOW THEREFORE, IT IS HEREBY ORDERED that the CNI Manufacturing System is certified to be at least 98.0 percent efficient when installed, operated, and maintained as specified herein and in the following exhibits. Exhibit 1 contains a list of the certified

components. Exhibit 2 contains the performance standards and specifications, typical installation drawings, and maintenance intervals for the CNI Manufacturing System as installed in a GDF. Exhibit 3 contains the manufacturing performance specifications. Exhibit 4 contains the manufacturer warranties. Exhibit 5 is the below-grade vaulted tank configuration.

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 component(s) 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 CNI Manufacturing, Franklin Fueling Systems, OPW, Husky, and EMCO Wheaton shall meet the manufacturing performance specifications as provided in Exhibit 3.

IT IS FURTHER ORDERED that the certified CNI Manufacturing System shall be installed, operated, and maintained in accordance with the CARB Approved Installation, Operation and Maintenance Manual for the CNI Manufacturing Phase I EVR System as Certified by Executive Order VR-104-J. Equipment shall be inspected at the interval specified and per the procedures identified in the CARB Approved Installation, Operation, and Maintenance Manual. A copy of the Executive Order and the CARB Approved Installation, Operation, and Maintenance Manual shall be maintained at each GDF where a certified CNI Manufacturing 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 manufacturer's certification application or documents and certified hereby is prohibited and deemed inconsistent with this certification, and is subject to enforcement action, 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 be made a condition of certification. The owner or operator of the CNI Manufacturing System shall conduct, and pass, the following tests no later than 60 days after startup and at least once every three (3) years after startup testing, 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-201.1B, Static Torque of Rotatable Phase I Adaptors (October 8, 2003); and
- Depending on the system configuration, either TP-201.1C, Leak Rate of Drop Tube/Drain Valve Assembly (October 8, 2003) or TP-201.1D, Leak Rate of Drop Tube Overfill Prevention Devices and Spill Container Drain Valves (October 8, 2003).

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 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). Alternate test procedures, including the most recent versions of the test procedures listed above, may be used if determined by the Executive Officer or his delegate, in writing, to yield comparable results. Testing the pressure/vacuum (P/V) vent valve will be at the option of the Districts. If P/V vent valve testing is required by the District, the test shall be conducted in accordance with TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves (October 8, 2003) and Exhibit 2.

IT IS FURTHER ORDERED that the CNI Manufacturing System shall be compatible with gasoline in common use in California at the time of certification and any modifications to comply with future California gasoline requirements shall be 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.


IT IS FURTHER ORDERED that the certification of the CNI Manufacturing System with the exception of the Husky Model 5885 P/V vent valve shall remain valid through May 31, 2021.

IT IS FURTHER ORDERED that to provide the Executive Officer with the necessary time to fully gather and evaluate information to make a determination regarding the renewal certification of the Husky Model 5885 P/V vent valve consistent with Sections 17.3 and 17.4 of CP 201, the certification of the Husky Model 5885 P/V vent valve is extended for one year from the date when this Executive Order is signed.

IT IS FURTHER ORDERED that Executive Order VR-104-I issued on June 1, 2018, is hereby superseded by this Executive Order. CNI Manufacturing Systems certified under Executive Order VR-104-A to I 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. This

Executive Order shall apply to new installations or major modification of existing Phase I systems.

Executed at Sacramento, California, this 3rd day of June 2019.


Catherine Dunwoody, Chief
Monitoring and Laboratory Division

Attachments:

- Exhibit 1 CNI Manufacturing Phase I Vapor Recovery System Equipment List
- Exhibit 2 Installation, Maintenance and Compliance Specifications
- Exhibit 3 Manufacturing Performance Standards and Specifications
- Exhibit 4 Manufacturer Warranties
- Exhibit 5 Vaulted Aboveground Storage Tank Configuration (*Optional*)

Draft - Modification Highlights for Executive Order VR-104-J

NOTE: Global change for Executive Order and Installation, Operation, and Maintenance Manual; changed revision letter from I to J.

Part I: Executive Order

Legal Language:

- Extended certification of the Husky Model 5885 P/V vent valve is extended by one year from the date when Executive Order VR-104-J is signed.

**State of California
AIR RESOURCES BOARD**

EXECUTIVE ORDER VR-104-I

Relating to Certification of Vapor Recovery Systems

**CNI Manufacturing, Inc.
CNI Manufacturing Phase I Vapor Recovery System**

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 the filling of underground gasoline storage tanks (Phase I system), in its Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities (CP-201) as last amended April 23, 2015, 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 I EVR systems with emission standards;

WHEREAS, CNI Manufacturing Inc. requested and was granted certification of the CNI Manufacturing Phase I Vapor Recovery System (CNI Manufacturing system) pursuant to CP-201 on September 26, 2003, by Executive Order VR-104-A, and last modified on May 29, 2017, by Executive Order VR-104-H;

WHEREAS, additional time is necessary to gather and evaluate information needed to complete the certification renewal of the Husky Model 5885 pressure-vacuum (P/V) vent valve;

WHEREAS, Husky requested amendment of the Installation, Operation, and Maintenance Manual for the Husky Model 5885 P/V vent valve;

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 CNI Manufacturing System, as amended to include the components listed above, conforms with all requirements set forth in CP-201 and results in a vapor recovery system which is at least 98.0 percent efficient when tested pursuant to test procedure TP-201.1, Volumetric Efficiency for Phase I Systems (July 26, 2012).

NOW THEREFORE, IT IS HEREBY ORDERED that the CNI Manufacturing System is certified to be at least 98.0 percent efficient when installed, operated, and maintained as specified herein and in the following exhibits. Exhibit 1 contains a list of the certified components. Exhibit 2 contains the performance standards and specifications, typical installation drawings, and maintenance intervals for the CNI Manufacturing System as installed in a GDF. Exhibit 3 contains the manufacturing performance specifications. Exhibit 4 contains the manufacturer warranties. Exhibit 5 is the below-grade vaulted tank configuration.

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 component(s) 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 CNI Manufacturing, Franklin Fueling Systems, OPW, Husky, and EMCO Wheaton shall meet the manufacturing performance specifications as provided in Exhibit 3.

IT IS FURTHER ORDERED that the certified CNI Manufacturing System shall be installed, operated, and maintained in accordance with the CARB Approved Installation, Operation and Maintenance Manual for the CNI Manufacturing Phase I EVR System as Certified by Executive Order VR-104-I. Equipment shall be inspected at the interval specified and per the procedures identified in the CARB Approved Installation, Operation, and Maintenance Manual. A copy of the Executive Order and the CARB Approved Installation, Operation, and Maintenance Manual shall be maintained at each GDF where a certified CNI Manufacturing 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 manufacturer's certification application or documents and certified hereby is prohibited and deemed inconsistent with this certification, and is subject to enforcement action, 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 be made a condition of certification. The owner or operator of the CNI Manufacturing System shall conduct, and pass, the following tests no later than 60 days after startup and at least once every three (3) years after startup testing, 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-201.1B, Static Torque of Rotatable Phase I Adaptors (October 8, 2003); and
- Depending on the system configuration, either TP-201.1C, Leak Rate of Drop Tube/Drain Valve Assembly (October 8, 2003) or TP-201.1D, Leak Rate of Drop Tube Overfill Prevention Devices and Spill Container Drain Valves (October 8, 2003).

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 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). Alternate test procedures, including the most recent versions of the test procedures listed above, may be used if determined by the Executive Officer or his delegate, in writing, to yield comparable results. Testing the pressure/vacuum (P/V) vent valve will be at the option of the Districts. If P/V vent valve testing is required by the District, the test shall be conducted in accordance with TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves (October 8, 2003) and Exhibit 2.

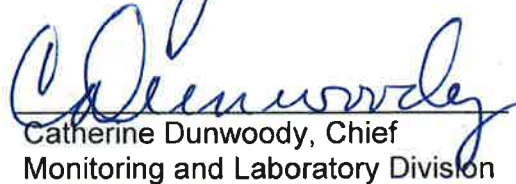
IT IS FURTHER ORDERED that the CNI Manufacturing System shall be compatible with gasoline in common use in California at the time of certification and any modifications to comply with future California gasoline requirements shall be submitted in writing pursuant to the process for Executive Order amendments set forth in Section 18 of CP-201 and approved in writing by the Executive Officer or his delegate.

IT IS FURTHER ORDERED that the certification of the CNI Manufacturing System with the exception of the Husky Model 5885 P/V vent valve shall remain valid through May 31, 2021.

IT IS FURTHER ORDERED that to provide the Executive Officer with the necessary time to fully gather and evaluate information to make a determination regarding the renewal certification of the Husky Model 5885 P/V vent valve consistent with Sections 17.3 and 17.4 of CP 201, the certification of the Husky Model 5885 P/V vent valve is extended for one year from the date when this Executive Order is signed.

IT IS FURTHER ORDERED that Executive Order VR-104-H issued on May 29, 2017, is hereby superseded by this Executive Order. CNI Manufacturing Systems certified under Executive Order VR-104-A to H 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. This Executive Order shall apply to new installations or major modification of existing Phase I systems.

Executed at Sacramento, California, this 1st day of June 2018.


Catherine Dunwoody, Chief
Monitoring and Laboratory Division

Attachments:

- Exhibit 1 CNI Manufacturing Phase I Vapor Recovery System Equipment List
- Exhibit 2 Installation, Maintenance and Compliance Specifications
- Exhibit 3 Manufacturing Performance Standards and Specifications
- Exhibit 4 Manufacturer Warranties
- Exhibit 5 Vaulted Aboveground Storage Tank Configuration (*Optional*)

Exhibit 1

CNI Manufacturing Phase I Vapor Recovery System Equipment List

<u>Equipment</u>	<u>Manufacturer/Model Number</u>
Containment Assembly	CNI Manufacturing XXXX-31103 (31103 denotes EVR System) 2 point System Configuration: XXXX (four digit code) indicates: CON1 – Vapor Assembly (5, 10, and 15 gallons) CON2 – Product Assembly (5, 10, and 15 gallons) Stand Alone/Direct Bury Configuration ¹ : XXXX (four digit code) indicates: 205P - Product Assembly 205V - Vapor Assembly (205 series are 5 gallons) 214P - Product Assembly 214V - Vapor Assembly (214 series are 5 gallons)
Pressure/Vacuum Vent Valve	OPW 723V FFS PV-Zero Husky 5885
Gravity Cover	CNI Mfg. GAC (used for CON1, CON2 or 214 Containments)
Snap Tight Cover	CNI Mfg. STP-200 (used for CON1, CON2 or 205 Containments)
Snap Tight Cover Ring	CNI Mfg. STP-39

¹ CNI Mfg. Stand Alone/Direct Bury Configurations 205P, 205V, 214P and 214V are not certified for use in a sump configuration.

Exhibit 1 (continued)

Drain Valve	CNI Mfg. RP12-Push
Dust Caps	CNI Mfg. 64 (product) CNI Mfg. 611-VR-3 (vapor) CompX CSP1-634LPC (product) CompX CSP3-1711LPC (vapor) CompX CSP2-634LPC (product) CompX CSP4-1711LPC (vapor) OPW 634LPC (product) OPW 1711LPC (vapor)
Dust Cap Gasket	CNI Mfg. 65 CNI Mfg. RP65 (replacement)
Product Adaptor	Emco Wheaton Retail A0030-124 Emco Wheaton Retail A0030-124S
Vapor Adaptor	Emco Wheaton Retail A0076-124 Emco Wheaton Retail A0076-124S
Jam Nut	CNI Mfg. 200JN
Tank Gauge Port Components	CNI Mfg. 613BC set (Cap 64, Adaptor 613)
Drop Tube²	CNI Mfg. DT100 (various lengths)
CNI Mfg. Drop Tube O-Ring³	CNI Mfg. DT101 (original) CNI Mfg. RP101 (replacement)
Drop Tube Overfill Prevention Valve²	EMCO Wheaton Retail A1100EVR Guardian
EMCO Wheaton Drop Tube O-Ring⁴	EMCO Wheaton Retail 569461
Fuel Lock⁵	McGard FL1 – Stick Only Fuel Lock (125007) McGard FL2 – Stick/Sampling Fuel Lock (125008)
Bladder Plug	McGard PSI104
Emergency Vent	Exhibit 5 (for below-grade vaulted tank configuration)

² If these components are installed or required by regulations of other agencies, only those components and model numbers specified above shall be installed or used.

³ O-Rings used only with the CNI Mfg. DT100 drop configuration.

⁴ O-Ring used only with the EMCO Wheaton Retail A1100EVR Guardian Overfill drop tube configuration.

⁵ If these components are installed, only those components and model numbers specified above shall be installed or used.

Exhibit 1 (continued)

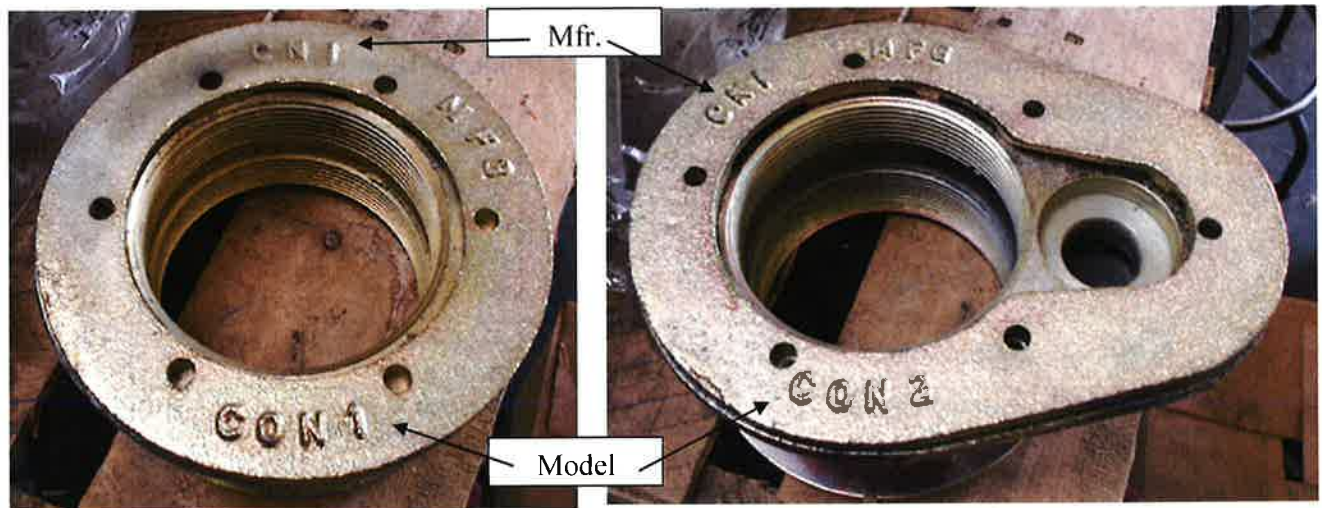
Table 1
Components Exempt from Identification Requirements

Component Name	Manufacturer	Model Number
Replacement Drain Valve	CNI Mfg.	RP12-Push
Jam Nut	CNI Mfg.	200JN
Tank Gauge Port Components (Cap and Adaptor)	CNI Mfg.	613BC Cap and Adaptor set; p/n 64 and 613
Dust Cap gaskets	CNI Mfg.	Gasket 65 original, RP65 for replacement
O-Rings and gaskets for product and vapor adaptors	EMCO Wheaton Retail	O-rings in kit 494301, gasket 409628; O-rings in kit 493995
Drop Tube O-Ring	CNI Mfg. EMCO Wheaton Retail	DT101 original, RP101 replacement 56941
Drop Tube ²	CNI Mfg.	DT100
Containment Assembly	CNI Mfg.	XXXX-31103*
Gravity Cover	CNI Mfg.	CNI Mfg. GAC
Snap Tight Cover	CNI Mfg.	CNI Mfg. STP-200
Snap Tight Cover Ring	CNI Mfg.	CNI Mfg. STP-39
Fuel Lock	McGard	FL1, FL2

***CON1, CON2, 205, and 214 shall be marked on each containment assembly.**

² If these components are installed or required by regulations of other agencies, only those components and model numbers specified above shall be installed or used.

Exhibit 1 (continued)
Component Identification & Location

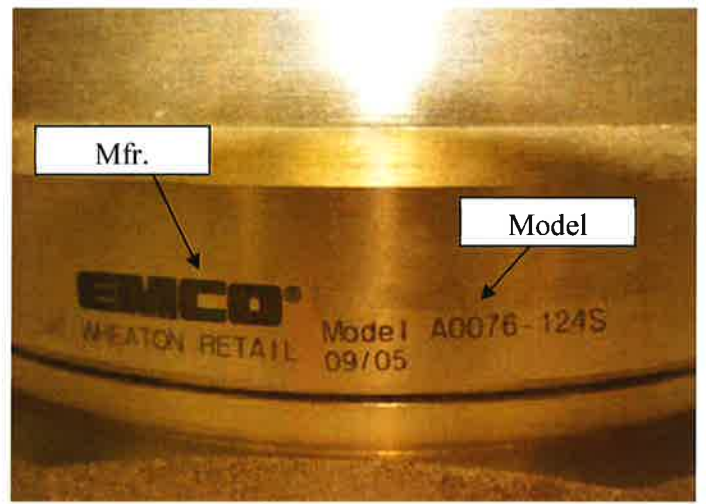
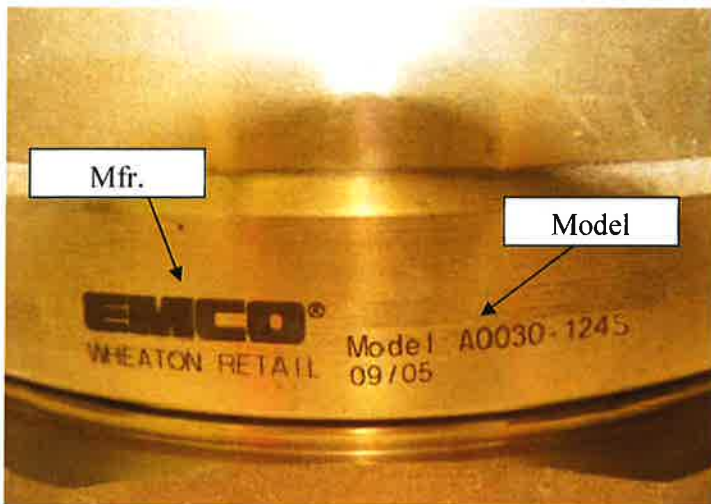


CNI Mfg. CON1 and CON2 Containment Assemblies

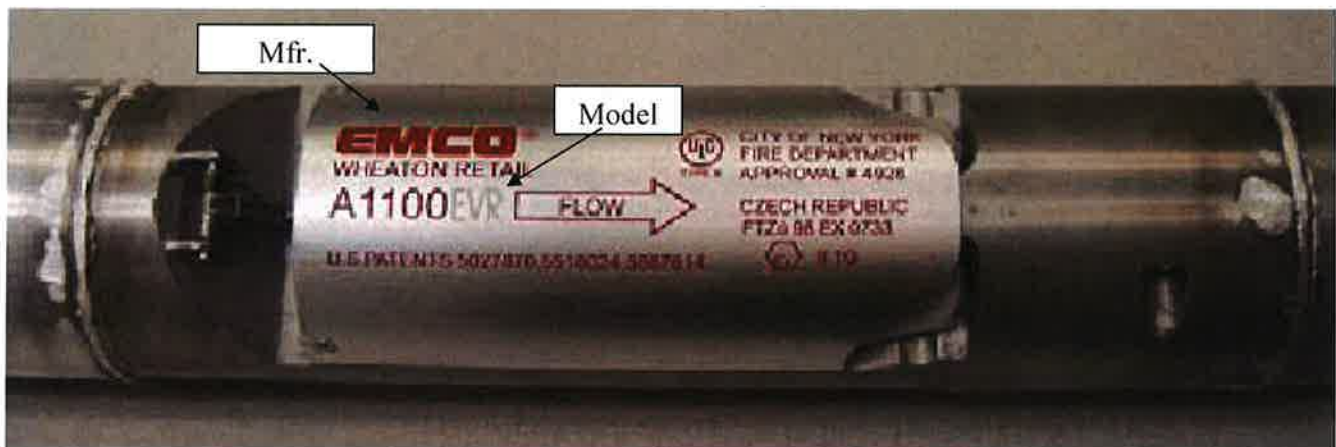


CNI Mfg. Model 205 and 214 Containment Assemblies

Exhibit 1 (continued)
Component Identification & Location

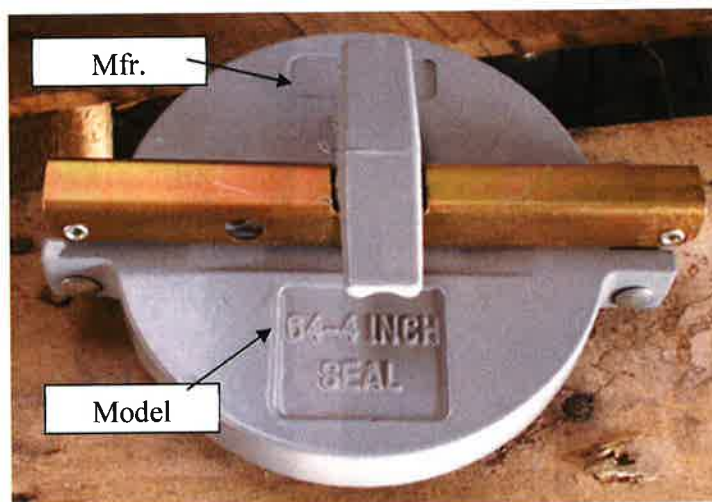


EMCO Wheaton Retail
Model A0030-124S Product Adaptor and Model A0076-124S Vapor Adaptor
(Models A0030-124 and A0076-124 identified in the same location)

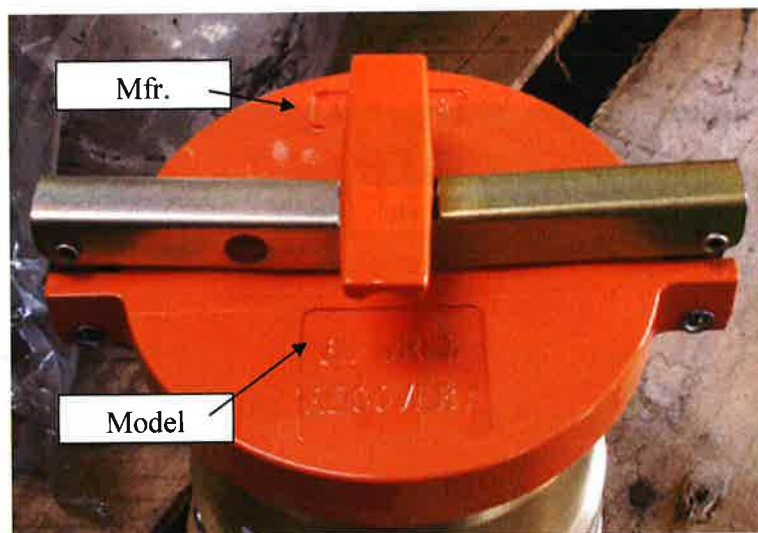


EMCO Wheaton Retail
Model A1100EVR Overfill Prevention Valve

Exhibit 1 (continued)
Component Identification & Location



CNI Mfg. Model 64 Dust Cap



CNI Mfg. Model 611-VR-3 Dust Cap

Exhibit 1 (continued)
Component Identification & Location



OPW 634LPC Product Dust



OPW 1711LPC Vapor Dust

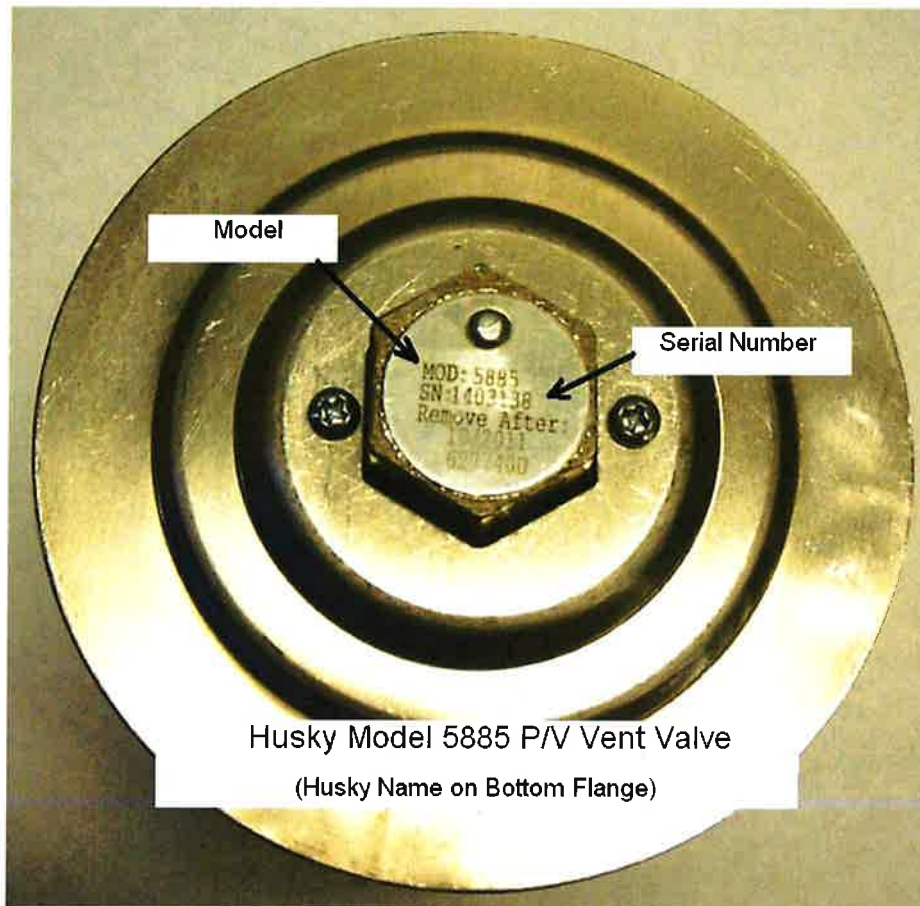
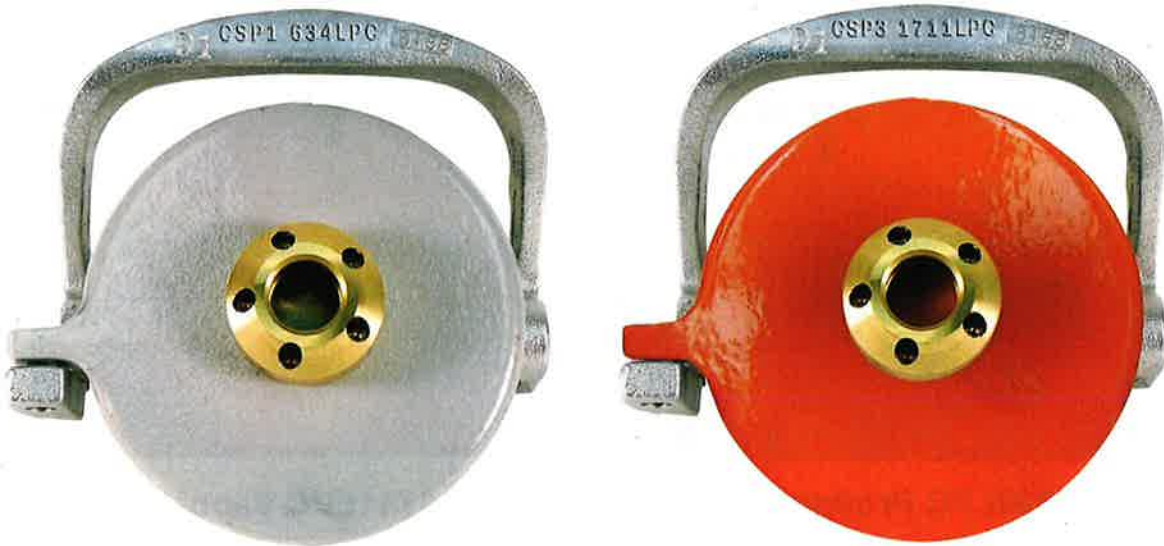


Exhibit 1 (continued)
Component Identification and Location

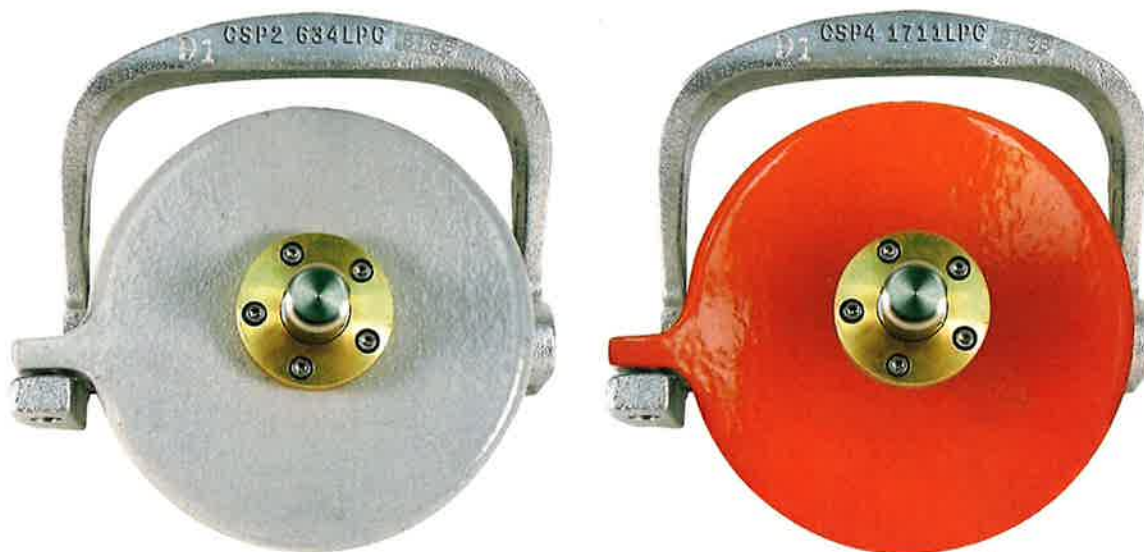


CompX CSP1-634LPC Product Dust Cap CompX CSP3-1711LPC Vapor Dust Cap



CompX Tank Commander Lid
Locks onto CSP1-634LPC and CSP3-1711LPC Dust Caps

Exhibit 1 (continued)
Component Identification and Location



CompX CSP2-634LPC Product Dust Cap CompX CSP4-1711LPC Vapor Dust Cap



CompX Tank Commander Lid
Locks onto CSP2-634LPC and CSP4-1711LPC Dust Caps

2

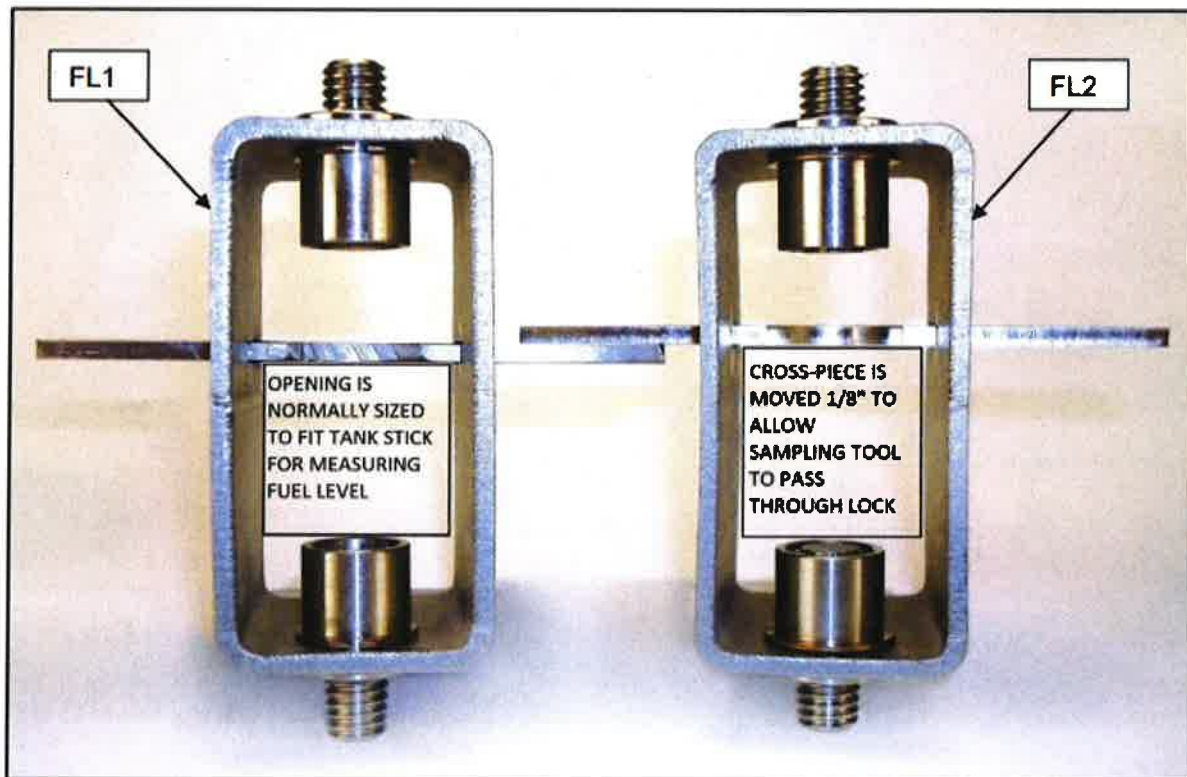


2

Exhibit 1 (continued)
Component Identification and Location



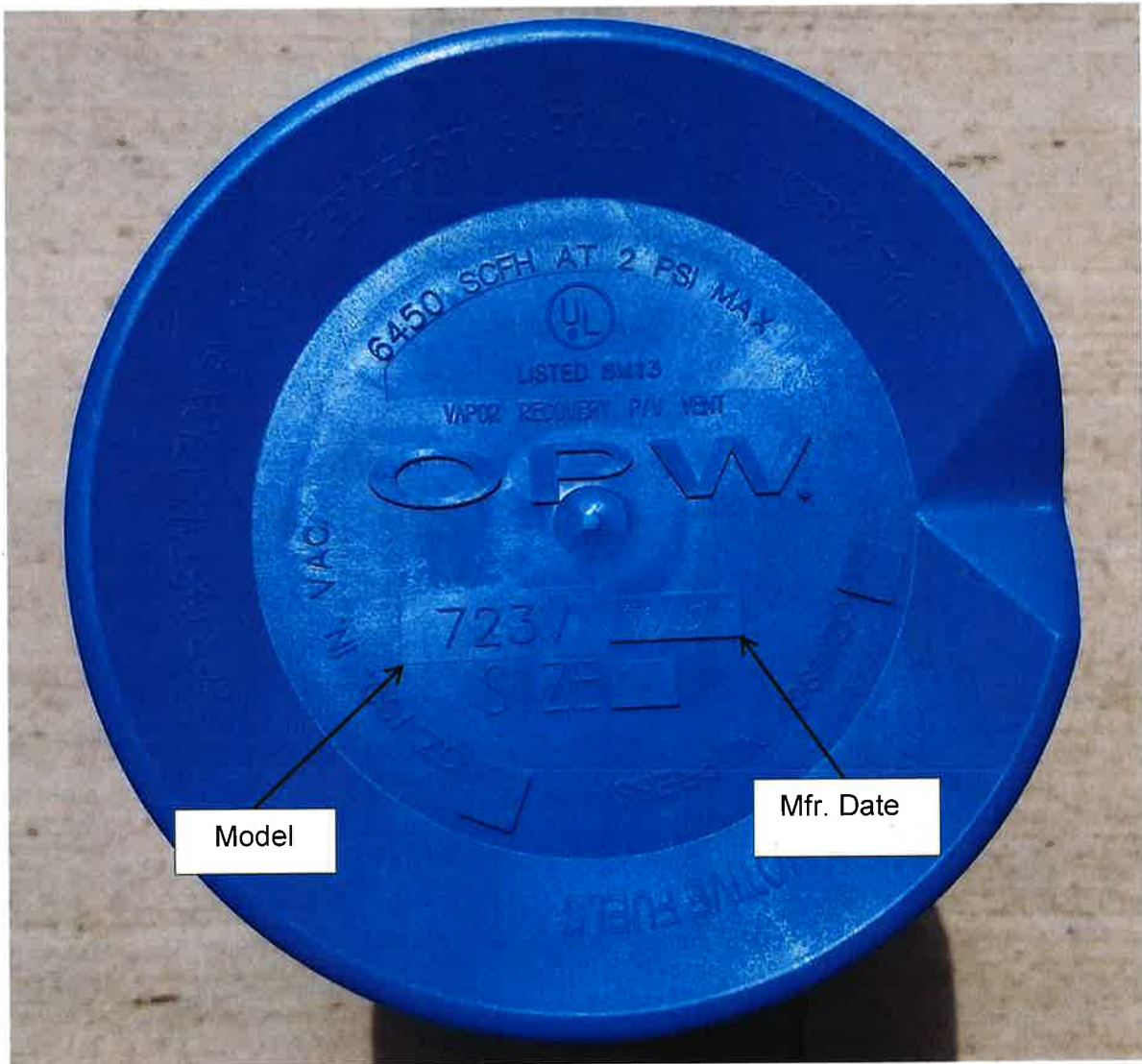
McGard Fuel Lock Installation Position⁶



McGard Fuel Lock (FL1 on Left, FL2 on Right)

⁶ Optional component, but if installed this picture shows the correct installation location in the pipe just below the Product Rotatable Adaptor in the drop tube.

Exhibit 1 (continued)
Component Identification and Location



OPW Model 723V Pressure/Vacuum Vent Valve

Exhibit 2

Installation, Maintenance and Compliance Specifications

This exhibit contains the installation, maintenance and compliance standards and specifications applicable to a CNI Manufacturing Phase I Vapor Recovery System (CNI Manufacturing System) installed in a gasoline dispensing facility (GDF).

General Specifications

1. Typical installations of the CNI Manufacturing System are shown in Figures 2A, 2B, 2C 2D, 2E, 2F, and 2G.
2. The CNI Manufacturing System shall be installed, operated and maintained in accordance with the ARB Approved Installation, Operation and Maintenance Manual for the CNI Manufacturing Phase I Vapor Recovery System.
3. Any repair or replacement of system components shall be done in accordance with the ARB Approved Installation, Operation and Maintenance Manual for the CNI Manufacturing Phase I Vapor Recovery System.
4. Unless otherwise specified in this Executive Order (EO), the CNI Manufacturing Phase I Vapor Recovery System shall comply with the applicable performance standards and performance specifications in CP-201.
5. Installation, maintenance and repair of system components, including removal and installation of such components in the course of any required tests, shall be performed by CNI Mfg. certified technicians. Additional certifications may be required in accordance with District requirements.

Pressure/Vacuum Vent Valves For Storage Tank Vent Pipes

1. No more than three certified pressure/vacuum vent valves (P/V Valves) listed in Exhibit 1 shall be installed on any GDF underground storage tank system.
2. Compliance determination of the following P/V valve performance specifications shall be at the option of the districts:
 - a. The leak rate of each P/V valve shall not exceed 0.05 cubic feet per hour (CFH) at 2.0 inches H₂O positive pressure and 0.21 CFH at 4.0 inches H₂O negative pressure as determined by TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves (October 8, 2003).

- b. The positive pressure setting is 2.5 to 6.0 inches of H₂O and the negative pressure setting is 6.0 to 10.0 inches of H₂O as determined by TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves (October 8, 2003).
3. Compliance determination of the P/V valve performance specifications in items 2a and 2b for the FFS PV-Zero P/V vent valve shall be conducted with the valve remaining in its installed position on the vent line(s). The PV-Zero section of the ARB-Approved Installation, Operation and Maintenance Manual for the CNI Manufacturing Phase I Vapor Recovery System outlines the equipment needed to test the valve in its installed position.
4. At least one pressure/vacuum (P/V) vent valve shall be installed on each tank vent. If two or more P/V vent valves are used, they shall be installed in parallel, so that each can serve as a backup to the other if one should fail to open properly. A manifold may be installed on the vent pipes to reduce the number of potential leak sources and P/V valves installed. Vent pipe manifolds shall be constructed of steel pipe or an equivalent material that has been listed for use with gasoline. If a material other than steel is used, the GDF operator shall make available information demonstrating that the material is compatible for use with gasoline. One example of a typical vent pipe manifold is shown in Figure 2H. This shows only one typical configuration: other manifold configurations may be used. For example, a tee may be located in a different position, or fewer vent pipes may be connected, or more than one P/V valve may be installed on the manifold.
5. Each P/V valve shall have permanently affixed to it a yellow, gold, or white-colored label with black lettering stating the following specifications:

Positive pressure setting: 2.5 to 6 inches H₂O
Negative pressure setting: 6.0 to 10.0 inches H₂O
Positive Leak rate: 0.05 CFH at 2.0 inches H₂O
Negative Leak rate: 0.21 CFH at 4.0 inches H₂O

Rotatable Product and Vapor Recovery Adaptors

1. Rotatable product and vapor recovery adaptors shall be capable of at least 360-degree rotation and have an average static torque not to exceed 108 pound-inch (9 pound-foot). Compliance with this requirement shall be demonstrated in accordance with TP-201.1B, Static Torque of Rotatable Phase I Adaptors (October 8, 2003).

Use CNI Manufacturing Torque Test Tool Part Number EVRSYS100, as an equivalent Torque Test Tool per section 5.2 of TP-201.1B, rather than Phil-Tite

Torque Test Tool Part Number 6004. The Phil-Tite tool is not compatible with CNI Manufacturing dust caps.

2. The vapor adaptor poppet shall not leak when closed. Compliance with this requirement shall be verified by the use of commercial liquid leak detection solution, or by bagging, when the vapor containment space of the underground storage tank is subjected to a non-zero gauge pressure. (Note: leak detection solution will detect leaks only when positive gauge pressure exists).

Vapor Recovery and Product Adaptor Dust Caps

Dust caps with intact gaskets shall be installed on all Phase I tank adaptors.

Spill Container Drain Valve

The spill container drain valve shall be configured to drain liquid directly into the drop tube and shall be isolated from the underground storage tank ullage space. The leak rate of the drain valve shall not exceed 0.17 CFH at 2.0 inches H₂O. Depending on the presence of the drop tube overfill prevention device, compliance with this requirement shall be demonstrated in accordance with either TP-201.1C, Leak Rate of Drop Tube/Drain Valve Assembly or TP-201.1D (October 8, 2003), Leak Rate of Drop Tube Overfill Prevention Devices and Spill Container Drain Valves (October 8, 2003).

Phase I Drop-Tubes with Overfill Prevention Devices

1. The Drop Tube Overfill Prevention Device (overfill device) is designed to restrict the flow of gasoline delivered to the underground storage when liquid levels exceed a specified capacity. The drop tube overfill device is not a required component of the vapor recovery system, but maybe installed as an optional component of the system. Other requirements may apply.
2. The leak rate of Phase I drop-tube overfill prevention devices shall not exceed 0.17 CFH at 2.0 inches H₂O). The leak rate shall be determined in accordance with TP-201.1D, Leak Rate of Drop Tube Overfill Prevention Devices and Spill Container Drain Valves (October 8, 2003).
3. The discharge opening of the fill-pipe must be entirely submerged when the liquid level is six inches above the bottom of the tank.

Phase I Drop-Tubes without Overfill Prevention Devices

1. Drop tubes that do not have an overfill prevention device shall not leak and shall be tested in accordance with TP-201.1C, Leak Rate of Drop Tube/Drain Valve Assembly (October 8, 2003).
2. The discharge opening of the fill-pipe must be entirely submerged when the liquid level is six inches above the bottom of the tank.

Vapor Recovery Riser Offset

1. The vapor recovery tank riser may be offset from the tank connection to the vapor recovery Spill Container provided that the maximum horizontal distance (offset distance) does not exceed twenty (20) inches. One example of an offset is shown in Figure 2I.
2. The vapor recovery riser shall be offset using commercially available, four (4) inch diameter steel pipe fittings.

Tank Gauge Port Components

The tank gauge adaptor and cap are paired. Therefore, an adaptor manufactured by one company shall be used only with a cap manufactured by the same company.

Warranty

Each manufacturer listed in Exhibit 1 shall include a warranty tag with the certified component(s). The manufacturer warranty tag, included with each component, shall be provided to the service station owner/operator at the time of installation.

Connections and Fittings

All connections and fittings not specifically certified with an allowable leak rate shall not leak. The absence of vapor leaks shall be verified with the use of commercial liquid leak detection solution, or by bagging, when the vapor containment space of the underground storage tank is subjected to a non-zero gauge pressure. (Note: leak detection solution will detect leaks only when positive gauge pressure exists.)

Maintenance Records

Each GDF operator/owner shall keep records of maintenance performed at the facility. Such records shall be maintained on site or in accordance with district requirements or policies. Additional information may be required in accordance with district requirement or policies. The records shall include the maintenance or test date, repair date to correct test failure, maintenance or test performed, affiliation, telephone number, name and Certified Technician Identification Number, of individual conducting maintenance or test. An example of a GDF Maintenance Record is shown in Figure 2J.

Table 2-1
Gasoline Dispensing Facility Compliance Standards and Specifications

Component/System	Test Method	Standard or Specification
Rotatable Phase I Adaptors	TP-201.1B	Minimum, 360-degree rotation Maximum, 108 pound-inch average static torque
Overfill Prevention Device	TP-201.1D	Leak rate \leq 0.17 CFH at 2.0 inches H ₂ O
Spill Container Drain Valve	TP-201.1C or TP-201.1D	\leq 0.17 CFH at 2.0 inches H ₂ O
P/V Vent Valve ¹	TP-201.1E	Positive pressure setting: 2.5 to 6.0 inches H ₂ O Negative pressure setting: 6.0 to 100 inches H ₂ O Positive Leak rate: 0.05 CFH at 2.0 inches H ₂ O Negative Leak rate: 0.21 CFH at -4.0 inches H ₂ O
Gasoline Dispensing Facility	TP-201.3	As specified in TP-201.3 and/or CP-201
All connections and fittings certified without an allowable leak rate	Leak Detection Solution or bagging	No Leaks

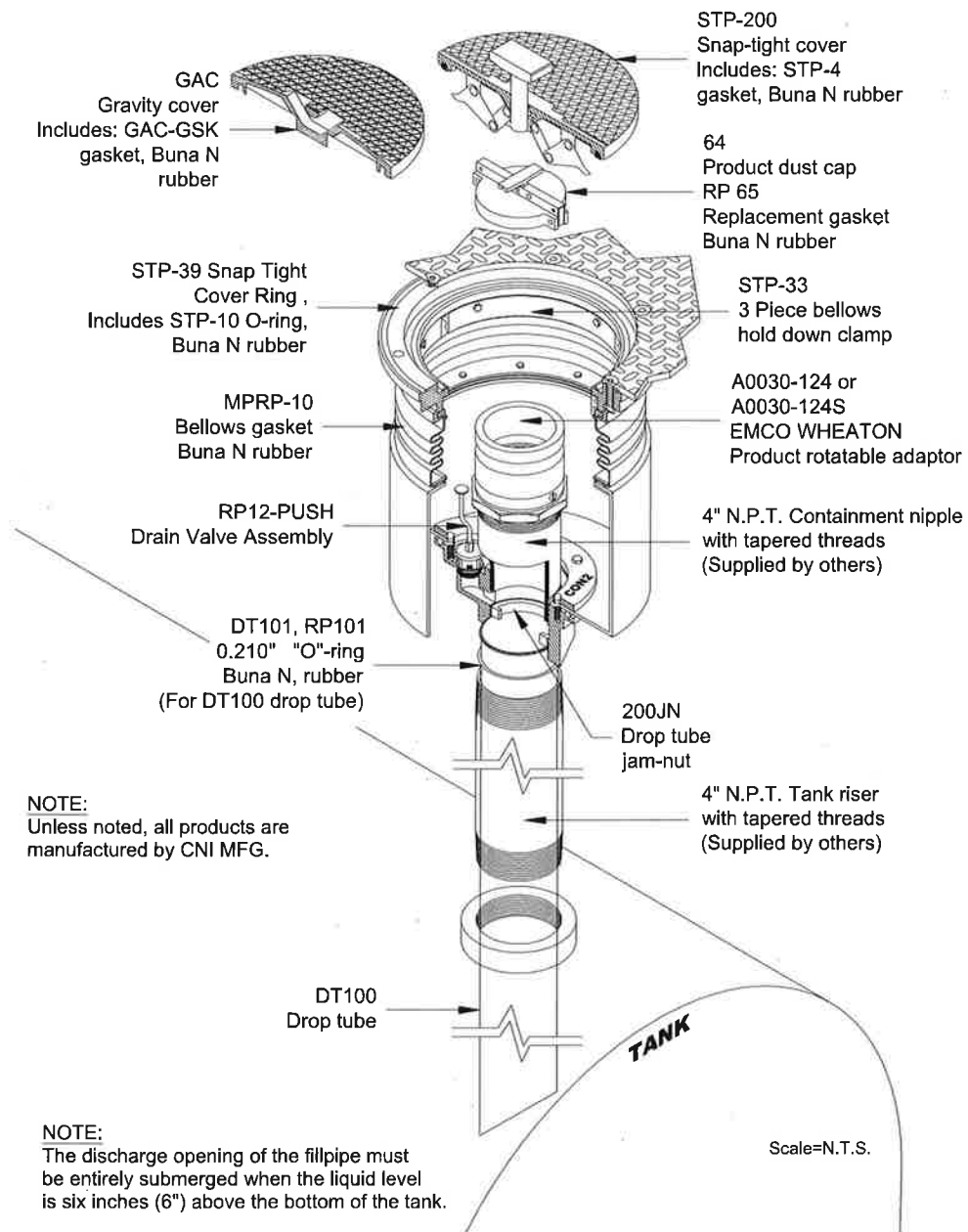
¹ Compliance determination at the option of the district.

Table 2-2
Maintenance Intervals for System Components²

Manufacturer	Component	Maintenance Interval
OPW	Pressure/Vacuum Vent Valve	Annual
Husky	Pressure/Vacuum Vent Valve	Annual
FFS	Pressure/Vacuum Vent Valve	Annual
CNI Manufacturing	Tank Gauge Port Components	Annual Inspection
CNI Manufacturing	Dust Caps	Annual Inspection
CompX	Dust Caps	Annual Inspection
OPW	Dust Caps	Annual Inspection
CNI Manufacturing	Drop Tube	Annual Test
EMCO Wheaton Retail	Drop Tube Overfill Prevention Valve	Annual Tests
EMCO Wheaton Retail	Rotatable Phase I Product and Vapor Adaptors	Annual Tests
CNI Manufacturing	Spill Container Drain Valve	18 Months
CNI Manufacturing	Spill Containment	Annual Inspection

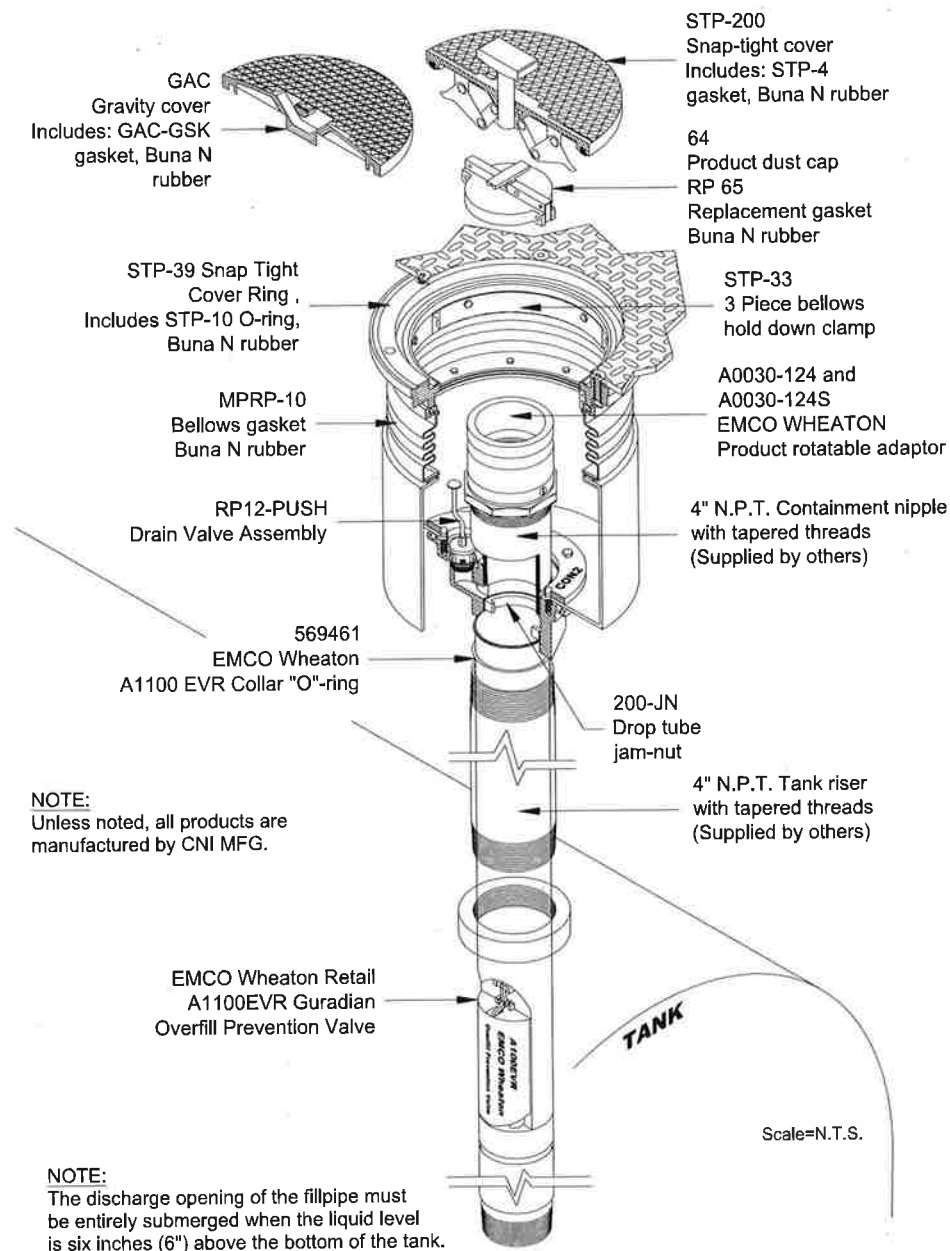
² Maintenance must be conducted within the interval specified from the date of installation and at least within the specified interval thereafter.

Figure 2A
Typical Product Side Installation of CNI Manufacturing 2 Point System
Model CON2 using DT100 Drop Tube⁷



⁷ McGard FL1 or FL2 Fuel Lock (Optional - Not Pictured), if installed, would be positioned inside the containment nipple below the rotatable adaptor.

