State of California
AIR RESOURCES BOARD

Executive Order VR-102-L

OPW Fueling Components, Inc.
OPW Phase I Vapor Recovery System
(Including Remote-Fill Configuration)

WHEREAS, the California Air Resources Board (ARB) has established, pursuant to California Health and Safety Code sections 25290.1.2, 39600, 39601 and 41954, certification procedures for systems designed for the control of gasoline vapor emissions during the filling of underground gasoline storage tanks, in its **CP-201, *Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities*** (Certification Procedure), as last amended May 25, 2006, incorporated by reference in Title 17, California Code of Regulations, section 94011;

WHEREAS, ARB has established, pursuant to California Health and Safety Code sections 39600, 39601 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 the Certification Procedure by Executive Order VR-102-A, first issued on October 10, 2002, and last modified on September 14, 2009, by Executive Order VR-102-K;

WHEREAS, the OPW system certification expires on May 31, 2012;

WHEREAS, the Certification Procedure authorizes the Executive Officer or Executive Officer delegate to extend the certification of the OPW system when more time is needed to gather necessary information to complete a renewal evaluation;

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

WHEREAS, G-01-032 delegates to the Chief of the Monitoring and Laboratory Division the authority to certify or approve modifications to certified Phase I and Phase II vapor recovery systems for gasoline dispensing facilities (GDF); and

WHEREAS, I, Alberto Ayala, Chief of the Monitoring and Laboratory Division, find that the OPW Phase I Vapor Recovery System, including modifications, conforms with all of the requirements set forth in the Certification Procedure, 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 (October 8, 2003)***;

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 gasoline dispensing facility (GDF). Exhibit 3 contains the manufacturing specifications.

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 OPW shall provide a warranty for the vapor recovery system and components to the initial purchaser and each subsequent purchaser within the warranty period. The manufacturer of components not manufactured by OPW shall provide a warranty for each of their components certified herein. This warranty shall include the ongoing compliance with all applicable performance standards and specifications, and shall comply with all warranty requirements in Section 16.5 of the Certification Procedure. OPW or other manufacturers may specify that the warranty is contingent upon the use of trained installers. Copies of the warranty for the system and components shall be made available to the GDF owner or operator.

IT IS FURTHER ORDERED that the certified OPW system shall be installed, operated, and maintained in accordance with the ***ARB-Approved Installation, Operation and Maintenance Manual for the OPW Phase I Vapor Recovery System*** as certified by Executive Order VR-102-L***.*** A copy of this Executive Order and 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 and model number.

IT IS FURTHER ORDERED that any alteration in the equipment, parts, design, installation, or operation of the system certified hereby is prohibited and deemed inconsistent with this certification unless the alteration has been submitted in writing and approved in writing by the Executive Officer or Executive Officer's delegate.

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: **TP-201.3, *Determination of 2 Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities (March 17, 1999)***, **TP-201.1B*, Static Torque of Rotatable Phase I Adaptors (October 8, 2003)*** and depending on the system configuration, either **TP-201-1D*, Leak Rate of Drop Tube Overfill Prevention Devices and Spill Container***

Drain Valves (October 8, 2003); or **TP-201.1C, *Leak Rate of Drop Tube/Drain Valve Assembly (October 8, 2003)***. Shorter time periods may be specified in accordance with local district requirements. Notification of testing and submittal of test results shall be done in accordance with local district requirements and pursuant to the policies established by that district. Alternate test procedures, including most recent versions of test procedures listed above, may be used if determined by the ARB Executive Officer or Executive Officer delegate, in writing, to yield equivalent results. Testing the Pressure/Vacuum (P/V) Vent valve will be at the option of the local districts. If P/V 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. Any modifications to comply with future California gasoline requirements shall be approved in writing by the Executive Officer or Executive Officer's delegate.

IT IS FURTHER ORDERED that the certification of the OPW Phase I Vapor Recovery System is valid through May 31, 2013 to provide more time for the Executive Officer or Executive Officer delegate to gather necessary information to complete a renewal evaluation.

IT IS FURTHER ORDERED that Executive Order VR-102-K, issued on September 14, 2009, is hereby superseded by this Executive Order. OPW Phase I Vapor Recovery Systems certified under Executive Orders VR-102-A to K may remain in use at existing installations. This Executive Order shall apply to new installations or major modification of Phase I Systems.

Executed at Sacramento, California, this 24th day of May 2012.

Alberto Ayala, Ph.D., M.S.E
Chief, Monitoring and Laboratory Division

Attachments:

Exhibit 1 OPW Phase I Vapor Recovery System Equipment List
Exhibit 2 Installation, Maintenance and Compliance Specifications
Exhibit 3 Manufacturing Performance Standards and Specifications

Executive Order VR-102-L OPW Phase I Vapor Recovery System

Exhibit 1

OPW Phase I Vapor Recovery System Equipment List

Equipment	Manufacturer/Model Number
Pressure/Vacuum Vent Valve	FFS PV-Zero Husky 5885
Spill Containers	Spill Container OPW 1-Series OPW / Pomeco Container Bellows Capacity – 5, 7.5, or 15 gallons Single or Double Wall Type of Base – Composite or Cast Iron
Replacement Drain Valve Kit	OPW 1DK-2100
Dust Caps	OPW 634TT-EVR (product) OPW 1711T-EVR (vapor) OPW 634LPC (product) OPW 1711LPC (vapor) CompX CSP1-634LPC (product) CompX CSP3-1711LPC (vapor) CompX CSP2-634LPC (product) CompX CSP4-1711LPC (vapor)
Product Adaptor	OPW 61SALP
Vapor Adaptor	OPW 61VSA
Jack Screw Kit	OPW 61JSK-4410 (Only used with Composite Base Spill Container) OPW 61JSK-44CB (Only used with Cast Iron Base Spill Container) OPW 61JSK-4RMT (Only Used on Remote-Fill Configuration)
Face Seal Adaptor	OPW FSA-400 OPW FSA-400-S
Drop Tube	OPW 61T (various lengths)

