



20 May 2011

Sent via Email

Trevor Dark
Energy Resources Conservation Board
Suite 1000, 250 – 5th Street SW
Calgary, AB T2P 0R4

Dear Mr. Dark,

RE: REQUEST FOR LEAVE TO RESUME OPERATION OF NPS 20 RAINBOW PIPELINE (LICENSE 5592-1)

The following is further to discussions between ERCB and Plains technical staff yesterday.

Plains maintains its position that the NPS 20 pipeline is safe to resume operation immediately. However, we recognize that the ERCB must be satisfied that every reasonable effort has been made to minimize both the probability and consequence of a failure similar to what was recently experienced. Plains acknowledges the need to respond to the implications arising from the unrelated anomaly found on a repair sleeve 25 km downstream from the MP188 release site which was identified during routine maintenance in accordance with Plains' standard asset integrity program protocols.

Cause of Failure at MP188 Release Site

In Plains' May 8, 2011 Engineering Assessment, Plains submitted that the most likely cause of the April 28, 2011 failure was the combination of the following three coincident factors:

- The presence of a stress riser in the form of an increase in relative pipe stiffness from the carrier pipe to the carrier pipe with a full encirclement repair sleeve;
- Differential settlement due possibly to inadequate compaction following the re-excavation of a segment of pipeline straddling the location of the stress riser; and
- Excessive stress on the bottom chord of the pipeline likely resulting from soil settlement.

Independent third-party forensic evaluation has been completed confirming the above and citing a fourth causal factor, namely the presence of an initiating crack. The final report from Acuren Goup Inc. was provided under separate cover to ERCB technical staff Thursday May 19, 2011.

Probability of a Similar Failure

With this new information from the independent forensic analysis, Plains now knows that a failure similar to that experienced on April 28, 2011 requires the presence of all four of the above-referenced factors.

Plains has reviewed its maintenance logs and confirmed that there are only five locations where two of the now four factors are a possibility (i.e. re-excavated weld sleeve). All five sites are located on the 82 km segment of NPS 20 pipeline from Zama to Rainbow Lake; there are no such sites on the 378 km segment of NPS 20 pipeline from Rainbow Lake to Nipisi.

It is important to note that Plains has no reason to suspect that any of the other two factors required for a similar failure (i.e. excessive stress on the bottom chord, and a pre-existing crack) exist at any of these five locations and as such Plains is confident that the incident at MP188 is a singular event. However, to be absolutely certain, Plains is in the process of inspecting each of these five locations on an expedited basis (by June 22, 2011 or sooner). This program will be referred to as Inspection Plan A.

Upon further review of our maintenance logs Plains has been able to determine that two of these five sites were recently inspected in 2011 and were confirmed (by way of magnetic particle inspection) to be free of any potential initiating cracks. Therefore, Plains can now confirm that there are only three remaining sites to inspect. Plains will make every effort to complete these inspections as quickly as possible recognizing however that these locations are remote, difficult to access in summer, logistically complicated by the recent forest fire situation, and that our staff and contractors are highly engaged in both the clean-up exercise at MP188 and have been heavily impacted by the recent fires in the Town of Slave Lake.

Plains remains confident, particularly given the new information from the Acuren Group Inc. report, that Inspection Plan A can follow the re-start of the pipeline, as a condition subsequent to the pipeline's ongoing operation.

Consequence of Failure

It is important to note that the cause of failure is not related to operating condition, that is to say such a failure (despite its remote probability) is essentially independent of operating pressure and flow rate and as such is as likely to occur with the line shut-in as it is when in operation.

Plains agrees that shutting-in the line while the above-referenced inspections are carried out has some benefit in reducing the consequence of a failure (i.e. volume released would vary proportionally with operating pressure), however, Plains notes that this benefit is significantly offset given that without product flowing through the line, the two automated leak detection systems Plains employs (and have proven to operate as designed) are rendered useless while there is currently approximately 89,350 m³ of crude oil still in the affected line.

However, in an effort to minimize the consequence of a similar failure (despite its remote probability) Plains has suggested to limit the MOP to 4,000kPa (i.e. 55% of the licensed MOP) until the Inspection Plan A has been completed to the ERCB's satisfaction. Plains feels a restriction to 4,000kPa throughout the NPS

20 pipeline is the lowest practical operating pressure required to establish flow from Rainbow Lake through to Nipisi.

Implications Arising From Unrelated Finding Of An Anomaly

As self-disclosed to the ERCB, Plains indentified an anomaly on a weld sleeve while conducting routine maintenance 25km from MP188. This anomaly has been present since installation and poses no risk to pipeline integrity.

The finding and subsequent repair is routine. It is not required to be reported to the ERCB. In fact, were it not for the high profile nature of the MP188 release and the coincidence both in terms of proximity to MP188 and timing, Plains (like any other prudent pipeline operator) would have simply affected a standard repair and recorded the finding and repair details in its maintenance logs.

