



Enbridge Energy, Limited Partnership

Restart Plan for Line 14

Prepared for

Pipeline and Hazardous Materials Safety Administration

(PHMSA)

July 31, 2012, (Revised August 5, 2012)

This Restart Plan concerning Line 14 is submitted by Enbridge Energy, Limited Partnership (“Enbridge”) as ordered by the Pipeline and Hazardous Materials Safety Administration’s (“PHMSA”) July 30, 2012 Corrective Action Order (“CAO”). This Plan is being submitted for approval by PHMSA’s Regional Director, Central Region as per item 1 of page 5 of the CAO. This Plan and supporting technical documentation is consistent with the requirements of the CAO. The purpose of this Restart Plan is to document Enbridge’s prestart-up preparations as well as the procedure to be followed for restarting Line 14 at a reduced pressure under controlled conditions and monitoring.

1. INTRODUCTION

On July 27, 2012, a pipeline leak was discovered on Enbridge Line 14, approximately four miles downstream of Adams Station near MP 232 in Adams County, Wisconsin. In accordance with the PHMSA’s July 30, 2012 CAO, Enbridge has undertaken measures to ensure that the restart of Enbridge’s pipeline Line 14 will be executed and completed in a safe and operationally sound manner.

2. PRESSURE REDUCTION

As per PHMSA’s stated directives to Enbridge, Line 14, after receiving Director approval to restart, will maintain a minimum twenty percent pressure reduction as further described in the table below. Enbridge has also conducted an operability assessment and considered ILI features and anomalies in order to calculate appropriate discharge pressures in compliance with the CAO directive.

Based on this analysis, Enbridge has determined that Line 14 is safe to return to service under reduced operating pressure and will impose pressure restrictions at each pump station from Superior to Mokena, as well as Mokena to Griffith (although not required within the CAO). Operating pressures for each pump station at the time of failure, as well as the reduced operating pressures upon restart, are described in the table below:

LINE 14 - PRESSURE REDUCTION TABLE

Station	<i>Pre-Incident Station Base Maximum Discharge (psi)</i>	<i>Discharge Pressure at time of failure (psi)</i>	<i>High Recorded Discharge Pressure in Preceding 30 Days (psi)</i>	<i>Return to Service Base Max Discharge (per CAO Item 2) (psi)</i>
Superior	1407	1077	1340	1072
Minong	1279	780	1238	990
Edgewater	1079	835	1063	850
Sheldon	1365	673	1325	1060
Owen	1207	677	1189	951
Vesper	1342	1054	1290	1032
Adams	1362	1339	1338	1070
Rio	1245	968	980	784
Cambridge	1356	604	1014	811
Walworth	1376	828	1078	862
Burlington	1387	963	965	772
Shorewood	1228	686	858	686
Griffith/Mokena	--			

Table 1 – Pressure Reduction Table

The original hydrostatic pressure test for the line at installation established a Maximum Allowable Operating Pressure (MOP) of 1378 psig in accordance with 49 CFR Part 195.

The lower operating pressures proposed to be in effect upon restart provide a significant margin of safety. The twenty percent reduction in operating pressures is common practice as detailed in the Pipeline Research Council International (PRCI) repair manual. To support these restrictions, a fatigue assessment utilizing a just surviving flaw approach was performed by a third party expert to show that a hypothetical just surviving flaw downstream of each pump station is safe for continued operation and will enable adequate timeframe for completing the integrity verification program. In addition to these station discharge restrictions, which lowers the pressure across the entire pipeline, a full assessment was conducted on the 2012 DUO Phased Array inspection of Line 14 Superior to Adams segment and additional point pressure restrictions were applied based on this analysis. To date, the 2007 USCD data on the Adams to

Mokena segment has been reanalyzed by the ILI vendor, GE, for the signals 5 miles downstream of all stations in the Adams to Mokena segment. The 2011 MFL data in both segments was reviewed and it is confirmed that all features reported to have a fitness for purpose below SMYS have been repaired.

