VIA CERTIFIED MAIL AND FAX TO: (214-981-0700)

December 24, 2014

Mr. Kelcy L. Warren
Chief Executive Officer
Energy Transfer Partners, L.P.
3738 Oak Lawn Avenue
Dallas, Texas 75219

Re: CPF No. 3-2014-1008S

Dear Mr. Warren:

Enclosed please find a Notice of Proposed Safety Order (Notice) issued in the above-referenced case. The Notice proposes that you take certain measures with respect to Energy Transfer Partners, L.P./Panhandle Eastern Pipe Line Company system (ETP/PEPL). Your receipt of the Notice constitutes service of this document under 49 C.F.R. § 190.5.

We look forward to a successful resolution of this matter to ensure pipeline safety. Please direct any questions on this matter to me at (816) 329-3800.

Sincerely,

Allan C. Beshore
Director, Central Region, OPS
Pipeline and Hazardous Materials Safety Administration

Enclosures: Notice of Proposed Safety Order and Copy of 49 C.F.R. § 190.239

cc: Ryan Coffey, Executive Vice-President

U.S. DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION
OFFICE OF PIPELINE SAFETY
CENTRAL REGION
KANSAS CITY, MISSOURI 64106

In the Matter of	)	
Energy Transfer Partners, L.P.,	)	
Panhandle Eastern Pipe Line Company,	)	**CPF No. 3-2014-1008S**
Respondent.	)	

NOTICE OF PROPOSED SAFETY ORDER

Background and Purpose

Pursuant to Chapter 601 of Title 49, United States Code, the Pipeline and Hazardous Materials Safety Administration (PHMSA) has initiated an investigation of the safety of Energy Transfer Partners, L.P. Panhandle Eastern Pipe Line Company's (ETP/PEPL) pipeline system, including incidents that occurred on November 28, 2013, on ETP/PEPL's 400 line approximately 4.7 miles downstream of the Houstonia compressor station near Hughesville, Missouri and the October 13, 2014 failure on the 100 line near Centerview, Missouri. Both incidents resulted in significant fire and emergency response requirements.

As a result of the investigation, it appears that conditions exist on the ETP/PEPL pipeline system that pose a pipeline integrity risk to public safety, property or the environment. Pursuant to 49 U.S.C. § 60117(l), PHMSA issues this Notice of Proposed Safety Order (Notice), notifying you of the preliminary findings of the investigations and proposing that you take measures to ensure that the public, property, and the environment are protected from the potential risk.

Preliminary Findings

- As of 2014, Energy Transfer is a Texas-based company that is engaged in the operation and/or ownership of approximately 71,000 miles of pipeline. This pipeline mileage includes natural gas, natural gas liquids (NGLs), refined products, and crude oil pipelines. In 2012, Energy Transfer acquired the Southern Union Company and expanded its natural gas pipeline assets to more than 20,000 miles, including gathering

and transportation related assets. The Panhandle Eastern Pipe Line Company system was a portion of this acquired mileage.

- ETP/PEPL's pipeline is a natural gas transmission system comprised of a combination of pipelines and storage fields with approximately 6,000 miles of interstate pipeline, portions of which are capable of bi-directional movement. This ETP/PEPL system is comprised of five large transmission pipelines (100 Line, 200 Line, 300 Line, 400 line, and 500 line), and numerous laterals. This pipeline system traverses the states of Kansas, Missouri, Illinois, Indiana, Ohio, and Michigan.

- PHMSA and/or State Pipeline Safety partners have repeatedly addressed concerns with ETP/PEPL on various pipelines within the ETP/PEPL pipeline system associated with corrosion, coupling failures, inadequate procedures, and controls. To remedy these issues, PHMSA has engaged in a number of inspections and has even issued Corrective Action Orders to ETP/PEPL. However, significant improvements associated with corrosion, coupling failures, inadequate procedures, and controls have not occurred. A few of these significant cases and events are named below:

  - PHMSA issued CPF 3-2008-1002 as a result of a failure that occurred on the ETP/PEPL Glenarm 200 Line at approximately MP 3, near Pawnee, Illinois on 4/27/2007. The failure ejected a 109-inch long section of 22-inch diameter pipe, releasing 38 mmcf of natural gas that ignited. The rupture and resulting fire required the evacuation of a residence and the death of farm animals. The pipe that failed was installed in 1940, seamless, 0.281-inch wall thickness, X42, manufactured by National tube, and coated with a field applied Bitumastic coal tar epoxy. The maximum allowable operating pressure (MAOP) was 800 psig and the pressure at the time of failure was 788 psig. The failure was due to external corrosion. Evidence from the case indicates that "Respondent's atmospheric coating system installed in the area of the pipe that failed was in poor condition as early as 2003, that Panhandle discovered and documented the poor condition of the coating at that time and also in 2005, and that the company took no action to remediate the external corrosion prior to the Incident."

  - On August 27, 2007, ETP/PEPL experienced a longitudinal crack in the body of the pipe at Waverly Storage field in Morgan County, Illinois. This failure was on pipe installed in 1986, 8 inches in diameter, reported as 0.180 inch wall thickness, X42, ERW, manufactured by Republic. The MAOP was 845 psig and the pressure at the time of the failure was 787 psig. The cause of the failure was reported by the operator to be internal corrosion associated with a low spot in the pipeline.

  - On November 30, 2007, PHMSA issued CPF 3-2007-1016H as the result of a failure on the 400 Line near the town of Haven, Kansas (date of the failure was 11/21/2007). The incident occurred at Mile Post (MP) 3.1 and resulted in a large fireball requiring multiple emergency response entities and nearby county road closures. The failed pipe section was installed in 1962, comprised of 30-inch nominal diameter, 0.312-inch wall thickness, Grade X60, electric flash-welded (EFW) pipe manufactured by A.O. Smith with coal tar coating and MAOP of 900

psig. The pressure at the time of the failure was 897 psig. This segment of pipeline on the 400 line crossed the Arkansas River and several state highways. This CAO was the second CAO issued for this line segment (CAO 3-2001-1001H was the first) and was the third similar failure (first occurring in 1990 at MP 0.0 and the second in 2000 at MP 6.1.) All three failures were the result of selective seam corrosion.

- On June 20, 2008, PHMSA issued CPF 4-2008-1012M to ETP/PEPL as the result of an integrity management inspection. Numerous procedural revisions were required and these affected significant areas such as High Consequence Area (HCA) identification.

- On July 1, 2008, PHMSA issued CPF 4-2008-1013M to ETP/PEPL regarding operator qualification requirements and identified many areas for procedural amendments. These areas included corrosion related topics such as close interval survey, various other covered tasks and how contractor qualifications suspensions would occur after incident investigations.

