



U.S. Department
of Transportation

**Pipeline and
Hazardous Materials Safety
Administration**

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12300 W Dakota Ave, Suite 110
Lakewood, CO 80228

**NOTICE OF PROBABLE VIOLATION
PROPOSED CIVIL PENALTY
and
PROPOSED COMPLIANCE ORDER**

VIA FEDEX AND FACSIMILE to (907) 787-8330

November 27, 2007

Mr. Jim Johnson
Pipeline Vice President
Alyeska Pipeline Service Company
900 East Benson Blvd.
P.O. Box 196660
Anchorage, AK 99519-6660

CPF 5-2007-5041

Dear Mr. Johnson:

In December 2006 and January 2007, the Alyeska Pipeline Service Company (Alyeska), operator of the Trans Alaska Pipeline System (TAPS), experienced at least three pipeline failures of TAPS. These failures resulted in several probable violations of the Pipeline Safety Regulations and are cause for concern regarding the operational integrity of TAPS.

The pipeline failures include the following events:

- 1) On January 6, 2007, a fire occurred in the containment area of Tank 190 at PS9 shortly after an unplanned relief event. The relief event was the result of Alyeska's testing of its automated Safety Integrity Pressure Protection System (SIPPS) pipeline control system. The relief event released flammable crude oil vapors into the containment area

of Tank 190. The vapors were ignited by one or more ignition sources that Alyeska had placed in the containment area in support of maintenance activities.

- 2) On January 8, 2007, a pipeline failure occurred at a Thread-O-Ring (T-O-R) fitting on the six-inch bypass piping at Remote Gate Valve No. 32 (RGV-32) on TAPS. Alyeska indicated that approximately 900 gallons of crude oil was spilled as a result.

A third failure involved a failed scraper pig operation. This failure is described and addressed in the companion Notice of Amendment (NOA) to this case. **See 5-2007-5042M.**

Representatives of the Western Region, PHMSA, pursuant to 49 United States Code, Chapter 601, initiated investigations of each of the events described above and obtained documentation relevant to the incidents in support of its investigations. PHMSA sent a Request for Specific Information (RFSI) to Alyeska, dated February 15, 2007, seeking records, reports and information regarding the PS9 fire. On February 22, 2007, PHMSA received documents responsive to the information request. PHMSA sent an additional RFSI to Alyeska, dated February 22, 2007, seeking records, reports and information regarding the scraper pig incident. On March 2, 2007 PHMSA received documents responsive to the information request. PHMSA also requested and obtained information from Alyeska regarding the RGV-32 incident and additional information regarding the other incidents.

Additionally, on April 10-14, August 9 and 24, September 11 and 15, October 16 and 20, December 12, 2006 and February 6 and 8, 2007, representatives of the Western Region, PHMSA, pursuant to Chapter 601 of 49 United States Code, inspected Alyeska-operated TAPS facilities between Prudhoe Bay and Valdez, Alaska. Operation and maintenance and other procedures and supporting records for TAPS facilities were also reviewed in Anchorage and Fairbanks.

On the basis of PHMSA's inspections and investigations, it appears that Alyeska has committed violations of the Pipeline Safety Regulations, Title 49, Code of Federal Regulations.

The items inspected and investigated and the probable violations are:

Section 1

Probable violation Items 1 through 9 were discovered as a result of PHMSA's investigations of the pipeline failures described above.

Item 1: §195.52 Telephonic notice of certain accidents.

(a) At the earliest practicable moment following discovery of a release of the hazardous liquid or carbon dioxide transported resulting in an event described in §195.50, the operator of the system shall give notice, in accordance with paragraph (b) of this section, of any failure that:

(2) Resulted in either a fire or explosion not intentionally set by the operator;

(b) Reports made under paragraph (a) of this section are made by telephone to 800-424-8802 (in Washington, D.C. 267-2675) and must include the following information:

- (1) Name and address of the operator.**
- (2) Name and telephone number of the reporter.**
- (3) The location of the failure.**
- (4) The time of the failure.**
- (5) The fatalities and personal injuries, if any.**
- (6) All other significant facts known by the operator that are relevant to the cause of the failure or extent of the damages.**

§195.50 Reporting accidents.

