

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

In the Matter of )  
 )  
ALON USA, ) CPF No. 5-2002-5017  
 )  
Respondent. )  
 )

ORDER DIRECTING AMENDMENT

On February 20-21, 2002, pursuant to 49 U.S.C. § 60117, representatives of the Western and Southern Regions, Office of Pipeline Safety (OPS), inspected ALON USA's (Respondent's) integrity management program at Respondent's facility in Big Spring, Texas. As a result of the inspection, the Director, Western Region, OPS, issued to Respondent, by letter dated May 7, 2002, a Notice of Amendment (NOA). The NOA alleged inadequacies in Respondent's integrity management procedures and proposed to require amendment of these procedures to comply with the requirements of 49 C.F.R. § 195.452.

By letter dated June 5, 2002, Respondent requested a 30 day extension of time to respond to the NOA. By letter dated June 18, 2002, OPS granted the request. By letter dated July 9, 2002, Respondent responded to the NOA (Response). With regard to the first of two issues raised in the Notice, Respondent did not contest the issue and described the actions it was taking to address the inadequacies in its procedures. With regard to the second issue, Respondent disagreed that its procedures were inadequate, offered information in explanation of its position, and requested that this item be withdrawn from the NOA.

FINDINGS OF INADEQUATE PROCEDURES

*Uncontested Inadequate Procedures*

Item 1 of the NOA alleged that Respondent's procedures involving its identification of pipeline segments that could affect a high consequence area were inadequate and failed to meet the requirements of 49 C.F.R. § 195.452 in that the procedures failed to take stream and waterway transport into account.

In its Response, Respondent did not contest the allegation, acknowledged the omission, and explained the actions it was taking to address this inadequacy in its procedures. These actions included retaining an expert contractor to integrate stream and waterway modeling into their

analytical mapping process. Respondent also submitted a two page chart summarizing the approach that would be used to identify pipeline segments that could affect a high consequence area on flat terrain.

As part of their integrity management program requirements, operators are required to identify pipeline segments that could affect a high consequence area. The procedures used to identify these segments must be adequately supported by technical justifications that take into account, among other things, topological and hydraulic gradients and stream flow characteristics when a buffer zone approach is utilized.

The information provided by Respondent with its response letter indicated that a 1/8 mile buffer zone and an average stream velocity of 2 feet per second would be used as basic assumptions for the water transport modeling to be performed by their contractor. However, Respondent did not explain the basis for these assumptions and did not demonstrate why they could be relied upon to ensure that all segments are properly identified. Respondent must submit segment identification procedures which include detailed supporting justifications that provide a sound technical basis for the assumptions and formulas used in its spill modeling analysis. Although Respondent has articulated its intentions to correct any inadequacies in this regard, it has not yet submitted the revised procedures themselves. Accordingly, I find Respondent's integrity management program procedures inadequate to ensure safe operation of Respondent's pipeline system.

#### *Contested Inadequate Procedures*

Item 2 of the NOA alleged that Respondent's procedures involving its determination of release volumes were inadequate and failed to meet the requirements of 49 C.F.R. § 195.452 in that the worst case discharge values used in its analysis were not supported by a sound technical basis demonstrating their reliability.

In response to Item 2, Respondent contested the allegation, explained that its release volumes were based on worst case discharge calculations that involved taking into account the distance between its block valves, the topography, and its recent leak history, and contended that they were therefore defensible. Respondent requested that Item 2 be withdrawn from the NOA.

The integrity management program was established to enhance public safety by requiring operators to conduct a fresh evaluation of their pipelines in a comprehensive, system-wide manner, and to integrate all available data sources to formulate a comprehensive program to ensure the integrity of their pipelines on a long-term basis. As part of their initial integrity management program requirements, operators are required to identify all segments of their pipelines that could affect a high consequence area in the event of a release. This process in turn involves analyzing the possible consequences of a pipeline rupture resulting in the release of various quantities of commodity, depending on the nature of the failure, the type of commodity, the flow rate, the local topography, and other factors. One methodology for identifying these segments is to design a buffer zone around each pipeline segment and evaluate whether any portion of the buffer zone overlaps a high

consequence area. The size of the buffer zone can not be established arbitrarily, but rather, must be determined by calculating the expected spill trajectory associated with a given segment of pipeline. The procedures used to establish such buffer zones must involve conservative spill scenarios supported by technical justifications for a range of release volumes, including worst case release volumes associated with catastrophic failures.