- On August 25, 2008, at approximately 8:51 a.m., a rupture occurred on the ETP/PEPL Houstonia 200 Line near Mile Post 21.6. The failed section of the pipeline was located in a rural area west of Pilot Grove, Missouri in Cooper County. The longitudinal rupture in the pipe body created a 50-foot by 33-foot by 7-foot deep crater in the ground. Two pipeline sections totaling 28 feet in length and a coupling were ejected from the crater up to a distance of 300 feet from the rupture site. The 24-inch pipe was installed in 1937, 0.280 wall thickness, 48,000 SMYS, manufactured by A.O. Smith, and EFW seam. The MAOP was 800 psig and the pipeline pressure at the time of the failure was reported to be 790 psig. The cause of the rupture was external corrosion.

- On May 13, 2009, PHMSA issued ETP/PEPL Corrective Action Order CPF 3-2009-1009H following a failure on the 24-inch 200 Line near Rockville, Indiana on May 5, 2009. Fifty two people were evacuated. The pipe was installed in 1940, manufactured by National Tube, reported to be 0.312 inch wall thickness, 35,000 SMYS, and seamless. The MAOP was 800 psig and pressure was 784 psig at the point of the failure. The cause of this failure was determined to be external corrosion. Additional work performed as a result of this order provided significant indications of external corrosion in various sections of the 200 Line.

- On May 20, 2009, ETP/PEPL experienced a failure on the 200 Line due to a coupling pulling apart near Fayette, Missouri and County Road 427. Fourteen people were evacuated. The MAOP was 800 psig and pressure at the time of the failure was 567 psig.

- On May 17-21, 2010, PHMSA conducted an inspection of the ETP/PEPL written operations and maintenance procedures. As a result of the inspection, PHMSA issued CPF 3-2010-1006M on December 21, 2010, identifying 20 procedures that

were inadequate to assure safe operations. This enforcement action resulted in an Order Directing Amendment specific to IR drop inclusion for accurate cathodic protection measurement. The final implementation of this amendment has yet to be completed by ETP/PEPL.

- On December 29, 2010, PHMSA issued warning letter 3-2010-1008W to ETP/PEPL. Item 1 identified a potential ignition source associated with wiring for a regulator heater at the A.P. Green delivery point and Item 2 noted that ETP/PEPL had not designed and constructed the Peoria Lateral 3 Gate delivery point in such a manner as to ensure that damage to one control line would not make the other over pressure device inoperative.

- On April 25, 2011, ETP/PEPL experienced a failure on the 22-inch 200 Line near Manchester, IL. The pipe at this location has a 0.281 inch wall thickness, seamless, and X42. The cause of the failure was a coupling pulling apart at MP 31.5. The MAOP was 800 psig and the pressure at the time of the failure was 749 psig.

- On May 29, 2011, ETP/PEPL experienced a failure in the Borchers Storage field near Meade, Kansas. The pipe was installed in 1981, manufactured by Tex-tube, was 6.625 inches in nominal diameter, 0.219 inch wall thickness, SMYS 46,000, and High Frequency ERW, coated with a field applied epoxy. The MAOP was 1,875 psig and the estimated pressure at the location of the failure was 1,639 psig. The cause of the failure was determined to be internal corrosion.

- On July 1, 2013, PHMSA issued CPF 3-2013-1011M as a result of an inspection during May 24-26, 2011. This enforcement action identified several deficiencies, including that ETP/PEPL procedures were inadequate because its Public Awareness Plan did not include a process that clearly defined how to establish proper notification areas and distance on each of their pipeline system that affects the public stakeholder audience including other appropriate factors such as the potential impact radius (PIR) and the alternate maximum allowable operating pressure (AMAOP) conditions.

- On April 9, 2014, PHMSA issued a final order for CPF 3-2013-1015. ETP/PEPL had operated its meter and regulator stations and associated pipeline segments at Centertown, Missouri and Auburn, Illinois above the MAOP. On October 28, 2011, ETP/PEPL's working and monitor regulators at Centertown's M&R station malfunctioned allowing the pressure to reach approximately 486 psig exceeding the MAOP and the pipeline operated above 110 percent psig for 9 hours. Similarly on April 6, 2012, ETP/PEPL working and monitor regulators at Auburn's M&R station froze-up resulting in the pressure downstream of the station reaching approximately 550 psig exceeding MAOP for approximately 1-1/2 hours.

- During June 18-July 20, 2012 PHMSA inspected ETP/PEPL facilities in Kansas and Missouri. Discoveries associated with the inspection revealed a lack of prompt remedial action to cathodic protection (CP) deficiencies, a lack of tests to assure

electrical isolation of casings, a lack of sufficient test stations or other contact points to determine the adequacy of cathodic protection on the 100 and 200 Lines, and an insufficient continuing program to minimize the detrimental effects of interference currents on the affected pipeline systems of the 100 and 200 Lines. PHMSA also identified that documentation associated with a periodic review of work done by operator personnel to determine the effectiveness and adequacy of procedures was not available.

- During September and October in 2013, representatives of the Michigan Public Service Commission, acting as an interstate agent for PHMSA, inspected ETP/PEPL records and facilities in Howell, Michigan. As a result of the inspection, PHMSA issued warning letter 3-2014-1006W. This warning letter identified concerns with the integrity management program implementation regarding HCA designations and associated documentation.

- On September 24, 2013, ETP/PEPL experienced a coupling leak near New Franklin, Missouri. Interconnect piping located at the 5 gate valve between the 100 and 200 lines contained a 10-inch coupling. The interconnect line had been cut and capped when a valve was removed in 2010 from the 200 line. The coupling was left on the capped interconnect when the maintenance was performed in 2010.

- On November 28, 2013, ETP/PEPL's 400 line failed approximately 4.7 miles downstream of the Houstonia compressor station near Hughesville, Missouri. The blowing gas ignited and nine people were evacuated. The failed joint of 30-inch pipe was ejected approximately 200 feet from the original location. The pipe was installed in 1962, 0.312 inch wall thickness, API5L X60, DSAW seam, manufactured by Kaiser Steel Corporation and was coated with coal tar enamel. A close interval survey had been conducted in 2013. The MAOP of the pipeline segment was 900 psig and the operating pressure at the time of failure was reported as 893 psig. The pipeline has received several inline inspection (ILI) runs. Metallurgical examination determined the root cause of the failure to be corrosion.

