STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Mark N. Templeton, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

JUN 18 2009

Mr. Aldo Sucaldito
OPW Fueling Components
P.O. Box 405003
Cincinnati, OH 45240

APPROVAL LETTER 2006-1A

Dear Mr. Sucaldito:

This letter is to inform you and OPW, of the Missouri Department of Natural Resources approval of the OPW Edge and Edge1 spill containment, for use in Missouri Stage I EVR balance, vapor recovery required gasoline dispensing facilities.

OPW requested approval of their EDGE (double wall) and EDGE1 (single wall) spill containers at the TRC meeting on February 10, 2009. The vapor related structure of the EDGE and EDGE1 (OPW 1-3100) is the same as the already approved OPW 1-2100-DEVR (EVR with drain valve) and PEVR (with drain valve plugged) spill buckets MOPETP approved in May 2006 (Approval Letter 2006-1). At the TRC, it was determined, by engineering review, that the OPW EDGE and EDGE1 would provide the benefits of the option of a double walled or single walled field replaceable spill bucket, without negative impact on the vapor recovery.

The CARB EO-vr102j, modification highlights, and installation instructions can be found in Attachment A.

MOPETP Approval Letter 2006-1 can be found in Attachment B.

Comparative photos of the approved 1-2100 and to be approved 1-3100 spill buckets can be found in Attachment C.

The EDGE and EDGE 1 (1-3100) spill buckets were evaluated by the TRC and tested at CARB and should be approved with the following requirements:

1. The spill buckets must be marked as shown in the photos in Figures 1 and 2.
2. The 1-Series includes the 1- (aluminum), 1C- (cast iron), and 1SC- (sealable aluminum cover with an expandable seal).

3. The spill buckets must be installed and maintained according to the manufactures installation and maintenance instructions provided in the eo-vr102j-iom.pdf in Attachment A.
4. The Edge and Edge 1 spill containment must be used with the OPW Stage I EVR system.
5. All conditions, requirements, testing, and maintenance provisions referenced in CARB certification of this product are included in this approval.

Thank you for your cooperation in the MOPETP process. If you should have any questions about this approval, please contact Mr. Bud Pratt at the Department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, or by telephone at (573) 751-4817.

Sincerely

AIR POLLUTION CONTROL PROGRAM

James L. Kavanaugh
Director

JLK:bpt

Enclosures

c: Vapor Recovery

Attachment A

OPW Installation and Maintenance Instructions

OPW 1-3100 Series Thread-On Double Wall Grade Level Spill Containers

IMPORTANT: Please read these warnings and use the assembly instructions completely and carefully before starting. Failure to do so may cause product failure, or result in environmental contamination due to liquid leakage into the soil, creating hazardous spill conditions.

IMPORTANT: The OPW 1-3100 Spill Container is pre-assembled for your convenience and ease of installation. Check to make sure the unit is intact and undamaged and all parts have been supplied. Never substitute parts for those supplied. Doing so may cause product failure.

WARNING-DANGER: Using electrically operated equipment near gasoline or gasoline vapors may result in a fire or explosion, causing personal injury and property damage. Be sure that the working area is free from such hazards, and always use proper precautions.
NOTE: At all times when product is in the storage tank keep the riser pipe capped, so the vapors cannot escape into the environment.

Notice: OPW products must 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 in this literature are based on the latest production information available at the time of publication. Prices, materials, and specification are subject to change at any time, and models may be discontinued at any time, in either case, without notice or obligation.

Standard Product Warranty

OPW warrants that products sold by it are free from defects in materials and workmanship for a period of one year from the date of manufacture by OPW (ECO products two years from date of manufacture.) Proof of purchase may be required. As the exclusive remedy under this limited warranty, OPW, 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 manufacture period (repairs, replacements, or credits may be subject to prorated warranty for 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 service representative authorized by OPW, or when failure is due to misuse, or improper installation or maintenance. OPW 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, reinstallation, loss of profit, or any other cost or charges.