Exhibit 1 (continued)

OPW Phase I Vapor Recovery System Equipment List

Equipment	Manufacturer/Model Number
Drop Tube Overfill Prevention Device [1]	
	OPW 61SO OPW 71SO
Double Fill	OPW (Configuration Only)
Remote Fill	OPW (Configuration Only)
Tank Bottom Protector [1]	OPW/Pomeco 6111-1400
Tank Gauge Port Components[1]	OPW 62M (Cap and Adaptor)
	Morrison Brothers 305XPA1100AKEVR (cap & adaptor kit) Morrison Brothers 305-0200AAEVR (replacement adaptor) Morrison Brothers 305XP-110ACEVR (replacement cap)
	Ever-Tite 4097AGBR Adaptor Ever-Tite 4097AGMBRNL Adaptor Ever-Tite 4097MBR Cap
	Veeder-Root 312020-952 (cap & adaptor)

[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
Replacement Drain Valve	OPW	1DK-2100
Jack Screw Kit	OPW	61JSK-4410* 61JSK-44CB* 61JSK-4RMT*
Tank Gauge Port Component (Cap and Adaptor)	Morrison Brothers Ever-Tite Veeder-Root	305XPA1100AKEVR (cap & adaptor kit) 305-0200AAEVR (replacement adaptor) 305XP-110ACEVR (replacement cap). Ever-Tite 4097AGBR Adaptor Ever-Tite 4097AGMBRNL Adaptor Ever-Tite 4097MBR Cap Veeder-Root 312020-952 (cap & adaptor)
Drop Tube	OPW	61-T
Tank Bottom Protector	OPW/Pomeco	6111-1400
Sump / Sump Lids / Spill Container Covers	Varies	Varies

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

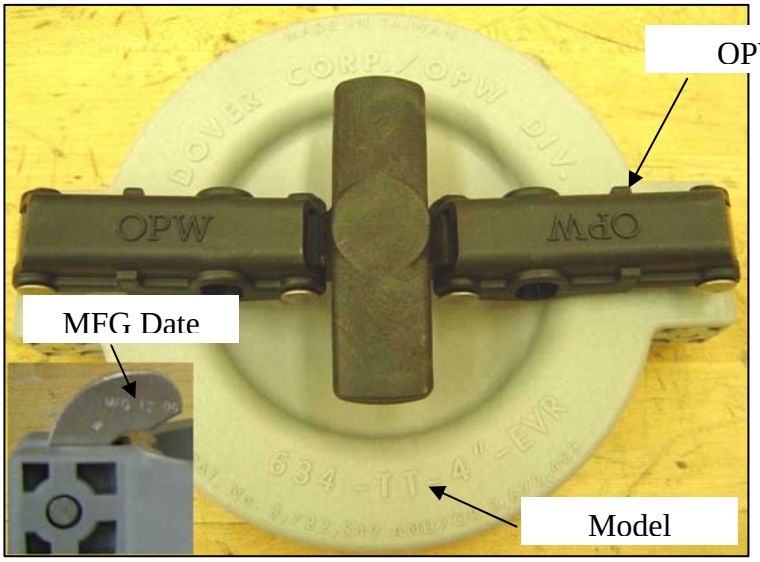
Exhibit 1 (continued)
Component Identification & Location

