



National Fuel

May 29, 2015

U.S Department of Transportation
Pipeline and Hazardous Materials Safety Administration
820 Bear Tavern Road, Suite 103
West Trenton, NJ 08628
Attention: Byron Coy, P.E., Director, Eastern Region

Dear Mr. Coy:

This letter is in response to your Notice of Amendment (NOA) Letter dated May 1, 2015 sent to John Pustulka, President of National Fuel Gas Supply Corporation (National), referencing CPF 1-2015-1010M. National recognizes the importance of a detailed welding specification and clearly defined welding procedures to ensure that welding results in the highest quality welds on a consistent basis. As such, National ensures that all welding is completed using welding procedures that have been qualified according to the requirements of API 1104. National's welding procedures have produced welds of consistent high quality year in and year out and have "passed the test of time." However, National recognizes PHMSA's review of its procedures and specifications and the subsequent issues raised by PHMSA that are the subject of this Notice of Amendment. This response is being sent to advise PHMSA of National's understanding of the inspection concerns raised, to provide notice and explanation of the steps that National intends to perform in order to address PHMSA's concerns, to request an extension of time to provide a final response to PHMSA, and, as necessary, to request a hearing.

Section 192.225 – Welding Procedures, Time between passes

The May 1, 2015 Notice of Amendment stated:

(1) 192.225 Welding Procedures

(b) Each welding procedure must be recorded in detail, including the results of the qualifying tests. This record must be retained and followed whenever the procedure is used.

NFG's welding procedures, *Line N 2.08 Mile Pipeline Project Welding Procedures*, are inadequate.

During the inspection, the PHMSA inspector reviewed the NFG welding procedures for the Line N 2.08 Mile Pipeline Project. The procedures included time lapse between bead entries for hot pass, filler passes, and cap passes that represented the actual times that a welder welded to qualify the welding procedures, not the time required for the welder utilizing the procedure in the field.

National Fuel Response:

The PHMSA inspector raised a concern that National's welding procedures included the actual time between passes from the original procedure rather than the time specified for utilization during production welding in the field. At the time of the PHMSA audit, National was in the midst of updating all of its procedures to reformat them such that each procedure was separated into a Welding Procedure Specification (WPS) and a Procedure Qualification Record (PQR). This was updated in our Welding Specification 100 on January 30, 2015. Inclusive in the updates was eliminating the times used during qualification of the procedure from the WPS. We believe that this should address the above noted issue. Attached are the updated procedures C-5 and C-18.

The PHMSA Inspector indicated in subsequent phone conversations that his interpretation of API 1104, Section 5.3.2.10, Time between Passes, means the "maximum time between completion of second bead and third pass, second bead and fourth pass, and so on and so forth to second bead and final pass." National responded to this PHMSA Inspector indicating that we feel that the note shown on each WPS which states the maximum duration to complete the weld after completion of the hot pass addresses Section 5.3.2.10 of API 1104 because, although it does not individually call out a maximum duration between each pass, by its nature, it governs the maximum allowable time between the second bead and all of the remaining passes. It is National's understanding that API 1104 does not require the WPS to define times between each remaining pass as described by the PHMSA Inspector. While this issue is not specifically addressed in this NOA, it was the subject of substantial discussion and focus for an extended period of time following the field audit. Given the discussion and continued phone conversations and emails, we believe that it may be the intention and expectation of the PHMSA inspector that this should also be addressed in our response to this NOA. If it is indeed the intent of the NOA to require definition of time between each and every welding pass, we contest this portion of the NOA, and the following response and actions are provided.

National's understanding of the intent of Section 5.3.2.10 of API 1104 is to limit the maximum time between the root bead and hot pass – which is an essential variable, as well as the hot pass and first filler pass. The NFG WPS's already clearly state the maximum duration between the completion of the root bead and start of the hot pass. Therefore, we intend to update our welding procedure specifications (WPS's) to clearly reflect the maximum time between the completion of the hot pass and start of the first filler pass. Because these changes are editorial in nature and do not change any essential variables as defined by API 1104, these updates would be made without requalification of the affected procedures.