For any product certified to California 2001 standards, OPW warrants that product sold by it are free from defects in material and workmanship for a period of one year from date of manufacture or one year from date of registration of installation not to exceed 15 months from date of manufacture by OPW.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND SPECIFICALLY THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

In some states it is prohibited to use spill container drain valves on spill containers that are exclusively used for vapor return risers. Install only 1-3100 Series Thread-On spill container models equipped with a drain plug.

WARNING: If the snowplow ring is removed, for any reason, follow the Operation and Maintenance instruction as noted. Replace o-rings and seals and install new ones. Never reuse damaged o-rings or seals as it may result in an improper seal. Only qualified, competent, well-trained technicians should perform maintenance. Common sense and good judgment should always be exercised. The contractor's understanding of all related site conditions prior to starting the project is essential. If the contractor does not have a clear understanding of the required work and site conditions, the contractor is advised to seek clarification prior to starting any portion of the project.

NOTICE TO DELIVERY DRIVER: All delivery drivers MUST inspect the inside of the container for water or contaminants other than fuel prior to delivery. If water or contaminates are present, then they MUST be removed before proceeding. Dispose of towels and debris safely and per all applicable local, state, and federal codes. After delivery is complete, the driver MUST drain any excess fuel that may have spilled into the container from their delivery hose.

1-3100 Series Performance Specifications:
This Spill Container drain valve has been manufactured and tested to the following specifications: Leak Rate to be less than or equal to 0.17 CFH @ 2.0 " W.C.

Torque Specification:
Spill Container 4" NPT, 125 ft-lbs minimum to 250 ft-lbs maximum.

4" Nipple: 4" NPT, 125 ft-lbs minimum to 250 ft-lbs maximum.

Note: All 4" NPT threads are to be torqued progressively lower from the tank up.

Drain Valve clamps: 5/16-18 UN thread, 11.5 ft-lbs minimum to 13.5 ft-lbs maximum.

Ring and Nipple Adaptor Bolts: 3/8-16 UN, 20 ft-lbs minimum to 25 ft-lbs maximum.

Tools Recommended:
1-3100-TOOL – Torque Installation Tool
DW-VAC-TEST – Vacuum Test Equipment
(or 202310 Test Adaptor)

OPW NO. 1-3100 SERIES GRADE LEVEL SPILL CONTAINER INSTALLATION INSTRUCTIONS:

Step 1: (See Figures 1 & 2)
Determine riser pipe height. "L" is the distance between the top of the riser pipe and finish grade.
***Note:* The spill container height (from riser to grade) is L+ 1".**

Model Series	"L" Dimension
1-3100, 5 Gal. (Cast Iron Base)	L=15 5/8" (40cm)

Step 2:
De-burr and thoroughly clean riser pipe. Apply pipe dope to riser threads. Pipe dope to be a non-hardening, gasoline resistant pipe thread seal compound.

Step 3:
Install gravel guard on riser pipe. Leave band clamp loose.
***Note:* Ground riser pipe to nearest grounding rod.**

Step 4:
Install spill container by rotating the mounting ring until hand tight.
***Note:* Do NOT attempt to completely tighten the container using the mounting ring. Doing so may cause the unit to fail.**

Step 5: (See Figure 2)
Finish tightening the spill container secondary base using the wrenching boss or with the 1-3100-TOOL. Torque to 125 ft-lbs min. to 250 ft-lbs max (4" NPT). 1-3100-TOOL can be used to set final torque (see 1-3100-TOOL instructions).