An accident report is required for each failure in a pipeline system subject to this part in which there is a release of the hazardous liquid [...] transported resulting in any of the following:

- (a) Explosion or fire not intentionally set by the operator.**

Alyeska failed to report a January 6, 2007 reportable incident by telephonic notice to the National Response Center, as required by §195.52. On that date, crude oil vapors were released from a valve on the top of Tank 190 at PS9 during a relief event. The escaping vapors were ignited by a portable heater nearby, and a fire ensued. The fire scorched the vacuum/pressure valve on the top of Tank 190. This accident qualifies as reportable under §195.50 because a failure of the pipeline system resulted in the release of crude oil vapors and a subsequent fire.

Item 2: §195.54 Accident reports.

- (a) Each operator that experiences an accident that is required to be reported under §195.50 shall as soon as practicable but not later than 30 days after discovery of the accident, prepare and file an accident report on DOT Form 7000-1, or a facsimile.**

§195.50 Reporting accidents.

An accident report is required for each failure in a pipeline system subject to this part in which there is a release of the hazardous liquid [...] transported resulting in any of the following:

(a) Explosion or fire not intentionally set by the operator.

Alyeska failed to file an accident report on DOT Form 7000-1, as required by §195.54, within 30 days after discovery of an accident that was required to be reported under §195.50. On January 6, 2007, crude oil vapors were released from a relief valve on the top of Tank 190 during a relief event. The escaping vapors were ignited by a portable heater nearby, and a fire ensued. The fire scorched the vacuum/pressure valve on the top of Tank 190. This accident qualifies as reportable under § 195.50 because a failure of the pipeline system resulted in the release of crude oil vapors and a subsequent fire. Despite the seriousness of the fire caused by pipeline operations, Alyeska did not submit an accident report.

Item 3: §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) General. Each operator shall prepare and follow for each pipeline system a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies.

(c) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:

(3) Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart ...

(7) Starting up and shutting down any part of the pipeline system in a manner designed to assure operation within the limits prescribed by §195.406, consider the hazardous liquid or carbon dioxide in transportation, variations in altitude along the pipeline, and pressure monitoring and control devices.

On January 8, 2007, a pipeline leak occurred at a Thread-O-Ring (T-O-R) fitting on the six-inch bypass piping at Remote Gate Valve No. 32 (RGV-32) on TAPS. Alyeska indicated that approximately 900 gallons of crude oil was spilled as a result. Failure to follow operating procedures during start-up caused vibrations that caused an uncompleted T-O-R assembly to vibrate loose and spill oil.

On at least three (3) separate occasions between November 15, 2006 and January 6, 2007, Alyeska failed to follow its manual of written procedures, as required by §195.402(a), in connection with the operation and maintenance of RGV-32. Contrary to its written procedures, Alyeska failed to require technicians to open the 6-inch by-pass line to equalize the pressure across RGV-32 when a 200 psi or greater pressure differential existed across the valve during opening. Alyeska procedure TP-OCC-0506, Section B-4, in place at the time of the spill, required a technician to go to the valve to equalize the pressure in order to minimize potential vibrations at RGV 32. Large vibrations of RGV 32 and nearby mainline piping can be caused by the collapse of vapor pockets upon reopening of RGV 32. The Operations Control Center (OCC) log book maintained by Alyeska indicated that technicians did not

equalize the hydraulic pressure at RGV-32 during three (3) valve opening instances between November 15, 2006 and January 6, 2007.

Alyeska also allowed transient pressure surges to occur in the vicinity of RGV-32 on January 8, 2007, when it operated RGV 32 remotely with a 375 psi differential across the valve. This event was preceded by at least ten (10) valve closures and re-openings since the T-O-R hot tap had been installed on September 11, 2006. The vibrations associated with all of these valve closures and re-openings, along with steady-state pressure pulsations, contributed significantly to loosening the T-O-R assembly, resulting in the January 8th leak.