Plains sees no reason to link approval to restart the NPS 20 pipeline following the MP188 release with this unrelated finding. However, Plains is in the process of completing another five inspections on weld sleeves that, other than being reasonably accessible, were selected at random. This program will be referred to as Inspection Plan B. Together, Inspection Plans A and B represent over 10% of the weld sleeves on the NPS 20 pipeline. Plains maintain this sample size is appropriate and statistically relevant and can be completed on an expedited basis.

Given that the anomaly finding poses no immediate concern to pipeline integrity and given there is no evidence of a systemic issue posing a concern to pipeline integrity, Plains maintains that Inspection Plan B can follow the re-start of the NPS 20 pipeline, as a condition subsequent to the pipeline's ongoing operation. It is important to re-state, were it not for the coincident unrelated release at MP188, Plains would have repaired the anomaly using established procedures without any restriction or interruption to pipeline operations, in full compliance with all regulations, codes and standards and industry best practice. However, in an effort to minimize the consequence of any such failure (despite its remote probability) Plains proposes to limit the MOP to 4,000 kPa (i.e. 55% of licensed MOP) until Inspection Plan B has been completed to the ERCB's satisfaction.

In addition, Plains proposes to voluntarily inspect all of the weld sleeve fittings. This program will be referred to as Inspection Plan C. The principles of the program shall require Plains to:

- File (within one month of receiving approval to restart the NPS 20 Rainbow pipeline) the details of its voluntary plan, including location and timing of the fittings to be inspected;
- Complete the inspection of all of the weld sleeve fittings on the NPS 20 line on a expedited basis (note - given the location of these inspections this work will likely require two winter seasons to complete);
- Notify the ERCB and allow for ERCB inspection of all anomalies found (if any); and
- Provide quarterly update reports on the status and findings of the voluntary weld sleeve inspection program.

Other Steps to Reduce the Consequence of Similar Failure

Plains maintains its position that the NPS 20 pipeline is safe to resume operation immediately. The Plains investigation, supported with independent third-party forensic analysis, concludes that the failure at MP188 was a singular event. While Plains has taken all reasonable steps to minimize both the probability and consequence of any further incident, Plains shall voluntarily implement the following additional consequence mitigations measures:

- Following completion of Inspection Plans A and B Plains will impose a voluntary restrict the MOP to 75% of the licensed MOP until such time as Inspection Plan C is completed to the satisfaction of the ERCB;
- It is important to note that Plains' leak detection system rapidly and correctly identified the pipeline failure. Regardless, Plains will increase supervisory coverage from its current level of 40 hours per week to provide shift supervision on a 24 hour per day, 7 day per week basis. In the interim (i.e. while this staffing is being put in place), Plains will implement after hours on-call supervisory coverage such that supervisors can respond to the control centre to participate fully in all potential line loss alerts and shutdowns. Plains has provided the ERCB (May 13, 2011) with two flow charts setting out the additional interaction, hold points, and re-start protocols to ensure that pipeline releases are detected rapidly and correctly, and that the consequence of a failure (despite its remote probability) is minimized; and
- Review manual block valve locations and develop and implement a program to further automate existing manual block valve sites over time. Plains will provide details of this program to the ERCB for review and will provide regular updates on the status of the program.

Fitness for Service

Based on the information highlighted in this and previous communications with the ERCB, Plains concludes the cause of the April 28, 2011 pipeline failure at MP188 on Plains' NPS 20 Rainbow Pipeline was a singular event resulting from a unique combination of the four factors as set out above.

The pipeline has been repaired and has been ready for operation since May 3, 2011. Plains respectfully submits that continued interruption of the NPS 20 pipeline as may be imposed by the ERCB is unnecessary and poses undue hardship to a number of parties including all of the oil producers affected. Further Plains submits that leaving the line out of operation poses unnecessary risk by essentially disabling its two proven automated leak detection systems while over 89,350 m³ of crude oil sits stagnant in the line.

Plains is confident that the pipeline is safe to resume normal operation immediately and hereby formally requests the ERCB authorize Plains to resume operation, subject to the actions described herein and in accordance with the approved start-up and communications plans (latest edition) already on file with the ERCB.

In the alternative, Plains seeks leave to immediately resume operation on the NPS 20 segment from Rainbow Lake to Nipisi, and seeks leave to resume operation of the NPS 20 segment from Zama to Rainbow Lake subject to completion of Inspection Plan A, all of which is subject to the actions described

herein and in accordance with the approved start-up and communications plans (latest edition) already on file with the ERCB.

Should you have any questions or concerns, please do not hesitate to contact Michelle Stepp at (403) 519-5066 or myself (403) 998-1215.

We request your direction on the matter by May 25, 2011.

Yours truly,

PLAINS MIDSTREAM CANADA ULC

A handwritten signature in cursive script, appearing to read "S. Bart".

Stephen Bart

Vice President, Crude Oil Operations