  - As a result of discussions with PHMSA, ETP/PEPL performed an internal and third party Root Cause Failure Analysis (RCFA) associated with the November 28, 2013 Houstonia 400 line failure. These failure investigations as presented to PHMSA identified needed improvements in the maintenance of cathodic protection systems and the prioritization of corrosion concerns, personnel training, data integration associated with corrosion control and environmental and ILI data, personnel understanding budget requests as it may relate to unplanned work, the number and locations of ILI data confirmation digs, the use of metal loss interaction rules by the ILI vendors, and the anomaly interactions effects on failure pressure ratio (FPR) calculations. A significant finding in the review of the records was disconnected negative cables on the 100, 300 and 400 lines as a result of a 2007 project for a new ground bed installation on the 200 Line. As built drawings did not reflect this connection. Recommendations from the ETP/PEPL internal Houstonia 400 line

RCFA (dated June 18, 2014) were provided in the areas of CP analysis and response, Personnel Training and Priorities, and Inline Inspection processes.

- During the initial investigation by PHMSA of the ETP/PEPL November 28, 2013 failure on the 400 line, it was determined that ETP/PEPL was in the process of developing corrosion growth rates and this had not been completed.

- On June 19, 2014, ETP/PEPL released liquid from the Olpe 100 compressor station discharge in preparation to repair a leak that was downstream of the station. The leak was from a 3" crack in a long seam (.24" diameter pipe, .281" wall thickness, SSAW seam, National Tube, Bitumastic coating). This leak was discovered during an airborne Lidar leak survey on the 100 and 200 lines from Haven to Louisburg (329.9 miles). Also discovered during this leak survey were other significant findings. While there were no local residents evacuated as a result of the liquid released from the natural gas pipeline, media attention occurred and a local golf course five ponds, two small areas with standing water, one small drainage ditch on various properties, five houses, soybean crops, gardens, and pasture land were affected. The impact to livestock was unclear. Leaks identified included at least five coupling leaks and resulted in several repair projects.

- On July 7, 2014, ETP/PEPL provided PHMSA with a notification regarding a reboiler vessel event that resulted in an emergency shutdown (ESD) of the Borchers Storage Field in southwestern Kansas due to a fire. The vessel fractured and the root cause of this event is in review.

- On July 24, 2014, ETP/PEPL delivered gas to DTE Energy from approximately 12:00 P.M. to 4:00 P.M. EST. Shortly after receipt of gas from ETP/PEPL, DTE began receiving numerous odor complaints in the community. DTE energy investigated and determined that over odorized gas had come from ETP/PEPL and DTE shut off the gas from ETP/PEPL. ETP/PEPL was contacted and informed DTE that it was not an ETP/PEPL problem. DTE received nearly 1,000 odor complaints over 2 days and DTE responded by dispatching field technicians. After further investigation, ETP/PEPL concluded that ETP/PEPL had delivered the over-odorized gas to DTE.

- On October 13, 2014, a fire and explosion occurred on the 100 line near Centerview, Missouri. ETP/PEPL reported a release of gas to the National Response Center (NRC) on October 13, 2014 at 12:07 pm EDT (NRC Report #1098139). No fatalities or injuries occurred. PHMSA initiated an investigation of the incident, which involved an on-site investigation at the failure location. The failure resulted in evacuations associated within approximately one mile radius and a county road closure (701). All residents were allowed to return to their homes by 2:00 pm CDT.

  - At approximately 10:13 am CDT on October 13, 2014, ETP/PEPL control room personnel observed a sudden pressure drop on their SCADA system indicating a possible failure on the Louisburg 100 pipeline. The control room then received a call at 10:18 am CDT from the Johnson County, Missouri 911 call center that

reported a natural gas release at 21 Northwest 701 Road in Centerview, Missouri. At this time, the natural gas had not ignited. The control room received a second call from the 911 center at 10:28 am CDT to report a fire at the scene. The control room personnel notified the ETP/PEPL Kansas City District office at 10:20 am CDT and at 10:28 am CDT, operations personnel were dispatched to the upstream and downstream valve locations and the failure location.

- The failure resulted in the ejection of approximately 22 feet of 22-inch diameter pipe 140 feet from the pipeline. The failure happened 600 feet east of Road 701 and 400 feet south of the nearest structure (a barn). The structure did sustain damage from flying debris.

- The 100 line has been repaired and is currently operating at a restricted 75 psig in the area of the failure. ETP/PEPL has removed the failed section of pipe and sent the pipe to a third-party metallurgical laboratory for evaluation. A repair plan was submitted initially, PHMSA supplied comments back, and PHMSA and ETP/PEPL agreed to a revised restart plan consisting only of the repair with the restricted pressure of 75 psig at this time.

- Line 100 is 22-inch diameter, mainly of 0.312 -inch wall thickness, 30,700 estimated yield strength pipe, manufactured by National Tube in 1931 with lap welded longitudinal seams. The coating is Bitumatstic and the pipeline is cathodically protected with impressed current. The pipe joints in the Louisburg 100 Line are joined together by either welding or by using mechanical couplings. A few of the couplings have been reinforced on the 100 Line over the years.

- The maximum allowable operating pressure (MAOP) for the 100 Line is 475 psig at this location and the pressure at the time of the failure was approximately 441 psig. A hydrostatic test was conducted as part of the 1953 100 Line test program to a pressure of 736 psig at the high point on 8/23/1953 for a minimum of 4 hours.

- The original 625 psig MAOP for this section was reported to have been established by the five year history of operating pressure from the Louisburg 100 line discharge pressures between July 1, 1965 and July 1, 1970 and was reduced to 500 psig on April 1, 2004 by a letter issued by an Executive Officer of the Company on March 14, 2004. This new MAOP was based upon the operating and maintenance (O&M) history of the line. The new pressure maximum was primarily maintained by pressure bleeds from the 200 line. Subsequently on 4/2/2012, the pressure on the Olpe 100 discharge was reduced to 475 psig due to a class location change. It was determined that it would be easier to maintain a consistent 475 psig pressure using the pressure bleeds from the 200 line, so the Louisburg 100 Discharge was also reduced to 475 psig on 4/2/2012.

- The first station immediately upstream of the failure site is Louisburg Station. Houstonia Compressor Station is the first station downstream. Line 100 crosses heavily traveled public roadways, including Missouri Highway 50.

- The condition or conditions on the pipeline that caused the failure are under investigation. Evidence indicates that two couplings (one on either end of the failure pipe joint) were not reinforced prior to the incident. The pipeline remains coupled in many areas without reinforcement and as a result, the same condition(s) that caused the failure could be present (or could develop) on other areas of the pipeline and impair the reliability and serviceability of the pipeline.

- ETP/PEPL performed an inline inspection (ILI) of the pipeline in 2009 with high resolution magnetic flux leakage (MFL) and caliper tools. The company has indicated that a review of the ILI information at that time revealed no actionable features at or near the failure site. There were 29 reported anomalies with metal loss greater than 80% deep, and 19 possible dents with metal loss. 39 locations were reported to exist with an RPR less than or equal to 1.39.

- ETP/PEPL routinely operates significant portions (approximately 457 miles) of the pipeline system over 72 percent SMYS due to historical operating pressures in accordance with 49 CFR § 192.691(c).

