Pipeline and Hazardous Materials Safety Administration
Office of Pipeline Safety

Gas Integrity Management Inspection Manual

Inspection Protocols with Results Forms

August 2013

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Explanation of Protocol Format

Each protocol element will have top-tier protocols that address the high level requirements. The regulatory requirement upon which the protocol is based is contained in brackets; e.g., [§192.905(a)]

Each top-tier protocol will have detailed "sub-tier" protocols which collectively lead the inspector to draw overall conclusions about compliance with the top-tier protocol. The regulatory requirement, upon which each sub-tier protocol is based, is also contained in brackets.

Notes on protocols:

- The typical sentence structure used in the protocols follows the form of "Verify that [describe the requirement]." The use and meaning of the term "verify" is expanded upon below.
- PHMSA will "verify" an operator's compliance status with respect to each requirement. In order to perform this verification, PHMSA will inspect the operator's documented processes and procedures in order to determine if a program has been established that complies with rule requirements. In addition, PHMSA will inspect an operator's implementation records to determine if the operator is effectively implementing its programs and processes. The purpose of the PHMSA verification/inspection is not to perform a quality check of every integrity related activity. The PHMSA inspection is conducted in the form of an audit. As a result, the PHMSA inspection will typically perform an inspection of selected operator records sufficient in breadth and depth to give the inspection team adequate understanding regarding the degree of an operator's commitment to compliance with applicable requirements and/or the degree to which the operator's program has been effective with respect to achieving compliance. PHMSA may use any number of inspection or audit techniques to identify potential compliance issues. Program documents may be inspected to determine if adequate processes have been developed and documented to the degree necessary for competent professionals to understand and effectively implement the process with results that are consistent and repeatable. For example, one technique that might be used by the inspection team is a "vertical slice" in which a specific covered segment or pipeline system is selected to perform a detailed inspection of every aspect of integrity management, thus following a specific example through the entire process of integrity management. Based on those reviews, PHMSA will identify potential non-compliances with rule requirements. PHMSA can not and will not certify nor conclude that an operator is in full compliance with rule requirements, even if the inspection does not identify any areas of non-compliance. Operators are wholly responsible for compliance with regulations.
- References to regulatory requirements may include references to specific rule sections/paragraphs and/or to industry standards that are invoked in the rule. As specified in §192.7, any requirement invoked by reference is a requirement of the rule as though it were set out in full in the regulation.
- Protocols are subject to change without notice.
- Protocols are an initial guide for use by PHMSA inspectors during Integrity Management inspections. Inspectors will develop additional questioning during the course of the inspection to investigate the specifics of an operator's program. Protocols are not to be construed as an exhaustive list of questions that may be presented to operators during an inspection.
- Protocols are made publicly available as a courtesy to operators as they develop their Integrity Management program, as well as other stakeholders.

Operator Contact and System Information

Operator Information:

Name of Operator (legal entity):	Ameren Illinois
Headquarters Address:	300 Liberty Peoria, Illinois 61602
Company Official:	Ron Pate, Senior VP Operations and Tech Services Decatur, Il 62523
Phone Number:	217-424-6518
FAX Number:	
PHMSA Operator ID:	32513

Persons Interviewed:

Persons Interviewed *(list primary contact first)*	**Title**	**Phone Number**	**Email**
Carey Phelps	Manager Integrity Management	217-424-6952	cphelps3@ameren.com
Tim Delaney	Supervising Engineer	217-424-6886	tdelaney@ameren.com
Bob Roth	Senior Quality Assurance Consultant	217-778-0785	rroth2@ameren.com
Dallas Jett	Supt Quality Assurance	217-556-2605	djett@ameren.com
Tim Ashenfelter	Supervisor of Pipeline Integrity	217-671-3834	tashenfelter@ameren.com

PHMSA and State Representatives:

Inspector Name	**Office/Organization**	**Days Present**
James Watts	Illinois Commerce Commission	(7) – April 13-16 and June 30 - July 2
Kevin Hecker	Illinois Commerce Commission	(3) - June 30 – July 2

System Description:

Operator ID	System Name and Brief Description	States	InTRA/Inter	Fed. Insp. Jurisdiction
32513	Ameren IL	Illinois	InTRA	No

System Description Narrative:

Ameren Illinois operates a transmission system in conjunction with their distribution systems. The transmission system has 1250.5 miles of coated and cathodically protected piping with diameters from 3 to 30 inches. This piping total also includes 12 natural gas

storage facilities. Ameren contracted with Structural Integrity to write a new pipeline integrity plan in 2014. In 2014 Ameren reported having 71.4 miles of HCA's.

Protocol Area A. Identify HCAs

- A.01 Program Requirements
- A.02 Potential Impact Radius
- A.03 Identified Sites
- A.04 Identification Using Class Locations (Method 1)
- A.05 Identification Using Potential Impact Radius (Method 2)
- A.06 Identification and Evaluation of Newly Identified HCAs, Program Requirements
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A.01 Program Requirements

Verify that the methods defined in §192.903 High Consequence Area (1) and/or §192.903 High Consequence Area (2) are applied to each pipeline for the identification of high consequence areas. [§192.905(a)]

A.01.a. Verify the operator's integrity management program includes documented processes on how to implement methods (1) and (2) in order to identify high consequence areas. [§192.905(a)]

A.01.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

A.01.a. Statement of Issue *(Leave blank if no issue was identified.)*
Defined in Section 2.4 for Method 2 that is utilized by Ameren. Pages 2-3-4

A.01.b. Verify that the operator's process requires that the method used for each portion of the pipeline system be documented. [§192.905(a)]

A.01.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

A.01.b. Statement of Issue *(Leave blank if no issue was identified.)*

A.01.c. Verify that the operator's integrity management program includes system maps or other suitably detailed means documenting the pipeline segment locations that are located in high consequence areas. [§192.905(a)]

A.01.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

A.01.c. Statement of Issue *(Leave blank if no issue was identified.)*

A.01.d. Review HCA records to verify that the operator completed identification of pipeline segments in high consequence areas by December 17, 2004. [§192.907 and §192.911(a)]

A.01.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

A.01.d. Statement of Issue *(Leave blank if no issue was identified.)*

A.01 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 2.4	0	4/30/2014	HCA Process (Method 2)
Section 2.1	0	4/30/2014	HCA Identification Process – Background
Section 2.1.2	0	4/30/3014	HCA Identification Process
GIS Viewer			HCA Locations
Gas System 3548			HCA Maps for TR 51 Mainline in Decatur, Il

A.01 Inspection Notes

Ameren currently (2014 Plan) utilizes Method 2 to identify HCA's. In the 2010 plan review, Staff confirmed that all HCA's present by 2004 were identified by 12/17/2004. Ameren performs annual HCA surveys to identify changes that have taken place since the last survey. HCA revisions can be viewed using the GIS Viewer.

Staff reviewed the HCA reviews for the Pekin, Illinois area 2013-2014.

A.02 Potential Impact Radius

Verify that the definition and use of potential impact radius for establishment of high consequence areas meets the requirements of §192.903. [§192.905(a)]

A.02.a. Verify that the operator's formula for calculation of the potential impact radius is consistent with §192.903 requirements ($r = 0.69*(p*d^2)^{0.5}$) and that the pressure used in the formula is based on maximum allowable operating pressure (MAOP).

i. For gases other than natural gas, verify that the operator has documented processes for the use of ASME B31.8S-2004, Section 3.2 to calculate the impact radius formula [§192.903 Potential Impact Radius, §192.905(a)]

A.02.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

A.02.a. Statement of Issue *(Leave blank if no issue was identified.)*

A.02.b. In cases where potential impact circles are used to identify high consequence areas, verify that the program requires that high consequence areas include the area extending axially along the length of the pipeline from the outermost edge of the first potential impact circle to the outermost edge of the last contiguous potential impact circle for those potential impact circles that contain either an identified site or 20 or more buildings intended for human occupancy. [§192.903 High Consequence Area (3)]

A.02.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

A.02.b. Statement of Issue *(Leave blank if no issue was identified.)*

A.02 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 2.3	0	4/30/2014	Calculation of Potential Impact Radius
Section 2.4	0	4/30/2014	HCA Process

A.02 Inspection Notes
Staff confirmed the PIR for the Following TR03 – Tilden Compressor Station to Freeburg Compressor Station. Ameren 191 Feet ICC 191 feet. TR17 – Old Maryville Compressor Station to Highland - Poplar Street Station. Ameren 216 ICC 216 TR49 – Airport Road Station to Decatur – Mound Road. Ameren 176 ICC 175.9

A.03 Identified Sites

Verify that the operator's identification of identified sites includes the sources listed in §192.905(b) for those buildings or outside areas meeting the criteria specified by §192.903, and that the source of information selected is documented. [§192.903 Identified Sites, §192.905(b) and §192 Appendix E, I(c)]

A.03.a. Identified sites must include the following: [§192.903 Identified Sites, §192.905(b)]

i. Outside areas or open structures occupied by 20 or more people on at least 50 days in any 12 month period (days need not be consecutive),
ii. Buildings occupied by 20 or more people on at least 5 days a week for 10 weeks in any 12 month period (days and weeks need not be consecutive), and
iii. Facilities occupied by persons who are confined, have impaired mobility, or would be difficult to evacuate.

A.03.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

A.03.a. Statement of Issue *(Leave blank if no issue was identified.)*

A.03.b. Identified sites must be identified using the following sources of information: [§192.905(b)]

i. Information from routine operation and maintenance activities and input from public officials with safety or emergency response or planning responsibilities
ii. In the absence of public official input, the operator must use one of the following in order to identify an identified site:
    1. Visible markings such as signs, or
    2. Facility licensing or registration data on file with Federal, State, or local government agencies, or
    3. Lists or maps maintained by or available from a Federal, State, or local government agency and available to the general public.

A.03.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

A.03.b. Statement of Issue *(Leave blank if no issue was identified.)*

A.03 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
Section 2.4.1	0	4/30/2014	Identification of HCA's Based on Identified Sites
Section 2.4.2	0	4/30/2014	Alternate Sources of Information
Figure 2-2	0	4/30/2014	HCA Process Flow Chart

A.03 Inspection Notes
Staff reviewed the Identified Site in Arthur that resulted in a new Identified site / HCA in 2012.

A.04 Identification Using Class Locations (Method 1)

If the operator's integrity management program relies on §192.903 High Consequence Area definition (1) for identification of high consequence areas, verify compliance with the following:

A.04.a. Verify the integrity management program includes Class 3 and Class 4 piping locations as high consequence areas consistent with the criteria of §192.5(b)(3), §192.5(b)(4), and §192.5(c). [§192.903 High Consequence Area (1) (i) and (ii)]

A.04.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

A.04.a. Statement of Issue *(Leave blank if no issue was identified.)*

A.04.b. For Class 1 and Class 2 locations with the potential impact radius greater than 660 feet, verify the integrity management program includes piping locations as high consequence areas if the area within the associated potential impact circle contains 20 or more buildings intended for human occupancy.[§192.903 High Consequence Area (1)(iii)]

i. As an option for PIRs greater than 660 feet, the definition of high consequence area may be based on a prorated building count for buildings intended for human occupancy within a distance of 660 feet (200 meters) from the centerline of the pipeline as calculated using the following formula: [§192.903 High Consequence Area (4)]

Building Count within 660 feet = 20 x [660 (ft) /PIR (ft)]^2 or
Building Count within 200 meters = 20 x [200 (m) / PIR (m)]^2

1. If the option for use of a prorated number of buildings has been used for identification of high consequence areas, verify that the program acknowledges that use of the prorated allowance is only available to operators until December 17, 2006. [§192.903 High Consequence Area (4)]

A.04.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

A.04.b. Statement of Issue *(Leave blank if no issue was identified.)*

A.04.c. Verify the program includes as a high consequence area, any area in Class 1 and Class 2 piping locations where the potential impact circle contains an identified site. [§192.903 High Consequence Area (1) (iv)]

A.04.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

A.04.c. Statement of Issue *(Leave blank if no issue was identified.)*

A.04 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 2.4	0	4/30/2014	HCA Identification Process

A.04 Inspection Notes
Ameren has not and does not currently utilize Method 1 to calculate PIR.

