U.S. Department
of Transportation

**Research and
Special Programs
Administration**

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

DEC 31 2002

Margaret Yaege
Vice President of Alaska Pipelines
Phillips Alaska, Inc.
P.O. Box 100360
Anchorage, AK 99510

RE: CPF No. 5-2001-3001

Dear Ms. Yaege:

Enclosed is the Final Order issued by the Associate Administrator for Pipeline Safety in the above-referenced case. It makes findings of violation, assesses a civil penalty of $28,000, acknowledges completion of certain corrective action, and requires certain corrective action. The penalty payment terms are set forth in the Final Order. Your receipt of the Final Order constitutes service of that document under 49 C.F.R. § 190.5.

Sincerely,

for

Gwendolyn M. Hill
Pipeline Compliance Registry
Office of Pipeline Safety

Enclosure

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

DEPARTMENT OF TRANSPORTATION
RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION
OFFICE OF PIPELINE SAFETY
WASHINGTON, DC 20590

In the Matter of	)	
Phillips Alaska, Incorporated,	)	CPF No. 5-2001-3001
Respondent.	)	
	)	

FINAL ORDER

On March 20 and 21, 2001, pursuant to 49 U.S.C. § 60117, representatives of the Western Region, Office of Pipeline Safety (OPS) conducted an on-site pipeline safety inspection of Respondent's LNG facilities and records in Kenai, Alaska. As a result of the inspection, the Director, Western Region, OPS, issued to Respondent, by letter dated May 31, 2001, a Notice of Probable Violation, Proposed Civil Penalty, and Proposed Compliance Order (Notice). In accordance with 49 C.F.R. §190.207, the Notice proposed finding that Respondent had violated 49 C.F.R. §§ 191.5, 191.23, 193.2513, 193.2605, 193.2629, 193.2635, 193.2707, and 193.2713. The Notice proposed assessing civil penalties of $5,000 for violation of §191.5, $5,000 for violation of §191.23, $10,000 for violation of §193.2635, and $10,000 for violation of 193.2707. The Notice also proposed that Respondent take certain measures to correct the alleged violations.

Respondent responded to the Notice by letter dated July 5, 2001 (Response). Respondent contested the allegations, offered information to explain the allegations, and requested mitigation of the proposed civil penalties. Respondent subsequently requested a hearing by letter dated September 13, 2001. A hearing was held on December 6, 2001, in Washington, DC. At the hearing, OPS distributed a 5-page "rebuttal" to the Response (Rebuttal). After this hearing, Respondent provided additional information by letter dated January 28, 2002.

FINDINGS OF VIOLATION

Uncontested violations. At the hearing, Respondent stated it would present no evidence and would stand on its Response. Respondent requested clarification on the Compliance Order and mitigation of the penalties. Respondent did not contest the alleged violations of 49 C.F.R. §§ 193.2513(b) and (c), and 193.2635 (Items 3, 4, and 7, respectively, of the Notice). Accordingly, I find that Respondent violated the following sections of 49 C.F.R. Part 193, as more fully described in the Notice:

49 C.F.R. § 193.2513(b)– failing to have propane and ethylene transfer procedures that include provisions for personnel to:

> (3) before transfer, verify the maximum filling volume of each receiving container tank vehicle to ensure that expansion of the incoming fluid due to warming will not result in overfilling or overpressure;
>
> (5) verify that the transfer operations are proceeding within design conditions and that overpressure or overfilling does not occur by monitoring applicable flow rates and liquid levels;
>
> (6) manually terminate the flow before overfilling or overpressure occurs;
>
> (c)– failing to have propane and ethylene transfer procedures that include provisions for personnel to:
>
> (3) before transfer, verify that
>
> (iv) each tank truck engine is shut off unless the engine is required for transfer operations;
>
> (4) prevent a tank truck engine that is off during transfer operations from being restarted until the transfer lines have been disconnected and any released vapors have dissipated; and

193.2635(d)–failing to inspect each component of the facility that is protected from atmospheric corrosion at intervals not exceeding 3 years.

Contested violations. Item 1 of the Notice alleged that Respondent violated 49 C.F.R. § 191.5 by failing to give telephonic notice to the National Response Center of an incident, as defined in § 191.3, at the earliest practicable moment following discovery. On October 6, 1999, during a maintenance operation at Respondent's LNG plant, 3800 pounds of ethylene was released inside the turbine/compressor building.

