



U.S. Department
of Transportation

**Pipeline and
Hazardous Materials Safety
Administration**

400 Seventh Street, S.W.
Washington, D C. 20590

MAY 19 2005

Mr. David Wight
President and CEO
Alyeska Pipeline Service Company
P.O. Box 60469
Fairbanks, Alaska 99706

Re: CPF No. 5-2003-5002

Dear Mr. Wight:

Enclosed is the Final Order issued by the Associate Administrator for Pipeline Safety in the above-referenced case. The Final Order makes findings of violation, specifies actions to be taken to comply with the pipeline safety regulations and assesses a civil penalty of \$ 18,500. Your receipt of the Final Order constitutes service of that document under 49 C.F.R. § 190.5.

Sincerely,

James Reynolds
Pipeline Compliance Registry
Office of Pipeline Safety

Enclosure

cc: Lee Schoen
Sheila Doody Bishop
Chris Hoidal, Regional Director
Western Region, OPS

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION¹
OFFICE OF PIPELINE SAFETY
WASHINGTON, DC 20590

_____)
In the Matter of)
)
Alyeska Pipeline Service Company,)
)
Respondent.)
_____)

CPF No. 5-2003-5002

FINAL ORDER

From July 7-11, 2002, August 12-16, 2002, August 28-September 3, 2002 and September 15-20, 2002, representatives of the Office of Pipeline Safety (OPS), pursuant to 49 U.S.C. § 60117, conducted on-site pipeline safety inspections of Respondent's facilities, manuals and records on the Trans Alaska Pipeline System (TAPS).

As a result of the inspections, the Director, Western Region, OPS, issued to Respondent, by letter dated January 23, 2003, a Notice of Probable Violation, Proposed Civil Penalty, Proposed Compliance Order and Notice of Amendment (Notice). In accordance with 49 C.F.R. § 190.207, the Notice proposed finding that Respondent had violated 49 C.F.R. §§195.420(a), 195.567(c), 195.575(a), 195.571 and 195.573(a) and (e), proposed assessing a civil penalty of \$18,500 for several of the alleged violations, and proposed that Respondent take certain measures to correct the alleged violations. The Notice also proposed, in accordance with 49 C.F.R. § 190.237, that Respondent amend its procedures for Operations, Maintenance and Emergencies.

On February 3, 2003, Respondent requested an extension until April 28, 2003 to respond to the Notice, which the Regional Director granted on March 6, 2003. Respondent submitted its response to the Notice on April 28, 2003 (Response). Respondent contested the allegations, submitted

This case was initiated by the Office of Pipeline Safety in the Research and Special Programs Administration (RSPA). However, this case is no longer before RSPA. Effective February 20, 2005, the Pipeline and Hazardous Materials Safety Administration (PHMSA) was created to further the highest degree of safety in pipeline transportation and hazardous materials transportation. See, section 108 of the Norman Y. Mineta Research and Special Programs Improvement Act (Public Law 108-426, 118 Stat. 2423-2429 (November 30, 2004)). See also, 70 Fed. Reg. 8299 (February 18, 2005) re delegating the pipeline safety functions to the Administrator, PHMSA.

detailed information to explain the allegations and reserved the right to a hearing. A hearing was held in the Western Region, OPS, on March 23, 2004. After the hearing, Respondent submitted a Closing Response dated May 22, 2004.

FINDINGS OF VIOLATION

Item 4 in the Notice alleged that Respondent had violated 49 C.F.R. § 195.420(a) that requires an operator to maintain each valve that is necessary for the safe operation of its pipeline system in good working order. The Notice alleged that Respondent had not maintained the incoming and discharge valves on Relief Tank No. 111 at PS01. The Notice more specifically alleged that on April 23, 2002, when Respondent was isolating Tank 111, Respondent found that both the incoming and discharge valves would not seal properly and that the valves were leaking into the tank. Because of the leakage, the Notice alleged that Respondent could not isolate the tank and complete the scheduled internal inspection within the ten-year time frame required by API 653.