A.05 Identification Using Potential Impact Radius (Method 2)

If the operator's integrity management program relies on §192.903 High Consequence Area definition (2) for identification of high consequence areas, verify compliance with the following:

A.05.a. Verify the integrity management program includes piping locations as high consequence areas if the area within a potential impact circle contains 20 or more buildings intended for human occupancy: [§192.903 High Consequence Area (2)(i)]

i. As an option for PIRs greater than 660 feet, the definition of high consequence area may be based on a prorated building count for buildings intended for human occupancy within a distance of 660 feet (200 meters) from the centerline of the pipeline as calculated using the following formula: [§192.903 High Consequence Area (4)]

Building Count within 660 feet = 20 x [660 (ft) /PIR (ft)]^2 or
Building Count within 200 meters = 20 x [200 (m) / PIR (m)]^2

1. If the option for use of a prorated number of buildings has been used for identification of high consequence areas, verify that the program acknowledges that use of the prorated allowance is only available to operators until December 17, 2006. [§192.903 High Consequence Area (4)]

A.05.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

A.05.a. Statement of Issue *(Leave blank if no issue was identified.)*

A.05.b. Verify the program includes piping locations as high consequence areas if the area within the potential impact circle contains an identified site. [§192.903 High Consequence Area (2) (ii)]

A.05.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

A.05.b. Statement of Issue *(Leave blank if no issue was identified.)*

A.05 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
Section 2.4	0	4/30/2014	HCA Identification Process
Section 2.4.1	0	4/30/2014	Identification of HCA's Based on Identified Sites

A.05 Inspection Notes
Ameren has utilized Method 2 to identify the location of HCA's. There are no PIR's greater than 660 feet and prorating has not been utilized.

A.06 Identification and Evaluation of Newly Identified HCAs, Program Requirements

Review the operator's integrity management program to verify processes are in place for evaluation of new information that may show that a pipeline segment impacts a high consequence area. [§192.905(c)]

A.06.a. Verify the operator's integrity management program includes documented processes for how new information that shows a pipeline segment impacts a high consequence area is identified and integrated with the integrity management program. The program is to identify and analyze changes for impacts on pipeline segments potentially affecting high consequence areas. Issues the program must consider include but are not limited to: [§192.905(c)]

i. Changes in pipeline maximum allowable operating pressure (MAOP),
ii. Pipeline modifications affecting piping diameter,
iii. Changes in the commodity transported in the pipeline,
iv. Identification of new construction in the vicinity of the pipeline that results in additional buildings intended for human occupancy or additional identified sites,
v. Change in the use of existing buildings (e.g., hotel or house converted to nursing home),
vi. Installation of new pipeline,
vii. Change in pipeline class location (e.g., class 2 to 3) or class location boundary,
viii. Pipeline reroutes
ix. Corrections to erroneous pipeline center line data.

A.06.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

A.06.a. Statement of Issue *(Leave blank if no issue was identified.)*

A.06 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 2.2	0	4/30/2014	Timing and Responsibility for Identification of HCA's
Section 2.3	0	4/30/2014	Calculation of Potential Impact Radium

A.06 Inspection Notes

Staff reviewed the new Pekin Lateral that was installed 2014 and the review conducted in late 2014 established an Identified Site at a race track near Tremont, Illinois. This will be placed in the baseline in 2015 and Ameren will utilize the hydrotest as the initial inspection. Ameren currently adds 10% to the PIR to account for mapping inconsistencies.

Protocol Area B. Baseline Assessment Plan

- B.01 Assessment Methods
- B.02 Prioritized Schedule
- B.03 Use of Prior Assessments
- B.04 Newly Identified HCAs/Newly Installed Pipe
- B.05 Consideration of Environmental and Safety Risks
- B.06 Changes
- Table of Contents

B.01 Assessment Methods

Verify that the operator's Baseline Assessment Plan (BAP) specifies an assessment method(s) for each covered segment that is best suited for identifying anomalies associated with specific threats identified for the segment. [§192.919(b), §192.921(a), §192.921(c), and §192.921(h)]

B.01.a. Verify that the operator followed ASME B31.8S-2004, Section 6 and that the assessment methods selected for each covered segment addresses all of the threats identified for the segment. More than one assessment tool may be necessary to address all applicable threats to a covered segment. [§192.919(b), §192.921(a), §192.921(c), and §192.921(h)]

B.01.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

B.01.a. Statement of Issue *(Leave blank if no issue was identified.)*

B.01.b. If internal inspection tools are selected, verify that the operator followed ASME B31.8S-2004, Section 6.2 in selecting the appropriate internal inspection tool for the covered segment. [§192.921(a) (1)]

i. Verify that the operator has evaluated the general reliability of any in-line assessment method selected by looking at factors including but not limited to: detection sensitivity; anomaly classification; sizing accuracy; location accuracy; requirements for direct examination; history of tool; ability to inspect full length and full circumference of the section; and ability to indicate the presence of multiple cause anomalies. Refer to ASME B31.8S-2004, Section 6.2.5. [§192.921(a)(1)]

B.01.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

B.01.b. Statement of Issue *(Leave blank if no issue was identified.)*

B.01.c. If a pressure test is specified, verify that the test is required to be conducted in accordance with Part 192, Subpart J requirements. Verify that the operator followed ASME B31.8S-2004, Section 6.3 in selecting the pressure test as the appropriate assessment method. [§192.921(a) (2)]

B.01c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

B.01.c. Statement of Issue *(Leave blank if no issue was identified.)*

B.01.d. If the operator specifies the use of "other technology," verify that notification to PHMSA is required in accordance with Part 192.949, 180 days before conducting the assessment. Also, verify that notification to a State or local pipeline safety authority is required when either a covered segment is located in a State where PHMSA has an interstate agent agreement, or an intrastate covered segment is regulated by that State. [§192.921(a) (4)]

B.01.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

B.01.d. Statement of Issue *(Leave blank if no issue was identified.)*

B.01.e. If a covered pipeline segment contains low frequency electric resistance welded pipe (ERW) or lap welded pipe that satisfies the conditions specified in ASME B31.8S-2004, Appendix A4.3 and ASME B31.8S-2004, Appendix A4.4, and any covered or non-covered segment in the pipeline system with such pipe has experienced seam failure, or operating pressure on the covered segment has increased over the maximum operating pressure experienced during the preceding five years verify that the selected assessment method(s) are proven to be capable of assessing seam integrity and detecting seam corrosion anomalies. [§192.917€ (4)]

B.01.e. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

B.01.e. Statement of Issue *(Leave blank if no issue was identified.)*

B.01.f. If the threat analysis required in §192.917(d) on a plastic transmission pipeline indicates that a covered segment is susceptible to failure from causes other than third-party damage, verify that the operator documents an acceptable justification for the use of an alternative assessment method that will address the identified threats to the covered segment. [§192.921(h)]

B.01.f. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

B.01.f. Statement of Issue *(Leave blank if no issue was identified.)*

B.01 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 3.1	0	4/30/2014	Threat Overview
Section 5.3.1	0	4/30/2014	Internal Inspection
		8/20/2014	Inline Inspection Procedure
Section 5.3.2	0	4/30/2014	Pressure Testing
Section 5.3.4	0	4/30/2014	Other Technology
Section 3.6	0	4/30/2014	Manufacturing
Baseline Assessment Plan			

B.01 Inspection Notes

B.01 Inspection Notes
There has been no pigging conducted to establish the baseline since the inception of the plan. Pigging was utilized as reassessment and was conducted in 2014 Greenville to Maryville feeder using ILI. Other Technology has not been utilized as of the end of 2014 but procedures are in place in the TIMP plan in 5.3.4. There is low frequency piping in their system. The Mt. Zion lateral was partially replaced and was hydrotested to eliminate the seam threat. There is no plastic transmission piping in the Ameren Illinois system.

B.02 Prioritized Schedule

Verify that the BAP contains a schedule for completing the assessment activities for all covered segments; and that the BAP appropriately considered the applicable risk factors in the prioritization of the schedule. [§192.917(c), §192.919(c) and §192.921]

B.02.a. Verify that the BAP schedule includes all covered segments not already assessed. [§192.921(a)]

B.02.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

B.02.a. Statement of Issue *(Leave blank if no issue was identified.)*

B.02.b. Verify that the BAP schedule prioritizes the covered segments based on potential threats and applicable risk analysis, and that the risk ranking is appropriate. [§192.917(c) and §192.921(b)]

B.02.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

B.02.b. Statement of Issue *(Leave blank if no issue was identified.)*

B.02.c. Verify that covered segments meeting the following conditions are prioritized as high-risk segments.

i. Segments that contain low frequency resistance welded (ERW) pipe or lap welded pipe that satisfy the conditions specified in ASME B31.8S-2004, Appendix A4.3 and ASME B31.8S-2004, Appendix A4.4, and any covered or non-covered segment in the pipeline system with such pipe has experienced seam failure, or operating pressure on the covered segment has increased over the maximum operating pressure experienced during the preceding five years. [§192.917(e)(4)]

ii. Covered segments that have manufacturing or construction defects (including seam defects) where any of the following changes occurred in the covered segment: operating pressure increases above the maximum operating pressure experienced during the preceding five years; MAOP increases; or the stresses leading to cyclic fatigue increase. [§192.917(e)(3)]

B.02.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

B.02.c. Statement of Issue *(Leave blank if no issue was identified.)*

B.02.d. Verify that the BAP schedule requires 50% of the covered segments, beginning with the highest risk segments, to be assessed by December 17, 2007; and that baseline assessments shall be completed for all covered segments by December 17, 2012. [§192.921(d)]

B.02.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

B.02.d. Statement of Issue *(Leave blank if no issue was identified.)*

B.02.e. Review the operator's implementation progress to date and verify that: [§192.921]

i. Assessments scheduled for completion by the date of the inspection were in fact completed.
ii. Assessment methods used for completed assessments were as described in the plan.
iii. The date assessment field activities were completed is recorded [so the operator understands the time frame allowable for compliance with the provisions of §192.933].

B.02.e. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

B.02.e. Statement of Issue *(Leave blank if no issue was identified.)*

B.02 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
		2014	Baseline Assessment Plan
Section 3.15		3/30/2014	High Risk Prioritization

B.02 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
Section 4.1	0	4/30/2014	Objectives Risk Assessment
Section 4.4	0	4/30/2014	Updates due to Risk Assessments

B.02 Inspection Notes
The initial baselines were completed within the required timeframe of December 2012. Review of the baseline plan indicates all reassessments have been completed within the required timelines up to the end of 2014. (With the exception of the 3 casing installations) and the processes utilized to conduct the inspections and the date of the survey are defined in the Baseline Plan. The baseline Plan has three segments that have been identified as new HCA's and are due for assessments in 2020 and 2022. These are the Johnston City to Benton (2020) and the Highland Poplar St Station to Greenville Airport Road Station Segment and Troy Bouse Road to Troy-Formosa Road (2022).

B.03 Use of Prior Assessments

If prior assessments are used in the BAP, verify that the assessment methods used meet the requirements of §192.921(a) and that remedial actions have been carried out to address conditions listed in §192.933. Prior assessments are those that were completed prior to December 17, 2002. [§192.921(e)]

B.03.a. Verify that threats to these pipeline sections were identified as required under §192.919(a).

B.03.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

B.03.a. Statement of Issue *(Leave blank if no issue was identified.)*

B.03.b. Verify that the methods used for these prior assessments were appropriate for the threats per ANSI B31.8S-2004 as required under §192.919(b) and §192.919(d).

B.03.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

B.03.b. Statement of Issue *(Leave blank if no issue was identified.)*

B.03.c. Verify that anomalies satisfying the requirements of §192.933 were repaired.