In its Response, Respondent alleged that the ethylene release did not meet the definition of "incident" in § 191.3, in that the event did not involve a death, injury, or property damage of $50,000 or more. Respondent also alleged that, as the plant was not manufacturing LNG at the time, Respondent "did not consider the event an emergency shutdown." Respondent further alleged that, under § 191.3, the event was not significant "because it did not have any impact on LNG processing capacity of the facility and did not require remedial repair prior to returning the plant to service."

The Response included a report entitled "Revised Taproot Investigation of Kenai LNG Plant Ethylene Release " (Report), dated November 17, 1999. The Report noted that the ethylene release,

which lasted 38 minutes, could have had the following consequences: a vapor cloud explosion resulting in possible loss of life, destruction of more than half of the compressor room and control room, major damage to 3 turbine drivers, and loss of revenues for up to 16 months.

According to the Report, "[t]he mechanics evacuated the compressor room and notified the operators that ethylene vapors were being released. There were 5 employees and 4 contractors on duty in the plant when the release occurred. . ." The Report stated that the action of one of Respondent's employees in opening a valve actually increased the duration of the release by 22 minutes. The report stated that immediately prior to the release of ethylene, the plant was operating at half-rate; then later, "the plant was brought back on line 9-½ hrs after the incident."

The circumstances suggest that, notwithstanding Respondent's assertions, Respondent did adjudge the event significant, and, therefore, reportable under § 191.5. Moreover, the circumstances clearly suggest that the release resulted in an emergency shutdown of the plant. There is some ambiguity in the Report regarding the triggering event for the shutdown of the compressors. The Report states that the compressors were "shut down by operations because of increasing process pressures." Even assuming some other event shut the plant down, the plant remained shut down because of the release of ethylene. Moreover, employees were evacuated, the plant remained off-line for 9 ½ hours, and a formal, thorough, Taproot investigation ensued. Indeed, in its Response, Respondent stated, "[a]fter reviewing the event again in the light of DOT's comments, Phillips would report this event if it happened now and will report similar events in the future." I therefore find that the October 6, 1999, release of ethylene at Respondent's LNG facility was an "incident" within the meaning of § 191.3, and that Respondent violated § 191.5 in not giving telephonic notice of the incident at the earliest possible moment following discovery.

Item 2 of the Notice alleged that Respondent violated § 191.23(a)(5) in failing to file a safety-related condition report for a malfunction or operating error occurring on May 13, 1996 that caused the pressure of Respondent's LNG facility to rise above its working pressure plus the build-up allowed for operation of pressure limiting or control devices. Respondent's internal investigation report, dated a day after the event, states that "the Marathon Inlet Scrubber catch tank was overpressured while draining the Marathon scrubber of accumulated liquids prior to turnaround. The vessel walls were bulged out of shape and a small quantity of accumulated liquids overflowed the vessel. . ." The report stated that no injury resulted from the event. The report indicated that the overpressure occurred when an employee started draining the scrubber when no liquid was visible in the sight glass.

The Notice states that the overpressure impaired the serviceability of the catch tank, which is not designed for pressurization but is part of the initial gas process. In its Response, Respondent stated that it did not report the overpressuring of the catch tank because it did not consider the tank (which is owned by Marathon, and which the Response describes as "an atmospheric storage tank used to hold waste glycol drained from the inlet receivers") to be part of a LNG or pipeline facility. Notwithstanding Respondent's assertions, however, Respondent's brochure, entitled "Kenai Liquefied Natural Gas Operations," contains a detailed diagram showing the Marathon Inlet

Scrubber as an integral part of LNG manufacturing operations. Again, Respondent acknowledged in its Response, "[a]fter reviewing the event again in light of DOT's comments, Phillips would report this event if it happened now and will report similar events in the future." In its Rebuttal, OPS stated that OPS considers the Marathon scrubber to be part of the LNG facility "as it contains hydro carbons [sic] and can under some circumstances contain natural gas." I therefore find that Respondent violated § 191.23(a)(5) in failing to file a safety-related condition report for the May 13, 1996 overpressuring of the Marathon Inlet Scrubber catch tank.

Item 5 of the Notice alleged that Respondent violated § 193.2605 in: failing to state, in control systems procedures manuals, that control systems in service must be inspected and tested once each calendar year, not exceeding 15 months; failing to state, in fire control systems procedures manuals, that control systems in service must be inspected and tested every six months; failing to have procedures that detail safety relief valve inspections, maintenance, and testing, including references to the proper manufacturer's equipment manual; failing to state, in valve procedures, that for pilot-operated valves, the valve as well as the pilot must be tested annually not to exceed 15 months; failing to state, in procedures to test transfer hoses used in LNG or flammable refrigerant transfer systems, that hoses must be tested once each calendar year not exceeding 15 months; and failing to include, in maintenance procedures manuals, appropriate precautions to be taken to maintain the safety of personnel and property when repairing a component while it is operating.