Figure 2B
Typical Product Side Installation of CNI Manufacturing 2 Point System
Model CON2 using EMCO Wheaton A1100EVR Guardian Overfill Prevention⁸



⁸ McGard FL1 or FL2 Fuel Lock (Optional - Not Pictured), if installed, would be positioned inside the containment nipple below the rotatable adaptor
 Executive Order VR-104-I, CNI Manufacturing Phase I Vapor Recovery System, Exhibit 2

Figure 2C
Typical Vapor Side Installation of CNI Manufacturing 2 Point System
Model CON1

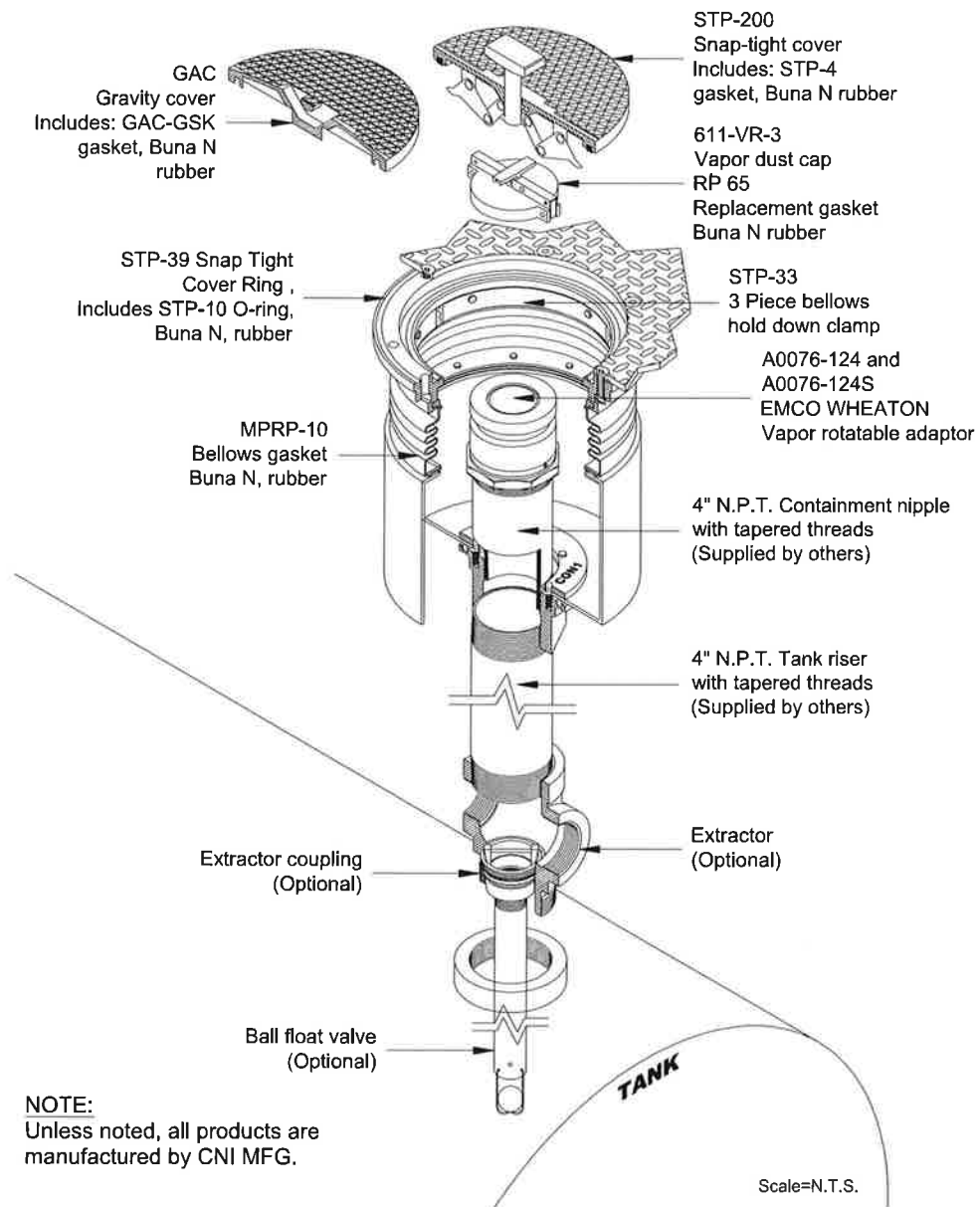
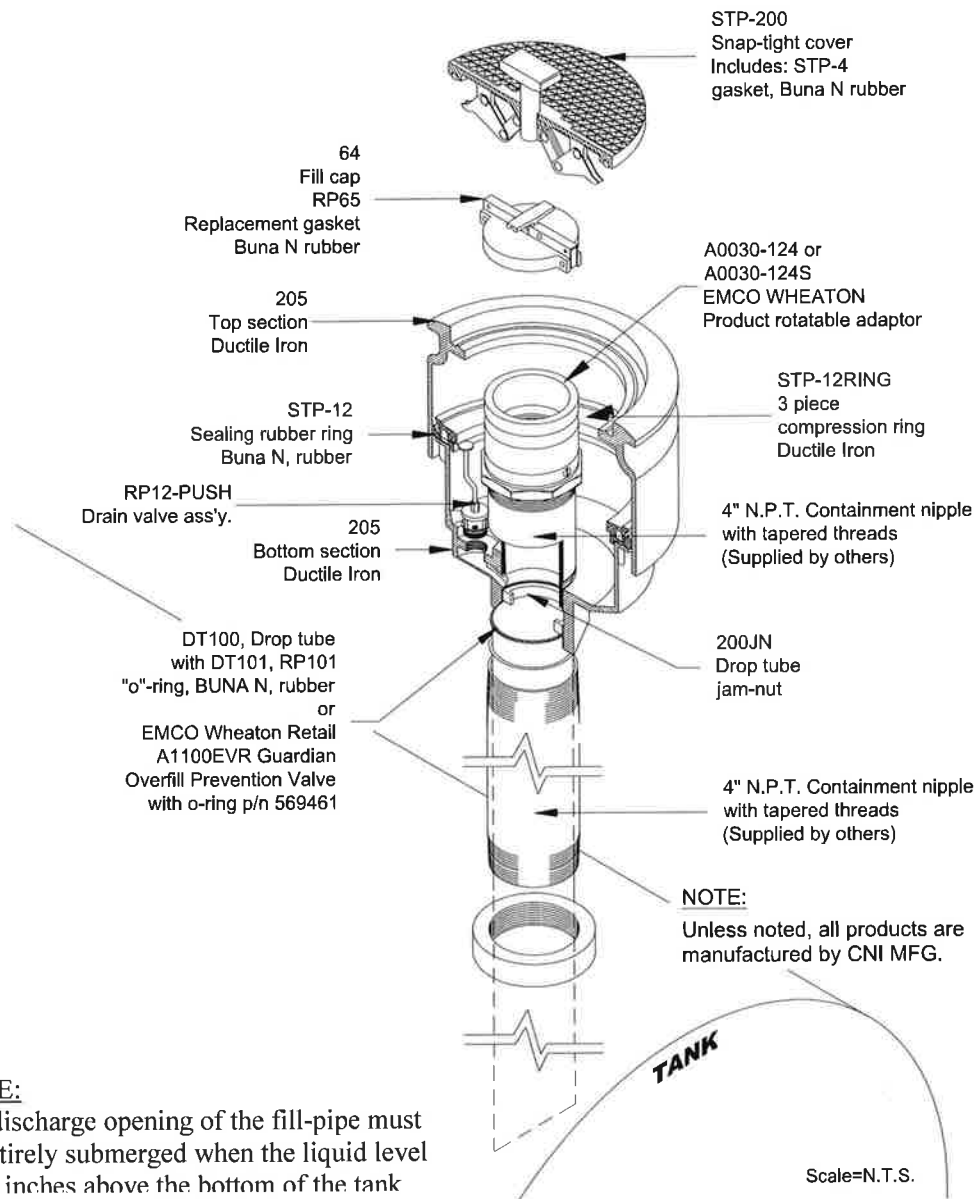


Figure 2D
Typical Product Side Installation of
CNI Manufacturing Stand Alone/Direct Bury System⁹



NOTE:

The discharge opening of the fill-pipe must be entirely submerged when the liquid level is six inches above the bottom of the tank

⁹ McGard FL1 or FL2 Fuel Lock (Optional - Not Pictured), if installed, would be positioned inside the containment nipple below the rotatable adaptor
 Executive Order VR-104-I, CNI Manufacturing Phase I Vapor Recovery System, Exhibit 2

Figure 2E
Typical Vapor Side Installation of
CNI Manufacturing Stand Alone/Direct Bury System

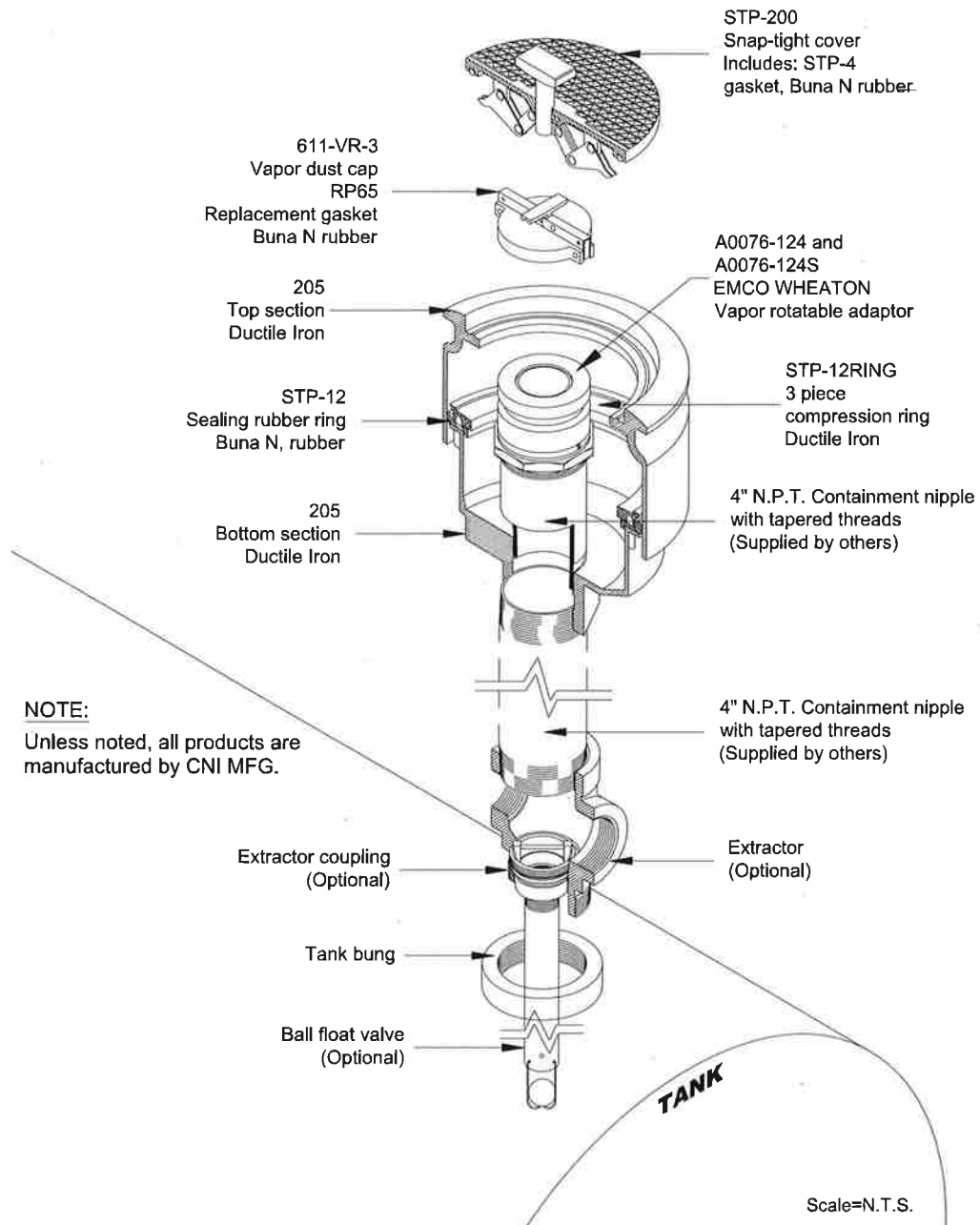
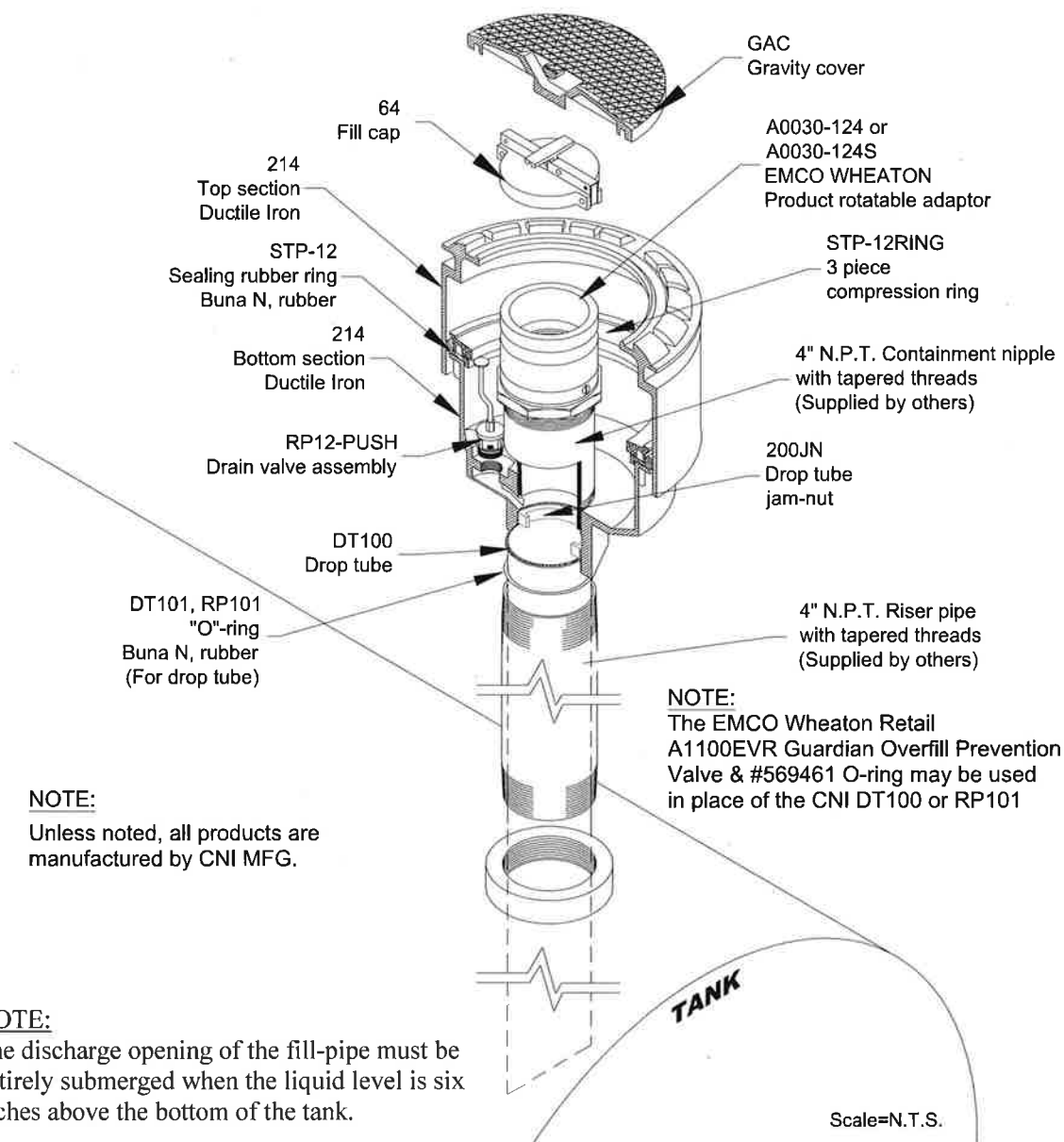


Figure 2F
Typical Product Side Installation of CNI Manufacturing Stand Alone/ Direct Bury/ System
Model No. 214P with Gravity Cover¹⁰



¹⁰ McGard FL1 or FL2 Fuel Lock (Optional - Not Pictured), if installed, would be positioned inside the containment nipple below the rotatable adaptor.

Figure 2G
Typical Vapor Side Installation of CNI Manufacturing Stand Alone/Direct Bury System
Model No. 214V with Gravity Cover

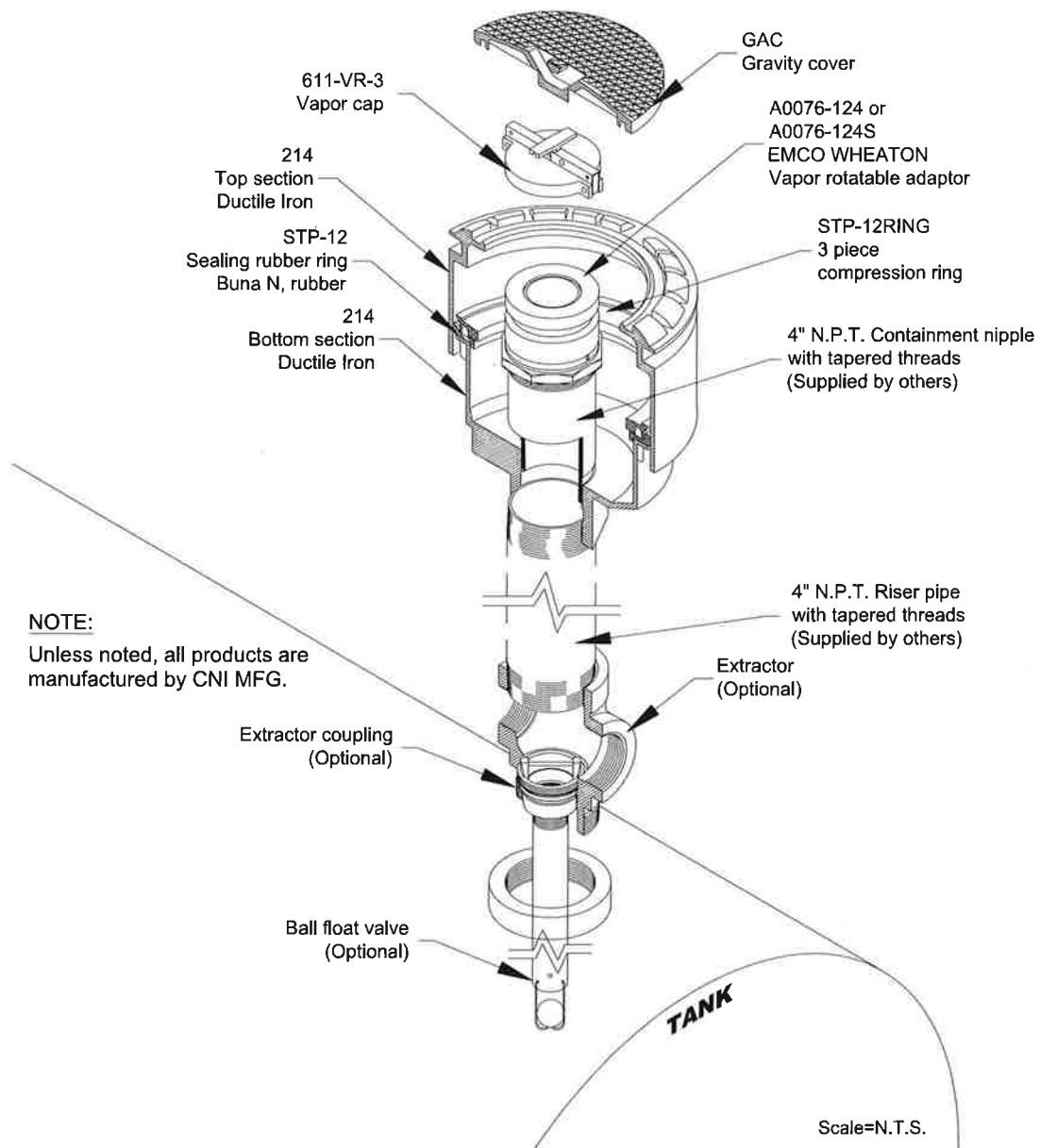
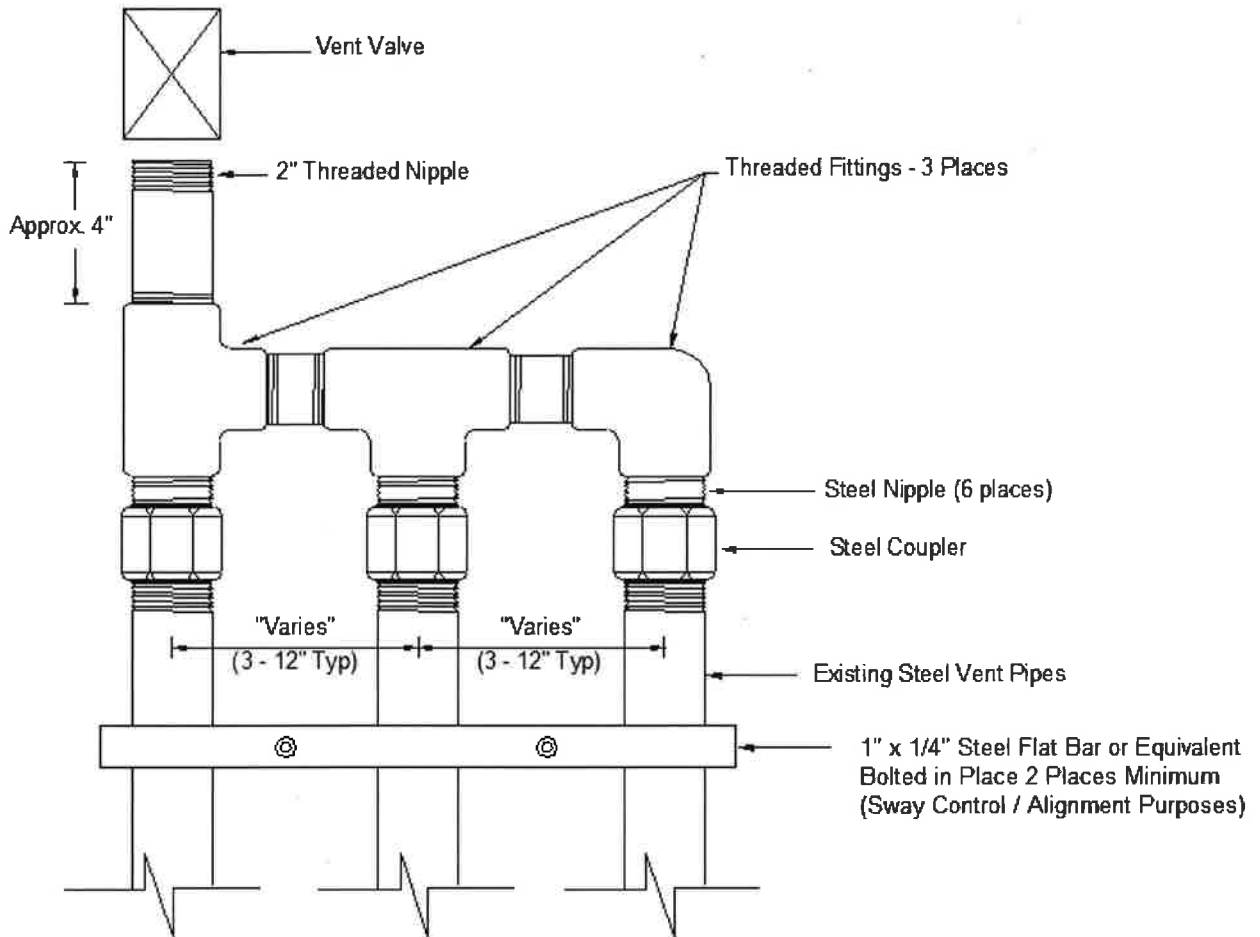
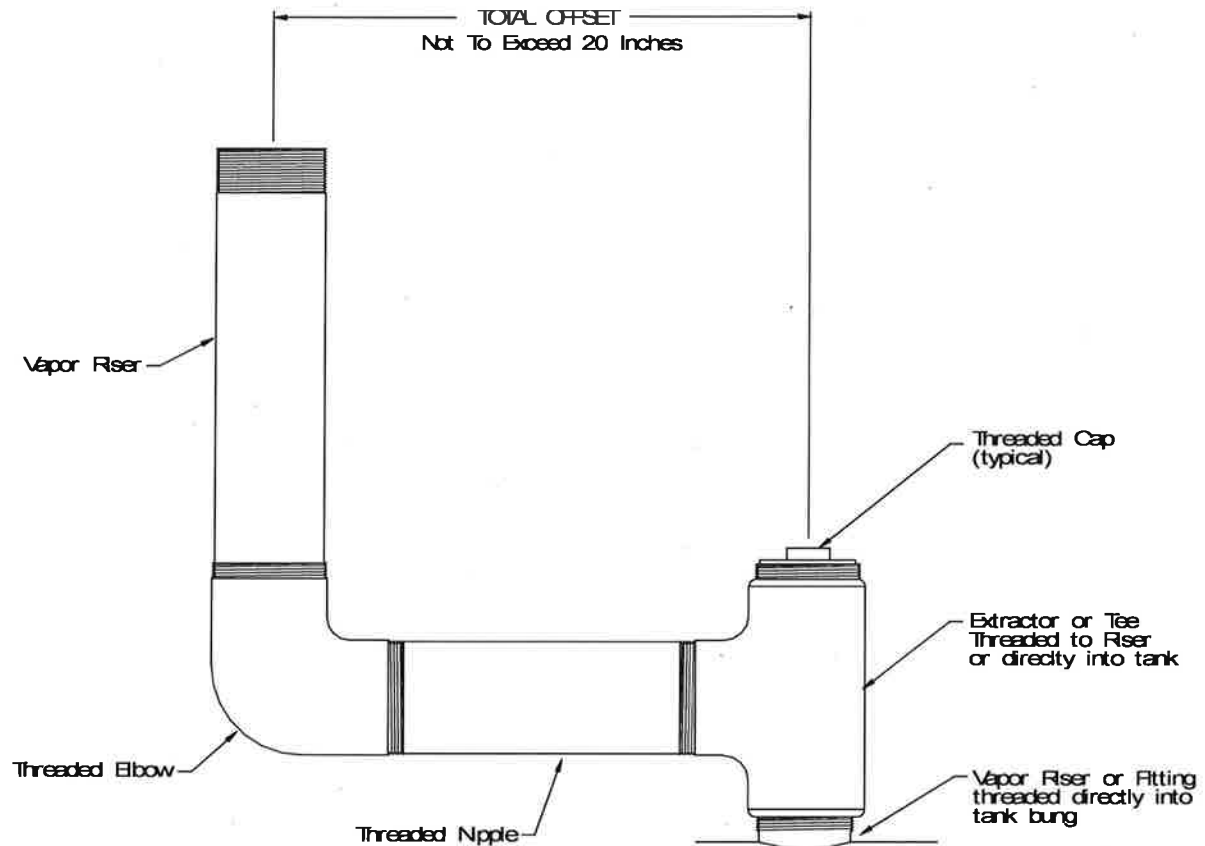


Figure 2H
Typical Vent Pipe Manifold



Note: This shows only one typical configuration; other manifold configurations may be used. For example, a tee may be located in a different position, or fewer vent pipes may be connected, or more than one P/V valve may be installed on the manifold.

Figure 2I
Typical Vapor Recovery Riser Offset



Note: This Figure represents one instance where a vapor recovery riser has been offset in order to construct a two-point Phase I vapor recovery system. The above Figure illustrates an offset using a 90-degree elbow. However, in some instances, elbows less than 90 degrees may be used. All fittings and pipe nipples shall be 4-inch diameter similar to those of the spill container and rotatable Phase I adaptors in order to reduce back pressure during a gasoline delivery.

Figure 2J
Example of a GDF Maintenance Record

Date of Maintenance/ Test/Inspection/Failure (including date and time of maintenance call)	Repair Date To Correct Test Failure	Maintenance/Test/Inspection Performed and Outcome	Affiliation	Name and Certified Technician Identification Number of Individual Conducting Maintenance or Test	Telephone Number

Exhibit 3

Manufacturing Performance Standards and Specifications

The CNI Manufacturing System and all components shall be manufactured in compliance with the applicable Phase I performance standards and specifications in CP-201, as well as the requirements specified in this Executive Order. All components 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. Unless specified in Exhibit 2 or in the ARB Approved Installation, Operation and Maintenance Manual for the CNI Manufacturing Phase I Vapor Recovery System, the requirements of this section apply to the manufacturing process and are not appropriate for determining the compliance status of a GDF.

Pressure/Vacuum Vent Valves for Storage Tank Vent Pipes

1. Each pressure/vacuum vent valve (P/V valve) shall be tested at the factory for cracking pressure and leak rate at each specified pressure setting and shall be done in accordance with TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves (October 8, 2003).
2. Each P/V valve shall be shipped with a card or label stating the performance specifications listed in Table 3-1, and a statement that the valve was tested to, and met, these specifications.
3. Each P/V valve shall have permanently affixed to it a yellow, gold, or white-colored label with black lettering listing the positive and negative pressure settings and leak rate standards listed in Table 3-1. The lettering of the positive and negative pressure settings and leak rate standards on the label shall have a minimum font size of 20.

Rotatable Product and Vapor Recovery Adaptors

1. The rotatable product and vapor recovery adaptors shall not leak.
2. The product adaptor cam and groove shall be manufactured in accordance with the cam and groove specifications shown in Figure 3A of CP-201.
3. The vapor recovery adaptor cam and groove shall be manufactured in accordance with the cam and groove specifications shown in Figure 3B of CP-201.
4. Each product and vapor recovery adaptor shall be tested at the factory to, and shall meet, the specifications listed in Table 3-1 and shall have affixed to it a card or label listing these performance specifications and a statement that the adaptor was tested to, and met, such performance specifications.

Spill Container and Drain Valves

Each spill container drain valve shall be tested at the factory to, and shall meet, the specification listed in Table 3-1 and shall have affixed to it a card or label listing the performance specification and a statement that the drain valve was tested to, and met, such performance specifications.

Drop Tube Overfill Prevention Device

Each Drop Tube Overfill Prevention Device shall be tested at the factory to, and shall meet, the specification listed in Table 3-1 and shall have affixed to it a card or label stating the performance specification listed in Table 3-1 and a statement that the device was tested to, and met, such performance specification.

**Table 3-1
Manufacturing Component Standards and Specifications**

Component	Test Method	Standard or Specification
Rotatable Phase I Adaptors	TP-201.1B	Minimum, 360-degree rotation Maximum, 108 lb-inch average static torque
Rotatable Phase I Adaptors	Micrometer	Cam and Groove Standard (CP-201)
Drop Tube Overfill Prevention Device	TP-201.1D	≤0.17 CFH at 2.0 inches H ₂ O
Spill Container Drain Valve	TP-201.1C or TP-201.1D	≤0.17 CFH at 2.0 inches H ₂ O
Pressure/Vacuum Vent Valve	TP-201.1E	Positive Pressure: 2.5 to 6.0 inches H ₂ O Negative Pressure: -6.0 to 10.0 inches H ₂ O Leak rate: ≤ 0.05 CFH at +2.0 inches H ₂ O ≤ 0.21 CFH at -4.0 inches H ₂ O

Exhibit 4 Manufacturer Warranties

This exhibit includes the manufacturer warranties for all components listed in Exhibit 1, including replacement parts and subparts. The manufacturer warranty tag, included with each component, shall be provided to the service station owner/operator at the time of installation.

CNI Manufacturing Warranty Statement

CNI Manufacturing, Inc. warrants that products sold by it are free from defects in material and workmanship for a period of one year from the date of installation by a CNI EVR certified installer, licensed contractor, the initial purchaser and any subsequent purchasers within the warranty period. Proof of purchase may be required. All components are factory tested and have met all applicable performance standards and specifications. Our obligation under this warranty is limited to ongoing compliance with standards and specifications for the duration of the warranty period to repairing or replacing any product returned to our factory, freight prepaid, which proves upon inspection to have been defective. As the exclusive remedy under this limited warranty, CNI will at its sole discretion, repair, replace, or issue credit for future orders for any product that may prove defective within the one year date of installation period. (Repairs, replacements, or credits may be subject to prorated warranty for the remainder of the original warranty period, complete proper warranty claim documentation required.)

This warranty shall not apply to any product that has been altered in any way, which has been repaired by any party other than a CNI EVR certified installer, licensed contractor authorized by CNI. When failure is due to misuse, or improper installation, maintenance, electrolysis, corrosion, faulty maintenance, accident, overload, abuse, alteration or used with special attachments other than recommended by CNI Manufacturing in writing, is not covered by this guarantee. CNI shall have no liability whatsoever for special, incidental or consequential damages to any party, and shall have no liability for the cost of labor, freight, excavation, clean up, downtime, removal, installation, loss of profit, or any other cost or charges. CNI reserves the right to decline responsibility when repairs are made or attempted by others.

CNI Manufacturing Warranty Tag

WARRANTY

E.O. VR-104-I

Date of Manufacture:

Date of Installation:

CNI Manufacturing, Inc. warrants that products sold by it are free from defects in material and workmanship for a period of one year from the date of installation by a CNI EVR certified installer, licensed contractor. Proof of purchase may be required.

All components are factory tested and have met all applicable performance standards and specifications.

Our obligation under this warranty is limited to ongoing compliance with standards and specifications for the duration of the warranty period to repairing or replacing any product returned to our factory, freight prepaid, which proves upon inspection to have been defective.

As the exclusive remedy under this limited warranty, CNI will at its sole discretion, repair, replace, or issue credit for future orders for any product that may prove defective within the one year date of installation period. (Repairs, replacements, or credits may be subject to prorated warranty for the remainder of the original warranty period, complete proper warranty claim documentation required.)

This warranty shall not apply to any product that has been altered in any way, which has been repaired by any party other than a CNI EVR certified installer, licensed contractor authorized by CNI. When failure is due to misuse, or improper installation, maintenance, electrolysis, corrosion, faulty maintenance, accident, overload, abuse, alteration or used with special attachments other than recommended by CNI Manufacturing in writing, is not covered by this guarantee.

CNI shall have no liability whatsoever for special, incidental or consequential damages to any party, and shall have no liability for the cost of labor, freight, excavation, clean up, downtime, removal, installation, loss of profit, or any other cost or charges.

CNI reserves the right to decline responsibility when repairs are made or attempted by others.

RP12-PUSH: Drain valve assembly is certified not to exceed 0.17 CFH at 2 inches H2O.

Franklin Fueling Systems Warranty Statement and Tag

Franklin Fueling Systems (FFS) Enhanced Vapor Recovery (EVR) products are offered for sale under the brand names of Healy, INCON, Phil-Tite, EBW, and Franklin Fueling Systems (collectively referred to as "FFS EVR products"). FFS EVR products are fully tested at the time of manufacture to meet the applicable performance standards and specifications to which it was certified by the California Air Resource Board (CARB) for the duration of the warranty period, as indicated in the related CARB Executive Order (EO). Performance standards and specifications are listed in Exhibit 2 (System/Compliance Specifications) and Exhibit 3 (Manufacturing Performance Standards) in the related CARB EO.

FFS warrants that FFS EVR products installed in California will conform to the warranty terms and conditions required by the California Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities (CP-201) with respect to (a) transferability of warranties for FFS EVR products, (b) design changes to FFS EVR products, (c) performance specifications of the FFS EVR products, and (d) duration of the warranty period of FFS EVR products.

FFS EVR products are warranted to the initial purchaser, and any subsequent purchaser within the warranty period, for workmanship, performance, and materials when properly installed, used and maintained in accordance with the CARB Approved Installation, Operation, and Maintenance Manuals by certified technicians or an owner/operator as defined in the related CARB EO and to generally accepted industry standards.

FFS reserves the right to make changes in the design or to make additions or improvements with respect to FFS EVR products without incurring any obligation to modify or install same on previously manufactured products, upon written approval from CARB.

FFS reserves the right to change or cancel all or any part of this limited warranty, upon written approval from CARB. Any such change or cancellation will be effective for products sold by FFS after the date of such change or cancellation. No agents, distributors, dealers, or employees of FFS are authorized to make modifications to this warranty or to make additional warranties with respect to any FFS EVR products. Accordingly, any statements made by individuals, whether oral or written, shall not constitute a warranty of FFS and shall not be relied upon.

FFS warrants the workmanship and materials of FFS EVR products to be free of defects, at the time of sale by FFS, for a period of one year (12 months) from the date of installation. When warranty for FFS EVR products cannot be verified to date of installation, claims will be honored for a period of fifteen (15) months from the date of purchase. When warranty for FFS EVR product cannot be verified to date of installation or date of purchase, claims will be honored for a period of eighteen (18) months from date of manufacture by FFS (for location of date of manufacture on components, see related CARB EO Exhibit 1 – Equipment List). In all cases, installation date or purchase date will require providing formal documentation to FFS as evidence of applicable warranty coverage or date of manufacture will be used to determine duration of warranty period. Formal documentation may include, but is not limited to, FFS authorized service company and distributor work orders, startup/installation documentation, maintenance logs, and/or sales receipts.

FFS shall not be liable for any loss or damage whatsoever, including, without limitation, loss in profits, loss in sales, loss of fuel or other products, loss of use of equipment, facilities or service, costs of environmental remediation, diminution in property value, or any other special, incidental or consequential damages of any type or nature, and all such losses or damages are hereby disclaimed and excluded from this limited warranty.

Use of non-FFS replacement parts, the unauthorized addition of non-FFS items to FFS EVR products, and the unauthorized alteration of FFS EVR products will void warranty. FFS shall, as to each defect, be relieved of all obligations and liabilities under a components warranty if the FFS EVR products have been operated with any accessory, equipment, or a part not specifically approved by FFS and not manufactured by FFS to FFS design and specifications.

FFS EVR product warranty shall not apply to any products which have been mishandled, incorrectly installed or applied, altered in any way, which has been repaired by any party other than qualified technicians, or when such failure is due to misuse or conditions of use (such as, but not limited to, blown fuses, sheared breakaway screws, corrosion damage, negligence, accidents, or normal wear of plastic/rubber parts including scuff guards and seals). FFS EVR product warranty shall not apply to acts of terrorism, acts of war, or acts of God (such as, but not limited to, fire, flood, earthquake, or explosion). Unless otherwise expressly provided in a specific FFS written warranty, FFS does not provide coverage for labor or shipping charges, shall not be liable for any costs or charges attributable to any product testing, maintenance, installation, repair or removal, or any tools, supplies, or equipment need to install, repair, or remove any FFS EVR product.

Other than those FFS EVR products specifically designated for fuel concentrations of 85% ethanol with 15% gasoline (E85), FFS EVR product warranty shall not cover any components that have been in contact with fuel concentrations greater than 15% ethanol or 15% methanol by volume (up to E15/M15).

Claims for FFS EVR product warranty must be submitted in writing promptly after discovery of a defect with a Returned Goods Authorization (RGA) Number from FFS. FFS will honor warranty claims processed through FFS authorized service companies and distributors only. FFS will honor warranty claims submitted no more than thirty (30) days after the end of the applicable warranty period. Product returned for warranty inspection must be shipped freight prepaid to FFS's facilities, with the RGA Number indicated on the returned product, to the following address for inspection:

INCON branded products:
Franklin Fueling Systems, Inc.
ATTN: Warranty Department
34 Spring Hill Road
Saco, ME 04072 USA

All other FFS EVR Products:
Franklin Fueling Systems, Inc.
ATTN: Warranty Department
3760 Marsh Road
Madison, WI 53718 USA

Franklin Fueling Systems, upon inspection and after determination of a warranty defect, will at its option, repair or replace defective parts returned to FFS's facility or where the product is in use. Repaired or replaced parts will be returned freight prepaid by FFS.

A copy of this limited warranty is to be retained with the equipment, on-site with the facility owner/operator.

Component Model Number : _____
Component Date of Manufacturer : _____
Component Install Date : _____
Facility Name : _____
Facility Address : _____
Installer Name : _____
Installer Signature : _____

OPW STANDARD PRODUCT WARRANTY TAG

Notice: FlexWorks by OPW, Inc., VAPORSAVER™ and all other OPW products must be used in compliance with all applicable federal, state, provincial and local laws, rules and regulations. Product selection is the sole responsibility of the customer and/or its agents and must be based on physical specifications and limitations, compatibility with the environment and material to be handled. All illustrations and specifications in this literature are based on the latest production information available at the time of publication. Prices, materials and specifications are subject to change at any time, and models may be discontinued at any time, in either case, without notice or obligation.

OPW warrants solely to its customer (the initial purchaser and any subsequent purchasers within the warranty period) that the following products sold by OPW will be free from defects in materials and workmanship under normal use and conditions for the periods indicated:

PRODUCT	WARRANTY PERIOD
FlexWorks Primary Pipe	10 years from date of manufacture
All Products and replacement parts installed in the State of California Certified to California CP-201 and/or CP-206 Standards*	1 year from-date of installation (proof of purchase from certified contractors/technicians required) OPW warrants ongoing compliance with the standards and specifications for the duration of the warranty period required by the State of California; this limited warranty is under the condition the equipment was installed and maintained by trained and certified contractors/technicians unless noted in Installation Manual
All other Products and replacement parts	1 year from date of manufacture**
*Products certified to California CP-201 and/or CP-206 Standards have been factory tested and met all applicable performance standards and specifications and will have an OPW registration card enclosed/attached to the product	

OPW's exclusive obligation under this limited warranty is, at its option, to repair, replace or issue credit (in an amount not to exceed the list price for the product) for future orders for any product that may prove defective within the applicable warranty period. (Parts repaired or replaced under warranty are subject to prorated warranty coverage for remainder of the original warranty period). Complete and proper warranty claim documentation and proof of purchase required. All warranty claims must be made in writing and delivered during the applicable warranty period to OPW at OPW 9393 Princeton-Glendale Road Hamilton, Ohio, USA 45011, Attention: Customer Service Manager. No products may be returned to OPW without its prior written authority.

This limited warranty shall not apply to any FlexWorks or VAPORSAVER™ product unless it is installed by an OPW attested installer and all required site and warranty registration forms are completed and received by OPW within 60 days of installation. This limited warranty also shall not apply to any FlexWorks, VAPORSAVER™ or other OPW product: unless all piping connections are installed with a nationally-recognized or state-approved leak detection device in each tank and dispenser sump (which are not for storage and from which all discharge hydrocarbons must be removed, and the systems completely cleaned, within 24 hours); unless testable sumps utilize FlexWorks pipe and access fittings; unless a sump inspection log or an EPA recommended/required checklist is maintained and the results are furnished to OPW upon request; and unless OPW is notified within 24 hours of any known or suspected product failure and is provided with unrestricted access to the product and the site. This limited warranty also shall not apply to any product which has been altered in any way, which has been repaired by anyone other than a service representative authorized by OPW, or when failure or defect is due to: improper installation or maintenance (including, without limitation, failure to follow FlexWorks Quick Reference Manual Installation Guide and all product warning labels); abuse or misuse; violation of health or safety requirements; use of another manufacturer's, or otherwise unauthorized, substances or components; soil or other surface or subsurface conditions; or fire, flood, storm, lightning, earthquake, accident or any other conditions, events or circumstances beyond OPW's control.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND ALL OTHER WARRANTIES INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY EXCLUDED.

OPW shall have no other liability whatsoever, whether based on breach of contract, negligence, gross negligence, strict liability or any other claim, including, without limitation, for special, incidental, consequential or exemplary damages or for the cost of labor, freight, excavation, clean-up, downtime, removal, reinstallation, loss of profit, or any other cost or charges. No person or entity is authorized to assume on behalf of OPW any liability beyond this limited warranty. This limited warranty is not assignable.

** Date of manufacture on this product is located (*location will be specific to each component*)



North America Toll Free - TELEPHONE: (800) 422-2525 - Fax:
(800) 421-3297 - Email: domesticsales@opw-fc.com

9393 Princeton-Glendale Road
Hamilton, Ohio 45011

International – TELEPHONE: (513) 870-3315 or (513) 870-3261 -
Fax: (513) 870-3157 - Email: intlsales@opw-fc.com
www.opwglobal.com

Comp X TANK Commander Warranty Statement and Tag

Seller warrants to the initial and subsequent purchasers, for a period of one year from date of installation, that the Products sold hereunder will, at the time of delivery: (a) comply with the ARB CP-201 standards and specifications for the duration of the warranty period for such Products in effect at the time of shipment or such other specifications as are expressly agreed upon by Seller and Buyer in writing; (b) be adequately contained, packaged, and labeled; and (c) conform to any promises and affirmations of fact made on the container and label. In the event that any such Products fail to conform to the foregoing warranty, Seller will, at its option, repair or replace such nonconforming Products, or credit Buyer for an amount not to exceed the original sales price of such Products. Shipping costs incurred in returning such nonconforming Products to Seller shall be borne by Seller, but Seller shall in no event be liable for any inspection, handling, or packaging costs incurred by Buyer in connection with such Products. Buyer's negligence, misuse, improper installation, or unauthorized repair or alteration, shall void this warranty. The TANK Commander Warranty tag is located on the inside cover of the product.

Warranty Tag

TANK Commander TC-1

1 year warranty from date of installation

Date of manufacture __/__/____

The CompX TANK Commander product was factory tested and meets the standards and specifications to which it was certified by the California Air Resources Board (CARB) as indicated in the related CARB Phase I EVR Executive Orders.

Husky Corporation Warranty Statement and Tag

VAPOR PRODUCTS – Husky Corporation will, at its option, repair, replace, or credit the purchase price of any Husky manufactured product which proves upon examination by Husky, to be defective in material and/or workmanship for a period of one (1) year of installation or fifteen (15) months from the manufacture date of shipment by Husky, whichever occurs first. The warranty period on repaired or replacement vapor recovery products is only for the remainder of the warranty period of the defective product.

EVR PRODUCTS – With respect to EVR products installed in California, for a period of one (1) year from the date of installation, Husky warrants that the product will be free from defects in materials and workmanship (if the installation date is in question or indeterminable, Husky will warrant the product for 12 months from sale by Husky). Husky confirms that the warranty is transferable to a subsequent purchaser within the warranty period. However, the warranty does not follow the product from its initial installation location to succeeding locations. Husky confirms these products are warranted to meet the performance standards and specifications to which it was certified by CARB for the duration of the warranty. EVR products must be installed per CARB Executive Order and must follow the Husky Installation Instructions or the warranty is void. The warranty tag included with the EVR product must be provided to the end user at installation. A completed warranty tag and installation documentation is required to be returned with the product to be eligible for warranty consideration.

CONVENTIONAL PRODUCTS – Husky Corporation will, at its option, repair, replace, or credit the purchase price of any Husky manufactured product which proves upon examination by Husky, to be defective in material and/or workmanship for a period of one (1) year from the manufacture date of shipment by Husky.


Buyer must return the products to Husky, transportation charges prepaid. This Warranty excludes the replaceable bellows, bellows spring assembly, spout assembly and scuff guard, unless (i) damage is obvious when the product is removed from shipping carton and (ii) the defective product is returned to Husky prior to use. This warranty does not apply to equipment or parts which have been installed improperly, damaged by misuse, improper operation or maintenance, or which are altered or repaired in any way.

The warranty provisions contained herein apply only to original purchasers who use the equipment for commercial or industrial purposes. There are no other warranties of merchantability, fitness for a particular purpose, or otherwise, and any other such warranties are hereby specifically disclaimed.

Husky assumes no liability for labor charges or other costs incurred by Buyer incidental to the service, adjustment, repair, return, removal or replacement of products. Husky assumes no liability for any incidental, consequential, or other damages under any warranty, express or implied, and all such liability is hereby expressly excluded.

Husky reserves the right to change or improve the design of any Husky fuel dispensing equipment without assuming any obligations to modify any fuel dispensing equipment previously manufactured.

Husky Warranty Tag

	WARRANTY TAG Husky Corporation 2325 Husky Way Pacific, Mo 63069 (800) 325-3558	Husky General Fueling Products:
	Station Name: _____ Store #: _____ Date: _____ City: _____ State: _____ Service Contractor: _____ Service Tech: _____ Distributor: _____ <small>No warranty accepted without warranty tag filled out completely and attached to product.</small>	Model #: _____ Serial #: _____ Installation Date: _____ Manufacturer Lot #: _____ Work order # (if applicable): _____ RGA #: _____ Form #009179-6 03/2013

FRONT VIEW

FOR REFERENCE ONLY

Reason for Return (check all applicable):	
<input type="checkbox"/> Leaking Fuel Around Spout <input type="checkbox"/> Leaking Fuel In Trigger Area <input type="checkbox"/> Keeps Shutting Off <input type="checkbox"/> Will Not Shut Off	<input type="checkbox"/> Failed Pressure Decay Test <input type="checkbox"/> Leaking Fuel at Hose Inlet <input type="checkbox"/> Mechanical Malfunction <input type="checkbox"/> Dispenses Fuel Without Pulling Lever
Notes / Comments: _____ _____ _____	
<small> EVR products installed in California are warranted for 1 year from the date of installation. Manufacturing data can be found on the product data tag attached to the product. Husky confirms the product was tested at the factory and met all applicable performance standards in CP-201 including Pressure Setting: 2.5-6.0 in W.C., Vacuum Setting: 6.0 - 10.0 in W.C. and Leak Rate: 0.05 CFH @ +2.0 in W.C. and 0.21 CFH @ -4.0 in W.C. Please provide installation documentation such as a purchase order, an invoice or a receipt at time of claim. </small>	

BACK VIEW

EMCO Wheaton Retail Corporation
CALIFORNIA EVR WARRANTY POLICY

Emco Wheaton Retail Corporation service station products are warranted to be free from defects in material and workmanship under normal use and service. Emco Wheaton Retail Corporation warrants its California enhanced vapor recovery (EVR) components for a period of one (1) year from date of installation. The EVR components are warranted to meet the performance standards and specifications to which it was certified by the California Air Resources Board (CARB) for the duration of the warranty period. This warranty extends to the purchaser and any subsequent purchaser of the Emco Wheaton Retail components during the warranty period.

Emco Wheaton Retail Corporation shall, at its option, repair or replace that part which proves to be defective. Repaired or replacement nozzles are warranted for the balance of the original warranty period. This warranty is void unless the purchaser returns the claimed defective item to Emco Wheaton Retail Corporation for inspection to determine whether the claimed defect is covered by this warranty.

The exclusive and sole remedy under this warranty is repair or replacement of the defective part. Emco is not responsible for claims for damage caused by improper installation or maintenance; corrosive fluids; misuse of the product or use the product for other than its intended purpose; or accident, acts of God, or natural phenomena. Emco will not pay for labor or related expenses, nor shall Emco be liable for any incidental, consequential or exemplary damages. This warranty is void if the Emco Wheaton Retail Corporation product has been previously repaired with parts not approved by Emco Wheaton Retail Corporation, or if a nozzle bears the mark or imprint of a company other than Emco Wheaton Retail Corporation, indicating the nozzle has been rebuilt or repaired by a company other than Emco Wheaton Retail Corporation.

EMCO WHEATON RETAIL CORPORATION MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, (WHETHER WRITTEN OR ORAL), INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

In the event a nozzle is returned to Emco Wheaton Retail Corporation within the warranty period described above, and when tested is found to be functional and without defect, Emco Wheaton Retail Corporation reserves the right to return the nozzle to the customer or apply a Core Credit (see Nozzle Core Return Program), at Emco Wheaton Retail Corporation's discretion.

In the event of failure within the warranty period, call the Customer Service Department at **(800) 234-4394**. Describe the problem and provide the product date stamp information to the customer service representative. In the case of a nozzle, provide the serial number. The customer service representative will provide a product complaint number, if applicable. Ship the defective equipment **PREPAID**, to Emco Wheaton Retail Corporation for repair or replacement. Warranty issue is contingent upon proof of installation to establish that the product falls within the warranty period. Proof on installation shall be: 1) warranty information completed by the certified contractor (warranty card), 2) contractor invoice, 3) end-user sales receipt, or 4) copy of the appropriate log book entry from the gasoline dispensing facility. Nozzle serial number must be included on proof of installation document.

Emco Wheaton Retail Corporation products should be used in compliance with applicable federal, state and local laws and regulations. Product selection should be based on physical specifications and limitations and compatibility with the environment and material to be handled. All illustrations and specifications are based on the latest product information available at the

time of publication. Emco Wheaton Retail Corporation reserves the right to make changes at any time in prices without notice or obligation. Emco Wheaton Retail Corporation reserves the right to make changes at any time in materials, specifications and models upon CARB approval.

Emco Warranty Tag

EMCO ³⁹ WHEATON RETAIL (252) 243-0150 Phase II EVR Warranty Tag Emco Wheaton Retail warrants its California enhanced vapor recovery (EVR) components for a period of one (1) year from date of installation. This component was factory tested to and met all applicable performance standards and specifications to which it was certified by the California Air Resources Board (ARB). The performance standards and specifications are listed in the applicable ARB Executive Orders and Certification Procedure 201. IMPORTANT: Leave this warranty tag with the station owner and/or operator. Emco Wheaton Retail Corp. 2300 Industrial Park Dr., Wilson, NC 27803 p/n 570866	Serial Number: _____ Replacement Serial Number: _____ Manufacture Date: _____ Name of Contractor: _____ Name of Technician: _____ Technician Signature: _____ Technician Certification Number: _____ Installation Date: _____ Installation Site: _____ Distributor Name: _____ Branch Location: _____ Component: <input type="checkbox"/> A4005EVR Nozzle <input type="checkbox"/> A4110EVR Hose Swivel <input type="checkbox"/> A4119EVR Safe Break Valve
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Reason for returning product: Please select appropriately.
Important: Failure to complete accurately may cause delays processing warranty claim.

<input type="checkbox"/> Does not shut-off	<input type="checkbox"/> Leaks fuel around lever and latch area
<input type="checkbox"/> Experiencing premature shut-off	<input type="checkbox"/> Causing meter creep
<input type="checkbox"/> Does not flow fuel with bellows compressed and lever engaged	<input type="checkbox"/> Bad Inlet or outlet threads
<input type="checkbox"/> Flows fuel when bellows is not compressed	<input type="checkbox"/> Fails Leak Decay Test CARB TP-201.3
<input type="checkbox"/> Leaks fuel around spout or bellows area	<input type="checkbox"/> Fails Dynamic Back Pressure Test CARB TP-201.4

Comments _____

McGard Warranty Statement and Tag

McGard Fuel Locks are fully tested at the time of manufacture to meet the applicable performance standards and specifications to which it was certified by the California Air Resource Board (CARB) for the duration of the warranty period, as indicated in the related CARB Executive Order (EO). Performance standards and specifications are listed in Exhibit 2 (System/Compliance Specifications) and Exhibit 3 (Manufacturing Performance Standards) in the related CARB EO.

McGard warrants that McGard Fuel Lock products installed in California will conform to the warranty terms and conditions required by the California Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities (CP-201) with respect to (a) transferability of warranties for McGard Fuel Locks, (b) design changes to McGard Fuel Locks, (c) performance specifications of the McGard Fuel Locks, and (d) duration of the warranty period of McGard Fuel Locks.

McGard Fuel Locks are warranted to the initial purchaser, and any subsequent purchaser within the warranty period, for workmanship, performance, and materials when properly installed, used and maintained in accordance with the CARB Approved Installation, Operation, and Maintenance Manuals by certified technicians as defined in the related CARB EO and to generally accepted industry standards.

McGard reserves the right to make changes in the design or to make additions or improvements with respect to McGard Fuel Locks without incurring any obligation to modify or install same on previously manufactured products, upon written approval from CARB.

McGard reserves the right to change or cancel all or any part of this limited warranty, upon written approval from CARB. Any such change or cancellation will be effective for products sold by McGard after the date of such change or cancellation. No agents, distributors, dealers, or employees of McGard are authorized to make modifications to this warranty or to make additional warranties with respect to any McGard Fuel Locks. Accordingly, any statements made by individuals, whether oral or written, shall not constitute a warranty of McGard and shall not be relied upon.

McGard warrants the workmanship and materials of McGard Fuel Locks to be free of defects, at the time of sale by McGard, for a period of one year (12 months) from the date of installation. When warranty for McGard Fuel Locks cannot be verified to date of installation, claims will be honored for a period of fifteen (15) months from the date of purchase. When warranty for McGard Fuel Locks cannot be verified to date of installation or date of purchase, claims will be honored for a period of eighteen (18) months from date of manufacture by McGard (date of manufacture is engraved on side of lock body). In all cases, installation date or purchase date will require providing formal documentation to McGard as evidence of applicable warranty coverage or date of manufacture will be used to determine duration of warranty period. Formal documentation may include, but is not limited to McGard authorized service company and distributor work orders, startup/installation documentation, maintenance logs, and/or sales receipts.

McGard shall not be liable for any loss or damage whatsoever, including, without limitation, loss in profits, loss in sales, loss of fuel or other products, loss of use of equipment, facilities or service, costs of environmental remediation, diminution in property value, or any other special, incidental or consequential damages of any type or nature, and all such losses or damages are hereby disclaimed and excluded from this limited warranty.

Use of non-McGard replacement parts, the unauthorized addition of non-McGard items to McGard Fuel Locks, and the unauthorized alteration of McGard Fuel Locks will void warranty. McGard shall, as to each defect, be relieved of all obligations and liabilities under a components warranty if the McGard Fuel Locks have been operated with any accessory, equipment, or a part not specifically approved by McGard and not manufactured by McGard to McGard design and specifications.

McGard Fuel Lock warranty shall not apply to any products which have been mishandled, incorrectly installed or applied, altered in any way, which has been repaired by any party other than qualified technicians, or when such failure is due to misuse or conditions of use (such as, but not limited to, blown fuses, sheared breakaway screws, corrosion damage, negligence, accidents, or normal wear of plastic/rubber parts including scuff guards and seals). McGard Fuel Lock warranty shall not apply to vandalism, theft, acts of terrorism, acts of war, or acts of God (such as, but not limited to, fire, flood, earthquake, or explosion). Unless otherwise expressly provided in a specific McGard written warranty, McGard does not provide coverage for labor or shipping charges, shall not be liable for any costs or charges attributable to any product testing, maintenance, installation, repair or removal, or any tools, supplies, or equipment need to install, repair, or remove any McGard Fuel Lock.

Other than those McGard Fuel Locks specifically designated for fuel concentrations of 85% ethanol with 15% gasoline (E85), McGard Fuel Lock product warranty shall not cover any components that have been in contact with fuel concentrations greater than 15% ethanol or 15% methanol by volume (up to E15/M15).

Claims for McGard Fuel Lock warranty must be submitted in writing promptly after discovery of a defect with a Returned Goods Authorization (RGA) Number from McGard. McGard will honor warranty claims processed through McGard authorized service companies and distributors only. McGard will honor warranty claims submitted no more than thirty (30) days after the end of the applicable warranty period. Product returned for warranty inspection must be shipped freight prepaid to McGard's facilities, with the RGA Number indicated on the returned product, to the following address for inspection:

McGard LLC, ATTN: Warranty Department, 3875 California Road, Orchard Park, NY 14127 USA

McGard, upon inspection and after determination of a warranty defect, will at its option, repair or replace defective parts returned to McGard's facility or where the product is in use. Repaired or replaced parts will be returned freight prepaid by McGard.

A copy of this limited warranty is to be retained with the equipment, on-site with the facility owner/operator.

Component Model Number: _____

Component Date of Manufacturer: _____

Component Install Date: _____

Facility Name: _____

Facility Address: _____

Installer Name: _____

Installer Signature: _____

Exhibit 5

VAULTED ABOVEGROUND STORAGE TANK CONFIGURATION (Optional)

This exhibit allows an alternate tank storage configuration for the Phase I EVR system. A vaulted aboveground storage tank (AST) may be installed in substitute for a conventional underground storage tank (UST). The figures in this exhibit provide examples of typical vaulted AST configurations.

General Specifications

Alternate typical vaulted AST configurations for the Phase I EVR Systems are shown in Figures 5-1, 5-2, 5-3, and 5-4.

Unless otherwise specified in this Executive Order (EO), the vaulted AST configuration shall comply with the applicable performance standards and performance specifications in CP-201. The emergency vent shall be a certified vent listed in the Phase I EVR Executive Orders for ASTs and shall be installed, operated, maintained and meet any performance requirements specified in the applicable AST Executive Order.

Figure 5-1: Front Sectional Views of Typical Vaulted AST

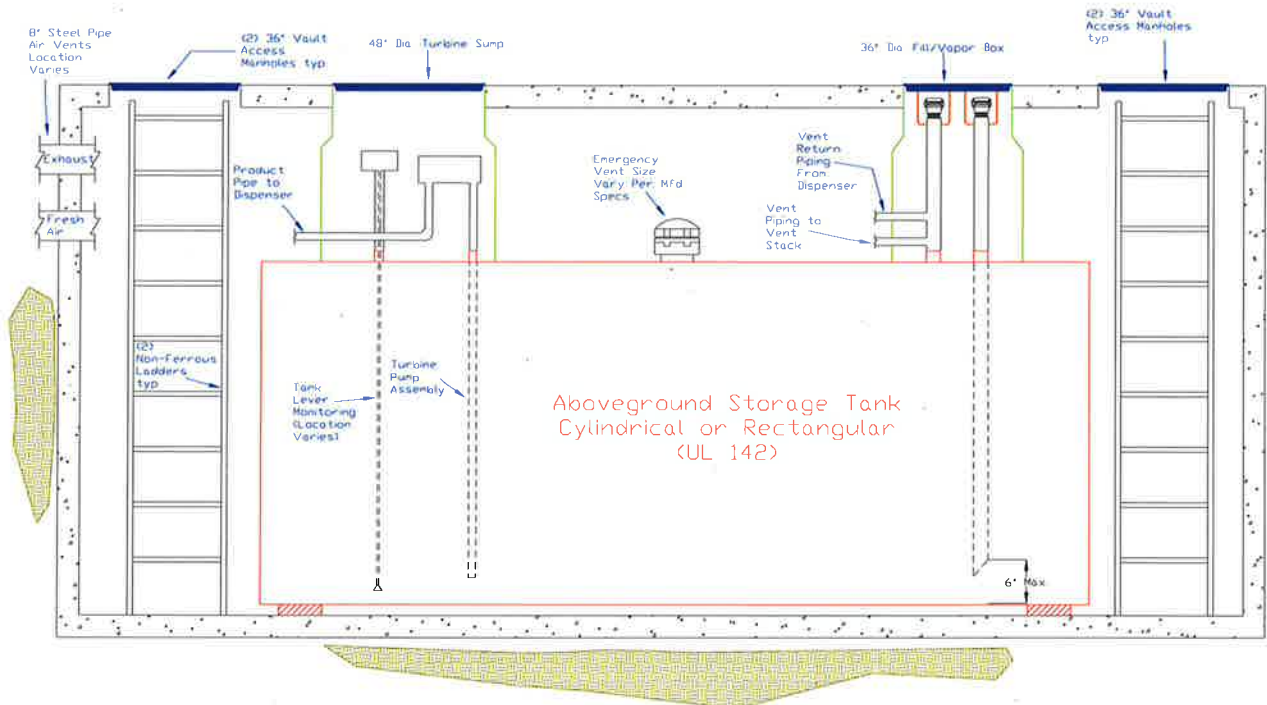


Figure 5-2: Top Sectional View of Typical Vaulted AST

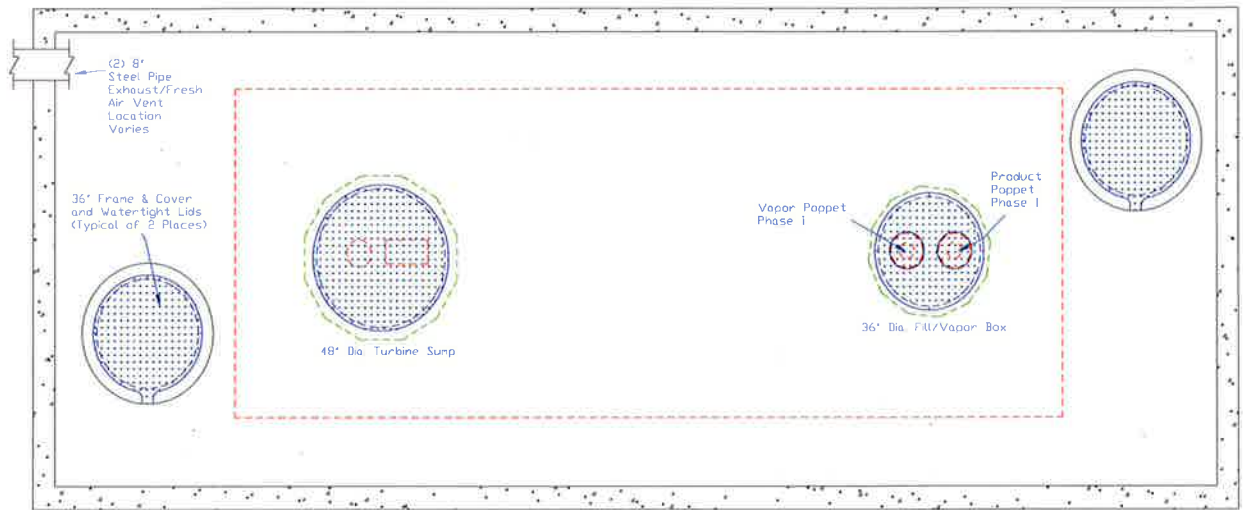


Figure 5-3: End Sectional View of Typical Vaulted AST

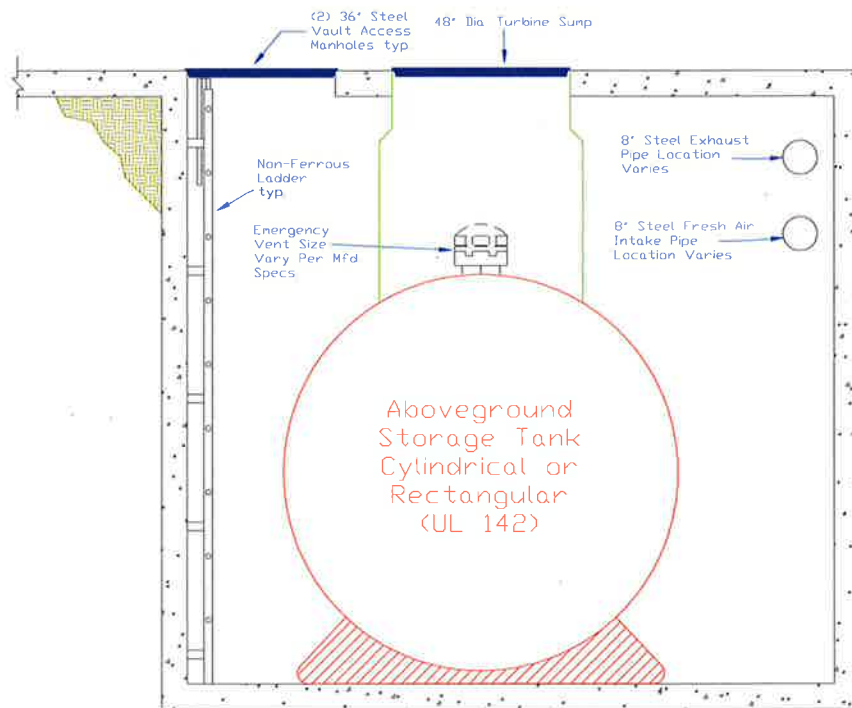


Figure 5-4: Sectional Views of Typical Vaulted AST (Ventilation)

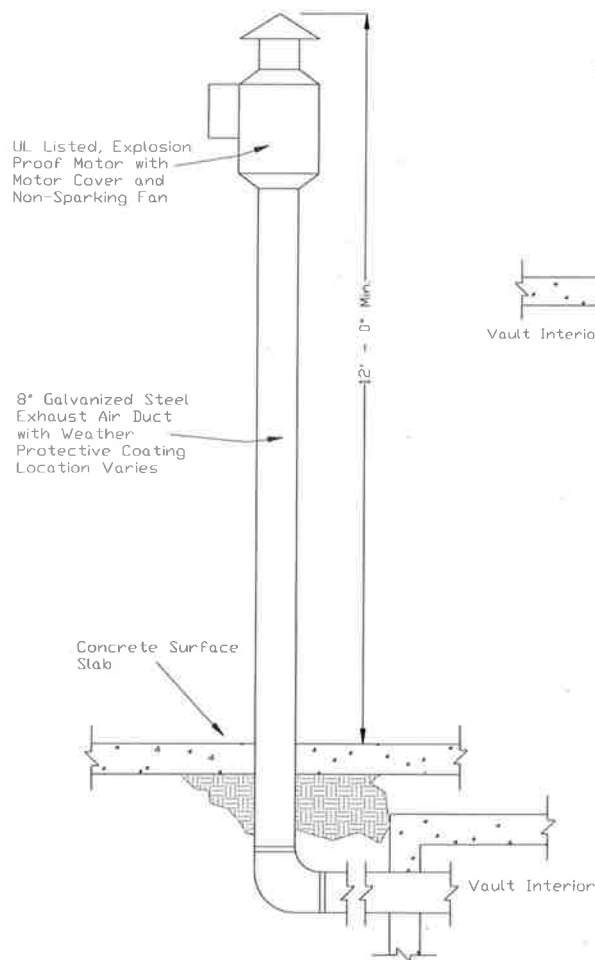


Figure 5-4a: Typical Exhaust

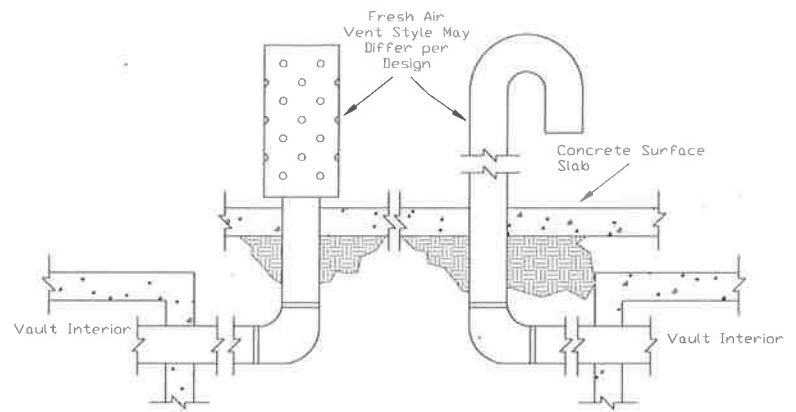


Figure 5-4b: Typical Fresh Air Intake



Public Hearing: 6:00 pm, Wednesday, January 8, 2020
Auditorium, R & R Building, Dover.