B.03.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

B.03.c. Statement of Issue *(Leave blank if no issue was identified.)*

B.03 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
Section 5.4	0	4/30/2014	Use of Assessments prior to December 17, 2002

B.03 Inspection Notes
No prior assessments were utilized for baseline assessments. This is defined in 5.4 on page 5-6.

B.04 New HCAs/Newly Installed Pipe

Verify that the operator updates the baseline assessment plan for new HCAs and newly installed pipe. [§192.905(c), §192.921(f), §192.921(g)]

B.04.a. If new HCAs have been identified or new pipe has been installed that is covered by this subpart, verify that applicable segment(s) have been incorporated into the operator's baseline assessment plan within one year from the date the area or pipe is identified and assessments have been appropriately scheduled and/or completed. [§192.905(c)]

B.04.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

B.04.a. Statement of Issue *(Leave blank if no issue was identified.)*

B.04.b. For new HCAs, verify that the operator completes a baseline assessment for the applicable segment(s) within ten (10) years from the date the area is identified. [§192.921(f)]

B.04.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

B.04.b. Statement of Issue *(Leave blank if no issue was identified.)*

B.04.c. For newly installed pipe that is covered by this subpart and impacts an HCA, verify that the operator completes a baseline assessment within ten (10) years from the date the pipe is installed. [§192.921(g)]

B.04.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

B.04.c. Statement of Issue *(Leave blank if no issue was identified.)*

B.04.d. Verify that threats to these pipeline sections were identified as required under §192.919(a). [§192.921(b)]

B.04.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

B.04.d. Statement of Issue *(Leave blank if no issue was identified.)*

B.04.e. Verify that the assessment methods used were appropriate for the threats per ASME B31.8S-2004 as required under §192.919(b) and 192.919(d).

B.04.e. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

B.04.e. Statement of Issue *(Leave blank if no issue was identified.)*

B.04 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
		2014	Baseline Assessment Plan
			GIS Mapping of HCA's

B.04 Inspection Notes
Staff observed that a new HCA was established after installing and placing the new Pekin Lateral in service in November of 2014. This has been established as an HCA and will be added to the Baseline plan by November of 2015.

B.05 Consideration of Environmental and Safety Risks

Verify that the operator addresses requirements for conducting the integrity assessments (baseline and reassessment) in a manner that minimizes environmental and safety risks. [§192.919€ and §192.911(o)]

B.05.a. Verify that precautions were implemented to protect workers, members of the public, and the environment from safety hazards (such as an accidental release of gas) during assessments. [§192.919€ and §192.911(o)]

B.05.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

B.05.a. Statement of Issue *(Leave blank if no issue was identified.)*

B.05 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 5.10	0	4/30/2014	Environmental and Safety Risks
Appendix F	0	4/30/2014	Excavation Location Field Sheet
Appendix F	0	4/30/2014	Direct Exam Job Briefing Sheet

B.05 Inspection Notes

B.06 Changes

Verify that the operator keeps the BAP up-to-date with respect to newly arising information. Also refer to Protocol K. [§192.911(k) and ASME B31.8S-2004, Section 11]

B.06.a. Verify that the operator's process has requirements to keep the BAP up-to-date with respect to newly arising information, applicable threats, and risks that may require changes to the segment prioritization or assessment method. [§192.911(k) & ASME B31.8S-2004, Section 11]

B.06.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

B.06.a. Statement of Issue *(Leave blank if no issue was identified.)*

B.06.b. Verify that required BAP changes have been made and that for all changes, the following are documented: [ASME B31.8S-2004, Section 11(a)]

i. Reason for change
ii. Authority for approving change
iii. Analysis of implications
iv. Communication of change to affected parties

B.06.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

B.06.b. Statement of Issue *(Leave blank if no issue was identified.)*

B.06 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 4.4	0	4/30/2014	Updates
Section 5.5	0	4/30/2014	Newly Identified HCA
Section 5.6	0	4/30/2014	Newly Installed Pipe
Section 5.12	0	4/30/2014	Revising the Assessment Plan

B.06 Inspection Notes
New HCA's have been added to the baseline plan as they are identified due to newly installed pipe or changes in building usage or count.

Protocol Area C. Identify Threats, Data Integration, and Risk Assessment

- C.01 Threat Identification
- C.02 Data Gathering and Integration
- C.03 Risk Assessment
- C.04 Validation of the Risk Assessment
- C.05 Plastic Transmission Pipeline
- Table of Contents

C.01 Threat Identification

Verify that the operator identifies and evaluates all potential threats to each covered pipeline segment. [§192.917(a)]

C.01.a. If the operator is following the prescriptive or performance-related approaches, verify that the following categories of failure have been considered and evaluated: [§192.917(a) and ASME B31.8S-2004, Section 2.2]

i. external corrosion,
ii. internal corrosion,
iii. stress corrosion cracking;
iv. manufacturing-related defects, including the use of low frequency electric resistance welded (ERW) pipe, lap welded pipe, flash welded pipe, or other pipe potentially susceptible to manufacturing defects [§192.917(e)(4) and ASME B31.8S-2004, Appendix A4.3];
v. welding- or fabrication-related defects,
vi. equipment failures;
vii. third party/mechanical damage [§192.917(e)(1)],
viii. incorrect operations (including human error),
ix. weather-related and outside force damage,
x. cyclic fatigue or other loading condition [§192.917(e)(2)],
xi. all other potential threats.

C.01.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

C.01.a. Statement of Issue *(Leave blank if no issue was identified.)*

C.01.b. If the operator is following the performance-based approach, verify that all 21 of the threats associated with the first nine failure categories listed above have been considered. [§192.917(a) and ASME B31.8S-2004, Section 2.2]

C.01.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

C.01.b. Statement of Issue *(Leave blank if no issue was identified.)*

C.01.c. Verify that the operator's threat identification has considered interactive threats from different categories (e.g., manufacturing defects activated by pressure cycling, corrosion accelerated by third party or outside force damage) [ASME B31.8S-2004, Section 2.2].

C.01.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

C.01.c. Statement of Issue *(Leave blank if no issue was identified.)*

C.01.d. Verify that the approach incorporates appropriate criteria for eliminating a specific threat for a particular pipeline segment. [ASME B31.8S-2004, Section 5.10]

C.01.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

C.01.d. Statement of Issue *(Leave blank if no issue was identified.)*

C.01.e. Verify that the approach appropriately considers industry data and experience.

C.01.e. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*

C.01.e. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	Not Applicable *(explain in summary)*

C.01.e. Statement of Issue *(Leave blank if no issue was identified.)*

C.01.f. Verify that the records indicate that all potential threats to each covered pipeline segment have been identified and evaluated.

Adequate records that demonstrate all potential threats to each covered segment have been identified and evaluated should:

i. Show consideration and evaluation of categories of threats summarized in 192.917(a), 192.917(e), and ASME B31.8S-2004.
ii. If performance-based approach is utilized, show that all 21 of the threats associated with 192.917(a) and ASME B31.8S-2004 are considered.
iii. Show interactive threats from different categories (e.g., manufacturing defects activated by pressure cycling, corrosion accelerated by third party or outside force damage) are considered.
iv. Show appropriate criteria for eliminating a specific threat for a particular pipeline segment.
v. Show that industry data and experience was appropriately considered in the identification of potential threats.

C.01.f. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

C.01.f. Statement of Issue *(Leave blank if no issue was identified.)*

C.01 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 3.0	0	4/30/2014	Threat Identification Strategy
Section 3.1	0	4/30/2014	Threat Overview
Section 3.5	0	4/30/2014	Stress Corrosion Cracking
Section 3.2.1	0	4/30/2014	Industry Threat Summary
Section 3.6	0	4/30/2014	Manufacturing
Table 3-1	0	4/30/2014	DOT Incident Details

C.01 Inspection Notes
C.01.b Ameren does not utilize a Performance Based Program. C.01.e Ameren has eliminated the Stress Cracking Corrosion (SCC) Threat as they have no pipelines that meet the requirements defined in 3.5. The Henry Princeton line in the Peoria Area operates at just over 60% SMYS but does not meet the criteria for being within 20 miles of a compressor station. Applicable threats are identified using the Risk Model and are listed in the Baseline Plan

C.02 Data Gathering and Integration

Verify that the operator gathers and integrates existing data and information on the entire pipeline that could be relevant to covered segments, and verify that the necessary pipeline data have been assembled and integrated. [§192.917(b)]

C.02.a. Verify that the operator has in place a comprehensive plan for collecting, reviewing, and analyzing the data. [ASME B31.8S-2004, Section 4.2 and ASME B31.8S-2004, Section 4.4]

C.02.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

C.02.a. Statement of Issue *(Leave blank if no issue was identified.)*

C.02.b. Verify that the operator has assembled data sets for threat identification and risk assessment according to the requirements in ASME B31.8S-2004, Section 4.2, ASME B31.8S-2004, Section 4.3, and ASME B31.8S-2004, Section 4.4. At a minimum, an operator must gather and evaluate the set of data specified in ASME B31.8S-2004, Appendix A (summarized in ASME B31.8S-2004, Table 1) and consider the following on covered segments and similar non-covered segments [§192.917(b)]:

i. Past incident history
ii. Corrosion control records
iii. Continuing surveillance records
iv. Patrolling records
v. Maintenance history
vi. Internal inspection records
vii. All other conditions specific to each pipeline.

C.02.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

C.02.b. Statement of Issue *(Leave blank if no issue was identified.)*

C.02.c. Verify that the operator has utilized the data sources listed in ASME B31.8S-2004, Table 2, for initiation of the integrity management program. [ASME B31.8S-2004, Section 4.3]

C.02.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

C.02.c. Statement of Issue *(Leave blank if no issue was identified.)*

C.02.d. Verify that the operator has checked the data for accuracy. If the operator lacks sufficient data or where data quality is suspect, verify that the operator has followed the requirements in ASME B31.8S-2004, Section 4.2.1, ASME B31.8S-2004, Section 4.4, and ASME B31.8S-2004, Appendix A [ASME B31.8S-2004, Section 4.1, ASME B31.8S-2004, Section 4.2.1, ASME B31.8S-2004, Section 4.4, ASME B31.8S-2004, Section 5.7(e), and ASME B31.8S-2004, Appendix A]:

i. Each threat covered by the missing or suspect data is assumed to apply to the segment being evaluated. The unavailability of identified data elements is not a justification for exclusion of a threat.
ii. Conservative assumptions are used in the risk assessment for that threat and segment or the segment is given higher priority.
iii. Records are maintained that identify how unsubstantiated data are used, so that the impact on the variability and accuracy of assessment results can be considered.
iv. Depending on the importance of the data, additional inspection actions or field data collection efforts may be required.

C.02.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

C.02.d. Statement of Issue *(Leave blank if no issue was identified.)*

C.02.e. Verify that the operator's program includes measures to ensure that new information is incorporated in a timely and effective manner, as addressed in Protocol K. [§192.911(k), ASME B31.8S-2004, Section 11(b) and ASME B31.8S-2004, Section 11(d)]

C.02.e. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

C.02.e. Statement of Issue *(Leave blank if no issue was identified.)*

C.02.f. Verify that individual data elements are brought together and analyzed in their context such that the integrated data can provide improved confidence with respect to determining the relevance of specific threats and can support an improved analysis of overall risk. [ASME B31.8S-2004, Section 4.5]. Data integration includes:

i. A common spatial reference system that allows association of data elements with accurate locations on the pipeline [ASME B31.8S-2004, Section 4.5];
ii. Integration of ILI or ECDA results with data on encroachments or foreign line crossings in the same segment to define locations of potential third party damage [§192.917I(1)].

C.02.f. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

C.02.f. Statement of Issue ***(Leave blank if no issue was identified.)***

C.02.g**.** Verify that the operator's program includes a procedure for ensuring the accuracy and completeness of information and data used in the identification of potential threats and the risk analysis.

C.02.g. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

C.02.g. Statement of Issue *(Leave blank if no issue was identified.)*

C.02.h**.** Verify that the operator's program includes plans for additional inspection activities or field data collection efforts as needed to ensure data completeness and accuracy.