Item 4: §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) General. Each operator shall prepare and follow for each pipeline system a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies.

(c) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:

(3) Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart ...

On January 6, 2007, crude oil vapors were released from a relief valve on the top of Tank 190 during a relief event. The escaping vapors were ignited by a portable heater nearby, and a fire ensued. The fire scorched the vacuum/pressure valve on the top of Tank 190.

Alyeska failed to follow its manual of written procedures as required by § 195.402(a) by allowing a portable industrial heater within 15 feet of Tank 190 at PS 9 on TAPS. Alyeska's Corporate Safety manual, SA-38, 2 1.17, as referenced by OM-1, requires that "portable industrial heaters must be kept 25 feet from any oil, gas, or electric process facilities."

The portable heater was operating inside the containment area of Tank 190 during the relief event on January 6th, when crude oil vapors were released into the containment area and subsequently ignited. A primary function of Tank 190 is to provide storage of crude oil received during a relief event. The tank is equipped with pressure valves to discharge any build-up of gas or vapor pressure concentrated during a relief event.

Item 5: §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) General. Each operator shall prepare and follow for each pipeline system a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies.

(c) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following to provide safety during

maintenance and normal operations:

(c)(11) Minimizing the likelihood of accidental ignition of vapors in areas near facilities identified under paragraph (c)(4) of this section where the potential exists for the presence of flammable liquids or gases.

Alyeska's manual of written procedures for minimizing the likelihood of accidental ignition of vapors is grossly deficient. Alyeska's Hot Work Permit procedures, SA-38, 1.15, as referenced in OM-1, improperly allow task workers to serve as their own fire watches. A fire watch needs to be located away from the work area so that he can observe the work being done and the surrounding area for signs of fire, and alert the proper authorities should a fire occur. The task worker performing maintenance inside the Tank 190 containment area at the time of the fire was serving as his own fire watch. He was working in a covered area and was unable to see or hear events happening in the surrounding area.

Alyeska OM-1, Section 4.6.1 procedures treat all TAPS facilities as facilities located in areas that would require an immediate response under §195.402(c)(4).

Item 6: §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) General. Each operator shall prepare and follow for each pipeline system a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies.

(c) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:

(3) Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart ...

(c)(11) Minimizing the likelihood of accidental ignition of vapors in areas near facilities identified under paragraph (c)(4) of this section where the potential exists for the presence of flammable liquids or gases.

On January 6, 2007, crude oil vapors were released from a relief valve on the top of Tank 190 during a relief event. The escaping vapors were ignited by a portable heater nearby, and a fire ensued. The fire scorched the vacuum/pressure valve on the top of Tank 190.

Alyeska failed to follow its written procedures as required by 195.402(a) when it failed to isolate the work area inside the containment area of Tank 190 from flammable vapors before starting work. Alyeska is required by 195.402(c)(11) to have procedures for minimizing the likelihood of accidental ignition of vapors. Alyeska has three (3) separate written procedures that required it to isolate energy sources, including flammable vapors. These procedures include the SA-38 Hot Work Permit Procedures; the procedures in the Hot Work Permit for Tank 190 maintenance; and the Manual for Operations, Maintenance and Emergencies (OM-

1). Isolation of the Tank 190 relief valves would have prevented crude oil from entering Tank 190, the release of crude oil vapors into the work area, and the January 6, 2006 fire.

Alyeska OM-1, Section 4.6.1 procedures treat all TAPS facilities as facilities located in areas that would require an immediate response under §195.402(c)(4).

Item 7: §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) General. Each operator shall prepare and follow for each pipeline system a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies.

(c) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:

(3) Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart ...

Alyeska's Hot Work Permit procedures SA-38 1.15, as referenced in OM-1, are grossly deficient because:

The permit procedures do not adequately address ignition sources. The permit allowed two ignition sources, an industrial heater and a running vehicle, to be within the break out tank area in areas near facilities where the potential exists for the presence of flammable liquids, vapors and gases.