Subject: Proposed Amendments to 7 **DE Admin. Code** 1124
Section 26.0 "Gasoline Dispensing Facility Stage I Vapor Recovery"
Section 36.0 "Vapor Emission Control at Gasoline Dispensing
Facilities"

Opening Statement of DAQ-DNREC [Presented by DAQ staff Frank Gao]

(1. Opening Statement) My name is Frank Gao, and I am an engineer in the Planning Section of the Division of Air Quality (Division).

(2. Brief background and summary) The purpose of this rule-making action is to update the requirements for Gasoline Dispensing Facilities in 7 **DE Admin. Code** 1124 Section 26.0 "Gasoline Dispensing Facility Stage I Vapor Recovery" and Section 36.0 "Vapor Emission Control at Gasoline Dispensing Facilities."

Gasoline vapor contains volatile organic compounds (VOCs) which contribute to summertime smog and also contain certain air toxics. To meet the requirements in the federal Clean Air Act, gasoline stations in Delaware have installed and operated two systems to control gasoline vapor emissions for more than 20 years. One system is called a "Stage I" vapor recovery system (VRS), which controls gasoline vapor emissions from gasoline storage tanks during tanker truck gasoline delivery. Another system is called a "Stage II" VRS, which controls gasoline vapor emissions from vehicle's fuel tanks when refueling.

Since 1998, new vehicles in the US have been required by the Clean Air Act to install an on-board refueling vapor recovery (ORVR) system. For these vehicles, the gasoline vapors displaced during refueling are controlled through the vehicle's ORVR canister, not through the station's Stage II

system. Both Stage II and ORVR systems are effective for controlling gasoline vapor emissions during vehicle refueling. However, the vacuum-assist Stage II systems and the ORVR systems are incompatible. Such incompatibility causes excess vapor emissions from gasoline storage tanks when ORVR-equipped vehicles refuel at Stage II-equipped stations, especially when those gasoline storage tanks are not vapor-tight.

In May 2012, the US Environmental Protection agency (EPA) determined that the ORVR systems were in widespread use nationwide on gasoline-powered vehicles, and issued a final rule to allow gasoline stations to decommission Stage II systems (77 *FR* 28772). The final rule aimed at reducing the adverse effect of the functional overlap and incompatibility between the vacuum-assist Stage II systems at gasoline stations and the ORVR system on vehicles.

Since Delaware's Stage II systems are all vacuum-assist systems, the Division is proposing the following amendments to 7 **DE Admin. Code** 1124: (1) to decommission the Stage II systems installed at all Delaware's gasoline stations by December 31, 2021, and (2) to install enhanced Stage I systems at gasoline stations by December 31, 2025.

The Division is also proposing to submit to EPA a revision to Delaware State Implementation Plan (SIP), entitled "Decommissioning Stage II Vapor Recovery Systems and Requiring Stage I Enhanced Vapor Recovery Systems at Gasoline Dispensing Facilities." The objectives of the proposed SIP revision is to (1) analyze the regulatory impacts of the above regulation amendments on Delaware's emissions of VOC's, and (2) demonstrate that the above regulation amendments meet the anti-backsliding requirements of the federal Clean Air Act Sections 182(b)(2) and 110(l).

The Division initiated the public involvement process for the proposed amendments in April 2019 with a series of review committee meetings and public workshops. The Division formed a review committee to gather public input regarding the proposed regulatory changes. The review committee consisted of representatives of the regulated community (i.e., gasoline station owners or operators), testing companies, regional organizations of gasoline distribution industry, environmental organizations, and regulatory agencies.

After incorporating the comments from the review committees and public workshops, the Department published the proposed amendments to Section 26.0 and Section 36.0 and the SIP revision on December 1, 2019, in Delaware Register of Regulations for review and comment from the public.

(3. Availability and Publication) The proposed amendments and the SIP revision have been available for public review in DAQ offices in New Castle and Dover since December 1, 2019. A legal notice regarding the availability and publication of the proposed amendments, the SIP revision, and the schedule of today's hearing was announced in the Sunday News Journal and the Delaware State News on Sunday, December 1, 2019.

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Section 36.0 "Vapor Emission Control at Gasoline Dispensing
Facilities"

Opening Statement of DAQ-DNREC [Presented by DAQ staff Frank Gao]

(1. Opening Statement) My name is Frank Gao, and I am an engineer in the Planning Section of the Division of Air Quality (Division).

(2. Brief background and summary) The purpose of this rule-making action is to update the requirements for Gasoline Dispensing Facilities in 7 **DE Admin. Code** 1124 Section 26.0 "Gasoline Dispensing Facility Stage I Vapor Recovery" and Section 36.0 "Vapor Emission Control at Gasoline Dispensing Facilities."

Gasoline vapor contains volatile organic compounds (VOCs) which contribute to summertime smog and also contain certain air toxics. To meet the requirements in the federal Clean Air Act, gasoline stations in Delaware have installed and operated two systems to control gasoline vapor emissions for more than 20 years. One system is called a "Stage I" vapor recovery system (VRS), which controls gasoline vapor emissions from gasoline storage tanks during tanker truck gasoline delivery. Another system is called a "Stage II" VRS, which controls gasoline vapor emissions from vehicle's fuel tanks when refueling.

Since 1998, new vehicles in the US have been required by the Clean Air Act to install an on-board refueling vapor recovery (ORVR) system. For these vehicles, the gasoline vapors displaced during refueling are controlled through the vehicle's ORVR canister, not through the station's Stage II

system. Both Stage II and ORVR systems are effective for controlling gasoline vapor emissions during vehicle refueling. However, the vacuum-assist Stage II systems and the ORVR systems are incompatible. Such incompatibility causes excess vapor emissions from gasoline storage tanks when ORVR-equipped vehicles refuel at Stage II-equipped stations, especially when those gasoline storage tanks are not vapor-tight.

In May 2012, the US Environmental Protection agency (EPA) determined that the ORVR systems were in widespread use nationwide on gasoline-powered vehicles, and issued a final rule to allow gasoline stations to decommission Stage II systems (77 *FR* 28772). The final rule aimed at reducing the adverse effect of the functional overlap and incompatibility between the vacuum-assist Stage II systems at gasoline stations and the ORVR system on vehicles.

Since Delaware's Stage II systems are all vacuum-assist systems, the Division is proposing the following amendments to 7 **DE Admin. Code** 1124: (1) to decommission the Stage II systems installed at all Delaware's gasoline stations by December 31, 2021, and (2) to install enhanced Stage I systems at gasoline stations by December 31, 2025.

The Division is also proposing to submit to EPA a revision to Delaware State Implementation Plan (SIP), entitled "Decommissioning Stage II Vapor Recovery Systems and Requiring Stage I Enhanced Vapor Recovery Systems at Gasoline Dispensing Facilities." The objectives of the proposed SIP revision is to (1) analyze the regulatory impacts of the above regulation amendments on Delaware's emissions of VOC's, and (2) demonstrate that the above regulation amendments meet the anti-backsliding requirements of the federal Clean Air Act Sections 182(b)(2) and 110(l).

The Division initiated the public involvement process for the proposed amendments in April 2019 with a series of review committee meetings and public workshops. The Division formed a review committee to gather public input regarding the proposed regulatory changes. The review committee consisted of representatives of the regulated community (i.e., gasoline station owners or operators), testing companies, regional organizations of gasoline distribution industry, environmental organizations, and regulatory agencies.

After incorporating the comments from the review committees and public workshops, the Department published the proposed amendments to Section 26.0 and Section 36.0 and the SIP revision on December 1, 2019, in Delaware Register of Regulations for review and comment from the public.

(3. Availability and Publication) The proposed amendments and the SIP revision have been available for public review in DAQ offices in New Castle and Dover since December 1, 2019. A legal notice regarding the availability and publication of the proposed amendments, the SIP revision, and the schedule of today's hearing was announced in the Sunday News Journal and the Delaware State News on Sunday, December 1, 2019.

(4. Exhibits) The Department is presenting 19 exhibits to the hearing records, as provided in the exhibits listing, which is also available to you on the table in the back of the room. This completes the Department's presentation on the proposed amendments to 7 **DE Admin. Code** 1124, Sections 26.0 and 36.0.



Public Hearing: 6:00 pm, Wednesday, January 8, 2020
Auditorium, R & R Building, Dover.

Subject: Proposed Amendments to 7 **DE Admin. Code** 1124
Section 26.0 "Gasoline Dispensing Facility Stage I Vapor Recovery"
Section 36.0 "Vapor Emission Control at Gasoline Dispensing
Facilities"

Opening Statement of DAQ-DNREC [Presented by DAQ staff Frank Gao]

(1. Opening Statement) My name is Frank Gao, and I am an engineer in the Planning Section of the Division of Air Quality (Division).

(2. Brief background and summary) The purpose of this rule-making action is to update the requirements for Gasoline Dispensing Facilities in 7 **DE Admin. Code** 1124 Section 26.0 "Gasoline Dispensing Facility Stage I Vapor Recovery" and Section 36.0 "Vapor Emission Control at Gasoline Dispensing Facilities."

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system. Both Stage II and ORVR systems are effective for controlling gasoline vapor emissions during vehicle refueling. However, the vacuum-assist Stage II systems and the ORVR systems are incompatible. Such incompatibility causes excess vapor emissions from gasoline storage tanks when ORVR-equipped vehicles refuel at Stage II-equipped stations, especially when those gasoline storage tanks are not vapor-tight.

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**State of California
AIR RESOURCES BOARD**

EXECUTIVE ORDER VR-105-G

Relating to Certification of Vapor Recovery Systems

EMCO Wheaton Retail Phase I Vapor Recovery System

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 the filling of underground gasoline storage tanks (Phase I EVR System), in its Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities (CP-201) as last amended November 9, 2015, 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 I EVR Systems with emission standards;

WHEREAS, EMCO Wheaton Retail (EMCO) requested and was granted certification of the EMCO Wheaton Retail Phase I Vapor Recovery System (EMCO System) pursuant to CP-201 on October 20, 2006 by Executive Order VR-105-A; and last modified on June 1, 2018, by Executive Order VR-105-F;

WHEREAS, additional time is necessary to gather and evaluate information needed to complete the certification renewal of the Husky Model 5885 pressure/vacuum (P/V) vent valve;

WHEREAS, CP-201 provides that the CARB Executive Officer shall issue an Executive Order if he 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 EMCO System, as amended to include the components listed above, conforms with all the requirements set forth in CP-201, and results in a vapor recovery system which is at least 98.0 percent efficient when tested pursuant to test procedure TP-201.1, Volumetric Efficiency for Phase I Systems (July 26, 2012);

NOW THEREFORE, IT IS HEREBY ORDERED that the EMCO System is certified to be at least 98.0 percent efficient when installed, operated, and maintained as specified

herein and in the following exhibits. Exhibit 1 contains a list of the certified components. Exhibit 2 contains the performance standards and specifications, typical installation drawings, and maintenance intervals applicable to the EMCO System as installed in a GDF. Exhibit 3 contains the manufacturing performance specifications. Exhibit 4 contains the manufacturer warranties. Exhibit 5 is the below-grade vaulted tank configuration.

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 component(s) 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 EMCO, Franklin Fueling Systems (FFS), OPW, and Husky Corporation (Husky) shall meet the manufacturing performance specifications as provided in Exhibit 3.

IT IS FURTHER ORDERED that the certified EMCO System shall be installed, operated, and maintained in accordance with the CARB-Approved Installation, Operation and Maintenance Manual for the EMCO Wheaton Phase I Vapor Recovery System as certified by Executive Order VR-105-G. Equipment shall be inspected 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-105-A to F. A copy of this Executive Order and the CARB Approved Installation, Operation, and Maintenance Manual shall be maintained at each GDF where a certified EMCO System is installed.

IT IS FURTHER ORDERED that all equipment listed in Exhibit 1, unless exempted, shall be clearly identified with a permanent identification 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 manufacturer's 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 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 EMCO System shall conduct, and pass, the following tests no later than 60 days after startup and at least once every (3) years after startup testing, 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-201.1B, Static Torque of Rotatable Phase I Adaptors (October 8, 2003); and
- Depending on the system configuration, either TP-201.1C, Leak Rate of Drop Tube/Drain Valve Assembly (October 8, 2003) or TP-201.1D, Leak Rate of Drop Tube Overfill Prevention Devices and Spill Container Drain Valves (October 8, 2003).

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 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). Alternate test procedures, including the most recent versions of test procedures listed above, may be used if determined by the CARB Executive Officer or his delegate, in writing, to yield equivalent results. Testing the pressure/vacuum (P/V) vent valve will be at the option of the Districts. If P/V vent valve testing is required by the District, the test shall be conducted in accordance with TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves (October 8, 2003) and Exhibit 2.

IT IS FURTHER ORDERED that the EMCO System shall be compatible with gasoline in common use in California at the time of certification. 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 the EMCO Wheaton Phase I Vapor Recovery System with the exception of the Husky Model 5885 P/V vent valve is valid through May 31, 2022.

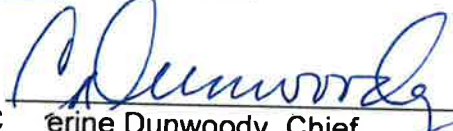
IT IS FURTHER ORDERED that to provide the Executive Officer with the necessary time to fully gather and evaluate information to make a determination regarding the renewal certification of the Husky Model 5885 P/V vent valve consistent with Section

17.3 and 17.4 of CP 201, the certification of the Husky Model 5885 P/V vent valve is extended by one year from the date this Executive Order is signed.

IT IS FURTHER ORDERED that Executive Order VR-105-E issued on June 1, 2018, is hereby superseded by this Executive Order. EMCO Wheaton Phase I Vapor Recovery Systems certified under Executive Orders VR-105-A through F 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 the Phase I system of existing gasoline dispensing facilities.

Executed at Sacramento, California, this 3rd day of June 2019.


Terine Dunwoody, Chief
Monitoring and Laboratory Division

Attachments:

- | | |
|-----------|--|
| Exhibit 1 | EMCO Wheaton Phase I Vapor Recovery System Equipment |
| Exhibit 2 | List Installation, Maintenance and Compliance Specifications |
| Exhibit 3 | Manufacturing Performance Standards and Specifications |
| Exhibit 4 | Manufacturer Warranties |
| Exhibit 5 | Vaulted Aboveground Storage Tank Configuration (<i>Optional</i>) |

Draft - Modification Highlights for Executive Order VR-104-J

NOTE: Global change for Executive Order and Installation, Operation, and Maintenance Manual; changed revision letter from I to J.

Part I: Executive Order

Legal Language:

- Extended certification of the Husky Model 5885 P/V vent valve is extended by one year from the date when Executive Order VR-104-J is signed.

**State of California
AIR RESOURCES BOARD**

EXECUTIVE ORDER VR-104-I

Relating to Certification of Vapor Recovery Systems

**CNI Manufacturing, Inc.
CNI Manufacturing Phase I Vapor Recovery System**

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 the filling of underground gasoline storage tanks (Phase I system), in its Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities (CP-201) as last amended April 23, 2015, 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 I EVR systems with emission standards;

WHEREAS, CNI Manufacturing Inc. requested and was granted certification of the CNI Manufacturing Phase I Vapor Recovery System (CNI Manufacturing system) pursuant to CP-201 on September 26, 2003, by Executive Order VR-104-A, and last modified on May 29, 2017, by Executive Order VR-104-H;

WHEREAS, additional time is necessary to gather and evaluate information needed to complete the certification renewal of the Husky Model 5885 pressure-vacuum (P/V) vent valve;

WHEREAS, Husky requested amendment of the Installation, Operation, and Maintenance Manual for the Husky Model 5885 P/V vent valve;

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 CNI Manufacturing System, as amended to include the components listed above, conforms with all requirements set forth in CP-201 and results in a vapor recovery system which is at least 98.0 percent efficient when tested pursuant to test procedure TP-201.1, Volumetric Efficiency for Phase I Systems (July 26, 2012).

NOW THEREFORE, IT IS HEREBY ORDERED that the CNI Manufacturing System is certified to be at least 98.0 percent efficient when installed, operated, and maintained as specified herein and in the following exhibits. Exhibit 1 contains a list of the certified components. Exhibit 2 contains the performance standards and specifications, typical installation drawings, and maintenance intervals for the CNI Manufacturing System as installed in a GDF. Exhibit 3 contains the manufacturing performance specifications. Exhibit 4 contains the manufacturer warranties. Exhibit 5 is the below-grade vaulted tank configuration.

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 component(s) 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 CNI Manufacturing, Franklin Fueling Systems, OPW, Husky, and EMCO Wheaton shall meet the manufacturing performance specifications as provided in Exhibit 3.

IT IS FURTHER ORDERED that the certified CNI Manufacturing System shall be installed, operated, and maintained in accordance with the CARB Approved Installation, Operation and Maintenance Manual for the CNI Manufacturing Phase I EVR System as Certified by Executive Order VR-104-I. Equipment shall be inspected at the interval specified and per the procedures identified in the CARB Approved Installation, Operation, and Maintenance Manual. A copy of the Executive Order and the CARB Approved Installation, Operation, and Maintenance Manual shall be maintained at each GDF where a certified CNI Manufacturing 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 manufacturer's certification application or documents and certified hereby is prohibited and deemed inconsistent with this certification, and is subject to enforcement action, 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 be made a condition of certification. The owner or operator of the CNI Manufacturing System shall conduct, and pass, the following tests no later than 60 days after startup and at least once every three (3) years after startup testing, 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-201.1B, Static Torque of Rotatable Phase I Adaptors (October 8, 2003); and
- Depending on the system configuration, either TP-201.1C, Leak Rate of Drop Tube/Drain Valve Assembly (October 8, 2003) or TP-201.1D, Leak Rate of Drop Tube Overfill Prevention Devices and Spill Container Drain Valves (October 8, 2003).

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 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). Alternate test procedures, including the most recent versions of the test procedures listed above, may be used if determined by the Executive Officer or his delegate, in writing, to yield comparable results. Testing the pressure/vacuum (P/V) vent valve will be at the option of the Districts. If P/V vent valve testing is required by the District, the test shall be conducted in accordance with TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves (October 8, 2003) and Exhibit 2.

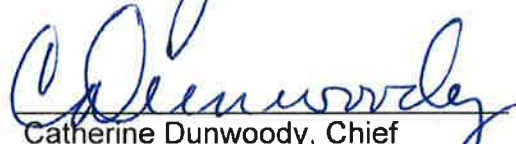
IT IS FURTHER ORDERED that the CNI Manufacturing System shall be compatible with gasoline in common use in California at the time of certification and any modifications to comply with future California gasoline requirements shall be submitted in writing pursuant to the process for Executive Order amendments set forth in Section 18 of CP-201 and approved in writing by the Executive Officer or his delegate.

IT IS FURTHER ORDERED that the certification of the CNI Manufacturing System with the exception of the Husky Model 5885 P/V vent valve shall remain valid through May 31, 2021.

IT IS FURTHER ORDERED that to provide the Executive Officer with the necessary time to fully gather and evaluate information to make a determination regarding the renewal certification of the Husky Model 5885 P/V vent valve consistent with Sections 17.3 and 17.4 of CP 201, the certification of the Husky Model 5885 P/V vent valve is extended for one year from the date when this Executive Order is signed.

IT IS FURTHER ORDERED that Executive Order VR-104-H issued on May 29, 2017, is hereby superseded by this Executive Order. CNI Manufacturing Systems certified under Executive Order VR-104-A to H 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. This Executive Order shall apply to new installations or major modification of existing Phase I systems.

Executed at Sacramento, California, this 1st day of June 2018.


Catherine Dunwoody, Chief
Monitoring and Laboratory Division

Attachments:

- Exhibit 1 CNI Manufacturing Phase I Vapor Recovery System Equipment List
- Exhibit 2 Installation, Maintenance and Compliance Specifications
- Exhibit 3 Manufacturing Performance Standards and Specifications
- Exhibit 4 Manufacturer Warranties
- Exhibit 5 Vaulted Aboveground Storage Tank Configuration (*Optional*)

Exhibit 1

CNI Manufacturing Phase I Vapor Recovery System Equipment List

<u>Equipment</u>	<u>Manufacturer/Model Number</u>
Containment Assembly	CNI Manufacturing XXXX-31103 (31103 denotes EVR System) 2 point System Configuration: XXXX (four digit code) indicates: CON1 – Vapor Assembly (5, 10, and 15 gallons) CON2 – Product Assembly (5, 10, and 15 gallons) Stand Alone/Direct Bury Configuration ¹ : XXXX (four digit code) indicates: 205P - Product Assembly 205V - Vapor Assembly (205 series are 5 gallons) 214P - Product Assembly 214V - Vapor Assembly (214 series are 5 gallons)
Pressure/Vacuum Vent Valve	OPW 723V FFS PV-Zero Husky 5885
Gravity Cover	CNI Mfg. GAC (used for CON1, CON2 or 214 Containments)
Snap Tight Cover	CNI Mfg. STP-200 (used for CON1, CON2 or 205 Containments)
Snap Tight Cover Ring	CNI Mfg. STP-39

¹ CNI Mfg. Stand Alone/Direct Bury Configurations 205P, 205V, 214P and 214V are not certified for use in a sump configuration.

Exhibit 1 (continued)

Drain Valve	CNI Mfg. RP12-Push
Dust Caps	CNI Mfg. 64 (product) CNI Mfg. 611-VR-3 (vapor) CompX CSP1-634LPC (product) CompX CSP3-1711LPC (vapor) CompX CSP2-634LPC (product) CompX CSP4-1711LPC (vapor) OPW 634LPC (product) OPW 1711LPC (vapor)
Dust Cap Gasket	CNI Mfg. 65 CNI Mfg. RP65 (replacement)
Product Adaptor	Emco Wheaton Retail A0030-124 Emco Wheaton Retail A0030-124S
Vapor Adaptor	Emco Wheaton Retail A0076-124 Emco Wheaton Retail A0076-124S
Jam Nut	CNI Mfg. 200JN
Tank Gauge Port Components	CNI Mfg. 613BC set (Cap 64, Adaptor 613)
Drop Tube²	CNI Mfg. DT100 (various lengths)
CNI Mfg. Drop Tube O-Ring³	CNI Mfg. DT101 (original) CNI Mfg. RP101 (replacement)
Drop Tube Overfill Prevention Valve²	EMCO Wheaton Retail A1100EVR Guardian
EMCO Wheaton Drop Tube O-Ring⁴	EMCO Wheaton Retail 569461
Fuel Lock⁵	McGard FL1 – Stick Only Fuel Lock (125007) McGard FL2 – Stick/Sampling Fuel Lock (125008)
Bladder Plug	McGard PSI104
Emergency Vent	Exhibit 5 (for below-grade vaulted tank configuration)

² If these components are installed or required by regulations of other agencies, only those components and model numbers specified above shall be installed or used.

³ O-Rings used only with the CNI Mfg. DT100 drop configuration.

⁴ O-Ring used only with the EMCO Wheaton Retail A1100EVR Guardian Overfill drop tube configuration.

⁵ If these components are installed, only those components and model numbers specified above shall be installed or used.

Exhibit 1 (continued)

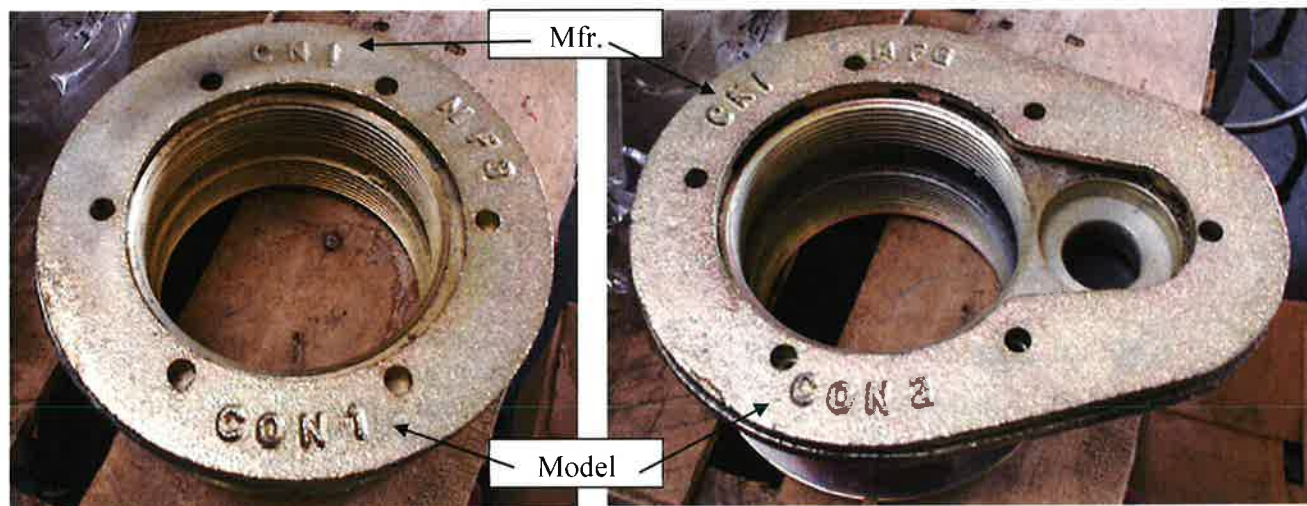
Table 1
Components Exempt from Identification Requirements

Component Name	Manufacturer	Model Number
Replacement Drain Valve	CNI Mfg.	RP12-Push
Jam Nut	CNI Mfg.	200JN
Tank Gauge Port Components (Cap and Adaptor)	CNI Mfg.	613BC Cap and Adaptor set; p/n 64 and 613
Dust Cap gaskets	CNI Mfg.	Gasket 65 original, RP65 for replacement
O-Rings and gaskets for product and vapor adaptors	EMCO Wheaton Retail	O-rings in kit 494301, gasket 409628; O-rings in kit 493995
Drop Tube O-Ring	CNI Mfg.	DT101 original, RP101 replacement
	EMCO Wheaton Retail	56941
Drop Tube ²	CNI Mfg.	DT100
Containment Assembly	CNI Mfg.	XXXX-31103*
Gravity Cover	CNI Mfg.	CNI Mfg. GAC
Snap Tight Cover	CNI Mfg.	CNI Mfg. STP-200
Snap Tight Cover Ring	CNI Mfg.	CNI Mfg. STP-39
Fuel Lock	McGard	FL1, FL2

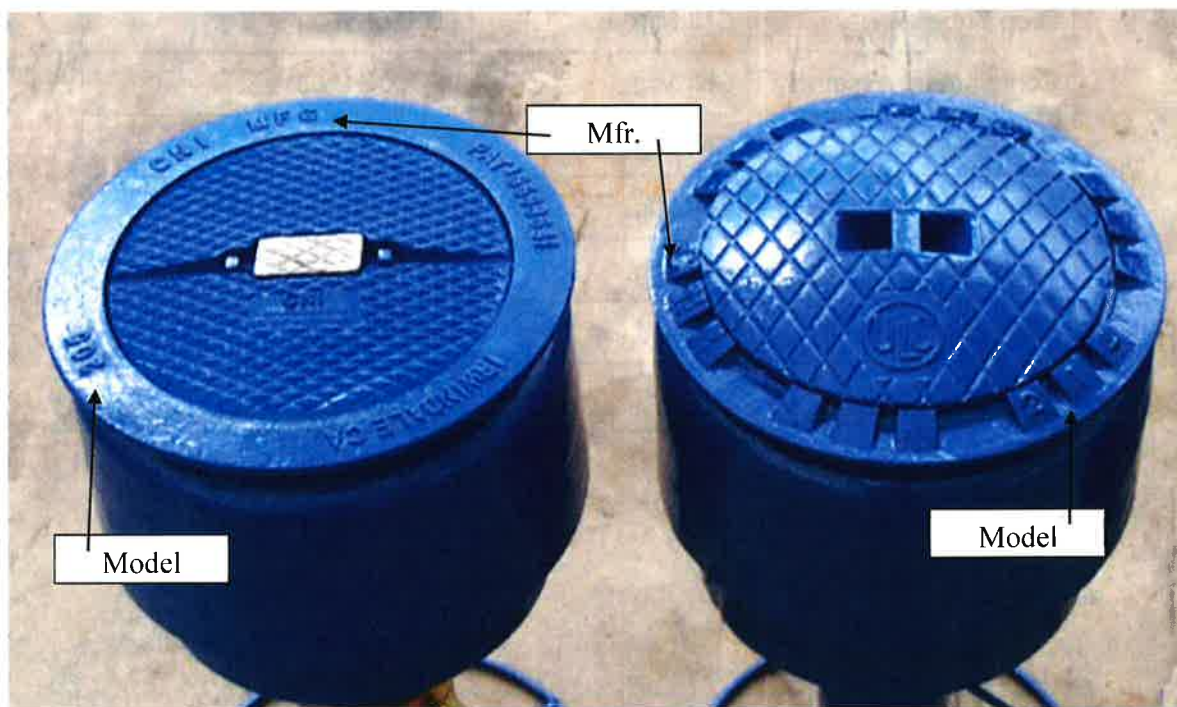
***CON1, CON2, 205, and 214 shall be marked on each containment assembly.**

² If these components are installed or required by regulations of other agencies, only those components and model numbers specified above shall be installed or used.

Exhibit 1 (continued)
Component Identification & Location

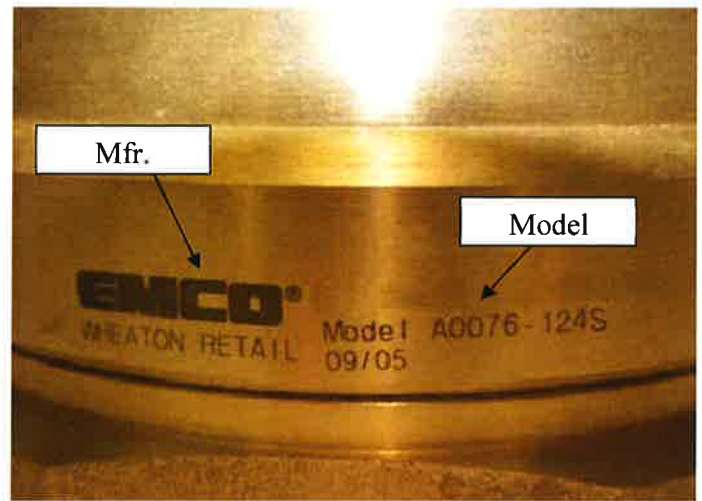
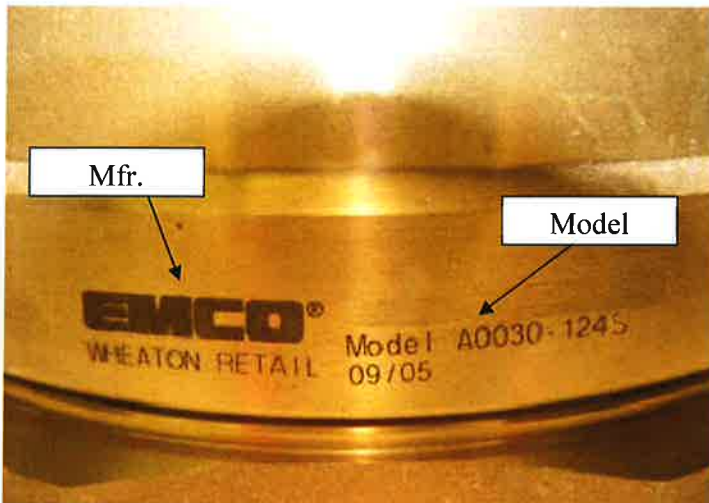


CNI Mfg. CON1 and CON2 Containment Assemblies

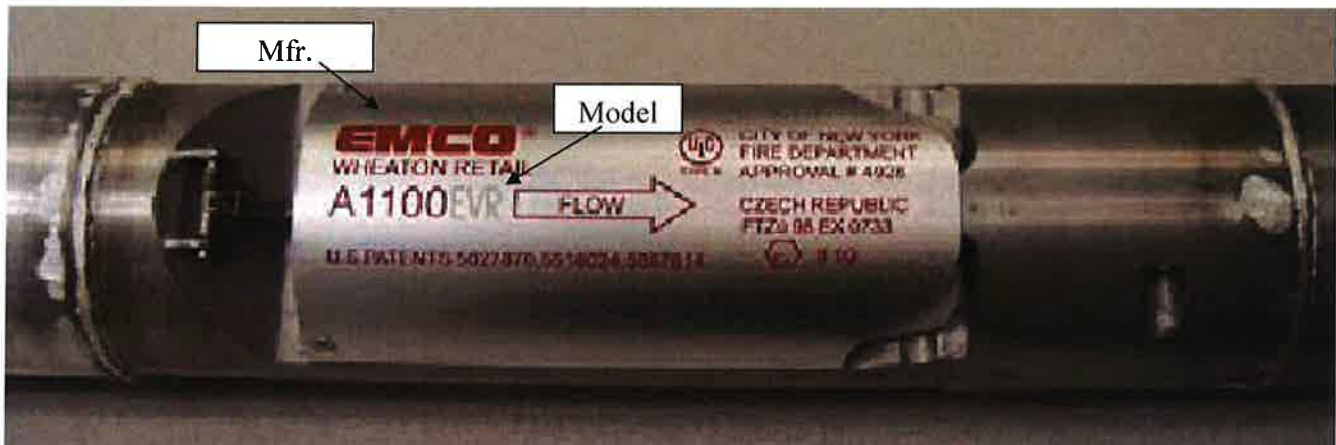


CNI Mfg. Model 205 and 214 Containment Assemblies

Exhibit 1 (continued)
Component Identification & Location

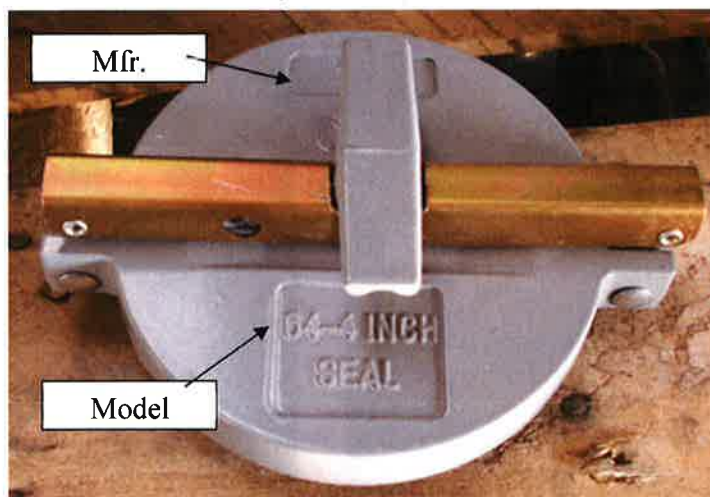


EMCO Wheaton Retail
Model A0030-124S Product Adaptor and Model A0076-124S Vapor Adaptor
(Models A0030-124 and A0076-124 identified in the same location)

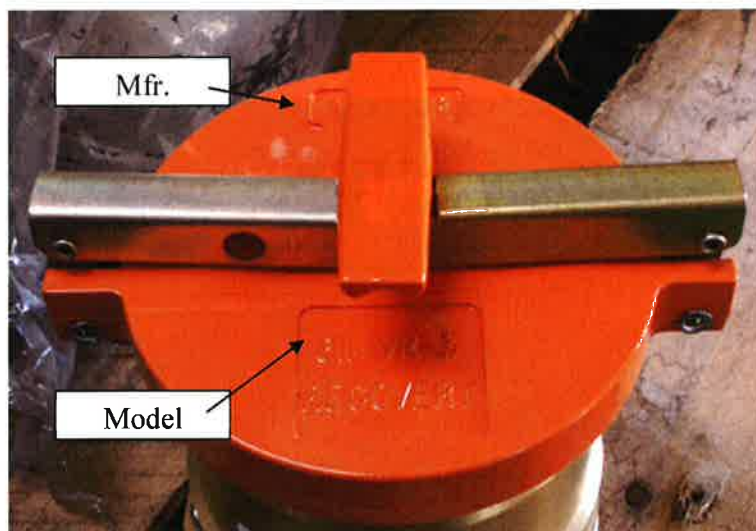


EMCO Wheaton Retail
Model A1100EVR Overfill Prevention Valve

Exhibit 1 (continued)
Component Identification & Location



CNI Mfg. Model 64 Dust Cap

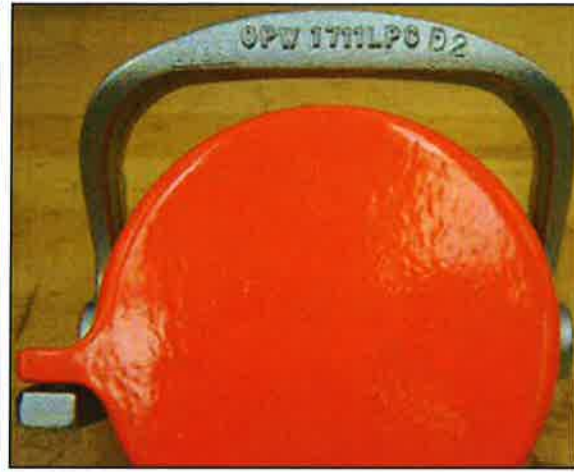


CNI Mfg. Model 611-VR-3 Dust Cap

Exhibit 1 (continued)
Component Identification & Location



OPW 634LPC Product Dust



OPW 1711LPC Vapor Dust

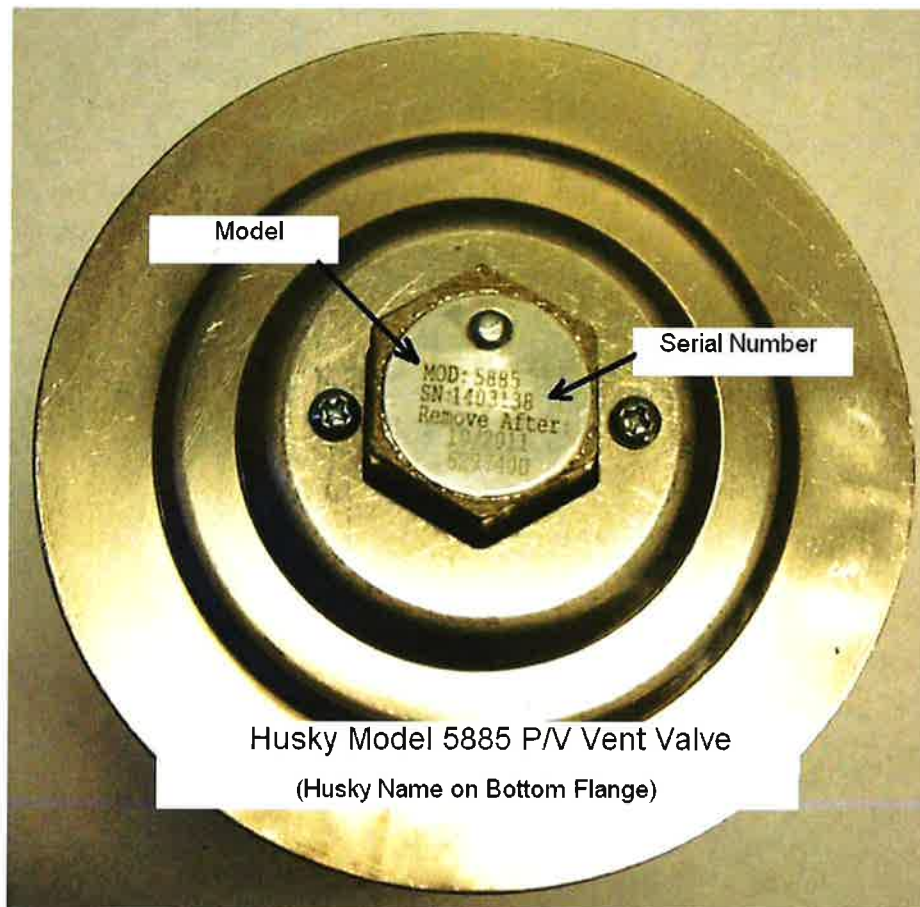
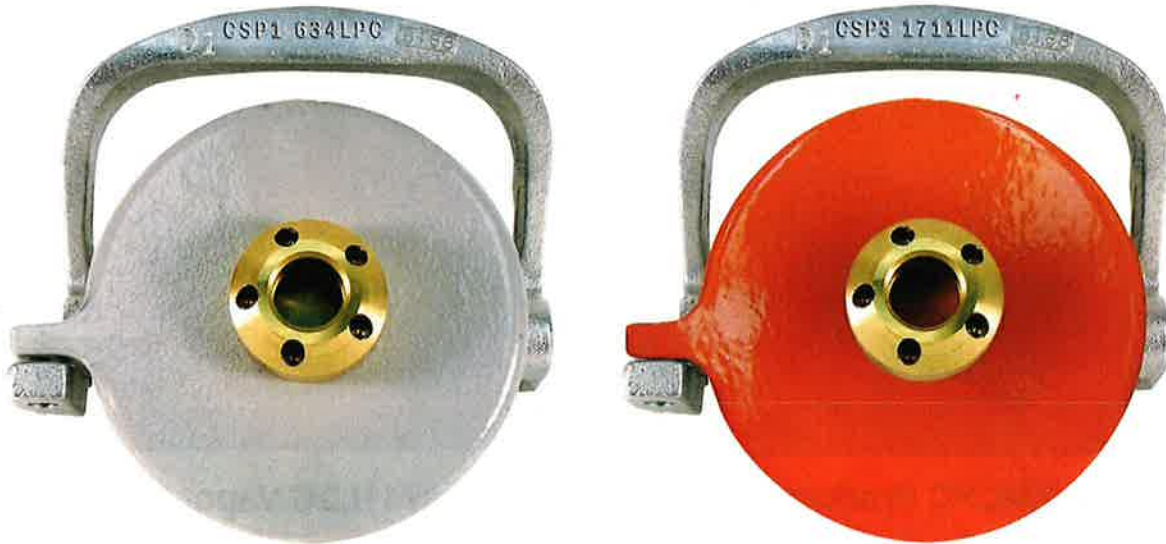


Exhibit 1 (continued)
Component Identification and Location

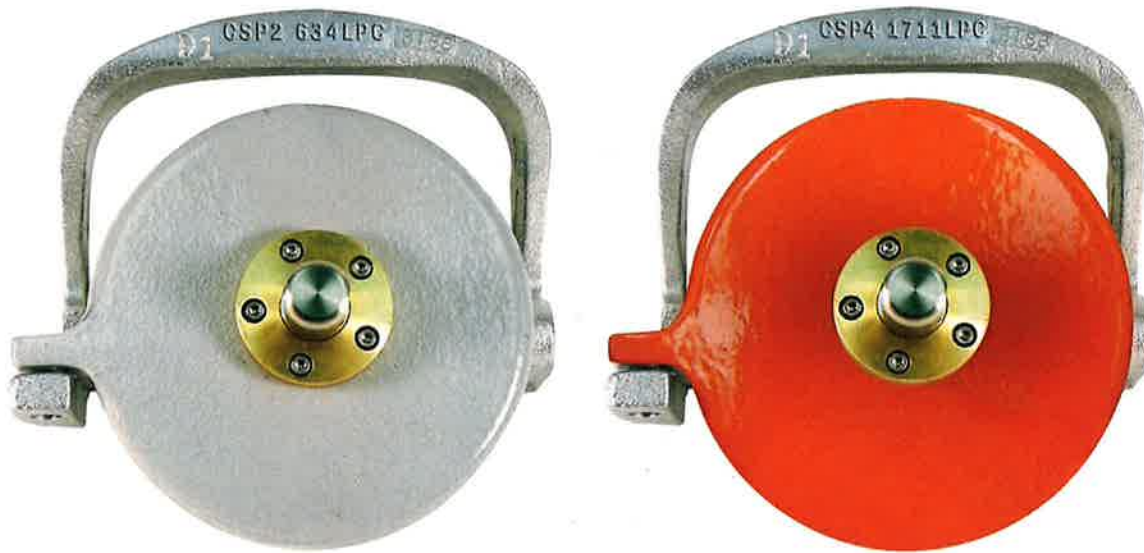


CompX CSP1-634LPC Product Dust Cap CompX CSP3-1711LPC Vapor Dust Cap



CompX Tank Commander Lid
Locks onto CSP1-634LPC and CSP3-1711LPC Dust Caps

Exhibit 1 (continued)
Component Identification and Location



CompX CSP2-634LPC Product Dust Cap CompX CSP4-1711LPC Vapor Dust Cap



CompX Tank Commander Lid
Locks onto CSP2-634LPC and CSP4-1711LPC Dust Caps

Exhibit 1 (continued)
Component Identification and Location

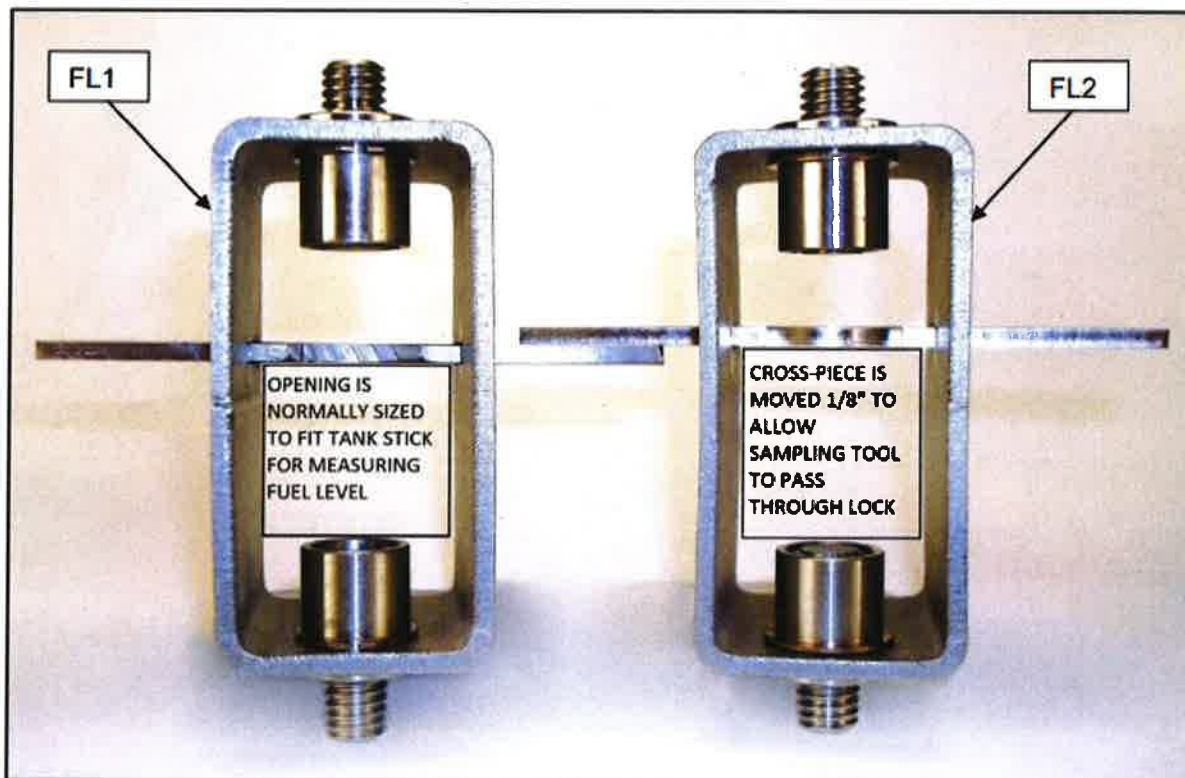


FFS PV-Zero P/V Vent Valve
(Model and Serial Number on White Tag)

Exhibit 1 (continued)
Component Identification and Location



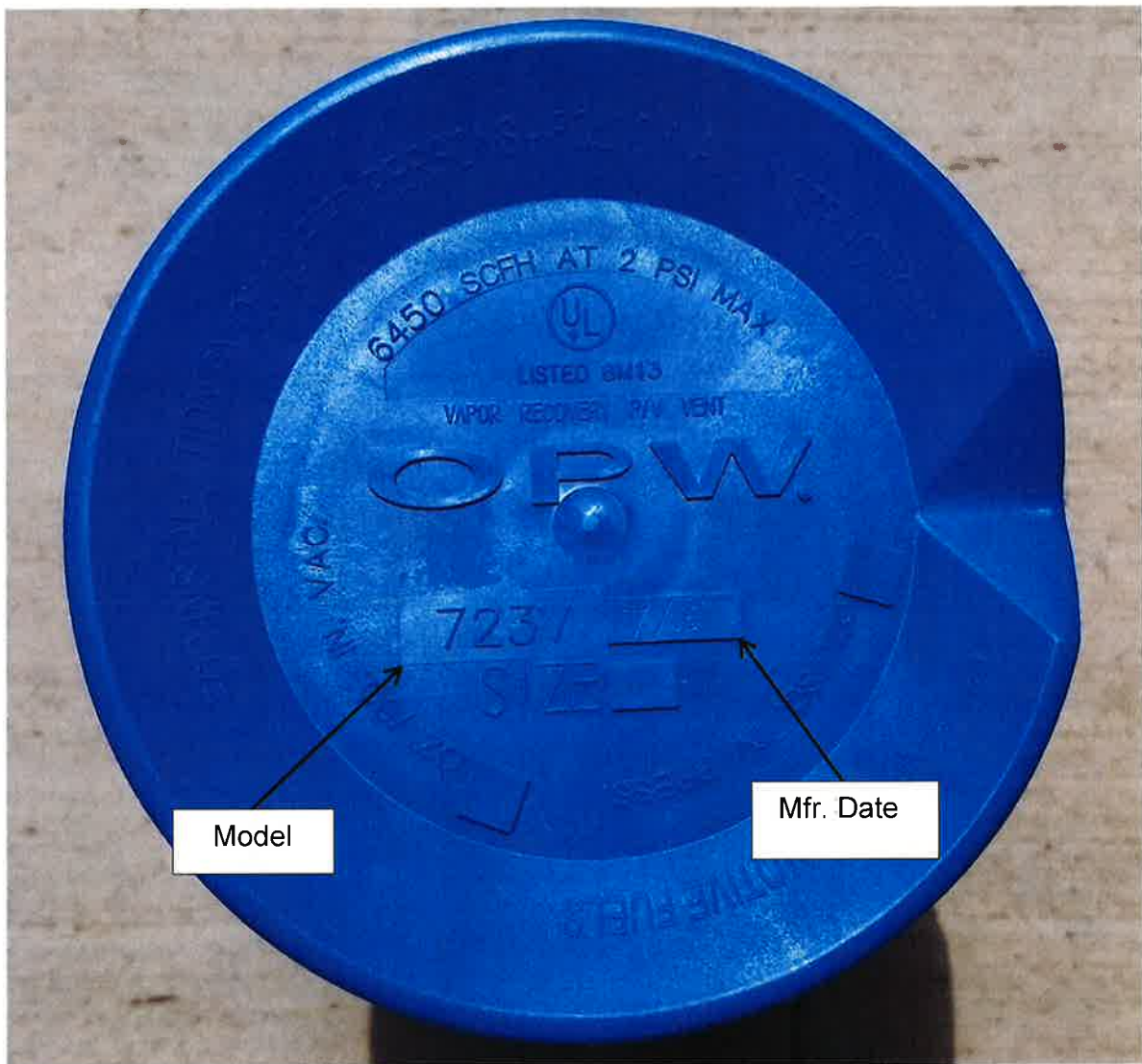
McGard Fuel Lock Installation Position⁶



McGard Fuel Lock (FL1 on Left, FL2 on Right)

⁶ Optional component, but if installed this picture shows the correct installation location in the pipe just below the Product Rotatable Adaptor in the drop tube.

Exhibit 1 (continued)
Component Identification and Location



OPW Model 723V Pressure/Vacuum Vent Valve

Exhibit 2

Installation, Maintenance and Compliance Specifications

This exhibit contains the installation, maintenance and compliance standards and specifications applicable to a CNI Manufacturing Phase I Vapor Recovery System (CNI Manufacturing System) installed in a gasoline dispensing facility (GDF).

General Specifications

1. Typical installations of the CNI Manufacturing System are shown in Figures 2A, 2B, 2C 2D, 2E, 2F, and 2G.
2. The CNI Manufacturing System shall be installed, operated and maintained in accordance with the ARB Approved Installation, Operation and Maintenance Manual for the CNI Manufacturing Phase I Vapor Recovery System.
3. Any repair or replacement of system components shall be done in accordance with the ARB Approved Installation, Operation and Maintenance Manual for the CNI Manufacturing Phase I Vapor Recovery System.
4. Unless otherwise specified in this Executive Order (EO), the CNI Manufacturing Phase I Vapor Recovery System shall comply with the applicable performance standards and performance specifications in CP-201.
5. Installation, maintenance and repair of system components, including removal and installation of such components in the course of any required tests, shall be performed by CNI Mfg. certified technicians. Additional certifications may be required in accordance with District requirements.

Pressure/Vacuum Vent Valves For Storage Tank Vent Pipes

1. No more than three certified pressure/vacuum vent valves (P/V Valves) listed in Exhibit 1 shall be installed on any GDF underground storage tank system.
2. Compliance determination of the following P/V valve performance specifications shall be at the option of the districts:
 - a. The leak rate of each P/V valve shall not exceed 0.05 cubic feet per hour (CFH) at 2.0 inches H₂O positive pressure and 0.21 CFH at 4.0 inches H₂O negative pressure as determined by TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves (October 8, 2003).

- b. The positive pressure setting is 2.5 to 6.0 inches of H₂O and the negative pressure setting is 6.0 to 10.0 inches of H₂O as determined by TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves (October 8, 2003).
3. Compliance determination of the P/V valve performance specifications in items 2a and 2b for the FFS PV-Zero P/V vent valve shall be conducted with the valve remaining in its installed position on the vent line(s). The PV-Zero section of the ARB-Approved Installation, Operation and Maintenance Manual for the CNI Manufacturing Phase I Vapor Recovery System outlines the equipment needed to test the valve in its installed position.
4. At least one pressure/vacuum (P/V) vent valve shall be installed on each tank vent. If two or more P/V vent valves are used, they shall be installed in parallel, so that each can serve as a backup to the other if one should fail to open properly. A manifold may be installed on the vent pipes to reduce the number of potential leak sources and P/V valves installed. Vent pipe manifolds shall be constructed of steel pipe or an equivalent material that has been listed for use with gasoline. If a material other than steel is used, the GDF operator shall make available information demonstrating that the material is compatible for use with gasoline. One example of a typical vent pipe manifold is shown in Figure 2H. This shows only one typical configuration; other manifold configurations may be used. For example, a tee may be located in a different position, or fewer vent pipes may be connected, or more than one P/V valve may be installed on the manifold.
5. Each P/V valve shall have permanently affixed to it a yellow, gold, or white-colored label with black lettering stating the following specifications:

Positive pressure setting: 2.5 to 6 inches H₂O
Negative pressure setting: 6.0 to 10.0 inches H₂O
Positive Leak rate: 0.05 CFH at 2.0 inches H₂O
Negative Leak rate: 0.21 CFH at 4.0 inches H₂O

Rotatable Product and Vapor Recovery Adaptors

1. Rotatable product and vapor recovery adaptors shall be capable of at least 360-degree rotation and have an average static torque not to exceed 108 pound-inch (9 pound-foot). Compliance with this requirement shall be demonstrated in accordance with TP-201.1B, Static Torque of Rotatable Phase I Adaptors (October 8, 2003).

Use CNI Manufacturing Torque Test Tool Part Number EVRSYS100, as an equivalent Torque Test Tool per section 5.2 of TP-201.1B, rather than Phil-Tite

Torque Test Tool Part Number 6004. The Phil-Tite tool is not compatible with CNI Manufacturing dust caps.

2. The vapor adaptor poppet shall not leak when closed. Compliance with this requirement shall be verified by the use of commercial liquid leak detection solution, or by bagging, when the vapor containment space of the underground storage tank is subjected to a non-zero gauge pressure. (Note: leak detection solution will detect leaks only when positive gauge pressure exists).

Vapor Recovery and Product Adaptor Dust Caps

Dust caps with intact gaskets shall be installed on all Phase I tank adaptors.

Spill Container Drain Valve

The spill container drain valve shall be configured to drain liquid directly into the drop tube and shall be isolated from the underground storage tank ullage space. The leak rate of the drain valve shall not exceed 0.17 CFH at 2.0 inches H₂O. Depending on the presence of the drop tube overfill prevention device, compliance with this requirement shall be demonstrated in accordance with either TP-201.1C, Leak Rate of Drop Tube/Drain Valve Assembly or TP-201.1D (October 8, 2003), Leak Rate of Drop Tube Overfill Prevention Devices and Spill Container Drain Valves (October 8, 2003).

Phase I Drop-Tubes with Overfill Prevention Devices

1. The Drop Tube Overfill Prevention Device (overfill device) is designed to restrict the flow of gasoline delivered to the underground storage when liquid levels exceed a specified capacity. The drop tube overfill device is not a required component of the vapor recovery system, but maybe installed as an optional component of the system. Other requirements may apply.
2. The leak rate of Phase I drop-tube overfill prevention devices shall not exceed 0.17 CFH at 2.0 inches H₂O). The leak rate shall be determined in accordance with TP-201.1D, Leak Rate of Drop Tube Overfill Prevention Devices and Spill Container Drain Valves (October 8, 2003).
3. The discharge opening of the fill-pipe must be entirely submerged when the liquid level is six inches above the bottom of the tank.

Phase I Drop-Tubes without Overfill Prevention Devices

1. Drop tubes that do not have an overfill prevention device shall not leak and shall be tested in accordance with TP-201.1C, Leak Rate of Drop Tube/Drain Valve Assembly (October 8, 2003).
2. The discharge opening of the fill-pipe must be entirely submerged when the liquid level is six inches above the bottom of the tank.

Vapor Recovery Riser Offset

1. The vapor recovery tank riser may be offset from the tank connection to the vapor recovery Spill Container provided that the maximum horizontal distance (offset distance) does not exceed twenty (20) inches. One example of an offset is shown in Figure 2I.
2. The vapor recovery riser shall be offset using commercially available, four (4) inch diameter steel pipe fittings.

Tank Gauge Port Components

The tank gauge adaptor and cap are paired. Therefore, an adaptor manufactured by one company shall be used only with a cap manufactured by the same company.

Warranty

Each manufacturer listed in Exhibit 1 shall include a warranty tag with the certified component(s). The manufacturer warranty tag, included with each component, shall be provided to the service station owner/operator at the time of installation.

Connections and Fittings

All connections and fittings not specifically certified with an allowable leak rate shall not leak. The absence of vapor leaks shall be verified with the use of commercial liquid leak detection solution, or by bagging, when the vapor containment space of the underground storage tank is subjected to a non-zero gauge pressure. (Note: leak detection solution will detect leaks only when positive gauge pressure exists.)

Maintenance Records

Each GDF operator/owner shall keep records of maintenance performed at the facility. Such records shall be maintained on site or in accordance with district requirements or policies. Additional information may be required in accordance with district requirement or policies. The records shall include the maintenance or test date, repair date to correct test failure, maintenance or test performed, affiliation, telephone number, name and Certified Technician Identification Number, of individual conducting maintenance or test. An example of a GDF Maintenance Record is shown in Figure 2J.