C.02.h. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

C.02.h. Statement of Issue *(Leave blank if no issue was identified.)*

C.02.i. Verify that the records indicate that all existing data and information on the entire pipeline, that could be relevant to covered segments, has been gathered.

Adequate records that demonstrate all data and information has been gathered should:

i. Show that comprehensive collection, review and analyzing of data was performed.
ii. That data sets for threat identification and risk assessment were assembled in accordance with the requirements in ASME B31.8S-2004, Sections 4.2, 4.3 and 4.4.
iii. Show that data sources listed in ASME B31.8S-2004, Table 2, were utilized for initiation of the integrity management program.
iv. Show that new information was incorporated in a timely and effective manner.
v. Show that controls to provide assurance of the completeness and accuracy of input information in accordance with the operator's procedure were properly applied.
vi. Show additional inspection or field data collection activities to improve the accuracy and completeness of the data were conducted.

C.02.i. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

C.02.i. Statement of Issue *(Leave blank if no issue was identified.)*

C.02 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
Section 4.2	0	4/30/2014	Data Integration
Appendix C	0	4/30/2014	Data Matrix
Appendix D	0	4/30/2014	Risk Analysis Process (Utilized through 2014)
Figure 4-1	0	4/30/2014	Risk Analysis Update Process
Section 11	0	4/30/2014	Management of Change
		2014	Baseline Plan
		2014	Pre-assessment Form for ECDA (Data Confirmation)

C.02 Inspection Notes

C.02 Inspection Notes
In late 2014 Ameren revised the Risk Algorithm from the American Innovations to the Structural Integrity (Ameren HCA Risk Model). Ameren has compared the results side by side an observed no drastic changes in the risk rankings. Information from G/Tech and other sources are placed in ESRI to allow association of data elements with accurate locations on the pipeline.

C.03 Risk Assessment

Verify that the operator has conducted a risk assessment that follows ASME B31.8S-2004, Section 5, and that considers the identified threats for each covered segment. [§192.917(c)] [Note: Application of the risk assessment to prioritize the covered segments for the baseline assessment is covered in Protocol B, continual reassessments in Protocol F, and additional preventive and mitigative measures in Protocol H.]

C.03.a. Verify that the operator's risk assessment supports the following objectives [ASME B31.8S-2004, Section 5.3 and ASME B31.8S-2004, Section 5.4]:

i. prioritization of pipelines/segments for scheduling integrity assessments and mitigating action
ii. assessment of the benefits derived from mitigating action
iii. determination of the most effective mitigation measures for the identified threats
iv. assessment of the integrity impact from modified inspection intervals
v. assessment of the use of or need for alternative inspection methodologies
vi. more effective resource allocation
vii. facilitation of decisions to address risks along a pipeline or within a facility

C.03.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

C.03.a. Statement of Issue *(Leave blank if no issue was identified.)*

C.03.b. Verify that the operator utilizes one or more of the following risk assessment approaches [ASME B31.8S-2004, Section 5.5]:

i. Subject matter experts (SMEs),
ii. Relative assessment models,
iii. Scenario-based models, or
iv. Probabilistic models

C.03.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

C.03.b. Statement of Issue *(Leave blank if no issue was identified.)*

C.03.c. Verify that the risk assessment explicitly accounts for factors that could affect the likelihood of a release and for factors that could affect the consequences of potential releases, and that these factors are

combined in an appropriate manner to produce a risk value for each pipeline segment. [ASME B31.8S-2004, Section 3.1, ASME B31.8S-2004, Section 3.3, ASME B31.8S-2004, Section 5.2, ASME B31.8S-2004, Section 5.3 and ASME B31.8S-2004, Section 5.7(j)] Verify that the risk assessment approach includes the following characteristics:

i. The risk assessment approach contains a defined logic and is structured to provide a complete, accurate, and objective analysis of risk [ASME B31.8S-2004, Section 5.7(a)];
ii. The risk assessment considers the frequency and consequences of past events, using company and industry data [ASME B31.8S-2004, Section 5.7(c)];
iii. The risk assessment approach integrates the results of pipeline inspections in the development of risk estimates [ASME B31.8S-2004, Section 5.7(d)];
iv. The risk assessment process includes a structured set of weighting factors to indicate the relative level of influence of each risk assessment component [ASME B31.8S-2004, Section 5.7(i)];The risk assessment approach establishes the documentation requirements for the use of inadequate or unsubstantiated data in the risk analysis [ASME B31.8S-2004, Section 5.7(e)];
v. The risk assessment approach assumes a threat is applicable , and uses appropriately conservative assumptions, when inadequate or unsubstantiated data is available to eliminate the threat from the risk analysis [ASME B31.8S-2004, Section 5.7(e)];
vi. The risk assessment process incorporates sufficient resolution of pipeline segment size to analyze data as it exists along the pipeline [ASME B31.8S-2004, Section 5.7(k)].

C.03.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

C.03.c. Statement of Issue *(Leave blank if no issue was identified.)*

C.03.d. Verify that records demonstrate that the risk analysis data is combined in an appropriate manner to produce a risk value for each pipeline segment. Verify that the records:

i. Show a defined logic and structure to provide a complete, accurate, and objective analysis of risk [ASME B31.8S-2004, Section 5.7(a)];
ii. Show the frequency and consequences of past events, using company and industry data is considered[ASME B31.8S-2004, Section 5.7(c)];
iii. Shows the risk assessment approach integrates the results of pipeline inspections in the development of risk estimates [ASME B31.8S-2004, Section 5.7(d)];
iv. Show how factors with missing or unsubstantiated data was used in the risk analysis [ASME B31.8S-2004, Section 5.7(e)]
v. Show that conservative assumptions are used whenever inadequate or unsubstantiated data was used in the risk analysis [ASME B31.8S-2004, Section 5.7(e)]
vi. Shows a structured set of weighting factors to indicate the relative level of influence of each risk assessment component [ASME B31.8S-2004, Section 5.7(i)];
vii. Shows that sufficient resolution of pipeline segment size was used to analyze data as it exists along the pipeline [ASME B31.8S-2004, Section 5.7(k)].

C.03.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified

C.03.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

C.03.d. Statement of Issue *(Leave blank if no issue was identified.)*

C.03.e. Verify that adequate time and personnel have been allocated to permit effective completion of the selected risk assessment approach. [ASME B31.8S-2004, Section 5.7(b)]

C.03.e. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

C.03.e. Statement of Issue *(Leave blank if no issue was identified.)*

C.03 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Appendix D			Ameren Risk Algorithm
2-2			Ameren HCA Risk Model and Calculation Results
3.1		11/2014	Likelihood in the Risk Model
3.4		11/2014	Consequence of Failure in the Risk Model

C.03 Inspection Notes
As far as TIMP personnel, Ameren has added 6 new positions to the Transmission Integrity Department since 2010 of which had a total of 3 individuals at that time.

C.04 Validation of the Risk Assessment

Verify that the integrity management program identifies and documents a process to validate, and update, the results of the risk assessments. [§192.917(c) and ASME B31.8S-2004, Section 5.12]

C.04.a. Verify that the validation process includes a check that the risk results are logical and consistent with the operator's and other industry experience. [§192.917(c) and ASME B31.8S-2004, Section 5.12]

C.04.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

C.04.a. Statement of Issue *(Leave blank if no issue was identified.)*

C.04.b. Verify that the operator's process provides for revisions to the risk assessment if new information is obtained or conditions change on the pipeline segments. Verify that the provisions for change to the risk assessment address the following areas:

i. the risk assessment plan calls for recalculating the risk for each segment to reflect the results from an integrity assessment or to account for completed prevention and mitigation actions. [ASME B31.8S-2004, Section 5.11, and ASME B31.8S-2004, Section 5.7(c)]
ii. the operator integrates the risk assessment process into field reporting, engineering, facility mapping, and other processes as necessary to ensure regular updates. [ASME B31.8S-2004, Section 5.4]
iii. the integrity management plan calls for revision to the risk assessment process if pipeline maintenance or other activities identify inaccuracies in the characterization of the risk for any segments. [§192.917(c) and ASME B31.8S-2004, Section 5.12]
iv. the operator uses a feedback mechanism to ensure that the risk model is subject to continuous validation and improvement. [§192.917(c) and ASME B31.8S-2004, Section 5.7(f)]
v. the use of a mechanism to ensure the risk model is subject to continuous validation and improvement
vi. leak, failure, and incident history is used to validate the risk model.

C.04.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

C.04.b. Statement of Issue *(Leave blank if no issue was identified.)*

C.04.c. Verify that records demonstrate that the risk assessment was revised as necessary as new information was obtained or conditions changed on the pipeline segments. Verify that the records address the following:

i. The risk for each segment was recalculated to reflect the results from an integrity assessment or to account for completed prevention and mitigation actions.
ii. The risk assessment process was integrated into field reporting, engineering, facility mapping, and other processes as necessary to ensure regular updates.
iii. The risk assessment process was revised if pipeline maintenance or other activities identify inaccuracies in the characterization of the risk for any segments.
iv. The risk model is continually being validated and improved.
v. The operator uses its leak, failure, and incident history to validate the risk model.
vi. The operator captures actions such as installing new pipe, new coating, repairs, etc. into the pipeline system in and outside of HCA's.

C.04.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

C.04.a. Statement of Issue *(Leave blank if no issue was identified.)*

C.04 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Form B	0	4/30/2014	Risk Analysis Review and Validation Documentation
Section 4.1	0	4/30/2014	Objective
Section 4.4	0	4/30/2014	Updates
		2014	Risk Model

C.04 Inspection Notes

C.05 Plastic Transmission Pipeline

If the operator has plastic transmission pipelines, verify that the operator assesses applicable threats to each covered segment of plastic line. [§192.917(d)]

C.05.a. If the operator has plastic transmission lines, verify that the information in ASME B31.8S-2004, Section 4 and ASME B31.8S-2004, Section 5, and any unique threats to the integrity of plastic pipe have been considered when assessing the threats to each covered segment of plastic pipeline. [§192.917(d)]

C.05.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

C.05.a. Statement of Issue *(Leave blank if no issue was identified.)*

C.05 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
Section 1.1	0	4/30/2014	Company Overview

C.05 Inspection Notes
Ameren has no Plastic Transmission Piping in their system

Protocol Area D. DA Plan

- D.01 ECDA Programmatic Requirements
- D.02 ECDA Pre-Assessment
- D.03 ECDA Indirect Examination
- D.04 ECDA Direct Examination
- D.05 ECDA Post-Assessment
- D.06 Dry Gas ICDA Programmatic Requirements
- D.07 Dry Gas ICDA Pre-Assessment, Region Identification, Use of Model & Indirect Inspection
- D.08 Dry Gas ICDA Direct Examination
- D.09 Dry Gas ICDA Post-Assessment
- D.10 Wet Gas ICDA Programmatic Requirements –
- D.11 SCCDA Data Gathering & Evaluation
- D.12 SCCDA Assessment, Examination, & Threat Remediation
- Table of Contents

D.01 ECDA Programmatic Requirements

If the operator elects to use ECDA, verify that the operator develops and implements an ECDA plan in accordance with §192.925.