A third party expert substantiated that the reduced pressures reflected in Table 1 are appropriate, considering an associated remaining life of a hypothetical feature at those 30 day high pressures. Documentation confirming that the 30 day high pressures were in fact achieved, have been submitted to PHMSA.

We have reviewed the previous engineering critical assessment that was utilized to develop the post 2007 re-inspection interval for Adams – Mokena. The re-inspection interval was based on setting the starting flaw size using the data from the 2007 inspection. We have adjusted the engineering critical assessment approach using the just surviving flaw technique to establish the start-up pressures.

This document covers Enbridge's Line 14 pre-restart and restart activities. The plan describes the startup process which Enbridge will follow or has employed prior to and during the Line 14 restart. Enbridge will comply completely with the CAO and provisions for Line 14.

3. PRELIMINARY LINE 14 INTEGRITY SUMMARY ASSESSMENT

3.1 Description of Line 14 Pipeline

Line 14 was constructed in 1998 using NPS 24, X70, 0.328 inch to 0.500 inch nominal wall thickness pipe. The pipe was manufactured by Stupp Pipe in the US using the Electric Resistance Weld process. The pipe was manufactured in accordance with 49 CFR Part 195 and, as incorporated into the regulations, American Petroleum Institute (API) Standard 5L as well as Enbridge's supplementary specifications. The pipeline was coated in a coating mill with Fusion Bond Epoxy (FBE) and the girth welds were coated in the field with either a spray applied FBE or a liquid epoxy for a corrosion barrier.

3.2 Description of Failed Pipe Near MP 232

Every pipe joint in the Enbridge mainline system is identified through in-line inspection and is labeled to assure consistent data warehousing, primarily for integrity management programs. In this case, the failure occurred at Joint No. 3140. A photograph of the failed pipe joint is provided below in Figure 1.



Figure 1 – Failed Pipe Joint

Results from in-line inspection (ILI) programs conducted by Enbridge across the section of pipe that included the failed joint were reassessed. The key observations are as follows:

- The 2007 USCD Crack Detection data did not report a feature at the failure location however the data upon further review does show a feature that was smaller than the tool specifications for detection at the time of inspection. The original features list of the 2007 CD inspection and the re-assessment of the failed joint and other removed pipe have been submitted to PHMSA.

- The 2011 MFL tool run showed five short shallow features on this joint. The location of these features was not coincident with the location of the failure on the pipe. The original features list from the 2011 MFL inspection of the failed joint and other removed pipe have been submitted to PHMSA.
- The 2011 Geometry inspection showed no features or anomalies on the failed joint. The original features list from the 2011 Geometry inspection of the failed joint and other removed pipe have been submitted to PHMSA.

4. INTEGRITY VERIFICATION ACTIONS

The following are the key steps that provide the required confidence that Line 14 can be operated safely.

4.1 Interim Reduced Operating Pressures and Safe Operation

As required by the CAO, the pipeline will operate at temporary reduced operating pressures until further approval by PHMSA that the pipeline can be restored to increased operating pressures.

Enbridge will operate the pipeline no higher than at 80% of the highest pressure recorded in the 30 days prior to the incident, except at Adams where the limit will be 80% of the pressure at time of failure. The maximum discharge pressures for all of the stations are summarized in Table 1. Additionally, Enbridge has reviewed the 2012 crack ILI data from Superior to Adams and has imposed point pressure restrictions at locations where ILI features have been identified to meet excavation criteria.

Enbridge will review the pressure restrictions monthly, taking into account any ILI features present in the pipeline and analysis of operating pressure cycle data. Based on the monthly review, Enbridge will immediately reduce operating pressure accordingly to maintain safe operations, submit the results of the monthly review, the current discharge set points, including any additional reductions, and any exceedance of discharge set points to PHMSA in accordance to Item 10 of the CAO.

4.2 Field Investigation and Current Assessment Activities

The failed pipe joint 3140 has been removed for metallurgical investigation and preliminary assessment has been performed. This assessment shows evidence of an internal surface breaking flaw with progressive growth (beach marks).