The permit process does not adequately identify hazard recognition and risk mitigation. The permit did not address controlling flammable vapors from an unexpected relief event. Item No. 7 in the permit states that, "Energy Isolation is necessary," yet Alyeska did not isolate pressure energy from the work in the break out tank area.

The permit process does not address the serious risks associated with conducting simultaneous operations and maintenance activities on the TAPS system. As relevant to the January 6, 2007 fire at PS9, the permit process fails to address the risk of conducting maintenance inside a break out tank area while performing activities related to Strategic Reconfiguration, where there is likelihood of an unexpected pipeline shutdown and relief event. It appears that there is inadequate communication among different parts of Alyeska regarding such activities.

Item 8: §195.408 Communications.

(a) Each operator must have a communication system to provide for the transmission of information needed for the safe operation of its pipeline system.

(b) The communication system required by paragraph (a) of this section must, at a minimum, include means for:

(1) Monitoring operational data as required by §195.402(c)(9); ...

(3) Conducting two-way vocal communication between a control center and the scene of abnormal operations and emergencies...

Alyeska failed to provide an effective means of communications between the Control Room Operator (CRO) at PS9 and the task worker performing work on valve 20TO in the containment area of Tank 190 during the relief event and subsequent fire. The relief event was an abnormal operation and the fire was an emergency. The Control Room Log indicates that on January 6, 2007, at 15:07, the PS9 CRO notified the task worker via radio that a relief event was occurring. However, the task worker did not hear the notification due to the noise of the portable heater in the containment area and was not aware that a relief event was occurring.

Alyeska should have also activated the station alarm at PS9 to notify station personnel that a relief event was occurring.

Item 9: §195.438 Smoking or open flames.

Each operator shall prohibit smoking and open flames in each pump station area and each breakout tank area where there is a possibility of the leakage of a flammable hazardous liquid or of the presence of flammable vapors.

Alyeska failed to prohibit open flames and potential ignition sources inside the containment area at breakout Tank 190 as required by §195.438. In general, there is a high probability that during a relief event the containment area could be exposed to flammable hazardous liquid and/or flammable crude oil vapors. During the January 6, 2007 relief event, flammable crude oil vapors were released from a relief valve on the top of Tank 190. The escaping vapors were ignited by a portable heater nearby, and a fire ensued. The fire scorched the vacuum/pressure valve on the top of Tank 190.

Section 2

Probable violation Items 10 through 17 were discovered during PHMSA inspections conducted between August 9-24, September 11-15, and October 16-20, 2006.

Item 10: §195.404 Maps and Records.

(a) Each operator shall maintain current maps and records of its pipeline systems that include at least the following information;

(vii) Safety devices to which §195.428 applies.

Alyeska failed to indicate the correct configuration of certain double block and bleed service valves on its maps and records as required by §195.404. The P&ID (Piping & Instrument Drawing) D-39-M1/M201 R23H for Pump Station 9 did not show the double block and bleed service valve configuration for PIT 902R, 905AR, and 905BR as these valves are actually installed.

Item 11: §195.262 Pumping equipment.

(b) The following must be provided in each pump station:

(1) Safety devices that prevent overpressuring of pumping equipment, including the auxiliary pumping equipment within the pumping station.

Alyeska failed to provide safety devices to prevent overpressuring of pumping equipment as required by §195.262. Alyeska did not provide operational alarms that would indicate that a relief valve had failed to open when a relief set-point had been reached. Alyeska's current operational alarms provide warnings that a relief set-point is being approached or that relief is occurring; however, there are no alarms that would indicate that a relief set-point had been reached but a relief valve had failed to open.

Item 12: §195.404 Maps and Records.

(b) Each operator shall maintain for at least 3 years daily operating records that indicate-

(2) Any emergency or abnormal operation to which the procedures under §195.402 apply.

Alyeska failed to maintain complete daily operating records as required by §195.404(b) by failing to indicate on its daily operating log who or what initiated each command action. When an individual at the Operations Control Center (OCC) takes a command action, the action is logged, and the log indicates who took action, but when the automated SIPPS (Safety Integrity Pressure Protection System) takes action, the logs do not indicate that SIPPS caused the command action. Instead, unidentified command log events are only presumed to be action taken by SIPPS.