In its Response, Respondent stated generally that it "has a number of systems that cover inspection and testing intervals for control systems," and that it believed its control systems, relief valve maintenance procedures, and safety manual procedures, met "DOT requirements." In support of these assertions, Respondent submitted copies of numerous records and procedures with the Response. Respondent admitted, however, that its transfer hose testing procedure does not provide for testing the hoses once each calendar year.

OPS found that, except as to the safety procedures, the documents did not address the deficiencies listed in item 5 of the Notice. OPS' Rebuttal stated that Respondent's "procedures and processes provided for insuring safety during repairs appear to be adequate." At the hearing, OPS stated that the following documents were adequate: Control of Hazardous Energy Sources, Lockout/Tagout and Try, Energy Isolation Procedure for Repairing or Replacing Valves/Piping, and Hot Work Permit Procedure. I therefore find that, except as to the appropriate precautions to be taken to maintain the safety of personnel and property when repairing a component while it is operating, Respondent has violated § 193.2605 as more fully described in the Notice.

Item 6 of the Notice alleged that Respondent violated § 193.2629 in failing to protect certain buried components that are subject to external corrosive attack through the use of corrosion-resistant materials, external coating, or a cathodic protection system. The Notice stated that when Respondent performed cathodic protection monitoring of the Marathon Scrubber in 1999 and 2000, Respondent found low readings, but did nothing about it. In its Response, Respondent countered that the cathodic protection readings of the Marathon Scrubber were adequate. In its rebuttal, OPS stated that it was unclear from Respondent's documents whether the readings for the Marathon Scrubber

were correctly taken. The readings are supposed to be of the buried half cells, however Respondent's documents do not clearly show this. OPS nevertheless stated that, upon review of the documents submitted by Respondent, the Marathon Scrubber should not have been cited for low cathodic protection readings. OPS stated that the PPCo. Scrubber, the Ball Receiver, the Unocal Pipeline on the Phillips side, and the Bypass Line on the Plant side should have been cited for low cathodic protection readings. The rebuttal also stated that since OPS' inspection, Respondent provided cathodic protection monitoring data "which shows that all LNG buried plant piping does not meet the -.85V criteria." At the hearing OPS stated that there was nothing to indicate that Phillips was using a 100mV shift in lieu of the -.85V criteria.

Although the Notice identified the Marathon Scrubber as having inadequate cathodic protection, and the Rebuttal states that the Notice should have included other parts of Respondent's LNG facility that have low cathodic protection readings, the Notice provided Respondent with notice of a violation of § 193.2629. Accordingly, I find that Respondent violated § 193.2629 in failing to protect the inlet piping (including the PPCo Scrubber, the Ball Receiver, the Unocal Pipeline on the Phillips side, and the Bypass Line on the Plant side) from external corrosive attack through the use of corrosion-resistant materials, external coating, or a cathodic protection system.

Item 8 of the Notice alleged that Respondent violated § 193.2707(a) in not utilizing for operation or maintenance of components only those personnel who have demonstrated their capability to perform their assigned functions by successful completion of training, related experience, and acceptable performance on a relevant proficiency test. The Notice cited three instances of inadequate training of personnel: Safety Related Condition training, safety relief valve training, and the October 6, 1999 ethylene leak incident (specifically, the employee's opening of the valve, which exacerbated the release).

In its Response, Respondent disputed the allegation. The Response included in-house training materials used to train Respondent's personnel about safety related conditions. In rebuttal, OPS stated that Respondent provided no documentation showing which individuals received training in reporting Safety Related Conditions. OPS noted three errors in the training materials. At the hearing, OPS stated that Respondent had no written plan for continuing instruction at not more than two year intervals, as required by § 193.2713. At the hearing, Respondent acknowledged that it had no written plan for continuing education and training of employees.

Regarding the safety relief valve training, the Response stated that Respondent was in the process of outsourcing valve inspection, testing and repair to comply with new State of Alaska regulations. In its Rebuttal, OPS stated that Respondent nevertheless needed to ensure that employees who perform the safety relief valve work meet all training requirements in 49 C.F.R. Part 193.