D.01.a. Verify that the operator developed a documented ECDA plan, and developed procedures to implement the plan. [§192.925(b)]

D.01.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.01.a. Statement of Issue *(Leave blank if no issue was identified.)*

D.01 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
Section 6.8.2	0	4/30/2014	External Corrosion Direct Assessment
	1	2/17/2015	ECDA Procedure

D.01 Inspection Notes

D.02 ECDA Pre-Assessment

Verify that the ECDA Pre-assessment process complies with ASME B31.8S-2004, Section 6.4 and NACE SP0502-2008 to (1) determine if ECDA is feasible for the pipeline to be evaluated, (2) identify ECDA regions and (3) select Indirect Inspection Tools. [§192.925(b) (1)]

D.02.a. Verify that the operator **identifies and collects adequate data** to support ECDA pre-assessment. [NACE SP0502-2008, Section 3.2]

D.02.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.02.a. Statement of Issue *(Leave blank if no issue was identified.)*

D.02.b. Verify that the operator conducts an ECDA **feasibility assessment** by integrating and analyzing the data collected. [NACE SP0502-2008, Section 3.3]

D.02.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.02.b. Statement of Issue *(Leave blank if no issue was identified.)*

D.02.c. Verify that the operator complies with all requirements for appropriate indirect inspection **tools selection**: [NACE SP0502-2008, Section 3.4, NACE SP0502-2008, Table 2, and 192.925(b) (1) (ii)]

i. A minimum of 2 complementary tools must be selected such that the strengths of one tool compensate for the limitations of the other tool. (Note: The operator must consider whether more than two indirect inspection tools are needed to reliably detect corrosion activity.)
ii. Tools are able to assess and reliably detect corrosion activity and/or coating holidays.
iii. Verify that the operator documents the basis for its tool selection.
iv. If the operator utilizes an indirect inspection method not listed in NACE SP0502-2008, Appendix A, verify that the operator justifies and documents the method's applicability, validation basis, equipment used, application procedure, and utilization of data. [§192.925(b)(1)(ii)]

D.02.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*

D.02.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	Not Applicable *(explain in summary)*

D.02.c. Statement of Issue *(Leave blank if no issue was identified.)*

D.02.d. Verify that the operator **identifies ECDA Regions** based on the use of data integration results applied to specified criteria. [NACE SP0502-2008, Section 3.5]

D.02.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.02.d. Statement of Issue *(Leave blank if no issue was identified.)*

D.02.e. Verify that the operator applies more restrictive criteria when conducting ECDA pre-assessment for the first time on a covered segment. [§192.925(b) (1) (i)]

D.02.e. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.02.e. Statement of Issue *(Leave blank if no issue was identified.)*

D.02 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 2.0	1	2/17/2015	Pre-Assessment ECDA Plan
Form A	1	2/17/2015	Data Element Check Sheet
Form B	1	2/17/2015	Sufficient Data Analysis
Form D	1	2/17/2015	Indirect Tool Selection
Section 2.9	1	2/17/2015	Indirect Inspection Tool Selection ECDA Procedure
2.10	1	2/17/2015	Establishment of ECDA Regions
2.4.3	1	2/17/2015	1st Assessment Requirements ECDA Procedure

D.02 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**

D.02 Inspection Notes
Staff reviewed the ECDA inspections completed on the Marion Transmission Lines inspected in 2013. This included the review of pre-assessment reviews. These were for HCA's 1-4 Johnston City to Benton, HCA's 1-3 New Dennison to Marion Gas Plant, HCA 1 Marion Gas Plant to N Carbondale, HCA 1 Carbondale to Harrison, and HCA's 1-3 Marion Gas Plant to Johnston City. Staff reviewed the ECDA inspection for 2010 conducted on the Ruby Line. For 2012 Staff reviewed TR 61 Curtis Road Valve Station to Champaign Propane Plant Site and TR 63 Catlin NGPL Delivery Station to Ross Lane Delivery Station.

D.03 ECDA Indirect Examination

Verify that the ECDA Indirect Examination process complies with ASME B31.8S-2004, Section 6.4 and NACE SP0502-2008, Section 4 to identify and characterize the severity of coating fault indications, other anomalies, and areas at which corrosion activity may have occurred or may be occurring, and establish priorities for excavation. [§192.925(b) (2)]

D.03.a. Verify that the operator **conducts indirect examination measurements** in accordance with NACE SP0502-2008, Section 4.2.

i. Verify that the operator identifies and clearly marks the boundaries of each ECDA region. [NACE SP0502-2008, Section 4.2.1]
ii. Verify that the operator performs indirect inspections over the entire lengths of each ECDA region and that the inspections conform to generally accepted industry practices. [NACE SP0502-2008, Section 4.2.2]
iii. Verify that the operator specifies and follows generally accepted industry practices for conducting ECDA indirect inspections and analyzing results. [NACE SP0502-2008, Section 4.2.2]
iv. Verify that the operator specifies the physical spacing of readings (and the practices for changing the spacing as needed) such that suspected corrosion activity on the segment can be detected and located. [NACE SP0502-2008, Section 4.2.3]

D.03.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.03.a. Statement of Issue *(Leave blank if no issue was identified.)*

D.03.b. Verify that the operator properly aligns indications and compares the data from each indirect examination to characterize both the severity of indications and urgency for direct examination in accordance with NACE SP0502-2008, Section 4.3 and NACE SP0502-2008, Section 5.2.

i. Verify the operator specifies criteria for identifying and documenting those indications that must be considered for excavation and direct examination. Minimum criteria include
   1. Known sensitivities of assessment tools
   2. The procedures for using each tool
   3. The approach to be used for decreasing the physical spacing of indirect assessment tool readings when the presence of a defect is suspected. [§192.925(b)(2)(ii) and NACE SP0502-2008, Section 4.3.1.1]
ii. Verify that the operator specifies and applies criteria for classification of the severity of each indication. [NACE SP0502-2008, Section 4.3.2],

   1. Verify that the operator considers the impact of spatial errors when aligning indirect examination results. [NACE SP0502-2008, Section 4.3.1.2]
   2. Verify that the operator compares the results from the indirect inspections and determines the consistency of indirect inspections results to resolve conflicting or differing indications by the primary and secondary tools. [NACE SP0502-2008, Section 4.3.3]

3. Verify that the operator compares indirect inspection results with pre-assessment results to confirm or reassess ECDA feasibility and ECDA Region definitions. [NACE SP0502-2008, Section 4.3.4]

iii. Verify that the operator specified and applies criteria for defining the urgency level (i.e., immediate, scheduled, or monitored) with which excavation and direct examination of indications will be conducted based on the likelihood of current corrosion activity plus the extent and severity of prior corrosion. [§192.925(b)(2)(iii) and (iv) and NACE SP0502-2008, Section 5.2]

iv. Verify that the operator's ECDA procedures have a process to address pipeline coating indications. The procedures must provide for integrating ECDA data with encroachment and foreign line crossing data to evaluate the covered segment for the threat of third party damage, and to address this threat as required by §192.917(e)(1) (See Protocol C.02 and Protocol C.03). [§192.917(b), §192.917(e) and §192.925(b)]

D.03.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.03.b. Statement of Issue *(Leave blank if no issue was identified.)*

D.03.c. Verify that the operator applies more restrictive criteria when conducting ECDA indirect examinations for the first time on a covered segment. [§192.925(b) (2) (i)]

D.03.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.03.c. Statement of Issue *(Leave blank if no issue was identified.)*

D.03 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 3.0	1	2/17/2015	Indirect Inspection ECDA Procedure
Section 1.0	1	2/17/2015	Introduction ECDA Procedure
Section 3.7	1	2/17/2015	Aligning Indications
Figure 3.1	1	2/17/2015	Categorization Process
Section 3.9	1	2/17/2015	Categorization of Direct Examinations
	1	2/17/2015	ECDA Procedure

D.03 Inspection Notes
Staff reviewed the ECDA inspections completed on the Marion Transmission Lines inspected in 2013. This included the review of pre-assessment reviews. These were for HCA's 1-4 Johnston City to Benton, HCA's 1-3 New Dennison to Marion Gas Plant, HCA 1 Marion Gas Plant to N Carbondale, HCA 1 Carbondale to Harrison, and HCA's 1-3 Marion Gas Plant to Johnston City. Staff reviewed the ECDA inspection for 2010 conducted on the Ruby Line. For 2012 Staff reviewed TR 61 Curtis Road Valve Station to Champaign Propane Plant Site and TR 63 Catlin NGPL Delivery Station to Ross Lane Delivery Station.

D.04 ECDA Direct Examination

Verify that the ECDA Direct Examination process complies with ASME B31.8S-2004, Section 6.4 and NACE SP0502-2008, Section 5 to collect data to assess corrosion activity and remediate defects discovered. [NACE SP0502-2008, Section 5.1.1 and §192.925(b) (3)]

D.04.a. Verify that the operator performs excavations and data collection in accordance with NACE SP0502-2008, Section 5.3, NACE SP0502-2008, Section 5.4, NACE SP0502-2008, Section 5.10 and NACE SP0502-2008, Section 6.4.2.

i. Verify that the operator makes excavations based on priority categories described in NACE SP0502-2008, Section 5.2. [NACE SP0502-2008, Section 5.3.1]
ii. Verify that the operator identifies and implements minimum requirements for data collection, measurements, and recordkeeping, to evaluate coating condition and significant corrosion defects at each excavation location. [NACE SP0502-2008, Section 5.3, NACE SP0502-2008, Section 5.4, NACE SP0502-2008, Appendix A, NACE SP0502-2008, Appendix B, and NACE SP0502-2008, Appendix C]
iii. Verify that the number and location of direct examinations complies with NACE SP0502-2008, Section 5.10 and NACE SP0502-2008, Section 6.4.2

D.04.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.04.a. Statement of Issue *(Leave blank if no issue was identified.)*

D.04.b. Verify that the operator determines the remaining strength at locations where corrosion defects are found. Any corrosion defects discovered during direct examinations must be remediated in accordance with §192.933. [§192.925(b) (3) (ii), §192.933, and NACE SP0502-2008, Section 5.5]

D.04.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.04.b. Statement of Issue *(Leave blank if no issue was identified.)*

D.04.c. Verify that the operator identifies the root cause of all significant corrosion activity, [NACE SP0502-2008, Section 5.6] and identifies and reevaluates all other indications that occur in the pipeline segment where similar root-cause conditions exist. [NACE SP0502-2008, Section 5.9.3]

i. Verify that the operator considers alternative methods of assessing the integrity of the pipeline segment if the operator's root cause analysis uncovers problems for which ECDA is not well suited. [NACE SP0502-2008, Section 5.6.2 and §192.925(b)(3)(ii)(b)]

D.04.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.04.c. Statement of Issue *(Leave blank if no issue was identified.)*

D.04.d. Verify that the operator mitigates or precludes future external corrosion resulting from significant root causes. [NACE SP0502-2008, Section 5.7]

D.04.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.04.d. Statement of Issue *(Leave blank if no issue was identified.)*

D.04.e. Verify that the operator performs an evaluation of the indirect inspection data, the results from the remaining strength evaluation and root cause analysis to evaluate the criteria and assumptions used to: [NACE SP0502-2008, Section 5.7, NACE SP0502-2008, Section 5.8 and §192.933]

i. Categorize the need for repairs
ii. Classify the severity of individual indications

D.04.e. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.04.e. Statement of Issue *(Leave blank if no issue was identified.)*

D.04.f. As appropriate, verify the basis upon which the operator may reclassify and reprioritize indications in accordance with any of the provisions that are specified in NACE SP0502-2008, Section 5.9. [§192.925(b) (3) (iv)]

D.04.f. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.04.f. Statement of Issue *(Leave blank if no issue was identified.)*

D.04.g. Verify the operator establishes and implements criteria and internal notification procedures for any changes in the ECDA Plan, including changes that affect the severity classification, the priority of direct examination, and the time frame for direct examination of indications. [§192.925(b) (3) (iii), §192.909, and §192.911(k)]

D.04.g. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.04.g. Statement of Issue *(Leave blank if no issue was identified.)*

D.04.h. Verify that the operator has a process to consider the use of assessment methods other than ECDA (i.e., ILI or Subpart J pressure test) to assess the impact of defects other than external corrosion (e.g., mechanical damage and stress corrosion cracking) discovered during direct examination. [NACE SP0502-2008, Section 5.1.5 and §192.933]

D.04.h. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.04.h. Statement of Issue *(Leave blank if no issue was identified.)*

D.04.i. Verify that the operator applies more restrictive criteria when conducting ECDA direct examination for the first time on a covered segment. [§192.925(b) (3) (i)]

D.04.i. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.04.i. Statement of Issue *(Leave blank if no issue was identified.)*

D.04 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 4.0	1	2/17/2015	Direct Examination ECDA Procedure
Section 4.1	1	2/17/2015	Number of Excavations ECDA Procedure
4.1.2	1	2/17/2015	Immediate Indications ECDA Procedure
4.1.6	1	2/17/2015	Initial ECDA Projects ECDA Procedure
4.5	1	2/17/2015	Pipe Excavation and Data Collection ECDA Procedure
4.6	1	2/17/2015	Remaining Strength Evaluation for Directly Assessed Piping
4.8.4	1	2/17/2015	ECDA Evaluation ECDA Procedure
4.8.2.5	1	2/17/2015	Mitigative Measures ECDA Procedure
4.9	1	2/17/2015	Reclassification and Reprioritization of Indications ECDA Procedure
4.9.3	1	2/17/2015	Reprioritization Requirements ECDA Procedure
Table 4-1	1	2/17/2015	Excavation Summary Table
Form H		4/10/2013	Direct Examination Summary Form
		4/10/2013	Direct Examination Data Sheet
Section 11		4/30/2014	Management of Change
1.8	1	2/17/2015	Special Requirements ECDA Procedure

D.04 Inspection Notes

D.04 Inspection Notes
GTSE 797 (Peoria 100 Line Now TR 101) reassessment found a dent and external corrosion, calculations were conducted on the corrosion and was repaired with clock spring. The dent was determined to be construction related and was repaired with a weld repair sleeve in 2013. This line has since been replaced in 2014-2015.