Step 6: (See Figures 2 & 3)
Remove Nipple Adaptor from spill container. Apply pipe dope to nipple and install in Nipple Adaptor. Pipe dope to be a non-hardening, gasoline resistant pipe thread seal compound. Use only factory made nipples. Torque nipple to 125 ft-lbs min. to 250 ft-lbs max. (4" NPT). 1-3100-TOOL can be used to set final torque. Torque value is based on rotation at the center of pipe. Install rotatable adaptor and dust cap per manufacturers' instructions. Install drop tube, overfill prevention valve and/or loose jack screw assembly if used (61JSK-44CB) per manufacturers' instructions. Reinstall the Nipple Adaptor in spill container. Torque Nipple Adaptor bolts to 20 ft-lbs minimum to 25 ft-lbs maximum.
Note: Nipple length is determined by measuring from the bottom of the threaded portion of the base to the bottom of the cover. Then subtract 2" minimum for clearance, height of adaptor and height of cap. Range of nipple lengths that can be used in all of the OPW spill containers: 4" minimum to 9" maximum. See Figure 5.

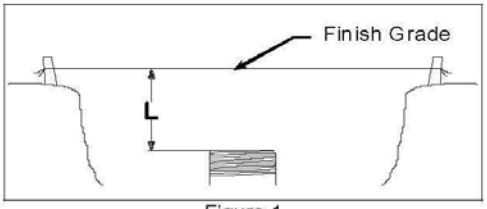


Figure 1

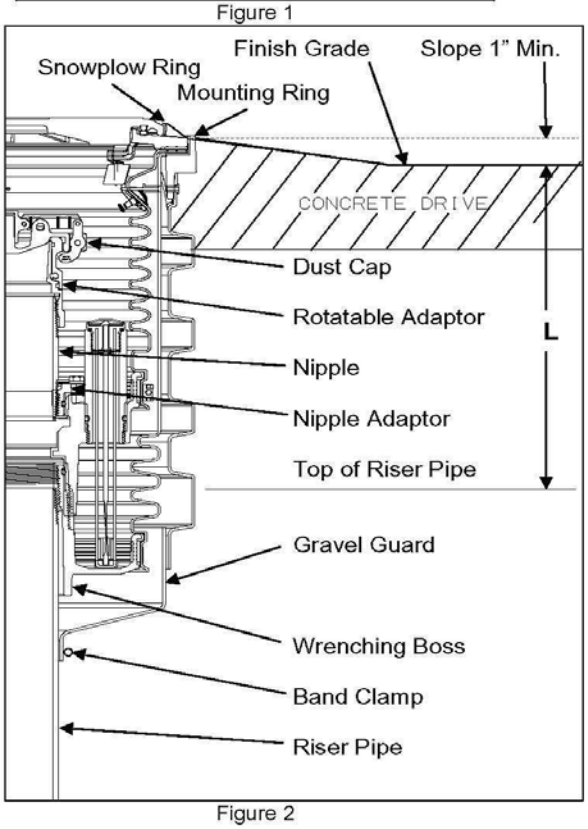


Figure 2

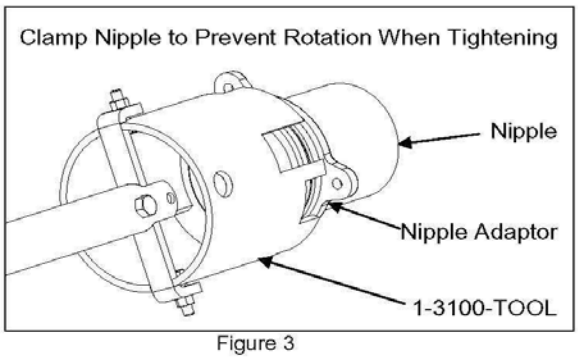


Figure 3

Step 7: (See Figure 4)
If necessary, the height of the spill container can be adjusted by ±1" (2.5cm). If it is necessary to increase height, install adjusting system beneath tabs on mounting ring. Add shims as needed and adjust with screw.
***Note:* The adjustment should not be more than 1" from the initial length of the unit.**

Step 8:
Where applicable, upon preliminary installation perform the CARB Test Procedure TP-201.1C or equivalent. This Test Procedure will check the seals between the drain valve, nipple, bases, and rotatable adapter.
***Note:* Follow all state and local required testing on the primary and secondary buckets.**

Step 9: (See Figure 7)
Verify torque on mounting ring bolts. Torque to be 20 ft-lbs minimum to 25 ft-lbs maximum.
Using OPW DW-VAC-TEST (or 202310 Test Adaptor), perform a vacuum test on the spill container. An initial vacuum of 15" of water should be attained and the spill container must retain a vacuum of at least 12" of water after 5 minutes. (See DW-VAC-TEST Instructions.)