The PHMSA Inspector indicated that the time between passes was critical in order to keep the temperature of the weld above the minimum preheat temperature. National understands and agrees that maintaining the pre-heat temperature during the welding process is an important aspect of the welding process. However, given the realities of everyday production welding, it is a given that welding can and will pause during a lunch break, during an equipment malfunction, during a period of inclement weather, during a weekend, or during other work stoppage events. Recognizing these events, National contends that describing the time between the completion of the second pass, and all subsequent passes should not be defined by a hard and fast rule. It is important to note that National's Welding Specification 100, Section 11.8, specifies that "preheat requirements apply to all passes of the weld." This is considered an industry best practice, which is followed for all pipeline welding at National. National is also going to add a note to the preheat section of the WPS's to further emphasize the

requirement of applying the preheat requirements to all welding passes, including after interruptions of the welding process.

National intends to submit a request for interpretation to API 1104 within 30 days of this letter in order to assess the API 1104 Interpretations Task Group's understanding of the intent of Section 5.3.2.10, Time between Passes, to ensure that any editorial changes to our WPS's are updated properly and accurately. Therefore, National is requesting an extension of time in order to provide a final response on this portion of the NOA. Due to the unpredictable response time of the API 1104 Interpretations Task Group, we are requesting an extension to one month beyond the response date from the API 1104 Task Group. Historically, the API 1104 Interpretations Task Group has taken upwards of 6 months to respond to requests for interpretation, therefore this time extension request will likely have a duration of approximately 7 months.

Section 192.225 – Welding Procedures, Additional pre-heat or post-heat...

The May 1, 2015 Notice of Amendment stated:

(2) 192.225 Welding Procedures

(b) Each welding procedure must be recorded in detail, including the results of the qualifying tests. This record must be retained and followed whenever the procedure is used.

NFG's operating procedures, *Welding Specification Number 100*, 02/18/2014, are inadequate. Specifically, paragraph 11.7 states in part that "At the discretion of the Welding Inspector, additional pre or post heating may be necessary..." The operating procedures allows additional post heating of welds, however, it is not clear that changes to post heating requires that the welding procedure be completely re-qualified.

Post-weld heat treatment is an essential variable. According to API 1104, 20th edition, 2008, when any essential variables are revised, a welding procedure must be re-established as a new procedure specification and must be completely re-qualified.

National Fuel Response:

The NOA highlights the fact that post-heat treatment is an essential variable as defined by API 1104 and raises concern over the statement "At the discretion of the Welding Inspector, additional pre or post heating may be necessary...", which is included in NFG Welding Specification 100, Section 11.7. Note that this sentence does not include the key word "treatment". Heat treatment is defined as a process which reaches a temperature that will change the metallurgical properties of the steel. The intent of the statement included Section 11.7 of NFG Welding Specification 100 is to ensure that, after welding, heat is maintained on the weld to minimize the possibility of hydrogen induced cracking. It was not the intent of the statement to require or prescribe Post-weld Heat Treatment.

In order to more clearly describe any post-weld temperature control, National plans to update the language in our Welding Specification 100 and use the term "post-weld preheat maintenance". This

term of “post-weld preheat maintenance” is defined in *Guidelines for Interpretation and Application of API 1104*, prepared for the Pipeline Research Council International. Maintaining the preheat temperature following completion of welding to allow hydrogen diffusion after welding does not constitute post-weld heat treatment and therefore, does not constitute an essential variable.

On several of the welding procedures used during the Line N 2014 2-Mile Pipeline Project, the WPS’s specified a minimum temperature of 250 deg F in the “Post-heat Treatment” category. National acknowledges that this statement was included in a cell incorrectly labeled as “post-heat treatment”. In that regard, we agree with the issue raised by PHMSA. These WPS’s will be updated to reflect that “post-heat treatment” is not applicable and a note will be added indicating that a “post-weld preheat maintenance” minimum temperature of 250 deg F shall be maintained. National will also update all other WPS’s to make any necessary corrections to clearly clarify that post-heat treatment is not required but post-weld preheat maintenance is required.

Section 192.225 – Welding Procedures, Definition of impractical and practical...

The May 1, 2015 Notice of Amendment states:

(3) 192.225 Welding Procedures

(b) Each welding procedure must be recorded in detail, including the results of the qualifying tests. This record must be retained and followed whenever the procedure is used.

NFG’s operating procedures, *Welding Specification Number 100, 2/18/2015*, are inadequate. Specifically, *Welding Specification 100*, section 14.0 Inspection of Production Welds, 14.2.1 does not define the terminologies: impractical and practical.

In addition, *Welding Specification 100*, Appendix B - Welding On In-Service Pipelines or Facilities, 2.0 Welding Sequence - (Sleeve Type), Step 8 does not define terminologies: possible, impractical and practical.

