



PO BOX 196660

ANCHORAGE, ALASKA 99519-6660

TELEPHONE (907) 787-8700

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March 27, 2008

Government Letter No.: 15523  
APSC File No. 2.11

Mr. Chris Hoidal, Western Region Director  
U.S. Department of Transportation  
Pipeline and Hazardous Materials Safety Administration  
12300 West Dakota Avenue, Suite 110  
Lakewood, CO 80228

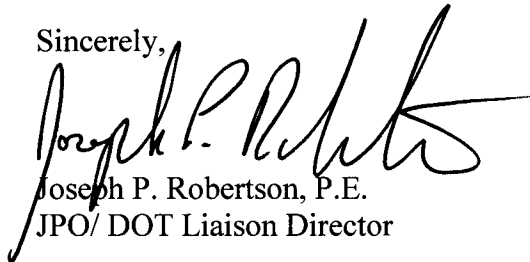
RE: Warning Letter CPF No. 5-2008-5001 W

Dear Mr. Hoidal:

Attached please find Alyeska Pipeline Service Company's detailed response to the Pipeline and Hazardous Materials Safety Administration's Warning Letter CPF No. 5-2008-5001 W, dated February 27, 2008. Alyeska believes that this response will provide adequate clarification and additional information on the findings issued by PHMSA.

We hope you will find this material helpful. Should you have further questions, please do not hesitate to contact me at (907) 787-8061.

Sincerely,



Joseph P. Robertson, P.E.  
JPO/ DOT Liaison Director

JPR/em

Attachment: Alyeska Pipeline Service Company's Response to CPF 5-2008-5001 W.

cc: Jon Strawn  
Jerry L. Brossia  
Dennis Hinnah  
Mike Thompson  
JPO Records Center

CERTIFIED MAIL 7002 2410 0005 0102 9603

**PROBABLE VIOLATION 1:  
Compliance with Specifications or Standards**

**PHMSA POSITION**

**Pertinent Regulation:**

49 CFR §195.202 Compliance with Specifications or Standards

Each pipeline system must be constructed in accordance with comprehensive written specifications or standards that are consistent with the requirements of this part.

**Findings:**

During 2006, Alyeska Pipeline Service Company constructed the SR piping at Pump Station #3. Alyeska's construction procedure W-3.7, Visual Welding Inspection, requires 100% visual inspection of 49 CFR 195 girth welds and associated documentation. Records of visual inspection of pump station girth welds were reviewed but, Alyeska could not find visual inspection records for nine welds. We did, however, find satisfactory Non-Destructive Testing (NDT) records for all welds.

**Warning:**

Under 49 United States Code, §60122, you are subject to a civil penalty not to exceed \$100,000 for each violation for each day the violation persists up to a maximum of \$1,000,000 for any related series of violations. We have reviewed the circumstances and supporting documents involved in this case, and have decided not to conduct additional enforcement action or penalty assessment proceedings at this time. We advise you to correct the items identified in this letter. Failure to do so will result in Alyeska Pipeline Service Company being subject to additional enforcement action.

**ALYESKA PIPELINE SERVICE COMPANY'S RESPONSE**

**Summary:**

Alyeska Pipeline Service Company (Alyeska) respectfully disagrees with PHMSA's finding that Alyeska did not have visual inspection records for nine welds. Alyeska requests that PHMSA withdraw this finding.

**Discussion:**

WP-3.7, Visual Welding Inspection, is a Special Process Practice with a stated scope of providing guidelines to be used by welding inspectors when performing visual inspection of welding and completed welds. It does not specify the type or extent of weld inspections. Alyeska considers guidelines as non-mandatory requirements. While WP-3.7 does require 100% visual inspection of girth welds, it is neither a specification nor standard used during construction for compliance with §195.202.

The specification or standard used for weld inspections are the criteria specified in the Welding Inspection / Nondestructive Testing Inspection Reports issued for PS03. The

Inspection Report instructs the welding inspector on the type of inspection(s) to perform and to what extent. The specific attribute that addresses visual inspection states:

*“Monitor in-process welding and/or inspect completed welds to the extent specified in the Design Package. Document the inspection results on a Weld Tracking Report.”*

The Design Package provided the extent of visual inspection in its reference to Project Specification 015481-3000-46ES-0040 (W-300), Piping Fabrication. In W-300, Table 4, 100% visual inspection was specified. Therefore, Alyeska’s requirement that each weld and welding be visually inspected as stated in 49 CFR §195.228, comes from the requirements of W-300.

PHMSA alleged that Alyeska was missing in-process welding documentation, Weld Tracking Reports (WTR) and completed weld bubble maps. During the standard project closure review of the PS03 Inspection Reports by the QC Inspection Services contractor before turnover to Alyeska, they identified missing WTRs and weld bubble maps. The missing WTRs and weld bubble maps meant that there were no verifiable records that the welding of the cited nine field welds had been visually inspected. However, consistent with the requirement for 100% visual inspection specified in W-300, each completed weld, including the nine referenced by the finding, were visually inspected and accepted prior to final sign-off of the Inspection Report by a qualified welding inspector. Therefore, the documentation supporting 100% visual inspection was the signed Inspection Report.

With respect to Finding 1, Alyeska respectfully requests that PHMSA withdraw this finding as Alyeska has documentation of 100% visual inspection of all girth welds at PS03.