D.05 ECDA Post-Assessment

Verify that the ECDA Post assessment process complies with ASME B31.8S-2004, Section 6.4 and NACE SP0502-2008, Section 6, to (1) define reassessment intervals and (2) assess the overall effectiveness of the ECDA process. [§192.925(b) (4) and §192.939]

D.05.a. Verify that the operator determined **reassessment intervals** in accordance with NACE SP0502-2008, Section 6.

i. Verify the adequacy of the operators remaining life calculations. [NACE SP0502-2008, Section 6.2]
ii. Verify that the maximum re-assessment intervals for each region are one half the calculated remaining life. [NACE SP0502-2008, Section 6.1.3 and NACE SP0502-2008, Section 6.3]

D.05.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.05.a. Statement of Issue *(Leave blank if no issue was identified.)*

D.05.b. Verify that the reassessment intervals are adjusted if required in accordance with special provisions in Subpart O, as follows:

i. Verify that reassessment intervals do not exceed the maximum intervals (refer to Protocol F) established in §192.939, as follows:
    1. 10 years for pipeline segments operating at SMYS levels greater than 50%
    2. 15 years for those segments operating between 30 and 50% SMYS
    3. 20 years for those segments operating below 30% SMYS
ii. Verify that the operator specifies and applies criteria for evaluating whether conditions discovered by direct examination of indications in each ECDA region indicate a need for reassessment of the covered segment at an interval less than that specified in §192.939. [§192.925(b)(4)(ii)]

D.05.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.05.b. Statement of Issue *(Leave blank if no issue was identified.)*

D.05.c. Verify that performance measures for ECDA effectiveness have been defined and are monitored. [§192.925, §192.945(b) and NACE SP0502-2008, Section 6]

i. Verify that at least one additional, randomly selected anomaly location has been excavated for process validation. [NACE SP0502-2008, Section 6.4.2]
ii. Verify that additional criteria have been established and monitored to evaluate long-term program effectiveness such as those identified in NACE SP0502-2008, Section 6.4.3. [§192.945(b) and NACE SP0502-2008, Section 6.4.3]

D.05.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.05.c. Statement of Issue *(Leave blank if no issue was identified.)*

D.05.d. Verify the operator's process has incorporated feedback at all appropriate opportunities throughout the ECDA process to demonstrate feedback and continuous improvement. [§192.907(a) and NACE SP0502-2008, Section 6.5]

D.05.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.05.d. Statement of Issue *(Leave blank if no issue was identified.)*

D.05 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
5.2	1	2/17/2015	Remaining Life Determination ECDA Procedure
5.3	1	2/17/2015	Reassessment Intervals ECDA Procedure
Section 6.8	0	4/30/2014	Reassessment
Table 6-1	0	4/30/2014	Maximum Reassessment Interval
4.1.6	1	2/17/2015	Initial ECDA Projects ECDA Procedure
Section 9.1.1	0	4/30/2014	Quality Control Pipeline Integrity Program Manager

D.05 Inspection Notes

D.05 Inspection Notes
GTSE 797 (Peoria 100 Line now designated as TR 101) reassessment found a dent and external corrosion, calculations were conducted on the corrosion and was repaired with clock spring. This line has since been replaced.

D.06 Dry Gas ICDA Programmatic Requirements

If the operator elects to use ICDA, verify that the operator develops and implements an ICDA plan in accordance with §192.927.

D.06.a. Verify that the operator developed a documented ICDA plan [§192.927(c)]

D.06.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.06.a. Statement of Issue *(Leave blank if no issue was identified.)*

D.06.b. Verify that the operator's plan contains provisions for carrying out ICDA on the entire pipeline in which covered segments are present, except that application of the remediation criteria of §192.933 may be limited to covered segments. [§192.927(c) (5) (iii)]

D.06.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.06.b. Statement of Issue *(Leave blank if no issue was identified.)*

D.06.c. Verify that the operator implements the ICDA plan. [§192.927(c)]

D.06.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.06.c. Statement of Issue *(Leave blank if no issue was identified.)*

D.06 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
	0	9/9/2014	ICDA Procedure
1.4	0	9/9/2014	ICDA Procedure
# of ICDA Digs	0	9/9/2014	Baseline Assessment Plan

D.06 Inspection Notes

D.07 Dry Gas ICDA Pre-Assessment, Region Identification, Use of Model & Indirect Inspection

For dry gas systems, verify that the operator gathers, integrates and analyzes data and information to accomplish pre-assessment objectives and identify ICDA Regions. [§192.927(c) (1), §192.927(c) (2), ASME B31.8S-2004, Section 6.4.2, ASME B31.8S-2004, Appendix A2 and ASME B31.8S-2004, Appendix B2]

D.07.a. Verify that the operator's plan defines criteria to be applied in making key decisions (e.g., region identification, feasibility determinations) in implementing the pre-assessment stage of the ICDA process. [§192.927(c) (5) (i)]

D.07.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.07.a. Statement of Issue *(Leave blank if no issue was identified.)*

D.07.b. Verify that the operator collects, as a minimum, the following **data and information**:

i. All data elements listed in ASME B31.8S-2004, Appendix A2 [§192.927(c)(1)(i)]
ii. Information needed to support use of a model to identify areas where internal corrosion is most likely, including locations of all 1) gas input and withdrawal points, 2) low points such as sags, drips, inclines, valves, manifolds, dead-legs, and traps, 3) elevation profile in sufficient detail for angles of inclination to be calculated, and 4) the range of expected gas velocities within the pipeline; [§192.927(c)(1)(ii)]
iii. Operating experience data that would indicate historic upsets in gas conditions, locations where these upsets have occurred, and potential damage resulting from these upset conditions [§192.927(c)(1)(iii)]
iv. Information where cleaning pigs may not have been used or where cleaning pigs may deposit electrolytes. [§192.927(c)(1)(iv)]

D.07.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.07.b. Statement of Issue *(Leave blank if no issue was identified.)*

D.07.c. Verify that the operator integrates the data collected and uses the integrated data analysis to evaluate and document the following:

i. Feasibility of performing ICDA on its pipe segments [§192.927(c)(1)]
ii. Identification of all ICDA Regions and the location of each region. [§192.927(c)(1) & (2)]
iii. Support use of a model to identify the locations along the pipe segment where electrolyte may accumulate [§192.927(c)(1)]
iv. Identify areas within the covered segment where liquids may be potentially entrained. [§192.927(c)(1)]

D.07.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.07.c. Statement of Issue *(Leave blank if no issue was identified.)*

D.07.d. Verify the operator's plan uses the model in GRI 02-0057 ICDA of Gas Transmission Pipelines-Methodology (or equivalent acceptable model) to define critical pipe angle of inclination above which water film cannot be transported by the gas, and that the model considers, as a minimum: [§192.927©(2)]

i. Changes in pipe diameter, [§192.927©(2)]
ii. Locations where gas enters a line, [§192.927©(2)]
iii. Locations down stream of gas draw-offs. [§192.927©(2)]
iv. Other conditions that may result in changes in gas velocity. [§192.927©(2) and GRI 02-0057]

D.07.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.07.d. Statement of Issue *(Leave blank if no issue was identified.)*

D.07.e. Verify that the operator's plan contains provisions for applying more restrictive criteria for pre-assessment and region identification when conducting ICDA for the first time on a covered segment [§192.927©(5)(ii)]

D.07.e. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*

D.07.e. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	Not Applicable *(explain in summary)*

D.07.e. Statement of Issue *(Leave blank if no issue was identified.)*

D.07 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
1.1	0	9/9/2014	Pre-assessment ICDA Procedure
1.4 – 1.5		9/9/2014	Pre-assessment ICDA Procedure
Appendix C	0	4/30/2014	Data Elements Matrix

D.07 Inspection Notes

D.08 Dry Gas ICDA Direct Examination

For dry gas systems, verify that the operator (1) identifies locations where internal corrosion is most likely in each ICDA region and (2) performs direct examinations of those locations. [§192.927(b), 192.927(c) (3), ASME B31.8S-2004, Section 6.4 and ASME B31.8S-2004, Appendix B2]

D.08.a. Verify that the operator's plan defines criteria to be applied in making key decisions (e.g., identifying locations most likely to have internal corrosion, selection of tools) in implementing the direct assessment stage of the ICDA process. [§192.927(c) (5) (i)]

D.08.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.08.a. Statement of Issue *(Leave blank if no issue was identified.)*

D.08.b. Verify the operator has identified locations where internal corrosion is most likely to exist in each ICDA region and where electrolyte accumulation is predicted. [§192.927(c) (3), ASME B31.8S-2004, Section 6.4.2 and ASME B31.8S-2004, Appendix B2.3]

D.08.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.08.b. Statement of Issue *(Leave blank if no issue was identified.)*

D.08.c. Verify the operator requires a direct examination for internal corrosion using ultrasonic thickness measurements, radiography, or other generally accepted measurement technique of those covered segment locations where internal corrosion is most likely to exist, and includes as a minimum, the following: [§192.927(c)(3), ASME B31.8S-2004, Section 6.4.2, ASME B31.8S-2004, Appendix B2.3 and ASME B31.8S-2004, Appendix B2.4]

i. A minimum of two (2) locations within each ICDA region within a covered segment,
ii. At least one location must be the low point (e.g., sags, drips, valves, manifolds, deadlegs, traps) nearest the beginning of the ICDA region and
iii. The second location must be further downstream within a covered segment near the end of the ICDA Region (The end of the ICDA region is the farthest downstream location where the ICDA model predicts electrolytes could accumulate based on the critical angle of inclination above which water film cannot be transported by the gas). [§192.927(c)(2) and ASME B31.8S-2004, Appendix B2.3]

D.08.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.08.c. Statement of Issue *(Leave blank if no issue was identified.)*

D.08.d. If internal corrosion exists at any location directly examined, verify that the operator: [192.927©(3)]

i. Evaluates the severity of the defect and remediates the defect per §192.933 (see Protocol E) [§192.927©(3)(i)], and
ii. Either performs additional excavations or performs additional assessment using an allowed alternative assessment method [§192.927©(3)(ii)], and
iii. Evaluates the potential for internal corrosion in all pipeline segments (both covered and non-covered) in the operator's pipeline system with similar characteristics to the ICDA region containing the covered segment in which the corrosion was found and remediates the conditions per §192.933. [§192.927©(3)(iii)]

D.08.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.08.d. Statement of Issue *(Leave blank if no issue was identified.)*

D.08.e. Verify that the operator's plan contains provisions for applying more restrictive criteria for the direct examination when conducting ICDA for the first time on a covered segment [§192.927©(5)(ii)]

D.08.e. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.08.e. Statement of Issue *(Leave blank if no issue was identified.)*

D.08 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
1.11		9/9/2014	Flow Modeling Calculations ICDA Procedure
1.12		9/9/2014	Inclination Profile Calculation ICDA Procedure
1.13/14		9/9/2014	Site Selection ICDA Procedure
1.9		9/9/2014	Initial ICDA Applications ICDA Procedures
2.1.2		9/9/2014	Detailed Examinations ICDA Procedure
2.2.5		9/9/2014	Wall thickness measurements ICDA Procedure

D.08 Inspection Notes
No internal Corrosion has been identified by Ameren during ICDA inspections performed during inspections performed in 2004-2014.