As for the training of the employee involved in the ethylene leak incident, Respondent stated in its Response that the three personnel involved in the release had previously successfully completed Operator training modules on Respondent's computer system and had reviewed Emergency Response Plan and HAZWOPER guidelines. Respondent stated that its Taproot investigation report

"found that the actions taken by the operations team were prudent and effective." In its Rebuttal, OPS stated that the employee's opening of valve VP4 "allowed additional gas to back feed into the compressor inlet piping which extended the release for an addition [sic] 22 minutes and contributed 2500 lbs. Without additional information why VP4 was opened it can only be assumed that the operator did not fully understand the bypass piping or did not understand the primary reason for the release."

Accordingly, I find that Respondent violated § 193.2707(a) in not using operation or maintenance personnel who have been trained according to written plans for initial instruction in safety related conditions; and in not using personnel who have been trained according to written plans for continuing instruction in safety relief valves at intervals of not more than two years. I cannot find from the evidence, however, that the actions of the employee in opening valve VP4 during the ethylene leak necessarily reveal inadequate training of the employee, and I am unwilling to assume so from the circumstances.

Item 9 of the Notice alleged that Respondent violated § 193.2707(c) in having corrosion control procedures carried out by persons unqualified by experience and training in corrosion control technology. In its Response, Respondent stated that on the day of the OPS inspection, its two technicians were unavailable, and that OPS based its violation on an interview with an employee who was, at the time, undergoing training in cathodic protection. At the hearing, however, OPS stated that the OPS inspector had also interviewed Respondent's senior cathodic protection employee, who demonstrated unfamiliarity with basic principles of cathodic protection. In its Response and at the hearing, Respondent stated that "all [cathodic protection] technicians responsible for maintaining [cathodic systems] in DOT covered facilities, both those in training and experienced [cathodic protection] technicians, will undergo NACE [cathodic protection] training." Accordingly I find that Respondent violated § 193.2707(c) as more fully described in the Notice.

Item 10 of the Notice alleges that Respondent violated § 193.2713 in that Respondent's training plan does not contain pressure relief valve training, training for operations or maintenance personnel to recognize safety related conditions, or training for individuals responsible for carrying out corrosion control procedures under § 193.2605. Item 10 also alleges that Respondent's ethylene refresher training for auxiliary systems does not describe the start-up procedure, and that Respondent's refresher training "does not include actions that must be taken during abnormal and emergency operations to prevent an escalation of the situation." In its Response, Respondent stated its belief that HAZWOPER training covered the prevention of escalation of emergency situations. In its Rebuttal, OPS stated "Hazwoper training does not constitute training for reacting to abnormal or emergency operation. Either may or may not result in release of a hazardous substance. This training should cover actions that operators should take to prevent an abnormal operation from escalating to an incident."

The discussion of Item 8 above contains evidence that supports this violation. Accordingly, I find that Respondent violated § 193.2713 as more fully described in the Notice.

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

ASSESSMENT OF PENALTIES

Under 49 U.S.C. § 60122, Respondent is subject to a civil penalty not to exceed $25,000 per violation for each day of the violation up to a maximum of $500,000 for any related series of violations.

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 violations, 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 penalty of $5,000 for violation of 49 C.F.R. § 191.5, which requires telephonic notice to the National Response Center of an incident, as defined in § 191.3, at the earliest practicable moment following discovery. The relevant circumstances are the following: the ethylene leak required immediate repair; the consequences could have been disastrous; and the incident only came to light two years later during OPS' inspection of Respondent's facility. Had Respondent made telephonic notice as required in § 191.5, OPS might have conducted its own investigation of the incident. The primary purpose of the reporting requirements is to provide for the accumulation of factual data that will give OPS a sound statistical base from which to define safety problems, determine their underlying causes, and propose regulatory solutions. Respondent has not shown any circumstance that would justify its failure to comply with § 191.5. Accordingly, having reviewed the record and considered the assessment criteria, I assess Respondent a civil penalty of $5,000 for violation of § 191.5.

The Notice proposed a penalty of $5,000 for violation of 49 C.F.R. §191.23, which requires making a safety-related condition report for any malfunction or operating error that causes the pressure of a LNG facility that contains or processes LNG to rise above its working pressure plus the build-up allowed for operation of pressure limiting or control devices. As noted in OPS' Violation Report, had the catch tank lost its containment ability, an uncontrolled release of natural gas and an explosive atmosphere may have resulted, with injury and death as possible consequences. This five year old condition only came to the attention of OPS during its 2001 inspection. OPS tracks safety-related condition reports to ensure that prompt and appropriate action is taken to correct the adverse condition. Respondent has not shown any circumstance that would justify its failure to comply with § 191.23. Accordingly, having reviewed the record and considered the assessment criteria, I assess Respondent a civil penalty of $5,000 for violation of § 191.23.