This failure location was identified in the ILI data to have a below specification feature. The characteristics of this feature have been utilized to develop a comprehensive Line 14 ILI data review that will include all crack ILI data sets which is being performed by the ILI vendor. This assessment will identify priority excavations and any other immediate actions related to ILI tool performance for both segments of Line 14. This analysis is a high priority for both Enbridge and the ILI vendor.

In order to obtain a highly comprehensive data set, Enbridge plans to run two separate high resolution ultrasonic crack inspection instruments supplied by two different vendors (NDT Systems and Services Ultrasonic Crack Tool and the GE DUO Phased Array Crack Tool). The NDT tool will be run in August, 2012. We are arranging the availability of the GE DUO tool and current availability is anticipated to be September, 2012. We will advise PHMSA once the specific launch date is defined. These new data sets will be overlaid and integrated with all other integrity data sets and information.

Two joints upstream, 3120 and 3130, were also removed. 3120 was known to have a < 12.5% depth notch like feature reported by the 2007 crack inspection. These joints being removed will allow further testing to better understand the specific pipeline condition and ILI performance. NDE analysis has been completed on these joints. Nothing was found on 3130 with visual or UT examination. On 3120, NDE identified irregular profile of the ID weld trim. Enbridge intends to perform destructive examination of joint 3120 utilizing DNV to confirm classification and characterization of the features by both the Crack ILI and the NDE. This activity is targeted for completion by September 15, 2012.

Once additional data is available, and within 90 days, the engineering critical assessment to assess the hypothetical surviving flaw will be updated and communicated to PHMSA as part of

the monthly report. The monthly report to PHMSA will also include any clarifications on ILI data analysis and features list relative to previous or upcoming ILI runs on Line 14.

4.3 Laboratory Investigation

Enbridge has obtained the services of DNV (Columbus) to conduct the laboratory analysis of the failed pipe. The laboratory analysis will be performed with all the provisions of the CAO accounted for. The protocol for completing this investigation will be submitted to the PHMSA Regional Director for approval prior to starting laboratory work as per the CAO.

4.4 Integrity Verification Plan

The Integrity Verification Plan will be developed and submitted to PHMSA, in accordance with the CAO, by October 28, 2012.

5. PREPARATORY ACTIONS PRIOR TO RESTART

In preparation of the restart, the following actions for Line 14 are to be completed by Enbridge.

5.1 Repair of the Pipeline at the Failure Location

Upon completion of the examination, approximately 120 feet of new pipe was installed to repair the failed and adjoining sections that were removed. The replacement section installed is comprised of three pretested, 24-inch outside diameter, 0.375-inch wall pipe joints manufactured to API 5L X-70 specifications welded on the adjacent bank. The replacement section was re-hydrotested to 2,200 psi and held for 4 hours and 15 minutes. The replacement section was lowered in and welded in two locations in accordance with the repair plan.

5.2 Control Center Line 14 Pre-Start

Enbridge's Control Center will be responsible for managing the pipeline control system restart of Line 14. Control room procedures have been supplemented in connection with the restart of Line 14 as described in this Plan. Line 14 will be operated solely on its current CCO console, allowing it to maintain all of its current screen configurations and current contact information. The other line's operation which is normally operated from this console (Line 4) will be

relocated to a spare console in the CCO with a qualified operator maintaining operations for the duration of the Line 14 restart. The terminal operators and pipeline operators will be informed of the pressure limit changes on line 14 and the refill/restart process and will be required to review the critical change binders prior to initiating of the activities.

The following Sections of this Restart Plan outline the measures to be undertaken by Enbridge's Control Center in advance of and in connection with Line 14's restart.

5.3 Reduced Operating Limit Implementation

As per the CAO, Enbridge will implement station base maximum discharge operating pressure restrictions on Line 14 to those listed in Table 1. The new operating pressure limits have been implemented at the SCADA and station Programmable Logic Controller (PLC) level and both a startup plan review and operational review with Line 14 operators will be conducted regarding the changes to Line 14 control devices pressure limits.