- ETP/PEPL has not submitted a Safety Related Condition Report (SRCR) for PHMSA Central Region since 1991. This 1991 SRCR available in PHMSA records identified a general corrosion issue.

- ETP/PEPL shares natural gas transmission safety program relationships with the following operators under PHMSA jurisdiction. Incidents and enforcement actions for these entities have not been included in this review summary:

  - Energy Transfer (Op ID 32099)
  - Florida Gas Transmission (Op ID 5304)
  - Sea Robin Pipeline Company (Op ID 18152)
  - TransWestern Pipeline Company LLC (Op ID 19610)
  - Trunkline Gas Company (Op ID 19730)
  - Lee 8 Storage Partnership (Op ID 30786)
  - Gulf States Transmission Corporation (Op ID 32323)
  - ETC Tiger Pipeline LLC (Op ID 32467)
  - Fayette Express Pipeline LLC (Op ID 32469)
  - DCP Midstream- PEPL (Op ID 39028)

Proposed Issuance of Safety Order

Section 60117(l) of Title 49, United States Code, provides for the issuance of a safety order, after reasonable notice and the opportunity for a hearing, requiring corrective measures, which may include physical inspection, testing, repair, or other action, as appropriate. The basis for making the determination that a pipeline facility has a condition or conditions that pose a pipeline

integrity risk to public safety, property, or the environment is set forth both in the above-referenced statute and 49 C.F.R. § 190.239, a copy of which is enclosed.

After evaluating the foregoing preliminary findings of fact and considering the age of the pipeline system, the proximity of the pipeline system to public roadways and populated areas, the hazardous nature of the product being transported, the pressure required for transporting the material, the ongoing investigations to determine the conditions that caused the pipeline failures, the likelihood that the conditions causing the failures could be present or could develop on other areas of the pipeline, and the likelihood that such conditions could again impair the serviceability of the pipeline system, it appears that the continued operation of the pipeline system without corrective measures would pose a pipeline integrity risk to public safety, property, or the environment.

Accordingly, PHMSA issues this Notice of Proposed Safety Order to notify ETP/PEPL of the proposed issuance of a safety order and to propose that the company take the measures specified herein to address the potential risk.

Response to this Notice

In accordance with 49 C.F.R. § 190.239, you have 30 days following receipt of this Notice to submit a written response to the Regional Director who issued the Notice. If you do not respond within 30 days, this constitutes a waiver of your right to contest the Notice and authorizes the Associate Administrator for Pipeline Safety to find facts as alleged in the Notice without further notice to you and to issue a safety order.

In your response, you may notify the Regional Director that you intend to comply with the terms of the Notice as proposed, or you may request that an informal consultation be scheduled. Informal consultation provides you with the opportunity to explain the circumstances associated with the risk conditions alleged in the notice and, as appropriate, to present a proposal for a work plan or other remedial measures, without prejudice to your position in any subsequent hearing. If you and PHMSA agree within 30 days of informal consultation on a plan and schedule for you to address each identified risk condition, we may enter into a written consent agreement (Agreement). PHMSA would then issue an administrative consent order incorporating the terms of the agreement.

If a consent agreement is not reached, or if you have elected not to request informal consultation, you may request an administrative hearing in writing within 30 days following receipt of the Notice or within 10 days following the conclusion of an informal consultation that did not result in a consent agreement, as applicable. Following a hearing, if the Associate Administrator finds the facility to have a condition that poses a pipeline integrity risk to the public, property, or the environment in accordance with 49 C.F.R. § 190.239, the Associate Administrator may issue a Safety Order.

Be advised that all material you submit 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).

In your correspondence on this matter, please refer to CPF 3-2014-1008S and for each document you submit, please provide a copy in electronic format whenever possible.

Proposed Corrective Measures

Pursuant to 49 U.S.C. § 60117(l) and 49 C.F.R. § 190.239, PHMSA proposes to issue to Energy Transfer Partners/Panhandle Eastern Pipe Line Company (ETP/PEPL) a Safety Order (Order) incorporating the following remedial requirements with respect to the ETP/PEPL pipeline system (100 Line, 200 Line, 300 Line, 400 Line, 500 Line, laterals and all associated piping):

1. Regarding the 100 Line failure occurring on October 13, 2014, ETP/PEPL shall complete the following:

   (A) Within 90 days of the receipt of this Order, ETP/PEPL shall complete a root cause failure analysis (RCFA) for the 100 Line failure occurring on October 13, 2014, and submit a final report for this RCFA to the Director. The RCFA must be facilitated by an independent consultant acceptable to the Director and must document the decision-making process and all factors contributing to the failure on the 100 line. ETP/PEPL shall submit a summary of suitability as outlined in Item 4 (A) of this Order for the independent consultant proposed to be used for the RCFA to the Central Region Director for review. PHMSA will review the submitted information and will notify ETP/PEPL if the proposed candidate is unacceptable. The RCFA must provide a detailed review of all SCADA and control related activities related to the response to the failure. If SCADA or control activities are identified as contributing factors during this review, recommended actions to address the contributing factors shall be included in the report and discussed with the Director to develop an appropriate implementation schedule.

   (B) Within 45 days of receipt of this Order, complete mechanical and metallurgical testing and failure analysis of the failed pipe, including an analysis of soil samples and any foreign materials. Complete the testing and analysis as follows:

      i. Document the chain-of-custody when handling and transporting the failed pipe section and other evidence from the failure site.

      ii. Within 10 days of receipt of this Order, submit the testing protocols and proposed testing laboratory to the Director.

iii. Continue to update the Director of mechanical and metallurgical testing and additional proposed dates with enough notice to allow for an OPS representative to witness the testing.

iv. Ensure that the testing laboratory provides any report, whether draft or final, in its entirety to the Director at the same time it is presented to ETP/PEPL.

(C) Provide to PHMSA a restart plan for the Director's approval prior to resuming operations at pressures above 75 psig on the pipeline segment from 105 to 106 gate. The restart plan shall include the following:

i. Instrumented leak survey between 105 and 106 gate to include associated farm taps or temporary school line replacements. Any leaks found must be remediated before continuing on with the restart plan.

ii. Must specify a daylight restart and include advance notification with the local emergency response officials.

iii. Must include reinforcing or removing all 100 Line couplings, including any that are on the interconnect piping, located on the property associated with the failure or the adjacent road crossing.

(D) Provide to PHMSA a plan to reinforce or remove all 200 Line couplings on the property or the adjacent road crossing associated with failure within 1 year of the receipt of this Order. Completion dates for this activity will be discussed with the Director and approved by PHMSA.