In its Response Respondent contended that it took maintenance action to address the leaking valves and that extending the internal tank inspection to 2003 did not jeopardize the integrity of the tank or of the system. Respondent maintained that it replaced the 20T0 and 20T1 Tank 111 isolation valves within a reasonable time considering the long lead (12-month) requirements, the short construction window (four months) on the north slope, and the state of corrosion on the tanks. Respondent further argued that during this period the operating risk was acceptable and the integrity of the pipeline was never compromised. Respondent explained that in early 2002 it found the Tank 111 isolation valves were leaking into the tank and installed stopples on the inlet and outlet lines of the tank, and in 2003 replaced the isolation valves. According to Respondent, the valve installation was delayed because of the long lead time required for the 48-inch valves, and, even with expedited service, it took nine months, until February 2003, to get the new valves.

Respondent explained that after replacing the isolation valves on Tank 111, it inspected and repaired the tank bottom. According to Respondent, API standard 653 provides that the inspection interval is determined by the corrosion rates measured during previous inspections or anticipated corrosion rates based on experience with tanks in similar service, with a 20-year maximum inspection interval. Respondent's senior corrosion engineer determined that no significant corrosion would be expected on the floor of Tank 111, and extending the internal inspection to 2003 would not jeopardize the integrity of the tank or system. Respondent maintained that when it inspected the tank in 2003, its engineering analysis was verified.

Section 195.420(a) requires that each valve necessary for the safe operation of its system be in good working order at all times. Although Respondent may have replaced the valves within a reasonable time frame, considering the circumstances that necessitated a 12-month lead time for replacement, the valves were not in good working order at all times. The leaking valves were isolation valves, and due to their leaking, would not have worked properly to shut off the flow to Tank 111. Because they were leaking, Respondent could not isolate Tank 111 to perform the inspection. Although the corrosion rate may have been slow enough that the integrity of the tank floor was not impaired and

the tank inspection could be delayed a year, this does not alter the requirement that the valves were to have been in good working order at all times. Accordingly, I find that Respondent violated § 195.420(a).

Item 5 alleged two violations. The first (Item 5(a)) was that Respondent violated § 195.567(c) because at the Atigun Pass road crossing, from MP 165.77 to MP 165.8, a continuity test showed that the casing test lead was directly shorted to the carrier pipe. The Notice alleged that without a hard wire connection to the casing, Respondent could not confirm that the casing was electrically isolated from the carrier pipe. The regulation requires that an operator maintain the test lead wires in a condition that enables the operator to obtain electrical measurements to determine if the cathodic protection meets criteria.

Item 5's second allegation (Item 5(b)) was that Respondent had violated § 195.575(a), because at the Atigun Pass road crossing, both the casing vent and settlement rod indicated a pipe-to-soil potential of -1.25 volts. This reading suggested that the casing and/or casing test lead was in electrical contact with the carrier pipe and not electrically isolated. The regulation requires an operator to electrically isolate each buried or submerged pipeline from other metallic structures, unless the pipeline is electrically interconnected and cathodically protected as a single unit.

Respondent agreed that the casing vent at the Atigun Pass road crossing could be shorted and explained that it planned to correct the potential shorting by the end of 2004, but no later than the end of 2005. Respondent argued that the existing state of corrosion does not represent an unsafe condition and that the 2004-2005 time frame for repair is reasonable considering the state of corrosion.

Respondent's time frame for correcting the shorting is not at issue. Respondent did not dispute that the casing and/or test lead may be shorted to the carrier pipe; therefore, I find that Respondent committed both violations of §§ 195.567(c) and 195.575(a). Respondent's actions to correct the condition will be addressed in the Compliance Order section.

Item 6 alleged four violations of §§ 195.571 and 195.573 (a)(1) and (e). These regulations require an operator to monitor external corrosion control to determine if cathodic protection (CP) complies with one or more of the applicable criteria in NACE standard RP0169-96 by conducting tests at specified intervals and to correct any identified deficiency in corrosion control.

The first allegation was that cathodic protection pipe-to-soil tests conducted at MP 12.31 and MP 12.63 did not meet the CP criteria in NACE standard RP 0169-96 for the years 2000, 2001 and 2002. Respondent did not dispute the allegation but maintained it was making the repairs in a reasonable time frame. Respondent explained it had installed a continuous anode (Anodeflex) impressed current CP system in 2000 but that the remote power supply did not perform. Respondent said it planned to install a new power generation and battery storage system in 2003 or by the end of 2004.