**PROBABLE VIOLATION 2:  
Welds and Welding Inspection: Standards**

**PHMSA POSITION**

**Pertinent Regulation:**

49 CFR §195.228 Welds and welding inspection: Standards of acceptability

(b) The acceptability of a weld is determined according to the standards in Section 9 of API 1104. However, if a girth weld is unacceptable under those standards for a reason other than a crack, and if Appendix A to API 1104 (incorporated by reference, *see* §195.3) applies to the weld, the acceptability of the weld may be determined under that appendix.

**Findings:**

PHMSA, in conjunction with non-destruction testing specialist from the Oak Ridge National Laboratory, examined the radiographs of Pump Station #3 welds for compliance with API 1104 Section 9. Four welds were identified that contained un-repaired defects that the NDT contractor failed to detect. Additionally, eleven radiographs were found to contain unacceptable film density or penetrameters. Finally, Alyeska initially failed to identify these radiographic deficiencies and defective welds. All of the inadequate films were eventually reshot, and all defects repaired.

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**ALYESKA PIPELINE SERVICE COMPANY'S RESPONSE**

**Summary:**

Alyeska Pipeline Service Company (Alyeska) respectfully disagrees with PHMSA's finding that Alyeska failed to meet the requirements of API 1104 Section 9 for PS03 welds. Alyeska requests that PHMSA withdraw this finding.

**Discussion:**

Two independent non-destructive testing (NDT) contractors shot, interpreted, and accepted radiographs of several hundred welds made during shop and field fabrication of piping modules and pipe spools for PS03. During its review, Alyeska identified a total of 15 shop and field weld radiographs that had either unacceptable film quality or incorrect interpretations. Alyeska's initial findings indicated that four of the field welds needed

repair. Following Alyeska's review, the non-destructive testing experts from Oak Ridge National Laboratories (ORNL) reached the same conclusions as Alyeska.

As a part of the actions taken after discovery of the weld documentation deficiencies, Alyeska engineers, and the NDT contractor who made the radiographs, reviewed all field weld radiographs. That review identified the same deficiencies as subsequently confirmed by ORNL reviewers. ORNL's subsequent review of field welds matched those of Alyeska's findings from its film review. Alyeska engineers conducted a statistical sampling of shop weld radiographs without any findings. ORNL's complete review found 11 unsatisfactory radiographs due to film density.

No known radiographic film quality or interpretation issues were found by ORNL that were not first identified by Alyeska.

With regard to Finding 2, Alyeska respectfully requests that PHMSA withdraw this finding as Alyeska met the requirements of API 1104 Section 9 for PS03 welds.

**PROBABLE VIOLATION 3:  
Welding Procedures**

**PHMSA POSITION**

**Pertinent Regulation:**

49 CFR §195.214 Welding Procedures

(a) Welding must be performed by a qualified welder in accordance with welding procedures qualified under Section 5 of API 1104 or Section IX of the ASME Boiler and Pressure Vessel Code (incorporated by reference, *see* §195.3) . The quality of the test welds used to qualify the welding procedure shall be determined by destructive testing.

**Findings:**

PHMSA and experts from the Oak Ridge National Laboratories examined the welding procedures used to complete the welding at Pump Station #3. There were 24 deficiencies identified in these procedures. These deficiencies were brought to the attention of Alyeska's engineers.

**Warning:**

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**ALYESKA PIPELINE SERVICE COMPANY'S RESPONSE**

**Summary:**

Alyeska Pipeline Service Company (Alyeska) respectfully disagrees with PHMSA's finding that Alyeska had significant technical deficiencies in its welding procedures. Alyeska requests that PHMSA withdraw this finding.

**Discussion:**

Alyeska reviewed and approved all welding procedure documentation prior to use. The procedures were prepared and qualified in accordance with API 1104 or ASME Section IX, and met additional Alyeska specification requirements. Alyeska approved documentation from four companies that fabricated piping modules, pipe spools, and installed them at PS03. These are the same welding procedure specifications (WPSs) and supporting procedure qualification records (PQRs) that Oak Ridge National Laboratory (ORNL) non-destructive testing experts reviewed.. ORNL identified a total of 24 deficiencies within procedure documents (both WPSs and PQRs) from two companies

out of the four. Alyeska could only verify a total of 23 deficiencies from the correspondence received from ORNL. Of these 23 deficiencies, 18 were associated with PQRs, and five with WPSs. They were characterized as either "editorial in nature" or "non-editorial in nature."

Of the 15 out of the 23 deficiencies ORNL characterized as "editorial in nature", 13 were different company names between the supporting PQRs and approved WPS documents that had been qualified in accordance with ASME Section IX. These different company names on the PQRs were for current or prior subsidiary companies all within operational control of the same parent company organization whose name was on the WPSs. The companies involved were identified within the parent companies' QA Program as the source of the PQRs in compliance with the provisions of ASME Section IX, QW-201.

The remaining eight deficiencies were considered "non-editorial in nature." Although considered important clarifications or corrections to the WPS or PQR, none were identified as an "Essential Variable" as defined by the applicable welding code or additional Alyeska requirements. Essential variables would have required the procedure to have been requalified by testing.

Since all shop fabrication and field welding had been completed for nearly two years at the time of the ORNL review, Alyeska did not ask the contractors to revise their welding documentation to correct any of the cited deficiencies. However, Alyeska engineers did evaluate the technical implications of deficiencies identified as "non-editorial in nature." The technical evaluation determined that there were no deficiencies that would impact mechanical or physical properties of the welds previously made with the procedures. These welds had already been accepted by radiography and pressure tested. No technical concerns were found and the welds were deemed acceptable for service.

With regard to Finding 3, Alyeska respectfully requests that PHMSA withdraw the finding as Alyeska has addressed the "non-editorial in nature" deficiencies and determined that there was no impact on the welds.