D.09 Dry Gas ICDA Post-Assessment

For dry gas systems, verify that the operator performs post-assessment evaluation of ICDA effectiveness and continued monitoring of covered segments where internal corrosion has been identified. [§192.927(c)(4)]

D.09.a. Verify that the operator's plan defines criteria to be applied in making key decisions (e.g., reassessment interval determination, techniques for monitoring internal corrosion) in implementing the post-assessment stage of the ICDA process. [§192.927(c) (5) (i)]

D.09.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.09a Statement of Issue *(Leave blank if no issue was identified.)*

D.09.b. Verify the operator has a process for **evaluating the effectiveness** of ICDA as an assessment method and **determining reassessment intervals**. [§192.927(c) (4) (i) and ASME B31.8S-2004, Appendix B2.4]

i. Verify that if corrosion is found in areas where the pipeline inclination is greater than the estimated critical inclination, that the operator re-evaluates the critical inclination angle and additional new areas are selected for direct examination. [ASME B31.8S-2004, Appendix B2.4]
ii. Verify the operator's process determines whether a segment must be reassessed at intervals more frequently than those specified in §192.939 using the largest defect most likely to remain in the covered segment as the largest defect discovered in the ICDA segment and estimating the reassessment interval as half the time required for the largest defect to grow to critical size. Verify that this evaluation is to be carried out within one year of completion of the assessment. [§192.927(c)(4)(i) and §192.939(a)(3)]
iii. Verify the operator's reassessment intervals comply with the following maximum allowed intervals in accordance with 192.939 (see Protocol F). [§192.939(b)]
    1. 10 years for segments operating at SMYS levels greater than 50%
    2. 15 years for segments operating between 30 and 50% SMYS
    3. 20 years for segments operating below 30% SMYS

D.09.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.09.b. Statement of Issue *(Leave blank if no issue was identified.)*

D.09.c. Verify the operator continually monitors each covered segment where internal corrosion has been identified using techniques such as coupons, UT sensors or electronic probes, periodically drawing off liquids at low points and chemically analyzing them for corrosion products. [§192.927(c) (4) (ii)]

i. Verify the operator has a process to determine the frequency for monitoring and liquid analysis based on all integrity assessments results conducted in accordance with 192 Subpart O and risk factors specific to the covered segment. [§192.927(c)(4)(ii) and ASME B31.8S-2004, Appendix A2.2]
ii. Verify the operator's process requires that if any evidence of corrosion products is found in the covered segment, prompt action must be taken including, as a minimum: [§192.927(c)(4)(ii)]
    1. Remediate the conditions the operator finds in accordance with §192.933, and
    2. Implement one of the two following required actions: (1) Conduct excavations of covered segments at locations downstream from where the electrolyte might have entered the pipe, or (2) assess the covered segment using another integrity assessment method allowed by Subpart O.

D.09.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.09.c. Statement of Issue *(Leave blank if no issue was identified.)*

D.09.d. Verify that the operator's plan contains provisions for applying more restrictive criteria for the post-assessment when conducting ICDA for the first time on a covered segment [§192.927©(5)(ii)]

D.09.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.09.d. Statement of Issue *(Leave blank if no issue was identified.)*

D.09 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
3.0		9/9/2014	Post Assessment ICDA Procedure
5.6		9/9/2014	Data Evaluation for Tracking Effectiveness ICDA Procedure
4.0		9/9/2014	Re-assessment Intervals ICDA Procedure
Table 3		9/9/2014	Re-assessment Intervals ICDA Procedures
4.1.2		9/9/2014	Installation of Internal Corrosion Monitoring Devices ICDA Procedure
1.9		9/9/2014	Initial ICDA Applications ICDA Procedure

D.09 Inspection Notes
No internal corrosion has been found during ICDA assessments conducted as of the end of 2014.

D.10 Wet Gas ICDA Programmatic Requirements –

If the operator elects to use ICDA to assess a covered segment operating with electrolyte present in the gas stream (wet gas), verify that the operator develops and implements an ICDA plan in accordance with §192.927 which addresses the following. [§192.927(b)]

D.10.a. Verify that the operator developed a documented ICDA plan which demonstrates how the operator will conduct ICDA on the entire pipeline in which covered segments are present to effectively address internal corrosion. [§192.927(c)]

D.10.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

D.10.a. Statement of Issue *(Leave blank if no issue was identified.)*

D.10.b. Verify the operator has provided notification to PHMSA, and applicable state or local safety authorities, of an ICDA wet gas "other technology" application in accordance with §192.921 (a) (4) or §192.937 (c) (4). [§192.927(b)]

D.10.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

D.10.b. Statement of Issue *(Leave blank if no issue was identified.)*

D.10 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
1.4.1		9/9/2014	ICDA Procedure

D.10 Inspection Notes
Ameren does not transport wet gas.

D.11 SCCDA Data Gathering & Evaluation

If the operator elects to use SCCDA, verify that the operator's SCCDA evaluation process complies with ASME B31.8S-2004, Appendix A3 in order to identify whether conditions for SCC of gas line pipe are present and to prioritize the covered segments for assessment. [§192.929(b) (1)]

D.11.a. Verify that the operator has a process to **gather, integrate, and evaluate data** for all covered segments to identify whether the conditions for SCC are present and to prioritize the covered segments for assessment. [§192.929(b) (1)]

i. Verify that the operator's process gathers and evaluates data related to SCC at all sites it excavates during the conduct of its pipeline operations (not just covered segments) where the criteria indicate the potential for SCC. [§192.929(b)(1) and ASME B31.8S-2004, Appendix A3.3]
ii. Verify that the data includes, as a minimum, the data specified in ASME B31.8S-2004, Appendix A3.
iii. Verify that the operator addresses missing data by either using conservative assumptions or assigning a higher priority to the segments affected by the missing data, as required by ASME B31.8S-2004, Appendix A3.2.

D.11.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

D.11.a. Statement of Issue *(Leave blank if no issue was identified.)*

D.11 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
Section 5.3.3.3	0	4/30/2014	Stress Corrosion Cracking Direct Assessment

D.11 Inspection Notes
There have been no indications of SCC observed in the Ameren system.

D.12 SCCDA Assessment, Examination, & Threat Remediation

Verify that covered segments (for which conditions for SCC are identified) are assessed, examined, and the threat remediated. [§192.929(b) (2)]

D.12.a. Verify that, if conditions for SCC are present, that the operator **conducts an assessment** using one of the methods specified in ASME B31.8S-2004, Appendix A3.

D.12.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

D.12.a. Statement of Issue *(Leave blank if no issue was identified.)*

D.12.b. Verify that the operator's plan specifies an acceptable **inspection, examination, and evaluation plan** using either the Bell Hole Examination and Evaluation Method (that complies with all requirements of ASME B31.8S-2004, Appendix A3.4 (a)) or Hydrostatic Testing (that complies with all requirements of ASME B31.8S-2004, Appendix A3.4 (b)).

i. Verify, that the operator's plan requires that for pipelines which have experienced an in-service leak or rupture attributable to SCC, that the particular segment(s) be subjected to a hydrostatic pressure test (that complies with ASME B31.8S-2004, Appendix A3.4 (b)) within 12 months of the failure, using a documented hydrostatic retest program developed specifically for the affected segment(s), as required by ASME B31.8S-2004, Appendix A3.4.

D.12.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

D.12.b. Statement of Issue *(Leave blank if no issue was identified.)*

D.12.c. Verify that assessment results are used to determine **reassessment intervals** in accordance with §192.939(a) (3); (see Protocol F). [§192.939(a) (3)]

D.12.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

D.12.c. Statement of Issue *(Leave blank if no issue was identified.)*

D.12 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
Section 5.3.3.3	0	4/30/2014	Stress Corrosion Cracking Direct Assessment
3.1.3		12/2014	Stress Corrosion Cracking ICDA Procedure

D.12 Inspection Notes
SCC has not been identified as a threat due to the pipelines not meeting all of the 5 parameters as defined in the plan and in ASME B31 8S. Ameren currently has procedures in place for establishing and identifying if SCC is applicable to new pipelines or HCA's.

Protocol Area E. Remediation

- E.01 Program Requirements for Discovery, Evaluation and Remediation Scheduling
- E.02 Program Requirements for Identifying Anomalies
- E.03 Operator Response when Timelines for Evaluation and Remediation Cannot be Met
- E.04 Record Review for Discovery, Repair and Remediation Activities
- Table of Contents

E.01 Program Requirements for Discovery, Evaluation and Remediation Scheduling

Verify that provisions exist to discover and evaluate all anomalous conditions resulting from integrity assessment and remediate those which could reduce a pipeline's integrity. [§192.933(a)]

E.01.a. Verify a definition of discovery is provided. [§192.933(b)]

E.01.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

E.01.a. Statement of Issue *(Leave blank if no issue was identified.)*

E.01.b. Verify a requirement exists to document the actual date of discovery. [§192.933(b)]

E.01.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

E.01.b. Statement of Issue *(Leave blank if no issue was identified.)*

E.01.c. Verify a requirement exists to develop a schedule that prioritizes evaluation and remediation of anomalous conditions. [§192.933(c)]

E.01.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

E.01.c. Statement of Issue *(Leave blank if no issue was identified.)*

E.01.d. If the operator desires to deviate from the timelines for remediation as provided in §192.933 by demonstrating exceptional performance, verify that the requirements of §192.913(b) have been met and the safety of the covered segment is not jeopardized. [§192.913(c) (2)](See Protocol F.05)

E.01.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

E.01.d. Statement of Issue *(Leave blank if no issue was identified.)*

E.01 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
Section 7.4	0	4/30/2014	Discovery of Conditions
Section 7.3	0	4/30/2014	Anomaly Classification
Section 7.3.1	0	4/30/2014	Response Time Requirements

E.01 Inspection Notes
E.01.d Ameren is not utilizing Exceptional Performance. Remediation - GTSE 797 (Peoria 100 Line Now TR 101) reassessment found a dent and external corrosion, calculations were conducted on the corrosion and was repaired with clock spring and the dent was repaired with a weld sleeve.

E.02 Program Requirements for Identifying Anomalies

Inspect the operator's program to verify that provisions exist for the classification and remediation of anomalies that meet the criteria for: (1) Immediate repair conditions; (2) One-year conditions; (3) Monitored conditions; or (4) Other conditions as specified in ASME B31.8S-2004, Section 7 . [§192.933(c) and §192.933(d)]

E.02.a. Verify the program requires a temporary pressure reduction or the pipeline to be shut down upon discovery of all immediate repair conditions. [§192.933(d) (1)]

E.02.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

E.02.a. Statement of Issue *(Leave blank if no issue was identified.)*

E.02.b. Verify provisions exist to classify and categorize anomalies meeting the following criteria:

i. Immediate Repair Conditions (Conditions requiring immediate remediation actions)
   1. Calculated remaining strength indicates a failure pressure that is less than or equal to 1.1 times MAOP; [§192.933(d)(1)]
   2. A dent having any indication of metal loss, cracking, or a stress riser; [§192.933(d)(1)]
   3. An indication or anomaly that is judged by the person designated by the operator to evaluate assessment results as requiring immediate action. [§192.933(d)(1)]
   4. Metal-loss indications affecting a detected longitudinal seam if that seam was formed by direct current or low-frequency electric resistance welding or by electric flash welding; [ASME B31.8S-2004, Section 7.2.1]
   5. All indications of stress corrosion cracks; [ASME B31.8S-2004, Section 7.2.2]; or
   6. Any indications that might be expected to cause immediate or near-term leaks or ruptures based on their known or perceived effects on the strength of the pipeline. [ASME B31.8S-2004, Section 7.2.3]

ii. One-Year Conditions (Conditions requiring remediation within one year of discovery).