Overview of SCADA automatic software related to operating limits and associated shutdowns:

For each station SCADA receives a set of pressure allowable limits for safe operation as determined by Control Center Engineering. The limits relate to the Suction, Case and Discharge pressures for each facility. The limits are in place to allow Operator manual setpoints to be executed within a safe operating range and to generate alarms and shutdowns as required for low suction pressure, high case pressure or high discharge pressure conditions. Below is a list of limits produced by engineering and monitored by the SCADA software. Units of measure are in psi.

Base Minimum Suction – The minimum suction setpoint that the operator may send to the PLC

Comm-out Suction Setpoint – The operating suction setpoint for communications outage situations

Downstream Suction Remote Warning – Suction pressure above this limit will check the upstream stations discharge pressure

Downstream High Suction Shutdown – When this limit is reached the line upstream will be shutdown.

High Case Cascade Shutdown – Case pressure above this limit will cascade units off at the station

Case Remote Warning – Alarm generated when this limit is reached

Base Maximum Discharge – Maximum discharge pressure setpoint that the Operator can send to the PLC. If the discharge pressure remains above this limit for 5 minutes, the units will cascade off

High Discharge Cascade Shutdown – Discharge pressure above this limit will cascade units off at the station

Comm-out Discharge Setpoint – The operating discharge setpoint for communications outage situations

6. ACTIONS DURING RESTART

The following section of this Restart Plan details the procedure which will be followed by Enbridge's Control Center and by other operating personnel in the field during the restart of Line 14.

6.1 Line 14 Startup Activities

6.1.1 Staffing Logistics

The Control Center will have Line 14 and Line 4 operating on separate consoles during the Line 14 restart. A Leak Detection Analyst will provide support to monitor start-up and to provide assistance to primary Line 14 control. All control center personnel involved in the restart will receive training on the restart plan. All Line 14 controllers (pipeline and

terminal) will receive training in regards to the operability changes resulting from the operating pressure limit changes.

6.1.2 Line 14 - Local Emergency Responder Notifications

In order to inform local emergency response officials of the Line 14 restart, as per item 1 of page 5 of the CAO, upon confirmation that the restart plan for Line 14 has been approved by PHMSA Central Region Director, notifications will be carried out as follows:

- Enbridge Government Affairs and Community Relations will make telephone or email contact with all emergency response officials in Adams County and with 911 dispatch in all counties through which Line 14 crosses. The emergency official contact list is attached.
- All contacts with emergency response officials will occur at least 4 hours prior to the restart timing, and may be conducted the evening prior, dependent upon schedule.
- Enbridge will retain a communications log that will include copies of emails to officials as well as notes about telephone conversations, and will make the log available to PHMSA.

6.1.3 Line 14 – Pre-Approvals

In order for the Edmonton Control Center to initiate the Line 14 linefill and restart procedure, the following external and Enbridge approvals and confirmations will be required:

- Written approval of the Restart Plan from PHMSA's Central Regional Director
- Written approval to resume operations from Enbridge Chicago Region General Manager.
- Approval to resume operation from PHMSA's Central Region Director.

6.1.4 Line 14 – Daylight Linefill and Restart Requirement

Line 14 Linefill and Restart Procedures are required to commence during daylight hours.

6.1.5 Line 14 Linefill Procedure

Excerpt from Enbridge Pipeline Repair/ Modification Job Planning Template – Linefill and Start-up Procedures

- Ensure PHMSA concurrence received prior to line fill.
- The excavation and adjacent land shall be clear of all ignition sources for a distance of 100 ft. This includes vehicles, all work equipment, heaters and all other ignition sources.
- Non-essential personnel are not to enter the 100 ft. zone which shall be clearly identified during start up and line fill and must stay outside of this area whenever there is a risk of an unexpected release of product.
- Edmonton Control Center to confirm that all stations between Superior and Rio are manned and communication has been completed.
- Call Edmonton Control Center to inform them we will be unlocking and opening valves in preparation of line fill/start up.
- Chicago Region staff to unlock Adams Station valves: AM-14-SDV-1, AM-14-SDV-2, AM-14-SSV-2, and AM-SBV-1 and MLV 227.50-14-V
- Chicago Region staff to UNLOCK valves MLV 242.28-14-V, and MLV 253.15-14-V
- Chicago Region Employee to call Edmonton Control Center prior to initiating static linefill to validate that communications can be verified with personnel at valve AM 14-SDV-1 and MP 232.
- Call Edmonton Control Center to initiate the line fill using static head on the line
- Perform a communication check with all parties (Chicago Region staff and Edmonton Control Center staff). Communication plan is:
- Chicago Region Employee to be located at valve 14-SDV-1 and maintain constant communication with Edmonton Control Center Line 14 operator and PLM staff at MP 232. Station Electrician to be located at valve 14-SDV-1 to operate valves.
- PLM Staff to be located at MP 232 to monitor venting and line fill operation.