Step 10: (See Figure 2)
Install gravel guard at final height as shown in Figure 2 and tighten band clamp to 30 in-lbs. Where applicable, per California SB-989, all metal must be protected from direct contact with the elements. Coat stainless steel band clamp with the following approved coatings: OPW SL-1100, 3M Underseal 08883 or Polyguard Mastic CA-9.

Step 11: (See Figures 2 & 5)
Before pouring concrete, place plastic over the cover and Mounting Ring protecting them from concrete splash and tighten the clamp on the gravel guard mounted on the riser pipe. Double check that the unit is level and at proper grade height. Pour concrete per Figure 5. Ramp or dome the concrete away from the mounting ring. There should be a minimum of 1" slope to finish grade.
***Note:* Do not stand on spill container before concrete sets up.**
Remove plastic from cover after concrete has dried. Remove adjustment system. Re-test the spill containers for leaks as described in step 9, after the concrete has set up.

Operation and Maintenance:

After each fuel delivery, the operator must remove any standing fuel from the container. Fuel can be removed by actuating the drain valve or with a gasoline absorbing disposable towel.
Weekly: Perform a visual inspection of the interior of the primary containment bucket for water or other contaminants and check the secondary containment bucket by checking the gauge in the base of the spill container. If water or other contaminants are found they must be disposed of with disposable towels. Dispose of towels safely and per all applicable local, state and federal codes. Check that cover is in good condition and properly identified. Replace cover and seal as necessary. Inspect the bucket walls for cracks, bulges or holes. If any exist, have that spill container barricaded and contact maintenance personnel immediately for repairs.
Semiannually: Follow all state and local required hydrostatic or vacuum testing on the primary and secondary buckets. Inspect and clean the interior of the spill container and drain valve screen. Remove accumulated dirt and grit. Where applicable, test the drain valve using CARB procedure TP-201.1C or TP-201.1D. If the drain valve passes testing no further maintenances required. If the drain valve fails testing, remove the valve, soak in water and use high-pressure air, if needed, to clean. Reinstall the drain valve to its proper position and where applicable, test the valve with CARB procedure TP-201.1C or TP-201.1D. If problems persist, replace the drain valve with P/N 1DK-2100-EVR (specified torque 11.5 ft-lbs min to 13.5 ft-lbs max, 5/16-18 UN thread).

Important: Leave these instructions with Station Operator.