Table 2-1
Gasoline Dispensing Facility Compliance Standards and Specifications

Component/System	Test Method	Standard or Specification
Rotatable Phase I Adaptors	TP-201.1B	Minimum, 360-degree rotation Maximum, 108 pound-inch average static torque
Overfill Prevention Device	TP-201.1D	Leak rate \leq 0.17 CFH at 2.0 inches H ₂ O
Spill Container Drain Valve	TP-201.1C or TP-201.1D	\leq 0.17 CFH at 2.0 inches H ₂ O
P/V Vent Valve ¹	TP-201.1E	Positive pressure setting: 2.5 to 6.0 inches H ₂ O Negative pressure setting: 6.0 to 100 inches H ₂ O Positive Leak rate: 0.05 CFH at 2.0 inches H ₂ O Negative Leak rate: 0.21 CFH at -4.0 inches H ₂ O
Gasoline Dispensing Facility	TP-201.3	As specified in TP-201.3 and/or CP-201
All connections and fittings certified without an allowable leak rate	Leak Detection Solution or bagging	No Leaks

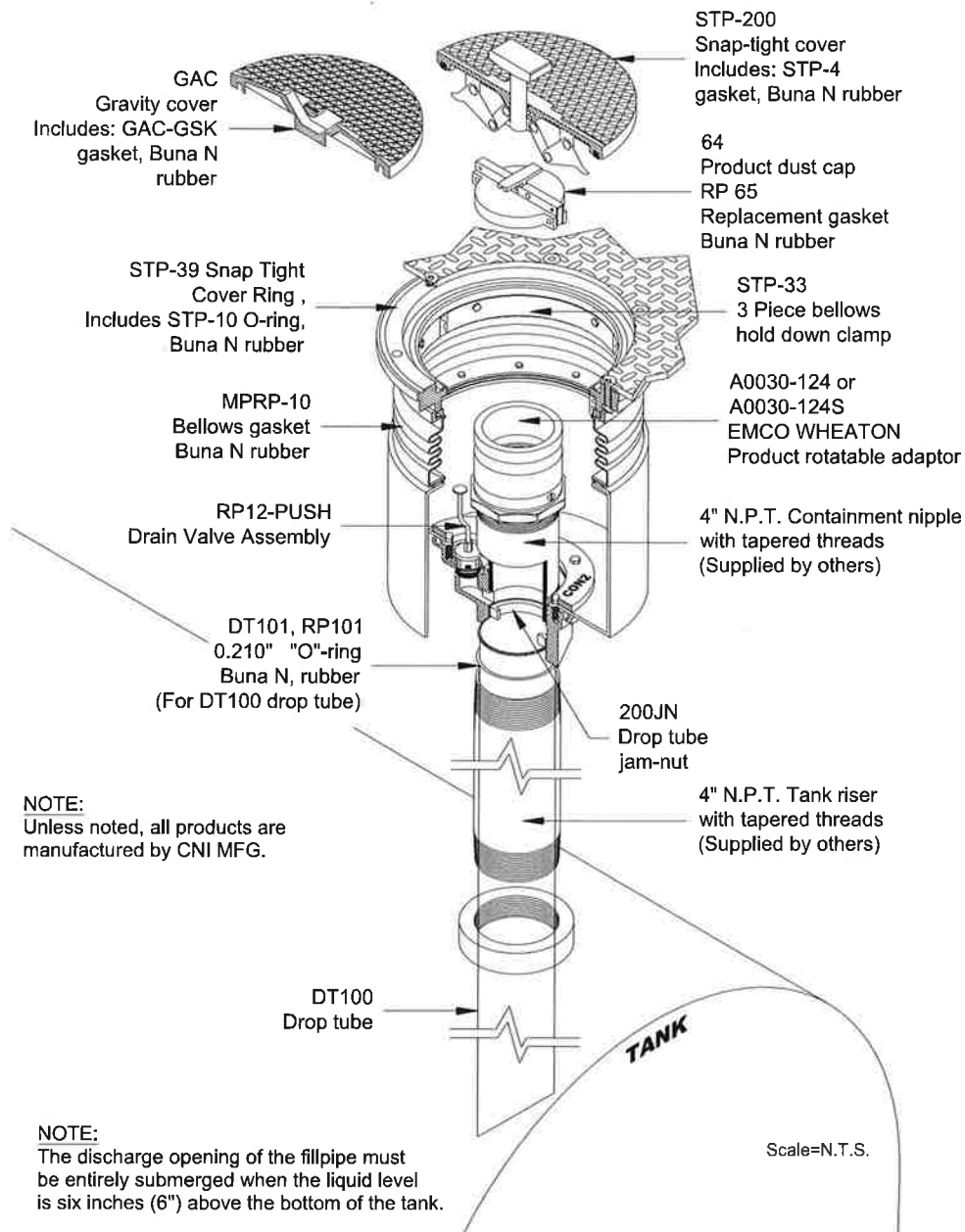
¹ Compliance determination at the option of the district.

Table 2-2
Maintenance Intervals for System Components²

Manufacturer	Component	Maintenance Interval
OPW	Pressure/Vacuum Vent Valve	Annual
Husky	Pressure/Vacuum Vent Valve	Annual
FFS	Pressure/Vacuum Vent Valve	Annual
CNI Manufacturing	Tank Gauge Port Components	Annual Inspection
CNI Manufacturing	Dust Caps	Annual Inspection
CompX	Dust Caps	Annual Inspection
OPW	Dust Caps	Annual Inspection
CNI Manufacturing	Drop Tube	Annual Test
EMCO Wheaton Retail	Drop Tube Overfill Prevention Valve	Annual Tests
EMCO Wheaton Retail	Rotatable Phase I Product and Vapor Adaptors	Annual Tests
CNI Manufacturing	Spill Container Drain Valve	18 Months
CNI Manufacturing	Spill Containment	Annual Inspection

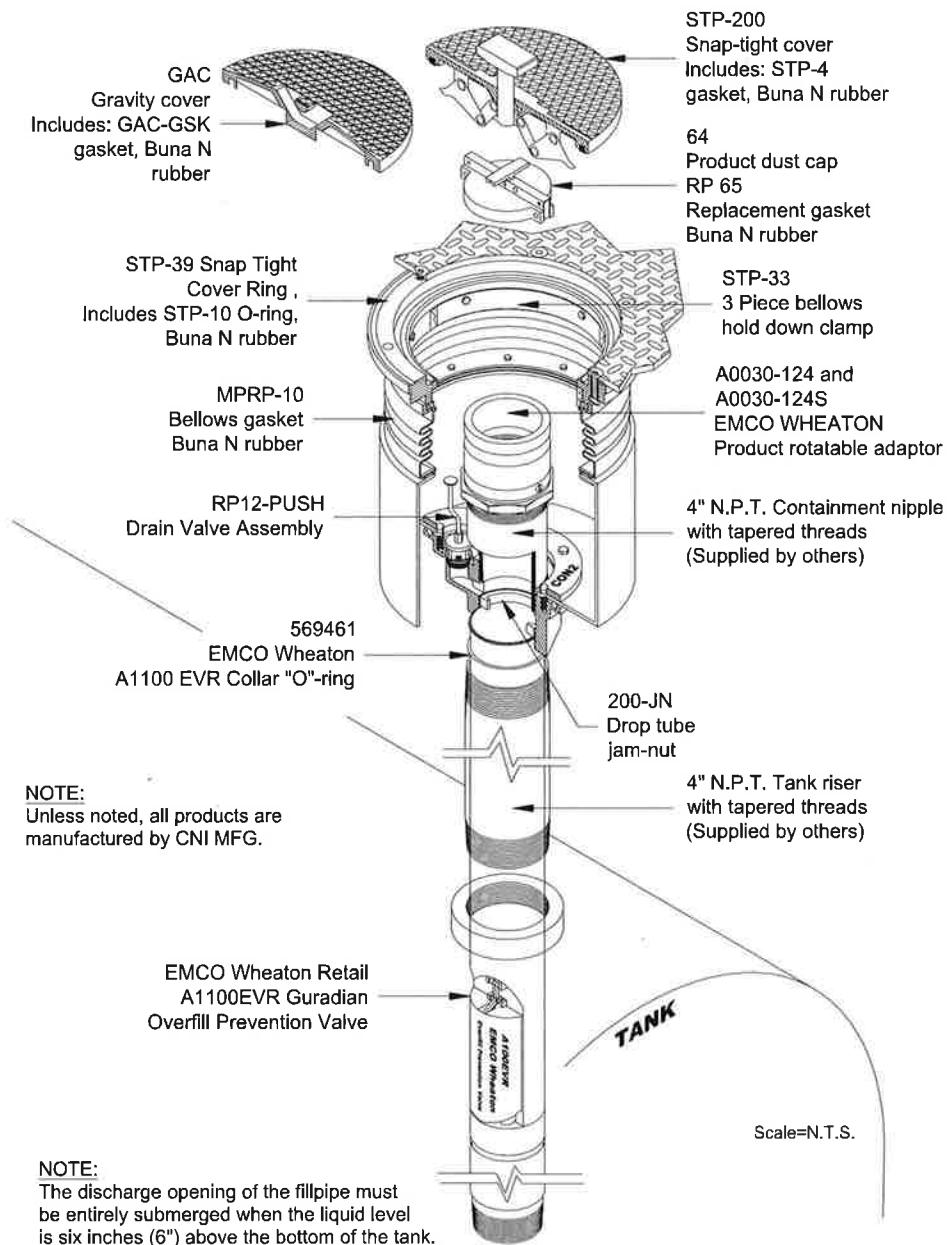
² Maintenance must be conducted within the interval specified from the date of installation and at least within the specified interval thereafter.

Figure 2A
Typical Product Side Installation of CNI Manufacturing 2 Point System
Model CON2 using DT100 Drop Tube⁷



⁷ McGard FL1 or FL2 Fuel Lock (Optional - Not Pictured), if installed, would be positioned inside the containment nipple below the rotatable adaptor.

Figure 2B
Typical Product Side Installation of CNI Manufacturing 2 Point System
Model CON2 using EMCO Wheaton A1100EVR Guardian Overfill Prevention⁸



⁸ McGard FL1 or FL2 Fuel Lock (Optional - Not Pictured), if installed, would be positioned inside the containment nipple below the rotatable adaptor

Figure 2C
Typical Vapor Side Installation of CNI Manufacturing 2 Point System
Model CON1

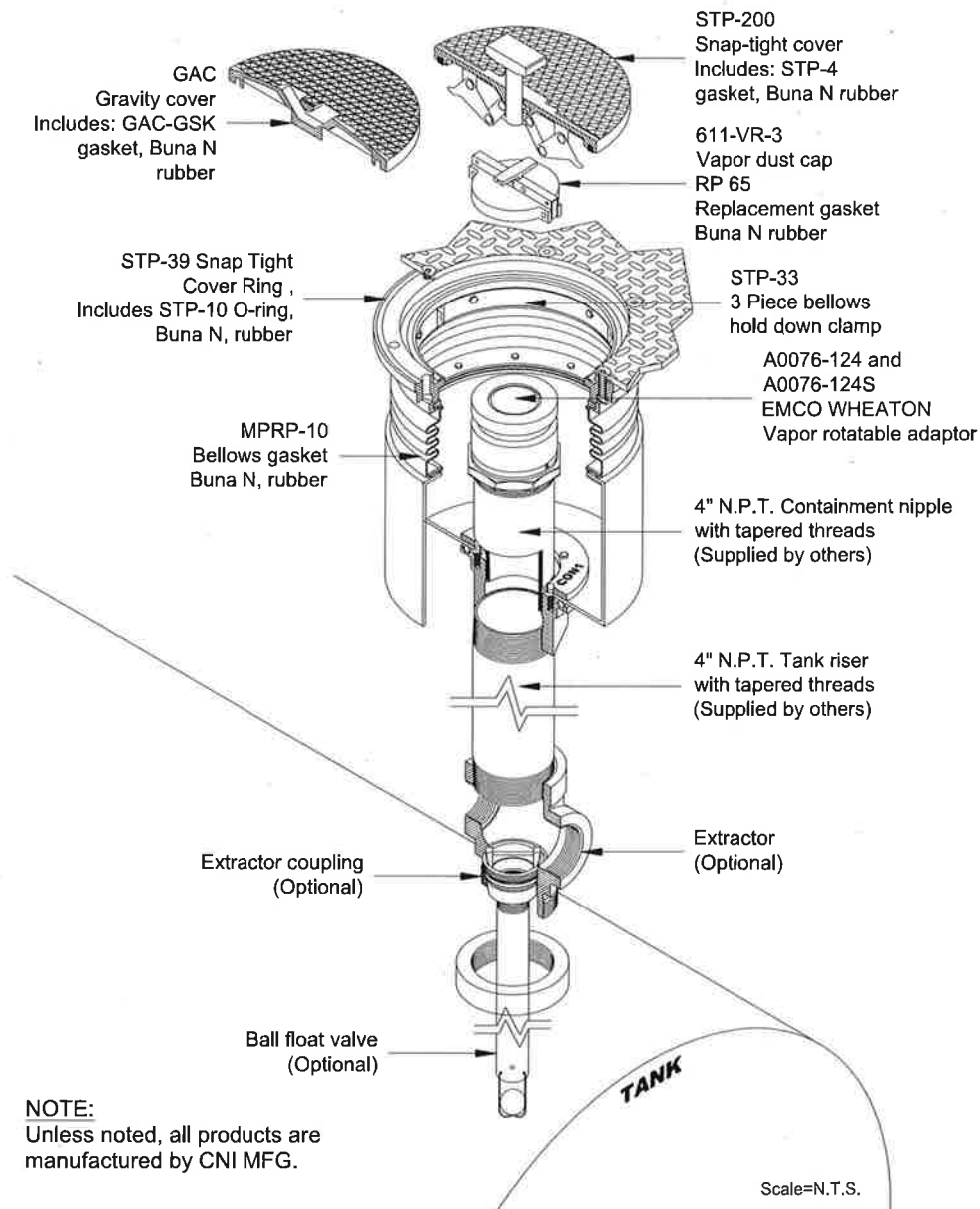
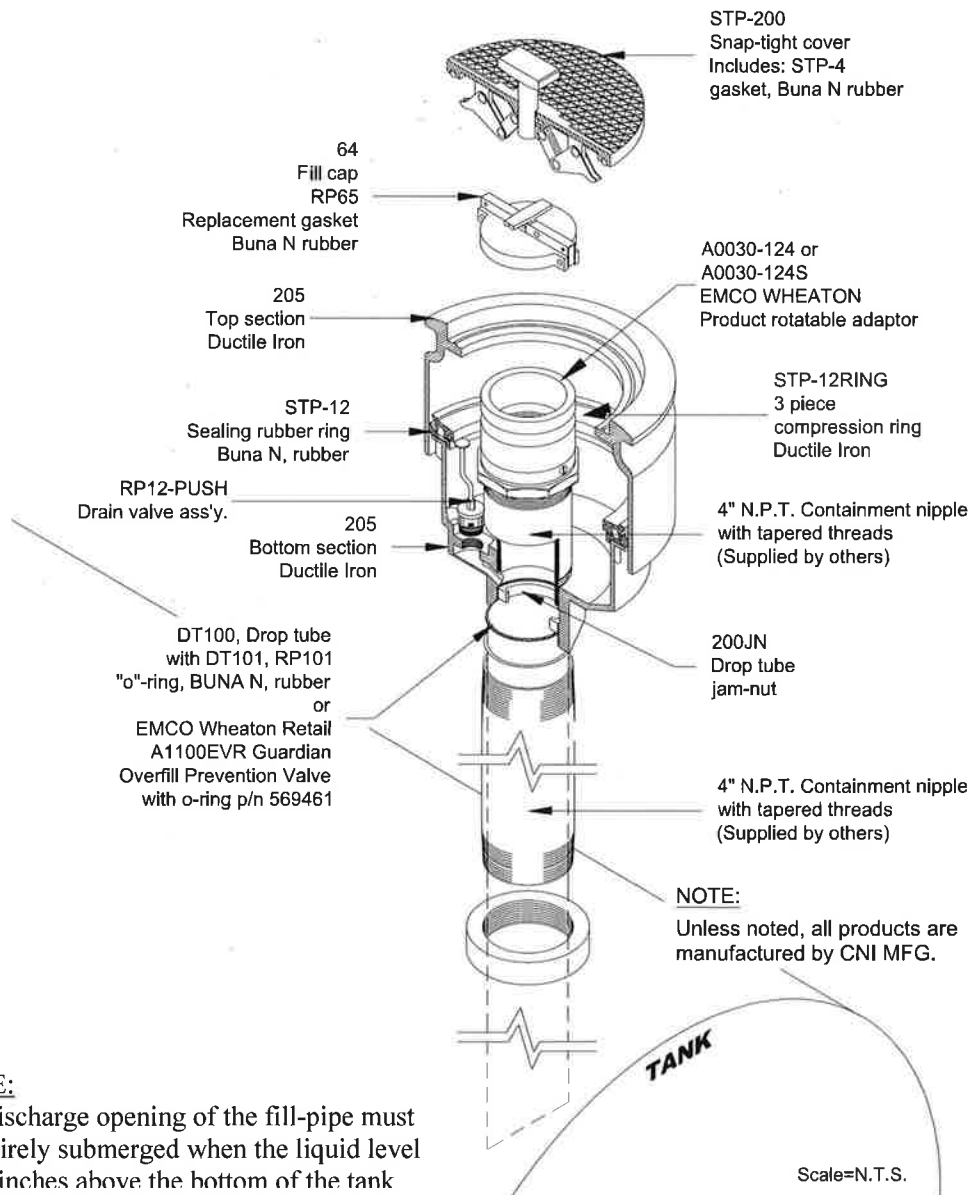


Figure 2D
Typical Product Side Installation of
CNI Manufacturing Stand Alone/Direct Bury System⁹



NOTE:

The discharge opening of the fill-pipe must be entirely submerged when the liquid level is six inches above the bottom of the tank

⁹ McGard FL1 or FL2 Fuel Lock (Optional - Not Pictured), if installed, would be positioned inside the containment nipple below the rotatable adaptor

Figure 2E
Typical Vapor Side Installation of
CNI Manufacturing Stand Alone/Direct Bury System

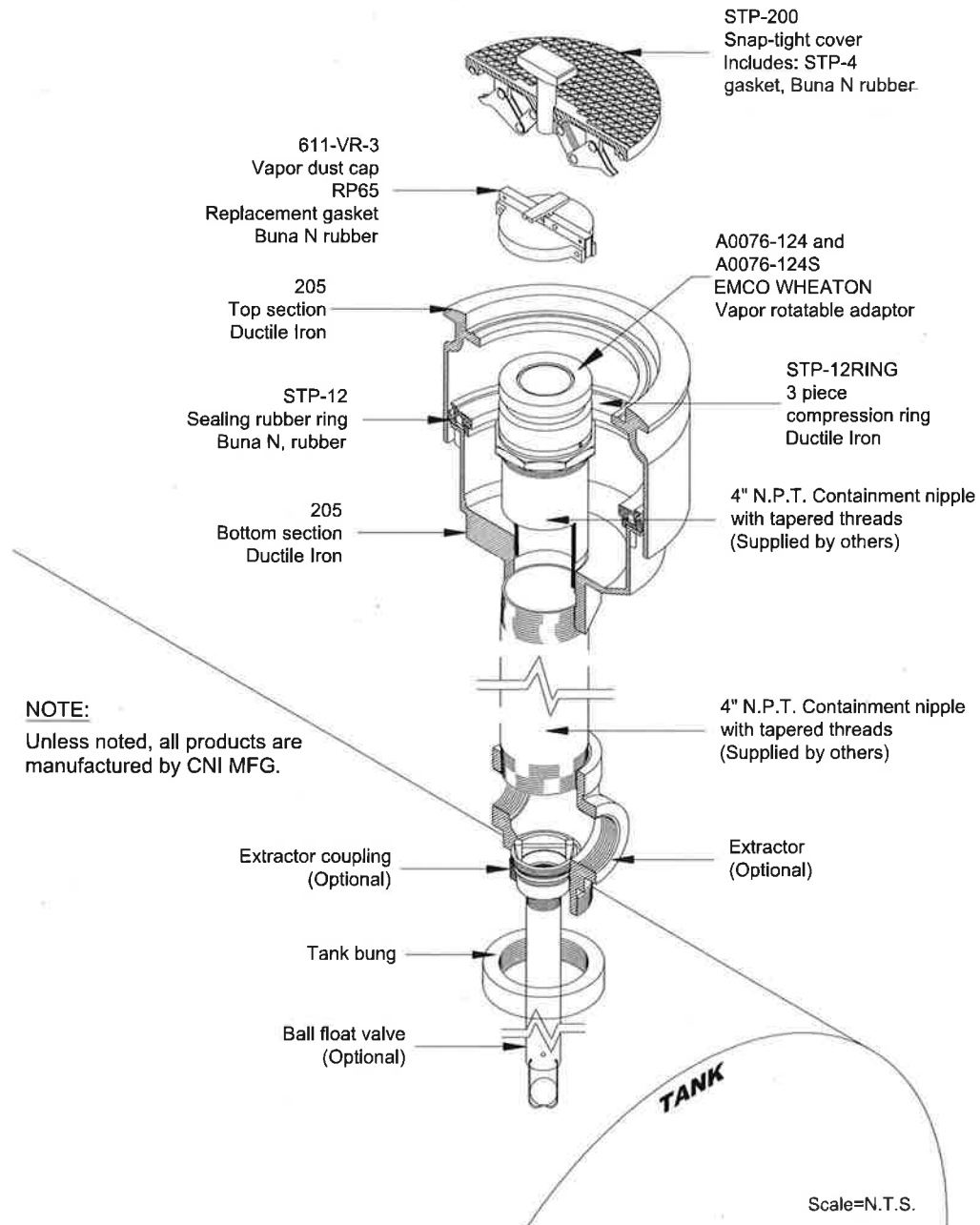
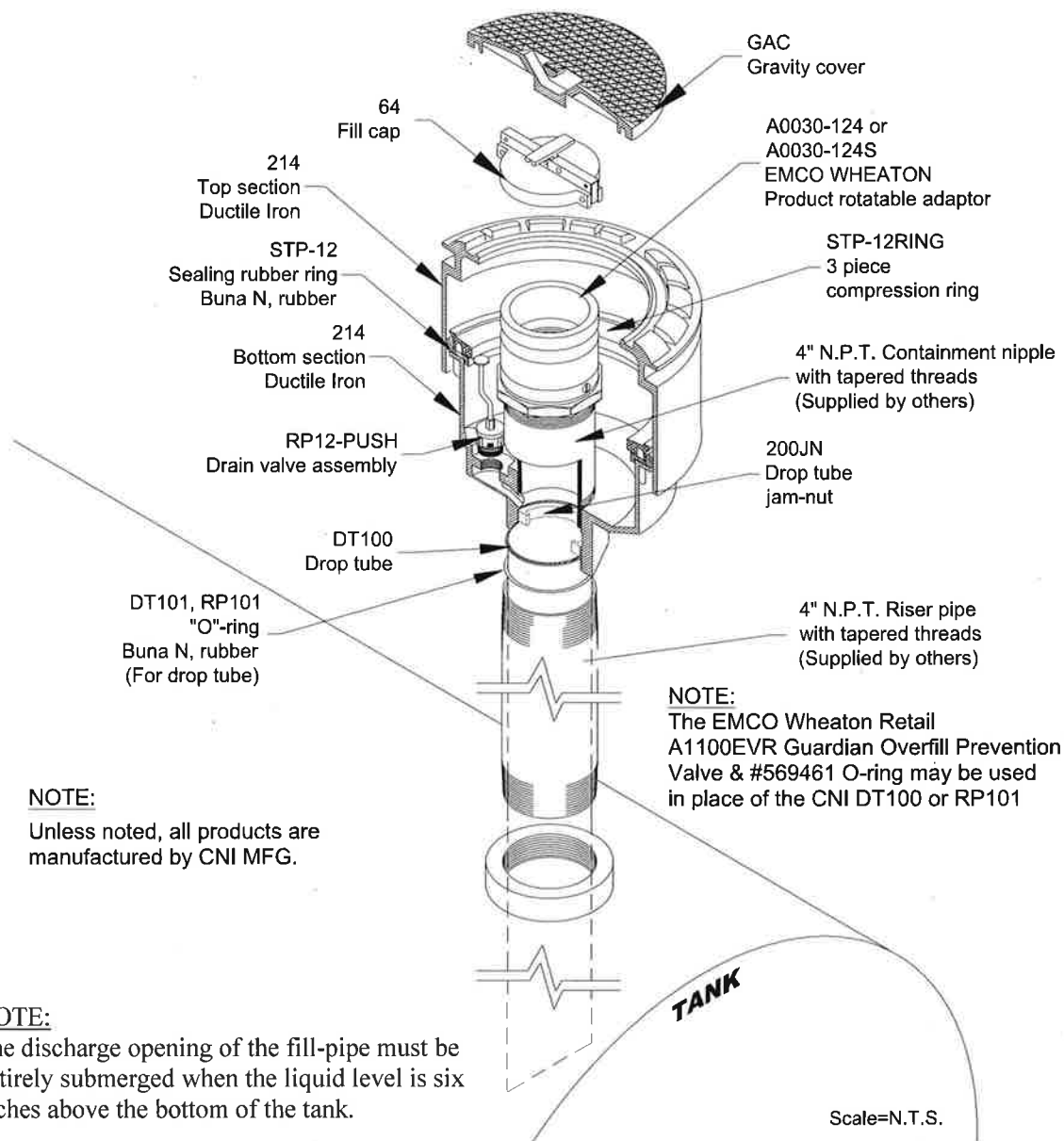


Figure 2F
Typical Product Side Installation of CNI Manufacturing Stand Alone/ Direct Bury/ System
Model No. 214P with Gravity Cover¹⁰



¹⁰ McGard FL1 or FL2 Fuel Lock (Optional - Not Pictured), if installed, would be positioned inside the containment nipple below the rotatable adaptor.

Figure 2G
Typical Vapor Side Installation of CNI Manufacturing Stand Alone/Direct Bury System
Model No. 214V with Gravity Cover

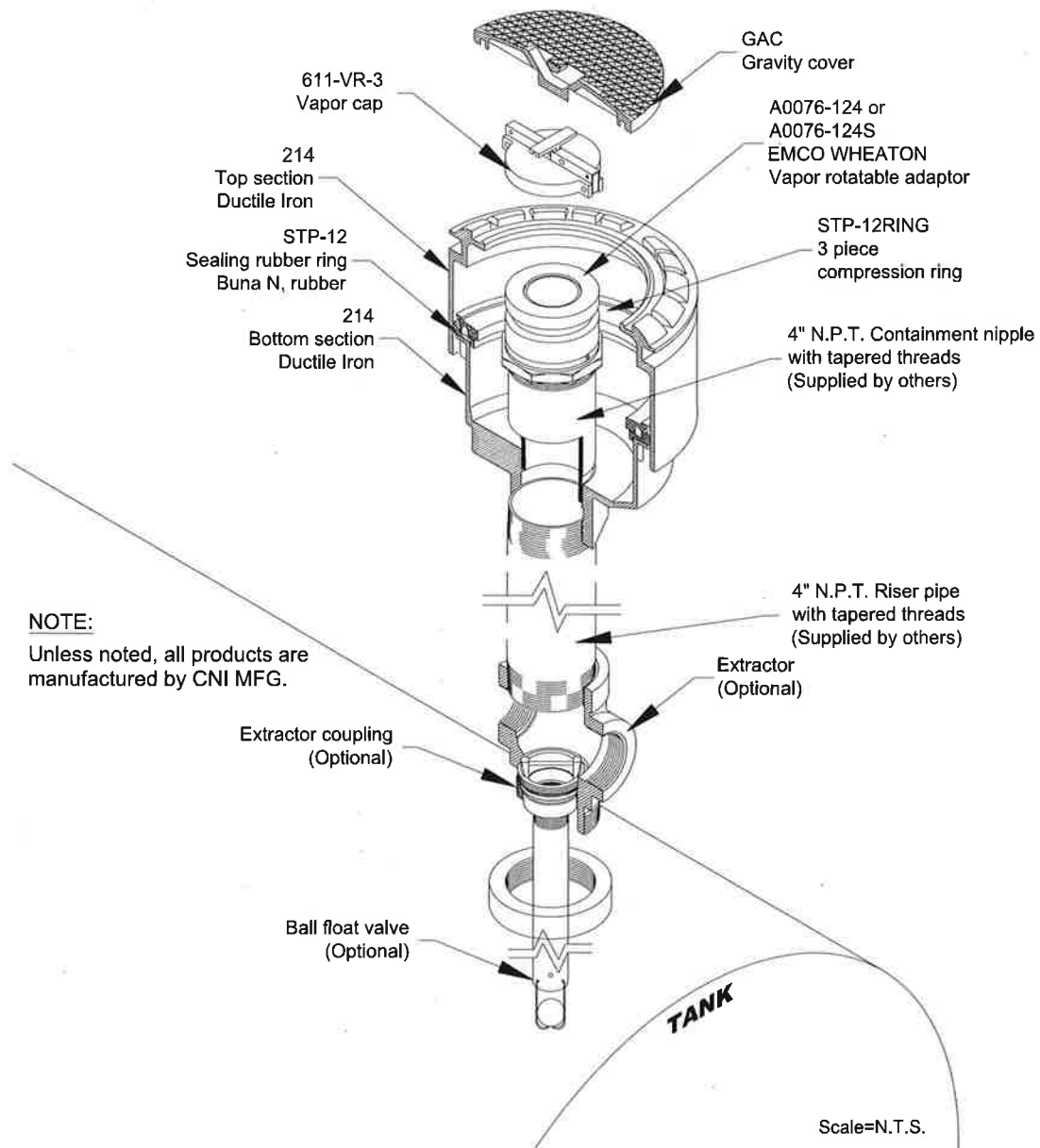
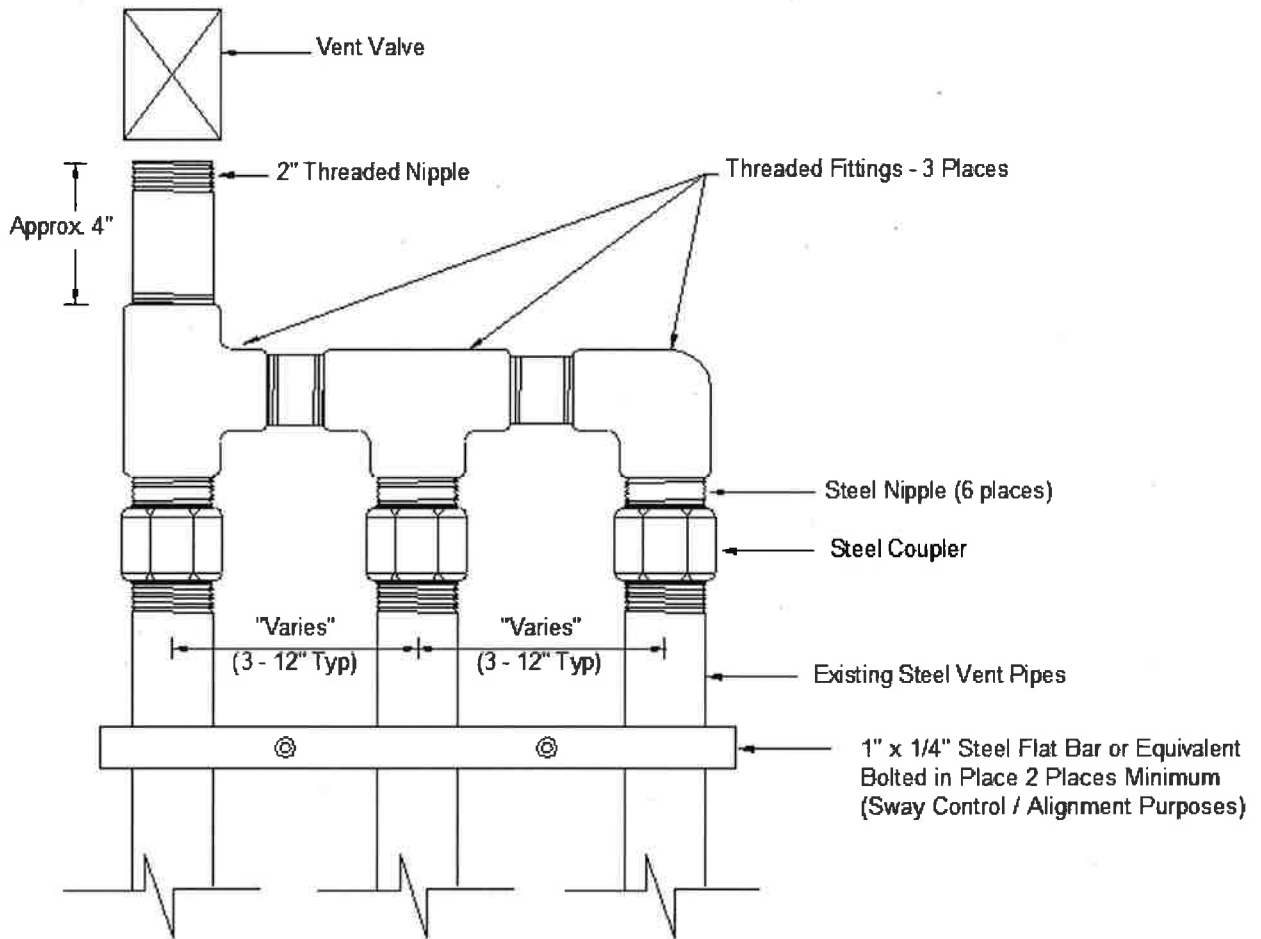
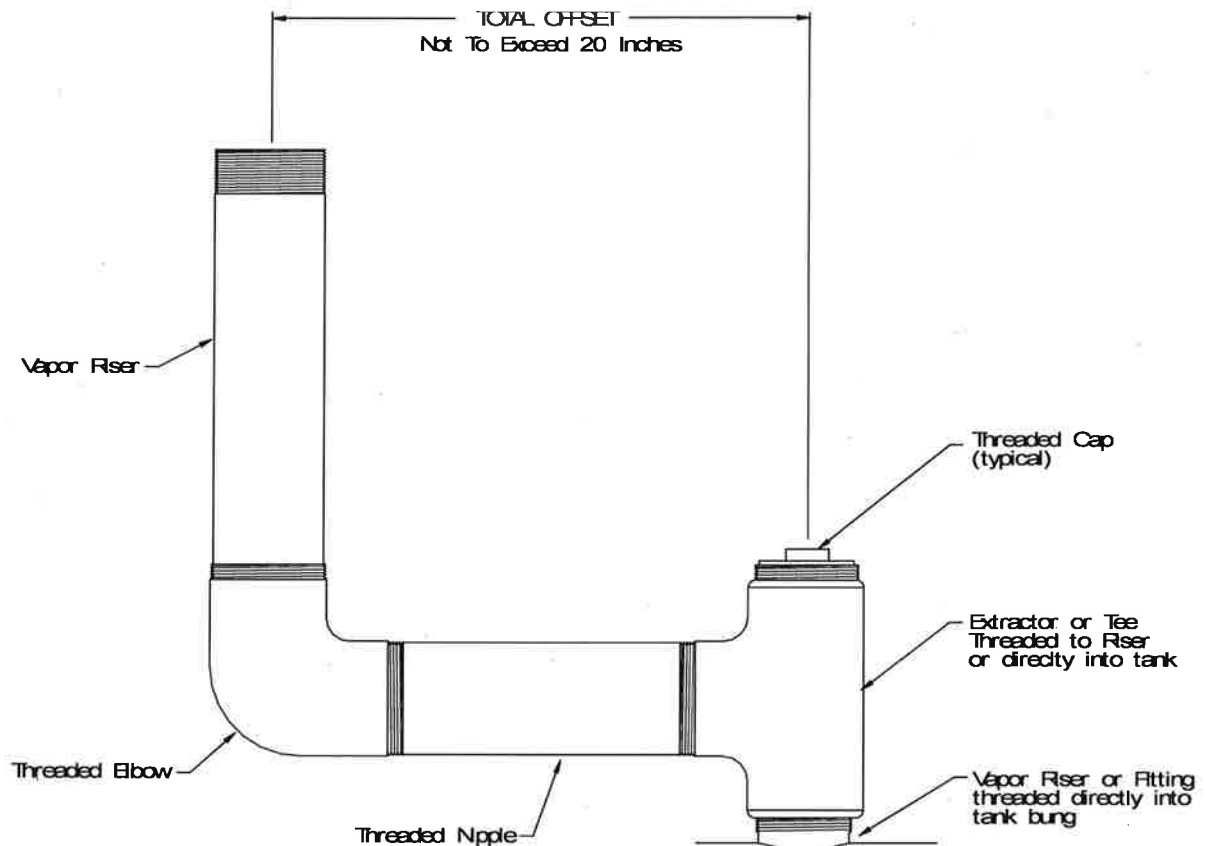


Figure 2H
Typical Vent Pipe Manifold



Note: This shows only one typical configuration; other manifold configurations may be used. For example, a tee may be located in a different position, or fewer vent pipes may be connected, or more than one P/V valve may be installed on the manifold.

Figure 2I
Typical Vapor Recovery Riser Offset



Note: This Figure represents one instance where a vapor recovery riser has been offset in order to construct a two-point Phase I vapor recovery system. The above Figure illustrates an offset using a 90-degree elbow. However, in some instances, elbows less than 90 degrees may be used. All fittings and pipe nipples shall be 4-inch diameter similar to those of the spill container and rotatable Phase I adaptors in order to reduce back pressure during a gasoline delivery.

Figure 2J
Example of a GDF Maintenance Record

Date of Maintenance/ Test/Inspection/Failure (including date and time of maintenance call)	Repair Date To Correct Test Failure	Maintenance/Test/Inspection Performed and Outcome	Affiliation	Name and Certified Technician Identification Number of Individual Conducting Maintenance or Test	Telephone Number

Exhibit 3

Manufacturing Performance Standards and Specifications

The CNI Manufacturing System and all components shall be manufactured in compliance with the applicable Phase I performance standards and specifications in CP-201, as well as the requirements specified in this Executive Order. All components 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. Unless specified in Exhibit 2 or in the ARB Approved Installation, Operation and Maintenance Manual for the CNI Manufacturing Phase I Vapor Recovery System, the requirements of this section apply to the manufacturing process and are not appropriate for determining the compliance status of a GDF.

Pressure/Vacuum Vent Valves for Storage Tank Vent Pipes

1. Each pressure/vacuum vent valve (P/V valve) shall be tested at the factory for cracking pressure and leak rate at each specified pressure setting and shall be done in accordance with TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves (October 8, 2003).
2. Each P/V valve shall be shipped with a card or label stating the performance specifications listed in Table 3-1, and a statement that the valve was tested to, and met, these specifications.
3. Each P/V valve shall have permanently affixed to it a yellow, gold, or white-colored label with black lettering listing the positive and negative pressure settings and leak rate standards listed in Table 3-1. The lettering of the positive and negative pressure settings and leak rate standards on the label shall have a minimum font size of 20.

Rotatable Product and Vapor Recovery Adaptors

1. The rotatable product and vapor recovery adaptors shall not leak.
2. The product adaptor cam and groove shall be manufactured in accordance with the cam and groove specifications shown in Figure 3A of CP-201.
3. The vapor recovery adaptor cam and groove shall be manufactured in accordance with the cam and groove specifications shown in Figure 3B of CP-201.
4. Each product and vapor recovery adaptor shall be tested at the factory to, and shall meet, the specifications listed in Table 3-1 and shall have affixed to it a card or label listing these performance specifications and a statement that the adaptor was tested to, and met, such performance specifications.

Spill Container and Drain Valves

Each spill container drain valve shall be tested at the factory to, and shall meet, the specification listed in Table 3-1 and shall have affixed to it a card or label listing the performance specification and a statement that the drain valve was tested to, and met, such performance specifications.

Drop Tube Overfill Prevention Device

Each Drop Tube Overfill Prevention Device shall be tested at the factory to, and shall meet, the specification listed in Table 3-1 and shall have affixed to it a card or label stating the performance specification listed in Table 3-1 and a statement that the device was tested to, and met, such performance specification.

**Table 3-1
Manufacturing Component Standards and Specifications**

Component	Test Method	Standard or Specification
Rotatable Phase I Adaptors	TP-201.1B	Minimum, 360-degree rotation Maximum, 108 lb-inch average static torque
Rotatable Phase I Adaptors	Micrometer	Cam and Groove Standard (CP-201)
Drop Tube Overfill Prevention Device	TP-201.1D	≤0.17 CFH at 2.0 inches H ₂ O
Spill Container Drain Valve	TP-201.1C or TP-201.1D	≤0.17 CFH at 2.0 inches H ₂ O
Pressure/Vacuum Vent Valve	TP-201.1E	Positive Pressure: 2.5 to 6.0 inches H ₂ O Negative Pressure: -6.0 to 10.0 inches H ₂ O Leak rate: ≤ 0.05 CFH at +2.0 inches H ₂ O ≤ 0.21 CFH at -4.0 inches H ₂ O

Exhibit 4 Manufacturer Warranties

This exhibit includes the manufacturer warranties for all components listed in Exhibit 1, including replacement parts and subparts. The manufacturer warranty tag, included with each component, shall be provided to the service station owner/operator at the time of installation.

CNI Manufacturing Warranty Statement

CNI Manufacturing, Inc. warrants that products sold by it are free from defects in material and workmanship for a period of one year from the date of installation by a CNI EVR certified installer, licensed contractor, the initial purchaser and any subsequent purchasers within the warranty period. Proof of purchase may be required. All components are factory tested and have met all applicable performance standards and specifications. Our obligation under this warranty is limited to ongoing compliance with standards and specifications for the duration of the warranty period to repairing or replacing any product returned to our factory, freight prepaid, which proves upon inspection to have been defective. As the exclusive remedy under this limited warranty, CNI will at its sole discretion, repair, replace, or issue credit for future orders for any product that may prove defective within the one year date of installation period. (Repairs, replacements, or credits may be subject to prorated warranty for the remainder of the original warranty period, complete proper warranty claim documentation required.)

This warranty shall not apply to any product that has been altered in any way, which has been repaired by any party other than a CNI EVR certified installer, licensed contractor authorized by CNI. When failure is due to misuse, or improper installation, maintenance, electrolysis, corrosion, faulty maintenance, accident, overload, abuse, alteration or used with special attachments other than recommended by CNI Manufacturing in writing, is not covered by this guarantee. CNI shall have no liability whatsoever for special, incidental or consequential damages to any party, and shall have no liability for the cost of labor, freight, excavation, clean up, downtime, removal, installation, loss of profit, or any other cost or charges. CNI reserves the right to decline responsibility when repairs are made or attempted by others.

CNI Manufacturing Warranty Tag

WARRANTY

E.O. VR-104-I

Date of Manufacture:

Date of Installation:

CNI Manufacturing, Inc. warrants that products sold by it are free from defects in material and workmanship for a period of one year from the date of installation by a CNI EVR certified installer, licensed contractor. Proof of purchase may be required.

All components are factory tested and have met all applicable performance standards and specifications.

Our obligation under this warranty is limited to ongoing compliance with standards and specifications for the duration of the warranty period to repairing or replacing any product returned to our factory, freight prepaid, which proves upon inspection to have been defective.

As the exclusive remedy under this limited warranty, CNI will at its sole discretion, repair, replace, or issue credit for future orders for any product that may prove defective within the one year date of installation period. (Repairs, replacements, or credits may be subject to prorated warranty for the remainder of the original warranty period, complete proper warranty claim documentation required.)

This warranty shall not apply to any product that has been altered in any way, which has been repaired by any party other than a CNI EVR certified installer, licensed contractor authorized by CNI. When failure is due to misuse, or improper installation, maintenance, electrolysis, corrosion, faulty maintenance, accident, overload, abuse, alteration or used with special attachments other than recommended by CNI Manufacturing in writing, is not covered by this guarantee.

CNI shall have no liability whatsoever for special, incidental or consequential damages to any party, and shall have no liability for the cost of labor, freight, excavation, clean up, downtime, removal, installation, loss of profit, or any other cost or charges.

CNI reserves the right to decline responsibility when repairs are made or attempted by others.

RP12-PUSH: Drain valve assembly is certified not to exceed 0.17 CFH at 2 inches H2O.

Franklin Fueling Systems Warranty Statement and Tag

Franklin Fueling Systems (FFS) Enhanced Vapor Recovery (EVR) products are offered for sale under the brand names of Healy, INCON, Phil-Tite, EBW, and Franklin Fueling Systems (collectively referred to as "FFS EVR products"). FFS EVR products are fully tested at the time of manufacture to meet the applicable performance standards and specifications to which it was certified by the California Air Resource Board (CARB) for the duration of the warranty period, as indicated in the related CARB Executive Order (EO). Performance standards and specifications are listed in Exhibit 2 (System/Compliance Specifications) and Exhibit 3 (Manufacturing Performance Standards) in the related CARB EO.

FFS warrants that FFS EVR products installed in California will conform to the warranty terms and conditions required by the California Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities (CP-201) with respect to (a) transferability of warranties for FFS EVR products, (b) design changes to FFS EVR products, (c) performance specifications of the FFS EVR products, and (d) duration of the warranty period of FFS EVR products.

FFS EVR products are warranted to the initial purchaser, and any subsequent purchaser within the warranty period, for workmanship, performance, and materials when properly installed, used and maintained in accordance with the CARB Approved Installation, Operation, and Maintenance Manuals by certified technicians or an owner/operator as defined in the related CARB EO and to generally accepted industry standards.

FFS reserves the right to make changes in the design or to make additions or improvements with respect to FFS EVR products without incurring any obligation to modify or install same on previously manufactured products, upon written approval from CARB.

FFS reserves the right to change or cancel all or any part of this limited warranty, upon written approval from CARB. Any such change or cancellation will be effective for products sold by FFS after the date of such change or cancellation. No agents, distributors, dealers, or employees of FFS are authorized to make modifications to this warranty or to make additional warranties with respect to any FFS EVR products. Accordingly, any statements made by individuals, whether oral or written, shall not constitute a warranty of FFS and shall not be relied upon.

FFS warrants the workmanship and materials of FFS EVR products to be free of defects, at the time of sale by FFS, for a period of one year (12 months) from the date of installation. When warranty for FFS EVR products cannot be verified to date of installation, claims will be honored for a period of fifteen (15) months from the date of purchase. When warranty for FFS EVR product cannot be verified to date of installation or date of purchase, claims will be honored for a period of eighteen (18) months from date of manufacture by FFS (for location of date of manufacture on components, see related CARB EO Exhibit 1 – Equipment List). In all cases, installation date or purchase date will require providing formal documentation to FFS as evidence of applicable warranty coverage or date of manufacture will be used to determine duration of warranty period. Formal documentation may include, but is not limited to, FFS authorized service company and distributor work orders, startup/installation documentation, maintenance logs, and/or sales receipts.

FFS shall not be liable for any loss or damage whatsoever, including, without limitation, loss in profits, loss in sales, loss of fuel or other products, loss of use of equipment, facilities or service, costs of environmental remediation, diminution in property value, or any other special, incidental or consequential damages of any type or nature, and all such losses or damages are hereby disclaimed and excluded from this limited warranty.

Use of non-FFS replacement parts, the unauthorized addition of non-FFS items to FFS EVR products, and the unauthorized alteration of FFS EVR products will void warranty. FFS shall, as to each defect, be relieved of all obligations and liabilities under a components warranty if the FFS EVR products have been operated with any accessory, equipment, or a part not specifically approved by FFS and not manufactured by FFS to FFS design and specifications.

FFS EVR product warranty shall not apply to any products which have been mishandled, incorrectly installed or applied, altered in any way, which has been repaired by any party other than qualified technicians, or when such failure is due to misuse or conditions of use (such as, but not limited to, blown fuses, sheared breakaway screws, corrosion damage, negligence, accidents, or normal wear of plastic/rubber parts including scuff guards and seals). FFS EVR product warranty shall not apply to acts of terrorism, acts of war, or acts of God (such as, but not limited to, fire, flood, earthquake, or explosion). Unless otherwise expressly provided in a specific FFS written warranty, FFS does not provide coverage for labor or shipping charges, shall not be liable for any costs or charges attributable to any product testing, maintenance, installation, repair or removal, or any tools, supplies, or equipment need to install, repair, or remove any FFS EVR product.

Other than those FFS EVR products specifically designated for fuel concentrations of 85% ethanol with 15% gasoline (E85), FFS EVR product warranty shall not cover any components that have been in contact with fuel concentrations greater than 15% ethanol or 15% methanol by volume (up to E15/M15).

Claims for FFS EVR product warranty must be submitted in writing promptly after discovery of a defect with a Returned Goods Authorization (RGA) Number from FFS. FFS will honor warranty claims processed through FFS authorized service companies and distributors only. FFS will honor warranty claims submitted no more than thirty (30) days after the end of the applicable warranty period. Product returned for warranty inspection must be shipped freight prepaid to FFS's facilities, with the RGA Number indicated on the returned product, to the following address for inspection:

INCON branded products:	All other FFS EVR Products:
Franklin Fueling Systems, Inc.	Franklin Fueling Systems, Inc.
ATTN: Warranty Department	ATTN: Warranty Department
34 Spring Hill Road	3760 Marsh Road
Saco, ME 04072 USA	Madison, WI 53718 USA

Franklin Fueling Systems, upon inspection and after determination of a warranty defect, will at its option, repair or replace defective parts returned to FFS's facility or where the product is in use. Repaired or replaced parts will be returned freight prepaid by FFS.

A copy of this limited warranty is to be retained with the equipment, on-site with the facility owner/operator.

Component Model Number : _____
Component Date of Manufacturer : _____
Component Install Date : _____
Facility Name : _____
Facility Address : _____
Installer Name : _____
Installer Signature : _____

OPW STANDARD PRODUCT WARRANTY TAG

Notice: FlexWorks by OPW, Inc., VAPORSAVER™ and all other OPW products must be used in compliance with all applicable federal, state, provincial and local laws, rules and regulations. Product selection is the sole responsibility of the customer and/or its agents and must be based on physical specifications and limitations, compatibility with the environment and material to be handled. All illustrations and specifications in this literature are based on the latest production information available at the time of publication. Prices, materials and specifications are subject to change at any time, and models may be discontinued at any time, in either case, without notice or obligation.

OPW warrants solely to its customer (the initial purchaser and any subsequent purchasers within the warranty period) that the following products sold by OPW will be free from defects in materials and workmanship under normal use and conditions for the periods indicated:

PRODUCT	WARRANTY PERIOD
FlexWorks Primary Pipe	10 years from date of manufacture
All Products and replacement parts installed in the State of California Certified to California CP-201 and/or CP-206 Standards*	1 year from-date of installation (proof of purchase from certified contractors/technicians required) OPW warrants ongoing compliance with the standards and specifications for the duration of the warranty period required by the State of California; this limited warranty is under the condition the equipment was installed and maintained by trained and certified contractors/technicians unless noted in Installation Manual
All other Products and replacement parts	1 year from date of manufacture**
*Products certified to California CP-201 and/or CP-206 Standards have been factory tested and met all applicable performance standards and specifications and will have an OPW registration card enclosed/attached to the product	

OPW's exclusive obligation under this limited warranty is, at its option, to repair, replace or issue credit (in an amount not to exceed the list price for the product) for future orders for any product that may prove defective within the applicable warranty period. (Parts repaired or replaced under warranty are subject to prorated warranty coverage for remainder of the original warranty period). Complete and proper warranty claim documentation and proof of purchase required. All warranty claims must be made in writing and delivered during the applicable warranty period to OPW at OPW 9393 Princeton-Glendale Road Hamilton, Ohio, USA 45011, Attention: Customer Service Manager. No products may be returned to OPW without its prior written authority.

This limited warranty shall not apply to any FlexWorks or VAPORSAVER™ product unless it is installed by an OPW attested installer and all required site and warranty registration forms are completed and received by OPW within 60 days of installation. This limited warranty also shall not apply to any FlexWorks, VAPORSAVER™ or other OPW product: unless all piping connections are installed with a nationally-recognized or state-approved leak detection device in each tank and dispenser sump (which are not for storage and from which all discharge hydrocarbons must be removed, and the systems completely cleaned, within 24 hours); unless testable sumps utilize FlexWorks pipe and access fittings; unless a sump inspection log or an EPA recommended/required checklist is maintained and the results are furnished to OPW upon request; and unless OPW is notified within 24 hours of any known or suspected product failure and is provided with unrestricted access to the product and the site. This limited warranty also shall not apply to any product which has been altered in any way, which has been repaired by anyone other than a service representative authorized by OPW, or when failure or defect is due to: improper installation or maintenance (including, without limitation, failure to follow FlexWorks Quick Reference Manual Installation Guide and all product warning labels); abuse or misuse; violation of health or safety requirements; use of another manufacturer's, or otherwise unauthorized, substances or components; soil or other surface or subsurface conditions; or fire, flood, storm, lightning, earthquake, accident or any other conditions, events or circumstances beyond OPW's control.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND ALL OTHER WARRANTIES INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY EXCLUDED.

OPW shall have no other liability whatsoever, whether based on breach of contract, negligence, gross negligence, strict liability or any other claim, including, without limitation, for special, incidental, consequential or exemplary damages or for the cost of labor, freight, excavation, clean-up, downtime, removal, reinstallation, loss of profit, or any other cost or charges. No person or entity is authorized to assume on behalf of OPW any liability beyond this limited warranty. This limited warranty is not assignable.

**** Date of manufacture on this product is located (*location will be specific to each component*)**



North America Toll Free - TELEPHONE: (800) 422-2525 - Fax:
(800) 421-3297 - Email: domesticsales@opw-fc.com

9393 Princeton-Glendale Road
Hamilton, Ohio 45011

International – TELEPHONE: (513) 870-3315 or (513) 870-3261 -
Fax: (513) 870-3157 - Email: intlsales@opw-fc.com
www.opwglobal.com

Comp X TANK Commander Warranty Statement and Tag

Seller warrants to the initial and subsequent purchasers, for a period of one year from date of installation, that the Products sold hereunder will, at the time of delivery: (a) comply with the ARB CP-201 standards and specifications for the duration of the warranty period for such Products in effect at the time of shipment or such other specifications as are expressly agreed upon by Seller and Buyer in writing; (b) be adequately contained, packaged, and labeled; and (c) conform to any promises and affirmations of fact made on the container and label. In the event that any such Products fail to conform to the foregoing warranty, Seller will, at its option, repair or replace such nonconforming Products, or credit Buyer for an amount not to exceed the original sales price of such Products. Shipping costs incurred in returning such nonconforming Products to Seller shall be borne by Seller, but Seller shall in no event be liable for any inspection, handling, or packaging costs incurred by Buyer in connection with such Products. Buyer's negligence, misuse, improper installation, or unauthorized repair or alteration, shall void this warranty. The TANK Commander Warranty tag is located on the inside cover of the product.

Warranty Tag

TANK Commander TC-1

1 year warranty from date of installation

Date of manufacture __/__/____

The CompX TANK Commander product was factory tested and meets the standards and specifications to which it was certified by the California Air Resources Board (CARB) as indicated in the related CARB Phase I EVR Executive Orders.

Husky Corporation Warranty Statement and Tag

VAPOR PRODUCTS – Husky Corporation will, at its option, repair, replace, or credit the purchase price of any Husky manufactured product which proves upon examination by Husky, to be defective in material and/or workmanship for a period of one (1) year of installation or fifteen (15) months from the manufacture date of shipment by Husky, whichever occurs first. The warranty period on repaired or replacement vapor recovery products is only for the remainder of the warranty period of the defective product.

EVR PRODUCTS – With respect to EVR products installed in California, for a period of one (1) year from the date of installation, Husky warrants that the product will be free from defects in materials and workmanship (if the installation date is in question or indeterminable, Husky will warrant the product for 12 months from sale by Husky). Husky confirms that the warranty is transferable to a subsequent purchaser within the warranty period. However, the warranty does not follow the product from its initial installation location to succeeding locations. Husky confirms these products are warranted to meet the performance standards and specifications to which it was certified by CARB for the duration of the warranty. EVR products must be installed per CARB Executive Order and must follow the Husky Installation Instructions or the warranty is void. The warranty tag included with the EVR product must be provided to the end user at installation. A completed warranty tag and installation documentation is required to be returned with the product to be eligible for warranty consideration.

CONVENTIONAL PRODUCTS – Husky Corporation will, at its option, repair, replace, or credit the purchase price of any Husky manufactured product which proves upon examination by Husky, to be defective in material and/or workmanship for a period of one (1) year from the manufacture date of shipment by Husky.

Buyer must return the products to Husky, transportation charges prepaid. This Warranty excludes the replaceable bellows, bellows spring assembly, spout assembly and scuff guard, unless (i) damage is obvious when the product is removed from shipping carton and (ii) the defective product is returned to Husky prior to use. This warranty does not apply to equipment or parts which have been installed improperly, damaged by misuse, improper operation or maintenance, or which are altered or repaired in any way.

The warranty provisions contained herein apply only to original purchasers who use the equipment for commercial or industrial purposes. There are no other warranties of merchantability, fitness for a particular purpose, or otherwise, and any other such warranties are hereby specifically disclaimed.

Husky assumes no liability for labor charges or other costs incurred by Buyer incidental to the service, adjustment, repair, return, removal or replacement of products. Husky assumes no liability for any incidental, consequential, or other damages under any warranty, express or implied, and all such liability is hereby expressly excluded.


Husky reserves the right to change or improve the design of any Husky fuel dispensing equipment without assuming any obligations to modify any fuel dispensing equipment previously manufactured.

Husky Warranty Tag

	WARRANTY TAG Husky Corporation 2325 Husky Way Pacific, Mo 63069 (800) 325-3558	Husky General Fueling Products:
	Station Name: _____ Store #: _____ Date: _____ City: _____ State: _____ Service Contractor: _____ Service Tech: _____ Distributor: _____ <small>No warranty accepted without warranty tag filled out completely and attached to product.</small>	Model #: _____ Serial #: _____ Installation Date: _____ Manufacturer Lot #: _____ Work order # (if applicable): _____ RGA #: _____ <small>Form #009179-6 03/2013</small>

FRONT VIEW

FOR REFERENCE ONLY

	Reason for Return (check all applicable):	
	<input type="checkbox"/> Leaking Fuel Around Spout <input type="checkbox"/> Leaking Fuel In Trigger Area <input type="checkbox"/> Keeps Shutting Off <input type="checkbox"/> Will Not Shut Off	<input type="checkbox"/> Failed Pressure Decay Test <input type="checkbox"/> Leaking Fuel at Hose Inlet <input type="checkbox"/> Mechanical Malfunction <input type="checkbox"/> Dispenses Fuel Without Pulling Lever
Notes / Comments: _____		
<small>EVR products installed in California are warranted for 1 year from the date of installation. Manufacturing data can be found on the product data tag attached to the product. Husky confirms the product was tested at the factory and met all applicable performance standards in CP-201 including Pressure Setting: 2.5-6.0 in W.C. Vacuum Setting: 6.0 - 10.0 in W.C. and Leak Rate: 0.05 CFH @ +2.0 in W.C. and 0.21 CFH @ -4.0 in W.C. Please provide installation documentation such as a purchase order, an invoice or a receipt at time of claim.</small>		

BACK VIEW

EMCO Wheaton Retail Corporation
CALIFORNIA EVR WARRANTY POLICY

Emco Wheaton Retail Corporation service station products are warranted to be free from defects in material and workmanship under normal use and service. Emco Wheaton Retail Corporation warrants its California enhanced vapor recovery (EVR) components for a period of one (1) year from date of installation. The EVR components are warranted to meet the performance standards and specifications to which it was certified by the California Air Resources Board (CARB) for the duration of the warranty period. This warranty extends to the purchaser and any subsequent purchaser of the Emco Wheaton Retail components during the warranty period.

Emco Wheaton Retail Corporation shall, at its option, repair or replace that part which proves to be defective. Repaired or replacement nozzles are warranted for the balance of the original warranty period. This warranty is void unless the purchaser returns the claimed defective item to Emco Wheaton Retail Corporation for inspection to determine whether the claimed defect is covered by this warranty.

The exclusive and sole remedy under this warranty is repair or replacement of the defective part. Emco is not responsible for claims for damage caused by improper installation or maintenance; corrosive fluids; misuse of the product or use the product for other than its intended purpose; or accident, acts of God, or natural phenomena. Emco will not pay for labor or related expenses, nor shall Emco be liable for any incidental, consequential or exemplary damages. This warranty is void if the Emco Wheaton Retail Corporation product has been previously repaired with parts not approved by Emco Wheaton Retail Corporation, or if a nozzle bears the mark or imprint of a company other than Emco Wheaton Retail Corporation, indicating the nozzle has been rebuilt or repaired by a company other than Emco Wheaton Retail Corporation.

EMCO WHEATON RETAIL CORPORATION MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, (WHETHER WRITTEN OR ORAL), INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

In the event a nozzle is returned to Emco Wheaton Retail Corporation within the warranty period described above, and when tested is found to be functional and without defect, Emco Wheaton Retail Corporation reserves the right to return the nozzle to the customer or apply a Core Credit (see Nozzle Core Return Program), at Emco Wheaton Retail Corporation's discretion.

In the event of failure within the warranty period, call the Customer Service Department at **(800) 234-4394**. Describe the problem and provide the product date stamp information to the customer service representative. In the case of a nozzle, provide the serial number. The customer service representative will provide a product complaint number, if applicable. Ship the defective equipment **PREPAID**, to Emco Wheaton Retail Corporation for repair or replacement. Warranty issue is contingent upon proof of installation to establish that the product falls within the warranty period. Proof on installation shall be: 1) warranty information completed by the certified contractor (warranty card), 2) contractor invoice, 3) end-user sales receipt, or 4) copy of the appropriate log book entry from the gasoline dispensing facility. Nozzle serial number must be included on proof of installation document.

Emco Wheaton Retail Corporation products should be used in compliance with applicable federal, state and local laws and regulations. Product selection should be based on physical specifications and limitations and compatibility with the environment and material to be handled. All illustrations and specifications are based on the latest product information available at the

time of publication. Emco Wheaton Retail Corporation reserves the right to make changes at any time in prices without notice or obligation. Emco Wheaton Retail Corporation reserves the right to make changes at any time in materials, specifications and models upon CARB approval.