The second allegation was that in 2001, based on the coupon test station survey, the coupon pipe-to-soil potentials at seven locations did not meet either the -850mV or 100mV depolarization criteria in NACE standard RP 0169-96. Respondent did not dispute that the pipe-to-soil readings at the seven locations failed to meet the NACE criteria. Respondent presented information showing that in subsequent CP coupon testing in 2002, five of the seven locations met criteria, and in 2003, all the coupons met the criteria.

The third allegation in Item 6 was that based on the close interval survey (CIS) Respondent had conducted in 2001, pipeline pipe-to-soil potentials at survey markers 30312+50 to 30321+00 (MP 574.1 to MP 574.26) and 31195+50 to 31197+80 (MP 590.82 to 590.86) did not meet the CP criteria in RP Standard 0169-96. The Notice further alleged that the mainline corrosion control report for the period ending December 31, 2000 indicated several areas of low pipe-to-soil potentials between MP 574.01-578.01 and MP 590.82. Respondent did not dispute that there were low pipeline-to-soil potentials at these locations, but maintained that CIS data, by itself, does not demonstrate the adequacy of CP. Respondent explained that it took action in 2003 to adjust the Black Rapids rectifier and that all but one location now showed adequate cathodic protection.

I find that Respondent committed the three violations of §§195.571 and 195.573 (a)(1) and (e) concerning deficiencies in its cathodic protection at the cited locations. A close interval survey (CIS) gives a better condition of the cathodic protection (CP levels) on the pipe. A coupon only measures the CP protection on a coupon, not on the pipe. However, a CIS is similar to a pipe reading in that the CIS lead is connected to the pipe. The CIS is surveyed every foot along the pipe compared with a pipe station that is located about every ½ mile. Thus, a CIS covers more of the pipe than a test station or coupon. A CIS can confirm that CP potentials are low.

Item 6's fourth allegation was that Respondent had violated §§195.571 and 195.573 (a)(1) and (e) because at the Valdez Marine Terminal (VMT) the crude oil piping between West Metering and Berth 4, and between Berths 4 and 5 did not meet the NACE criteria for adequate cathodic protection.

Respondent did not dispute the allegation that the cathodic protection was deficient on this piping but maintained it had, nonetheless, demonstrated good faith in addressing cathodic protection system deficiencies. Respondent explained that the piping from West Metering to Berth 4 and between Berths 4 and 5 is protected by a single rectifier and the low cathodic protection is due to a poor rectifier and anode bed design. According to Respondent, piping repair projects have necessitated Respondent's turning off the rectifier to assure its workers' safety. Because of the short construction season, cathodic protection testing is done when the rectifier is off or when insufficiently polarized. Respondent discussed the cathodic protection system repairs it has conducted to improve the cathodic protection.

In its Response and at the hearing, Respondent agreed that there were deficiencies in the cathodic protection on this piping. After submitting its Response and before the hearing, Respondent submitted a letter, dated June 25, 2003, to OPS maintaining that Respondent now considered the

VMT manifold piping downstream of the breakout tank outlet pressure controlling device excluded from regulation. At the hearing Respondent again contended that OPS did not regulate this piping. Respondent maintained that the piping is terminal piping excluded from regulation under §195.1(b)(8)(i). This provision excludes from regulation the transportation of hazardous liquid through facilities located on the grounds of a materials transportation terminal that are used exclusively to transfer oil between a non-pipeline mode (tank vessels) and a pipeline mode (except for any device and associated pipeline necessary to control pressure in the mainline pipeline). Respondent presented several interpretations by OPS addressing questions about the regulation of in-plant and terminal piping and drawings used by the Transportation Safety Institute (TSI), which Respondent argued approximated the VMT piping at issue.

In its after-hearing Statement, Respondent submitted a diagram of the piping at issue. Respondent continued to contend that the VMT piping was not regulated because it is used to transfer crude between the pipeline and the tankers.

