

Don K. Mukai

MECHANICAL ENGINEER

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May 18, 2012

Mrs. Paola B. Recendez

S. Bravo Systems, Inc.

2929 Vail Ave.

Commerce, CA 90040

Re: Specification approved by a state registered professional engineer

CCR Title 23, Division 3, Chapter 16, Article 3, Section 2631(d)

This letter is for an engineering specification review and approval of a secondary containment system component which is not an integral part of primary containment for an underground fuel tank storage system in California. The authority for this approval comes from the California Code of Regulations (CCR) Title 23, Division 3, Chapter 16, Article 3, Section 2631(d).

I have examined and reviewed the following specifications on the Bravo F-Series D-BLR-S Series fittings (DOUBLEWALL, SPLIT FIBERGLASS RETROFIT FOR BLUE LINE) and the Bravo F-Series D-INR-S Series fittings (DOUBLEWALL, SPLIT FIBERGLASS RETROFIT FOR ALL OTHER FLEXIBLE ENTRY FITTINGS):

- 1) UL Certifications Directory MH26018 for Vipel F-764 and F-774 resins
- 2) AOC Vipel Product Selection Guide
- 3) AOC Vipel Corrosion Resistance Guide
- 4) Bravo Systems datasheet F-Series-DW-10A
- 5) Bravo Systems datasheet F-Series-Retrofit-SD-AB-12A
- 6) Bravo Systems datasheet F-Series-D-BLR-S-12B
- 7) Bravo Systems datasheet F-Series-D-INR-S-12A
- 8) Bravo Systems Installation Manual ii-F-SERIES-1X-SS-D-11A
- 9) Bravo Systems Installation Manual ii-F-SERIES-LCX-D-09B
- 10) Bravo Systems Installation Manual ii-F-SERIES-TS-D-11A
- 11) Bravo Systems Installation Manual ii-FS-RETROFIT-SD-AB-12C
- 12) Bravo Systems Installation Manual ii-F-SERIES-D-BLR-S-12A
- 13) Bravo Systems Installation Manual draft for the F-Series D-INR-S
- 14) Bravo Systems Third Party document 3RP-F-Series
- 15) Bravo Systems Third Party document 3RP-FS-RETROFIT-S
- 16) Bravo Systems UL Approval document UL-ULC_BRAVO_FSERIES
- 17) Bravo Systems Adhesive-Epoxy-Kit and Adhesive-Retrofit-Epoxy-Kit
- 18) Smith Bulletin D4025 December 15, 2007
- 19) Smith Bulletin D4010 April 15, 2007

- 20) Smith Bulletin B2102 May 1, 2006
- 21) Ameron PSX-20 Adhesive Kit - Bondstrand Product Data FP698B (10/04)
- 22) RPM Technology Petrol Seal Weight Loss and Flexibility
- 23) RPM Technology Petrol Seal Swell Test Results
- 24) RPM Technology Petrol Seal Test Reports with Methods
- 25) RPM Technology Petrol Seal Summary Test Report Fuel Exposure


This system provides a permanent retrofit solution to replace from the inside of a containment sump, a new, suspect or failing Blue Line Technologies Kwik-Fit flexible penetration fitting which is used to make a seal between the fiberglass wall and steel conduit or fiberglass piping. This product maintains the integrity of the interstice of the double wall containment sump by sealing the secondary wall (outer) and the primary wall (inner) to the pipe line that passes through them. I have noted that standard models of the D-BLR-S and D-INR-S are available that are each tailored to each type of pipe but also that oversized or custom made components are available should they be required based on a specific application or site conditions. For the purposes of this review, I have:

- 1) Reviewed the construction and installation procedures for both the double wall F-Series full body and the split Retrofit-SD-AB Series fiberglass retrofit fittings for fiberglass pipe and conduit.
- 2) Reviewed the construction and installation procedures for the double wall F-Series fiberglass split retrofit D-BLR-S and D-INR-S Series fittings for conduit.
- 3) Reviewed materials used to construct the secondary containment system for sufficient thickness, density and corrosion resistance to prevent structural weakening or damage to the secondary containment system as a result of contact with hazardous substances contained in California fuels or their additives.

Upon review of the manufacturing procedures, employment of the materials used in the fabrication of the F-Series D-BLR-S and D-INR-S fitting product lines and the manufacturer's installation guidelines, it is my conclusion that sound design and engineering of this product for use with fiberglass double wall containment structures and aforementioned conduit and fiberglass piping will meet or exceed the secondary containment requirements as concerns corrosion resistance and material compatibility of all motor vehicle fuels, alternative fuels or their additives currently used by petroleum marketers today. I approve the above engineering specifications for the Bravo F-Series D-BLR-S and D-INR-S Series retrofit entry fittings.

Please contact me with any questions at 323-888-4136.

Sincerely,


Don K. Mukai
Mechanical Engineer