Emco Warranty Tag

EMCO[®] WHEATON RETAIL (252) 243-0150 Phase II EVR Warranty Tag Emco Wheaton Retail warrants its California enhanced vapor recovery (EVR) components for a period of one (1) year from date of installation. This component was factory tested to and met all applicable performance standards and specifications to which it was certified by the California Air Resources Board (ARB). The performance standards and specifications are listed in the applicable ARB Executive Orders and Certification Procedure 201. IMPORTANT: Leave this warranty tag with the station owner and/or operator. Emco Wheaton Retail Corp. 2300 Industrial Park Dr., Wilson, NC 27893 p/n 570866	Serial Number: _____ Replacement Serial Number: _____ Manufacture Date: _____ Name of Contractor: _____ Name of Technician: _____ Technician Signature: _____ Technician Certification Number: _____ Installation Date: _____ Installation Site: _____ Distributor Name: _____ Branch Location: _____ Component: <input type="checkbox"/> A4005EVR Nozzle <input type="checkbox"/> A4110EVR Hose Swivel <input type="checkbox"/> A4119EVR Safe Break Valve
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Reason for returning product: Please select appropriately.
Important: Failure to complete accurately may cause delays processing warranty claim.

<input type="checkbox"/> Does not shut-off	<input type="checkbox"/> Leaks fuel around lever and latch area
<input type="checkbox"/> Experiencing premature shut-off	<input type="checkbox"/> Causing meter creep
<input type="checkbox"/> Does not flow fuel with bellows compressed and lever engaged	<input type="checkbox"/> Bad Inlet or outlet threads
<input type="checkbox"/> Flows fuel when bellows is not compressed	<input type="checkbox"/> Fails Leak Decay Test CARB TP-201.3
<input type="checkbox"/> Leaks fuel around spout or bellows area	<input type="checkbox"/> Fails Dynamic Back Pressure Test CARB TP-201.4

Comments _____

McGard Warranty Statement and Tag

McGard Fuel Locks are fully tested at the time of manufacture to meet the applicable performance standards and specifications to which it was certified by the California Air Resource Board (CARB) for the duration of the warranty period, as indicated in the related CARB Executive Order (EO). Performance standards and specifications are listed in Exhibit 2 (System/Compliance Specifications) and Exhibit 3 (Manufacturing Performance Standards) in the related CARB EO.

McGard warrants that McGard Fuel Lock products installed in California will conform to the warranty terms and conditions required by the California Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities (CP-201) with respect to (a) transferability of warranties for McGard Fuel Locks, (b) design changes to McGard Fuel Locks, (c) performance specifications of the McGard Fuel Locks, and (d) duration of the warranty period of McGard Fuel Locks.

McGard Fuel Locks are warranted to the initial purchaser, and any subsequent purchaser within the warranty period, for workmanship, performance, and materials when properly installed, used and maintained in accordance with the CARB Approved Installation, Operation, and Maintenance Manuals by certified technicians as defined in the related CARB EO and to generally accepted industry standards.

McGard reserves the right to make changes in the design or to make additions or improvements with respect to McGard Fuel Locks without incurring any obligation to modify or install same on previously manufactured products, upon written approval from CARB.

McGard reserves the right to change or cancel all or any part of this limited warranty, upon written approval from CARB. Any such change or cancellation will be effective for products sold by McGard after the date of such change or cancellation. No agents, distributors, dealers, or employees of McGard are authorized to make modifications to this warranty or to make additional warranties with respect to any McGard Fuel Locks. Accordingly, any statements made by individuals, whether oral or written, shall not constitute a warranty of McGard and shall not be relied upon.

McGard warrants the workmanship and materials of McGard Fuel Locks to be free of defects, at the time of sale by McGard, for a period of one year (12 months) from the date of installation. When warranty for McGard Fuel Locks cannot be verified to date of installation, claims will be honored for a period of fifteen (15) months from the date of purchase. When warranty for McGard Fuel Locks cannot be verified to date of installation or date of purchase, claims will be honored for a period of eighteen (18) months from date of manufacture by McGard (date of manufacture is engraved on side of lock body). In all cases, installation date or purchase date will require providing formal documentation to McGard as evidence of applicable warranty coverage or date of manufacture will be used to determine duration of warranty period. Formal documentation may include, but is not limited to McGard authorized service company and distributor work orders, startup/installation documentation, maintenance logs, and/or sales receipts.

McGard shall not be liable for any loss or damage whatsoever, including, without limitation, loss in profits, loss in sales, loss of fuel or other products, loss of use of equipment, facilities or service, costs of environmental remediation, diminution in property value, or any other special, incidental or consequential damages of any type or nature, and all such losses or damages are hereby disclaimed and excluded from this limited warranty.

Use of non-McGard replacement parts, the unauthorized addition of non-McGard items to McGard Fuel Locks, and the unauthorized alteration of McGard Fuel Locks will void warranty. McGard shall, as to each defect, be relieved of all obligations and liabilities under a components warranty if the McGard Fuel Locks have been operated with any accessory, equipment, or a part not specifically approved by McGard and not manufactured by McGard to McGard design and specifications.

McGard Fuel Lock warranty shall not apply to any products which have been mishandled, incorrectly installed or applied, altered in any way, which has been repaired by any party other than qualified technicians, or when such failure is due to misuse or conditions of use (such as, but not limited to, blown fuses, sheared breakaway screws, corrosion damage, negligence, accidents, or normal wear of plastic/rubber parts including scuff guards and seals). McGard Fuel Lock warranty shall not apply to vandalism, theft, acts of terrorism, acts of war, or acts of God (such as, but not limited to, fire, flood, earthquake, or explosion). Unless otherwise expressly provided in a specific McGard written warranty, McGard does not provide coverage for labor or shipping charges, shall not be liable for any costs or charges attributable to any product testing, maintenance, installation, repair or removal, or any tools, supplies, or equipment need to install, repair, or remove any McGard Fuel Lock.

Other than those McGard Fuel Locks specifically designated for fuel concentrations of 85% ethanol with 15% gasoline (E85), McGard Fuel Lock product warranty shall not cover any components that have been in contact with fuel concentrations greater than 15% ethanol or 15% methanol by volume (up to E15/M15).

Claims for McGard Fuel Lock warranty must be submitted in writing promptly after discovery of a defect with a Returned Goods Authorization (RGA) Number from McGard. McGard will honor warranty claims processed through McGard authorized service companies and distributors only. McGard will honor warranty claims submitted no more than thirty (30) days after the end of the applicable warranty period. Product returned for warranty inspection must be shipped freight prepaid to McGard's facilities, with the RGA Number indicated on the returned product, to the following address for inspection:

McGard LLC, ATTN: Warranty Department, 3875 California Road, Orchard Park, NY 14127 USA

McGard, upon inspection and after determination of a warranty defect, will at its option, repair or replace defective parts returned to McGard's facility or where the product is in use. Repaired or replaced parts will be returned freight prepaid by McGard.

A copy of this limited warranty is to be retained with the equipment, on-site with the facility owner/operator.

Component Model Number:

Component Date of Manufacturer:

Component Install Date:

Facility Name:

Facility Address:

Installer Name:

Installer Signature:

Exhibit 5

VAULTED ABOVEGROUND STORAGE TANK CONFIGURATION (Optional)

This exhibit allows an alternate tank storage configuration for the Phase I EVR system. A vaulted aboveground storage tank (AST) may be installed in substitute for a conventional underground storage tank (UST). The figures in this exhibit provide examples of typical vaulted AST configurations.

General Specifications

Alternate typical vaulted AST configurations for the Phase I EVR Systems are shown in Figures 5-1, 5-2, 5-3, and 5-4.

Unless otherwise specified in this Executive Order (EO), the vaulted AST configuration shall comply with the applicable performance standards and performance specifications in CP-201. The emergency vent shall be a certified vent listed in the Phase I EVR Executive Orders for ASTs and shall be installed, operated, maintained and meet any performance requirements specified in the applicable AST Executive Order.

Figure 5-1: Front Sectional Views of Typical Vaulted AST

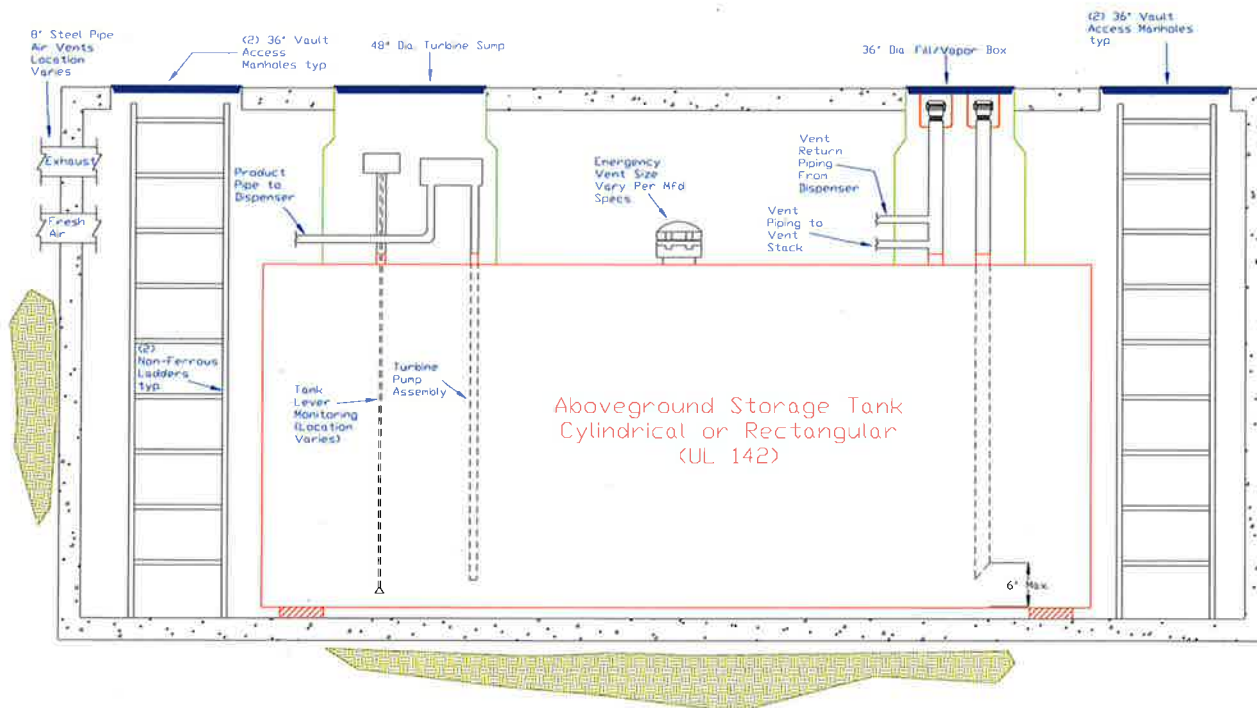


Figure 5-2: Top Sectional View of Typical Vaulted AST

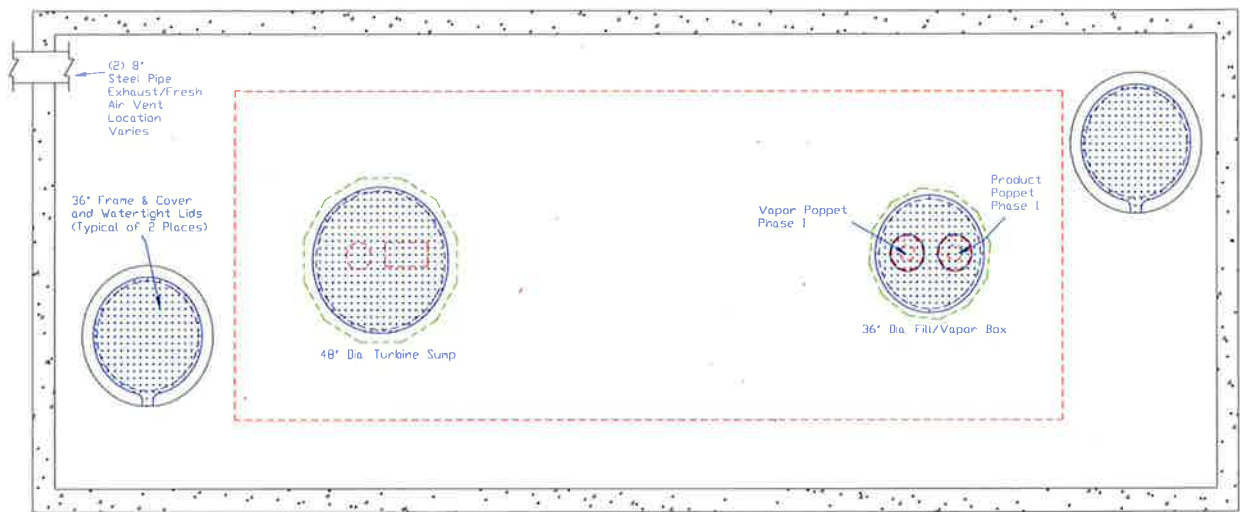


Figure 5-3: End Sectional View of Typical Vaulted AST

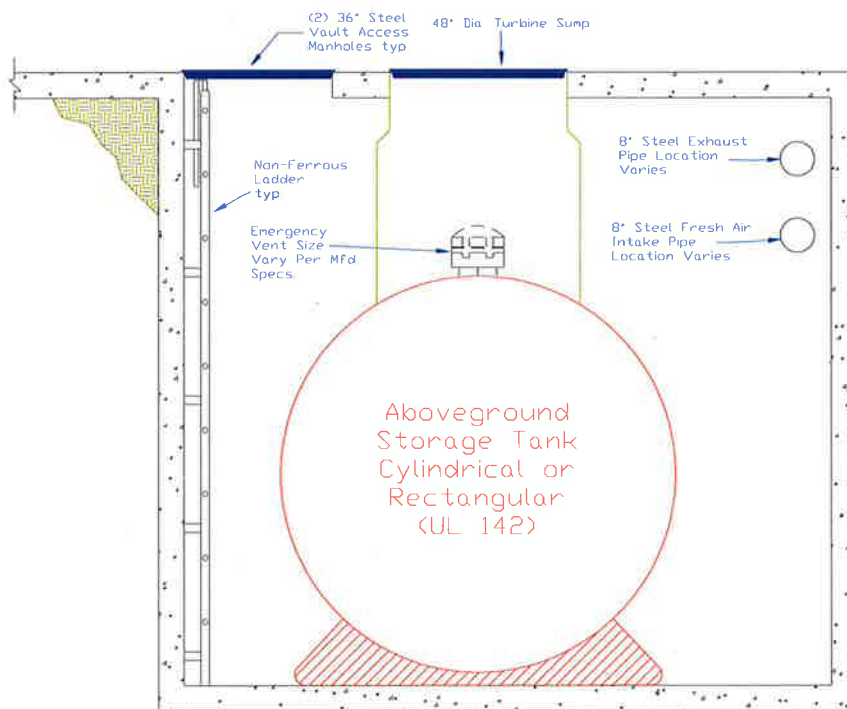


Figure 5-4: Sectional Views of Typical Vaulted AST (Ventilation)

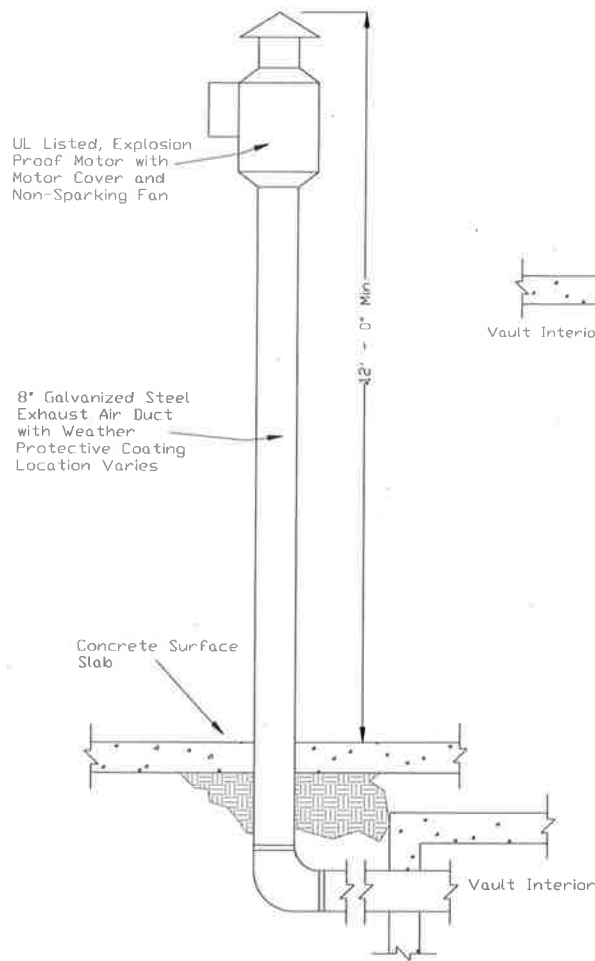


Figure 5-4a: Typical Exhaust

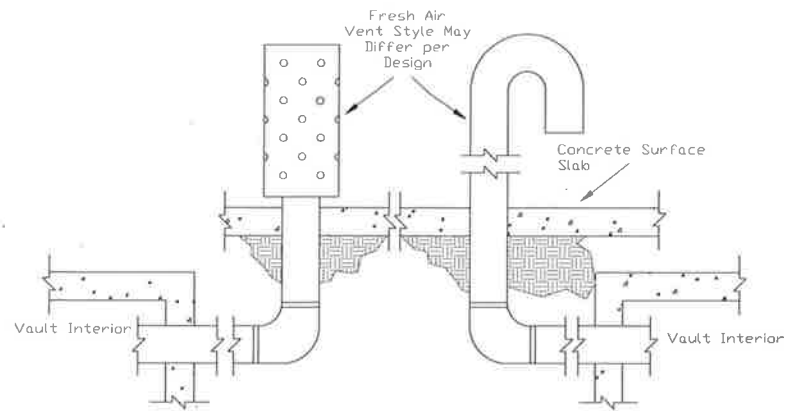


Figure 5-4b: Typical Fresh Air Intake

**State of California
AIR RESOURCES BOARD**

EXECUTIVE ORDER VR-401-E

Related to Certification of Vapor Recovery Systems

**OPW Phase I Enhanced Vapor Recovery (EVR) System For
Aboveground Storage Tanks (AST)**

WHEREAS, the California Air Resources Board (ARB) has established, pursuant to California Health and Safety Code sections 39600, 39601 and 41954, certification procedures for systems designed for the control of gasoline vapor emissions during the filling of ASTs, in its Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities Using Aboveground Storage Tanks (CP-206) as last amended on May 27, 2014, and incorporated by reference in Title 17, California Code of Regulations, Section 94016;

WHEREAS, OPW Fueling Components, Inc. (OPW) requested and was granted certification of the OPW Phase I EVR System for ASTs pursuant to CP-206 by Executive Order VR-401-A, first issued on February 3, 2010, modified in Revisions B and C, and subsequently extended by one year on May 12, 2014, by Executive Order VR-401-D;

WHEREAS, Executive Order VR-401-D expires on July 1, 2015;

WHEREAS, CP-206 provides a process for the renewal of the certification prior to the expiration date;

WHEREAS, OPW requested renewal of the certification of the OPW Phase I EVR System for ASTs on May 24, 2013;

WHEREAS, ARB has conducted a renewal evaluation and has found no system deficiencies with the OPW Phase I EVR System for ASTs;

WHEREAS, CP-206 provides that ARB Executive Officer shall renew the Executive Order for a period of four years if no data demonstrating system deficiencies is found or developed prior to the expiration date;

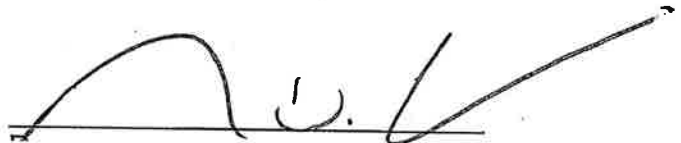
WHEREAS, I, Richard W. Corey, ARB Executive Officer, find that no data demonstrating system deficiencies has been found or developed as of the date of this Executive Order;

WHEREAS all provisions, terms and conditions for certification listed in Executive Order VR-401-C and attachments are incorporated by reference herein.

NOW THEREFORE, IT IS HEREBY ORDERED that the certification granted in Executive Order VR-401-C, as incorporated by reference herein, is renewed until July 1, 2019 and shall remain in full force and effect through that date.

IT IS FURTHER ORDERED that, notwithstanding the previous paragraph, if any data demonstrating system deficiencies is documented during the renewal period then the deficiencies shall be resolved to the ARB Executive Officer's satisfaction, or this renewal shall become ineffective and the certification may be revoked.

Executed at Sacramento, California, this 29th day of June 2015.

A handwritten signature in black ink, appearing to read 'R. W. Corey', is written over a horizontal line.

Richard W. Corey
Executive Officer

Attachments:

- Exhibit 1 Equipment List
- Exhibit 2 Installation, Maintenance, and Compliance Standards and Specifications
- Exhibit 3 Manufacturing Performance Standards and Specifications and Warranty
- Exhibit 4 Determination of Static Pressure Performance of Vapor Recovery Systems at Gasoline Dispensing Facilities with Aboveground Storage Tanks
- Exhibit 5 Alternate Phase I EVR Installation Configurations for Existing Aboveground Storage Tanks

**Exhibit 1
Equipment List**

Equipment

Manufacturer/Model Number

Emergency Vent (Figure 1A)

OPW 301W-XYZ

W represented by:

blank = female threads

M = male threads

F = #150 flange mounted

X represented by:

2 = 2.0" vent

3 = 3.0" vent

4 = 4.0" vent

5 = 5.0" vent

6 = 6.0" vent

8 = 8.0" vent

1 = 10.0" vent

YY represented by:

08 = 8oz/sq.in.

16 = 16oz/sq.in.

Z represented by:

0 = female NPT threads

1 = male NPT threads

5 = #150 flange

Note: For flange mounted models use gasket material made by Fibreflex. More information is available at <http://www.fibreflex.com>.

**Direct Fill Spill Container Assembly
With Drain Valve (Figures 1B and 1C)**

OPW 33X-ASTWYZ (spill container)

X represented by:

1 = welded bucket

2 = seamless bucket

Y represented by:

3 = 3.5 gallon capacity

5 = 5.0 gallon capacity

7 = 7.0 gallon capacity

Z represented by:

4 = 4.0" NPT base

6 = 6.0" NPT base

OPW 1DK-2100EVR (drain valve)

Equipment	Manufacturer/Model Number
Direct Fill Spill Container Assembly With Drain Valve - Continued (Figures 1B and 1C)	<p>*OPW 53-00XX (double tapped bushing)</p> <p>XX represented by:</p> <p>36 = 4.0"x2.0"x2.0"</p> <p>38 = 4.0"x3.0"x3.0"</p> <p>62 = 6.0"x2.0"x2.0"</p> <p>63 = 6.0"x3.0"x3.0"</p> <p>*Note: OPW 53-00XX double tapped bushings are typically used for remote fill configurations. However, if a Kamvalock NPT style (model numbers ending in 0200, 0300) product adaptor is selected, such bushing will be required for the spill container assembly.</p> <p>Kamvalok dual style fittings (model numbers ending in 2040 and 3060) do not require the use of the 53-00XX double tapped bushing.</p>
Overfill Prevention Device with Drop Tube (Figure 1D and 1E)	<p>OPW 61fSTOP-XXXXT (overfill device)</p> <p>XXXX represented by:</p> <p>1000 = 2.0" vertical float</p> <p>2000 = 2.0" swing style float</p> <p>3050 = 3.0" vertical style float</p> <p>OPW 61FT-DDLL (drop tube)</p> <p>DD represented by:</p> <p>02 = 2.0" drop tube</p> <p>03 = 3.0" drop tube</p> <p>LL= length in feet</p> <p>OPW 53-00XX (double tapped bushing)</p> <p>XX represented by:</p> <p>36 = 4.0"x2.0"x2.0"</p> <p>38 = 4.0"x3.0"x3.0"</p> <p>62 = 6.0"x2.0"x2.0"</p> <p>63 = 6.0"x3.0"x3.0"</p>

Equipment

Kamvalok Non-Rotatable Product Adaptor (Figure 1F)

Manufacturer/Model Number

OPW 161BAN-YYYY**

B represented by:

1 = Buna seal

2 = Viton seal

YYYY represented by:

0150 = 1.5" NPT

0200 = 2.0" NPT

0300 = 3.0" NPT

2040 = dual 2.0"X4.0" NPT*

3060 = dual 3.0"X6.0" NPT*

**Note: Dual fittings are recommended
when using a direct fill spill container.*

***Cast model number will include four digits
such as "1611", while the rolled stamped
model number will include four digits and
two characters such as, "1611-AN" or
"1612-AN". See Figure 1F for further
explanation.*

Product Adaptor Dust Caps (Figures 1G and 1H)

OPW 634B-0XXX

XXX represented by:

150 = 2.0"

160 = 2.5"

180 = 4.0"

OPW 634BK-0XXX (optional locking cap)

XXX represented by:

090 = 2.0"

100 = 3.0"

200 = 4.0"

Equipment

Manufacturer/Model Number

**Kamvalok Product Coupler
(Figure 1I)**

OPW 1711DL-YYYY or 1712DL-YYYY
(viton seal)

*L = locking coupler and blank for non-
locking coupler*

YYYY represented by:

1085 = 1.5"

1090 = 2.0"

1095 = 3.0"

Note: During fuel deliveries, an OPW Kamvalok coupler (part numbers 1711D, 1711DL, 1712D, and 1712DL) shall be used with an OPW Kamvalok product adaptor (part numbers OPW 1612AN). The Kamvalok coupler shall provided by the fuel supplier or provided by the GDF operator.

**Kamvalok Product Adaptor, Dust Cap, and Kamvalok Product Coupler
Combinations**

Kamvalok Product Adaptor	Product Adaptor Dust Cap	Kamvalok Product Coupler
1611AN-0150 or 1612AN-0150	634B-0150 or 634BK-0090	1711DL-1085, 1712DL-1085, 1711D-1085 or 1712D-1085
1611AN-0200, 1612AN-0200 or 1611AN-2040	634B-160 or 634BK-0100	1711DL-1090, 1712DL-1090, 1711D-1090 or 1711D-1090
1611AN-0300, 1612AN-0300 or 1612AN-3060	634B-0180 or 634BK-0200	1711DL-1095, 1712DL-1095, 1711D-1095 or 1712D-1095

Equipment

**Non-Rotatable Vapor Adaptor
(Figure 1J)**

Manufacturer/Model Number

OPW 1611AV-16YY

YY represented by:

05 = 3.0" NPT

20 = 4.0" NPT

OPW 1611AVB-EVR

Bronze 4" NPT

Equipment

Manufacturer/Model Number

**Rotatable Vapor Adaptor
(Figure 1J)**

OPW 61VSA-1020-EVR
Bronze, 4" NPT, Rotatable

**Vapor Adaptor Dust Cap
(Figure 1K)**

OPW 1711T-7085-EVR

OPW 1711LPC-0300
Ductile iron low profile cap

Vapor Adaptor and Dust Cap Combinations

Non-Rotatable Vapor Adaptor	Rotatable Vapor Adaptor	Vapor Adaptor Dust Cap
1611AV-1605, 1611AV-1620 or 1611AVB-EVR	61VSA-1020-EVR	1711T-7085-EVR or 1711LPC-0300

**Dedicated Gauging Port with Drop
Tube Assembly
(Figures 1G, 1H, 1L, 1M, and 1N)**

OPW 204247 (port cage)

OPW 634B-0XXX (dust cap)

XXX represented by:
140 = 1.5"
150 = 2.0"

OPW 634BK-0090 (optional 2" locking cap)

OPW 633AST-0XXX (female NPT Kamlok
adaptor)

XXX represented by:
150 = 1.5"
200 = 2.0"

OPW 53-00XX (required double tapped
bushing)

XX represented by:
12 = 2.0"x1.5"x1.5"
02 = 3.0"x2.0"x2.0"
34 = 4.0"x1.5"x1.5"
36 = 4.0"x2.0"x2.0"
62 = 6.0"x2.0"x2.0"

Equipment	Manufacturer/Model Number
Mechanical Tank Gauging (optional) (Figures 1O, 1P, and 1R)	OPW 200TG-XXXYY (tank gauge) <i>XXX represented by:</i> <i>ENG = English units</i> <i>MET = SI units</i> <i>YY represented by:</i> <i>blank = 20' cable length</i> <i>40 = 40' cable length</i> OPW 61T-02LL (drop tube for use with tank gauge) <i>LL = length in feet</i> OPW TGTA-0400* (optional combo fitting) *Allows for installation of mechanical tank gauge and overfill alarm on the same bung location.
Liquid Level Overfill Alarm (optional) (Figure 1Q)	OPW X44TA-0100 <i>X represented by:</i> <i>1 = 1 channel</i> <i>4 = 4 channel</i> OPW 44TA-LLFS (liquid level float switch assembly)
Automatic Tank Gauge Port Components¹ (optional) (Figure 1S)	OPW 62M Monitoring Probe Cap and Adaptor Kit Optional component for use in conjunction with automatic tank gauging systems

¹ If these components are installed or required by regulations of other agencies, only those components and model numbers specified above shall be installed or used.

Table 1
Components Exempt from Identification Requirements

Component Name	Manufacturer	Model Number
Drain Valve	OPW	OPW 1DK-2100EVR
Tank Bung Combo Fitting	OPW	OPW TGTA-0400
Drop Tube for Overfill Prevention Device	OPW	OPW 61FT-DDLL
Pipe Fittings	OPW	OPW 53-0XX
Kamlok Female NPT Adaptors	OPW	633FAST-0XXX
Remote Spill Containers	OPW	6211R
Tank Gauge Port Adaptor	OPW	62M
Dedicated Gauging Port Cage	OPW	204247



Figure 1A
OPW 301W-XYZ Series Emergency Vents



Figure 1A
OPW 301F-XYZ Series Flange Mounted Emergency Vents

Note: For flange mounted models use gasket material made by Fibreflex. More information is available at <http://www.fibreflex.com>.



Figure 1B
OPW 33X-ASTWYZ - Direct Fill Spill Container

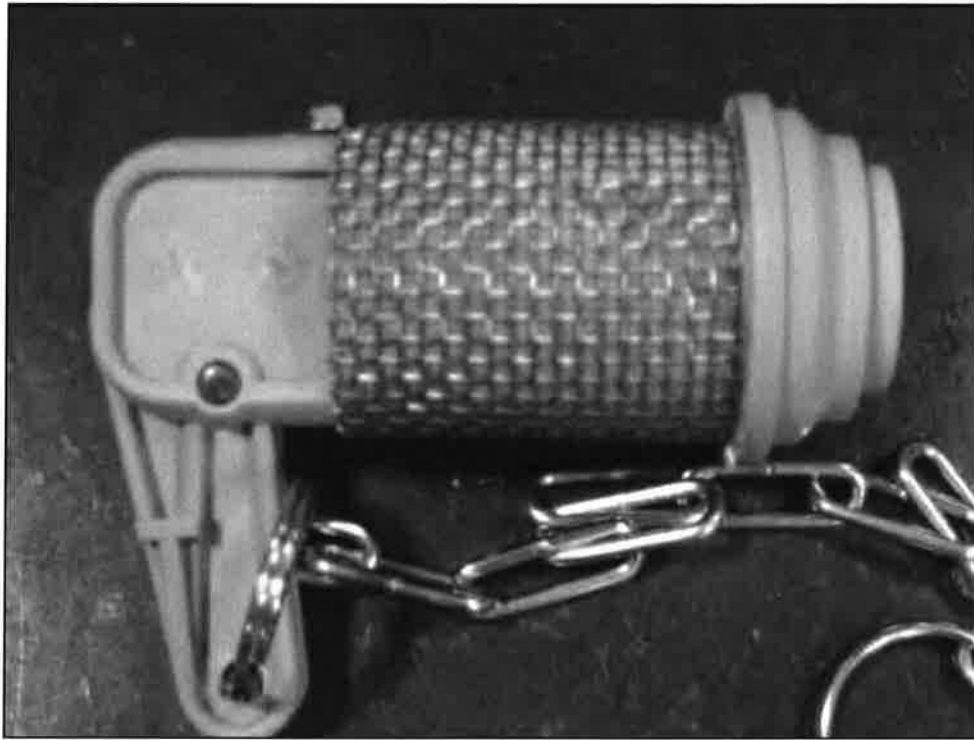


Figure 1C
OPW 1DK-2100EVR - Direct Fill Spill Container Drain Valve



Figure 1D
OPW 61FSTOP-XXXXT Overfill Prevention Device



Figure 1E
OPW 61FT-DDLL Drop Tube
(For use with overfill prevention device only.)



Figure 1F
OPW 161BAN-YYYY Kamvalok Non-Rotatable Product Adaptor



Figure 1G
OPW 634B-0XXX Product Dust Cap
(Also used for dedicated gauging port)



Figure 1H
OPW 634BK-0XXX Product Locking Dust Cap
(Also used for dedicated gauging port)



Figure 1I
OPW 1711DL -YYYY Kamvalok Product Coupler
(Required for fuel deliveries, see note under equipment list)



Figure 1J
OPW 1611AV-16YY Non-Rotatable Vapor Adaptor



Figure 1J
OPW 1611AVB-1625 Bronze Non-Rotatable Vapor Adaptor



Figure 1J
OPW 61VSA-1020-EVR Bronze Rotatable Vapor Adaptor



Figure 1K
OPW 1711T-7085-EVR Vapor Adaptor Dust Cap

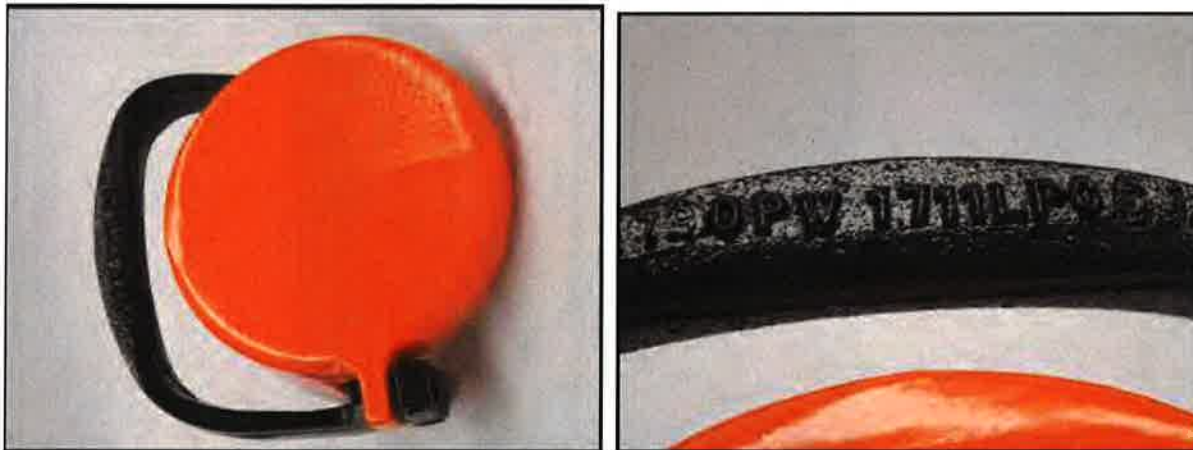


Figure 1K
OPW 1711LPC-0300 Ductile Iron Vapor Adaptor Dust Cap



Figure 1L
OPW 204247 Dedicated Gauging Port Cage



Figure 1M
633AST-0XXX Female NPT Kamlok Adaptor for Dedicated Gauging Port

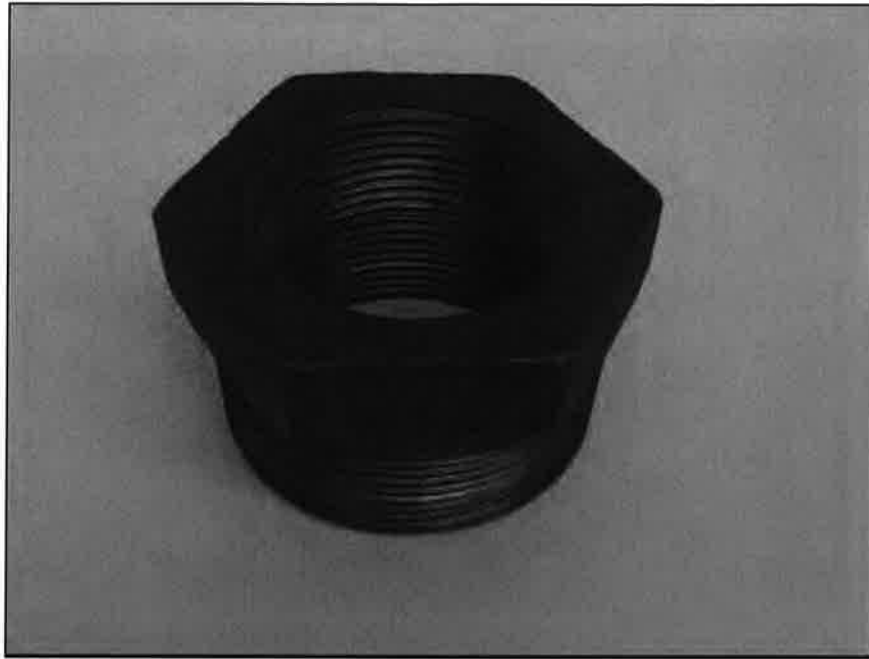


Figure 1N
OPW 53-00XX Double Tapped Bushing



Figure 10
OPW 200TG-XXYY Mechanical Tank Gauge (optional)

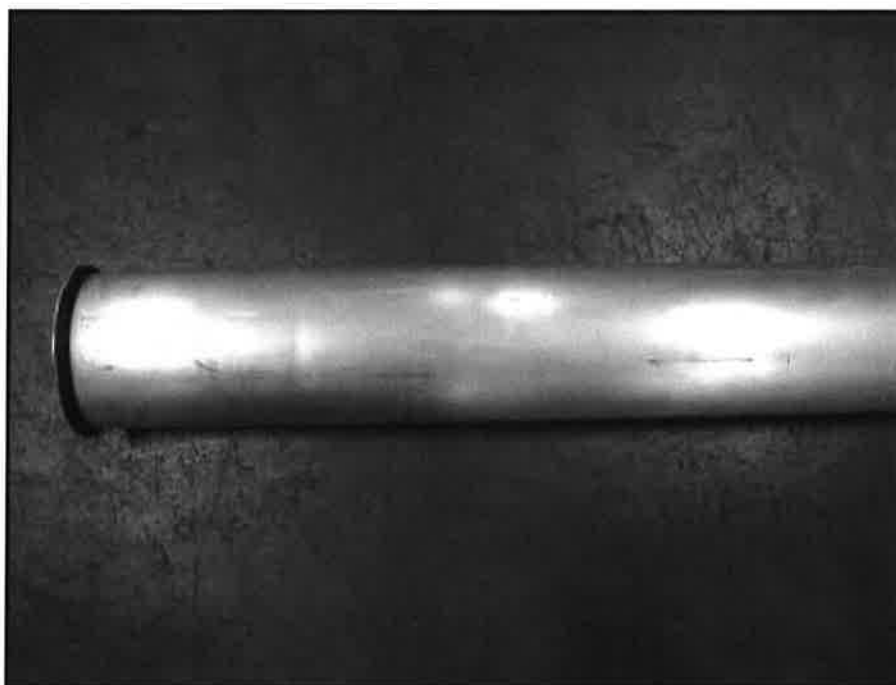


Figure 1P
OPW 61T-02LL Tank Gauge Drop Tube
(For mechanical tank gauge only)



Figure 1Q
OPW X44TA-0100 Liquid Level Overfill Alarm (optional)



Figure 1R
OPW TGTA-0400
(Optional combo fitting for installation of tank gauge and overfill alarm)



Figure 1S
OPW 62M Monitoring Probe Cap and Adaptor Kit
(Optional Component for Automatic Tank Gauge Systems)

Exhibit 2

Installation, Maintenance, and Compliance Standards and Specifications

This exhibit contains the installation, maintenance and compliance standards and specifications applicable to the OPW Phase I Enhanced Vapor Recovery (EVR) system (OPW system) installed on aboveground storage tanks (AST).

General Specifications

1. Typical installations of the OPW System are shown in Figures 2A, 2B, 2C, 2D, 2E, 2F, 2G, 2H, 2I, 2J, 2K, 2L and 2M.
2. The OPW System shall be installed, operated, and maintained in accordance with ***ARB Approved Installation, Operation and Maintenance Manual for Executive Order VR-401-C OPW Phase I Enhanced Vapor Recovery System for Aboveground Storage Tanks*** (IOM).
3. Any repair or replacement of system components shall be done in accordance with IOM.
4. Unless otherwise specified in this Executive Order (EO), the OPW system shall comply with the applicable performance standards and performance specifications in CP-206.
5. Maintenance and repair of system components, including removal and installation of such components in the course of any required tests, shall be performed by OPW Certified Technicians.

Vapor Recovery and Non-rotatable Product (Kamvalok) Adaptors

1. OPW rotatable and non-rotatable vapor and product adaptors (Kamvalok adaptors) are not certified with an allowable leak rate and shall not leak. Compliance with this requirement shall be verified by the use of commercial liquid leak detection solution or by bagging, when the vapor containment space of AST is subjected to a positive, non-zero pressure. A vacuum check with commercial liquid detection solution may be used for leak detection on vapor recovery adaptors if the aboveground storage tank ullage space is in negative gauge pressure (leak detection solution must be visibly seen drawn into leak).
2. Rotatable vapor recovery adaptors shall be capable of at least 360-degree rotation and have an average static torque not to exceed 108 pound inch (9 pound-foot). Compliance with this requirement shall be demonstrated in accordance with ***TP-201.1B, Static Torque of Rotatable Phase I Adaptors (October 8, 2003)***.

3. The diameter of the Phase I vapor return piping of the AST shall be greater than or equal to the diameter of the Phase I product drop tube. In addition, no liquid condensate traps are allowed within the Phase I vapor return path piping under this configuration.

Product Coupler (Kamvalok Coupler)

Kamvalok product couplers shall fit the matching non-rotatable Kamvalok product adapters so that spillage of gasoline during fuel deliveries is minimized. During fuel deliveries, an OPW Kamvalok coupler (part numbers 1711D, 1711DL, 1712D, and 1712DL) shall be used with an OPW Kamvalok product adaptor (part numbers 1611AN and 1612AN). The Kamvalok coupler shall be provided by the fuel supplier or provided by the gasoline dispensing facility (GDF) operator.

Vapor and Product Adaptor Dust Caps

Dust caps with intact gaskets shall be installed on all Phase I product and vapor adaptors.

Emergency Vents

The emergency vents are not certified with an allowable leak rate and shall not leak. Compliance with this requirement shall be verified by the use of commercial liquid leak detection solution or by bagging, when the vapor containment space of AST is subjected to a non-zero pressure. (Note: Leak detection solution or bagging will detect leaks only when positive gauge pressure exists).

Direct Fill Spill Container Drain Valve

The direct fill spill container drain valve is configured to drain liquid directly into the ullage space of the AST. The drain valve is not certified with an allowable leak rate and shall not leak. Compliance with this requirement shall be verified by the use of commercial liquid leak detection solution or by bagging, when the vapor containment space of AST is subjected to a non-zero pressure. (Note: Leak detection solution or bagging will detect leaks only when positive gauge pressure exists).

Dedicated Gauging Port

An AST shall include a dedicated gauging port for determining the amount of gasoline. This determination shall be accomplished either manually (measuring gasoline levels using a gauging stick, mechanically, or electronically. If the determination is accomplished manually, the port shall have a drop tube which has the discharge opening entirely submerged when the liquid level is six inches above the bottom of the tank. The gauging port shall be permanently identified and include an OPW cap and Kamlok adapter. The gauging port shall not leak when no manual gauging is occurring or at any time when mechanical or electronic components are used. Compliance with

this requirement shall be verified by the use of commercial liquid leak detection solution or by bagging, when the vapor containment space of AST is subjected to a non-zero pressure. (Note: Leak detection solution or bagging will detect leaks only when positive gauge pressure exists).

Tank Gauge Components (Optional)

The tank gauge components are not certified with an allowable leak rate and shall not leak. Compliance with this requirement shall be verified by the use of commercial liquid leak detection solution or by bagging, when the vapor containment space of AST is subjected to a non-zero pressure. (Note: Leak detection solution or bagging will detect leaks only when positive gauge pressure exists).

Overfill Prevention Device

1. The overfill prevention device (overfill device) is designed to restrict the flow of gasoline delivered to AST when liquid levels exceed a specified capacity.
2. The overfill prevention device shall be installed below the OPW product adaptor (see Figures 2A and 2E) which has a built in poppet (Kamvalok) to prevent vapor leakage and spillage of product after delivery. The overfill prevention device is not certified with an allowable leak rate and the leak rate cannot be determined by testing. Testing to determine the leak rate of the overfill prevention device is not needed since leaks from other components (e.g., Kamvalok product and vapor adaptors, emergency vents, spill container drain valves, dedicated gauging port, tank gauge components, connectors, and fittings) can be determined by the use of commercial liquid leak detection solution or by bagging, when the vapor containment space of AST is subjected to a non-zero pressure. (Note: Leak detection solution or bagging will detect leaks only when positive gauge pressure exists).
3. The discharge opening of the fill pipe must be entirely submerged when the liquid level is six inches above the bottom of the tank as shown in figures 2A, 2E, and 2K (see figures for installation details).

Remote Fill Configuration

Under remote fill configurations (also referred to as side fill), the Phase I vapor recovery piping shall be constructed of galvanized-steel or an equivalent material that has been listed for use with gasoline. If a material other than galvanized steel is used AST operator shall provide the District a manufacturers' listing demonstrating that the material is compatible for use with gasoline. The diameter of the Phase I vapor return piping of the AST shall be greater than or equal to the diameter of the Phase I product drop tube. In addition, no liquid condensate traps are allowed within the Phase I vapor return path piping under this configuration.

Connections and Fittings

All connections and fittings not certified with an allowable leak rate shall not leak. Compliance with this requirement shall be verified by the use of commercial liquid leak detection solution or by bagging, when the vapor containment space of the AST is subjected to a non-zero pressure. (Note: Leak detection solution or bagging will detect leaks only when positive gauge pressure exists).

Maintenance Records

Each GDF operator/owner shall keep records of maintenance performed at the facility. Such record shall be maintained on site or in accordance with district requirements or policies. The records shall include at a minimum the maintenance, inspection, or test date, repair date to correct test failure, maintenance, inspection, or test performed, affiliation, telephone number, name and Certified Technician Identification Number of individual conducting maintenance or test. Additional information may be required in accordance with district requirements. An example of a Phase I Maintenance Record is shown in Figure 2N.

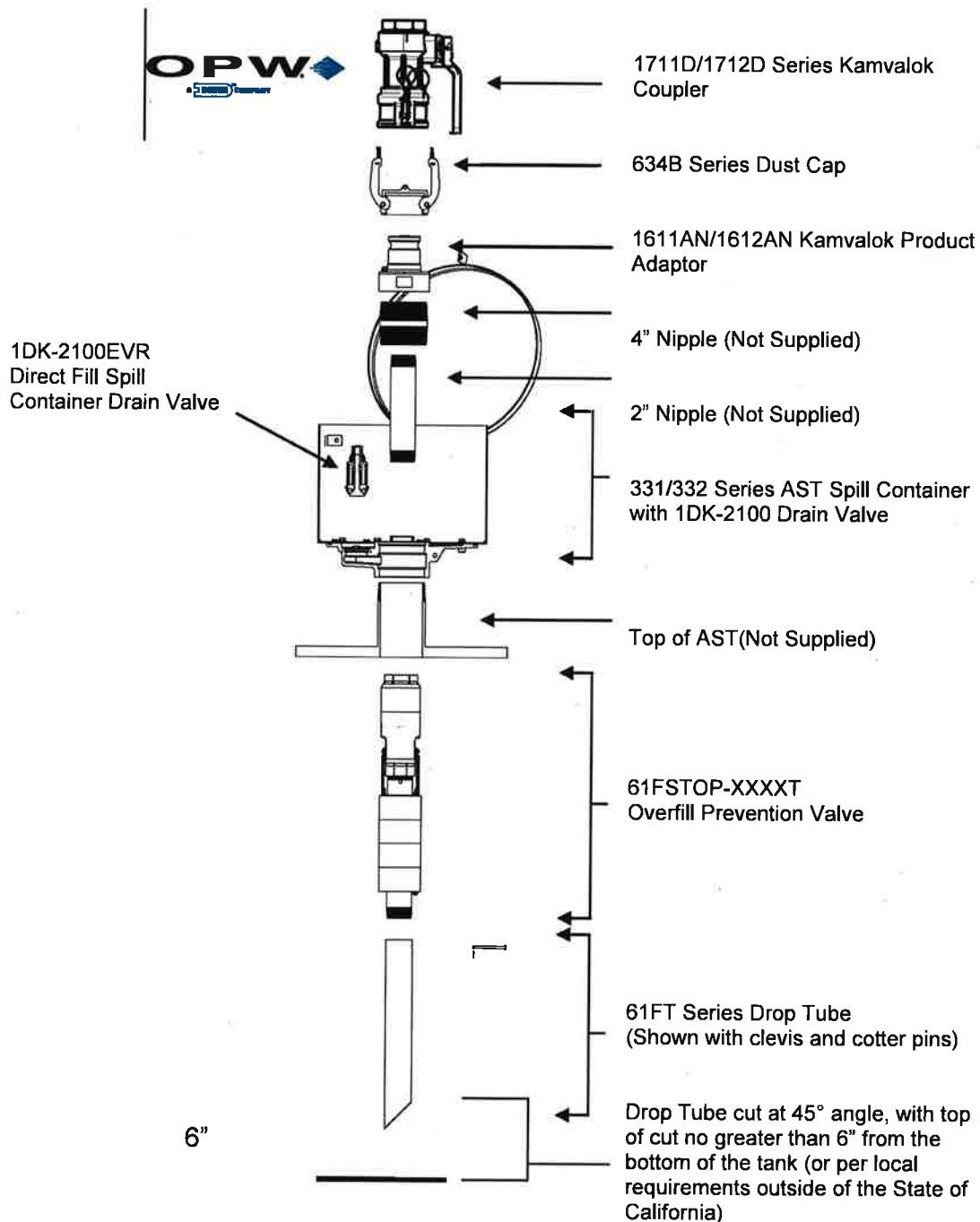
**Table 2-1
AST Compliance Standards and Specifications**

Component / System	Test Method	Standard or Specification
Rotatable Phase I Vapor Adapters	TP-201.1B	Minimum, 360-degree rotation Maximum, 108 pound-inch average static torque
Phase I Adaptors	Leak Detection Solution or Bagging	No Leaks
Emergency Vents	Leak Detection Solution or Bagging	No Leaks
Spill Container Drain Valve	Leak Detection Solution or Bagging	No Leaks
Dedicated gauging port with drop tube and tank gauge components	Leak Detection Solution or Bagging	No Leaks
Vapor Recovery System	Exhibit 4 (Static Pressure)	As specified in Exhibit 4 of this Executive Order and/or CP-206
All connections and fittings certified without an allowable leak rate	Leak Detection Solution or Bagging	No Leaks

**Table 2-2
Maintenance Intervals for System Components**

Manufacturer	Component	Maintenance Interval
OPW	Tank Gauge Components	Annual
OPW	Dust Caps	Annual
OPW	Emergency Vents	Annual
OPW	Phase I Product and Vapor Adaptors	Annual
OPW	Spill Container Drain Valve	Annual

Figure 2A
Typical Direct Fill (Product Side) Installation of OPW Phase I EVR System for AST



Note: An OPW 53-00XX series double tapped bushing (optional component for direct fill configurations) may be required depending on the type of Kamvalock adapter being used.

Figure 2B
Typical Vapor Recovery Adapter Configurations of OPW Phase I EVR System for AST

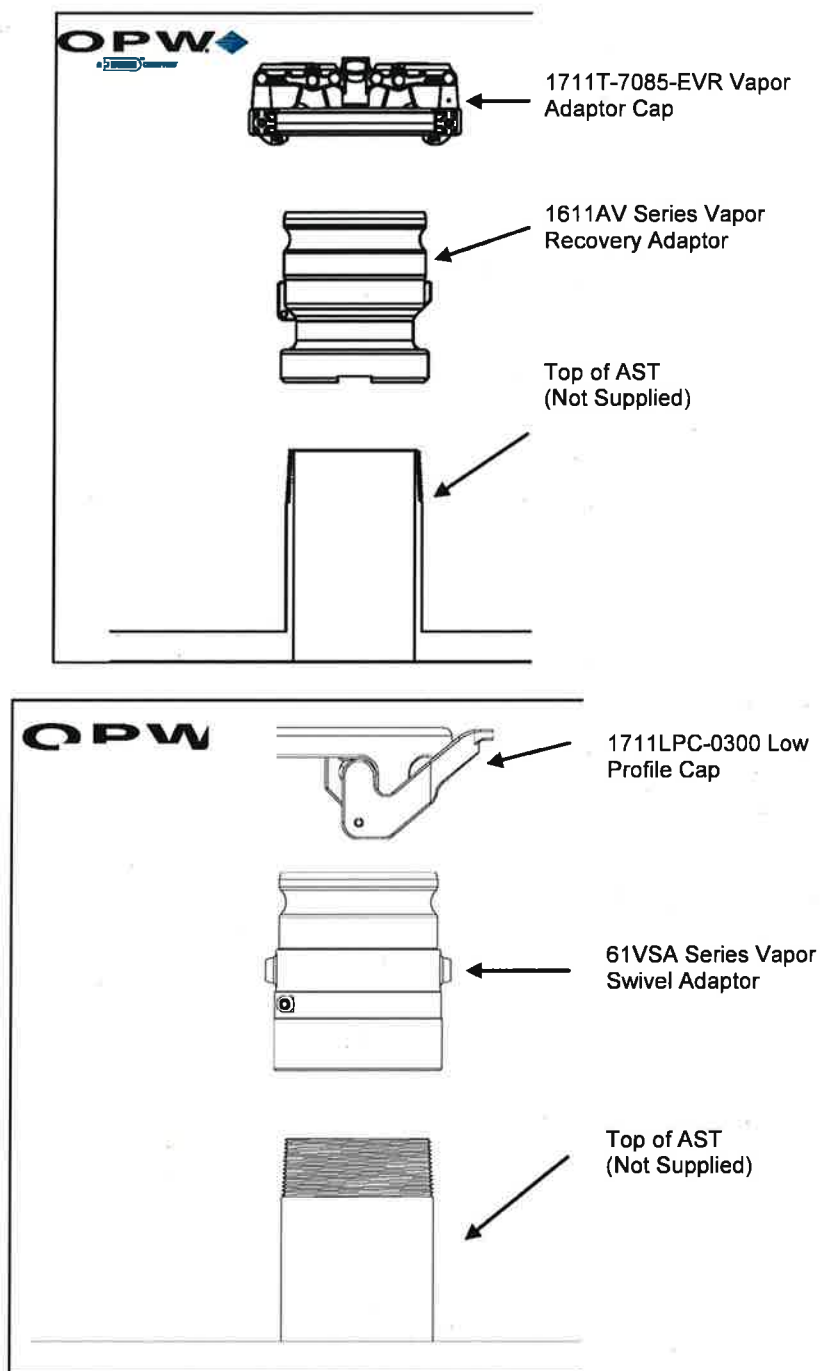
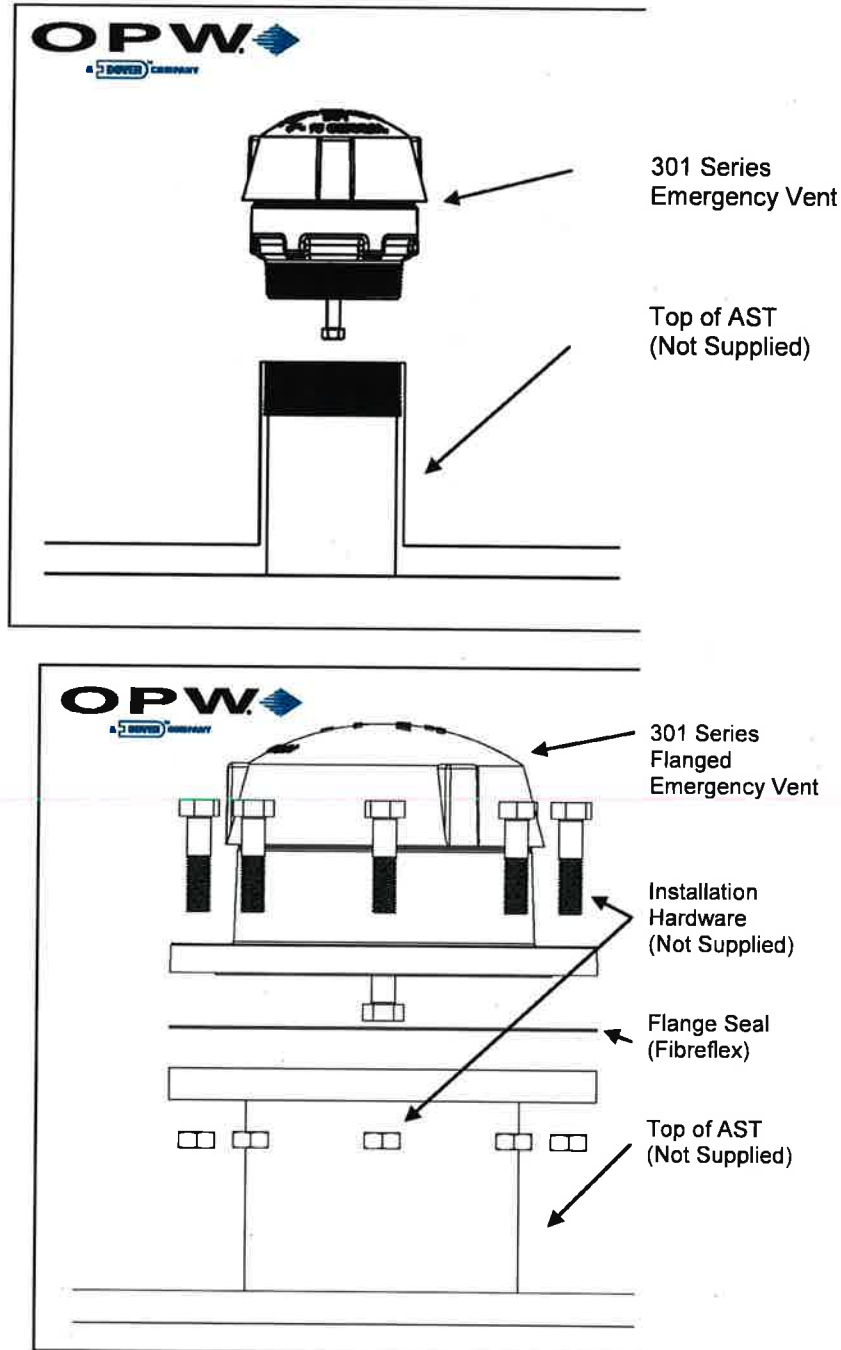


Figure 2C
Typical Emergency Vent Valve Configurations of OPW Phase I EVR System for AST



Note: For flange models use gasket material made by Fibreflex. More information is available at <http://www.fibreflex.com>.

Figure 2D
Typical Remote Fill Configuration of OPW Phase I EVR System for AST
(Note: The remote spill container is not a vapor recovery component.)