(E) Develop a plan within 1 year of the receipt of this Order, that includes a depth cover survey, to implement either reinforcing, removing, or abandoning all couplings on the 100 and 200 Lines located within 220 yards or the calculated PIR, whichever distance is greater, of structures, roads, airport, walking paths, playgrounds or parks, runways, and railroad tracks. The reinforcement, removal or abandonment of the couplings located in these areas shall be completed within no more than 3 years from the receipt of this Order. This plan shall include couplings that may be located on interconnected piping between the pipelines (i.e. between the 100 and 200 line, between the 200 and 300 line).

i. As part of this plan, for those couplings located within the above areas identified in E above that are determined to be less than 3 feet in depth, implement reinforcement, removal or abandonment activities for those couplings on an expedited basis, not to exceed completion within 1 year.

2. Within 90 days after receipt of this Order, ETP/PEPL shall work with PHMSA to clarify or address all comments provided by PHMSA to the 400 line Houstonia RCFA. ETP/PEPL shall provide for the Central Region Director's review and

approval an implementation plan and schedule addressing each finding and recommendation identified in the Root Cause Failure Analyses on the Houstonia 400 line failure (whether internal or external third party). Any finding or recommendation that would exceed one year for implementation would be identified and reviewed for concurrence by the Central Region Director. As part of the implementation plan, integrate the findings of the root cause failure analyses into other data integration efforts and work plan efforts. The following actions shall also be included as part of the implementation plan:

(A) Elements that address PHMSA comments to the RCFA.

(B) Complete a job task analysis associated with corrosion technician job responsibilities. Identify work load per corrosion technician and determine task priorities. Utilizing a third party specialist, determine resource allocations for all corrosion control maintenance activities.

(C) Develop a plan and strategy to implement effective technical support of field personnel. Determine metrics for this support process and develop a written annual review report that discusses the metrics, program usage, successes and area of needed improvement. Reports shall be available for PHMSA review upon request.

(D) Require management review of corrosion technician completed work and submitted paperwork.

(E) Develop a work management system and process requirements to review corrosion technician work products and submitted paperwork to ensure that capital or expense related work is funded to correct deficiencies on the pipeline system in a timely fashion.

(F) Review and correct as needed: bonding, cathodic protection system junction points, and rectifier performance for all pipelines.

3. Within 180 days from receipt of the Order, conduct airborne instrumented leak survey or an instrumented ground based leak survey (walking the pipeline ROW using Flame Ionization units) of the entire ETP/PEPL pipeline system.

(A) Within 60 days of the completion of the leak survey, provide a prioritized schedule for repair or remediation of any leak indication based on the following criteria:

i. Any leak identified as an imminent public safety threat (as defined through joint agreement by PHMSA and ETP/PEPL) shall be immediately remediated;

ii. Leak indications that are found to exist in an HCA, or Class 3, or Class 4 location;

iii. Leak indications discovered at a location on the system located within 220 yards or the calculated PIR, whichever distance is greater, from any structure or building intended for human occupancy or a location intended for an outdoor place of assembly;

iv. Leak indications discovered within the right-of-way of an active railroad, paved road, street, or highway, airport runway;

v. Leak indications discovered in an area where the pipeline is operating above 72% SMYS;

vi. All other leak indications.

4. Engage a third party consultant (Consultant) acceptable to the Central Region Director to review and evaluate ETP/PEPL current or proposed processes, procedures, and data systems associated with the integrity and safety of the ETP/PEPL system. Such action may include physical inspection, testing, repair, or other appropriate action to remedy the identified risk condition.

(A) ETP/PEPL will propose three potential Consultants with associated credentials to the Central Region Director for review. ETP/PEPL will research, review, develop, and submit a summary of suitability outlining the capabilities, qualifications, experience, and relevant work history of at least 3 potential Consultant candidates to the Central Region Director for review. A similar summary shall be submitted for each sub-consultant proposed to be utilized, if applicable. PHMSA will review the submitted information and will notify ETP/PEPL if any of the proposed candidates are unacceptable. Once 3 Consultant candidates have been found acceptable to PHMSA, ETP/PEPL shall select the Consultant to be utilized for this Order and finalize its scope of work. The Consultant's proposed scope of work will be submitted to the Central Region Director for review and approval. Each submitted summary shall, at a minimum, include the following:

i. A listing of key personnel to be utilized on each item in the Order.

ii. Qualifications and relevant experience of key personnel in the specific areas of expertise necessary for each item in the Order.

iii. Availability of key personnel and resources to assure a timely completion of each item in the Order.

iv. A summary of work performed by key personnel for ETP/PEPL in the past 5 years.

v. A summary of any potential conflicts of interest that might be relevant to the work to be performed pursuant to this Order.

vi. A statement executed by an officer of ETP/PEPL that it has reviewed and found that the proposed Consultant candidate is acceptable to ETP/PEPL and is capable of performing the work required by this Order and that no conflicts of interest exist or shall arise if the proposed Consultant is selected.

vii. A statement executed by ETP/PEPL and the Consultant outlining measures to be taken to ensure the Consultant performs an independent and impartial analysis of each item in its scope of work that is required by this Order.

(B) Within 90 days of the receipt of this Order, the Consultant will produce a report which will be shared with PHMSA and ETP/PEPL regarding the current safety and integrity of the ETP/PEPL system. The Consultant shall review and have access to all relevant data, information systems and applications (developed, created or maintained), as well as access to ETP/PEPL personnel applicable to the evaluation of the ETP/PEPL system safety including but not limited to the integrity management program and implementation.

(C) Findings and reports, whether draft or final, shall be submitted to PHMSA and ETP/PEPL simultaneously.

(D) The scope of the review and associated report shall include each segment of the ETP/PEPL system. This report will include laterals but will not be intended to focus on compressor, measurement, regulation, or underground storage facilities. It is possible that general outcomes or recommendations could be applicable to all types of facilities simply by a process or procedure revision and this should be identified in the report. The report will identify improvements needed to ensure and elevate system integrity in all relevant process, procedures, instrumentation and controls, training and qualification or data systems. The consultant shall review all relevant assessments, inspections and integrity records to determine if the appropriate process, procedure, training and qualifications, instrumentation and controls or data systems are appropriately implemented. Should a process, procedure, training, qualification, control or data system be determined to be incorrectly implemented or identified as less than sufficient for the safety of the public and protection of the public assets, remedial actions shall be developed to correct any resulting or identified deficiency. The Consultant will also review current inspections, assessment and integrity review records for all facilities which used a process, procedures controls or data systems that were found to need improvement and will identify actions needed to address any corrective measure in pipeline integrity and public safety. Recent improvement actions and procedure changes being contemplated or initiated by ETP/PEPL shall also be part of this review.

(E) The Consultant's report shall also make recommendations on any near-term actions necessary to maintain pipeline safety while the Comprehensive Safety and Integrity Improvement work plan (CSII in item 5 in this Order) is being developed and implemented.