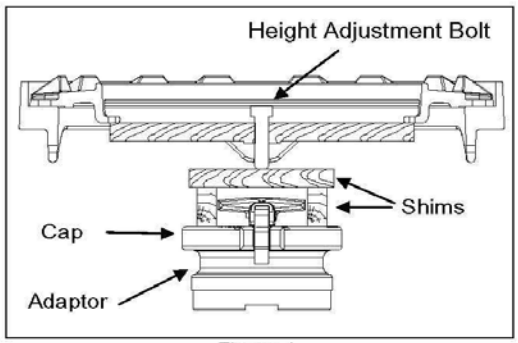


Figure 4

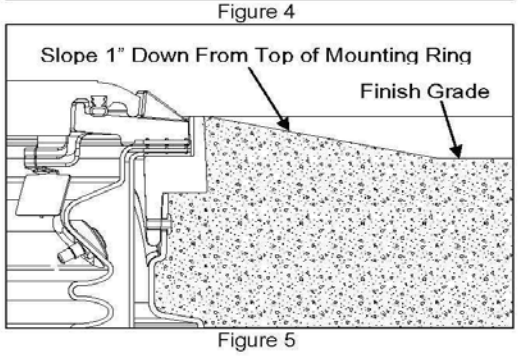


Figure 5

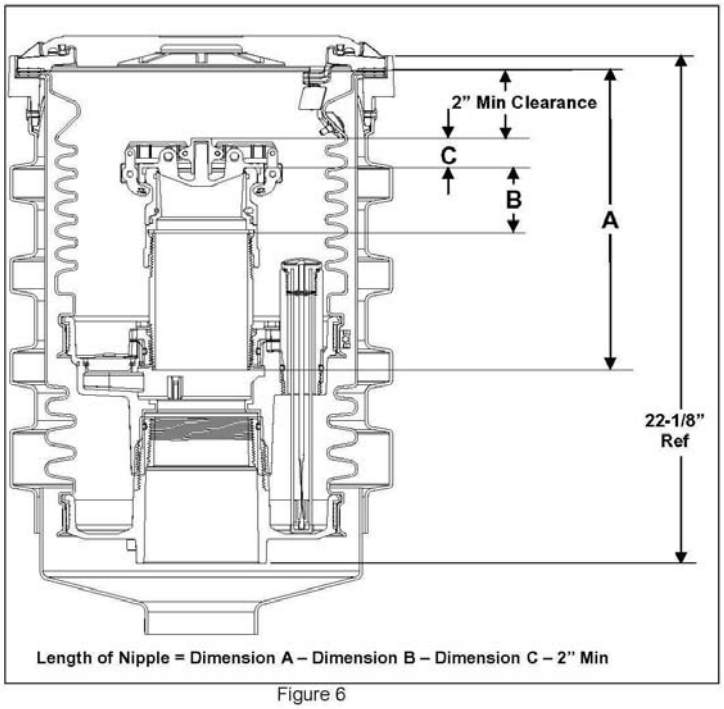


Figure 6

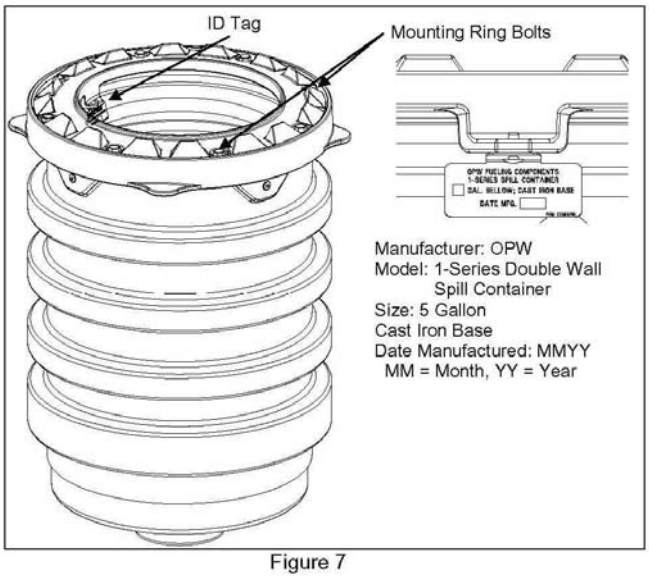


Figure 7

P.O. Box 405003
Cincinnati, Ohio 45240-5003
1-800-422-2525 Domestically
513-870-3315 Internationally
www.opw-fc.com

p/n 202181 – 04/08

Attachment B

April 18, 2006

Peter Manger
Design Engineer
OPW Fueling Components
P.O. Box 405003

APPROVAL LETTER 2006-1

Mr. Manger:

This letter is to inform you and OPW Fueling Components, of the department's approval of the OPW, Enhanced Vapor Recovery (EVR) Stage I vapor recovery (VR) system, for use in all Missouri Stage I VR required gasoline dispensing facilities (GDF). The California Air Resources Board (CARB) has begun the EVR certification of all new VR systems to meet these more stringent standards. With this approval, all Missouri GDFs in the ozone non-attainment or maintenance areas, which must applying for VR permits to construct new facilities, will be required to incorporate this MOPETP approved EVR Stage I system, or a similar EVR Stage I system which may be approved in the near future. All standards and conditions applied in the CARB certification for this system will also be held as a condition of this MOPETP approval.

