



U.S. Department
of Transportation

Pipeline and Hazardous Materials
Safety Administration

1200 New Jersey Ave., SE
Washington, DC 20590

SEP 25 2009

Mr. Danny Shelton
Vice President, Business Development
HazMat Resources, Inc.
Raleigh, NC 27615

Ref. No. 09-0012

Dear Mr. Shelton:

This responds to your January 21, 2009 letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to cargo tanks. Your questions are summarized and answered as follows:

Q1. When a repair is made on a specification cargo tank that affects the structural integrity or lading retention capability of the cargo tank, whether or not any additional tests identified in § 180.407(c) are completed, is a Registered Inspector (RI) required to certify the suitability of the repair by testing?

A1. Yes. The suitability of each repair affecting the structural integrity or lading retention capability of the cargo tank must be determined by the testing required in accordance with the applicable manufacturing specification, or § 180.407(g)(1)(iv). Section 180.407(a)(3) requires that anybody witnessing or performing a test or inspection in accordance with § 180.407 must meet the minimum qualifications described in § 180.409. Except as otherwise provided, § 180.409 requires that person to have the training and experience to meet the definition of a "Registered Inspector," as defined in 171.8.

Q2. What information should be included in this certification signed by the RI?

A2. Each person performing a test or inspection as specified in § 180.407 must prepare a written report (see § 180.417). The written report must include all of the information specified in § 180.417(b) and/or (c) as appropriate.

Q3. Who should maintain the certification of repair? How long should the certificate of repair be maintained?

A3. Each owner of a cargo tank motor vehicle must retain at the owner's principal place of business all records of repair, modification, stretching, or rebarrelling, including notation of any tests conducted to verify the suitability of the repair, modification, stretching or rebarreling made to each cargo tank during the time the cargo tank motor vehicle is in service and for one year thereafter. Copies of these records must be retained by a motor carrier, if not the owner of the cargo tank motor vehicle, at its principal place of business during the period the cargo tank motor vehicle is in the carrier's service.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Charles E. Betts". The signature is written in a cursive style with a large, stylized initial "C".

Charles E. Betts
Chief, Standards Development
Office of Hazardous Materials Standards

Drakeford, Carolyn <PHMSA>

From: Gorsky, Susan <PHMSA>
Sent: Wednesday, January 21, 2009 7:08 AM
To: Drakeford, Carolyn <PHMSA>
Subject: FW: Question

Eichenlaub
§ 180.413
§ 180.407
Cargo Tanks
D9-0012

-----Original Message-----

From: Danny Shelton [mailto:dgshelton@nc.rr.com]
Sent: Monday, January 19, 2009 6:22 AM
To: Gorsky, Susan <PHMSA>
Cc: Staniszewski, Stanley <PHMSA>; Thomas A. (Tom) Rogers; Evans, Joseph <FMCSA>
Subject: FW: Question

Please see the following e-mail regarding a repair on a specification cargo tank that affects the structural integrity or lading retention capability. 180.413 only talks about repairs on cargo tanks that affect either structural integrity or lading retention and it is my understanding that the DOT is the jurisdiction, not the National Board. Following are some questions that I believe would be beneficial in an interpretation:

Question 1 - When a repair is made on a specification cargo tank that affects the structural integrity or lading retention capability of the cargo tank, whether or not any additional tests identified in 180.407(c) are completed, is a Registered Inspector (RI) required to certify the suitability of the repair by testing?

Question 2 - What information should be included in this certification signed by the RI?

Question 3 - Who should maintain this certification of repair?

Question 4 - How long should this certification be maintained?

Thanks

P.S. The National Board is meeting in Austin, Texas this week and it is my understanding that Stan is attending this meeting so I took the liberty to cc him on this so he can communicate with the Board that the AI should not be changing the test pressure used to certify the suitability of a repair on an R-1 that is inconsistent with the requirements of the jurisdiction.

-----Original Message-----

From: joseph.evans@dot.gov [mailto:joseph.evans@dot.gov]
Sent: Sunday, January 18, 2009 7:07 PM
To: dgshelton@nc.rr.com
Subject: Re: Question

I think u r earning your money. Very detailed. R U running into this as an enforcement issue? I will look further. I am now watching the Steelers. Monday is a holiday, remember those? This is one of your favorites.

----- Original Message -----

From: Danny Shelton <dgshelton@nc.rr.com>
To: Evans, Joseph <FMCSA>
Sent: Sun Jan 18 16:56:27 2009
Subject: RE: Question

Good afternoon Joe, I certainly hope you are at a bar watching the Eagles and drinking a cold beer. Here is where I was coming from and where I am going with this question. Most folks, in fact I know of no one who replaces a normal vent and then performs a leakage test at 80% of MAWP of the tank which in the case of an MC 306 would be 2.4 psi in most cases and could be any where from 2.12 psi to 3.2 psi for a DOT 406. The consensus is that you test it at .6 psi (method 27 pressure) because the vent will open at 1 psi. I like your answer and I think it is the right answer; Test it at the leakage test

pressure because it sends you to (h)(1) not (h)(2), which is the method 27.