(F) All proposed actions and improvements identified during the course of this Order shall be considered for implementation on a prioritized risk basis. These actions and improvements shall be provided to the Central Region Director for review and approval. All repair or remediation efforts should be prioritized based on the severity of the condition, proximity to an HCA, located in a Class 3 or Class 4 location, located within 220 yards or the calculated PIR (whichever distance is greater) of a structure or outdoor place of assembly, or is located within the right-of-way of an active railroad, paved road, street, or highway, or airport runway, or in an area where the pipeline is operating above 72% SMYS.

(G) The Consultant must report directly to an ETP executive leadership team comprised of 3 or more members. PHMSA will also provide periodic input to the Consultant and Executive leadership team including a kick-off meeting to identify expectations and address initial scope clarifications. In addition, quarterly review meetings will occur with PHMSA, the Consultant, and an ETP/PEPL leadership team representative to discuss the status of the Consultant's scope of work and ETP/PEPL work plan progress until such time as PHMSA and the ETP/PEPL leadership team agree it is no longer necessary.

5. Develop a Comprehensive Safety and Integrity Improvement (CSII) work plan for the entire ETP/PEPL system. ETP/PEPL must submit, for review and approval to PHMSA, a comprehensive written plan, including timelines for specific actions of development, process review and implementation that has received the Consultant's approval. The Consultant must oversee the creation, execution and implementation of actions identified in the plan, provide detailed process review, and provide monitoring summaries to PHMSA and Respondent at the same time. Respondent must commit to address deficiencies, threats or risks, and necessary improvements identified in the Consultant's assessment. This will include process improvements, repair and/or replacement of high-risk infrastructure and other measures as may be identified by the Consultant assessment. The plan will be designed to improve four strategic areas of the ETP/PEPL system performance and must be sufficiently detailed with specific tasks, milestones, completion dates and reporting summaries. The four strategic areas are:

(A) Improved Corrosion Control Program Process;

(B) Improved Integrity Management Program Process;

(C) Enhanced Safety and Integrity Culture; and

(D) Enhanced Data Systems.

This plan must be submitted to, reviewed and approved by the Director, Central Region, OPS and include the following items:

(A) Implementation of an Improved Corrosion Control Program Process: The Consultant shall review all processes, procedures, and data systems associated with the elements of the ETP/PEPL corrosion control program (including supporting data systems) for improvements. Revisions shall take into account and include enhanced procedures such as those that have been modified through other failures, proposed or planned procedures and processes, internal and external lessons learned, standard industry practice, and specific areas identified in previous inspection or enforcement activities (Appendix A).

i. The plan, which will address procedural changes for items listed in Appendix A, shall be prepared and provided to the Consultant for review and comments. The plan, including comments incorporated from the Consultant's review, will be submitted to the Central Region Director for review and comment within 90 days of receipt of this Order.

ii. The plan will identify, prioritize, and mitigate CP system deficiencies.

iii. The items listed in Appendix A will also be reviewed to identify any facility modifications needed to be implemented to address safety or integrity concerns. Any facility modifications identified by this review shall be implemented on an accelerated prioritized time frame.

(B) Develop and implement an Improved Integrity Management Program Process: Implement an integrity work plan (IWP) that is designed to ensure pipeline safety and an effective integrity program. The IWP shall be approved by the Consultant and include a comprehensive review of the ETP/PEPL integrity management program which identifies and quantifies improvements needed to process, procedures, data systems and employee training and qualifications. This plan shall be submitted within 180 days of receipt of this Order to the Central Region Director for review and comment. During the duration of the Order, the Consultant will provide oversight for integrity management related activities, decisions, specifications, processes, calculations, procedures and program revisions. Whenever the Consultant determines that a pressure reduction is warranted, based on industry standards, best practices, operating or maintenance experience, other subject matter expert input, or regulatory requirements, ETP/PEPL shall implement the pressure reduction and report this action to the Central Region Director.

i. ETP/PEPL must review and revise the threat assessment, risk assessment, and continual evaluation procedures based upon the

integration of all available data, the regulatory requirements and industry best practices.

ii. ETP/PEPL must also demonstrate that the performance plan and performance measures, mitigative measures, management of change process and quality assurance program meet the regulatory requirements, achieve industry best practice, and prevent incident reoccurrence.

iii. IWP shall include additional field testing, inspections, and evaluations to determine whether and to what extent the conditions associated with the failure, or any other integrity-threatening conditions are present elsewhere on the ETP/PEPL System.

iv. IWP shall include the performance of repairs or other corrective measures that fully remediate any integrity-threatening condition everywhere. Include a detailed description of the repair criteria and method(s) to be used in undertaking any repairs or other remedial actions.

v. The IWP shall include provisions for short-term and long-term periodic testing and integrity verification measures to ensure the ongoing safe operation of the ETP/PEPL system considering the results of the analyses, inspections, previous enforcement actions and corrective measures undertaken pursuant to the Order; and

vi. The IWP must include, but not be limited to, the elements described in Appendix B.

vii. On a quarterly basis, or more frequently if needed, provide the Director with advance notice of scheduled repairs, testing or assessments.

(C) Review the development and implementation of an Enhanced Safety and Integrity Culture improvement program. A process to implement this enhanced safety and integrity culture improvement program shall be developed within 1 year of the receipt of this Order and submitted to the Central Region Director for review and comment. The program shall be designed to promote a system wide culture that encourages reporting and learning improvements while strengthening training and management of change.

i. A Reporting and Feedback System: A reporting culture for the purpose of this Order means creating an environment where employees or consultants have confidence to report safety concerns without fear of reprisal. Employees are confident that information provided will be acted upon.

ii. A Learning Environment: A learning culture for the purpose of this Order is a work environment that is capable of learning from mistakes and responding to prevent reoccurrence.

iii. Implement those elements as defined in Appendix C.

iv. The Consultant is to review existing and proposed enhancements to the program to assist with the further development of a reporting and learning culture and those items identified in Appendix C. An implementation plan for these enhancements shall be developed and provided to ETP/PEPL and PHMSA.

v. The Consultant will review the existing MOC process, identify enhancements and provide an implementation schedule for these enhancements.

(D) Enhanced Data Systems: The Consultant shall review and provide comments pertaining to a strategic data system improvement plan that will allow the effective collection, review, integration and analysis of integrity related data. The plan will define how ETP/PEPL will perform timely analysis of integrity related data, recognize integrity threats, identify effective mitigative and preventative measures, and support effective decision making. This data system strategic plan shall be completed within 1 year from the receipt of this Order. This shall be submitted to the Central Region Director for review and comment. An implementation schedule shall be submitted to the Central Region Director for approval. This shall include elements as presented in Appendix D.