OPW 1-Series Spill Container

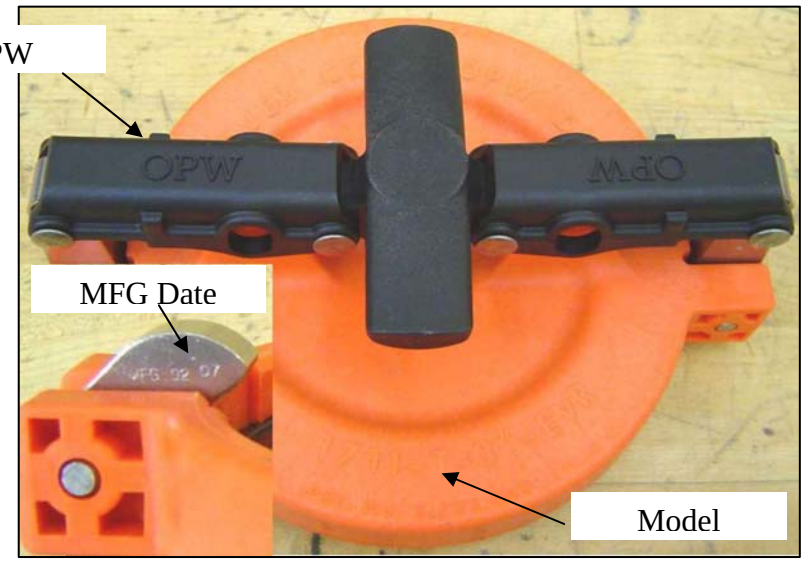
OPW 61SALP Product Adaptor

Exhibit 1 (continued)
Component Identification & Location

OPW 61VSA Vapor Adaptor



OPW 634-TT-EVR Product Dust Cap

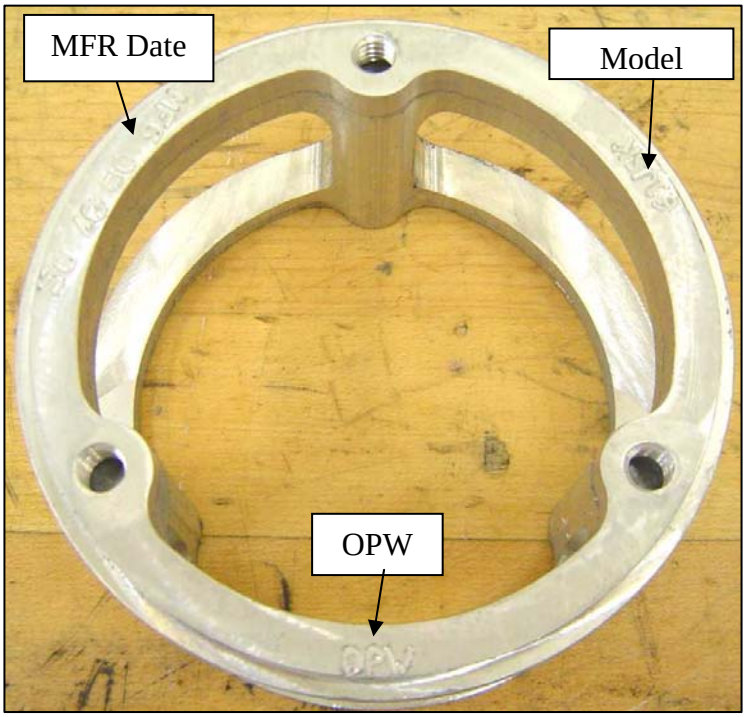


OPW 1711-T-EVR Vapor Dust Cap

Exhibit 1 (continued)
Component Identification & Location

OPW 634LPC Product Dust Cap

OPW 1711LPC Vapor Dust Cap

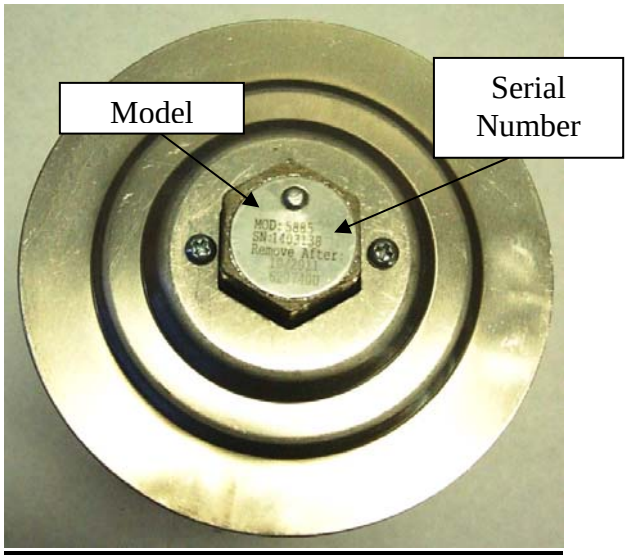


OPW 61JSK Jack Screw

OPW 62M Cap and Adaptor
(Only Cap is identified)

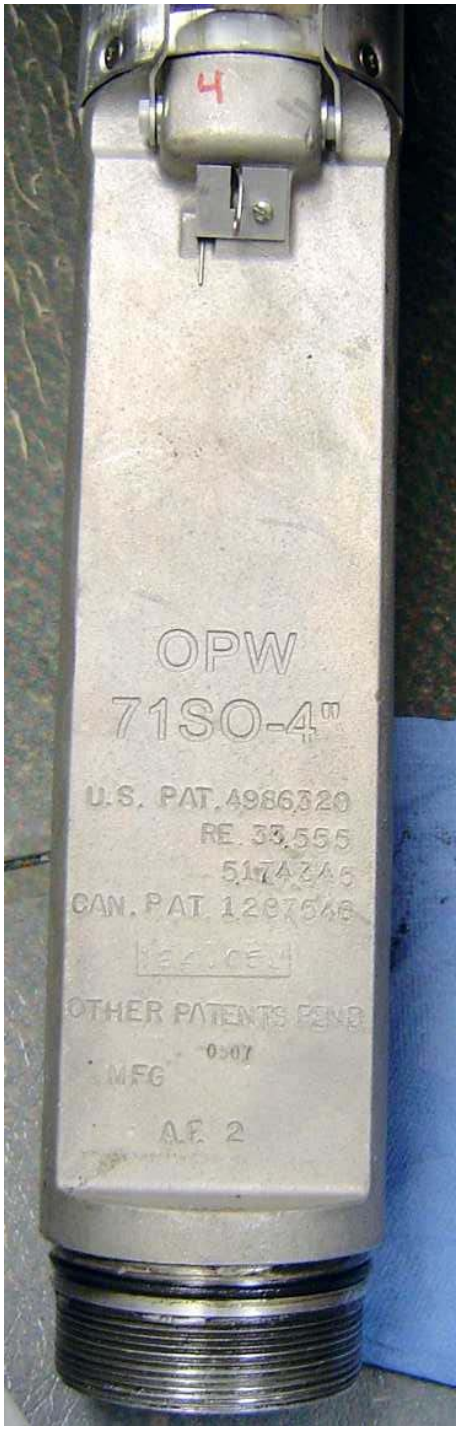
Exhibit 1 (continued)
Component Identification & Location

OPW FSA-400-S Face Seal Adaptor



Husky 5885 P/V Vent Valve
(Husky Name on Bottom Flange)

Exhibit 1 (continued)
Component Identification & Location



OPW 61SO and 71SO Overfill Prevention Devices

Exhibit 1 (continued)
Component Identification & 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 & 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 & Location

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

Executive Order VR-102-L OPW Phase I Vapor Recovery System

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 2A and 2B.

2. Typical installation of the OPW remote fill system is shown in Figures 2D and 2E.

3. The OPW system shall be installed, operated, and maintained in accordance with the latest version of ***ARB-Approved Installation, Operation and Maintenance Manual for the OPW Phase I Vapor Recovery System***.

4. Any repair or replacement of system components shall be done in accordance with the latest version of ***ARB-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 CP-201.