- Ensure 2” valve used for venting is hooked up to vac truck and ready to vent.
- Edmonton Control Center Line 14 operator will open non-routine sectionalizing valves 208.5, 207.93, 203.08, 201.15, 190.8, 188.36, 186.34, 173.29 and 163.66 sequentially until we receive adequate pressure at Adams for flooding activity.
- Field to slowly crack open and then fully open valve 14-SBV-1.
- Slowly crack open valve 14-SDV-1 to start line fill (this will result in column separation between EG and SH)
- If oil is received at 2” TOR vent, close 2” vent. Close valves 14-SDV-1 and 14-SBV-1.
- If there is not sufficient pressure in the line to complete line fill, complete the following steps:
 - o Ensure valves 14-SDV-1, 14-SSV-2, and 14-SBV-1 are closed.
 - o Edmonton Control Center to ensure all mainline valves between Superior and Adams (MP69.94 and MP148.68) are open.
 - o Edmonton Control Center to place all stations PR to Adams to comm out limits
 - o Edmonton Control Center to start a unit on VFD at PR at a low rate – build pressure on the broken column segment (between EG and SH)
 - o Run PR unit until sufficient pressure (approximately 300 psi on the Suction Side of Adams station (AM-14-PT-2S,AM-14-PT-3S)) is achieved at Adams station to complete line fill (do not exceed 400 psi)
- Shut down PR unit when pressure is achieved and communicate shutdown to Chicago Region Employee at Adams Station.
 - o Field to slowly crack open and then fully open valve 14-SBV-1
 - o With 2” TOR vent connected to vac truck, crack open valve 14-SDV-1 to complete line fill.
 - o When oil is received at 2” vent, close vent and close valves 14-SDV-1 and 14-SBV-1.
- Ensure PHMSA written approval of the Restart Plan
- Upon receipt of PHMSA approval of Restart Plan:

- Enbridge will initiate a daylight restart of Line 14 under restricted operating pressures, as required by item number 2 on page 3 of the CAO,
- Proceed with emergency responder notification per 6.1.2
- Obtain written authorization from PHMSA to resume Line 14 Operations under restricted pressures
- Return Line 14 to service under restricted operating pressures

6.2 Field Operations Activities

In addition to the restart activities conducted from the Edmonton Control Center, Enbridge will also have a number of field resources stationed along Line 14 participating in the process. These resources will provide additional oversight and monitoring during the restart, and will be deployed so as to provide immediate feedback on conditions experienced as the Line 14 restart process unfolds. Regular updates will be provided to PHMSA at intervals not to exceed 2 hours and at significant milestones. This will include any patrol findings, as well as, information about activities and status of refill and restart.

6.2.1 Pump Station Monitoring

Qualified Enbridge field technicians will be stationed at all pump stations and selected valves during restart of Line 14.

Field technicians will monitor pump and control valve performance during Line 14 restart. In the event of any abnormal condition witnessed, the field technicians will immediately contact the Line 14 Controller and request pipeline shutdown to investigate the condition. Start-up will resume only after safe conditions are confirmed by Enbridge.

6.2.2 Aerial Patrol

Enbridge will engage aerial patrol during the initial restart of Line 14 and will patrol twice during the day of startup. The patrols will be in addition to Enbridge's existing pipeline system aerial patrol practices, which will continue unabated. Enbridge will engage two additional patrols during the first week of operations above and beyond normal patrol activities.