Item 13: §195.404 Maps and Records.

(c) Each operator shall maintain the following records for the periods specified;

(3) A record of each inspection and test required by this subpart shall be maintained for at least 2 years or until the next inspection or test is performed, whichever is longer.

And

§195.428 Overpressure safety devices and overfill protection systems

(a) Except as provided in paragraph (b) of this section, each operator shall, at intervals not exceeding 15 months, but at least once each calendar year, or in the case of pipelines used to carry highly volatile liquids, at intervals not to exceed 7½ months, but at least twice each calendar year, inspect and test each pressure limiting device, relief valve, pressure regulator, or other item of pressure control equipment to determine that it is functioning properly, is in good mechanical condition, and is adequate from the standpoint of capacity and reliability of operation for the service in which it is used.

Alyeska failed to maintain complete records for each inspection and test of its pressure control equipment as required by §195.404(c). The electronic records system (PASSPORT) data for pressure control calibration “as found” and “as left” conditions is only retained if test results are not acceptable. Without the “as found” and “as left” condition information from acceptable tests, the record that the instrument is functioning properly is incomplete. PHMSA notes that PASSPORT does not generally provide the same level of detail of inspections and tests as the paper records system previously in place.

Item 14: §195.505 Qualification program.

Each operator shall have and follow a written qualification program. The program shall include provisions to:

(h) After December 16, 2004, provide training, as appropriate, to ensure that individuals performing covered tasks have the necessary knowledge and skills to perform the tasks in a manner that ensures the safe operation of pipeline facilities; and

Alyeska does not provide training in detecting and mitigating stress or fatigue that could impact controller performance to ensure safe operation of the pipeline facilities as required by § 195.505.

Item 15: §195.507 Recordkeeping.

(b) Records supporting an individual's current qualification shall be maintained while the individual is performing the covered task. Records of prior qualification and records of individuals no longer performing covered tasks shall be retained for a period of five years.

Alyeska's operator qualification (OQ) database reflects inaccurate information about the current qualification of individuals. The database shows that several controllers are overdue for required refresher training to maintain their qualifications, when it appears that these controllers are actually qualified. One such record shows an individual who, in September 2006, was 7 years 10 months late regarding the completion of all items in JR-3118, Operations Control Center Controller Requalification. This appears to be a problem with the database as this time period would have required the individual to be requalified prior to the requirement for an OQ program. Alyeska has acknowledged that the database does not work properly. Alyeska has identified the need to remedy the problem.

Items 16 (a) and (b): §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) General. Each operator shall prepare and follow for each pipeline system a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies.

(c) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:

(3) Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart and subpart H of this part.

Background regulations

§195.573 What must I do to monitor external corrosion control?

(e) You must correct any identified deficiency in corrosion control as required by Sec. 195.401(b). However, if the deficiency involves a pipeline in an integrity management program under Sec. 195.452, you must correct the deficiency as required by Sec. 195.452(h).

§195.571 What criteria must I use to determine the adequacy of cathodic protection?

Cathodic protection required by this subpart must comply with one or more of the applicable criteria and other considerations for cathodic protection contained in paragraphs 6.2 and 6.3 of NACE Standard RP0169-96.

Item 16 a.

Alyeska's Integrity Management Engineering Monitoring Program Procedures MP-166-3.19 are grossly deficient because they are written to allow for up to three years before some areas of low cathodic protection must be remediated. It is inappropriate for more than one (1) year to pass before areas of low protection are remediated. However, in some instances remediation must occur in less than one (1) year.

Specifically, Section 5.1.3 of the Alyeska MP-166-3.19 allows for continued inadequate cathodic protection levels in areas of TAPS that Alyeska has determined have corrosion growth that Alyeska describes as occurring at a low rate. Alyeska uses ILI data and a process that includes the development of "statistically active corrosion" as part of the basis for making decisions about mitigation of cathodic protection deficiencies. Section 195.571 does not permit Alyeska to use corrosion growth rates to determine the adequacy of cathodic protection.

