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Date: February 28, 2014

TTC Job No.: 2441.01

Attn: Mr. Doug Nakano, President, Fuel Oil Systems
6681 Sierra Lane., Ste. F, Dublin, CA 94568-2613
Sent via pdf to dnakano@fueloilsystems.net

RE: Brugg Flexwell piping for emergency generator and boiler fuel system applications in San Francisco, CA

Based upon a review of the information and conditions outlined below, the following Brugg double wall piping for use in above ground emergency generator and boiler fuel oil system applications can withstand the pressure demands for lifts of up to 500-feet:

Brugg Model Nos.:
FSR-HL 13/25
FSR-HL 30/48
FSR-HL 48/71
FSR-HL 60/83

The integral secondary containment piping can withstand the pressure demands of an open leak detection system without separating from the primary piping system, so long as the open fitting is at the lowest point of the piping run.

Analysis of fire exposure is not part of this letter.

Initial pressure testing shall follow NFPA 30, i.e.:

Primary pipe testing shall be done hydrostatically to 150 percent of the maximum anticipated pressure of the system or pneumatically to 110 percent of the maximum anticipated pressure of the system, and the test pressure shall be maintained while a complete visual inspection of all joints and connections is conducted. In no case shall the test pressure be less than a gauge pressure of 5 psi measured at the highest point of the system, and in no case shall the test pressure be maintained for less than 10 minutes.

The interstitial (annular) space of secondary containment–type piping shall be tested hydrostatically or pneumatically at a

gauge pressure of 5 psi or shall be tested in accordance with the manufacturer's instructions. The pressure source shall be disconnected from the interstitial space to ensure that the test is being conducted on a closed system. The pressure shall be maintained for a minimum of 1 hour.

I relied upon the following information provided by you and Brugg:

Brugg Flexwell Pipe for Emergency Generator and Boiler Fuel System Applications in New York, NY, March 2013

BRUGG FLEXWELL PIPING FEATURES.docx

BRUGG VERTICAL PIPE SUPPORT REQUIREMENTS.docx

Email: Doug Nakano <dnakano@fueloilsystems.net> Tue, Jan 14, 2014 To: mdonohue@transtechconsultants.com Cc: Jerry jerry@jursales.com

Email: Doug Nakano <dnakano@fueloilsystems.net> Wed, Jan 15, 2014 To: Matt Donohue <mdonohue@transtechconsultants.com>

Email: Doug Nakano <dnakano@fueloilsystems.net> Thu, Jan 23, 2014 To: mdonohue@transtechconsultants.com, Melanie melaniemiller@fueloilsystems.net

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FLEXWELL®-HL Double Wall Stainless Steel Pipe for Above Ground, Below Ground, Marina and Commercial Fuel Systems 03/12

Flexwell-HL End fitting with male thread HL 4.602.1

FLEXWELL-HL Pipe 13/25 / ½ inch – Installation Instructions FSR 4.642.1

FLEXWELL® pipework Technical statement Burst Pressure RT/Hm date: 22.01.2014

Matrix of Metallic Pipe Monitoring Application Updated August 29, 2013

New York City Mechanical Code Chapter 13, 2008

Pipesystems for Gas Stations Flexwell-HL Installation Instructions 05.08

Underwriters Laboratories Inc. Certificate of Compliance MH45398, 2007 September 20 Piping Flammable Liquid, Underground

Very truly yours,
Trans Tech Consultants

Matthew E. Donohue, P.E.
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