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 Pipes[1]

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 H_2O positive pressure and 0.21 CFH at 4.00 inches negative pressure 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.

b. The positive pressure setting is 2.5 to 6.0 inches of H_2O and the negative pressure setting is 6.0 to 10.0 inches of H_2O 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 ***ARB-Approved Installation, Operation and Maintenance Manual for the OPW 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 or gold-colored label with black lettering stating the following specifications:

Positive pressure setting: 2.5 to 6.0 inches H_2O
Negative pressure setting: 6.0 to 10.0 inches H_2O
Positive Leakrate: 0.05 CFH at 2.0 inches H_2O
Negative Leakrate: 0.21 CFH at -4.0 inches H_2O

<u>Rotatable Product and Vapor Recovery Adaptors</u>

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.)

<u>Vapor Recovery and Product Adaptor Dust Caps</u>

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 2.00 inches H_2O. 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).***

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 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 H_2O 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. 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 2A.

Face Seal Adaptor

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

1. 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 2C.

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.

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 2G.

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.

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 2H.

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 in H_2O
Spill Container Drain Valve	TP-201.1C or TP-201.1D	≤0.17 CFH at 2.00 in H_2O
P/V Valve[1]	TP-201.1E	Positive pressure setting: 2.5 to 6.0 in H_2O Negative pressure setting: 6.0 to 10.0 in H_2O Positive Leakrate: 0.05 CFH at 2.0 in H_2O Negative Leakrate: 0.21 CFH at -4.0 in H_2O
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

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

Manufacturer	Component	Maintenance Interval
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 \ Pomeco	Spill Containers (all models)	Annual

[1] Compliance determination is at the option of the district.
[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 Installation Using OPW System