In its Response, Respondent described its efforts to improve its ability to quickly identify and respond to discharge events, such as the placement of emergency response trailers in the vicinity of the pipeline, as well as its efforts to minimize the frequency of release incidents by establishing public education programs. Respondent contended that these efforts had resulted in a significant reduction in release volumes in recent years and argued that its use of assumptions that limited worst case release volumes to values less than that which could physically be released was justified on this basis. However, although faster response times might decrease the volume of commodity released in a given incident, such results are uncertain at best. Similarly, although public outreach might reduce the probability of a spill, it can not eliminate it altogether and these measures, while important, have no direct mitigating effects on any spill that should occur. Respondent must focus on the consequences of a potential discharge event where all of the commodity that can physically drain down is accounted for. In this case, Respondent did not introduce any physical apparatus or equipment, such as the strategic placement of check valves, emergency flow restricting devices, or remotely operated valves, that would directly reduce the volume of such a spill with certainty and thereby justify the use of release volumes lower than those physically possible.

Finally, Respondent contended that release volumes used for Oil Pollution Act (OPA) response planning could be utilized for integrity management segment identification purposes. However, although the methodologies used may be similar, worst case discharge calculations for OPA response planning involve pipeline sections within coastal and inland response zones formulated under different criteria than integrity management high consequence areas. To the extent which OPA determinations are relevant to integrity management procedures, Respondent must fully incorporate these detailed models and calculations into its segment analysis. In short, the Respondent must submit segment identification procedures which include detailed supporting justifications that provide a sound technical basis for the assumptions used in its spill trajectory modeling and demonstrate why they can be relied upon to ensure that all segments are properly identified. Accordingly, I find that Respondent's integrity management program procedures are inadequate to ensure safe operation of its pipeline system.

#### AMENDMENT OF PROCEDURES

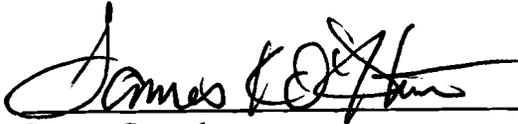
Pursuant to 49 U.S.C. § 60108(a) and 49 C.F.R. § 190.237, Respondent is ordered to make the following changes to its integrity management program procedures:

1. Amend its procedures to provide adequate technical justification for determining the extent of the buffer zone used to identify pipeline segments that could affect high consequence areas to account for longer range paths, such as minor streams and waterways, that can transport releases of commodity to a high consequence area.

2. Amend its procedures to provide adequate technical justification for determining the volume of commodity that could be released from a pipeline leak or rupture in determining the extent of the buffer zone used to identify pipeline segments that could affect high consequence areas, such that the worst case release volume associated with catastrophic failure is taken into account or physical equipment directly reducing release volume is introduced.
3. Respondent must amend its procedures within 30 days following receipt of this Order Directing Amendment. Submit all amended procedures and technical justifications demonstrating compliance with this Order to the Director, Western Region, Office of Pipeline Safety, Golden Hills Centre, Suite A-250, 12600 West Colfax Avenue, Lakewood, CO 80215-3736.

The Director, Western Region, OPS, may grant an extension of time to comply with any of the required items upon a request by the Respondent demonstrating good cause for an extension.

Failure to comply with this Order Directing Amendment 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. The terms and conditions of this Order are effective upon receipt.



**Stacey Gerard**  
Associate Administrator  
for Pipeline Safety

DEC 31 2007

Date Issued



U.S. Department  
of Transportation

**Research and  
Special Programs  
Administration**

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

DEC 31 2002

Mr. Randy Hillman  
Pipelines and Terminals Operations Manager  
ALON USA  
P.O. Box 1311  
Big Spring, TX 79721

Re: CPF No. 5-2002-5017

Dear Mr. Hillman:

Enclosed is the Order Directing Amendment issued by the Associate Administrator for Pipeline Safety in the above-referenced case. It makes findings of inadequate procedures and requires that you amend your integrity management program procedures. When the terms of the Order are completed, as determined by the Director, Western Region, OPS, this enforcement action will be closed. Your receipt of the Order Directing Amendment 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

cc: Bob Reed  
Senior Staff Environmental Specialist  
ALON, USA

CERTIFIED MAIL - RETURN RECEIPT REQUESTED