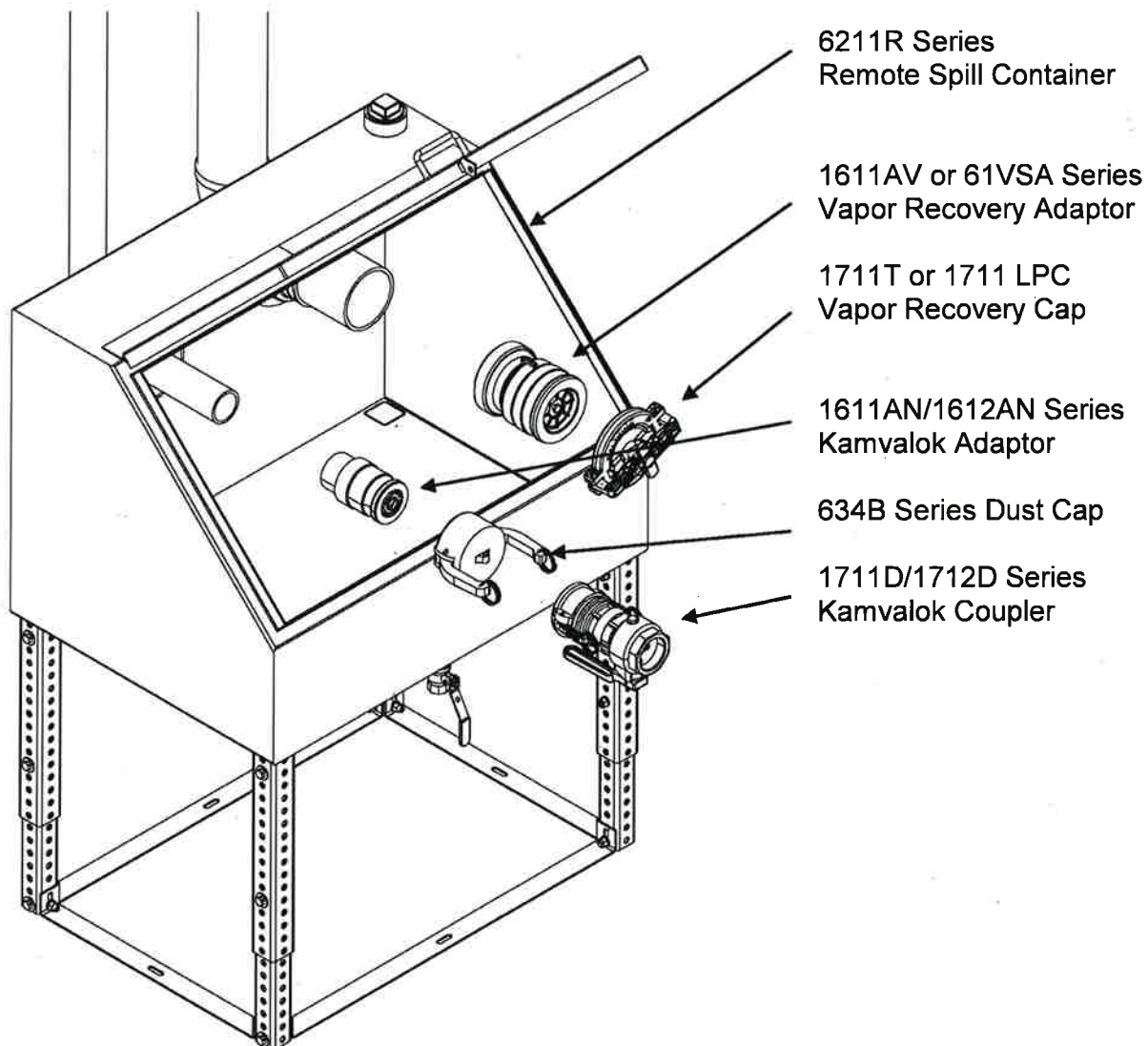


Figure 2E
Typical Remote Product Pathway Configuration for AST – Tank Side

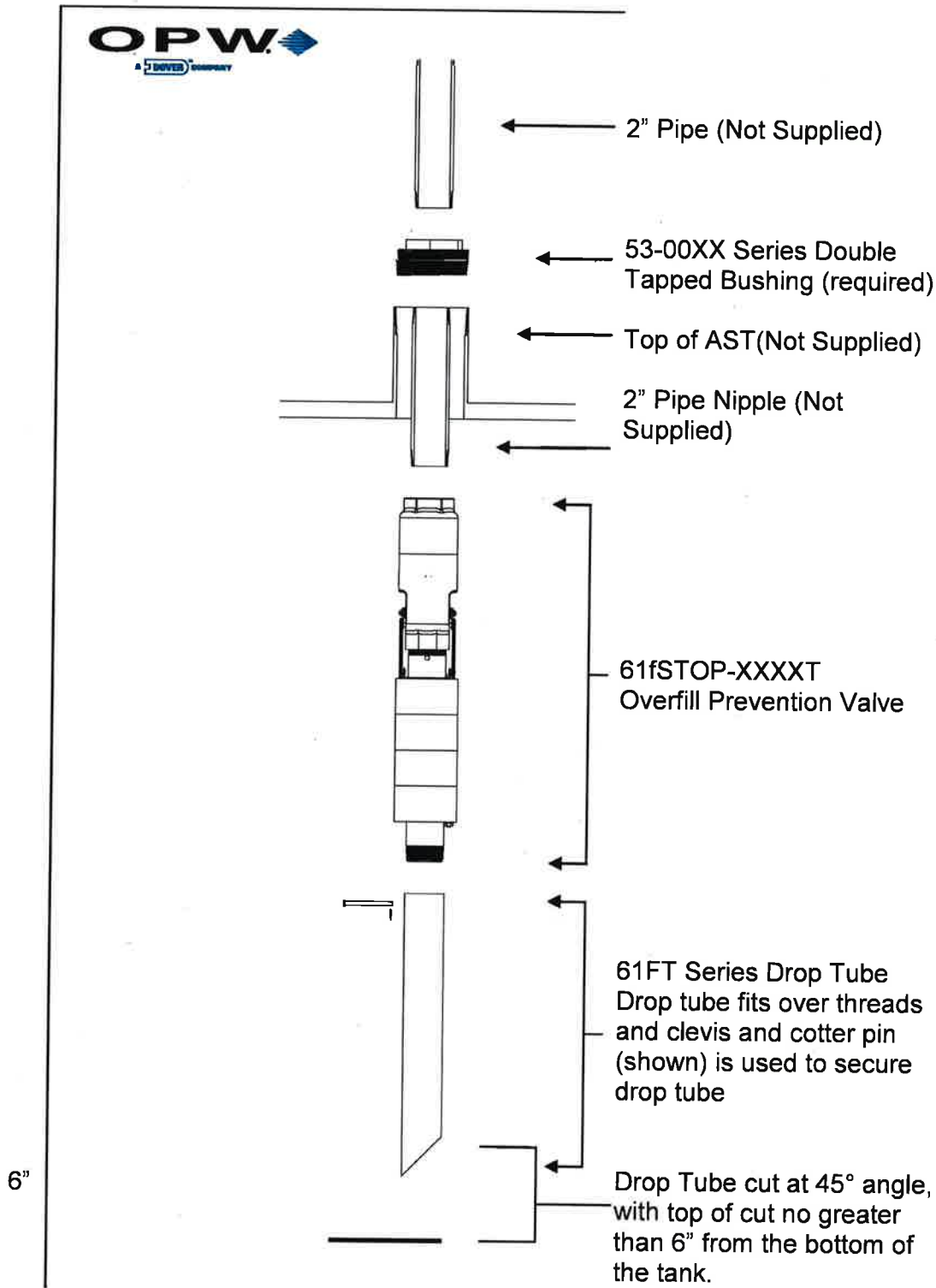
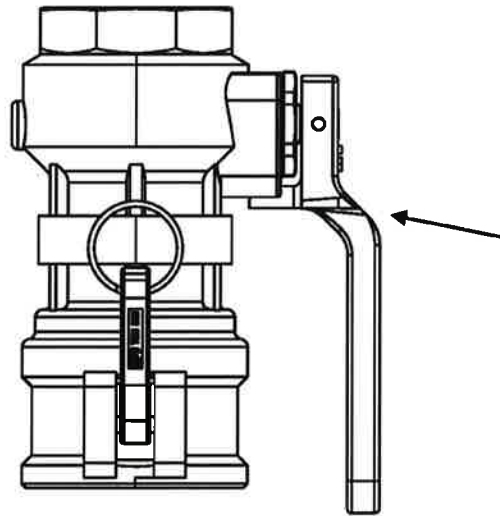
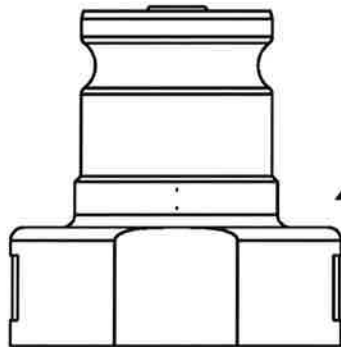


Figure 2F
Typical OPW Kamvalok Coupler and Adaptor



1711D/1712D Series
Kamvalok Coupler

Note: During fuel deliveries, the OPW Kamvalok coupler shall be used with the OPW Kamvalok product adaptor. The Kamvalok coupler can be provided by the fuel supplier or provided by the GDF operator.



1611AN/1612AN
Kamvalok Adaptor

Figure 2G
Typical Mechanical Tank Gauge Configuration of OPW Phase I EVR System for AST (optional)

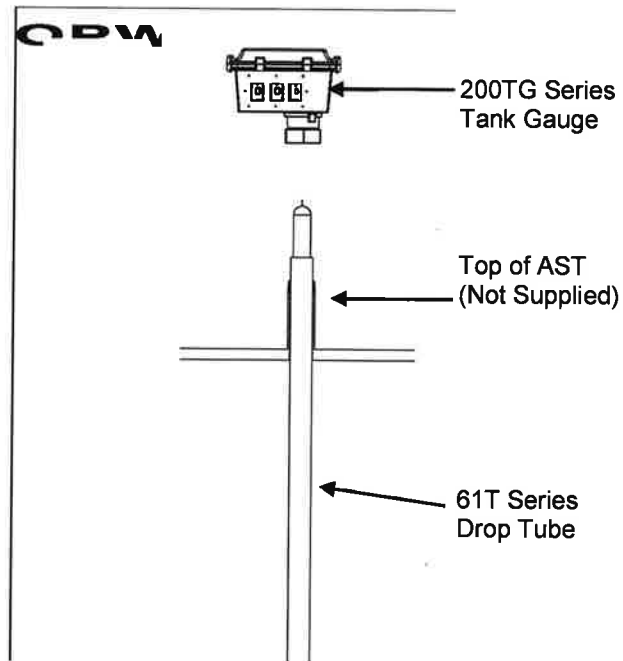


Figure 2H
Typical Tank Alarm Configuration of OPW Phase I EVR System for AST (optional)

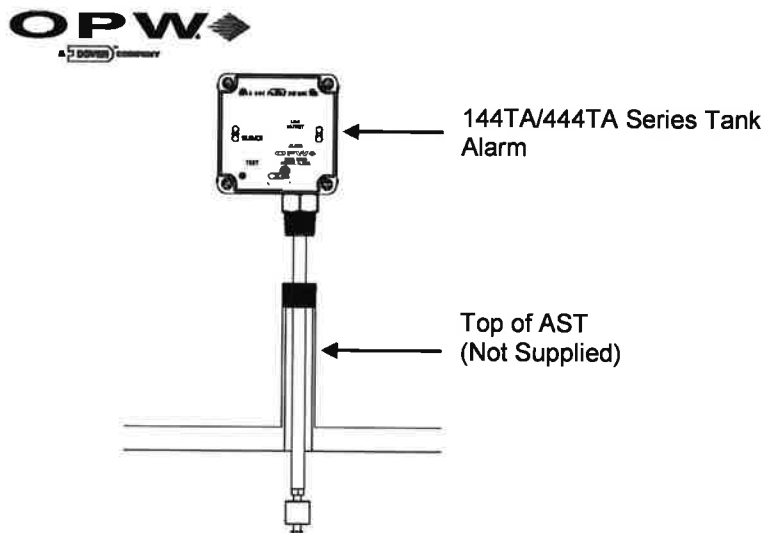


Figure 2I
Typical Tank Gauge and Alarm Combination Configuration of OPW Phase I EVR
System for AST (optional)

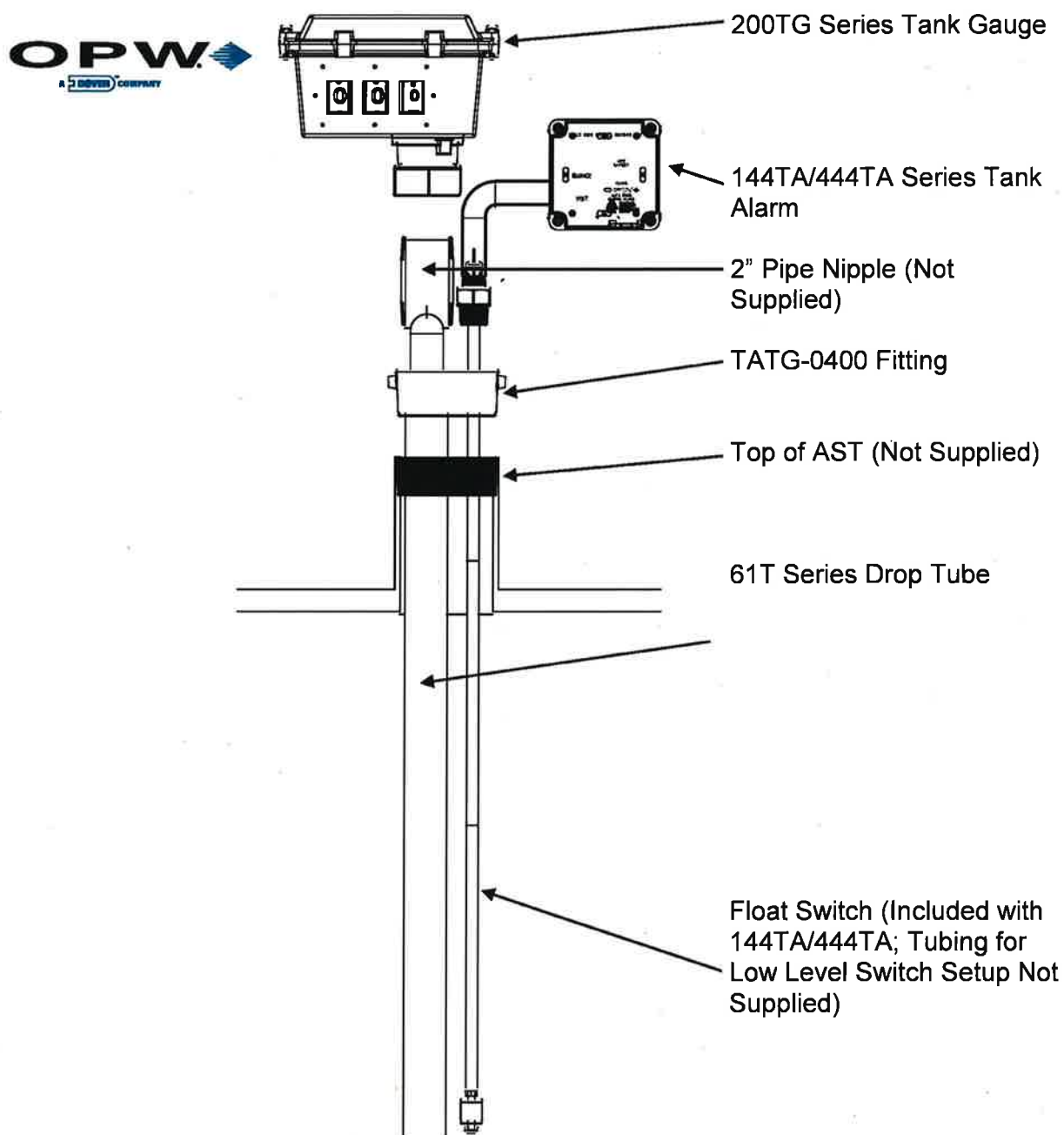


Figure 2J
Typical Dedicated Gauging Port with Drop Tube of OPW Phase I EVR System for AST

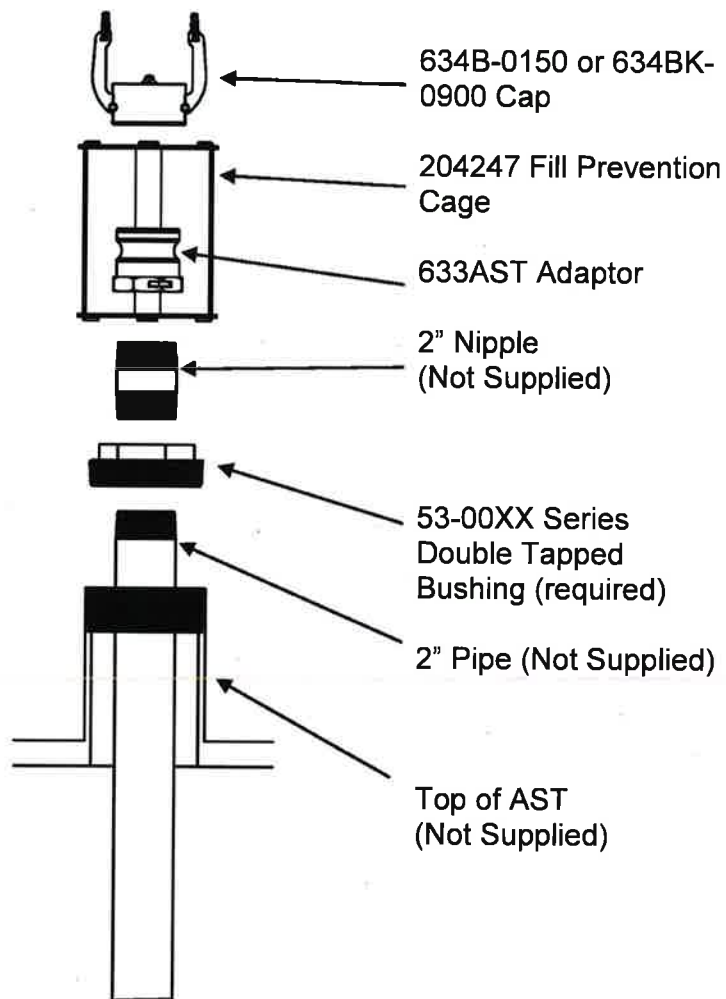
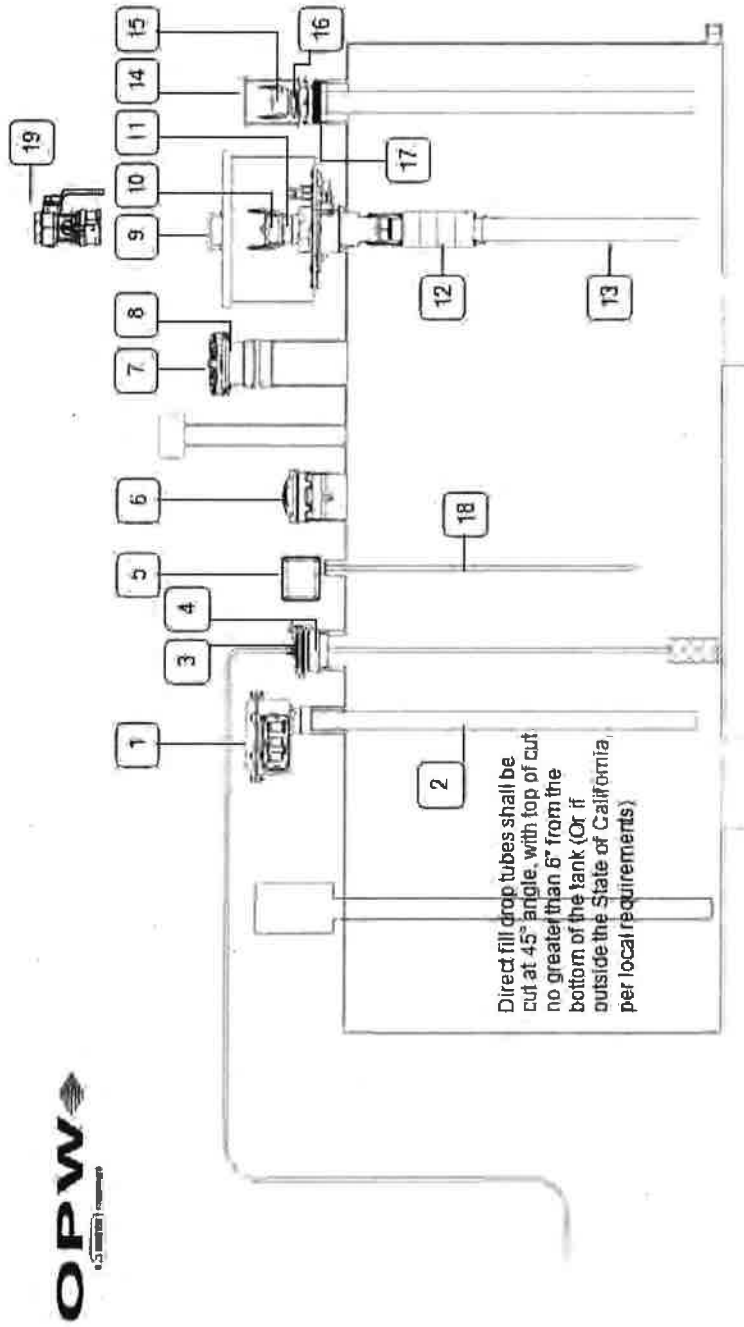


Figure 2K

Typical Configuration of OPW Phase I EVR System for AST with Direct Fill Spill Container

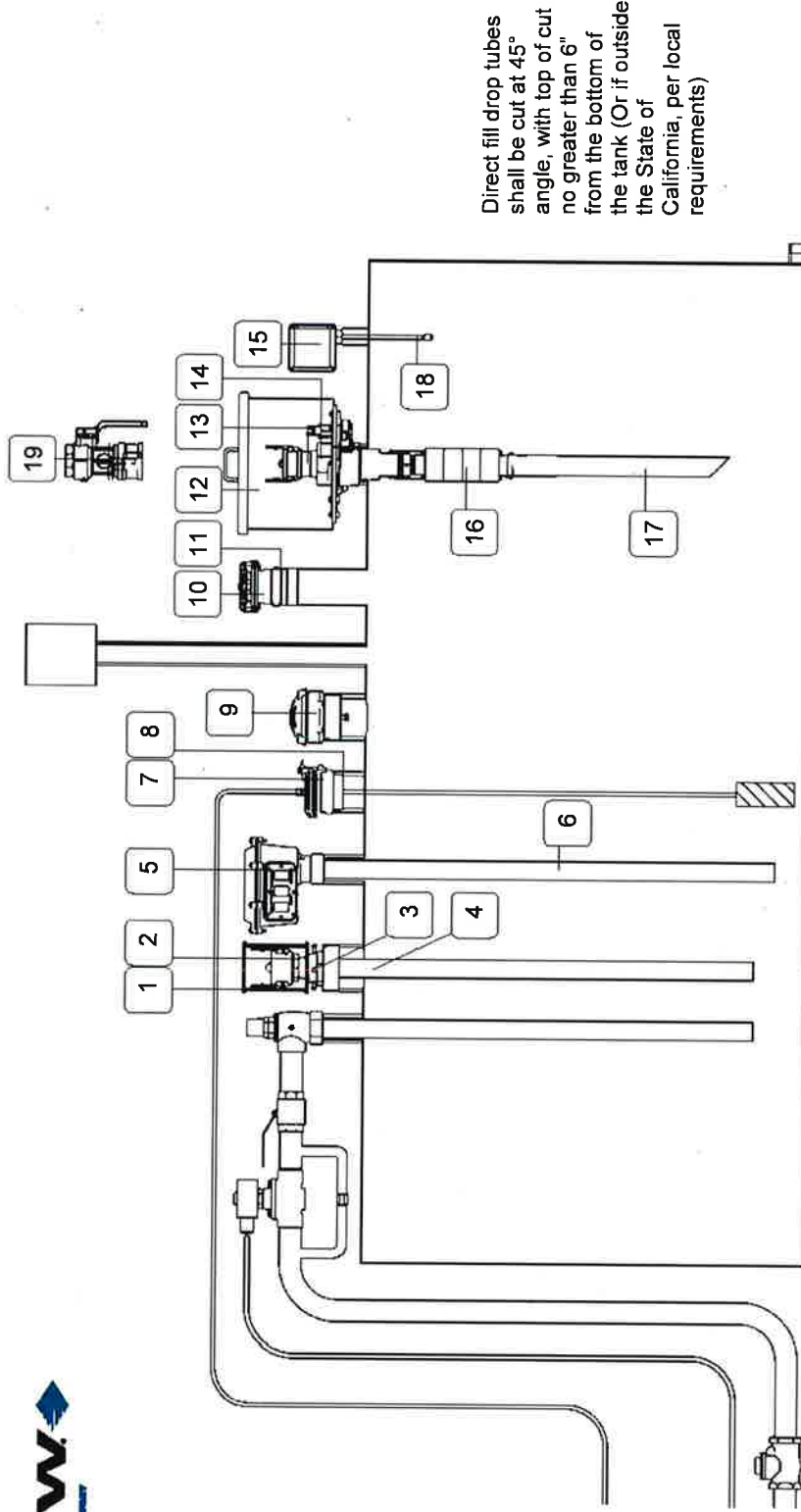


1	200TG Series Tank Gauge	8	1611AV/AVB Series Vapor Recovery Adaptor or 61VSA-1020 EVR	15	634B-0150 or 634BK-0090 Cap
2	61T Series Drop Tube	9	331/332 Series Spill Container	16	633AST-2190 Adaptor*
3	62M Monitoring Cap	10	634B or 634BK Series Dust Cap	17	53-00XX Series Double-Tapped Bushing *
4	FSA-400 Face Seal Adaptor	11	1611AN/1612AN Series Kamvalok® Adaptor	18	44TA-LLFS Liquid Level Float Switch (optional)
5	144TA/444TA Series Tank Alarm (optional)	12	61FSTOP-XXXXT Series Overfill Prevention Valve	19	1711D-YYYY Series Kamvalok® Coupler
6	301 Series Emergency Vent	13	61FT Series Drop Tube		
7	1711T-7085 or 1711LPC Series Vapor Recovery Cap	14	204247 Fill Prevention Cage		

*OPW 53-00XX bushing required for dedicated gauging port, optional for direct fill spill containers

Figure 2L

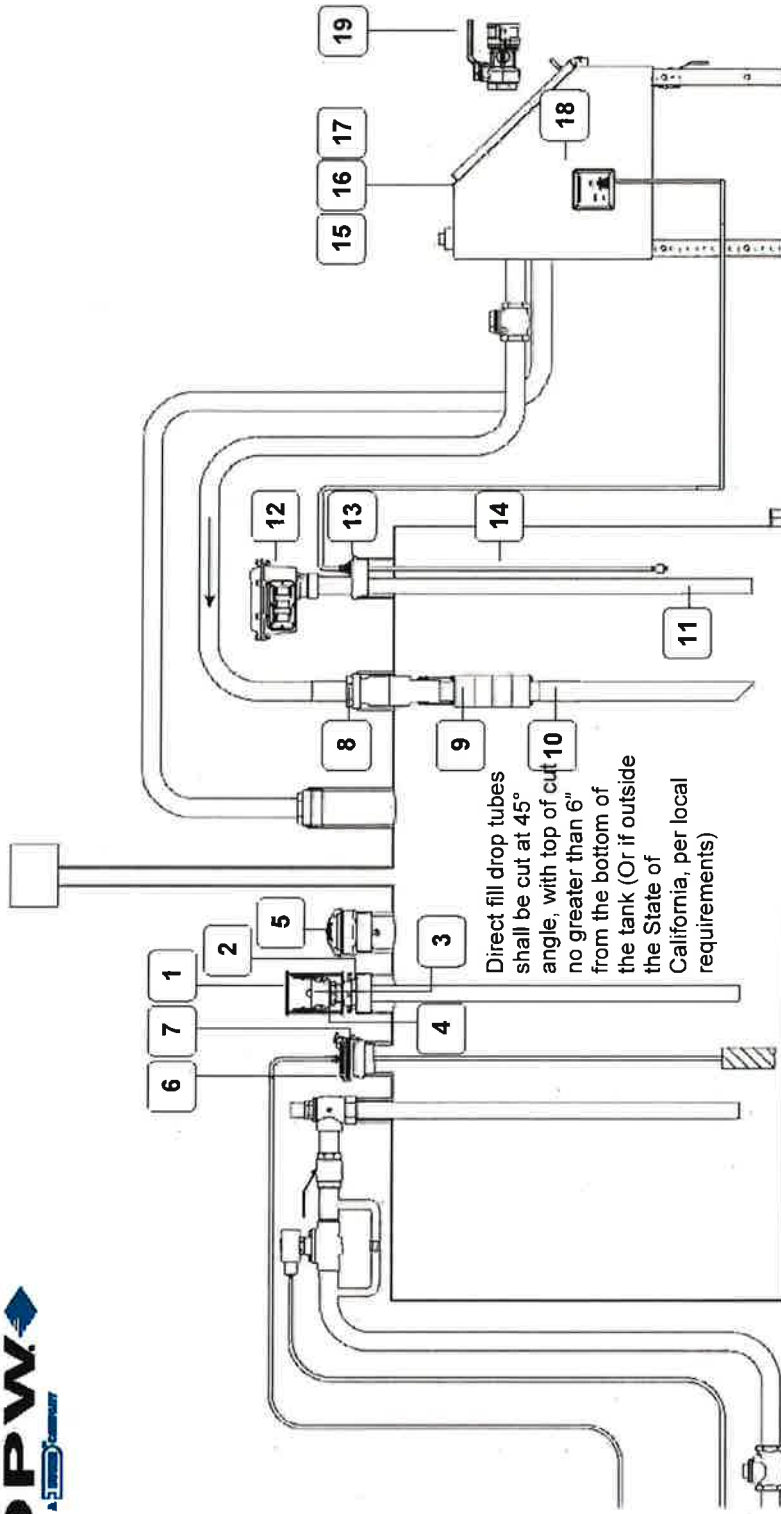
Typical Configuration of OPW Phase I EVR System for AST with Direct Fill Spill Container and Remote Dispenser



1	204247 Fill Prevention Cage	8	FSA-400 Face Seal Adaptor	15	144TA/444TA Series Tank Alarm (optional)
2	634B-0150 or 634BK-0090 Cap	9	301 Series Emergency Vent	16	61fSTOP-XXXXT Series Overfill Prevention Valve
3	633AST-0XXX Adaptor	10	1711T or 1711LPC Series Vapor Recovery Cap	17	61FT Series Drop Tube
4	53-00XX Series Double Tapped Bushing *	11	1611AV or 61VSA Series Vapor Recovery Adaptor	18	44TA-LLFS Liquid Level Float Switch (optional)
5	200TG Series Tank Gauge	12	331/332 Series Spill Container	19	1711D-YYYY Series Kamvalok® Coupler
6	61T Series Drop Tube	13	634B Series Dust Cap	*OPW 53-00XX bushing required for dedicated gauging port, optional for direct fill spill container.	
7	62M Monitoring Cap	14	1611AN/1612AN Series Kamvalok® Adaptor		

Figure 2M

Typical Configuration of OPW Phase I EVR System for AST with Remote Fill and Remote Dispenser



1	204247 Fill Prevention Cage	8	53 Series Bushing **	15	1611AN / 1612AN Series Kamvalok® Adaptor*
2	53-00XX Series Double Tapped Bushing	9	61fSTOP-XXXXT Series Overfill Prevention Valve	16	1611AV or 61VSA Series Vapor Recovery Adaptor*
3	634B-0150 or 634B-0090 Series Dust Cap	10	61FT Series Drop Tube	17	1711T or 1711LPC Series Vapor Recovery Cap*
4	633AST-0XXX Adaptor	11	61T Series Drop Tube	18	144TA/444TA Series Tank Alarm (optional)
5	301 Series Emergency Vent	12	200TG Series Tank Gauge (optional)	19	1711D-YYYY Series Kamvalok® Coupler
6	62M Monitoring Cap	13	TGTA-0400 4" Gauge/Alarm Combo Fitting (optional)	* OPW 53-00XX bushing is required for remote fill configurations and dedicated gauge ports	
7	FSA-400 Face Seal Adaptor	14	44TA-LLFS Liquid Level Float Switch (optional)		

Figure 2N
Example of a GDF Maintenance Record

Date of Maintenance/ Test/Inspection/Failure	Repair Date To Correct Test Failure	Maintenance/Test/Inspection Performed and Outcome	Affiliation	Name and Certified Technician Identification Number of Individual Conducting Maintenance or Test	Telephone Number

Exhibit 3

Manufacturing Performance Standards and Specifications

The OPW Phase I EVR System for aboveground storage tanks (AST) and all components shall be manufactured in compliance with the applicable Phase I performance standards and specifications in CP-206, as well as the requirements specified in this Executive Order. All components 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. Unless specified in Exhibit 2 or in the ***ARB Approved Installation, Operation and Maintenance Manual for the OPW Phase I Enhanced Vapor Recovery System for Aboveground Storage Tanks***, the requirements of this section apply to the manufacturing process and are not appropriate for determining the compliance status of a gasoline dispensing facility (GDF).

Pressure/Vacuum Vent Valves

Factory testing, shipping and labeling of pressure/vacuum vent (PV) valves are described in Air Resources Board's Executive Orders (EO) VR-301 series and VR-302 series for Standing Loss Control of existing and new ASTs, respectively.

Vapor Recovery and Non-rotatable Product (Kamvalok) Adaptors

1. The vapor recovery and non-rotatable product adaptors shall not leak.
2. The vapor recovery adaptor cam and groove shall be manufactured in accordance with the cam and groove specifications shown in Figure 4B of CP-206.
3. Each OPW vapor recovery adaptor and Kamvalok non-rotatable product adapter shall be tested at the factory, and shall meet the applicable performance specifications listed in Table 3-1 and shall have affixed to it a card or label listing these specifications and a statement that the adaptor complied with such specifications when tested in the factory.

Spill Container and Drain Valves

Each spill container drain valve shall be tested at the factory. The spill container drain valve is configured to drain liquid directly into the ullage space. The drain valve is not certified with an allowable leak rate and shall not leak.

Drop Tube Overfill Prevention Device

Each Drop Tube Overfill Prevention Device shall be tested at the factory. The overfill device is installed below the OPW product adaptor (see figures 2A and 2E, Exhibit 2) which has a built in poppet (Kamvalok) to prevent spillage of product after delivery and vapors from escaping.

Emergency Vents

Each emergency vent shall be tested at the factory. Emergency vents are not certified with an allowable leak rate and shall not leak.

Tank Gauge Components

Tank gauge components shall be tested at the factory. Tank gauge components are not certified with an allowable leak rate and shall not leak

Kamvalok Product Coupler

Each Kamvalok product coupler shall be tested at the factory. Kamvalok product couplers shall fit the matching non-rotatable Kamvalok product adapters.

**Table 3-1
Manufacturing Component Standards and Specifications**

Component	Test Method	Standard or Specification
Phase I Adaptors	Exhibit 4	No Leaks
Phase I Vapor Adaptors *	Micrometer	Cam and Groove Standard (CP-206)
Phase I Rotatable Adaptors	TP-201.1B	Minimum, 360-degree rotation Maximum, 108 pound-inch average static torque
Spill Container Drain Valve	Exhibit 4	No Leaks
Overfill Prevention Device	Exhibit 4	No Leaks
Emergency Vents	Exhibit 4	No Leaks

* Product adaptor does not meet cam and groove standard. This was deemed acceptable because the propriety Kamvalok coupler shall be used for product delivery.

Exhibit 4
Determination of Static Pressure Performance of
Vapor Recovery Systems at Gasoline Dispensing Facilities with
Aboveground Storage Tanks

Definitions common to all certification and test procedures are in:

D-200 Definitions for Vapor Recovery Procedures

For the purpose of this procedure, the term "ARB" refers to the California Air Resources Board, and the term "Executive Officer" refers to the ARB Executive Officer or his or her authorized representative or designee.

1. PURPOSE AND APPLICABILITY

The purpose of this test procedure is used to quantify the vapor tightness of an aboveground storage tank (AST) installed at a gasoline dispensing facility (GDF).

This test procedure is used to determine the static pressure performance standard of a vapor recovery system during the certification process and subsequently to determine compliance with that performance standard for in use aboveground storage tanks equipped with either a Phase I system or Phase I and Phase II systems.

The applicability of this test procedure for static pressure performance is for installations of Phase I or Phase 1 and Phase II systems with AST certified by:

CP-206 Certification Procedure for Vapor Recovery Systems at
Gasoline Dispensing Facilities Using Aboveground
Storage Tanks

2. PRINCIPLE AND SUMMARY OF TEST PROCEDURE

The entire vapor recovery system is pressurized with nitrogen to two (2.0) inches water column (wc). The system pressure is then allowed to decay for five (5) minutes. The acceptability of the final pressure is based upon the vapor system ullage.

3. BIASES AND INTERFERENCES

3.1 For tanks equipped with vapor recovery processor systems, the processor must be isolated or the processor outlet is capped. Leakage at the processor will indicate a system component leak.

3.2 Leaks in the test equipment will bias the results toward non-compliance. Prior to

conducting the test, this bias is eliminated by conducting a leak check of the equipment.

- 3.3 There shall be no Phase I bulk product deliveries into the storage tank(s) within three (3) hours prior to this test. There shall be no product dispensing within thirty (30) minutes prior to this test. There shall be no Air to Liquid or Volume to Liquid Volumetric Ratio Test (TP-201.5 or equivalent) conducted within the twenty-four (24) hour period immediately prior to this test.
- 3.4 Product levels less than four (4) inches above the highest opening at the bottom of the submerged drop tube may bias the test toward noncompliance.
- 3.5 For systems which utilize a destructive processor, power to the collection unit and the processor shall be turned off during testing.
- 3.6 For vacuum-assist systems with positive displacement vacuum pumps, which locate the vacuum producing device in-line between the Phase II vapor riser and the storage tank, the following requirements shall apply:
 - 3.6.1 A valve shall be installed at the vacuum producing device. When closed, this valve shall isolate the vapor passage downstream of the vacuum producing device.
 - 3.6.2 The upstream vapor passage (nozzle to vacuum producing device) shall also be tested. Methodology for this test shall be submitted to the Executive Officer for approval prior to submission of test results or shall be conducted in accordance with the procedures set forth in the applicable ARB Executive Order.

4. EQUIPMENT SPECIFICATIONS

- 4.1 Traffic Cones. If needed for safety, use traffic cones to encircle the area while the test is being conducted.
- 4.2 Care must be exercised to prevent exposure of testing personnel to benzene, a carcinogen. Use of appropriate safety gear such as gloves and respirator is suggested.
- 4.3 Use commercial grade nitrogen in a high pressure cylinder, equipped with a two-stage pressure regulator and one pressure per square inch gauge (psig) pressure relief valve. The minimum and maximum nitrogen feed rates into the system shall be 1.0 and 5.0 cfm (cubic feet per minute) respectively.
- 4.4 The System Leak Test Assembly is shown in Figure 1. Use a modified vapor cap compatible with the Phase I vapor adaptor. The vapor cap shall be equipped with a nitrogen inlet port.

- 4.5 Use a Dwyer flowmeter, Model RMC-104, or equivalent, to determine the required pressure setting of the delivery pressure gauge on the nitrogen supply pressure regulator. This pressure shall be set such that the nitrogen flowrate is between 1.0 and 5.0 cfm.
- 4.6 Electronic pressure measuring devices or digital pressure indicators shall be used. The maximum full-scale range of the device shall be 10 inches water column. The minimum accuracy shall be 1.5 percent of full scale and the pressure measuring device shall be readable to the nearest 0.01 inches water column. A copy of the most current calibration of shall be kept with the equipment. Instrument shall be calibrated every six months.
- 4.7 Stopwatch. Use a stopwatch accurate to within 0.10 seconds to time the one-minute pressure stabilization period, and the five-minute decay test period.
- 4.8 Leak Detection Solution or a Combustible Gas Indicator. Any liquid solution designed to detect vapor leaks may be used to verify the pressure integrity of system components during this test; or a combustible gas detector that complies with the requirements of U.S. EPA Method 21, "Determination of Volatile Organic Compounds Leaks", 40 CFR Ch. 1, Part 60, App. A-7 (36 FR 24877, December 23, 1971) and section 5 of this test procedure. Personnel shall assume that the combustible gas detector will be operated in an explosive atmosphere and comply with all pertinent regulations.

5. CALIBRATION PROCEDURE

- 5.1 The electronic pressure measuring device or digital pressure indicator shall be calibrated using a National Institute of Standards and Technology (NIST) traceable standard or reference standard traceable to NIST within 180 days prior to conducting the testing and the calibration. In addition, calibration shall be conducted after any repairs or alterations to the pressure measuring or indicating device. Calibrations shall be conducted per manufacturer's instructions, ensuring it complies with the minimum accuracy requirement of 1.5 percent of full scale. A copy of the most current calibration shall be kept with the equipment.
- 5.2 The flowmeter shall be calibrated every 180 days using a NIST traceable standard or a reference standard traceable to NIST as specified by the manufacturer's instructions.
- 5.3 Calibrate the combustible gas detector per the manufacturer's recommendation. Calibration gas shall be certified traceable to NIST-SRM.

5.3.1 The calibration gases must be certified according to one of the following options:

5.3.1.1 The EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (EPA-600/R-12/531, May 2012), or

5.3.1.2 To an analytical accuracy of ± 2 percent, traceable to a reference material approved by the National Institute of Standards and Technology (NIST) and recertified annually.

5.3.2 Documentation. Information on calibration gas cylinders shall be entered into a log identifying each cylinder by serial number. Sufficient information shall be maintained to allow a determination of the certification status of each calibration gas and shall include: (1) the data put in service, (2) assay result, (3) the dates the assay was performed, (4) the organization and specific personnel who performed the assay, and (5) the date taken out of service.

6. PRE-TEST PROCEDURES

- 6.1 Place the traffic cones around the perimeter of the testing area, allowing sufficient space to safely conduct the test.
- 6.2 Electronic manometers shall have a warm-up period of at least 15 minutes followed by a five-minute drift check. If the drift exceeds 0.01 inches water column, the instrument should not be used.
- 6.3 Record system information on Form 1.
- 6.4 The minimum ullage during the test shall be 25 percent of the tank capacity and the maximum ullage during the test shall be 75 percent of the tank capacity. For manifolded tanks, the minimum ullage during the test shall be 25 percent of the aggregate tank capacity and the maximum ullage during the test shall be 75 percent of the aggregate tank capacity.
- 6.5 Determine the allowable system leak rate using Equation 8-1 in section 8.
- 6.6 Ensure the nozzle(s) are properly hung in the dispenser boot and all dispenser cabinet covers are in place. No dispensing shall be allowed during the test.
- 6.7 If a steel-braided nitrogen supply line is not used, a ground strap should be employed during the introduction of nitrogen into the system.

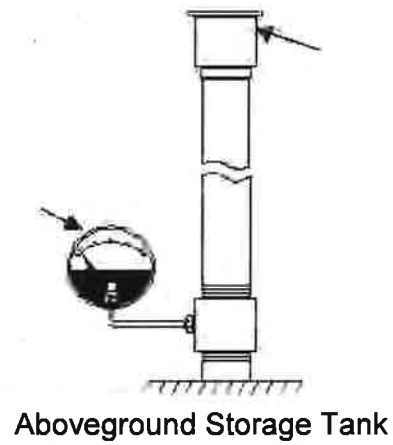
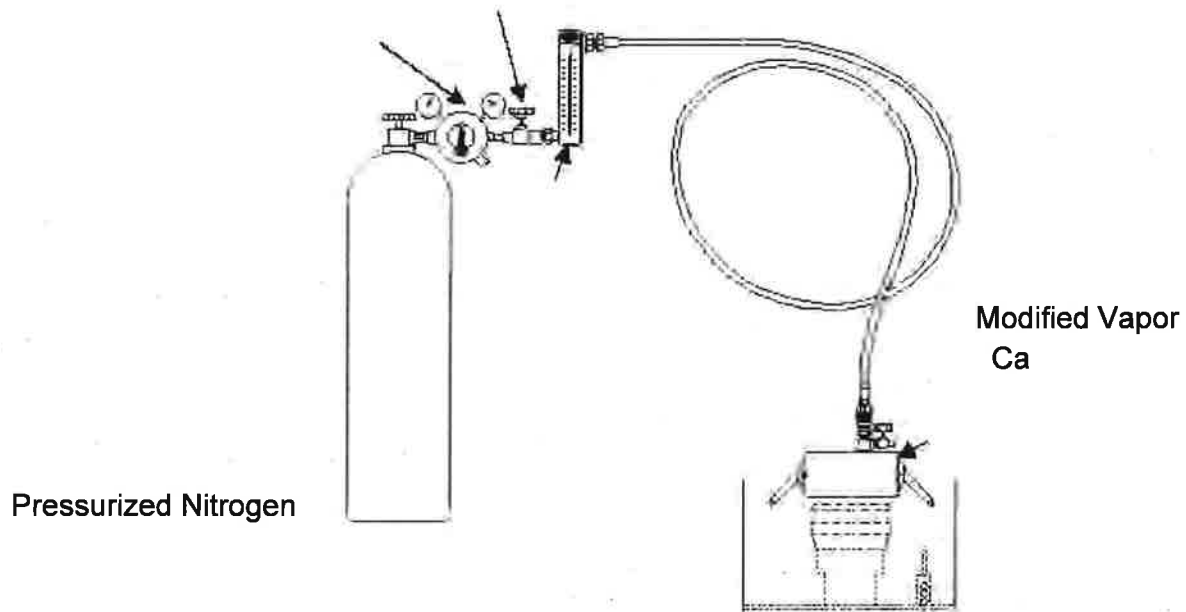
- 6.8 This test shall be conducted with the dust caps removed from both the product and the vapor coupler(s).
- 6.9 If the Phase I containment box is equipped with a drain valve, this test shall be conducted with the drain valve installed.
- 6.10 Conduct visual inspection of vapor recovery components to ensure no cracks, tears, or other anomalies are present that may cause a failure of the leak test.
- 6.11 Install system leak test assembly. An example is shown in Figure 1. Additional examples can be found in TP-201.3 (Figures 1-3).

7. TEST PROCEDURE

- 7.1 Observe the initial storage tank pressure. If the initial pressure is greater than one-half (0.50) inch H₂O gauge, proceed to Section 7.1.1. If the initial pressure is less than zero (0.00) inch H₂O gauge, proceed to Section 7.1.2. In the case where the storage tank pressure is between 0.00 and 0.50 inches H₂O, proceed to section 7.2.
 - 7.1.1 If the initial storage tank pressure is greater than one-half (0.50) inch H₂O gauge, carefully bleed off the excess pressure in accordance with all applicable safety procedures for a maximum of 30 seconds. Do not allow the tanks to remain open to atmosphere for more than 30 seconds or the ingestion of fresh air and additional vapor growth may result. Start the stopwatch and measure the storage tank pressure for three (3) minutes. If the 3-minute pressure exceeds 0.50 inches H₂O or continues to change at a rate exceeding ± 0.02 inches H₂O in 3 minutes, repeat this Section. Several attempts may be required.
 - 7.1.2 If the initial storage tank pressure is less than zero (0.00) inches H₂O gauge, slowly introduce nitrogen so that the storage tank pressure is between zero (0.00) and one-half (0.50) inches H₂O gauge. Start the stopwatch and measure the storage tank pressure for three (3) minutes. If the 3-minute pressure is not between 0.00 and 0.50 inches H₂O or continues to change at a rate exceeding ± 0.02 inches H₂O in 3 minutes, repeat this Section.
- 7.2 Open the nitrogen gas supply valve, regulate the delivery pressure to at least 10 psig, and pressurize the vapor system (or subsystem for individual vapor return line systems) to or slightly above 2 inches water column. The minimum and maximum nitrogen feed rates in to the system shall be 1.0 and 5.0 cfm respectively. It is critical to maintain the flow until both flow and pressure stabilize, indicating temperature and pressure stabilization in the tanks. Close the nitrogen supply valve.
- 7.3 Check the system leak test assembly using leak detection solution to verify that the test equipment is leak tight. Quickly remove the vapor cap assembly.

- 7.4 Re-open the nitrogen supply valve, and reset the tank pressure to reestablish a pressure slightly greater than 2 inches water column. Close the nitrogen supply valve and start the stopwatch when the pressure reaches an initial pressure of 2.0 inches of water column.
- 7.5 At one-minute intervals during the test, record the system pressure on Form 1. After five minutes, record the final system pressure on Form 1. Carefully remove the system leak test assembly.
- 7.6 Use Equation 8-1 in section 8 or Table 1 to determine the compliance status of the facility by comparing the final five-minute pressure with the minimum allowable pressure.

Figure 1
Typical System Leak Test Assembly



8. CALCULATING RESULTS

Minimum Allowable Pressure

The minimum allowable pressure after five (5) minutes, with an initial pressure of 2.0 inches water column, shall be calculated as shown below, or obtained from Table 1:

Equation 8-1

$$P_f = 2e^{(-223.9/V)}$$

where:

P_f	=	Minimum pressure after 5 minutes, inches water column
V	=	Ullage of the system, gallons
e	=	Constant equal to 2.71828
2	=	Initial starting pressure, inches water column
-223.9	=	Decay constant for a 5 minute test

9. REPORTING RESULTS

Report the results as indicated on Form 1. District may require the use of alternate forms provided they include the same minimum parameters identified in Form 1.

10. ALTERNATIVE TEST PROCEDURES

This procedure shall be conducted as specified. Modifications to this test procedure shall not be used to determine compliance unless prior written approval has been obtained from the ARB Executive Officer, pursuant to Section 15 of Certification Procedure CP-206.

**Form 1
Summary of Source Test Data**

Static Pressure Performance Test				
<p>GDF Name and Address:</p> <p>GDF Representative and Title:</p> <p>GDF Phone #:</p> <p>GDF # _____</p> <p>Manifolded? Y or N</p>	<p align="center">PHASE II SYSTEM TYPE (Check One)</p> <p>Balance _____</p> <p>VacAssist _____</p> <p>Other _____</p> <p>Manufacturer: _____</p> <p>Permit Conditions:</p>			
<p align="right">TANK #:</p> <p>1. Product Grade</p> <p>2. Actual Tank Capacity, gallons</p> <p>3. Gasoline Volume</p> <p>4. Ullage, gallons (ullage = capacity-volume)</p> <p>5. Initial Pressure (inches water column)</p> <p>6. Pressure After 1 Minute</p> <p>7. Pressure After 2 Minutes</p> <p>8. Pressure After 3 Minutes</p> <p>9. Pressure After 4 Minutes</p> <p>10. Final Pressure After 5 Minutes</p> <p>11. Allowable Final Pressure</p>	1	2	3	4
<p>Test Conducted by:</p> <p>Date of Test:</p>	<p>Test Company:</p> <p>Test Contractor Certification Number:</p> <p>Expiration Date:</p>			

TABLE 1
Leak Rate Criteria

ULLAGE (GALLONS)	MINIMUM PRESSURE AFTER 5 MINUTES, (INCHES OF WATER COLUMN)
100	0.21
150	0.45
200	0.65
250	0.82
300	0.95
350	1.05
400	1.14
450	1.22
500	1.28
550	1.33
600	1.38
650	1.42
700	1.45
750	1.48
800	1.51
850	1.54
900	1.56
950	1.58
1,000	1.60
1,200	1.66
1,400	1.70
1,600	1.74
1,800	1.77
2,000	1.79
2,200	1.81
2,400	1.82
2,600	1.83
2,800	1.85
3,000	1.86
3,500	1.88
4,000	1.89
4,500	1.90
5,000	1.91
6,000	1.93
7,000	1.94
8,000	1.94
9,000	1.95
10,000	1.96
15,000	1.97
20,000	1.98

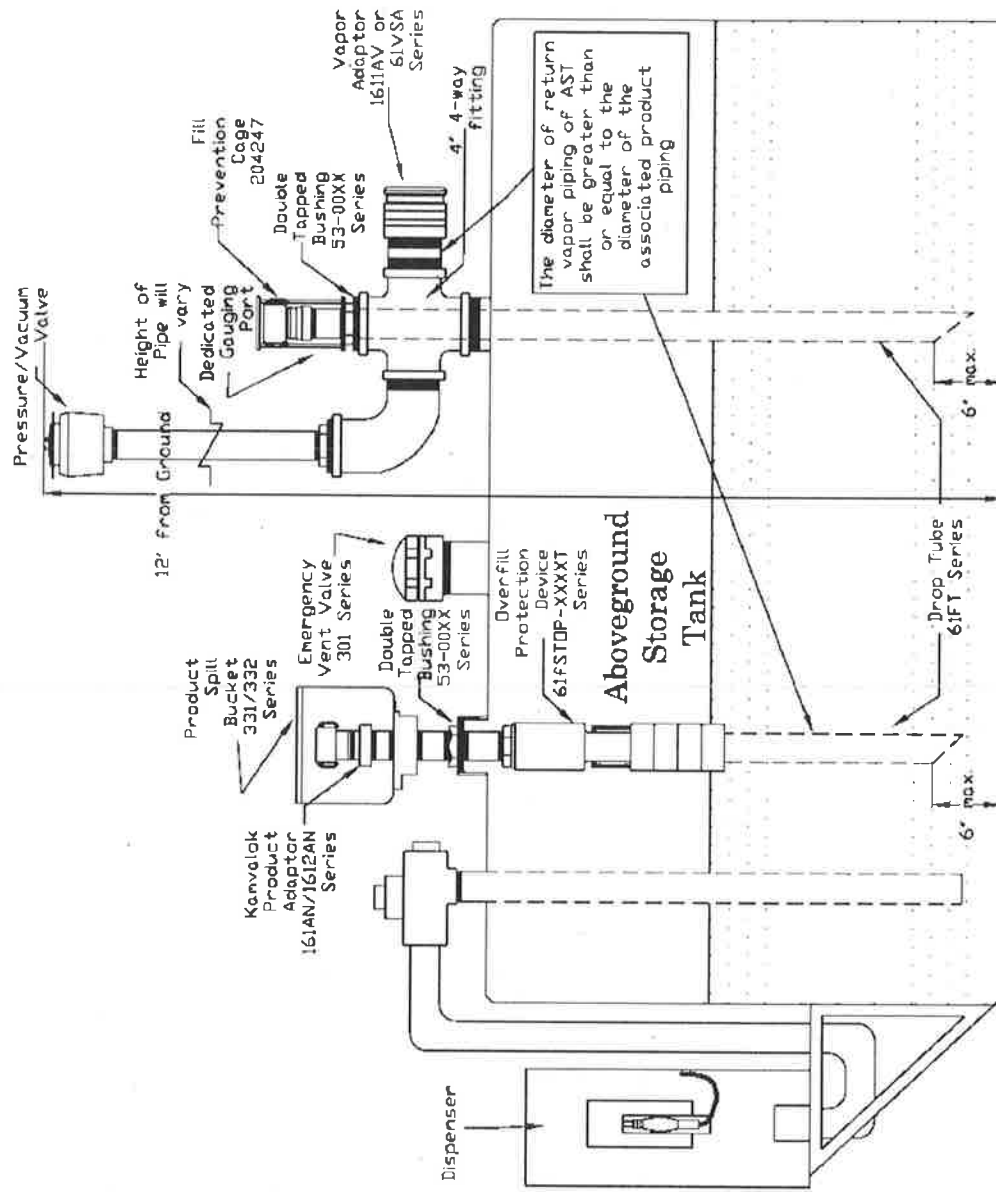
Exhibit 5
Alternate Phase I EVR Installation Configurations for
Existing Aboveground Storage Tanks

Existing aboveground storage tanks (AST) may be configured with a limited number of available bung openings and bung diameters. In an effort to provide flexibility in regards to Phase I EVR equipment installation, the figures in this Exhibit provide examples of typical alternate Phase I EVR installation configurations.

General Specifications

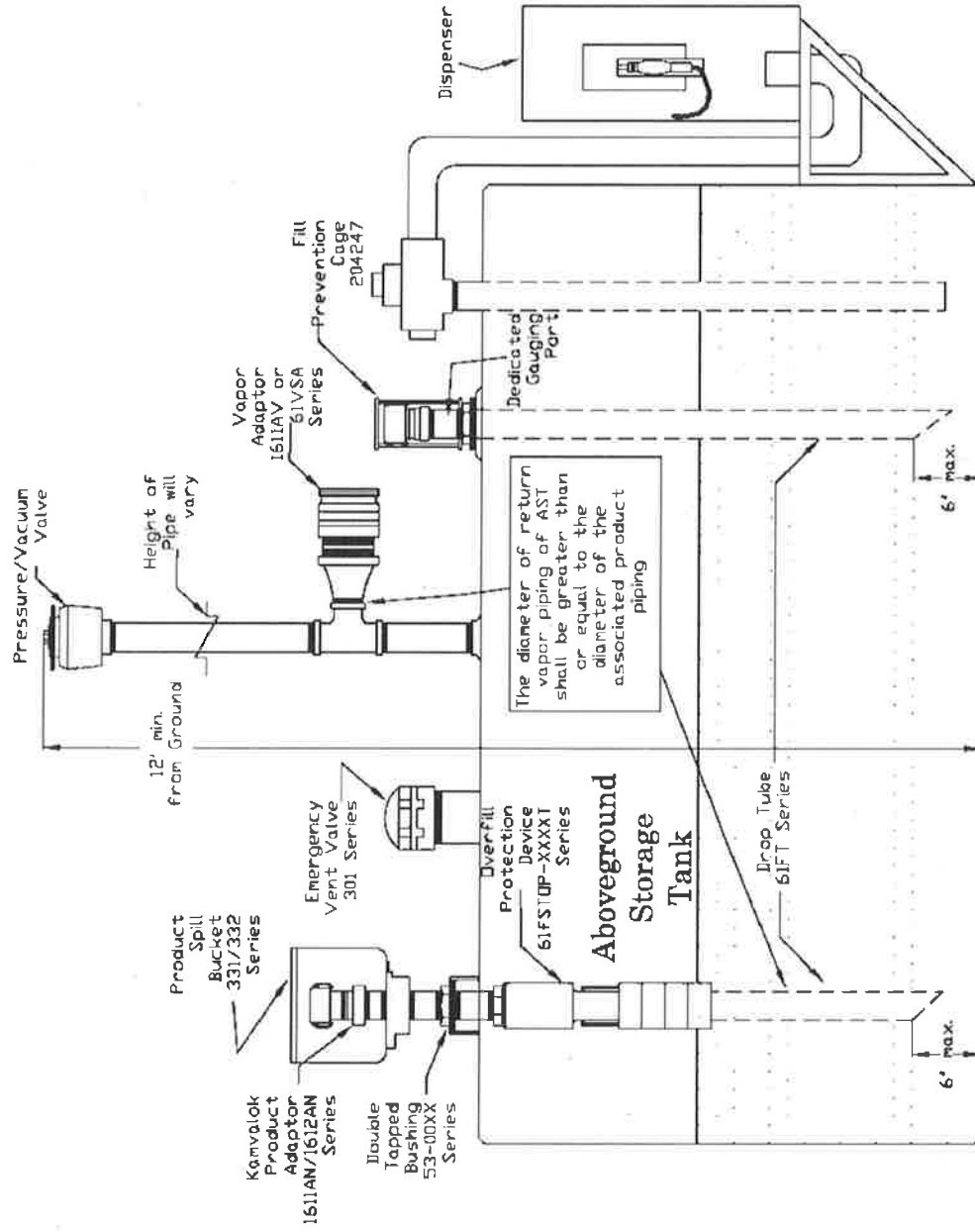
1. Alternate installation configurations for the OPW Phase I EVR System (OPW System) for existing ASTs are shown in Figures 5A, 5B, and 5C.
2. A properly sized, dedicated opening must be provided for the emergency vent in accordance with the ***ARB Approved Installation, Operation and Maintenance Manual for the OPW Phase I Enhanced Vapor Recovery System for Aboveground Storage Tanks***.
3. The OPW System shall be installed, operated, and maintained in accordance with the ***ARB Approved Installation, Operation and Maintenance Manual for the OPW Phase I Enhanced Vapor Recovery System for Aboveground Storage Tanks***.
4. Any repair or replacement of system components shall be done in accordance with the ***ARB Approved Installation, Operation and Maintenance Manual for the OPW Phase I Enhanced Vapor Recovery System for Aboveground Storage Tanks***.
5. Unless otherwise specified in this Executive Order (EO), the OPW System shall comply with the applicable performance standards and performance specifications in CP-206.
6. Per Exhibit 2 of the Executive Order, "The diameter of return vapor piping of AST shall be greater than or equal to diameter of the associated drop tube."
7. Maintenance and repair of system components, including removal and installation of such components in the course of any required tests, shall be performed by OPW Certified Technicians.
8. Other alternate installation configurations may be utilized if approved by the local air pollution control district and fire marshal/fire agency.

Figure 5A
Alternate Phase I Installation Configurations for Existing Aboveground Storage Tanks



Note: For Figure 5A, tank gauging may be accomplished by way of a dedicated port (shown), mechanical gauge, or electronic gauge.

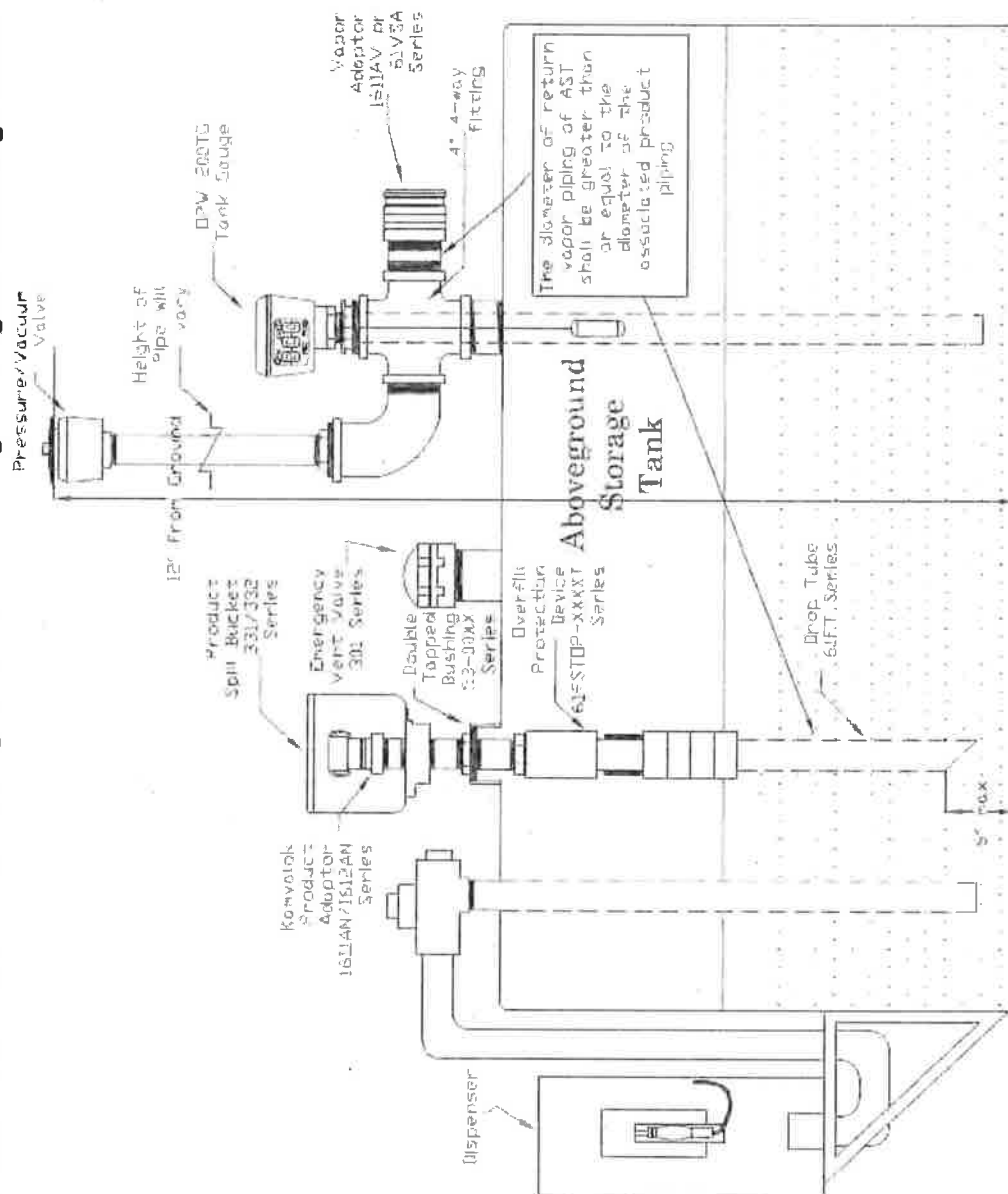
Figure 5B
Alternate Phase I Installation Configurations for Existing Aboveground Storage Tanks



Note: For Figure 5B, tank gauging may be done by way of a dedicated port (shown), mechanical gauge, or electronic gauge.