As indicated in previous PHMSA Final Orders issued to Alyeska¹, ILI results cannot substitute for an adequate cathodic protection (CP) system. Adequate CP provides continuous protection against corrosion, whereas ILI only provides a snapshot of some types of existing corrosion. In order for CP to be considered adequate, it must comply with §195.571, and the NACE RP0169-96 standards incorporated by reference.

Item 16 b.

In addition, Alyeska's procedures for cathodic protection coupon data analysis are grossly deficient because they allow Alyeska to take no action to remediate cathodic protection on areas of the pipeline that do not meet the NACE criteria referenced by §195.571. MP 166-3.22 "Pipeline Cathodic Protection Systems, Section 5.2.1.2, CP Coupon Data Analysis, and MP 166-3.19, section 5.2 Analysis of Data, allow Alyeska to take no action on areas which do not meet NACE criteria. It is inappropriate for more than one (1) year to pass before areas of low protection are remediated. However, in some instances remediation must occur in less than one (1) year.

Proposed Civil Penalty

Under 49 U.S.C. §60122, Alyeska is subject to an administrative 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. The Compliance Officer has reviewed the circumstances and supporting documentation involved in the above probable violation(s) and has recommended that Alyeska be preliminarily assessed a civil penalty of **\$ 817,000** as follows:

¹ See *In the Matter of Alyeska Pipeline Service Company*, Final Order, CPF No 5-2003-5002, and *In the Matter of Alyeska Pipeline Service Company* Final Order, CPF No 5-2004-5015

<u>ITEM NUMBER</u>	<u>PENALTY</u>
Item 1	\$11,000
Item 2	\$11,000
Item 3	\$195,000
Item 4	\$100,000
Item 5	\$42,000
Item 6	\$100,000
Item 7	\$42,000
Item 8	\$100,000
Item 9	\$100,000
Item 16 a	\$74,000
Item 16 b	\$42,000

Proposed Compliance Order

With respect to **Items 1, 2, 3, 5, 7, 8, and 16a and b**, pursuant to 49 U.S.C. §60118, the Pipeline and Hazardous Materials Safety Administration proposes to issue a Compliance Order to Alyeska Pipeline Service Company. Please refer to the *Proposed Compliance Order*, which is enclosed and made a part of this Notice.

Warning Items

With respect to **Items 10, 11, 12, 13, 14, and 15**, 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. Alyeska is advised to promptly correct these Items. Failure to do so may result in Alyeska being subject to additional enforcement action.

Response to this Notice

Enclosed as part of this Notice is a document entitled *Response Options for Pipeline Operators in Compliance Proceedings*. Please refer to this document and note the response options. Be advised that all material submitted in response to this enforcement action is subject to being made publicly available. If you believe that any portion of your responsive material qualifies for confidential treatment under 5 U.S.C. §552(b), along with the complete original document you must provide a second copy of the document with the portions you believe qualify for confidential treatment redacted and an explanation of why you believe the redacted information qualifies for confidential treatment under 5 U.S.C. 552(b). Failure to respond within 30 days of receipt of this Notice would constitute a waiver of Alyeska's right to contest the allegations in this Notice and authorize the Associate Administrator for Pipeline Safety to find facts as alleged in this Notice without further notice to Alyeska and to issue a Final Order.

In correspondence on this matter, please refer to **CPF 5-2007-5041**, and for each document submitted, please provide a copy in electronic format whenever possible.

Sincerely,

A handwritten signature in black ink, appearing to read "C. Hoidal", written in a cursive style.