6.2.3 Tracking of air trapped within batch LSB-627-0

Edmonton Control Center will track batch LSB-627-0 for potential air pockets and deliver this batch to Griffith Terminal. Edmonton Control Center will bypass each station for the last 3500 m³ of batch LSB-627-0 until that batch is past each station. Edmonton Control Center will contact the appropriate station tech 2 hour prior to arrival of potential air pocket to ensure they will be on site during the bypass.

Edmonton Control Center will inform Griffith Terminal Personnel 4 hours prior to the arrival of batch LSB-627-0 to advise that the vacuum breakers are required to be open prior to receipt. Edmonton Control Center will confirm with Griffith personnel that vacuum breakers are open on receipt batch prior to arrival and will be monitoring batch receipt.

Edmonton Control Center will reduce Line 14 rate to 1000 m³/hr for final 3500 m³ of Batch LSB-627-0.

6.2.4 Line Start-up Procedures

Excerpt from Enbridge Pipeline Repair/ Modification Job Planning Template – Linefill and Start-up Procedures:

Line 14 - Startup Procedure:

1.	Line fill of the repaired section will precede the activities detailed in this restart plan. See "L14 MP 232 Pipe Repair Job Plan 7-31-12 Rev 6" for details on the line fill procedure		
2.	Approval is required by both the Enbridge Incident Commander and from PHMSA Central Regional Director prior to restart. Edmonton Control Center (ECC) Management will confirm this action when complete to ECC personnel prior to restart.		
3.	All existing ECC procedures relating to the response of Abnormal Operating Conditions (suspected leaks, overpressure etc) apply for the entire scope of this job plan. <ul style="list-style-type: none"> ▪ MBS alarms classified under AOC will be reviewed according to step 8 ▪ Column separation AOC procedure will ensure calculations are completed on suspected fill time prior to restart and approved from CCO Management to adhere to calculated times (step 6) 	Changes to L14 Operation	Training session for L14 Operators

	<p>Training for the L14 Control Center and Terminal Operators will be conducted on expected changes in L14 Operation and on the execution of the L14 restart plan prior to start up.</p> <p>Additional staffing resources will be available to the L14 Operator during start up.</p>		
4.	ECC Shift Supervisor to ensure new operating limits are in place in accordance with the Corrective Action Order prior to Line 14 prior to restart.		
5.	ECC will adjust the batch size of LSB-627-0 in CMT from 9527 m3 to 9335 m3 based on the estimated leak volume.	Inaccurate batch size due to leak volume	Adjustment of batch size prior to restart.
6.	<p>ECC Line 14 Operator to notify the Material Balance System (MBS) Leak Detection Analyst of Line 14 start up</p> <p>Additional support staffing will be provided to the Leak Detection analyst for L14 restart.</p>		
7.	ECC Shift Supervisor to ensure new operating limits have been entered for applicable stations on Line 14 prior to restart.		
8.	ECC Line 14 Operator to notify LD Analyst of Line 14 start up		
9.	Perform a communication check with all parties (Chicago Region staff and ECC staff). Region staff and ECC shall stay in continuous contact during line fill.		
10.	ECC Line 14 Operator will drive Vesper and Adams station to comm.-out limits		
11.	ECC Line 14 Operator will de-isolate Adams and Vesper stations.		
12.	<p>ECC Line 14 Operator to open all non-routine sectionalizing valves (242.28, 253.15, 255.62, 268.77 and 286.49) and monitor line pressures for 30 minutes. If any abnormal operating conditions are observed existing ECC Emergency Procedures will be executed.</p> <p>Column separation procedures will be initiated at this time and are expected to take 1 to 2 hours to complete all calculations and obtain approvals from the time non-routine valves are opened.</p> <p>Routine sectionalizing valves (304.41, 384.50 and 437.77) will be opened upon the completion of the monitoring of pressures for 30 min, if no abnormal conditions are observed.</p>		
13.	After pressure monitoring is and column separation approvals are complete, the ECC Shift Supervisor will notify the Field Contact and ECC Manager designate to indicate that Line 14 is ready for restart.		
14.	<p>ECC Line 14 Operator to start up Line 14 at 1000 m3/hr following existing ECC start up and column separation procedures.</p> <p>If an MBS alarm occurs in an area of known column separation and is deemed "Valid" by the MBS analyst and occurs within the approved completion time for Column Separation repack: The Line 14 Operator will continue the column separation repack</p>		