OPW Phase I EVR System for Aboveground Storage Tanks – VR-401-C

Figure 5C
Alternate Phase I Installation Configurations for Existing Aboveground Storage Tanks



Note: For Figure 5C, tank gauging may be accomplished by way of a mechanical (shown) or electronic gauge.

**State of California
AIR RESOURCES BOARD**

Executive Order VR-402-D

**Morrison Bros. Phase I Enhanced Vapor Recovery (EVR) System
for Aboveground Storage Tanks (AST)**

WHEREAS, the California Air Resources Board (ARB) has established, pursuant to California Health and Safety Code Sections 39600, 39601 and 41954, certification procedures for systems designed for the control of gasoline vapor emissions during the filling of aboveground gasoline storage tanks (Phase I EVR System) in its Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities Using Aboveground Storage Tanks (CP-206) as last amended on November 9, 2015, and incorporated by reference in Title 17, California Code of Regulations, Section 94016;

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

WHEREAS, Morrison Bros. Co. (Morrison Bros.) requested and was granted certification of the Morrison Bros. Phase I EVR System for ASTs ("Morrison Bros. Phase I EVR System") pursuant to CP-206 on June 22, 2011, by Executive Order VR-402-A, which was last renewed on June 29, 2015, by Executive Order VR-402-C;

WHEREAS, Morrison Bros. requested amendments of the Morrison Bros. Phase I EVR System to include a Model AA Series 2" overfill prevention valve and modifications to the emergency vents, overfill prevention valves, product adapters, and installation instructions;

WHEREAS, Convault, Inc. (Convault) requested amendments of the Morrison Bros. Phase I EVR System to include the Convault drain valve and a drain plug for integral spill containers;

WHEREAS, CP-206 provides that the ARB Executive Officer shall issue an Executive Order only to those applicants or manufacturers who have demonstrated full compliance with CP-206 and the ability to maintain such compliance as provided in CP-206; and

WHEREAS, I, Richard W. Corey, Executive Officer, find that the Morrison Bros. Phase I EVR System, as modified herein, conforms with all the requirements set forth in CP-206 and results in a vapor recovery system which is at least 98.0 percent efficient when tested pursuant to TP-206.4, Volumetric Efficiency of Phase I Vapor Recovery Systems for Aboveground Storage Tanks (November 7, 2014);

NOW THEREFORE, IT IS HEREBY ORDERED that the Morrison Bros. Phase I EVR System is certified to be at least 98.0 percent efficient when used with Standing Loss Control Vapor Recovery Systems certified by Executive Order VR-301 or Executive Order VR-302, as applicable and installed and maintained as specified herein and in the following exhibits. Exhibit 1 contains a list of the equipment certified for use with the

Morrison Bros. Phase I EVR System, Exhibit 2 contains the performance standards and specifications, typical installation drawings, and maintenance intervals applicable to the Morrison Bros. Phase I EVR System as installed in a gasoline dispensing facility (GDF) with an AST. Exhibit 3 contains the manufacturing performance specifications. Exhibit 4 contains the manufacturer warranties. Exhibit 5 contains alternate Phase I EVR installation configurations for existing AST. Exhibit 6 contains a test procedure for determination of static pressure performance of vapor recovery systems at gasoline dispensing facilities with AST.

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, and the Division of Occupational Safety and Health of the Department of Industrial Relations are made conditions of this certification.

IT IS FURTHER ORDERED that Morrison Bros. 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 Morrison Bros. 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 17.5 of CP-206. Morrison Bros. or other 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 Morrison Bros. shall meet the manufacturing performance specifications as provided in Exhibit 3.

IT IS FURTHER ORDERED that the certified Morrison Bros. Phase I EVR System shall be installed, operated and maintained in accordance with the ARB Approved Installation, Operation and Maintenance Manual. Equipment shall be inspected annually per the procedures identified in the ARB Approved Installation, Operation, and Maintenance Manual. This inspection requirement shall also apply to systems certified by Executive Orders VR-402-A to C. A copy of the Executive Order and the ARB Approved Installation, Operation, and Maintenance Manual shall be maintained at each GDF where a certified Morrison Bros. Phase I EVR 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 manufacturer's 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 19 of CP-206 and

approved in writing by the Executive Officer or his delegate. Any sale, offer for sale, or installation of any system or component without ARB's approval as set forth above is subject to enforcement action.

IT IS FURTHER ORDERED that the following requirement be made a condition of certification. The owner or operator of the Morrison Bros. Phase I EVR System shall conduct and pass the following test no later than 60 days after startup and at least once every three years after startup testing, using the following test procedure: Exhibit 6, Determination of Static Pressure Performance of Vapor Recovery Systems at Gasoline Dispensing Facilities with Aboveground Storage Tanks. Shorter time periods may be specified by the District. 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. Alternate test procedures, including most recent version of test procedure listed above, may be used if determined by the ARB Executive Officer or his delegate, in writing, to yield equivalent results.

IT IS FURTHER ORDERED that the Morrison Bros. Phase I EVR System shall be compatible with gasoline in common use in California at the time of certification. The Morrison Bros. Phase I EVR System is not compatible with gasoline that has methanol content greater than 5 percent or ethanol content greater than 10 percent. Any modifications to comply with future California gasoline requirements shall be submitted in writing pursuant to the process for Executive Order amendments set forth in Section 19 of CP-206 and approved in writing by the Executive Officer or his delegate.

IT IS FURTHER ORDERED that the certification of the Morrison Bros. Phase I EVR System is valid through July 1, 2019.

IT IS FURTHER ORDERED that Executive Order VR-402-C issued on June 29, 2015, is hereby superseded by this Executive Order. Morrison Bros. Phase I EVR Systems certified under Executive Order VR-402-A through C may remain in use at existing installations up to four years after the expiration date of this Executive Order if this certification is not renewed.

IT IS FURTHER ORDERED that this Executive Order shall apply to new installations or major modification of the Phase I system at an existing gasoline dispensing facility.

Executed at Sacramento, California, this 29th day of March 2016.

Attachments: See next page

Attachments:

- Exhibit 1 Equipment List**
- Exhibit 2 Installation, Maintenance, and Compliance Standards and Specifications**
- Exhibit 3 Manufacturing Performance Standards and Specifications**
- Exhibit 4 Manufacturer Warranty**
- Exhibit 5 Alternate Phase I EVR Installation Configurations for Existing
Aboveground Storage Tank**
- Exhibit 6 Determination of Static Pressure Performance of Vapor Recovery
Systems at Gasoline Dispensing Facilities with Aboveground Storage
Tanks**

EXECUTIVE ORDER VR-402-D

Morrison Bros. Phase I Enhanced Vapor Recovery (EVR) System
For Aboveground Storage Tanks (AST)

EXHIBIT 1
Equipment List

Equipment**Manufacturer/Model Number****Emergency Vent**

Morrison 244O WX YYYY AVEVR

(Figures 1A)

W represented by:

dash (-) = female threads

M = male threads

F = flange mounted

S = with screen

X represented by:

S = with screen

A = Aluminum

dash (-) = Blank

YYYY represented by:

Numerical values between 0 to 9

Male / Female	Flanged*	Size	Setting
0030		2"	16 oz./sq.in.
0060		3"	16 oz./sq.in.
0170	0170	4"	16 oz./sq.in.
0900		5"	16 oz./sq.in.
0200	0050	6"	8 oz./sq.in.
0400	0075	6"	16 oz./sq.in.
0600	0100	8"	8 oz./sq.in.
0700	0200	8"	16 oz./sq.in.
	0300	10"	2.5 oz./sq.in.
	0400	10"	8 oz./sq.in.
	0500	10"	16 oz./sq.in.

***Note:** For flange mounted models use gasket material made by Fibreflex. More information is available at <http://www.fibreflex.com>.

Equipment**Manufacturer/Model Number****Overfill Prevention Valve and Drop Tube Assembly**

Overfill Prevention Valve
(Figures 1B)

Morrison 9095W X YYYY – AVEVR

W represented by:

A = A Series

C = C Series

X = X Series

X represented by:

dash = blank

V = Nickel Plated

A = AA Series or for fuels with S.G. less 0.72

YYYY represented by:

Numerical values between 0 to 9

	Size	Description
9100	2"	Base Model
9200,7200	2"	Base Model
9300	3"	Base Model
5200	2"	Direct Fill
3200	2"	Remote Fill
3300	3"	Remote Fill
4200,6200,6800	2"	Remote Fill

Drop Tube

(Figures 1C)

Morrison 419X - -YYZZ 1TEVR

X represented by:

dash = Aluminum

A = Anodized Aluminum

YY represented by:

Numerical values between 0 to 9

	Tube Size
02	2"
03	3"

ZZ represented by:

Numerical values between 0 to 9

As length in Feet

Equipment**Manufacturer/Model Number****Spill Container *****Non-Integral
Spill Container***

(Figure 1D)

Morrison 516 XX – 0400 ACEVR

*X represented by:**dash = female threads**O = Offset female threads**M = male threads**MO = Offset male threads***NOTE:** Optional for protected tanks with integral spill container.**Integral Spill Container****Convault Drain Valve**

(Figure 1E)

Drain Plug

(Figure 1F)

Material: Galvanized, Brass, or Stainless Steel

Thread Type: NPT Pipe Fitting

NOTE: Either is required for protected tanks with integral spill container.**Non-Rotatable Product
Adaptor**

(Figure 1G)

Morrison 927 - - - YYYY AAEVR

*YYYY represented by:**Numerical values between 0 to 9*

	Thread Size	Cam & Groove Size
0200	2"	2.5"
0300	3"	4"
0400	4"	4"

Equipment**Manufacturer/Model Number****Product Adaptor Dust Caps**

(Figure 1H)

Morrison 735DC X YYYY ACEVR

*X represented by:**dash = Aluminum**A = Anodized Aluminum**YYYY represented by:**Numerical values between 0 to 9*

	Size
2000	2"
2500	2.5"
3000	3"
4000	4"

Product Coupler

(Figure 1I)

Morrison 928 - - - YYYY ACEVR

*YYYY represented by:**Numerical values between 0 to 9*

	Thread Size	Cam & Groove Size
0150	1.5"	2"
0200	2"	2.5"
0300	3"	4"

Note: During fuel deliveries, a MORRISON coupler (928 Series) shall be used with a MORRISON product adaptor (927 Series). The MORRISON 928 Series coupler can be provided by the fuel supplier or provided by the GDF operator.

Non-Rotatable Vapor Adaptor

(Figure 1J)

Morrison 323 - - - YYYY AAEVR

*YYYY represented by:**Numerical values between 0 to 9*

	Thread Size	Cam & Groove Size
0300	3"	4"
0400	4"	4"

Vapor Adaptor Dust Caps

(Figure 1K)

Morrison 323C YYYY ACEVR

*YYYY represented by:**Numerical values between 0 to 9*

	Size
0100	4"

Equipment**Manufacturer/Model Number****Dedicated Gauging Port**

(Figure 1L)

NOTE: Per CP-206, an Above Ground Storage Tank (AST) shall include a dedicated gauging port for determining the amount of gasoline. The determination shall be accomplished manually, mechanically, or electronically

**Gauging Port and
Drop Tube Assembly
(Optional)**

Gauging Port Adapter

Morrison 305 X YYYY AA-EVR / 305 X YYYY AC-EVR

*X represented by:**blank = Brass Adaptor**C = Cap**GSP = Cap / Adapter Kit**YYYY represented by:**Numerical values between 0 to 9***Size***0000, 2000**2"*

Drop Tube

Morrison 419X - - YYZZ 1TEVR

(Figures 1C)

*X represented by:**dash = Aluminum**A = Anodized Aluminum**YY represented by:**Numerical values between 0 to 9***Tube Size***02**2"**ZZ represented by:**Numerical values between 0 to 9**As length in Feet*

Equipment**Manufacturer/Model Number****Mechanical Tank Gauging
(Optional)**

Morrison Z18 XXX YYYY AGEVR

*Z represented by:**Numerical values between 8 and 9**8 = Gauge w/o Alarm**9 = Gauge w/ Alarm**X represented by:**dash = Male thread**C = Custom Clock Face Label (Male Thread)**F = Female thread**CF = Custom Clock Face Label (Female Thread)**MEF = Metric (Female Thread)**MET = Metric (Male Thread)**DP = Dual Level Points (Male Thread)**DPF = Dual Level Points (Female Thread)**YYYY represented by:**Numerical values between 0 to 9*

	Size	Description
0100, 0000	2"	with Standard Float
0400, 2000	2"	with Drop Tube Float

Note: Custom clock face label model number.

AAABCXXXXXY 2L

*AAA = Figure No. = 818 or 918**B = Units of Measure**G = Gallons**L = Liters**C = Shape of Tank*

Equipment**Manufacturer/Model Number****Monitoring Cap and
Adaptor
(Optional)**

Morrison 305XXX YYYY ZZ EVR

*XXX represented by:**dash = Brass Adapter**XP = Cap with Cable Connector**XPA = Cap, Adapter and Cable Connector**YYYY represented by:**Numerical values between 0 to 9*

	Cap Size	Description
2200	2"	3/8" hole & Cable Connector
2400	2"	1/2" hole & Cable Connector
0100	4"	3/8" hole
1100	4"	1/2" hole
0200	4"	3/8" hole & Cable Connector
1200	4"	1/2" hole & Cable Connector

	Adapter Size	Description
0000	2"	Adapter
0200	4"	Adapter

*ZZ represented by:**AA = Adaptor**AC = Cap with/without Cable Connector**AK = Cap, Adapter with/without Cable Connector***Drop Tube Diffuser
(Optional)
(Figure 1M)**

Morrison 539A XZ YYYY ADEVR

*X represented by:**S = Slip-on**T = Threaded**Z represented by:**dash = blank**A = Anodized**YYYY represented by:**Numerical values between 0 to 9*

	Size
0200	2"
0300	3"

Equipment**Manufacturer/Model Number****Double Tapped Bushing
(Optional)**

(Figure 1N)

Morrison 184X YYYY1B / 184X YYYYMB

*X represented by:**blank = iron / steel**S = Stainless Steel**YYYY represented by:**Numerical values between 0 to 9***Extractor Fitting
(Optional)**

(Figure 1O)

Morrison 56X 0101 MBE

*X represented by:**Numerical values between 0 to 9*

TABLE 1-1
Components Exempt from Identification Requirements

Component Name	Manufacturer	Model Number
Drop Tube	Morrison	419 - - - YYXX 1TEVR 419A - - YYXX 1TEVR
305 Series Adaptors (dedicated gauging port & monitoring cap and adaptor)	Morrison	305 - - - 0000 AA EVR
Drop Tube Diffuser	Morrison	539A Series
Overfill Prevention Valve	Morrison	9095 Series
Product Coupler	Morrison	928 Series
Double Tapped Bushing	Morrison	184 Series
Extractor	Morrison	56X Series

FIGURE 1A-1
Morrison Bros. 244 Series Emergency Vents



Male Emergency Vents



Female Emergency Vents



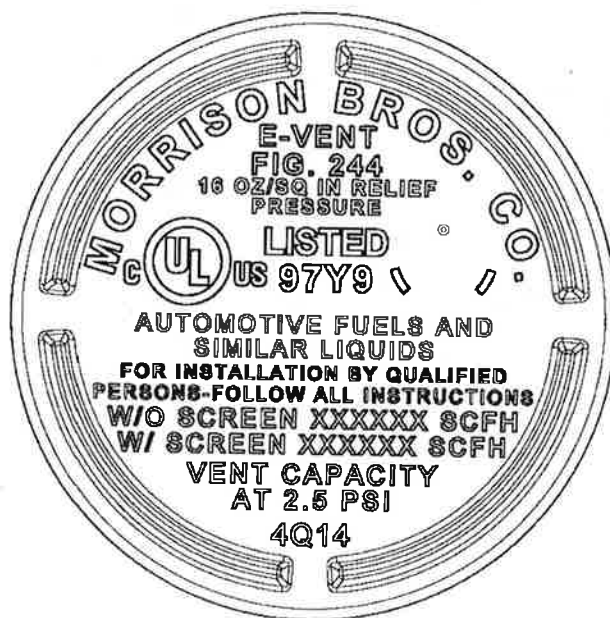
Flanged Emergency Vents

FIGURE 1A-2
Morrison Bros. 244 Series Emergency Vents
Cover Marking Diagram

(The X designation will contain a value which may vary depending upon the size and pressure setting of the vent)



Vent Sample With Relief Opening Pressure
 Less Than 0.5 Psi
 (ONLY APPLIES TO 2" 8OZ/SQ. IN. MODELS)



Vent Sample With Relief Opening Pressure
 Greater Than or Equal to 0.5 Psi

FIGURE 1B -1
Morrison Bros. 9095A Series Overfill Prevention Valve



Base Model
(w/o adaptor or bushing)



Direct Fill Model
(w/ adaptor)



Remote Fill Model
(w/ bushing)

FIGURE 1B-2
Morrison Bros. 9095C Series Overfill Prevention Valve



Base Model
(w/o adaptor or bushing)



Direct Fill Model
(w/ adaptor)



Remote Fill Model
(w/ bushing)

FIGURE 1B-3
Morrison Bros. 9095AA Series Overfill Prevention Valve



Base Model
(w/o adaptor or bushing)



Direct Fill Model
(w/ adaptor)



Remote Fill Model
(w/ bushing)

FIGURE 1B-3 (con't)
Morrison Bros. 9095 Series Overfill Prevention Valve



9095 AA Series Base Model
(w/o adaptor and w/ 2 floats)



9095 X Series Remote Fill Model
(w/ bushing and integral seat)

FIGURE 1C
Morrison Bros. 419 Series Drop Tube



FIGURE 1D
Morrison Bros. 516 Series Direct Fill Spill Container



FIGURE 1E
Convault Drain Valve



FIGURE 1F
Drain Plug (Typical)



FIGURE 1G
Morrison Bros. 927 Series Non-Rotatable Product Adaptor



FIGURE 1H
Morrison Bros. 735DC Series Product Dust Cap



Note: The number 713 at the bottom of the cap refers to the aluminum the cap is made of, and not the model number of the cap itself.

FIGURE 1I
Morrison Bros. 927 Series Non-Rotatable Product Adaptor



FIGURE 1J
Morrison Bros. 323 Series Non-Rotatable Vapor Adaptor

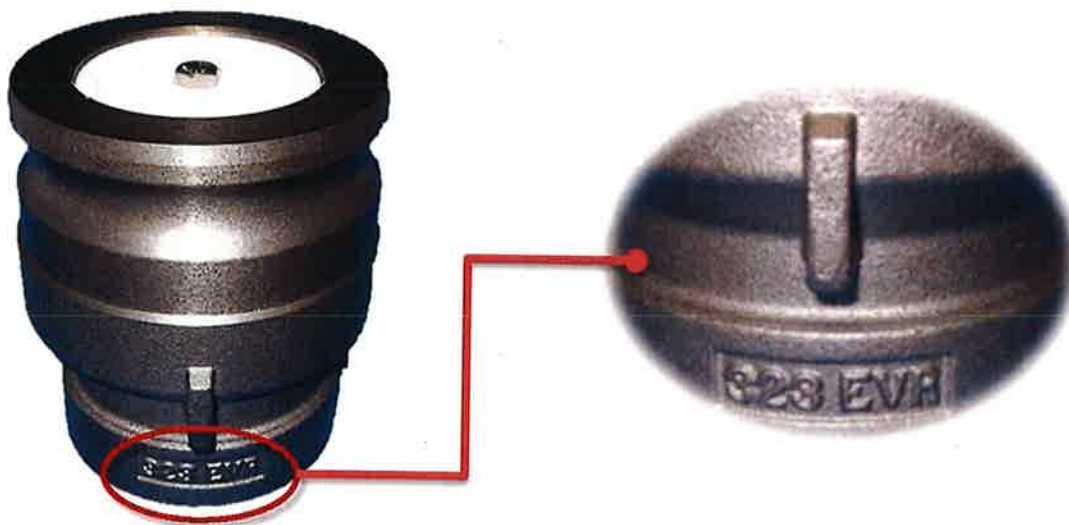


FIGURE 1K
Morrison Bros. 323C 0100 ACEVR Vapor Adaptor Dust Cap

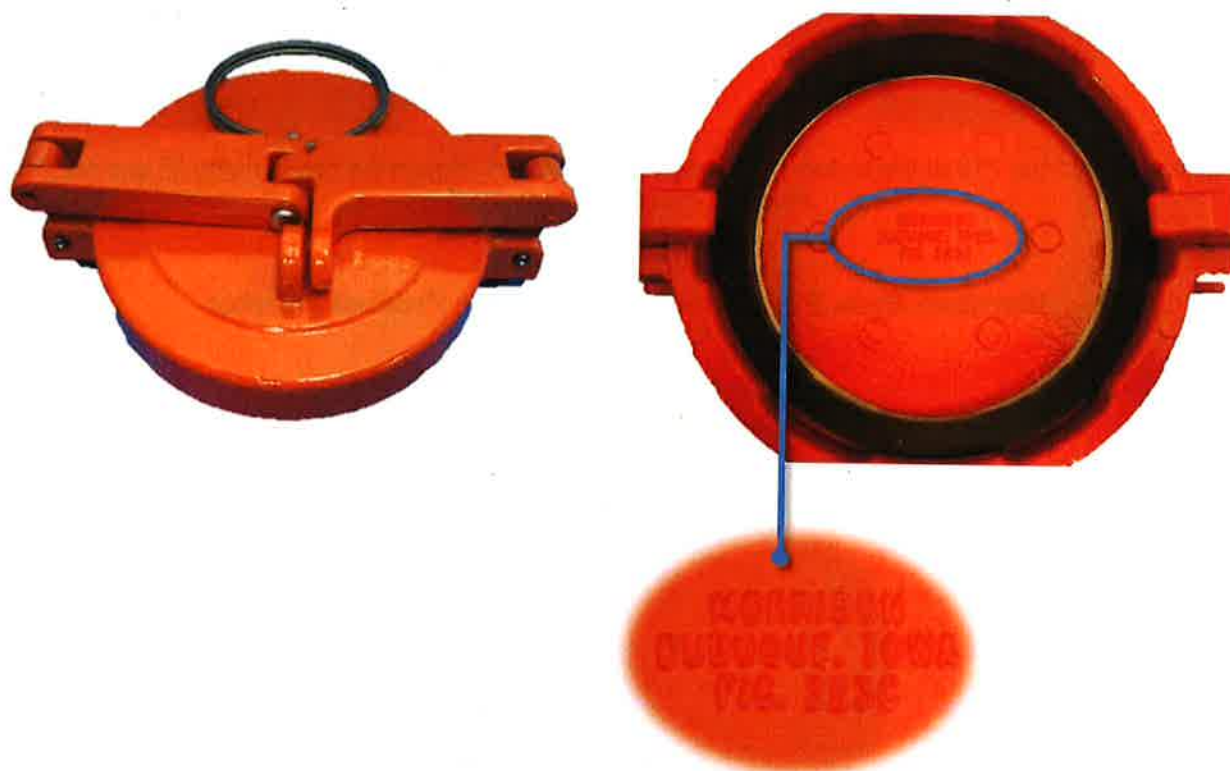


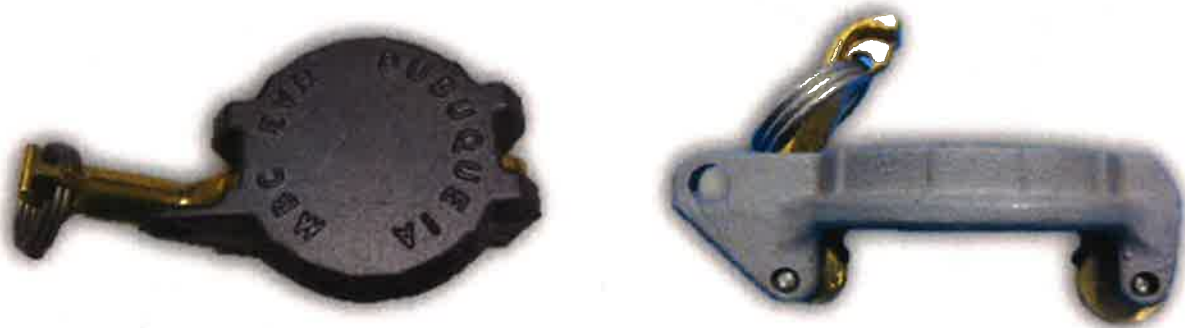
FIGURE 1L
Dedicated Gauging Port

NOTE: Per CP-206, an Above Ground Storage Tank (AST) shall include a dedicated gauging port for determining the amount of gasoline. The determination shall be accomplished manually, mechanically, or electronically

FIGURE 1L-1
Morrison Bros. 305 Series Gauge Port Adaptor and Cap
(optional)



Morrison Bros. 305 Series Gauge Port Adaptor



Morrison Bros. 305 Series Gauge Port Cap

FIGURE 1L
Dedicated Gauging Port
(continue)

FIGURE 1L-2
Morrison Bros. Mechanical Tank Gauge
(optional)



Morrison Bros. 818 Series
(optional)



Morrison Bros. 918 Series
With Alarm Output
(optional)



Morrison Bros. 918DP Series
With Dual Alarm Output
(optional)

FIGURE 1L
Dedicated Gauging Port
(continue)

FIGURE 1L-3
Morrison Bros. 305 Series Monitoring Cap & Adaptor
(optional)



FIGURE 1M
Morrison Bros. 539 Series Drop Tube Diffuser
(optional)



FIGURE 1N
Morrison Bros. 184 Series Double Tapped Bushing
(optional)



FIGURE 1O
Morrison Bros. Extractor 56X Series
(optional)

(Photo is of Fig. 562 4" x 4" x 3" x 2")



EXECUTIVE ORDER VR-402-D

Morrison Bros. Phase I Enhanced Vapor Recovery (EVR) System
For Aboveground Storage Tanks (AST)

EXHIBIT 2

**Installation, Maintenance, and Compliance
Standards and Specifications**

This exhibit contains the installation, maintenance and compliance standards and specifications applicable to the Morrison Bros. Phase I Enhanced Vapor Recovery (EVR) system (Morrison Bros. System) installed on aboveground storage tanks (AST). Table 2-1 summarizes the compliance standard and specification with the corresponding test method. Table 2-2 describes the maintenance interval for the Phase I EVR System components.

General Specifications

1. Typical installations of the Morrison Bros. System and system components are shown in Figures 2A, 2B, 2C, 2D, 2E, 2F, 2G, 2H, 2I, 2J, 2K, 2L, 2M, 2N, and 2O.
2. The Morrison Bros. System shall be installed, operated, and maintained in accordance with the ***ARB Approved Installation, Operation and Maintenance Manual for the Morrison Bros. Phase I Enhanced Vapor Recovery System for Aboveground Storage Tanks***.
3. Any repair or replacement of system components shall be done in accordance with the ***ARB Approved Installation, Operation and Maintenance Manual for the Morrison Bros. Phase I Enhanced Vapor Recovery System for Aboveground Storage Tanks***.
4. Unless otherwise specified in this Executive Order (EO), the Morrison Bros. System shall comply with the applicable performance standards and performance specifications in CP-206.
5. Maintenance and repair of system components, including removal and installation of such components in the course of any required tests, shall be performed by Morrison Certified Technicians. Additional certifications may be required in accordance with District requirements.

Non-rotatable Product and Vapor Adaptors

Morrison Bros. non-rotatable vapor adaptors and product adaptors are not specifically certified with an allowable leak rate and shall not leak. Compliance with this requirement shall be verified by the use of commercial liquid leak detection solution or by bagging, when the vapor containment space of AST is subjected to a non-zero pressure. (Note: Leak detection solution will detect leaks only when positive gauge pressure exists).

The bung diameter and associated vapor return piping of the AST shall be greater than or equal to the diameter of the Phase I product drop tube. In addition, no liquid condensate traps are allowed within the Phase I vapor return path piping under this configuration.

Product Coupler

Morrison Bros. product couplers shall fit the matching non-rotatable Morrison Bros. product adapters so that spillage of gasoline during fuel deliveries is minimized. During fuel deliveries, a Morrison Bros. coupler (928 Series) shall be used with a Morrison Bros. product adaptor (927 Series). The Morrison Bros. 928 Series coupler can be provided by the fuel supplier or provided by the gasoline dispensing facility (GDF) operator.

Vapor and Product Adaptor Dust Caps

Dust caps with intact gaskets shall be installed on all Phase I product and vapor adaptors.

Emergency Vents

The emergency vents are not specifically certified with an allowable leak rate and shall not leak. Compliance with this requirement shall be verified by the use of commercial liquid leak detection solution or by bagging, when the vapor containment space of AST is subjected to a non-zero pressure. (Note: Leak detection solution will detect leaks only when positive gauge pressure exists).

Overfill Prevention Valve Assembly and Drop Tube

1. The overfill prevention device (overfill device) is designed to restrict the flow of gasoline delivered to AST when liquid levels exceed a specified capacity.
2. The overfill prevention device is installed below the Morrison Bros. product adaptor (see figure 2A and 2E) which has a built in poppet to prevent vapor leakage and spillage of product after delivery. The overfill prevention device is not specifically certified with an allowable leak rate and the leak rate cannot be determined by testing. Testing to determine the leak rate of the overfill prevention device is not needed since leaks from other components (e.g., product and vapor adaptors, emergency vents, spill container drain valves, dedicated gauging port, tank gauge components, connectors, and fittings) can be determined by procedures specified in this Exhibit.
3. The discharge opening of the drop tube must be entirely submerged when the liquid level is above the bottom of the tank as shown in figures 2A, 2E, 2H, 2J, 2K, 2L, 2M, 2N, and 2O (see figures for installation details).

Direct Fill Spill Container Drain Valve

The Morrison Bros. direct fill spill container does not contain a drain valve and is not specifically certified with an allowable leak rate. Excess liquid is to be evacuated and disposed of according to local and federal regulations.

Direct Fill Integral Spill Container Drain Valve

The Convault direct fill integral spill container drain valve shall not leak. Compliance with this requirement shall be verified by the use of commercial liquid leak detection solution when the vapor containment space of the AST is subjected to a non-zero pressure.

(Note: Leak detection solution will detect leaks only when positive gauge pressure exists).

Dedicated Gauging Port with Drop Tube (Optional)

A dedicated port for manual tank gauging is used to measure gasoline levels in the AST with a gauging stick. The gauging port shall have a drop tube with a Morrison Bros. cap and adapter. The dedicated port and all associated components are not specifically certified with an allowable leak rate and shall not leak. Compliance with this requirement shall be verified by the use of commercial liquid leak detection solution or by bagging, when the vapor containment space of AST is subjected to a non-zero pressure. (Note: Leak detection solution will detect leaks only when positive gauge pressure exists).

Tank Gauge Components (Optional)

The tank gauge components are not specifically certified with an allowable leak rate and shall not leak. Compliance with this requirement shall be verified by the use of commercial liquid leak detection solution or by bagging, when the vapor containment space of an AST is subjected to a non-zero pressure. (Note: Leak detection solution will detect leaks only when positive gauge pressure exists).

Monitoring Cap And Adaptor (Optional)

The monitoring cap and adaptor is not specifically certified with an allowable leak rate and shall not leak. Compliance with this requirement shall be verified by the use of commercial liquid leak detection solution or by bagging, when the vapor containment space of the AST is subjected to a non-zero pressure. (Note: Leak detection solution will detect leaks only when positive gauge pressure exists).

Drop Tube Diffuser (Optional)

The drop tube diffuser is designed to reduce turbulence when filling a tank and minimize vapor generation. The diffuser is not specifically certified with an allowable leak rate and the leak rate cannot be determined by testing. Testing to determine the leak rate of the diffuser is not needed because the device is submerged below the liquid level.

Remote Fill Configuration

Under remote fill configurations (also referred to as side fill), the Phase I vapor recovery piping shall be constructed of galvanized-steel or an equivalent material that has been listed for use with gasoline. If a material other than galvanized steel is used AST operator shall provide a manufacturers' listing demonstrating that the material is compatible for use with gasoline. The diameter and associated vapor return piping of AST shall be greater than or equal to the diameter of the Phase I product drop tube opening. In addition, no liquid condensate traps are allowed within the Phase I vapor return path piping under this configuration. The fill pipe may have to be removed upon District request to verify that the bottom of the fill pipe is no greater than 6 inches from the bottom of the tank.

Connections and Fittings

All connections and fittings not specifically certified with an allowable leak rate shall not leak. Compliance with this requirement shall be verified by the use of commercial liquid leak detection solution or by bagging, when the vapor containment space of the AST is subjected to a non-zero pressure. (Note: Leak detection solution will detect leaks only when positive gauge pressure exists).

Maintenance Records

Each GDF operator/owner shall keep records of maintenance performed at the facility. Such record shall be maintained on site or in accordance with district requirements or policies. The records shall include at a minimum the maintenance or test date, repair date to correct test failure, maintenance or test performed, affiliation, telephone number, name and Certified Technician Identification Number of individual conducting maintenance or test. Additional information may be required in accordance with district requirements. An example of a Phase I Maintenance Record is shown in Figure 2P.

TABLE 2-1
AST Compliance Standards and Specifications

Component / System	Test Method	Standard or Specification
Phase I Adaptors	Leak Detection Solution or Bagging	No Leaks
Emergency Vents	Leak Detection Solution or Bagging	No Leaks
Dedicated Gauging Port with Drop Tube and Tank Gauge components	Leak Detection Solution or Bagging	No Leaks
Vapor Recovery System	EXHIBIT 6 Determination of Static Pressure Performance of Vapor Recovery Systems at Gasoline Dispensing Facilities with Aboveground Storage Tanks	Exhibit 6
Drain Valve	Leak Detection Solution or Bagging	No Leaks
All connections and fittings certified without an allowable leak rate	Leak Detection Solution or Bagging	No Leaks

TABLE 2-2
Maintenance Intervals for Morrison Bros. Phase I EVR AST System Components

Manufacturer	Component	Maintenance Interval
Morrison Bros.	Tank Gauge Components	Annual
Morrison Bros.	Dust Caps	Annual
Morrison Bros.	Emergency Vents	Annual
Morrison Bros.	Phase I Product and Vapor Adaptors	Annual
Morrison Bros.	Spill Container	Annual
Morrison Bros.	Drop Tube Overfill Prevention Device	None
Morrison Bros.	Drop Tube	None
Morrison Bros.	Product Coupler	Annual
Morrison Bros.	Monitoring Caps	Annual
Morrison Bros.	Drop Tube Diffuser	None
Husky Corp.	Pressure/Vacuum Vent Valve 5885	Annual

FIGURE 2A

Typical Direct Fill (Product Side) Installation of Morrison Bros. Phase I EVR System for AST

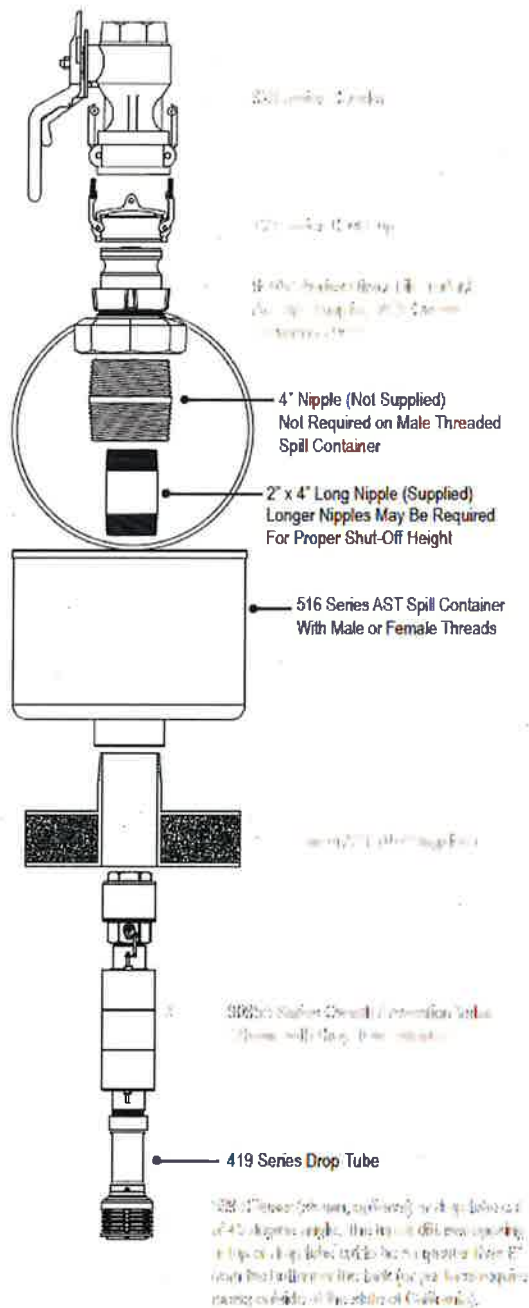


FIGURE 2A-1

With Morrison 516 Series Spill Container

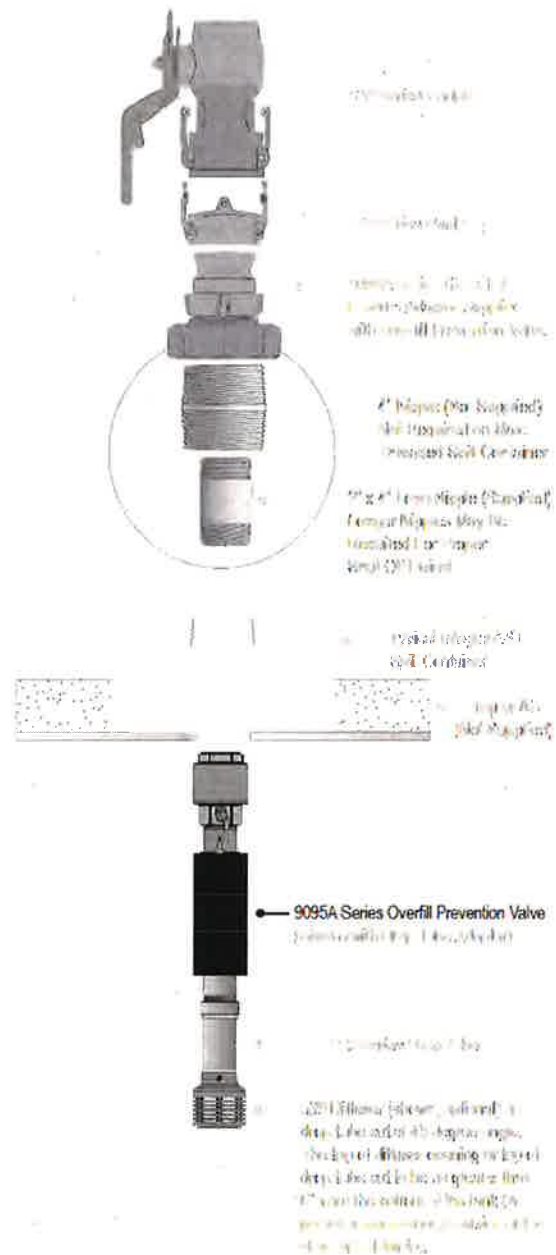


FIGURE 2A-2

With Integral Spill Container

FIGURE 2B
Typical Vapor Recovery Adaptor Configuration
of Morrison Bros. Phase I EVR System for AST

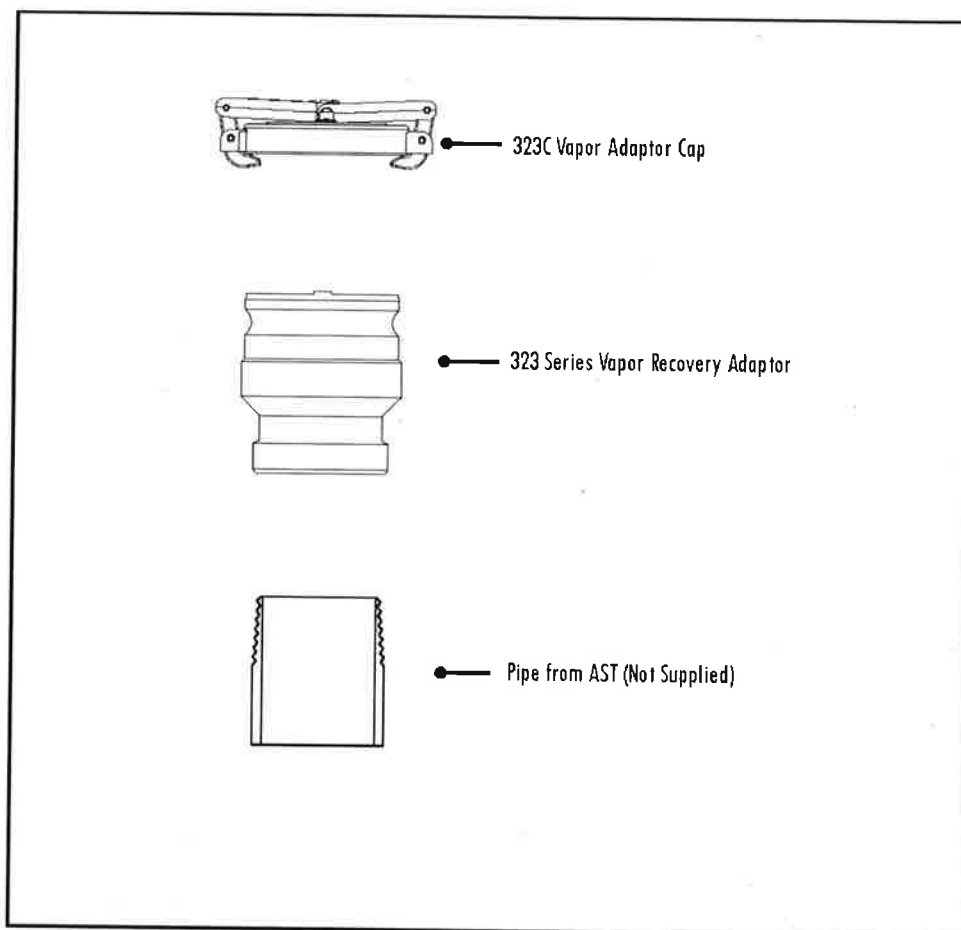


FIGURE 2C
Typical Emergency Vent Valve Installation
of Morrison Bros. Phase I EVR System

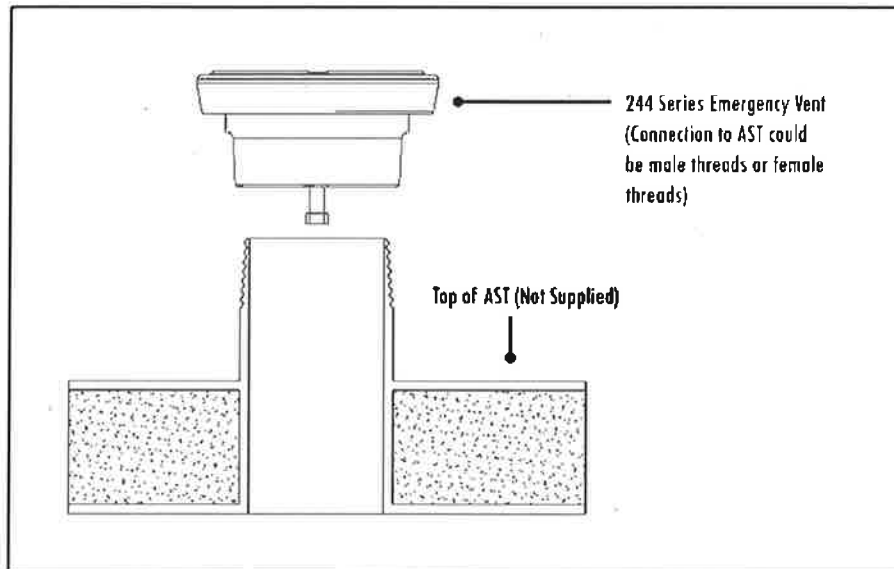
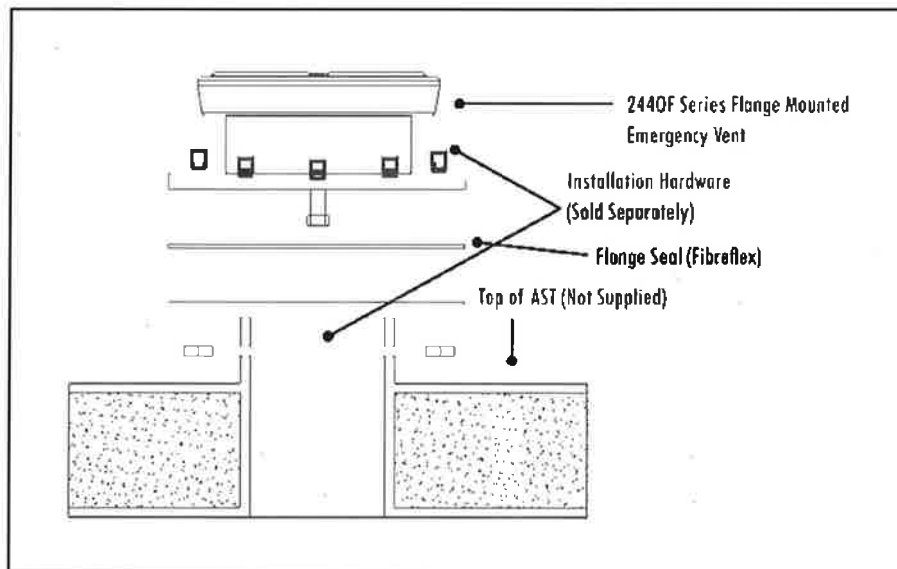


FIGURE 2C-1 – Threaded



NOTE: For flange models, use gasket material made by Fibreflex.
More Information is available at <http://www.fibreflex.com>

FIGURE 2C-2 - Flanged

FIGURE 2D
Typical Remote Fill Configuration
of Morrison Bros. Phase I EVR System for AST

(NOTE: The remote spill container is optional and not a vapor recovery component.)

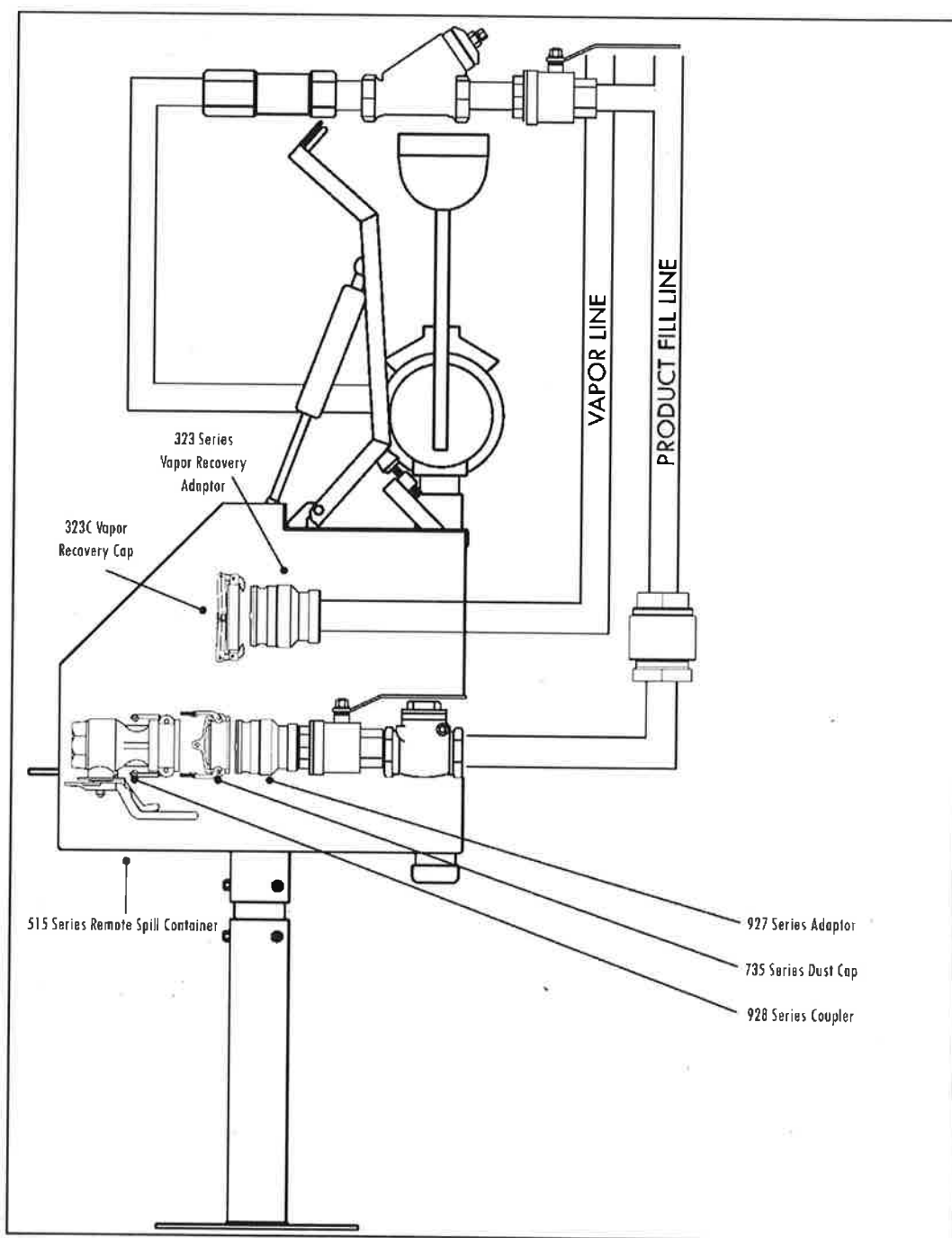


Figure 2F
Typical Morrison Bros. Coupler and Adaptor

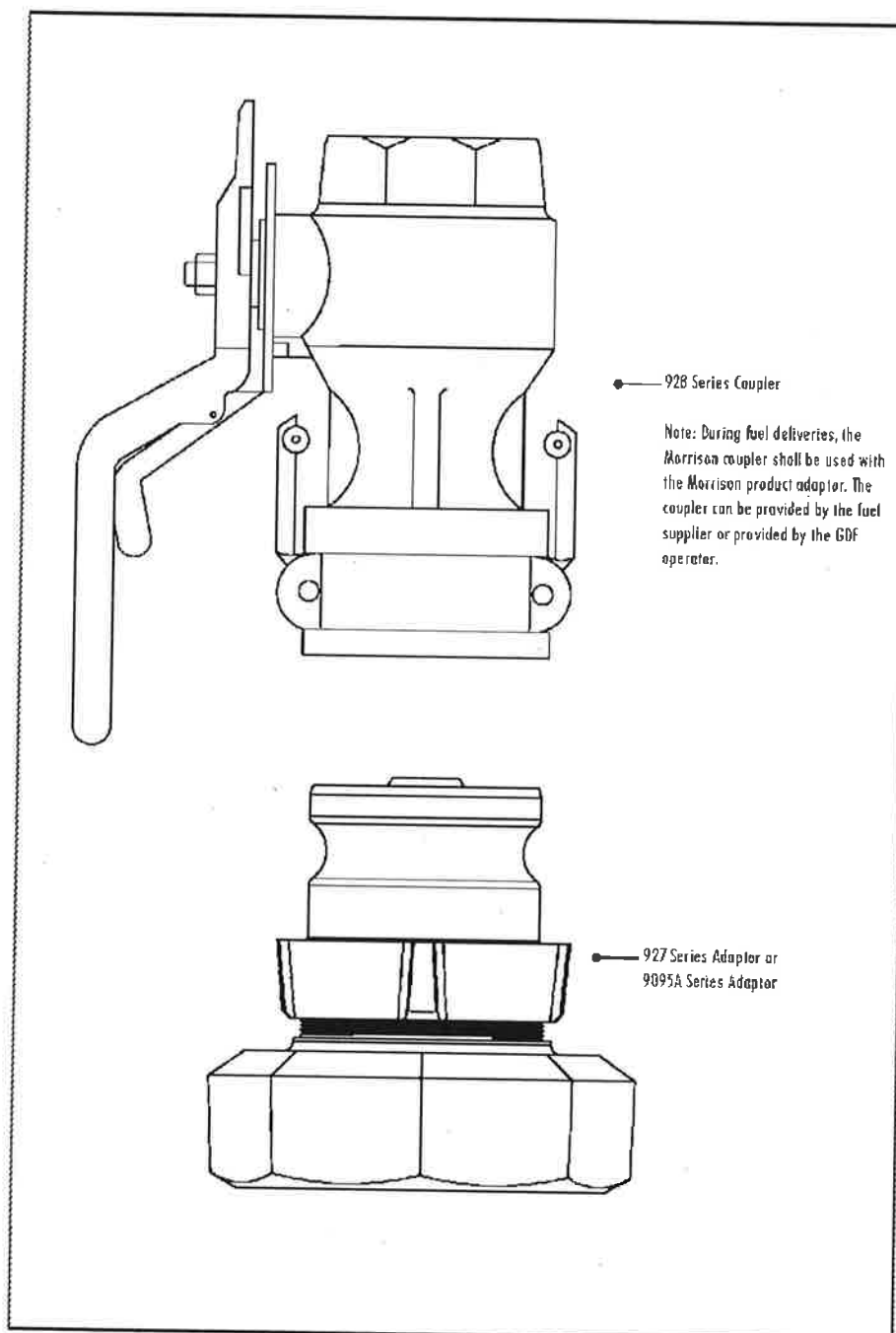


FIGURE 2G
Typical Mechanical Tank Gauge Configuration
of Morrison Bros. Phase I EVR System for AST (Optional)

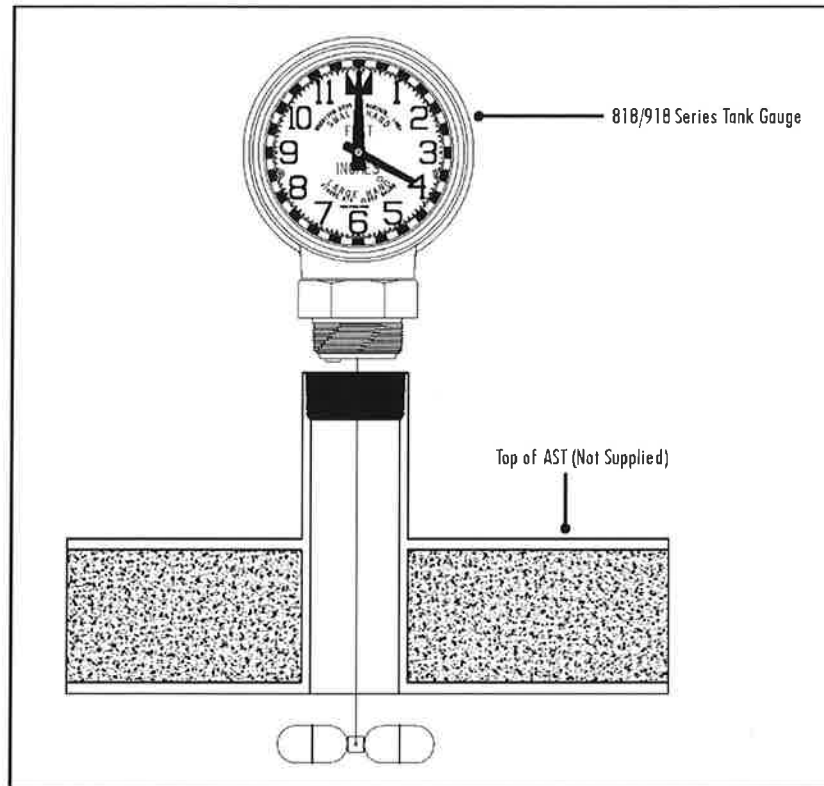


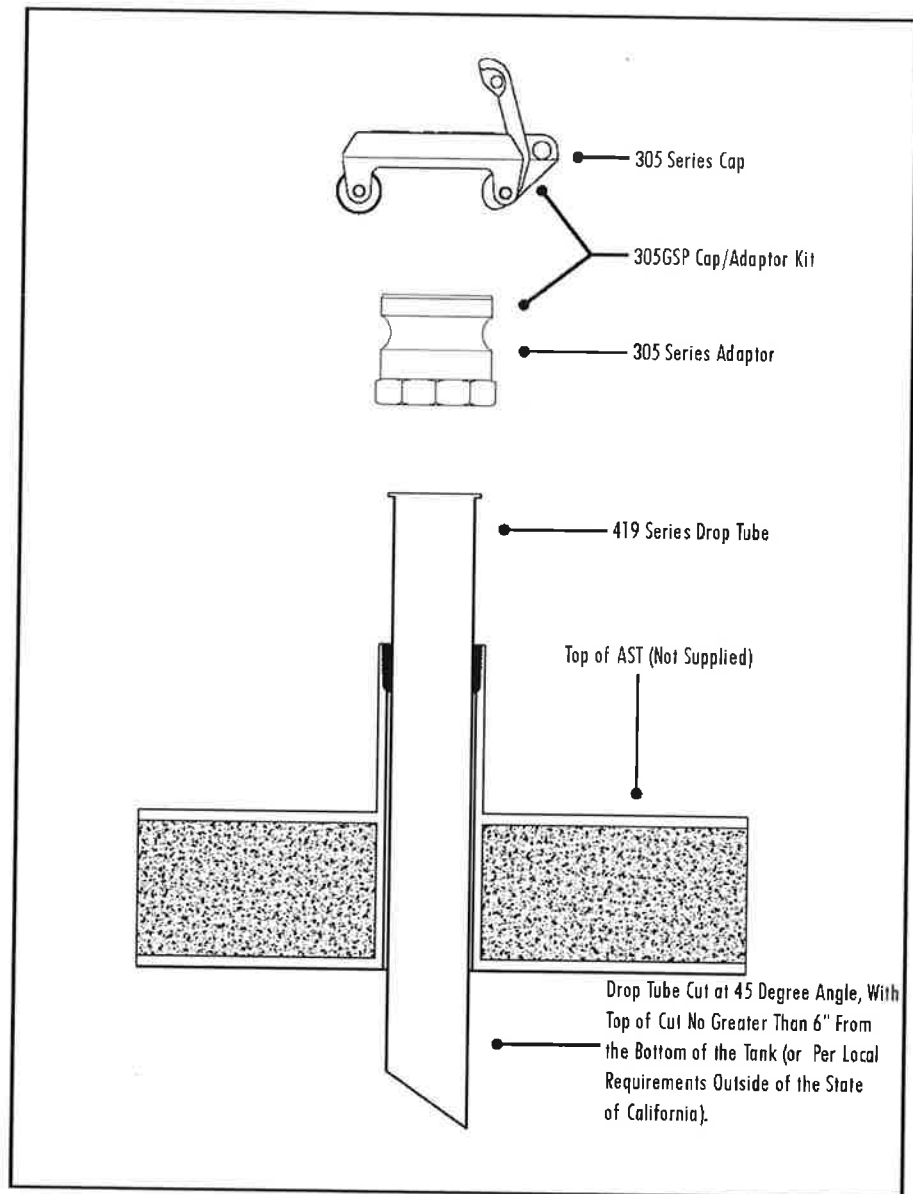
FIGURE 2H**Typical Dedicated Gauging Port with Drop Tube
of Morrison Bros. Phase I EVR System for AST**

FIGURE 21
Typical Monitoring Cap and Adaptor Configuration
for Morrison Bros. Phase I EVR System for AST

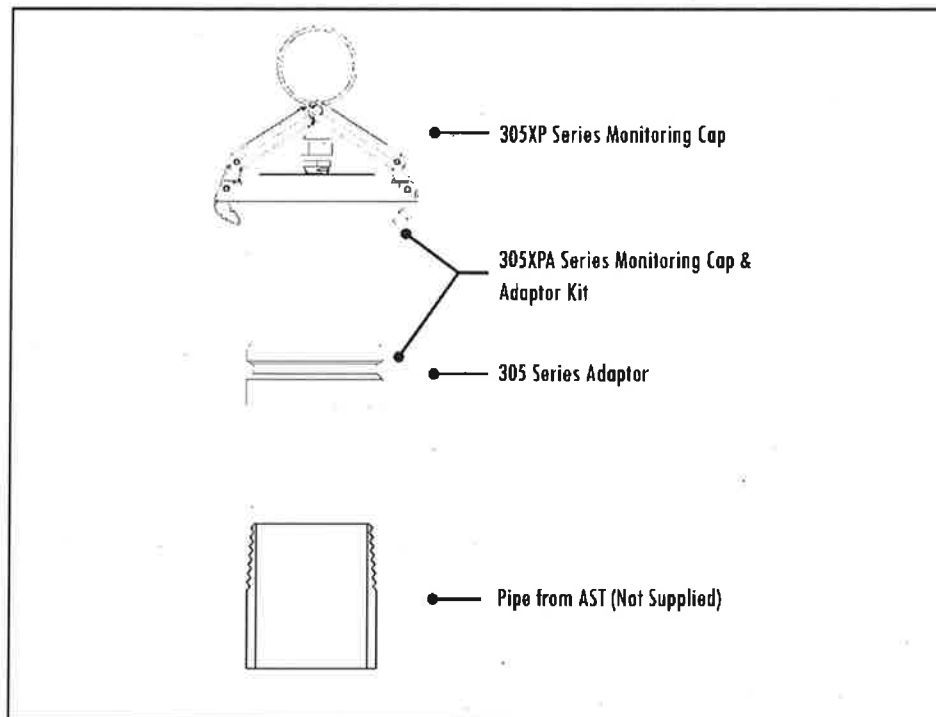
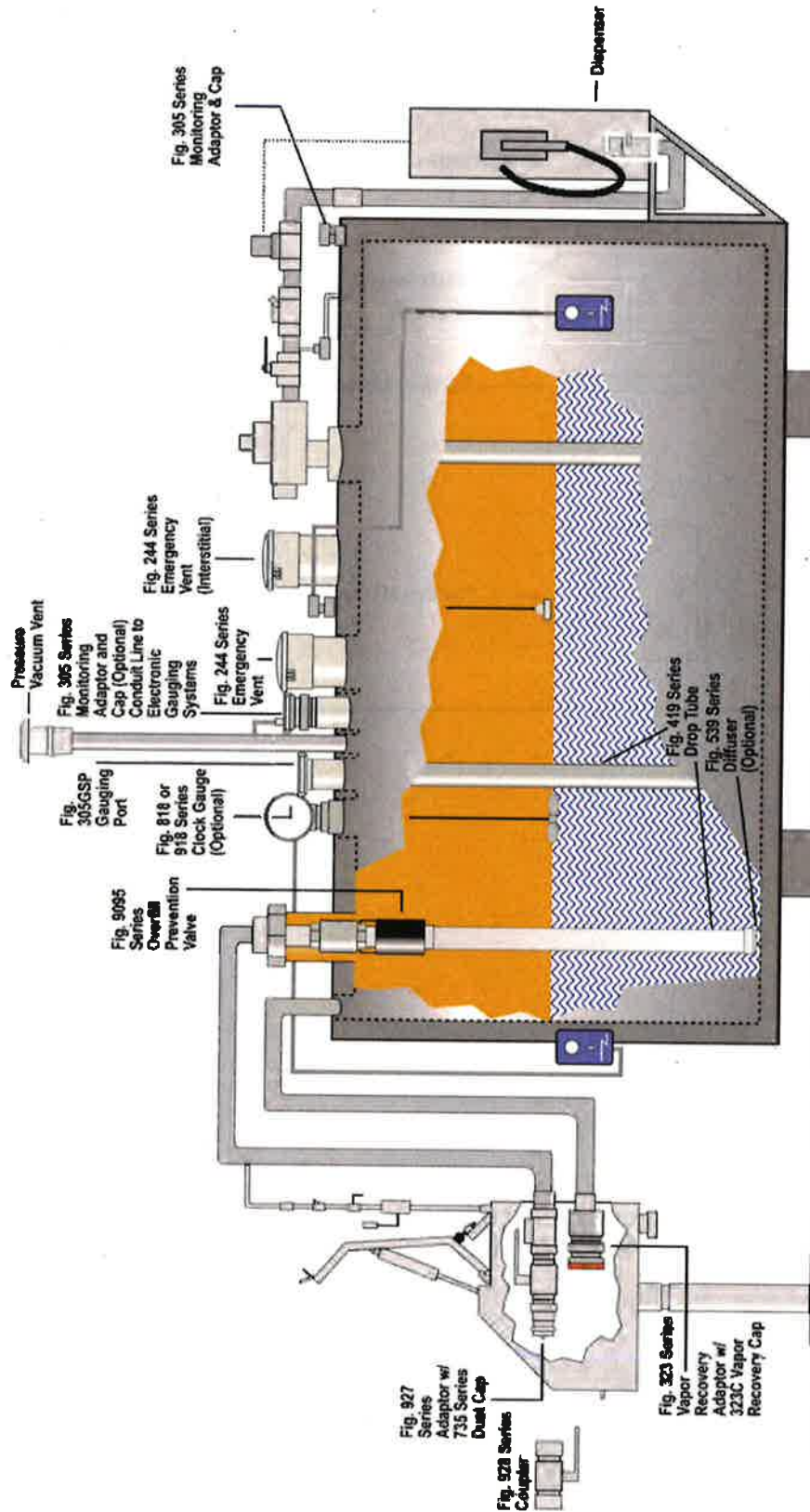


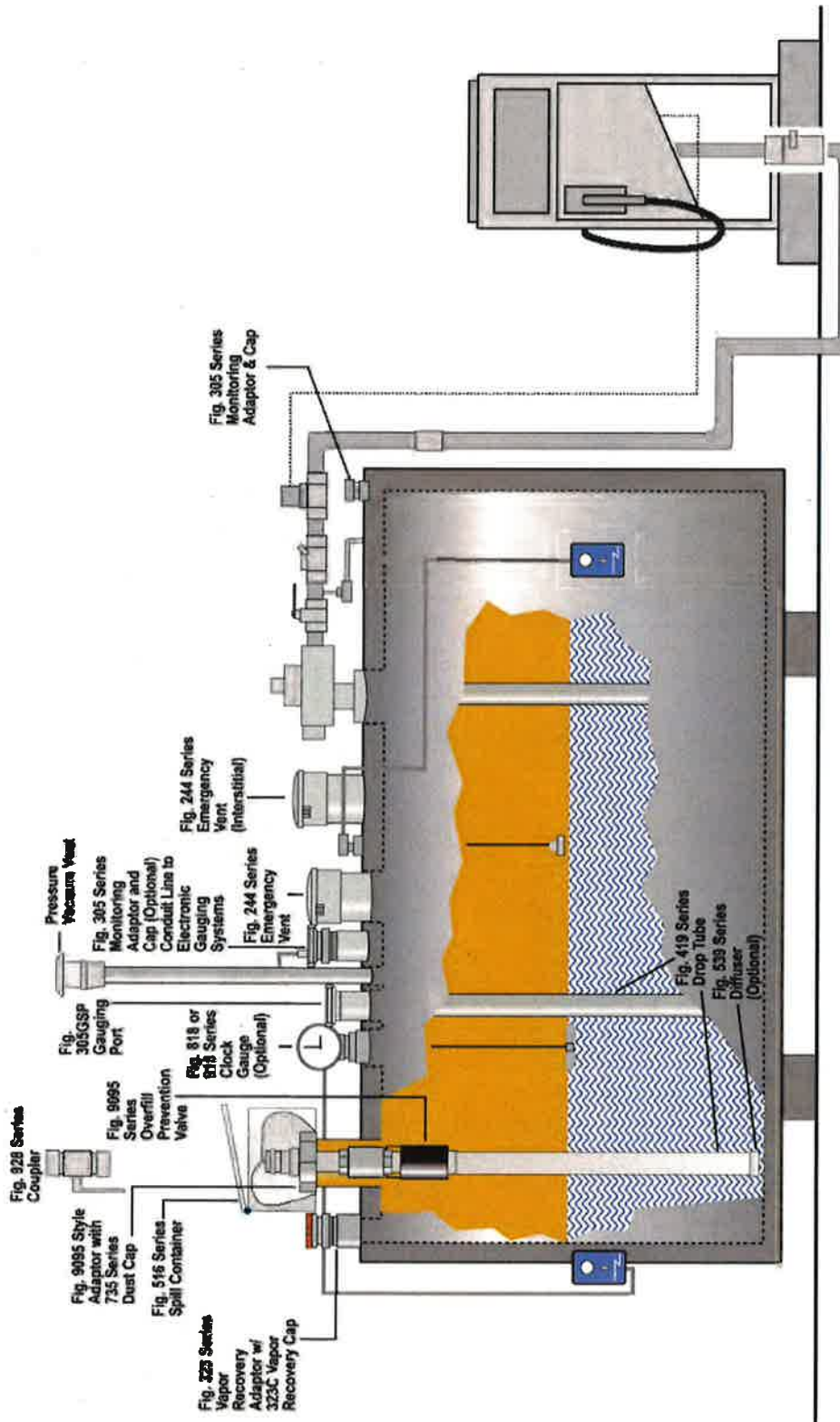
FIGURE 2J
Protected Double-Wall AST with Remote Fill



Remote Fill systems: 539 diffuser (shown, optional) or drop tube cut at 45 degree angle. The top of diffuser opening or top of drop tube cut to be no greater than 6" from the bottom of the tank (or per local requirements outside of the State of California).