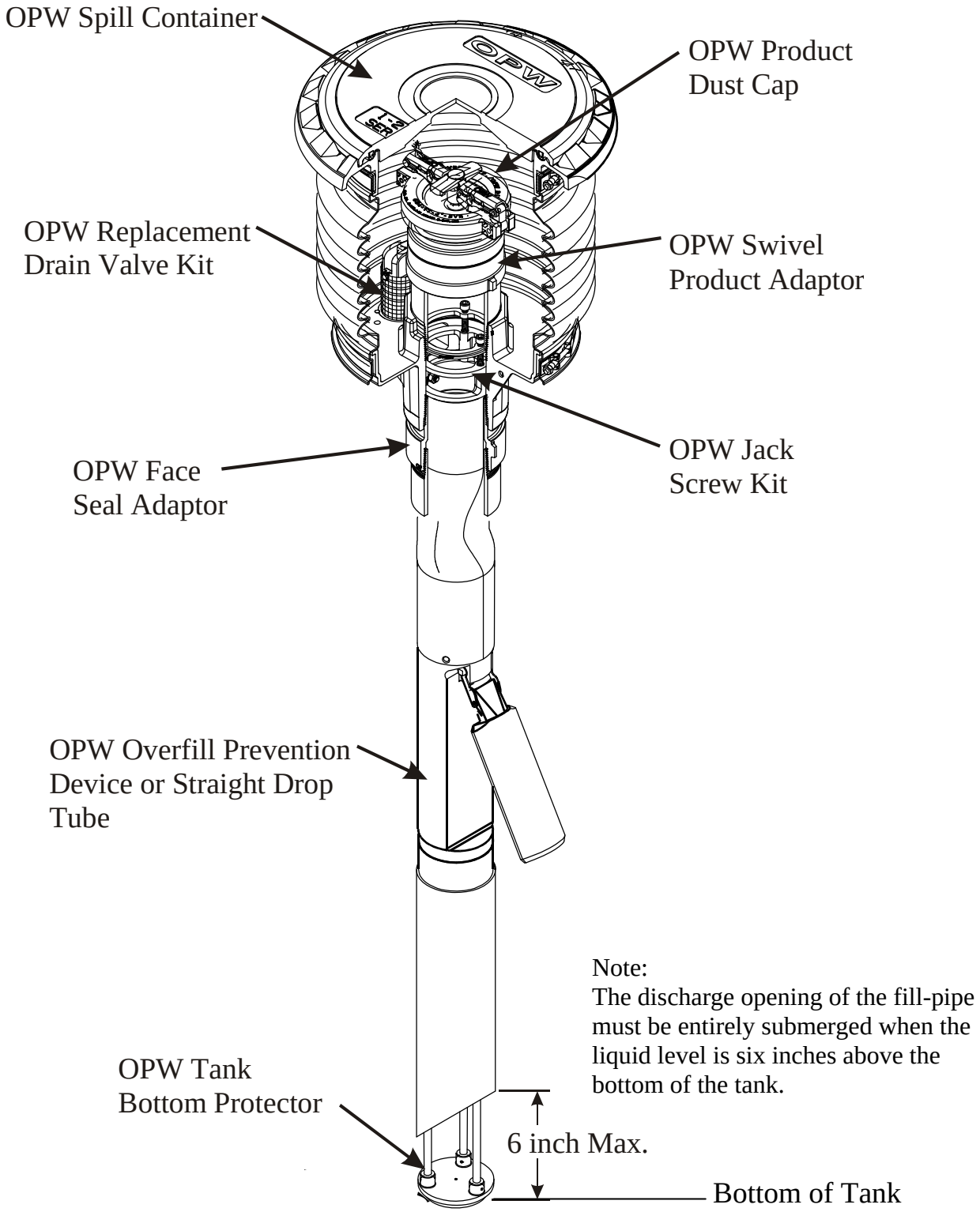


Figure 2B
Typical Vapor Installation Using OPW System

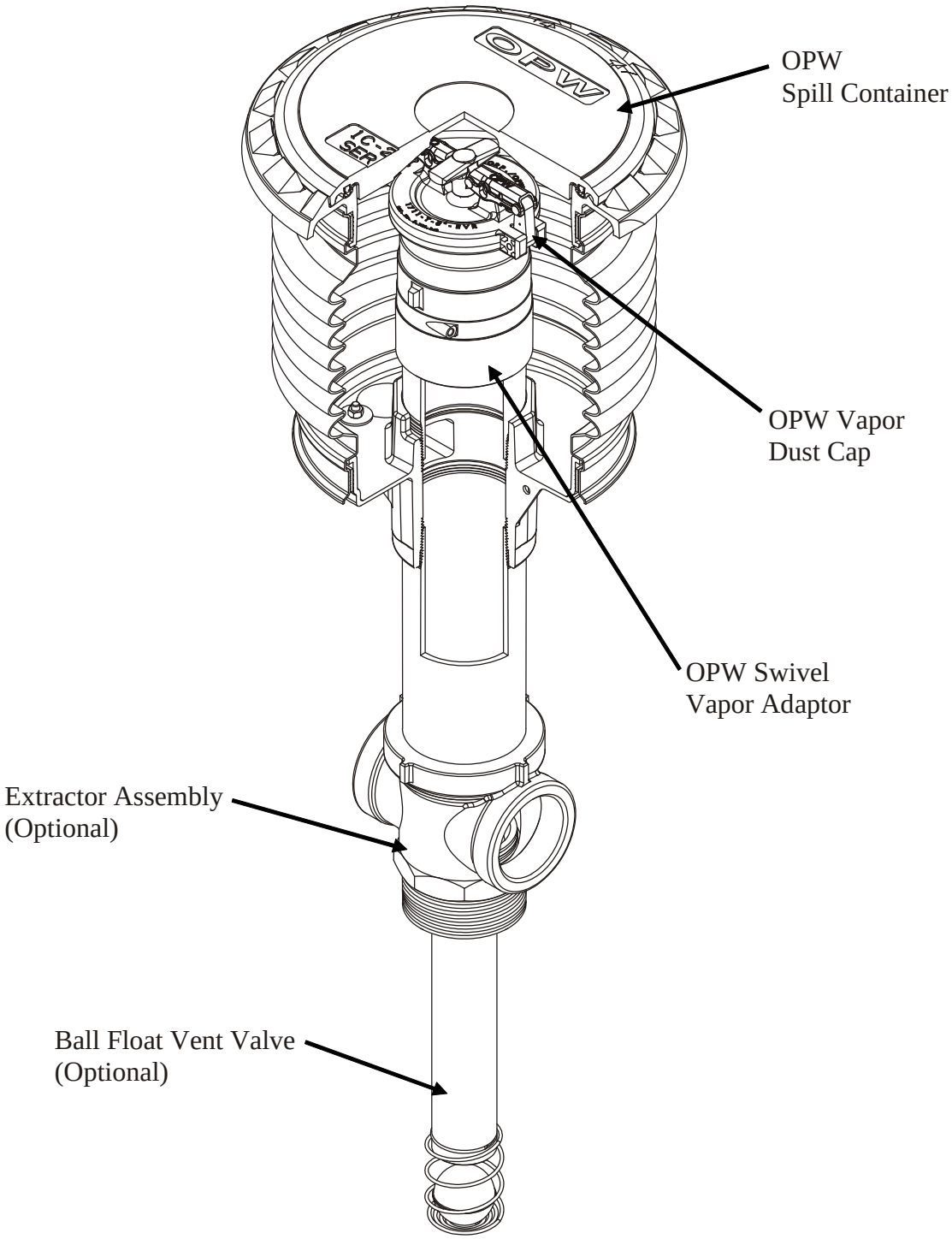


Figure 2C