The Notice proposed a penalty of $10,000 for violation of 49 C.F.R. § 193.2635, which requires each component protected from atmospheric corrosion to be inspected at intervals not exceeding three years. According to the Notice, Respondent had historically completed atmospheric corrosion

surveys at five year intervals, and then only of selected components. In 1999, corrosion was the second leading cause of reported incidents for gas pipeline operators. At the time of the inspection, Respondent was performing a complete atmospheric corrosion survey and using the services of a NACE coatings inspector. The results of that survey will provide Phillips a listing of all components protected from atmospheric corrosion which require an inspection on a three year interval. Respondent has not shown any circumstance that would justify its failure to comply with § 191.2635. Accordingly, having reviewed the record and considered the assessment criteria, I assess Respondent a civil penalty of $10,000 for violation of § 191.2635.

The Notice proposed a penalty of $5,000 for violation of 49 C.F.R. § 193.2707(a), which requires an operator to utilize for operation and maintenance only those personnel who have demonstrated their capability to perform their assigned functions by successful completion of training, related experience, and acceptable performance on a relevant proficiency test. A LNG plant must have qualified personnel maintaining relief valves and capable of recognizing and responding to a safety-related condition. The evidence was insufficient to show, however, that the employee involved in the 1999 ethylene release was inadequately trained. Accordingly, having reviewed the record and considered the assessment criteria, a reduction will be made in the amount of the proposed penalty. I assess Respondent a civil penalty of $3,000 for violation of § 193.2707(a).

The Notice proposed a penalty of $5,000 for violation of 49 C.F.R. § 193.2707(c) , which requires that corrosion control procedures under § 193.2605(b), including those for the design, installation, operation, and maintenance of cathodic protection systems, must be carried out by, or under the direction of, a person qualified by experience and training in corrosion control technology. The Notice stated that according to Respondent's records, one employee who had been taking cathodic protection readings had received no training in cathodic protection, and another had less than eight hours of training. As noted above, corrosion is the second leading cause of gas pipeline incidents. Respondent has not shown any circumstance that would justify its failure to comply with § 191.2707(c). Accordingly, having reviewed the record and considered the assessment criteria, I assess Respondent a civil penalty of $5,000 for violation of § 191.2707(c).

Accordingly Respondent's total civil penalty is $28,000. A determination has been made that Respondent has the ability to pay this penalty without adversely affecting its ability to continue in business.

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**. After completing the wire transfer, send a copy of the **electronic funds transfer receipt** to the **Office of the Chief Counsel** (DCC-1), Research and Special Programs Administration, Room 8407, U.S. Department of Transportation, 400 Seventh Street, SW, Washington, DC 20590-0001.

Questions concerning wire transfers should be directed to: Federal Aviation Administration, Mike Monroney Aeronautical Center, Financial Operations Division (AMZ-120), P.O. Box 25770, Oklahoma City, OK 73125; **(405) 954-4719**.

Failure to pay the $28,000 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 an United States District Court.

COMPLIANCE ORDER

The Notice proposed a compliance order. Respondent has demonstrated corrective action addressing all but one of the items in the proposed compliance order. Under 49 U.S.C. § 60118, each person who engages in the transportation of hazardous liquids or 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 ordered to take the following actions to ensure compliance with the pipeline safety regulations applicable to its operations:

1. Conduct an electrical study of the inlet piping area to determine the cause for the low cathodic protection monitoring readings and remedy the cause. Respondent has submitted a plan for a close interval survey of the inlet piping area with projected completion in 2002. The Director, Western Region, Office of Pipeline Safety, has accepted this plan.

2. Submit a copy of the electrical study or close interval survey, a report on the determination of the cause of the low cathodic protection monitoring readings, and a progress report on the remedy to the Director, Western Region, Office of Pipeline Safety, within 180 days of issuance of this order.

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, shall 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.

Failure to comply with this Final Order may result in the assessment of civil penalties of up to $25,000 per violation per day, or in the referral of the case for judicial enforcement.

Stacey Gerard
Associate Administrator
for Pipeline Safety

DEC 3 1 2001
Date Issued