Your company, after receiving CARB EVR certification E.O. VR-102-E, applied to this program to request MOPETP testing and approval of your OPW EVR Stage I VR system. The subsequent MOPETP testing was conducted at the Sinclair Oil station # 24089 (state coded 0217). All Stage II VR components at this test site were previously CARB certified and MOPETP approved. The official testing began on August 23, 2005, and was completed on January 18, 2006. During this official testing period the test site was under continuous monitoring of system pressure, temperature, fuel drops, maintenance, as well as atmospheric pressure and temperature. This data along with the spot checks provided by leak decay tests, and other tests listed below, were used to evaluate the system.

Older Stage I systems were prone to reoccurring leaks due to innate problems of design such as vapor and fuel port adaptors coming unscrewed during the final stages of a tanker delivery of product to the UST. This issue has been greatly improved by the swivel adaptor design. Other similar issues have been addressed as well in the new OPW EVR Stag I system. With the new CARB EVR certification the standards for emission reduction has been enhanced as well. Pressure vacuum valves, and drop tubes with overfill prevention valves have to meet more stringent standards to achieve CARB and

MOPETP approval. These much needed improvements will go a long way to reducing the emissions of GDFs.

The MOPETP testing for OPW Stage I EVR at the Sinclair station included the following tests and evaluations.

Listing of tests performed during the OPW EVR Stage I MO/PETP.

Test	Date
Continuous Monitoring (MOTP-01) - System	August 23, 2005 through January 18, 2006
Bench Testing (MOTP-02) – PV Valves	August 23, 2005
	December 14, 2005
	January 17, 2006
Static Pressure (Leak Decay) Testing (MOTP-03) – System	August 23, 2005
	September 14, 2005
	January 17, 2006
Dynamic Pressure (Back Pressure) Testing (MO/TP-04) – System	August 23, 2005
	January 17, 2006
Stage I Efficiency Test (MOTP-06) – Stage I Components	October 13, 2005
	January 18, 2006
Torque Test (MOTP-10) – Swivel Adaptors	August 23, 2005
	January 17, 2006
Drop Tube/Drain Valve Leak Test (MOTP-11) – Stage I Product delivery components	August 23, 2005
	January 17, 2006

The Stage I overall efficiency of the system must be >=98% relative to the uncontrolled emissions under conditions similar to those during the testing.

The Stage I Efficiency Test (MOTP-06) was initially performed on October 13, 2005. The PV vents had been bagged using approximately 20 gallon trash bags. There were excess emissions during the testing demonstrated by inflation of the trash bags and excessive pressure in the USTs. The test may have been adversely affected by one or more of the following issues: fuel drop allowed to contain conventional winter gasoline (federal Katrina RFG/RVP fuel waiver) during recent fuel drops, higher than normal winter temperatures, one compartment with 50% ullage, and probable issues with the cargo tanker (Sinclair #502) indicated by a vibrating noise from the tanker during the high pressure parts of the test.

The test was successfully repeated on January 18, 2006 after the tanker truck had been re-inspected and some valves repaired. The waiver period fuel allowed to contain conventional gasoline or as pure conventional gasoline had long passed and the temperatures were much cooler. The test passed with no emissions (UST at vacuum during the entire test) or 100% efficiency. A total of 3150 gallons of fuel was delivered (1350 gal. of Premium, and 1800 gal. of Regular).

Determination of Stage I efficiency using the continuous temperature and pressure monitoring data over the period from August 23, 2005 through January 18, 2006 indicated an overall emission factor of 0.02 lbs HC/1000 gallons of fuel dispensed over the full period of 147 days.