Chris Hoidal
Director, Western Region
Pipeline and Hazardous Materials Safety Administration

Enclosures: *Proposed Compliance Order*
Response Options for Pipeline Operators in Compliance Proceedings

PROPOSED COMPLIANCE ORDER

Pursuant to 49 United States Code §60118, the Pipeline and Hazardous Materials Safety Administration (PHMSA) proposes to issue to Alyeska Pipeline Service Company a Compliance Order incorporating the following remedial requirements to ensure the compliance of Alyeska Pipeline Service Company with the pipeline safety regulations:

1. In regard to **Item Number 1** of the Notice pertaining to Alyeska's failure to report by telephonic notice the January 6, 2007 incident in which hazardous crude vapors were ignited by one or more ignition sources causing a fire within the break out area of Tank 190 at PS9 on TAPS, Alyeska shall modify its procedures for compliance with §§195.50 and 195.52 to include releases of hydrocarbon vapors that result in any event described in §§195.50 and §195.52. **Within sixty (60) days** of receipt of the Final Order Alyeska shall modify and submit these procedures to the Director, Western Region.
2. In regard to **Item Number 2** of the Notice pertaining to Alyeska's failure to file an accident report on DOT Form 7000-1 within 30 days after discovery of a reportable accident, Alyeska shall modify its procedures for compliance with §§195.50 and 195.54 to include releases of hydrocarbon vapors that result in any event described in §§195.50 and §195.54. **Within sixty (60) days** of receipt of the Final Order Alyeska shall modify and submit these procedures to the Director, Western Region.
3. In regard to **Item Number 3** of the Notice pertaining to Alyeska's failure to follow its manual of written procedures on at least three (3) separate occasions, by failing to require technicians to open the 6-inch by-pass line to equalize the pressure across RGV-32 when a 200 psi or greater pressure differential existed across the valve during opening, Alyeska shall conduct, and submit to the Director, an engineering study that comprehensively addresses the following:
 - a. The impact of vapor pocket collapses and associated vibrations throughout the TAPS system and the adequacy of Alyeska's procedures to deal with such events.
 - b. How current and future operational conditions on TAPS may cause or contribute to the formation of vapor pockets, and the impacts of vapor pocket collapse on pipeline safety.
 - c. The recent vapor pocket collapses at RGV 32 and past collapses at PS 2, 3, 5, 6, 7, and 9, the booster pump at PS 12, and the tripped anchors at Atigun pass associated with vapor pocket collapse.
 - d. How Alyeska plans to address these impacts throughout the TAPS system now and in the future, and how Alyeska will change its mainline and pump station piping and/or procedures to mitigate vapor pocket collapse and associated vibrations.

Alyeska shall submit the study **within sixty (60) days** of receipt of the Final Order. **Within sixty (60) days** of submission of the study, Alyeska shall modify its procedures in accordance with the study findings and the comments of the Director.

4. In regard to **Item Number 5** of the Notice pertaining to Alyeska's deficient procedures for preventing accidental ignition, Alyeska shall modify its Hot Work Permit procedures, SA-38, 1.15, to require an independent fire watch that is someone other than the "task worker," and require that the fire watch be located sufficiently away from the work area so that he can observe the work being done and the surrounding area for signs of fire, and alert the proper authorities should a fire occur. **Within sixty (60) days** of receipt of the Final Order Alyeska shall develop and implement these procedures.
5. In regard to **Item Number 7** of the Notice pertaining to Alyeska's deficient hot work procedures, Alyeska shall modify its permitting process to identify necessary hazard recognition and risk mitigation, including, but not limited to, identification of any necessary energy isolation. Alyeska shall also conduct a study of the risks associated with conducting simultaneous operations and maintenance activities on the TAPS system, including, but not limited to, conducting maintenance inside a break out tank area while performing activities related to Strategic Reconfiguration. This study shall analyze the risks that can result from the interface of multiple activities on TAPS. Alyeska shall then add to or modify its procedures as necessary to address such risks. Such new or modified procedures shall include mechanisms for communicating and integrating information among the various components of Alyeska to reduce or eliminate such risks. **Within sixty (60) days** of receipt of the Final Order Alyeska shall conduct the study and develop and submit the procedures, including any new or modified procedures resulting from the study required above, to the Director for approval. **Within sixty (60) days** of approval or modification of the procedures by the Director, Alyeska shall implement the procedures.
6. In regard to **Item Number 8** of the Notice pertaining to Alyeska's failure to have an effective means of communications between the Control Room Operator at PS9 and the task worker performing work in the break out area of Tank 190 during abnormal operations or an emergency, when a relief event occurred on January 6, 2007, Alyeska shall install appropriate pump station alarms to warn station personnel whenever a relief event occurs. Alyeska shall also improve its communication system to ensure that two-way vocal communications can be conducted effectively. **Within sixty (60) days** of receipt of the Final Order Alyeska shall install the alarms, improve its communications system, and submit supporting documentation of both activities to the Director.
7. In regard to **Item Numbers 16a and b** of the Notice pertaining to Alyeska's deficient procedures for the mitigation of inadequate cathodic protection when levels are found by monitoring activities to be low, Alyeska must revise its procedures to require remediation of areas of inadequate cathodic protection within one (1) year of detection of cathodic protection that does not comply with one or more of the applicable criteria and other considerations for cathodic protection contained in paragraphs 6.2 and 6.3 of the NACE Standard RP0169 (incorporated by reference, see §195.3). **Within sixty (60) days** of receipt of the Final Order, Alyeska shall submit the revised procedures to the Director, for approval or modification. **Within sixty (60) days** of the Director's approval or modification Alyeska shall implement the revised procedures.

