



U.S. Department
of Transportation

Pipeline and Hazardous Materials
Safety Administration

1200 New Jersey Ave., SE
Washington, DC 20590

OCT 21 2008

Mr. Andrew Abrams
761 West Sproul Road Unit 208
Springfield, PA 19064

Ref. No.: 08-0205

Dear Mr. Abrams:

This is in response to your August 7, 2008 letter requesting clarification of the emergency discharge control equipment requirements provided in § 173.315(n) of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you request clarification of the roles performed by the Design Certification Engineer and Registered Inspector during the assembly and installation of Smart-Hose Passive Devices. Your questions are restated and answered as follows:

Q1: Section 173.315(n)(2)(ii) requires the design of the equipment to be certified by a Design Certifying Engineer. Does the Design Certifying Engineer need to be present to review each component of the Smart-Hose System?

A1: No. The Design Certifying Engineer is only required to certify that the design of the emergency discharge control equipment conforms to the performance standard in § 173.315(n)(2). There is no requirement to review each component throughout the manufacturing process.

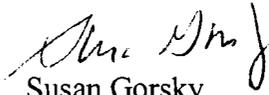
Q2: Paragraph (n)(2)(iii) requires the installation of emergency discharge control equipment to be performed under the supervision of a Registered Inspector. Does this mean that a registered inspector must be present during the installation and testing of the emergency discharge control equipment (e.g. Smart-Hose)?

A2: Generally, emergency discharge control equipment must be installed under the supervision of a Registered Inspector. "Under the supervision of" means the Registered Inspector must be present during installation and testing. Note, however, that § 173.315(n)(2)(iii) includes an exception for "equipment that is installed and removed as

part of regular operation (e.g., a hose).” A Smart-Hose is attached to a cargo tank motor vehicle in the same way as an ordinary hose; thus, supervision of such installation by a Registered Inspector is not necessary.

I hope this information is helpful. Please contact us if you require additional assistance.

Sincerely,

A handwritten signature in cursive script, appearing to read "Susan Gorsky".

Susan Gorsky
Acting Chief, Standards Development
Office of Hazardous Materials Standards

Andrew Abrams
761 West Sproul Road Unit 208
Springfield, PA 19064

Thursday, August 07, 2008

Mr. Charles Hochman
Director
Office of Hazardous Materials Technology
US Department of Transportation PHMSA
1200 New Jersey Avenue, SE Building 2nd Floor
Washington, DC 20590

Re: Letter of Interpretation – 49 CFR 173.315

Dear Mr. Hochman

I am writing in connection with the above captioned inquiry to ask for an interpretation of the regulations as it relates to the role of a DCE and Registered Inspector in the assembly and installation of certain passive devices.

Due to a recent internal dispute within Zena Associates LLC (d/b/a Smart-Hose Technologies), a series of initial consent decrees and now a court order has imposed a requirement that the current management of Zena must have a properly registered DCE, acting in an engineering manner on the production floor for 15 hours per week while the Smart-Hose Passive Devices are being assembled. It is now apparent that the current management through their attorney is challenging the specific language of 49 CFR 173.315 to have essentially an absentee engineer and inspector simply review documentation such as bills of materials and routing forms to comply with the regulations.

To provide some background information, after a legal dispute began in early March, for a period of three months, the existing management of Zena issued New Hose Certifications (see attached example) with contemporaneous dates of testing and assembly with the signature of Joseph Abrams who had not been employed at Zena for more than two months. In legal claims, Joseph Abrams has claimed that these were fraudulently issued without his consent and against his specific wishes. It is further alleged that once Zena was advised that customers were aware of this apparent inappropriate conduct, they began having an individual sign the same certifications prior to having registered with the US DOT. Mr. Abrams brought an action which resulted in an initial consent decree requiring the aforesaid supervision which Zena refused to comply with and then a subsequent Court Order requiring Zena to have the necessary engineering/inspection during the assembly process.

It is my understanding that during the Consent Decree Enforcement hearing and in other investigations relating to this apparent inappropriate conduct, Zena through their attorney misrepresented the results of an investigation indicating that “they had received a clean bill of health from DOT” presumably since they have contended that language of 49

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CFR 173.315 does not define the respective role of a DCE and a Registered Inspector thereby enabled them to have no Registered DCE or Registered Inspector supervising the assembly of the passive device during its assembly process. Rather, they have sought to interpret the language to enable them to have no technical staff on premises during the assembly process and have a part-time engineer review the documentation during off hours. Below are the pertinent sections of the Regulations:

(ii) The design for the means to automatically shut off product flow must be certified by a Design Certifying Engineer. The certification must **consider any specifications of the original component manufacturer** and must explain how the passive means to shut off the flow of product operates. It must also outline the parameters (e.g., temperature, pressure, types of product) within which the passive means to shut off the flow of product is designed to operate. All components of the discharge system that are integral to the design must be included in the certification. A copy of the design certification must be provided to the owner of the cargo tank motor vehicle on which the equipment will be installed.