With all that being said, this is a repair, just not a welded repair but it is a repair that affects the lading retention capability of the cargo tank, that is why you are required to perform a leakage test, right? There is an interpretation which says that if you change an opening in the tank from a wash out opening to a vent; that is a modification and requires certification by a DCE because it affected the cargo tanks' lading retention capability. Well, if it is a modification then it must be certified by a registered inspector in addition to the DCE; see 180.413(d)(4). With all due respect, you and I both have been reading Repair, as welding on the cargo tank wall and that implies certain other conditions that come into play, but 180.413(c) also talks about repair and differentiates between welded and non welded repairs but this only determines what the pressure is to verify the suitability of the repair. I believe all along that the Department intended for the RI to verify the suitability of all repairs identified in 180.413 because the repairs described in this section either are structural integrity or lading retention.

Let me give you an example. In this case lets say that we are performing a welded repair on an ASME Code Vessel. The vessel is an MC 331 Cargo Tank constructed of QT Steel. The shop who has a CT number and an "R" stamp complete the R - 1 and indicate a test pressure on the R - 1 for verifying the suitability of the repair of 500 psi; 2 times the design pressure (250 X 2). This is permissible because 180.413(b) says that you must either test it in accordance with the applicable specification which says 2 times the design pressure or in accordance with 180.407(g)(1)(iv) which would be 375 psi. Also, there is no requirement in either the National Board Inspection Code or the DOT regulations on how long you must hold this pressure. My position is that it can be 15 seconds and that is acceptable but it does not have to be held for 10 minutes that is for a pressure test not for verifying the suitability of a repair. What actually happened in this particular instance is that the shop made the repair, completed the R - 1 indicating 500 psi on the R - 1 and when the AI came to witness the testing and sign the R - 1, the AI changed the test pressure to 400 psi. Well how does an RI verify the suitability of the repair when the repair was not tested in accordance with the requirements of the jurisdiction and the DOT is the jurisdiction, not the National Board?

I go back to the beginning, the repair, whether it be welding or not must be certified by the RI, that is a jurisdictional requirement and the DOT is the jurisdiction, not the National Board and besides, unless it is an ASME Code vessel, the National Board would never be involved in the first place.

THE DEPARTMENT INTENDS FOR THE RI TO CERTIFY THE SUITABILITY OF REPAIRS PERFORMED ON SPECIFICATION CARGO TANKS BY TESTING. THAT MEANS THE RI MUST CERTIFY THE REPAIR WAS TESTED IN ACCORDANCE WITH THE REQUIRMENTS IN THE DOT REGULATIONS. THAT MEANS THERE MUST BE A CERTIFICATION IN THE FILE OF THE CARRIER THAT SAYS THAT, NOT JUST A SIGNATURE FROM AN RI.

WHAT DO YOU THINK?

From: joseph.evans@dot.gov [mailto:joseph.evans@dot.gov]
Sent: Thursday, January 15, 2009 9:26 AM
To: dgshelton@nc.rr.com
Subject: RE: Question

Was the normal vent leaking or the threaded valve that the normal vent was threaded into leaking? If only the normal vent was leaking. I would just replace it. If the threaded valve was leaking and then replaced by not welding than a leak test would be conducted. The leak test would have to be conducted at no less than 80% of the MAWP. What do you mean by a certified repair? A 306 is not a coded tank. If there was no welding involved it does not meet DOT's definition of a repair.

So what else is going on here? Enlighten me, Oh Scholarly roamer of the US countryside.

From: Danny Shelton [mailto:dgshelton@nc.rr.com]
Sent: Wednesday, January 14, 2009 5:06 PM
To: Evans, Joseph <FMCSA>
Subject: Question

During a leak test on an MC 306 cargo tank it is discovered that a normal vent(valve) is leaking. We replace the normal vent and then we are required to test the repair for leaks. This type of repair is defined in 180.413(c)(1) as follows: After maintenance or replacement that does not involve welding on the cargo tank wall, the repaired or replaced piping, valve, hose or fitting must be tested for leaks. This requirement is met when the piping, valve, hose or fitting is tested after installation in accordance with §180.407(h)(1). A hose may be tested before or after installation on the cargo tank.

At what pressure should the threaded connection on the normal vent that was replaced be tested and should this repair be certified.

Be careful how you answer this question. It can be willy nilly.