All OPW Stage I EVR systems and components must be installed and maintained as directed in the CARB E.O. VR-102-E, or most recent applicable executive order, and as directed in the applicable Installation and Maintenance Manuals provide by the manufacturers. This includes the component "replace by" dates which may be attached to the component.

In attachments shown in Appendix A, B, C, the various components, which comprise an OPW EVR Stage I VR system are listed. All new stations will be required to install this system, or a similar Stage I EVR system, which may be MOPETP approved in the future. Installation, maintenance, and testing requirements must meet manufacturers recommendations and all CARB EVR conditions. Existing stations (which do not apply for a construction permit) will not be required to install this Stage I upgrade. However, in the foreseeable future, this upgrade will most likely be required of all existing stations. Existing stations may install compatible OPW EVR Stage I components from this list in a "piece meal" fashion, in a gradual effort to meet future requirements, as long as their entire system continues to function properly and they pass the required tests.

Thank you for your cooperation in this matter. If you should have any questions about this approval, please contact Mr. Bud Pratt at the Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, or by telephone at (573) 751-4817.

Sincerely

AIR POLLUTION CONTROL PROGRAM

James L. Kavanaugh
Staff Director

Attachments: Appendix A, B, C

C: All Stage I & II contacts

Attachment C

OPW EDGE™

- Double wall replaceable 1-3100 series.
- Identification tag located on ring.
- Drain valve (end in D) and plug (end in P) models.
- Float gauge or sensor adaptor will be present in primary bucket.

EDGE 1™

Single-Wall Spill Container

- Single wall replaceable 1-3100 series.
- Identification tag located on ring.
- Drain valve (end in D) and plug (end in P) models.

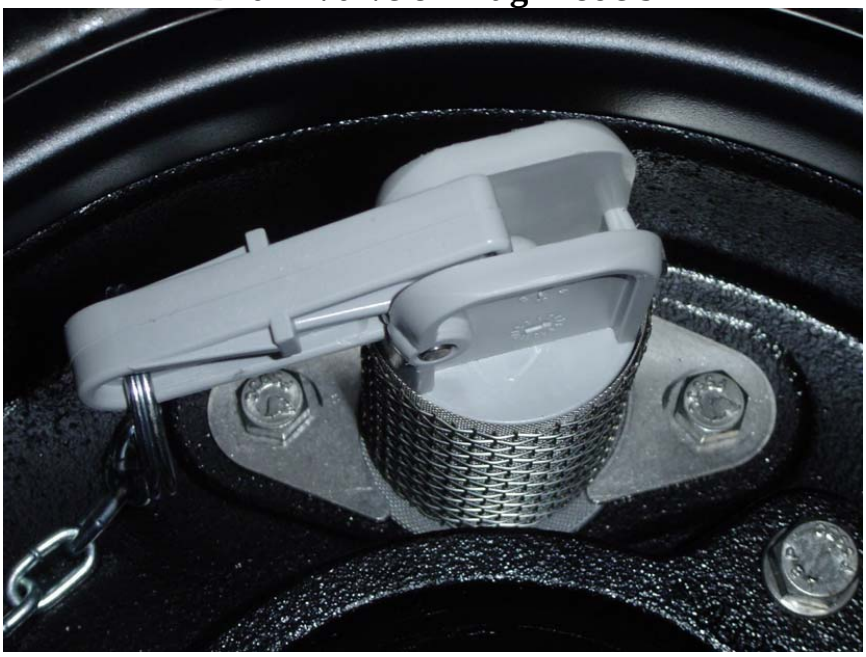

OFW

1-2100 Series

- Single wall 1-2100 series.
- Identification tag located on ring.
- Drain valve (end in DEVR) and plug (end in PEVR) models.
- Available in composite base and cast iron base (C) models.

OPW 1-Series Spill Container

Drain Valve or Plug Models



Drain Valve (DEVR or D) models. Shown in cast iron base.

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Plug (PEVR or P) models. Shown in cast iron base.