Typical OPW/POMECO Double Fill Configuration

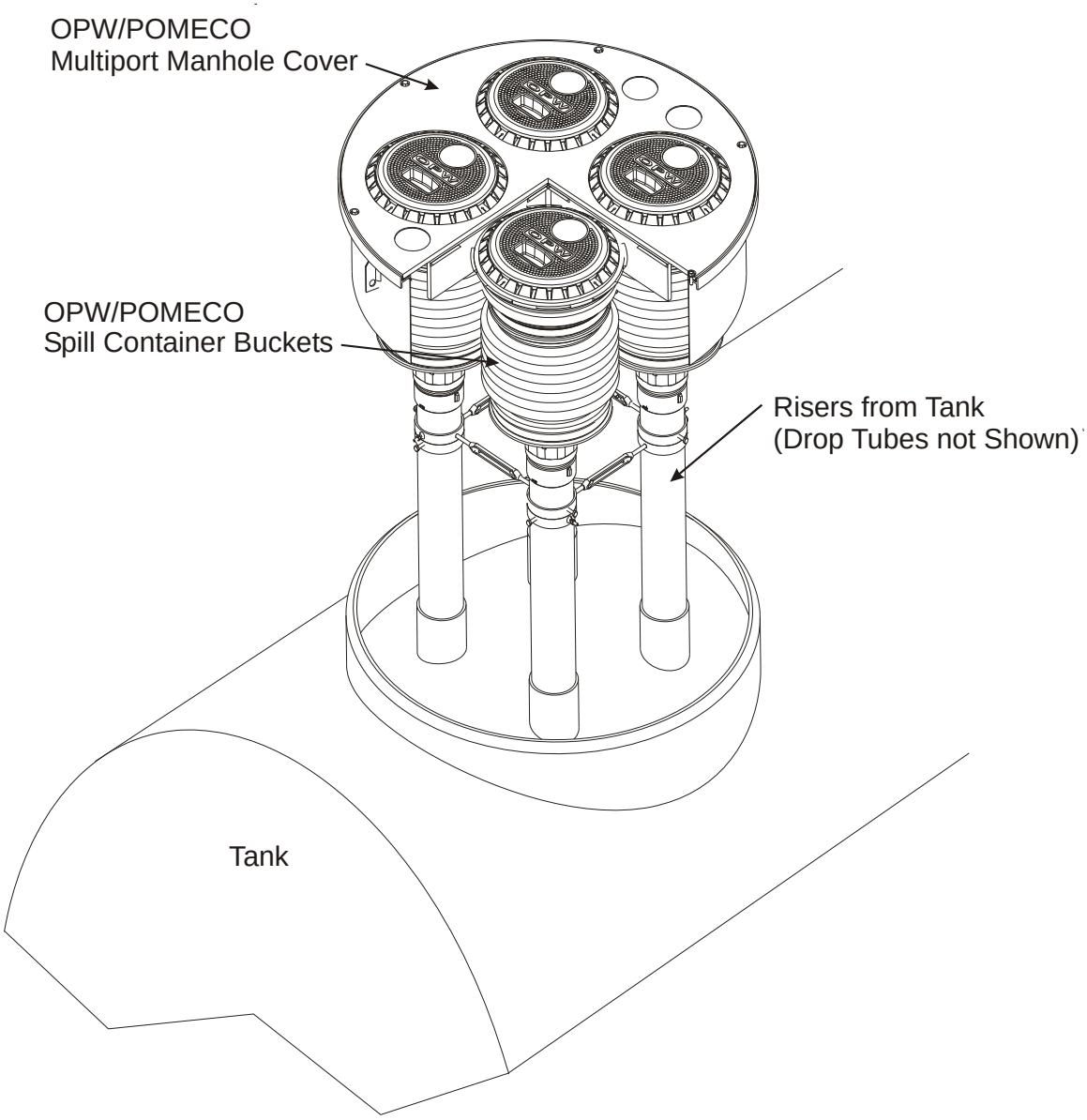


Figure 2D
Typical Remote-Fill Access Point Configuration