	<p>under the conditions and time approved by CCO Management.</p> <p>A summary of past column separation occurrences will be provided as reference in determination of the above</p>		
15.	<p>If any safety concerns occur at MP 232.04 during start up, field to request ECC to shutdown Line 14.</p>		
16.	<p>Once line 14 is at steady state and no anomalies are reported at MP 232.04, the CCO can remove comm.-out limits from Vesper and Adams stations and resume normal operations on Line 14.</p>		
17.	<p>ECC is to track batch of oil and potential air pocket into Griffith terminal. ECC is to bypass each station for an hour before and an hour after the batch in question moves past each station. ECC shall contact the appropriate station tech 2 hours prior to ensure he will be on site during the bypass.</p> <p>Bypass should be performed by isolating stations and flowing through the mainline.</p>		
18.	<p>Griffith terminal personnel shall ensure the Vacuum breaker vents are open on the receipt tank prior to the batch arriving in Griffith.</p>		
19.	<p>ECC is to track impacted batch LSB-627-0 for potential air pocket and deliver this batch into Griffith terminal.</p> <p>ECC is to bypass each station for the trailing 3500 m3 of batch LSB-627-0 until that batch moves past each station.</p> <p>PQ approval has been given for rates as low as 800 m3/hr during station bypasses.</p> <p>ECC shall contact the appropriate station tech 2 hours prior to ensure he will be on site during the bypass.</p> <p>Bypass should be performed by isolating stations and flowing through the mainline.</p>	<p>Air trapped within pipeline, damage to station equipment</p>	<p>Bypass Stations</p>
20.	<p>ECC will inform Griffith terminal personnel of batch LSB-627-0 at 4 hours prior to arrival to Griffith terminal.</p> <p>Griffith terminal personnel will ensure the vacuum breaker vents are open on the receipt tank prior to the batch arriving in Griffith and monitor landing</p> <p>ECC will reduce line 14 rate to 1000 m3/hr for landing of the final 3500 m3 of batch</p> <p>Upon completion of landing of batch LSB-627-0 Procedure is complete</p> <p>End procedure</p>	<p>Roof displacement</p>	<p>Open vacuum breaker vents on tank</p>
21.	<p>ECC is to track impacted batch LSB-627-0 for potential air pocket and deliver this batch into Griffith terminal.</p> <p>ECC is to bypass each station for the trailing 3500 m3 of batch LSB-627-0 until that batch moves past each station.</p> <p>PQ approval has been given for rates as low as 800 m3/hr during station bypasses.</p> <p>ECC shall contact the appropriate station tech 2 hours prior to ensure he will be on site</p>		

	<p>during the bypass.</p> <p>Bypass should be performed by isolating stations and flowing through the mainline.</p>		
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Field Staff Responsibilities:

1.	Line 14 Station Technicians will be present at all Line 14 station locations to verify normal operation of all station equipment and confirm new pressure limit changes and pressure control device limit changes with the Control Center. Control Center will document confirmation of field verified pressure settings.
2.	PLM will remain at leak site.
3.	Pilot will fly line from Superior Terminal to the end of the line and the return over the line to check for leakage. Pilot will be in air just prior to start up and be available for dispatch to any location along the line.
4.	Line restart will occur during daylight hours.
5.	Local emergency response officials will be notified prior to start up by a designated representative. Public Affairs will be making contact.
6.	Line 14 will start at a minimum rate for an undefined time. CCO will ramp up line to scheduled rate upon successful review of no anomalies in line operation.
7.	Griffith terminal personnel shall ensure the Vacuum breaker vents are open on the receipt tank prior to the batch arriving in Griffith.