Part 195 excludes from its regulation transportation of hazardous liquid through facilities located on the grounds of a materials transportation terminal that are used exclusively to transfer hazardous liquid between non pipeline modes of transportation or between a non pipeline mode and a pipeline, not including any device and associated piping that are necessary to control pipeline pressure. The OPS interpretations cited in Respondent's response provide that pipeline facilities at a terminal are regulated except for the piping used exclusively to transfer product from a storage or breakout tank to a non pipeline mode of transportation or between non pipeline modes of transportation. The TSI diagrams illustrate this concept. However, the piping configuration at VMT is different from the piping described in the interpretations and illustrated in the TSI diagrams. The VMT piping is not used exclusively as transfer piping. The 48-inch piping from MP 800 to the loading berths is a continuation of the mainline. The configuration is such that the tanks could be bypassed and the crude oil could flow directly from MP 800 to the berths. The piping sees mainline pressure because mainline pressure, i.e hydraulic head pressure, rather than pumps, is the force that causes the oil to flow to the berths.

Thus, I find that the VMT piping at issue is regulated under Part 195. Since Respondent agreed that the cathodic protection on the piping was low because of poor rectifier and anode bed design, I further find that Respondent violated §§195.571 and 195.573 (a)(1) and (e). Respondent's corrective actions to increase the cathodic protection are discussed in the Compliance Order section below.

These findings of violation will be considered prior offenses in any subsequent enforcement action taken against Respondent.

PENALTY ASSESSMENT

Under 49 U.S.C. § 60122, Respondent is subject to a civil penalty not to exceed \$100,000 per violation for each day of the violation up to a maximum of \$1,000,000 for any related series of violations. The Notice proposed a total civil penalty of \$18,500 for the violation of §§ 195.420(a) (Item 4), and the four violations of §§ 195.571 and 195.573(a) (1)(e) (Items 6a, 6b, 6c and 6d)

49 U.S.C. § 60122 and 49 C.F.R. § 190.225 require that, in determining the amount of the civil penalty, I consider the following criteria: nature, circumstances, and gravity of the violation, degree of Respondent's culpability, history of Respondent's prior offenses, Respondent's ability to pay the penalty, good faith by Respondent in attempting to achieve compliance, the effect on Respondent's ability to continue in business, and such other matters as justice may require.

The Notice proposed a civil penalty of \$10,000 for violation of 49 C.F.R. § 195.420(a) for not maintaining the incoming and discharge valves on Relief Tank 111 at Pump Station 1. As mitigating factors, Respondent offered that it had replaced the valves in a reasonable time frame, considering the long lead time necessary to make such a repair, and that pipeline safety was not threatened during the time as evidenced by the state of corrosion on the tanks. Respondent added that the tank isolation valves have never been used to isolate the tanks in an emergency situation.

Tank isolation valves are critical valves to the pipeline system, even if Respondent has not had to use them in an emergency. Although Respondent has not had to use the valves in an emergency, an emergency is not the time to find they do not work. That is why they are to be maintained in good working order at all times. But because they were leaking, the two valves would not have functioned as they were intended to function. Respondent replaced the leaking valves, but this was necessary to have functioning valves. Mitigation is not warranted for actions to bring the valves into compliance. Nor is mitigation warranted because the corrosion rate was slow enough that the tank inspection could be delayed. Therefore, I assess a civil penalty of \$10,000 for this violation.

The Notice proposed civil penalties of \$2000, \$3500 and \$2000 for the three violations of §§ 195.571 and 195.573 (a) and (e) for the cathodic protection deficiencies (Items 6a, 6b and 6c). Respondent asked that the penalty amounts be reconsidered. For those areas not corrected by the 2003 testing, Respondent said it would take additional action to correct the low cathodic protection areas by installing a new impressed current remote power supply. Respondent maintained it uses sound engineering practice to control corrosion through alternate means, and its pig data shows the state of corrosion does not threaten pipeline safety.

Mitigation is not warranted for taking corrective action to address the low cathodic protection readings, and to bring them into compliance with one or more of the NACE criteria, as the regulations require. Some of the low cathodic protection readings existed for at least three years (2000-2002). Respondent's use of in-line inspection tools to monitor corrosion is prudent but is not a substitute for restoring protection to required levels. Furthermore, Respondent's assertions about examining pig data it had obtained since 1994 (locations cited in 6a) and 1998 (locations cited in 6b and 6c) are unclear as to how these pig runs correspond to the period when the areas did not meet the NACE criteria. Although Respondent asserts that pipeline safety was not jeopardized, this was luck, not a reason for mitigation. The purpose of external monitoring for corrosion is not for an operator to see how long it can go before low cathodic protection readings result in corrosion injurious to the pipeline. I assess \$2,000 for the low readings at the locations cited in 6a, \$3500 for the low readings at the locations cited in 6b, and \$2000 for the low readings at the locations cited in 6c.