6. The Comprehensive Safety and Integrity Improvement work plan and the IWP becomes incorporated into the Order and must be revised as necessary to incorporate the results of actions undertaken pursuant to the Order and whenever necessary to incorporate new information obtained during the failure investigations and remedial activities. Submit any such plan revisions to the Director for prior approval. The Director may approve plan elements incrementally.

7. Implement the Comprehensive Safety and Integrity Improvement work plan as approved by the Director, including any revisions to the plan. The results of all actions taken in accordance with the approved plan must be available for review by PHMSA or the PHMSA representative.

8. The Respondent shall notify PHMSA Central Region via the PHMSA PHP300 Accident Team email address within 24 hours of discovery of any leak indication that is not reported through other requirements in 49 CFR 191 or the elements in this Order associated with leak survey.

9. Safety Order Documentation Report (SODR). Respondent must create, revise as necessary, and submit on a quarterly basis, a Safety Order Documentation Report. The intent is for the SODRs to summarize all activities and documentation associated

with this Order and to identify any activities or documentation for the period reflected in previous report activities so the status of any item in the Order is reflected in each report. When the Respondent has concluded all the required items in this Order, it will submit the final SODR in its entirety to the Director. This will allow the Director to complete a thorough review of all actions taken by the Respondent with regards to this Order prior to approving the closure of this Order.

(A) The Director may approve elements in the SODR as noted in item 11 below.

(B) Once approved by the Director, the SODR elements will be incorporated by reference into this Order. The SODR must include but not be limited to:

i. Table of Contents;

ii. Summary of the relevant pipeline failures, and the response activities applicable to the Houstonia 400 failure, the Louisburg 100 failure or as may be significant to provisions of this Order including leak metrics by locations identified (item 3 above) in this Order;

iii. Summary of the pipeline system by pipe data properties associated with the failures and all prior assessments for the failure areas (Houstonia 400 failure, Louisburg 100 failure) or as may be significant to the provisions of this Order;

iv. Summary of all activities under this Order including documentation associated with the Appendices or the IWP;

v. Summary of all metallurgical and metallurgical testing as required by this Order or others of significance to the provisions of this Order;

vi. Summary of the RCFA associated with the Houstonia 400 failure and the Louisburg 100 failure and any others of significance to the provisions of this Order;

vii. Documentation of all actions taken by EPT/PEPL to implement the IWP, or associated Appendices, or the consultant recommendations, the results of those actions, and the inspection and repair criteria used;

viii. Documentation of any revisions to the IWP or Appendices including those necessary to incorporate the results of actions undertaken pursuant to this Order whenever necessary to incorporate new information obtained during the failure investigations, Consultant recommendations, remedial actions or other elements under this Order;

ix. Lessons learned while completing this Order;

x. A path forward describing specific actions Respondent will take on its entire pipeline system as a result of the lessons learned from work on this Order; and

xi. Appendices as may be required.

10. It is requested that ETP/PEPL maintain documentation of the costs associated with implementation of the Order, and include in each report submitted pursuant to Item 9, the to-date total costs associated with: (1) preparation and revision of procedures, studies and analyses; (2) physical changes to pipeline infrastructure, including repairs, replacements and other modifications; and (3) environmental remediation, if applicable.

11. The Director may grant an extension of time for compliance with any of the terms of the Order upon a written request, timely submitted, demonstrating good cause for an extension.

12. For all submissions based upon this Order that requires the approval of the Director, the Director may (a) approve the submission in whole or in part; (b) impose specific conditions; (c) modify the submission to cure any deficiencies; (d) reject the submission in whole or in part; or (e) any combination of the above.

13. PEPL may appeal any decision of the Director to the Associate Administrator for Pipeline Safety. Decisions of the Associate Administrator are final.

The above actions proposed to be required by this Notice of Proposed Safety Order are in addition to and do not waive any requirements that apply to ETP/PEPL's pipeline system under 49 C.F.R. Parts 190 through 199, under any other order issued to ETP/PEPL under authority of 49 U.S.C. Chapter 601, or under any other provision of Federal or State law.

After receiving and analyzing additional data in the course of this proceeding and implementation of the work plan, PHMSA may identify other safety measures that need to be taken. In that event, ETP/PEPL will be notified of any proposed additional measures and, if necessary, amendments to the work plan or Safety Order.

_____ December 22, 2014

Allan C. Beshore Date issued
Director, Central Region, OPS
Pipeline and Hazardous Materials Safety Administration

APPENDIX A

(A) Implementation of the -850 mV polarized potential criteria as defined in the Order Directing Amendment (3-2010-1006M) to be completed.

(B) Remediation of all known low potential areas as of the receipt of Order based on a schedule provided to the Director and approved and reviewed by the Consultant. The proposed schedule shall be received by the Central Region Director within 30 days of the receipt of this Order.

i. This should include items discovered thru close interval survey (CIS), integrity assessments or annual survey; and

ii. Status of test station and rectifier repairs or CP system enhancements.

(C) Correct all future identified low potential areas within 12-15 months regardless of discovery method.

(D) Identify rectifier performance and remediate areas of interference at a minimum by completing the following:

i. Implement trends associated with current output for each rectifier on the system but prioritized by LPA;

ii. Develop and implement CP current management methods so that abnormal current draw or use per line segment (whenever possible) can be identified;

iii. Estimate current demand versus current availability; and

iv. Identify areas of AC or DC interference.

(E) Determine casing status and implement regular monitoring programs along with effective remediation where needed.

(F) Develop KPIs and performance measures for all elements of the corrosion control program reviewed by the 3rd party expert.

i. A schedule regarding the prioritization and implementation of the KPIs and performance measures will be provided to the Director.

(G) Review and revise CP programs goals by completing the following:

i. Develop a structured, formal data integration process, for ILI data and CIS/LPA matches and tie it directly to analysis and the formal remedial action plans;

ii. Develop annual plan of activity and implementation;

iii. Enhanced use of CIS and re-monitoring by CIS;

iv. Evaluation of coating quality especially Bucote as it relates to CGR;

v. Review of SOPs for pipe inspection to look for environmental factors, specifically MIC as it relates to corrosion rates; and

vi. Evaluate the CP status to see if/where a re-assessment is warranted.

(H) Revise resource allocation and follow up activities and reporting by:

i. Install the means for a prioritization value to be entered in the electronic system designed to track corrosion program activities. Design this prioritization capability such that a priority value can be entered by any level of employee involved in the decision making process including the level of employee acquiring or entering the initial data.

(I) Implement bonded coupling program

i. Identify the location of unbonded or electrically discontinuous couplings.

ii. Implement a plan to bond or remove all couplings identified in item (I) i. that are not addressed elsewhere in this Order within 10 years.