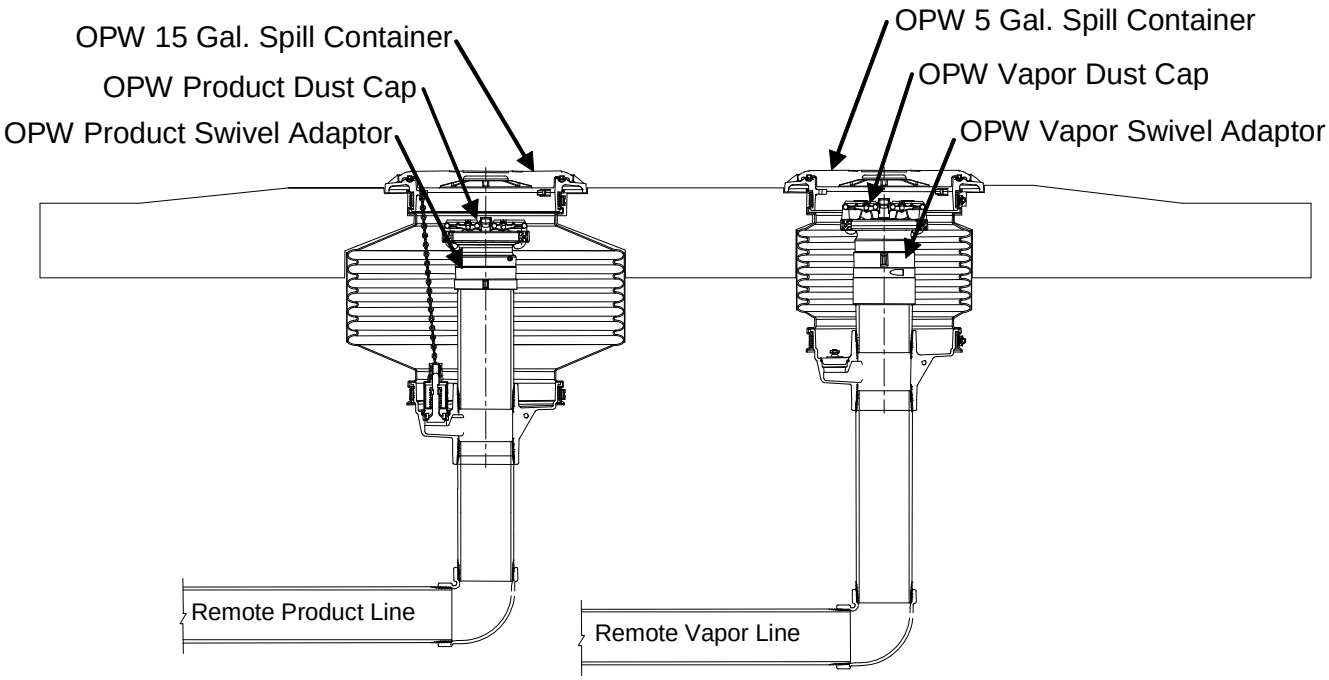


Figure 2E
Typical Remote-Fill Tank Top Configuration

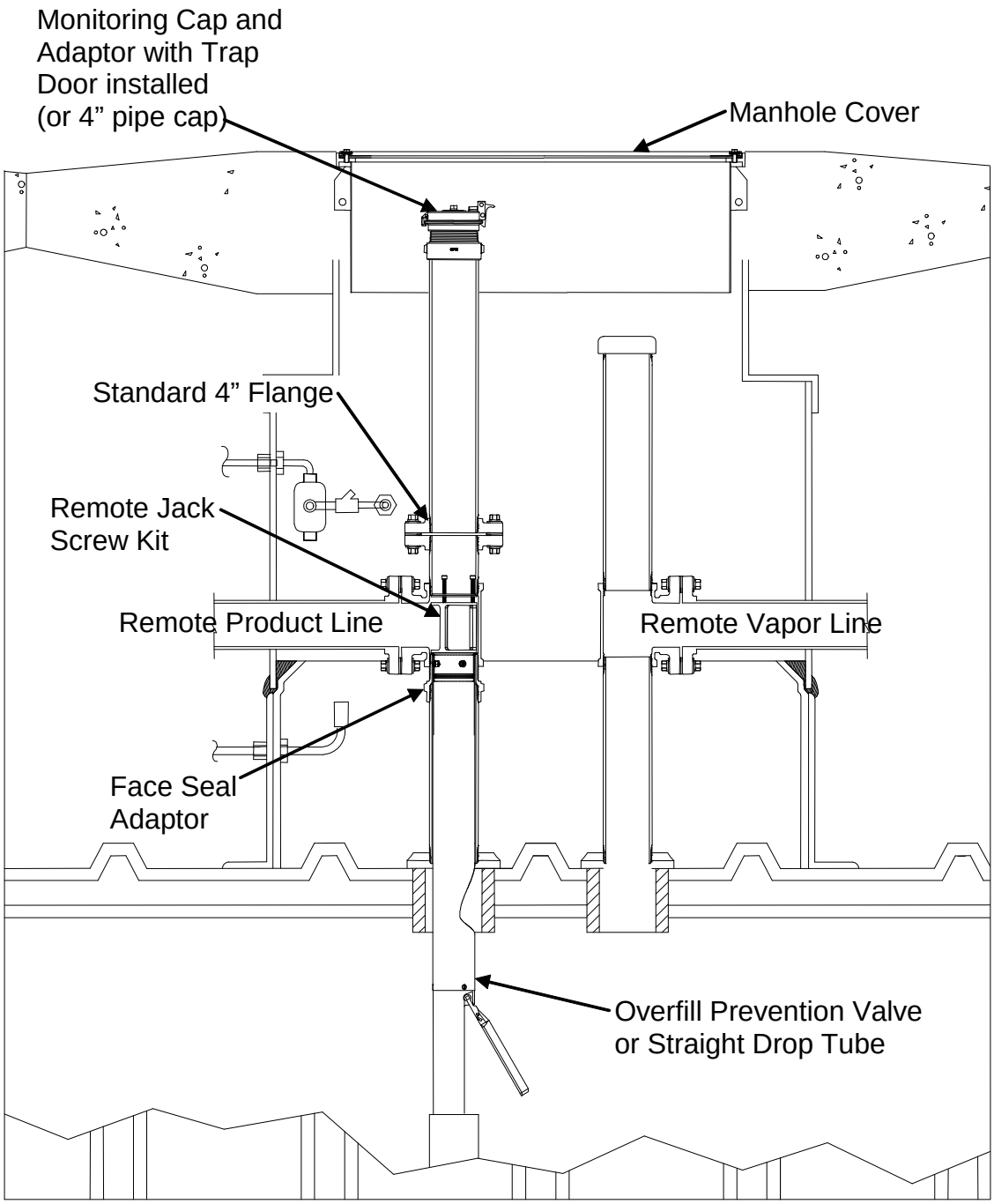
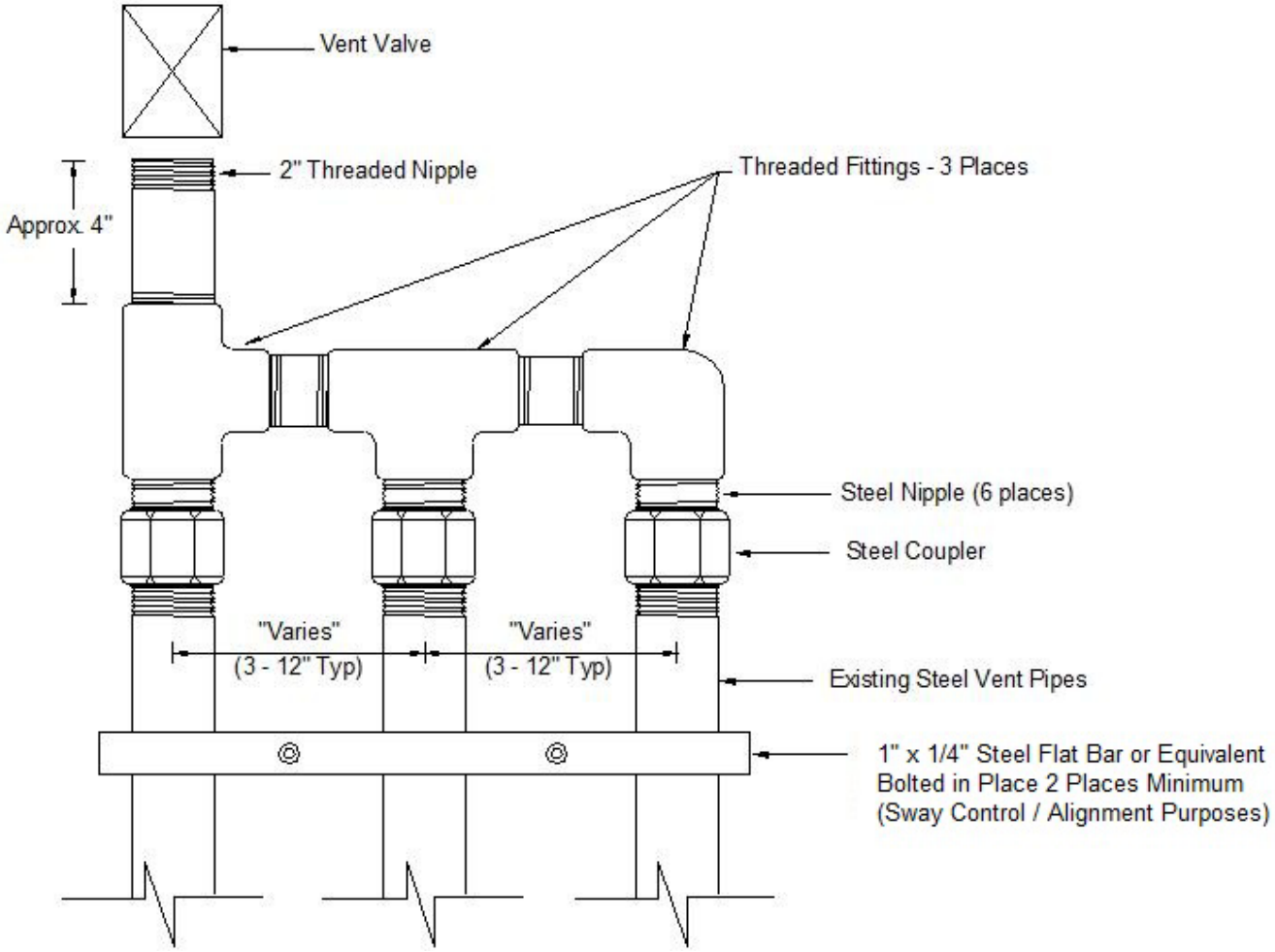