The Notice proposed a civil penalty of \$1,000 for the violation of §§ 195.571 and 195.573 (a) and (e) for the cathodic protection deficiencies on the piping at the Valdez Marine Terminal (Item 6d). Respondent maintained that it demonstrated good faith in addressing the CP system deficiencies. Although Respondent has tried to address the low cathodic protection on the Valdez Marine Terminal piping, these actions to come into compliance with the regulations do not warrant a reduced civil penalty.

Accordingly, having reviewed the record and considered the assessment criteria, I assess Respondent a total civil penalty of \$18,500.

Payment of the civil penalty must be made within 20 days of service. Federal regulations (49 C.F.R. § 89.21(b)(3)) require this payment be made by wire transfer, through the Federal Reserve Communications System (Fedwire), to the account of the U.S. Treasury. Detailed instructions are contained in the enclosure. Questions concerning wire transfers should be directed to: Financial Operations Division (AMZ-120), Federal Aviation Administration, Mike Monroney Aeronautical Center, P.O. Box 25082, Oklahoma City, OK 73125; (405) 954-8893.

Failure to pay the \$18,500 civil penalty will result in accrual of interest at the current annual rate in accordance with 31 U.S.C. § 3717, 31 C.F.R. § 901.9 and 49 C.F.R. § 89.23. Pursuant to those same authorities, a late penalty charge of six percent (6%) per annum will be charged if payment is not made within 110 days of service. Furthermore, failure to pay the civil penalty may result in referral of the matter to the Attorney General for appropriate action in a United States District Court.

WARNING ITEMS

Item 1 in the Notice warned Respondent that it had not reviewed its welding manual WL-1 since May 15, 1995. Section 195.402(a) requires an operator to review its manual of procedures for conducting normal operations and maintenance each calendar year, at intervals not exceeding 15 months. Respondent maintained that when it reviewed a document and did not make changes, the revision date was not changed. Rather, the documents showing the review were filed with the document management group.

Item 2 warned Respondent that it was not following its procedures for keeping all rectifier data on work done on the rectifiers in the rectifier cabinet. Respondent explained that the official record is kept in the pump station files, not at the rectifier box. Respondent submitted copies of the work order package for rectifier readings, which shows that the official form is to be filed at the pump station.

Respondent must continue to ensure that it makes and documents the required reviews of each of its manuals and that its actual record keeping is consistent with its procedures. Respondent is again warned that if OPS finds a violation for any of these items in a subsequent inspection, enforcement action will be taken.

COMPLIANCE ORDER

The Notice proposed a compliance order with respect to the items listed in the Notice as 4, 5a, 5b, 6a, 6b, 6c and 6d.

For violation of 49 C.F.R. § 195.412(a) (Item 4), the Notice proposed that Respondent repair the suction and discharge valves 20T0 and 20T1 and complete an internal inspection of relief Tank 111. It will not be necessary to include this item in a compliance order because Respondent has replaced the isolation valves and made the inspection.

For the two violations of §§ 195.567(c) and 195.575(a) (Items 5a and 5b), the Notice proposed that Respondent evaluate the cathodic protection levels on the underground piping at the Atigun Pass road crossing and take appropriate action to bring the level of cathodic protection into compliance with the criteria in NACE standard RP0169-96. Respondent maintained that it planned to excavate the road crossing ends to investigate and correct any potential shorting and problems associated with the casing test lead. Respondent said it planned to correct the potential shorting by the end of 2004 or 2005 and until corrected would monitor corrosion using high resolution inline inspection technology. The Region has verified that Respondent has excavated and repaired the casing at the road crossing. Therefore, there is no need to include this item in a compliance order.