National Fuel Response:

The language that is referred to above is found in Section 14.2.1 of NFG Welding Specification 100, and utilizes very similar language found in Section 192.241. The NDE requirements defined in NFG Welding Specification 100 exceed those required in Section 192.241(b)(1) and 192.241(b)(2). National does not believe that there is a need to define an all encompassing, holistic definition of these two terms. National used this language, as taken from Part 192, in order to preserve its flexibility and right to substitute a visual inspection by a qualified welding inspector for non-destructive examination, when non-destructive examination would be impractical, as provided by the writers of Part 192. Therefore, National contests this portion of the NOA.

National offers the following in support of this: Part 192 was written with much thought and consideration. Terms that the drafters determined needed to be defined were given definitions in Section 192.3. Terms that the drafters felt did not need further definition, including the terms

impractical and practical, were not. PHMSA has, from time to time, reviewed the language of the code and made changes which it believed were necessary, including changes to the definition Section, 192.3. Therefore, PHMSA has not, upon its periodic review of Part 192, found a need to define the term impractical or practical. Therefore, the definitions of impractical and practical have been left to the commonly held meaning as found in dictionaries. National does not believe that the regulation is further served by interjecting its own definitions of these terms as requested in this NOA.

To be sure, National has seldom, if ever, utilized this right to substitute visual inspection when otherwise utilizing NDE might be impractical. There are many occasions when bringing in NDE was inconvenient, time consuming and costly. However, in all of those situations, National chose to utilize NDE. Accordingly, National has not utilized a free-ranging or loose meaning of the term impractical.

National offers the following potential examples of when it believes a situation would be impractical:

When NDE equipment and/or qualified NDE personnel are not available and it is imperative to return the facility to service without delay.

Example 1: Welding is occurring Christmas night and multiple calls to NDE companies fail to locate an NDE crew to respond.

Example 2: When severe weather has caused major road shutdowns and NDE crews cannot be safely dispatched to the location.

As has been described above, National has seldom, if ever exercised the impracticality of examining a weld with NDE. In order to provide greater clarification to PHMSA, National will revise its specification language to limit the decision of whether a particular situation is impractical to a select few welding subject matter experts within the company, rather than to "the welding inspector." The qualifications of such subject matter experts will be referenced within NFG's Welding Specification 100.

In regards to the use of the terms practical and impractical in Step 8 of Appendix B, National believes that the same reasoning holds true as described above and the definitions of these words should be left to the commonly held meanings as found in dictionaries.

We intend to reword this section of our Welding Specification to eliminate the use of the word "possible" and only utilize the words "practical" and "impractical". "If possible" will be replaced with "unless determined to be impractical". Therefore, the requirement will read "Efforts should be made to let [the] weld cool for twenty-four (24) hours before testing, unless determined to be impractical." We will further limit the decision of whether a particular situation is practical/impractical to a select few subject matter experts and describe this requirement in Appendix B of NFG Welding Specification 100.

Conclusion

As discussed above, National intends to review NFG Welding Specification 100 as well as its WPS's, and where applicable, make updates to the specifications to address the concerns raised in the referenced NOA as described above. We believe that these changes do not change any essential variables, as defined by API 1104. In that regard, the changes are all editorial in nature, and while they do not change how the welding is to be accomplished, they do improve the clarity and intent of the procedures and specifications. National believes that the steps taken above would comply with and are responsive to the concerns raised by PHMSA in this NOA.

Should it be necessary to discuss these topics in greater detail, National is formally requesting a hearing to discuss the concerns described in the referenced NOA. National does not intend to be represented by counsel during this hearing, but reserves the right to be represented should the issues be a continuing concern to PHMSA. The intent of the hearing is to ensure that all concerns raised in the referenced NOA are satisfactorily resolved and that National's specifications and procedures both meet the intent of Part 192 and the intent of API 1104. We appreciate PHMSA's concerns and believe that the planned changes will result in greater clarity and intent.

If you have further questions about our plans to improve our welding specifications, please feel free to contact either Steve Glass (814-871-8542) or myself (814-871-8625) at any time.

Sincerely,

NATIONAL FUEL GAS SUPPLY CORPORATION

By: 
Jeffery J. Kittka, Assistant Vice President

Enclosures: NFG Welding Specification C-05
NFG Welding Specification C-18

cc. John Pustulka
Steve Glass