Figure 2F

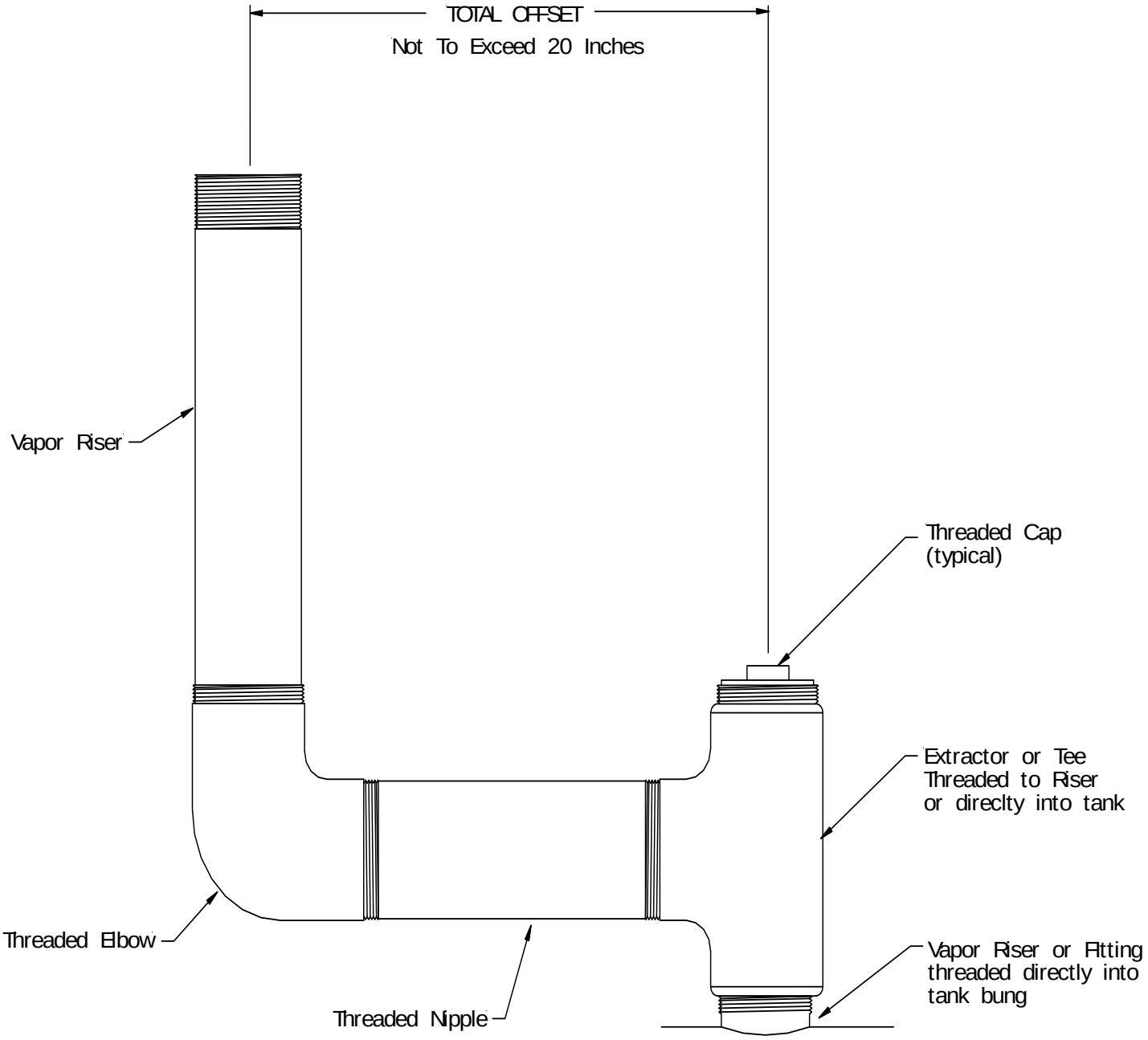
Typical Vent Pipe Manifold



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 2G

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 2H

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

Executive Order VR-102-L OPW Phase I Vapor Recovery System

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 ARB-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 or gold 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_2O
Spill Container Drain Valve	TP-201.1C or TP-201.1D	≤0.17 CFH at 2.00 inches H_2O
Pressure/Vacuum Vent Valve	TP-201.1E	Positive Pressure: 2.5 to 6.0 inches H_2O Negative Pressure: 6.0 to 10.0 inches H_2O Leak rate: ≤ 0.05 CFH at +2.0 inches H_2O Leak rate: ≤ 0.21 CFH at -4.0 inches H_2O