For the three violations of §§ 195.571 and 195.573 (Items 6a, 6b and 6c), the Notice proposed that Respondent evaluate the cathodic protection levels at MP 12.31, MP 12.63, MP 754.35, 760.09, 770.66, 773.78, 780.61, 789.49, 789.84, MP 574.1 to 574.26 and MP 590.82 to 590.86, take appropriate action to bring the level of cathodic protection into compliance with at least one of the criteria in NACE standard RP0169-96, and add cathodic protection where appropriate.

In response to 6a, Respondent said it would repair the power supply in 2004 by installing a new power generation and battery storage system. The Region has confirmed that the power supply is now working and that the cathodic protection levels are now adequate. For 6b Respondent said subsequent testing in 2003 showed all coupons at issue (Locations 754.35, 760.09, 770.66, 773.78, 780.61, 789.49, 789.940) met the criteria. To address 6c, Respondent said that in 2003 it adjusted the Black Rapids rectifier, which corrected the cathodic protection at all locations but one, and, as part of its Corrosion Monitoring and Mitigation and Capital Improvements Programs, would take additional action in 2004 to correct the areas with low readings. The Region confirmed that the coupons at the cited locations now meet the NACE criteria. Because Respondent has carried out the proposed corrective actions, they will not be included in the Compliance Order.

To address 6d, Respondent said it was taking appropriate action although the VMT piping was not regulated under the pipeline safety regulations. As discussed in the Findings section, this piping is regulated, and as such, must have adequate cathodic protection. Thus, this item will remain in the Compliance Order.

Under 49 U.S.C. § 60118(a), each person who owns or operates a pipeline facility is required to comply with the applicable safety standards established under chapter 601 Pursuant to the authority of 49 U.S.C. § 60118(b) and 49 C.F.R. § 190.217, Respondent is hereby ordered to take the following actions to ensure compliance with the pipeline safety regulations applicable to its operations Respondent must -

- 1 Evaluate the cathodic protection levels on the piping at the Valdez Marine Terminal between West Metering and Berth 4 and between Berth 4 and Berth 5 and bring the level of cathodic protection into compliance with one or more of the applicable criteria for cathodic protection set forth in paragraphs 6.2 and 6.3 of NACE standard RPO169-96.
- 2 Submit documentation to the Western Regional Director demonstrating that the cathodic protection deficiencies have been addressed.
- 3 Complete the above-listed items within 60 days from issuance of this Final Order.

The Regional Director may extend the period for complying with any of the required items if the Respondent requests an extension and adequately justifies the reasons for the extension.

AMENDMENT OF PROCEDURES

The Notice (Item 3) alleged inadequacies in Respondent's Mainline Surveillance Manual and proposed that Respondent amend the procedures to require ground surveillance, rather than aerial surveillance, to observe the conditions Respondent characterizes as notable conditions associated with Vertical Support Members. The Notice alleged that some of the notable conditions could only be seen by ground surveillance.

Respondent disagreed that its procedures are inadequate and need amendment. Respondent explained that its manual defines notable conditions as those which can be qualitatively observed during aerial inspection. Respondent contended that its weekly aerial inspections exceed the requirements of §195.412, and that the regulation does not require ground surveillance.

Section 195.412 requires an operator to inspect the surface conditions on or adjacent to each pipeline right-of-way at specified intervals. The method of inspection is left to the operator. Although OPS is concerned that the aerial surveillance may not adequately assess the conditions associated with the Vertical Support members, the record does not substantiate the necessity for Respondent to amend its manual. The record does not support a finding that the procedures for weekly aerial surveillance, combined with quarterly ground surveillance, and an annual line walk are not adequate for assessing the conditions Respondent lists as notable. Therefore, Respondent will not be required at this time to amend its Mainline surveillance manual procedures.

Failure to comply with this Final Order may result in the assessment of civil penalties of up to \$100,000 per violation per day, or in the referral of the case for judicial enforcement

Under 49 C.F.R. § 190.215, Respondent has a right to petition for reconsideration of this Final Order. The petition must be received within 20 days of Respondent's receipt of this Final Order and must contain a brief statement of the issue(s). The filing of the petition automatically stays the payment of any civil penalty assessed. All other terms of the order, including any required corrective action, remain in full effect unless the Associate Administrator, upon request, grants a stay. The terms and conditions of this Final Order are effective upon receipt.

for 

Stacey Gerard
Associate Administrator
for Pipeline Safety

MAY 19 2005

Date Issued