APPENDIX B

(A) The Consultant should review and revise the ILI data (tool run) alignment process. This process should provide automatic comparison of pipe diameter and wall thickness and identify couplings and casing locations or other known asset features for location confirmation of identified defects. This will also allow multiple ILI runs with different tool technology or similar technology but with different vendor tools to be compared. Field maintenance activities reports should be reviewed for tool data accuracy. This project should result in all previous runs being compared prior to and after tool tolerance is added.

(B) The Consultant will establish procedures, which ETP/PEPL shall implement, to determine conservative corrosion growth rates. If verified data acceptable to the Consultant is not present, the corrosion growth rate per NACE SP502 standard (16 mpy) shall be utilized.

(C) The Consultant shall evaluate the implementation and performance of the risk evaluation using this new system process and shall include preventative and mitigative measures and the substantiation of adequate corrosion growth rates.

i. Provide Integrity Summary Reports for all segments of pipeline.

(D) The Consultant shall establish conservative feature interaction rules for use by the ILI tool vendor and ETP/PEPL.

(E) The Consultant shall establish ETP/PEPL procedures to determine the most conservative (lowest predicted failure pressure) equation which will be used to calculate the predicted failure pressure (B31G, modified B31G, RSTRNG) to identify anomalies for remediation and repair.

(F) ETP/PEPL shall enhance engineering processes and evaluation of ILI data by completing the following:

i. Implement tool vendor processing of data and calculation of FPR;

ii. Compare tool vendor data analysis and calculation process to that of the ETP/PEPL;

iii. Implement procedures that statistically determine the number of required confirmation digs to substantiate tool reporting accuracy. This should be done in a method to establish 95% statistical confidence, utilize unity plots, and account for changes in tool specification criteria based on varying defect morphologies (length and depth) and interaction of features;

iv. Implement a procedure that collects all necessary field information (field measurements associated with dig sites, any mag. particle or metallurgical findings) to allow analysis of tool performance;

v. ILI data will be evaluated using dig results and adjustments to the data will be made based on tool related variances; and

vi. Generate unity plots.

(G) The IWP for the ETP/PEPL System must fully address all known or suspected factors per pipeline that have caused or contributed to the previous incidents, or have been discovered as lessons learned. This should include a review of reportable and non-reportable DOT events. The review of ETP failures (such as FGT) will be included. Data-gathering activities must include a review of the failure history (in-service and pressure test failures) of the entire length of the ETP/PEPL System since 2000 and the development of a written report containing all available information regarding locations, dates, pipeline name and causes of failures.

(H) The Consultant shall review all current pressure reductions resulting from integrity concerns by location and line. A report shall be prepared for PHMSA as a result of the Consultant review that lists the magnitude of the current pressure reduction by location, relevant remote or local alarm limits, software programming set-points or control points, and mechanical over-pressure devices, pressure regulator and ESD set points.

(I) Provide a summary of all locations that have experienced SCC or Flash weld associated seam corrosion by pipeline name and location. Submit to PHMSA an engineering summary that identifies why similar areas with SCC or Flash weld associated seam corrosion cracking on adjacent ETP/PEPL pipelines are not experiencing similar threats. (For example, if SCC has been determined to exist on the 300 line and preventative measures are in place, identify why from an engineering perspective the 400 line in this same area is not susceptible.) Explain in this engineering summary how the retest intervals are being established and implemented.

(J) Provide a review and identify an improvement plan to remediate or remove all couplings not previously addressed by other sections in this Order.

(K) Review near neutral SCC procedures.

(L) The Consultant shall review and revise as necessary MIC and AC/DC interference procedures and remediation actions.

(M) Evaluate existing anomaly response criteria. Include in the evaluation of response criteria a review of repair and remediation efforts that are prioritized (HCA, Class, and SRCR shall be required as a minimum).

(N) Review headquarter and field responsibilities and resources - training, allocation, deployment of skill sets.

(O) Review safety related condition reporting processes to determine if improvements or enhancements are needed.

APPENDIX C:

(A) Enhanced Safety and Integrity Culture through Reporting, Learning and Training

i. Review ETP/PEPL expansion or enhance efforts regarding the existing ETP/PEPL safety culture program and processes, placing an emphasis on pipeline integrity and corrosion control. Review the application of the existing processes within the Impact Safety management system to identify, report, and manage unwanted events. Review how the existing system can be utilized to encourage continuous improvement and a learning culture.

(B) Reporting criteria for additional unwanted events and issues

i. Review action item and learning process workflow;

ii. Review management of change process workflow; and

iii. Review the development of KPIs and performance measures indicative of corrosion control and pipeline integrity process performance.

(C) In consideration of process and procedure improvements resulting from the recent ETP/PEPL incident history and RCFAs, review processes to proactively manage the subject improvements and assure a formal MOC process occurs. Review the development and implementation of training and communication programs to assure people, process and technology components are fully implemented across the enterprise and changes are institutionalized accordingly including:

i. Review updates of SOPs and integrity management program documents;

ii. Review the training field technicians and SMEs in Corrosion Control and Integrity Management procedural/program changes;

iii. Review training and communication to technical support and management personnel related to changes in work management and management of KPIs; and

iv. Review processes and program design to verify that ongoing attention to key focus areas, such as integrity programs and corrosion control systems, is maintained during outside influences including organizational changes, mergers, acquisitions, resource changes, retirements, new hires, etc. and work to assure that any changes are managed so that safety performance is not negatively impacted.

APPENDIX D:

(A) The plan needs to address utilizing Geographic Information Systems and related applications to manage the following data and any other integrity related information:

i. HCAs

ii. Class locations

iii. Common corridors

a. Including type identification (type of corridor)

iv. Age and year of installation in combination with pipeline specifics (diameter, SMYS, wall thickness, coating type, cathodic protection date)

v. Structures within a 1000 feet

vi. Runways

vii. Test stations

viii. Bonds

ix. Rectifier and ground beds

x. Foreign line crossings

xi. Casings with shorted casings identified

xii. Repairs (including temporary repairs)

xiii. Reinforced and unreinforced couplings (project status)

xiv. Pressure reduction locations and reason for the reduction

xv. Areas not capable of accommodating smart pigging

xvi. All pipeline replacements

xvii. All areas of SCC or Crevice corrosion

xviii. Areas that have not been hydrotested since original construction.

xix. Locations of all failures and leaks including hydrotests

xx. CIS locations

xxi. Low potential areas

xxii. Spans and pipe exposures

xxiii. Areas of high potential as identified by procedure modifications

xxiv. Areas operating at over 72% SMYS

xxv. Recoated project areas

xxvi. Abandoned or inactive pipe locations

xxvii. Areas subject to the influence of stray current (power lines, wind farms, etc.)

xxviii. PIRs

(B) ETP to enhance and integrate these data collection efforts into the corrosion threat management processes.

i. ILI and CIS Data Alignment

(C) Automated data entry and analysis opportunities (Forms of various types)

i. Opportunities captured from review of current IMP and CP