8. Alyeska shall maintain documentation of the safety improvement costs associated with fulfilling this Compliance Order and submit the total to the Director, Western Region. Costs shall be reported in two categories: 1) total cost associated with preparation/revision of plans, procedures, studies and analyses, and 2) total cost associated with replacements, additions and other changes to pipeline infrastructure.



U.S. Department
of Transportation

**Pipeline and
Hazardous Materials Safety
Administration**

SENT TO COMPLIANCE REGISTRY
Hardcopy ☐ Electronically ☒
of Copies 1 / Date 11/28/07

12300 W Dakota Ave , Suite 110
Lakewood, CO 80228

VIA FEDEX AND FACSIMILE to (907) 787-8330

November 27, 2007

Mr. Jim Johnson
Pipeline Vice President
Alyeska Pipeline Service Company
900 East Benson Blvd.
P.O. Box 196660
Anchorage, AK 99519-6660

**CPF 5-2007-5041
CPF 5-2007-5042M**

Dear Mr. Johnson:

This letter transmits notices of two enforcement actions brought by the Pipeline and Hazardous Materials Safety Administration (PHMSA) against Alyeska Pipeline Service Company, as operator of the Trans Alaska Pipeline System (TAPS). The enclosed Notice of Proposed Violation and Notice of Amendment recite proposed findings based on inspections and incident investigations conducted by PHMSA in 2006 and 2007. On the basis of these findings, PHMSA alleges specified violations of the Federal Pipeline Safety Regulations, 49 C.F.R. Part 195, and proposes to assess civil penalties and require specific corrective actions, including development and implementation of revised safety procedures.

Without prejudice to Alyeska's right to a hearing, this will acknowledge the parties' ongoing discussions concerning actions Alyeska has taken to correct certain deficiencies cited by PHMSA and prevent future violations. Beginning last spring, PHMSA also has been working with Alyeska on development of broader risk-management procedures and controls. With an eye to future conditions and challenges, we expect this "Unified Plan" to address management processes, in addition to engineering and maintenance, and to prescribe standards in excess of

PHMSA's minimum regulatory requirements. We are encouraged by Alyeska's most recent progress and look forward to working with you to advance development and implementation of the Unified Plan.

Sincerely,

A handwritten signature in black ink, appearing to read "C. Hoidal", with a stylized flourish at the end.

Chris Hoidal
Director, Western Region
Pipeline and Hazardous Materials Safety Administration

Enclosures: *Notice of Probable Violation and Proposed Civil Penalty CPF 5-2007-5041*
Proposed Compliance Order CPF 5-2007-5041
Notice of Amendment CPF 5-2007-5042M
Response Options for Pipeline Operators in Compliance Proceedings