(iii) Installation must be performed **under the supervision of a Registered Inspector** unless the equipment is installed and removed as part of regular operation (e.g., a hose). The Registered Inspector must certify that the equipment is installed and tested, if it is possible to do so without damaging the equipment, in accordance with the Design Certifying Engineer's certification. The Registered Inspector must provide the certification to the owner of the cargo tank motor vehicle.

Issue: Since the Smart-Hose System consists of the installation of a “passive device” into the internal section of a standard hose assembly, can a Design Certifying Engineer issue a single “one-time” certification for the system without reviewing the specific components of each hose assembly?

We submit that this is not the intention of the DCE Certification as it relates to a completely integrated system requiring no infield installation **since the Smart-Hose system is both designed and installed** by the manufacturer. An example of this premise would be if a Smart-Hose system were installed into an LPG hose that is installed into NH3 service, it will not function properly as a “passive device” due to potential product incompatibility issues yet the system could be certified without evaluating these issues if the regulations were interpreted otherwise.

Issue: Since the Smart-Hose system (or any fully installed passive device) is both manufactured and installed by the same entity, is the intent of the regulations to require the installation **”under the supervision of a Registered Inspector”** to require the Registered Inspector to look carefully at or over; view closely and critically or examine formally or officially the installation of the passive device and therefore must this function be performed contemporaneously with the installation of the system? More succinctly, can this function be performed by someone who is not present during the installation?

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While our distributors are not experts on the law they are concerned that there is no oversight. In addition they wonder how a company can operate in this fashion. If a "best efforts" or "wink and nod" adherence to federal law is all that is required have we not substituted one safety concern for another? Further should there be a failure like the leaking hose that was sent to a Zena customer with a false certification for an 8" barge unloading application, we would undoubtedly see the industry advocacy element that is aware of the situation at Smart Hose and make a challenge of some sort which will lead back to the long and bloody rulemaking that took place in the 1990's and later.

The safety of the industry has made great strides since the "passive device" has been made law and because the ill-motivated, inexperienced, potentially criminal management (i.e. false certifications) of one company (the dominant player) has opted to contort the law it may/will allow all others to not only walk down that same path but in fact spawn industry challenges.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read 'A. Abrams', written over a horizontal line.

Andy Abrams

SMART HOSE TECHNOLOGIES

New Hose Test Certification

The **Smart-Hose™** technology is a proven hose technology designed to counteract the hazardous effect of hose rupture or failure during fluid or gaseous transfer operations. All **Smart-Hose™** designs, **Smart-Hose™ I**, **Smart-Hose™ I with breakaway**, **Smart-Hose™ II** and **Smart-Hose™ III** utilize the unique, patented and patent pending designs which eliminates the potential for disaster through the use of an internal cable connected to specially designed, normally unseated valve "wedges or plungers" located on each end of the cable. In the event of **hose separation, stretching to the point of an unsafe condition or coupling-to-hose separation**, the valve "wedges or plungers or flappers" are released and instantly seat **stopping the flow in both directions.** (Operating temp. -40°F to 180°F)

I certify that this hose assembly meets all the requirements of the DOT and when installed on any MC330, MC331 or authorized non-specification compressed gas cargo tank will satisfy the requirements for the passive shut down feature required for these cargo tanks by 49CFR 173.315 US DOT.

Certified By: Smart-Hose Technologies

CT# 7953

Design Certifying Eng:  **Joseph Abrams**

TEST Date: 4/1/08

On the above date, Smart-Hose Technologies has inspected and tested the hose assembly listed by serial number below.

Visual Inspection: **Accepted**

Test Pressure: **700 PSIG Passed**

Working Pressure: **350 PSIG Passed**

Hose Type: **Hose, NH3- LL 3-2" X 18.6 316-SS, FNPT- MNPT**

rebuilt end-fitting SERIAL# 416971

SO#4520

Registered Inspector 

Company Owner of Hose: _____

Company Representative Signature: _____

This test only represents that the hose has passed the defined test on the date tested, no other warranty express or implied is granted as a result of this certificate. It is important that all hose be inspected and tested on a regular basis in accordance with Smart-Hose Technologies Form #1999-1 "Proper Hose Use, Care and Maintenance."

2538 S 59th St., Philadelphia, PA 19143

Toll Free (877) 356-6278 Fax (215) 730-0558

Test Cert. Form #99-9 Rev.6 (March 2001)