The fill pipe may have to be removed upon District request to verify that the bottom of the fill pipe is no greater than 6" from the bottom of the tank.

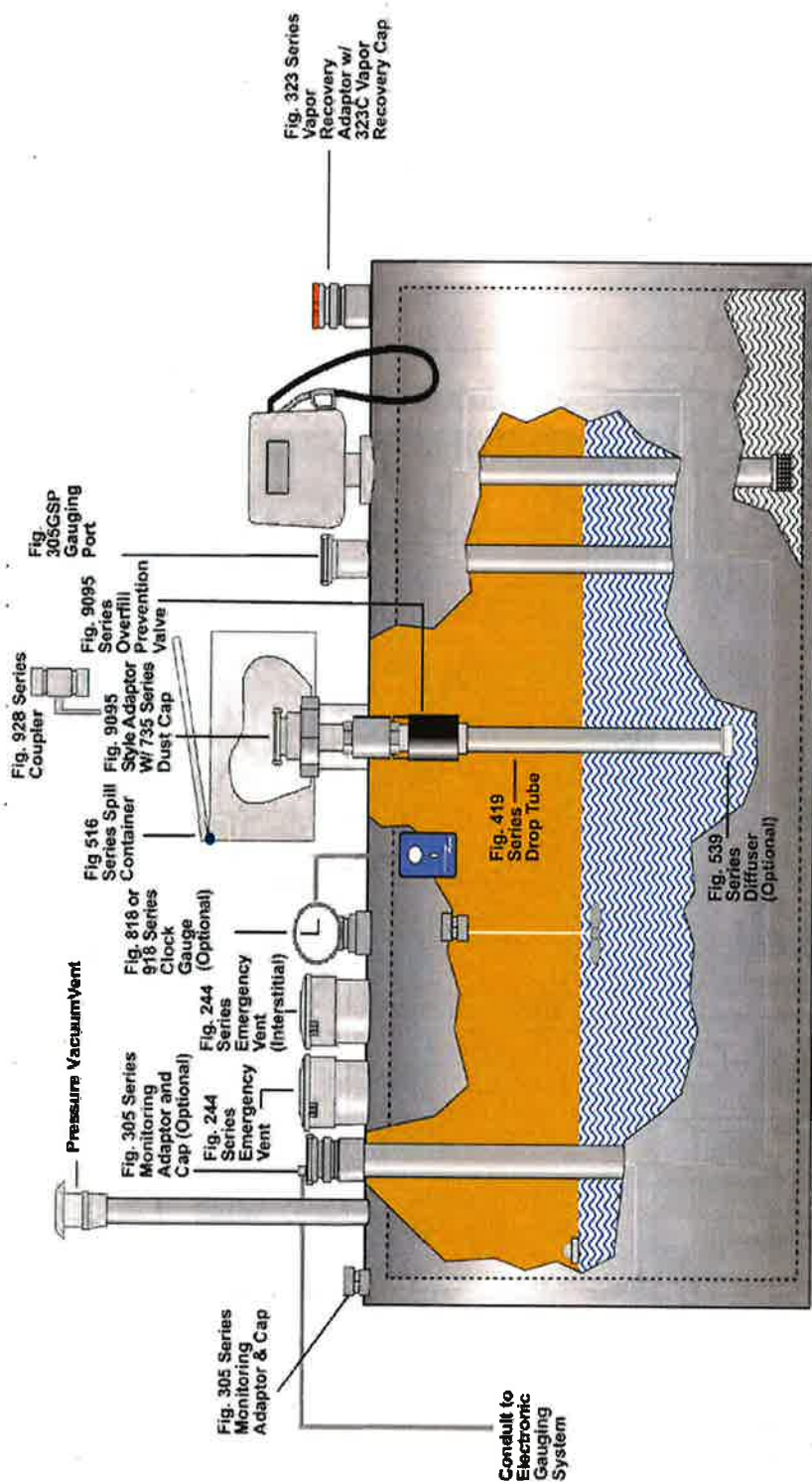
FIGURE 2K
Protected Double-Wall AST with Direct Fill



Direct Fill systems: 539 diffuser (shown, optional) or drop tube cut at 45 degree angle. The top of diffuser opening or top of drop tube cut to be no greater than 6" from the bottom of the tank (or per local requirements outside of the State of California).

The fill pipe may have to be removed upon District request to verify that the bottom of the fill pipe is no greater than 6" from the bottom of the tank.

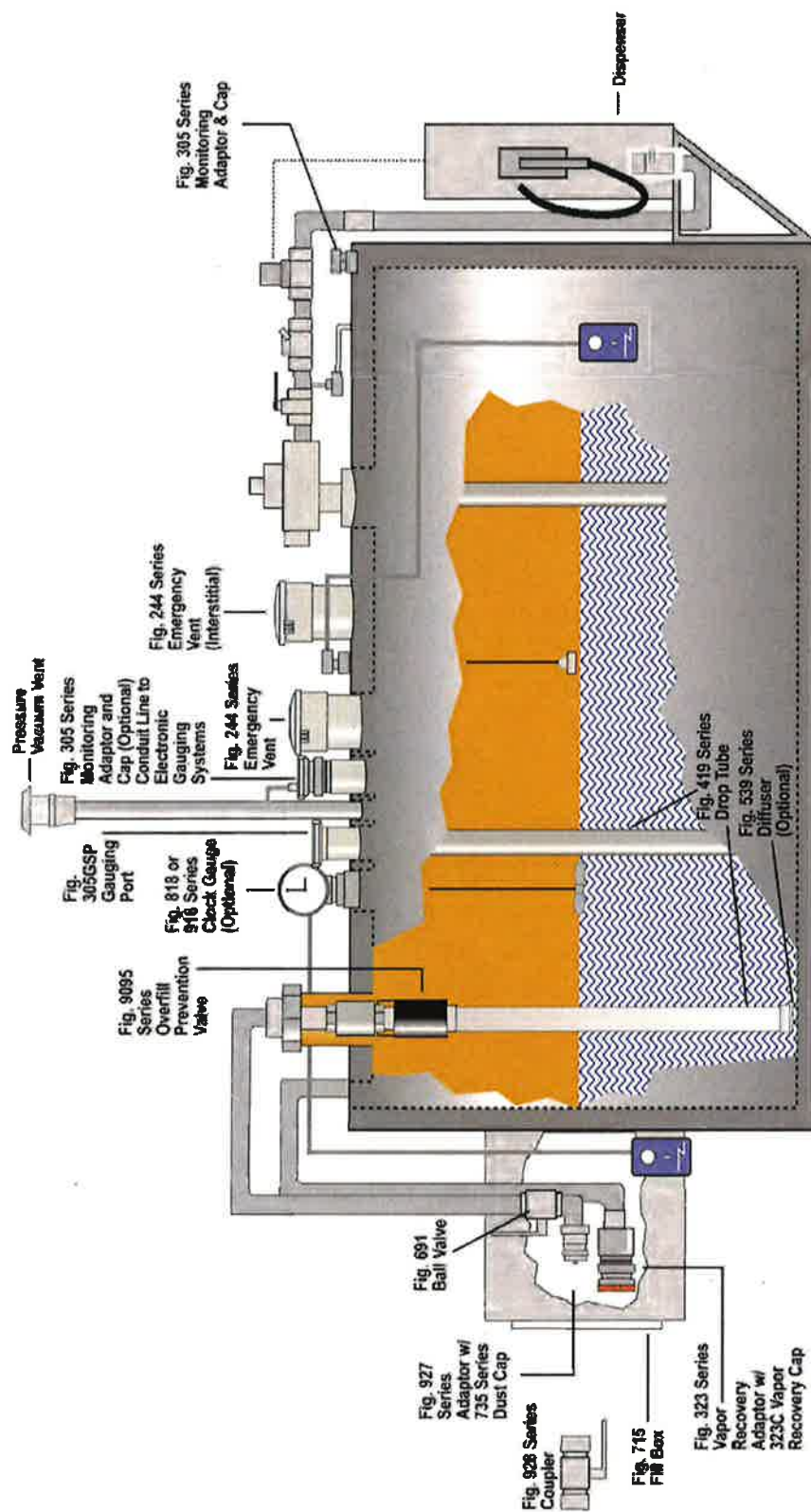
FIGURE 2L
Protected Double-Wall AST with Top Fill and Top Mounted Pump



Remote Fill systems: 539 diffuser (shown, optional) or drop tube cut at 45 degree angle. The top of diffuser opening or top of drop tube cut to be no greater than 6" from the bottom of the tank (or per local requirements outside of the State of California).

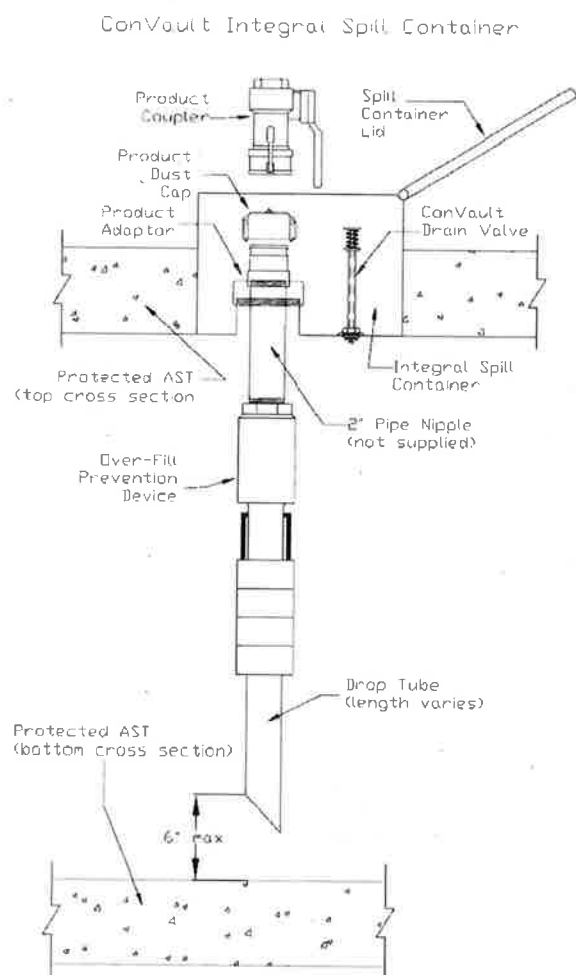
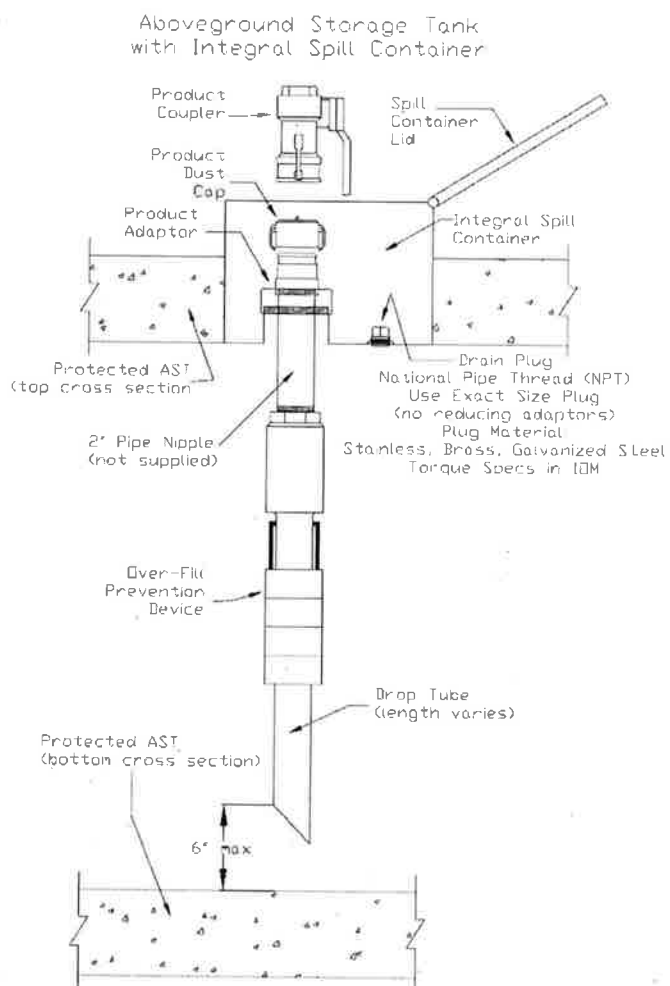
The fill pipe may have to be removed upon District request to verify that the bottom of the fill pipe is no greater than 6" from the bottom of the tank.

FIGURE 2M
Protected Double-Wall AST with Tank Mounted Remote Fill



Remote Fill systems: 539 diffuser (shown, optional) or drop tube cut at 45 degree angle. The top of diffuser opening or top of drop tube cut to be no greater than 6" from the bottom of the tank (or per local requirements outside of the State of California).

The fill pipe may have to be removed upon District request to verify that the bottom of the fill pipe is no greater than 6" from the bottom of the tank.

FIGURE 2N**Convault Spill Container with Drain Valve****FIGURE 2O****Typical Integral Spill Container with Drain Plug**

Example of a GDF Maintenance Record

[illegible]

EXECUTIVE ORDER VR-402-D

Morrison Bros. Phase I Enhanced Vapor Recovery (EVR) System
For Aboveground Storage Tanks (AST)

EXHIBIT 3

Manufacturing Performance Standards and Specifications

The Morrison Bros. Phase I EVR System for aboveground storage tanks (AST) and all components shall be manufactured in compliance with the applicable Phase I performance standards and specifications in CP-206, as well as the requirements specified in this Executive Order. All components 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. Unless specified in Exhibit 2 or in the ***ARB Approved Installation, Operation and Maintenance Manual for the Morrison Bros. Phase I Enhanced Vapor Recovery System for Aboveground Storage Tanks***, the requirements of this section apply to the manufacturing process and are not appropriate for determining the compliance status of a gasoline dispensing facility (GDF).

MANUFACTURING PERFORMANCE STANDARDS AND SPECIFICATIONS

Non-rotatable Product and Vapor Recovery Adaptors

1. The non-rotatable product and vapor recovery adaptors shall not leak.
2. The Morrison Bros. non-rotatable product adaptor cam and groove is not manufactured in accordance with the cam and groove specifications shown in Figure 4A of CP-206. This was deemed acceptable since the Morrison Bros. product coupler shall be used during fuel transfers to reduce the amount spillage that would otherwise occur.
3. The non-rotatable vapor recovery adaptor cam and groove shall be manufactured in accordance with the cam and groove specifications shown in Figure 4B of CP-206.
4. Each Morrison Bros. non-rotatable vapor recovery adaptor and non-rotatable product adapter shall be tested at the factory to have a zero leak rate.

Drop Tube Overfill Prevention Device

Each Drop Tube Overfill Prevention Device shall be tested at the factory to meet all applicable performance standards or specifications listed in Table 3-1. The overfill device is installed downstream of the Morrison Bros. product adaptor (see figures 2A and 2E, Exhibit 2) which has a built in poppet to prevent spillage of product after delivery and vapors from escaping.

Emergency Vents

Each emergency vent shall be tested at the factory to meet all applicable performance standards or specifications listed in Table 3-1. Emergency vents are not certified with an allowable leak rate and shall not leak.

Tank Gauge Components

Tank gauge components shall be tested at the factory to meet all applicable performance standards or specifications listed in Table 3-1. Tank gauge components are not certified with an allowable leak rate and shall not leak.

Product Coupler

Each product coupler shall be tested before shipment to meet the specification listed in table 3-1. Morrison Bros. product couplers shall fit the matching non-rotatable Morrison Bros. product adapters.

TABLE 3-1
Manufacturing Component Standards and Specifications

Component	Test Method	Standard or Specification
Phase I Product Adaptors*	Exhibit 4	No Leaks
Phase I Vapor Adaptors	Micrometer	Cam and Groove Standard (CP-206)
Overfill Prevention Device	Morrison Bros. 9095 Series Test Procedure	Maximum leakage of 2% of maximum rated flow per CAN/ULC-S661
Emergency Vent	Morrison Bros. 244 Series Test Procedure	No Leaks
Tank Gauge	Morrison Bros. 818/918 Series Test Procedure	No Leaks
Product Coupler	Morrison Bros. 928 Series Test Procedure	No Leaks

***NOTE:** Product adaptor does not meet cam and groove standard. This was deemed acceptable because the Morrison Bros. coupler shall be used for product delivery

EXECUTIVE ORDER VR-402-D
Morrison Bros. Phase I Enhanced Vapor Recovery (EVR) System
For Aboveground Storage Tanks (AST)

EXHIBIT 4
Manufacturer Warranty

The Phase I Vapor Recovery system manufacturer warranties for all components listed in Exhibit 1, including replacement parts and subparts. The manufacturer warranty tag, included with each component, shall be provided to the service station owner/operator at the time of installation.

Table of Contents

MORRISON BROS. WARRANTY	1
CONVAULT AST	3

MORRISON BROS. WARRANTY

WARRANTY— All Morrison products are thoroughly tested before shipment and meet all applicable performance standards and specifications of related ARB executive orders and vapor recovery procedures of CP-206 (Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities Using Aboveground Storage Tanks) or CP-201 (Certification Procedure for Vapor Recovery Systems at Dispensing Facilities). This warranty shall include the ongoing compliance with all applicable performance standards and specifications for the duration of the warranty. Only material found to be defective in manufacture will be repaired or replaced. Claims must be made within one year from the date of installation, and Morrison Bros. Co. will not allow claims for labor or consequential damage resulting from purchase, installation or misapplication of the product. This warranty will include the initial purchaser and any subsequent purchasers of the initial equipment within the warranty period. This warranty registration must remain with the equipment and be provided to the end user. If a warranty claim needs to be pursued, a copy of this information and the invoice of these products to the purchaser must be supplied to Morrison for verification.

MORRISON BROS. CO. WARRANTY REGISTRATION

All Morrison products are thoroughly tested before shipment and meet all applicable performance standards and specifications of related ARB executive orders and vapor recovery procedures of CP-206 (Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities Using Aboveground Storage Tanks) or CP-201 (Certification Procedure for Vapor Recovery Systems at Dispensing Facilities). This warranty shall include the ongoing compliance with all applicable performance standards and specifications for the duration of the warranty. Only material found to be defective in manufacture will be repaired or replaced. Claims must be made within one year from the date of installation, and Morrison Bros. Co. will not allow claims for labor or consequential damage resulting from purchase, installation or misapplication of the product. This warranty will include the initial purchaser and any subsequent purchasers of the initial equipment within the warranty period.

Installation Date: _____

Name of Installer/Contractor _____

Installation Company: _____

Name _____

Address: _____

City: _____

State: _____

Zip: _____

Business at Installation Site: Name: _____

Address: _____

City: _____

State: _____

Zip: _____

Morrison Product(s) I.D Numbers with Date of Manufacture: _____

Date of manufacture can be found on the product identification label applied to the finished product. This warranty registration must remain with the equipment and be provided to the end user. If a warranty claim needs to be pursued, a copy of this information and the invoice of these products to the purchaser must be supplied to Morrison for verification.

CONVAULT AST



The Industry Leader In Aboveground Fuel Storage Systems

CONVAULT LIMITED WARRANTY CALIFORNIA

ConVault, Inc. warrants each CONVAULT® tank against defects in material or workmanship to the original owner, for a period 12 months from the date of installation. Installation date is determined to be when the tank has been installed at the final destination, and all equipment necessary to meet the Air Resources Board requirements has been installed. This tank and its drain valve and plug have been factory tested and will comply for the 12 month warranty period with all applicable performance standards and specifications to which it was tested. Tanks remaining in their original installation location will retain warranty eligibility if the facility where the tank is installed is sold to a new entity. The new owner must inform the tank manufacturer in writing of the date of change in ownership and the new owner's contact information. Additionally, this tank carries a warranty up to 30 years from the date of manufacture, depending on the model number. ConVault agrees to repair or replace any defective unit without charge provided that the tank is operated and maintained in accordance with the manufacturer's Owner's Manual except as set forth herein. **FAILURE TO INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS WILL VOID THIS WARRANTY.**

CONVAULT® tanks are designed for storage of products compatible with steel. CONVAULT® tanks are not designed for storage of corrosives or toxic materials. To continue this warranty in effect, the user has a duty to conduct visual inspections at least weekly to check for leaks and to maintain the CONVAULT® tank in accordance with the Owner's Manual in effect on the date of shipment from the manufacturer. The primary tank must be inspected monthly for the presence of water and any water found must be removed. In the event leaks are determined, ConVault, Inc. must be contacted within two (2) working days at the following toll free number: 800-222-7099 or at 209-632-7571. This warranty does not cover damage resulting from accident, misuse or abuse, lack of reasonable care, or acts of God. This warranty is limited to the tank only and does not include paint, signs and decals, vents, pump, or any other accessories affixed to the tank. This warranty does not cover transportation cost of the replacement tank, the cost of labor or any other installation costs. Small cracks in concrete result from normal expansion and contraction and are not covered by warranty. Such cracks will not affect primary or secondary containment or fire retardation abilities of the tank. The limited warranties set forth herein are subject to the manufacturer receiving full payment for the products covered in this warranty.

THIS WARRANTY IS LIMITED TO REPLACEMENT OR REPAIR OF THE CONVAULT® TANK AT THE OPTION OF CONVAULT, INC. AND EXCLUDES ANY OTHER OR FURTHER REMEDIAL MEASURES. NO RESPONSIBILITY OR LIABILITY IS ASSUMED FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES. Under no circumstances, shall the liability of CONVAULT® under this warranty, exceed the original purchase price of the tank. There are no warranties, which extend beyond the face hereof.

You may obtain warranty service by contacting any dealer of ConVault, Inc.

For testing purposes, CONVAULT® primary tanks may be pressurized up to 3 psig only, provided, however, that after flammable or combustible liquids have been placed in the tank, the tank shall be pressurized using inert gases such as Nitrogen. If any additional testing is required, please contact ConVault, Inc. for instructions prior to testing.

You may fill out the Warranty Registration Card on line or download a printable form at <http://www.convault.com>.



ConVault, Inc., 4109 E. Zeering Road, Denair, CA 95316

800-222-7099, 209-632-7571

<http://www.convault.com>, info@convault.com

CALIFORNIA WARRANTY TAG

The following information **MUST** be provided to the **END USER**
per California Air Resources Board regulations CP206 Section 17.5.3

1. This ConVault Aboveground Storage Tank and its drain valve has a warranty period of 12 months for material and workmanship beginning from the date of installation. Installation date is determined to be when the tank has been installed at the final destination, and all equipment necessary to meet the Air Resources Board requirements has been installed. Additionally, this tank carries a warranty up to 30 years from the date of manufacture, depending on the model number. Please review the ConVault Limited Warranty included in the Owner's Manual for details.
2. The date of manufacture of this tank and its model number are listed on the Underwriters Laboratories label which is attached to the side of the tank.
3. This tank must be installed, operated and maintained in accordance with the ConVault Owner's Manual.
4. This tank should be installed as soon as practical to prolong the expected useful life of the unit. If stored prior to final installation location, it must be placed on a flat surface, strong enough to carry the weight of the tank without causing differential settlement.
5. This tank has been factory tested and will comply for the 12 month warranty period with all applicable performance standards and specifications to which it was tested.
6. This tank has been manufactured, listed, and labeled according to the Underwriters Laboratories Standard 2085 for Protected Aboveground Tanks for Flammable and Combustible Liquids.
7. This tank has been certified by the California Air Resources Board according to CP 206 certification procedures.

Effective March 1, 2012

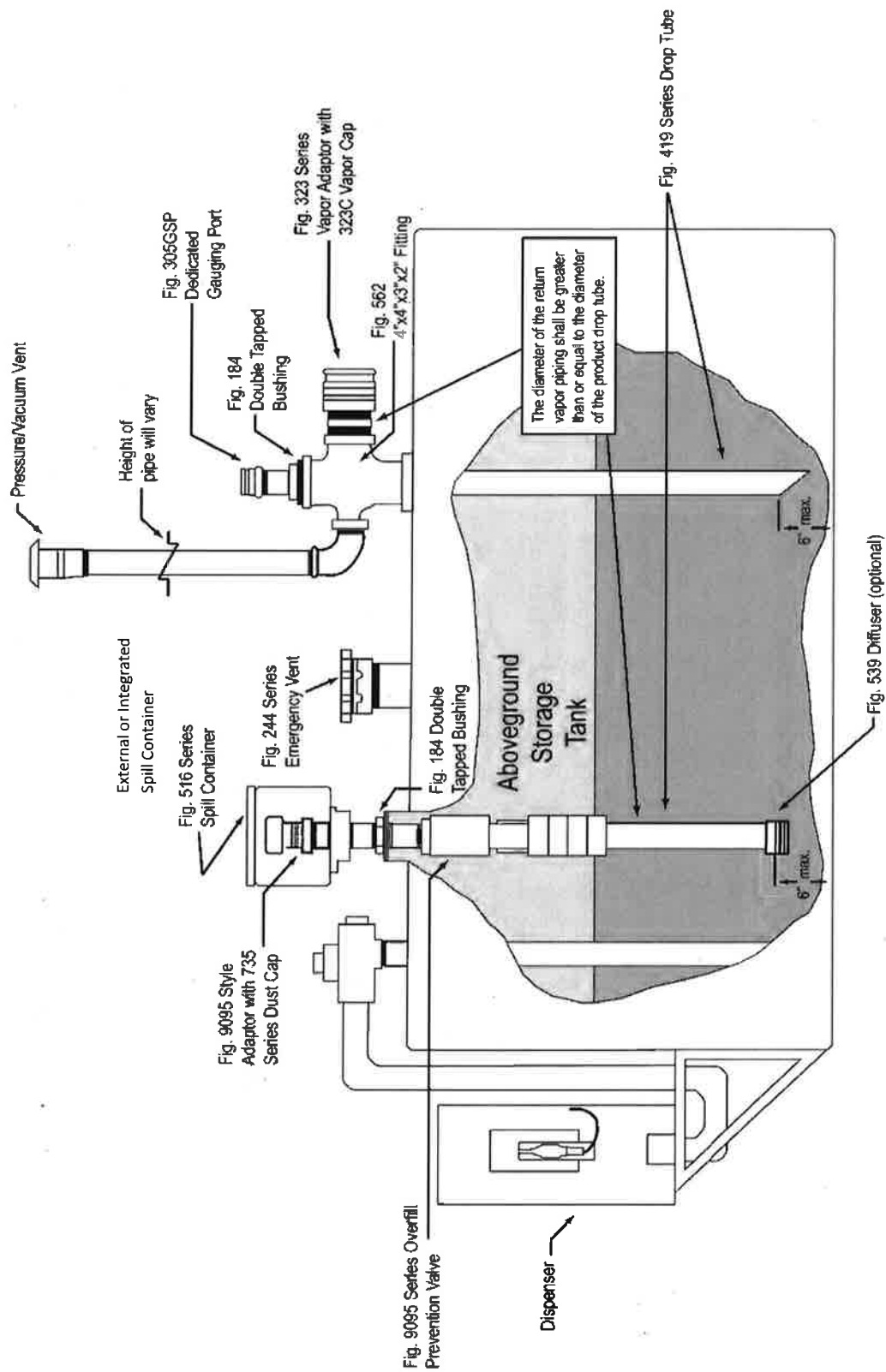
EXECUTIVE ORDER VR-402-D
Morrison Bros. Phase I Enhanced Vapor Recovery (EVR) System
For Aboveground Storage Tanks (AST)

EXHIBIT 5
**Alternate Phase I EVR Installation Configurations for
Existing Aboveground Storage Tank**

Existing aboveground storage tanks (AST) may be configured with a limited number of available bung openings and bung diameters. In order to provide flexibility in regards to Phase I EVR equipment installation, the figures in this exhibit provide examples of typical alternate Phase I EVR installation configurations.

General Specifications

1. Alternate installation configurations for the Morrison Bros. Phase I EVR System (Morrison System) for existing ASTs are shown in Figures 5A, 5B, and 5C.
2. A properly sized, dedicated opening must be provided for the emergency vent in accordance with Section 1 of the ***ARB Approved Installation, Operation and Maintenance Manual for the Morrison Bros. Phase I Enhanced Vapor Recovery System for Aboveground Storage Tanks***.
3. The Morrison System shall be installed, operated, and maintained in accordance with ***ARB Approved Installation, Operation and Maintenance Manual for the Morrison Bros. Phase I Enhanced Vapor Recovery System for Aboveground Storage Tanks***.
4. Any repair or replacement of system components shall be done in accordance with ***ARB Approved Installation, Operation and Maintenance Manual for the Morrison Bros. Phase I Enhanced Vapor Recovery System for Aboveground Storage Tanks***.
5. Unless otherwise specified in this Executive Order (EO), the Morrison System shall comply with the applicable performance standards and performance specifications in CP-206.
6. Maintenance and repair of system components, including removal and installation of such components in the course of any required tests, shall be performed by Morrison Bros. Certified Technicians. Additional certifications may be required in accordance with District requirements.
7. Per Exhibit 2 of the Executive Order, the diameter of return vapor piping of AST shall be greater than or equal to diameter of the associated drop tube.
8. Other alternate installation configurations may be utilized if approved by the local air pollution control district and fire marshal/fire agency.

FIGURE 5A**Alternate Phase I Installation Configurations for Existing Aboveground Storage Tanks**

Tank gauging may be done by way of a mechanical gauge (Fig 818 or 918 Series) or an electronic gauge (Fig 305 Series)"

FIGURE 5B

Alternative Phase I Installation Configurations for Existing Aboveground Storage Tanks

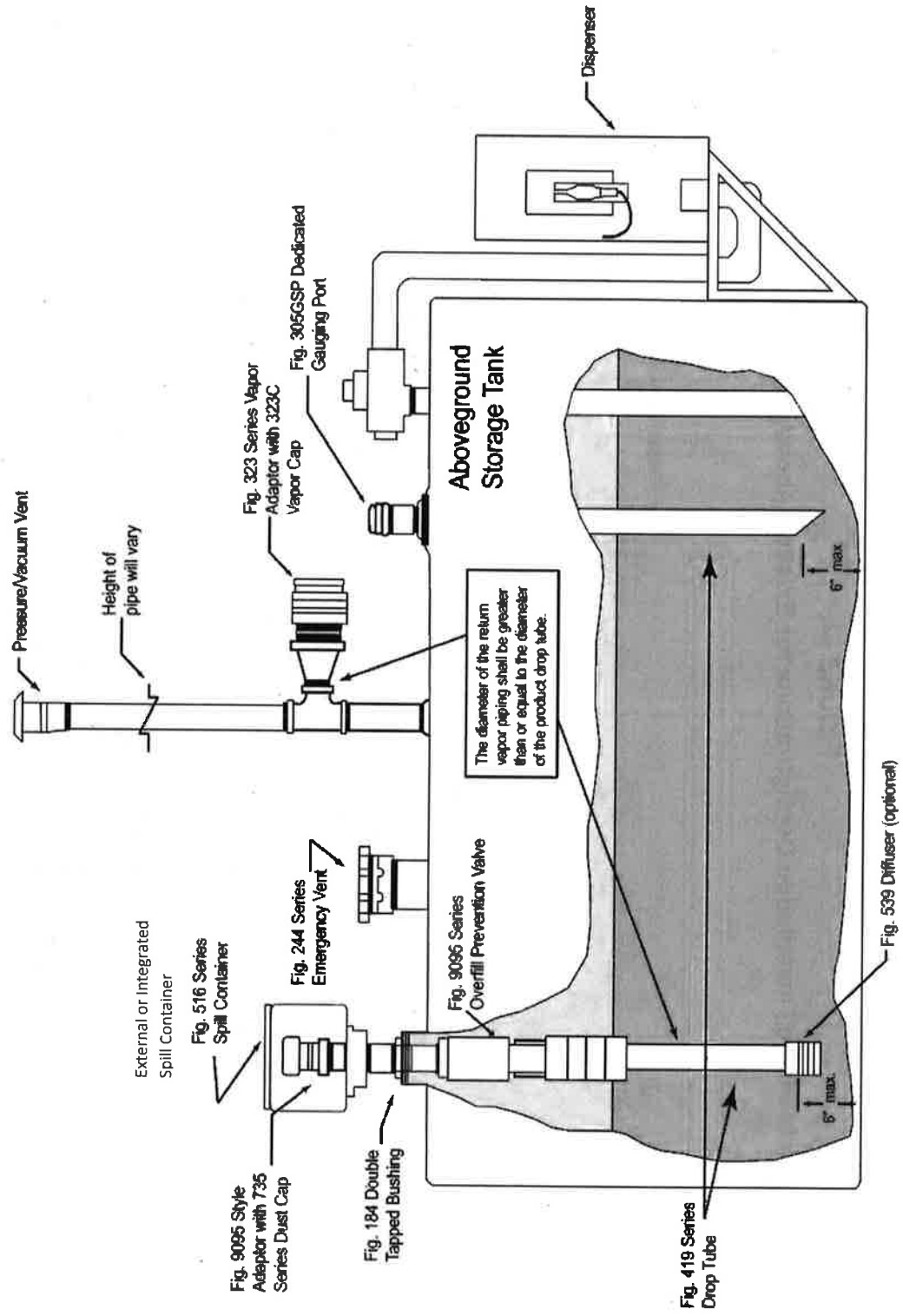
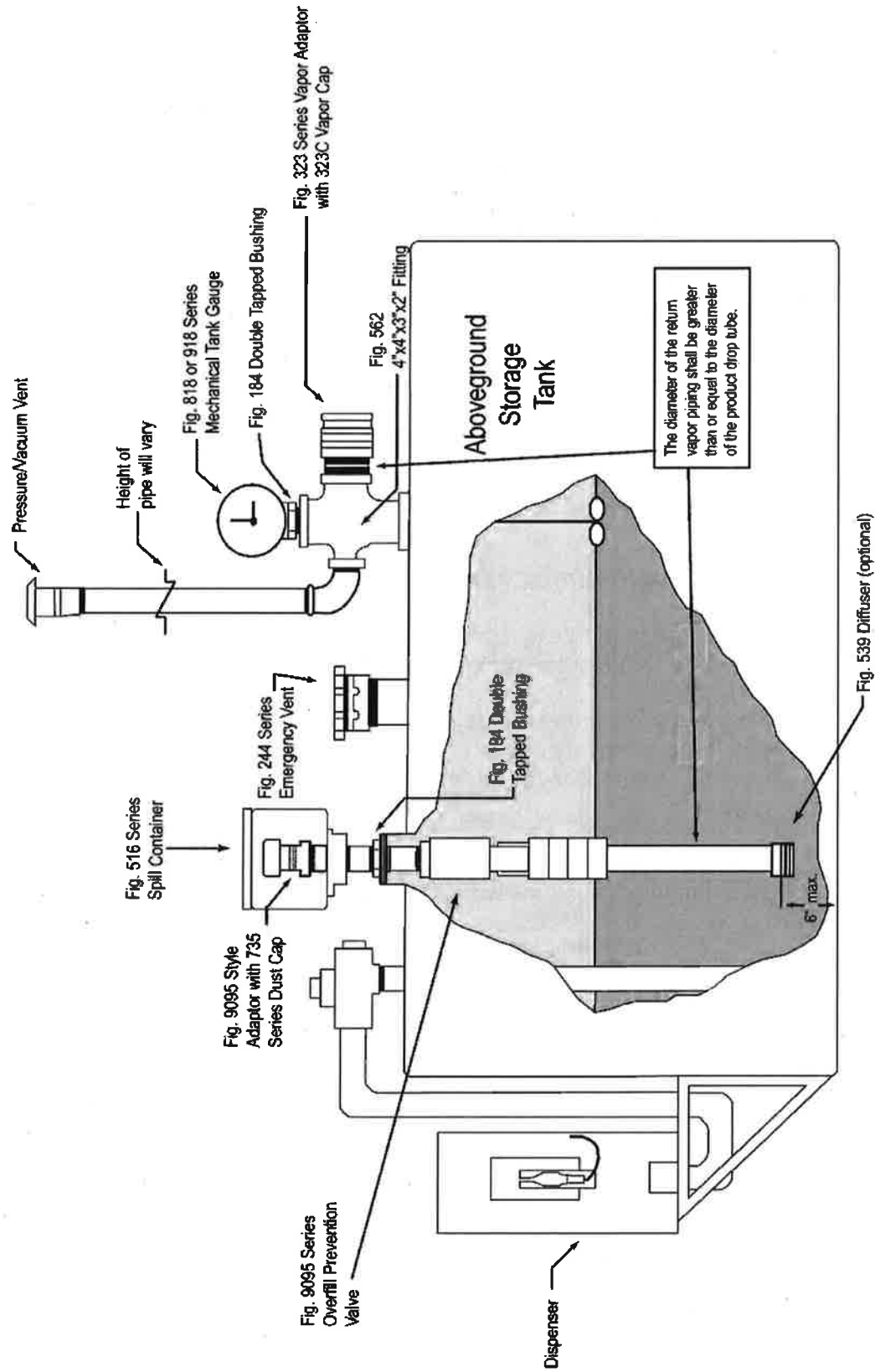


FIGURE 5C

Alternate Phase I Installation Configurations for Existing Aboveground Storage



Tank gauging may be done by way of a mechanical gauge (Fig 818 or 918 Series) or an electronic gauge (Fig 305 Series)"

EXECUTIVE ORDER VR-402-D

Morrison Bros. Phase I Enhanced Vapor Recovery (EVR) System
For Aboveground Storage Tanks (AST)

EXHIBIT 6

**Determination of Static Pressure Performance of
Vapor Recovery Systems at Gasoline Dispensing Facilities
with Aboveground Storage Tanks**

Definitions common to all certification and test procedures are in:

D-200 Definitions for Vapor Recovery Procedures

For the purpose of this procedure, the term "ARB" refers to the California Air Resources Board, and the term "Executive Officer" refers to the ARB Executive Officer or his or her authorized representative or designate.

1. PURPOSE AND APPLICABILITY

The purpose of this test procedure is used to quantify the vapor tightness of an aboveground storage tank (AST) installed at a gasoline dispensing facility (GDF).

This test procedure is used to determine the static pressure performance standard of a vapor recovery system during the certification process and subsequently to determine compliance with that performance standard for any installation of such a system.

The applicability of this test procedure for static pressure performance is for installations of systems with AST certified by:

CP-206 Certification Procedure for Vapor Recovery Systems at Gasoline
Dispensing Facilities Using Aboveground Storage Tanks

2. PRINCIPLE AND SUMMARY OF TEST PROCEDURE

The entire vapor recovery system is pressurized with nitrogen to two (2.0) inches water column. The system pressure is then allowed to decay for five (5) minutes. The acceptability of the final pressure is based upon the vapor system ullage.

3. BIASES AND INTERFERENCES

- 3.1 For tanks equipped with vapor recovery processor systems, the processor must be isolated or the processor outlet is capped. Leakage at the processor will indicate a system component leak.
- 3.2 Leaks in the test equipment will bias the results toward noncompliance. Prior to conducting the test, this bias is eliminated by conducting a leak check of the equipment.
- 3.3 There shall be no Phase I bulk product deliveries into the storage tank(s) within three (3) hours prior to this test. There shall be no product dispensing within thirty (30) minutes prior to this test. There shall be no Air to Liquid or Volume to Liquid Volumetric Ratio Test (TP-201.5 or equivalent) conducted within the twenty-four (24) hour period immediately prior to this test.
- 3.4 Product levels less than four (4) inches above the highest opening at the bottom of the submerged drop tube may bias the test toward noncompliance.
- 3.5 For systems which utilize a destructive processor, power to the collection unit and the processor shall be turned off during testing.
- 3.6 For vacuum-assist systems with positive displacement vacuum pumps, which locate the vacuum producing device in-line between the Phase II vapor riser and the storage tank, the following requirements shall apply:
 - 3.6.1 A valve shall be installed at the vacuum producing device. When closed, this valve shall isolate the vapor passage downstream of the vacuum producing device.
 - 3.6.2 The upstream vapor passage (nozzle to vacuum producing device) shall also be tested. Methodology for this test shall be submitted to the Executive Officer for approval prior to submission of test results or shall be conducted in accordance with the procedures set forth in the applicable ARB Executive Order.

4. EQUIPMENT SPECIFICATIONS

- 4.1 Traffic Cones. If needed for safety, use traffic cones to encircle the area while the test is being conducted.
- 4.2 Care must be exercised to prevent exposure of testing personnel to benzene, a carcinogen. Use of appropriate safety gear such as gloves and respirator is suggested.
- 4.3 Use commercial grade nitrogen in a high pressure cylinder, equipped with a two-stage pressure regulator and one pressure per square inch gauge (psig) pressure relief valve. The minimum and maximum nitrogen feed rates into the system shall be 1.0 and 5.0 cfm (cubic feet per minute) respectively.

- 4.4 The System Leak Test Assembly is shown in Figure 1. Use a modified vapor cap compatible with the Phase I vapor adaptor. The vapor cap shall be equipped with a nitrogen inlet port.
- 4.5 Use a Dwyer flowmeter, Model RMC-104, or equivalent, to determine the required pressure setting of the delivery pressure gauge on the nitrogen supply pressure regulator. This pressure shall be set such that the nitrogen flowrate is between 1.0 and 5.0 cfm.
- 4.6 Electronic pressure measuring devices or digital pressure indicators shall be used. The maximum full-scale range of the device shall be 10 inches water column. The minimum accuracy shall be 1.5 percent of full scale and the pressure measuring device shall be readable to the nearest 0.01 inches water column. A copy of the most current calibration shall be kept with the equipment. Instrument shall be calibrated every six months.
- 4.7 Stopwatch. Use a stopwatch accurate to within 0.10 seconds to time the one-minute pressure stabilization period, and the five-minute decay test period.
- 4.8 Leak Detection Solution or a Combustible Gas Indicator. Any liquid solution designed to detect vapor leaks may be used to verify the pressure integrity of system components during this test; or a combustible gas detector that complies with the requirements of U.S. EPA Method 21, "Determination of Volatile Organic Compounds Leaks", 40 CFR Ch. 1, Part 60, App. A-7 (36 FR 24877, December 23, 1971) and section 5 of this test procedure. Personnel shall assume that the combustible gas detector will be operated in an explosive atmosphere and comply with all pertinent regulations.

5. CALIBRATION PROCEDURE

- 5.1 The electronic pressure measuring device or digital pressure indicator shall be calibrated using a National Institute of Standards and Technology (NIST) traceable standard or reference standard traceable to NIST within 180 days prior to conducting the testing and the calibration. In addition, calibration shall be conducted after any repairs or alterations to the pressure measuring or indicating device. Calibrations shall be conducted per manufacturer's instructions, ensuring it complies with the minimum accuracy requirement of 1.5 percent of full scale. A copy of the most current calibration shall be kept with the equipment.
- 5.2 The flowmeter shall be calibrated every 180 days using a NIST traceable standard or a reference standard traceable to NIST as specified by the manufacturer's instructions.
- 5.3 Calibrate the combustible gas detector per the manufacturer's recommendation. Calibration gas shall be certified traceable to NIST-SRM.
 - 5.3.1 The calibration gases must be certified according to one of the following options:

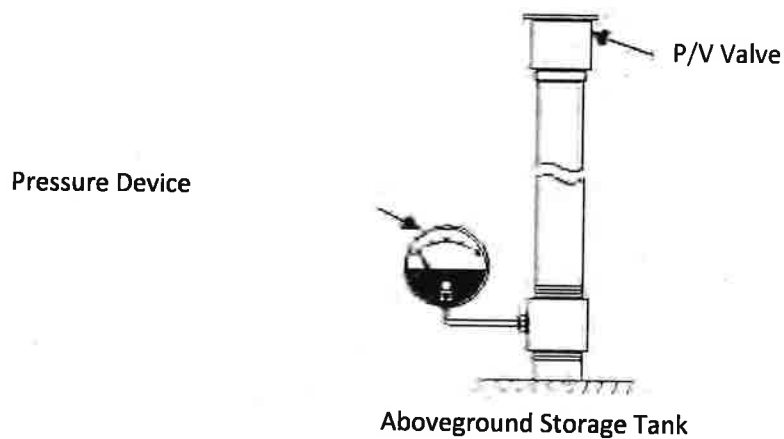
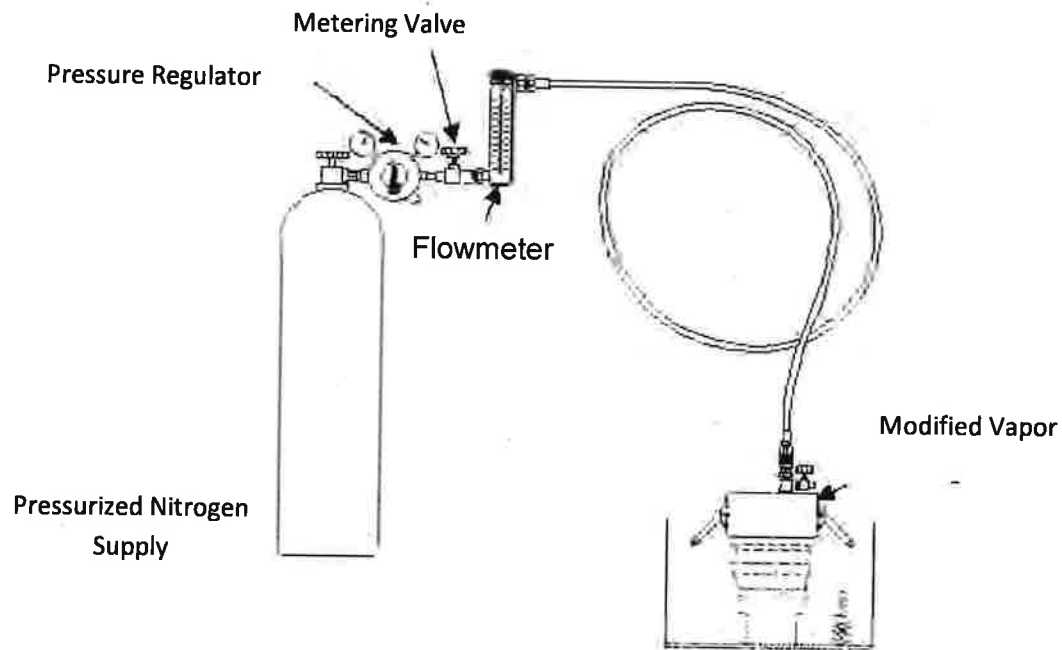
- 5.3.1.1 The EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (EPA-600/R-12/531, May 2012), or
- 5.3.1.2 To an analytical accuracy of ± 2 percent, traceable to a reference material approved by the National Institute of Standards and Technology (NIST) and recertified annually.
- 5.3.2 Documentation. Information on calibration gas cylinders shall be entered into a log identifying each cylinder by serial number. Sufficient information shall be maintained to allow a determination of the certification status of each calibration gas and shall include: (1) the date put in service, (2) assay result, (3) the dates the assay was performed, (4) the organization and specific personnel who performed the assay, and (5) the date taken out of service.

6. PRE-TEST PROCEDURES

- 6.1 Place the traffic cones around the perimeter of the testing area, allowing sufficient space to safely conduct the test.
- 6.2 Electronic manometers shall have a warm-up period of at least 15 minutes followed by a five-minute drift check. If the drift exceeds 0.01 inches water column, the instrument should not be used.
- 6.3 Record system information on Form 1.
- 6.4 The minimum ullage during the test shall be 25 percent of the tank capacity and the maximum ullage during the test shall be 75 percent of the tank capacity. For manifolded tanks, the minimum ullage during the test shall be 25 percent of the aggregate tank capacity and the maximum ullage during the test shall be 75 percent of the aggregate tank capacity.
- 6.5 Determine the allowable system leak rate using Equation 8-1 in section 8.
- 6.6 Ensure the nozzle(s) are properly hung in the dispenser boot and all dispenser cabinet covers are in place. No dispensing shall be allowed during the test.
- 6.7 If a steel-braided nitrogen supply line is not used, a ground strap should be employed during the introduction of nitrogen into the system.
- 6.8 This test shall be conducted with the dust caps removed from both the product and the vapor coupler(s).
- 6.9 If the Phase I containment box is equipped with a drain valve, this test shall be conducted with the drain valve installed.
- 6.10 Conduct visual inspection of vapor recovery components to ensure no cracks, tears, or other anomalies are present that may cause a failure of the leak test.

- 6.11 Install system leak test assembly. An example is shown in Figure 1. Additional examples can be found in TP-201.3 (Figures 1-3).

FIGURE 1
Typical System Leak Test Assembly



7. TEST PROCEDURE

- 7.1 Observe the initial storage tank pressure. If the initial pressure is greater than one-half (0.50) inch H₂O gauge, proceed to Section 7.1.1. If the initial pressure is less than zero (0.00) inch H₂O gauge, proceed to Section 7.1.2. In the case where the storage tank pressure is between 0.00 and 0.50 inches H₂O, proceed to section 7.2.
 - 7.1.1 If the initial storage tank pressure is greater than one-half (0.50) inch H₂O gauge, carefully bleed off the excess pressure in accordance with all applicable safety procedures for a maximum of 30 seconds. Do not allow the tanks to remain open to atmosphere for more than 30 seconds or the ingestion of fresh air and additional vapor growth may result. Start the stopwatch and measure the storage tank pressure for three (3) minutes. If the 3-minute pressure exceeds 0.50 inches H₂O or continues to change at a rate exceeding ± 0.02 inches H₂O in 3 minutes, repeat this Section. Several attempts may be required.
 - 7.1.2 If the initial storage tank pressure is less than zero (0.00) inches H₂O gauge, slowly introduce nitrogen so that the storage tank pressure is between zero (0.00) and one-half (0.50) inches H₂O gauge. Start the stopwatch and measure the storage tank pressure for three (3) minutes. If the 3-minute pressure is not between 0.00 and 0.50 inches H₂O or continues to change at a rate exceeding ± 0.02 inches H₂O in 3 minutes, repeat this Section.
- 7.2 Open the nitrogen gas supply valve, regulate the delivery pressure to at least 10 psig, and pressurize the vapor system (or subsystem for individual vapor return line systems) to or slightly above 2 inches water column. The minimum and maximum nitrogen feed rates in to the system shall be 1.0 and 5.0 cfm respectively. It is critical to maintain the flow until both flow and pressure stabilize, indicating temperature and pressure stabilization in the tanks. Close the nitrogen supply valve.
- 7.3 Check the system leak test assembly using leak detection solution to verify that the test equipment is leak tight. Quickly remove the vapor cap assembly.
- 7.4 Re-open the nitrogen supply valve, and reset the tank pressure to reestablish a pressure slightly greater than 2 inches water column. Close the nitrogen supply valve and start the stopwatch when the pressure reaches an initial pressure of 2.0 inches of water column.
- 7.5 At one-minute intervals during the test, record the system pressure on Form 1. After five minutes, record the final system pressure on Form 1. Carefully remove the system leak test assembly.
- 7.6 Use Equation 8-1 in section 8 or Table 1 to determine the compliance status of the facility by comparing the final five-minute pressure with the minimum allowable pressure.

8. CALCULATING RESULTS

Minimum Allowable Pressure

The minimum allowable pressure after five (5) minutes, with an initial pressure of 2.0 inches water column, shall be calculated as shown below, or obtained from Table 1:

Equation 8-1

$$P_f = 2e^{(-223.9/V)}$$

where:

- P_f = Minimum pressure after 5 minutes, inches water column
- V = Ullage of the system, gallons
- e = Constant equal to 2.71828
- 2 = Initial starting pressure, inches water column
- -223.9 = Decay constant for a 5 minute test

9. REPORTING RESULTS

Report the results as indicated on Form 1. District may require the use of alternate forms provided they include the same minimum parameters identified in Form 1.

10. ALTERNATIVE TEST PROCEDURES

This procedure shall be conducted as specified. Modifications to this test procedure shall not be used to determine compliance unless prior written approval has been obtained from the ARB Executive Officer, pursuant to Section 15 of Certification Procedure CP-206.

FORM 1

Summary of Source Test Data

Static Pressure Performance Test				
GDF Name and Address:	PHASE II SYSTEM TYPE (Check One)			
	Balance VacAssist			
	Other			
GDF Representative and Title:	Manufacture:			
GDF Phone #:	Permit Conditions:			
GDF #:				
Manifolded? Y or N				
TANK #:	1	2	3	4
1. Product Grade				
2. Actual Tank Capacity, gallons				
3. Gasoline Volume				
4. Ullage, gallons (ullage = capacity-volume)				
5. Initial Pressure (inches water column)				—
6. Pressure After 1 Minute				
7. Pressure After 2 Minutes				
8. Pressure After 3 Minutes				
9. Pressure After 4 Minutes				
10. Final Pressure After 5 Minutes				
11. Allowable Final Pressure				
Test Conducted by:	Test Company:			
Date of Test:	Test Contractor Certification Number:			
	Expiration Date:			

TABLE 1
Leak Rate Criteria

ULLAGE (GALLONS)	MINIMUM PRESSURE AFTER 5 MINUTES, (INCHES OF WATER COLUMN)
100	0.21
150	0.45
200	0.65
250	0.82
300	0.95
350	1.05
400	1.14
450	1.22
500	1.28
550	1.33
600	1.38
650	1.42
700	1.45
750	1.48
800	1.51
850	1.54
900	1.56
950	1.58
1,000	1.60
1,200	1.66
1,400	1.70
1,600	1.74
1,800	1.77
2,000	1.79
2,200	1.81
2,400	1.82
2,600	1.83
2,800	1.85
3,000	1.86
3,500	1.88
4,000	1.89
4,500	1.90
5,000	1.91
6,000	1.93
7,000	1.94
8,000	1.94
9,000	1.95
10,000	1.96
15,000	1.97
20,000	1.98

Note that the copyright-protected document "Recommended Practices for Installation and Testing of Vapor Recovery Systems at Vehicle Fueling Sites", PEI/RP300-19 (see below), can be ordered from Petroleum Equipment Institute's website <http://www.pei.org>, in the section of "Recommended Practices."

PEI/RP300-19

Recommended Practices For Installation and Testing of Vapor Recovery Systems at Vehicle fueling Sites

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