   1. A smooth dent located between the 8 and 4 o'clock positions (upper 2/3 of the pipe) with a depth greater than 6% of the pipeline diameter; [§192.933(d)(2)] or,
   2. A dent with a depth greater than 2% of the pipeline's diameter, that affects pipe curvature at a girth weld or at a longitudinal seam weld. [§192.933(d)(2)]

iii. Monitored Conditions (Conditions which must be monitored until the next assessment).

   1. A dent with a depth greater than 6% of the pipeline diameter located between the 4 and 8 o'clock position (lower 1/3) of the pipe; [§192.933(d)(3)]
   2. A dent located between the 8 and 4 o'clock position (upper 2/3) of the pipe with a depth greater than 6% of the pipeline diameter, and engineering analysis to demonstrate critical strain levels are not exceeded; [§192.933(d)(3)]or,
   3. A dent with a depth greater than 2% of the pipeline diameter, that affects pipe curvature at a girth weld or a longitudinal seam weld, and engineering analysis of the dent and girth or seam weld to demonstrate critical strain levels are not exceeded. [§192.933(d)(3)]

E.02.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

E.02.b. Statement of Issue *(Leave blank if no issue was identified.)*

E.02.c. Verify provisions exist to record and monitor anomalies that are classified as "monitored conditions" during subsequent risk or integrity assessments for any change in their status that would require remediation. [§192.933(d) (3)]

E.02.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

E.02.c. Statement of Issue *(Leave blank if no issue was identified.)*

E.02.d. Verify that program requirements exist to meet the provisions of ASME B31.8S-2004, Section 7, Figure 4 for scheduling and remediating any other threat conditions that do not meet the classification criteria of Protocol E.02.b, above. [§192.933(c)]

E.02.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

E.02.d. Statement of Issue *(Leave blank if no issue was identified.)*

E.02 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 7.3.2	0	4/30/2014	Immediate Repair Conditions
Section 7.3.3	0	4/30/2014	Scheduled Conditions
Section 7.3.4	0	4/30/2014	Monitored Conditions
Section 7.3.5	0	4/30/2014	Other Conditions Requiring Repairs

E.02 Inspection Notes
GTSE 797 (Peoria 100 Line Now TR 101) reassessment found a dent and external corrosion, calculations were conducted on the corrosion and was repaired with clock spring. The pressure was lowered until the repairs could be made. The line has since been replaced.

E.03 Operator Response when Timelines for Evaluation and Remediation Cannot be Met

Verify that provisions exist to respond appropriately when the operator is unable to meet time limits for evaluation and remediation. [§192.933(a)].

E.03.a. Verify a requirement exists to take a temporary operating pressure reduction or other action that ensures safety of the covered segment in the event the operator is unable to respond within the timeframes required by §192.933. [§192.933(a)]

i. Verify a requirement exists to determine the appropriate pressure reduction using ASME B31G, or "RSTRENG", or reduce pressure to a level not exceeding 80% of the level at the time the condition was discovered. [§192.933(a)]
ii. Verify a requirement exists that when a pressure reduction is to exceed 365 days, a documented technical justification is developed that explains the reason for remediation delay and demonstrates continuation of the reduction will not jeopardize pipeline integrity. [§192.933(a)]

E.03.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

E.03.a. Statement of Issue *(Leave blank if no issue was identified.)*

E.03.b. Verify a requirement exists to document the justification, when an evaluation and remediation activity cannot be completed within established timeframe requirements, that includes the reasons why the schedule cannot be met and the basis for why the changed schedule will not jeopardize public safety. [§192.933(a) and §192.933(c)]

E.03.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

E.03.b. Statement of Issue *(Leave blank if no issue was identified.)*

E.03.c. Verify a requirement exists to notify PHMSA in accordance with §192.949 and the State pipeline safety authority, if applicable, when:

I. the operator cannot meet the evaluation and remediation schedule and cannot provide a temporary reduction in operating pressure or other action [§192.933(a) (1) and §192.933(c)], and

ii. A pressure reduction exceeds 365 days. [§192.933(a) (2)]

The notification is to include the documented justification under protocols E.03.a and E.03.b.

E.03.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

E.03.c. Statement of Issue *(Leave blank if no issue was identified.)*

E.03 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 7.3.7	0	4/30/2014	Exceedance of Specified Time Limits
Section 7.3.7.1	0	4/30/2014	Pressure Reduction
Section 7.3.8	0	4/30/2014	Notification of Management
Section 7.3.9	0	4/30/2014	Notification of Regulatory Agencies

E.03 Inspection Notes
Staff established there no timelines that could not be met.

E.04 Record Review for Discovery, Repair and Remediation Activities

Inspect operator repair and remediation records to verify that remediation activities have been conducted in accordance with program requirements. [§192.933]

E.04.a. Verify a prioritized schedule exists for evaluation and remediation of anomalies identified during assessment or reassessment activities. The prioritized schedule must document which of the criteria specified in §192.933(d) and/or ASME B31.8S-2004 were used as the basis for the schedule. [§192.933(c) and §192.933(d)]

E.04.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

E.04.a. Statement of Issue *(Leave blank if no issue was identified.)*

E.04.b. Verify anomaly discovery was documented within 180 days of completion of the assessment or reassessment, or else that compliance with the 180-day period was impracticable. [§192.933(b)]

E.04.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

E.04.b. Statement of Issue *(Leave blank if no issue was identified.)*

E.04.c. Verify any remediation activities taken are sufficient to ensure that the anomaly is unlikely to threaten the integrity of the pipeline before the next scheduled reassessment. [§192.933(a)]

E.04.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

E.04.c. Statement of Issue *(Leave blank if no issue was identified.)*

E.04.d. Verify, for any immediate repair anomalies, a temporary pressure reduction is taken by the operator on the pipeline and the reduced pressure is determined in accordance with ASME B31G, or "RSTRENG", or that the reduced pressure does not exceed 80% of the level at the time the condition was discovered. [§192.933(a)]

E.04.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

E.04.d. Statement of Issue *(Leave blank if no issue was identified.)*

E.04.e. Verify immediate repair conditions have been evaluated and remediated on a schedule established in accordance with the provisions of ASME B31.8S-2004, Section 7. [§192.933(d)(1)]

E.04.e. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

E.04.e. Statement of Issue *(Leave blank if no issue was identified.)*

E.04.f. Verify any pressure reduction taken has not exceeded 365 days from the date of discovery unless:

i. a technical justification has been developed that explains the reason for remediation delay and demonstrates that continuation of the pressure reduction will not jeopardize the integrity of the pipeline [§192.933(a)], and

ii. PHMSA and the State pipeline safety authority, if applicable, have been notified in accordance with §192.949. [§192.933(a)]

E.04.f. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

E.04.f. Statement of Issue *(Leave blank if no issue was identified.)*

E.04.g. Verify that remediation activities were completed in accordance with scheduled timeframes. [§192.933I and §192.933(d)]

E.04.g. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

E.04.g. Statement of Issue *(Leave blank if no issue was identified.)*

E.04.h. Verify that anomalies meeting any of the criteria of §192.933(d)(3) as "monitored conditions" are evaluated during subsequent risk and integrity assessments to identify any change that may require remediation and that any required remediation is scheduled and implemented in accordance with the applicable requirements of §192.933 and ASME B31.8S-2004. [§192.933(d)]

E.04.h. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

E.04.h. Statement of Issue *(Leave blank if no issue was identified.)*

E.04.i. Verify any remediation activities that have not been completed in accordance with §192.933 timeframes, and the operator has not provided safety through a temporary pressure reduction:

i. have technical justifications that include the reasons why the schedule cannot be met and the basis for why the changed schedule will not jeopardize public safety, and

ii have been reported to PHMSA and appropriate State authorities in accordance with the requirements of §192.933I of the rule. [§192.933I]

E.04.i. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

E.04.i. Statement of Issue *(Leave blank if no issue was identified.)*

E.04 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
Section 7.3.1	0	4/30/2014	Response Time Requirement
Section 7.4.2	0	4/30/2014	Time Requirements
Section 7.5	0	4/30/2014	Repair/Remediation Methods

E.04 Inspection Notes
There were immediate conditions where as a safety precaution Ameren took a pressure reduction. The pressure reductions taken did not exceed 365 days.

Protocol Area F. Continual Evaluation and Assessment

- F.01 Periodic Evaluations
- F.02 Reassessment Methods
- F.03 Low Stress Reassessment
- F.04 Reassessment Intervals
- F.05 Deviation from Reassessment Requirements
- F.06 Waiver from Reassessment Interval
- Table of Contents

F.01 Periodic Evaluations

Verify the operator conducts a periodic evaluation of pipeline integrity based on data integration and risk assessment to identify the threats specific to each covered segment and the risk represented by these threats. [§192.917 and §192.937(b)]

F.01.a. Verify that periodic evaluations are conducted based on a data integration and risk assessment of the entire pipeline as specified in §192.917. The evaluation must consider the following: [§192.937(b) and 192.917]

i. Past and present assessment results
ii. Data integration and risk assessment information [§192.917]
iii. Decisions about remediation [§192.933]
iv. Additional preventive and mitigative actions [§192.935]

F.01.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

F.01.a. Statement of Issue *(Leave blank if no issue was identified.)*

F.01.b. Verify that periodic evaluations of data are thorough, complete, and adequate for establishing reassessment methods and schedules. [§192.937(b)]

F.01.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

F.01.b. Statement of Issue *(Leave blank if no issue was identified.)*

F.01.c. Verify that an appropriate interval is established for performing required periodic evaluations of threats and pipeline conditions following completion of the baseline assessment. [§192.937(b)]

F.01.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

F.01.c. Statement of Issue *(Leave blank if no issue was identified.)*

F.01.d. Verify that the operator periodically reviews the evaluation results to determine if the new information warrants changes to reassessment intervals and/or methods, and makes changes as appropriate. [§192.937]

F.01.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

F.01.d. Statement of Issue *(Leave blank if no issue was identified.)*

F.01 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 11.3.1-11.3.4	0	4/30/2014	Risk Analysis Review and Changes
			Risk Model
		2014	Baseline Assessment Plan

F.01 Inspection Notes

F.02 Reassessment Methods

Verify that the approach for establishing the reassessment method is consistent with the requirements in §192.937(c). [§192.937(c) and §192.941]

F.02.a. Verify that one or more of the following assessment methods (depending on the applicable threats) are specified:

i. An internal inspection tool(s) capable of detecting corrosion and any other threats that the operator intends to address using this tool(s). The process must follow ASME B31.8S-2004, Section 6.2, in selecting the appropriate inspection tool. [§192.937(c)(1)]
ii. A pressure test conducted in accordance with Subpart J. An operator must use the test pressures specified in ASME B31.8S-2004, Section 5, Table 3, to justify an extended reassessment interval in accordance with §192.939. Pressure test is appropriate for threats as defined in ASME B31.8S-2004, Section 6.3. [§192.937(c)(2)]
iii. Direct assessment – refer to Protocol D. [§192.937(c)(3)]
iv. Other technology that an operator demonstrates can provide an equivalent understanding of the condition of the pipe. If other technology is the method selected, the process should require that the operator notify PHMSA at least 180 days before conducting the assessment, in accordance with §192.949. Also, verify that notification to a State or local pipeline safety authority is required when either a covered segment is located in a State where PHMSA has an interstate agent agreement, or an intrastate covered segment is regulated by that State. [§192.937(c)(4)]
v. Confirmatory direct assessment when used on a covered segment that is scheduled for a reassessment period longer than seven years. Refer to Protocol G. [§192.937(c)(5)]
vi. If the operator is using "low stress reassessment" method, evaluate the process using Protocol F.03.

F.02.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

F.02.a. Statement of Issue *(Leave blank if no issue was identified.)*

F.02.b. Review the methods selected for reassessments and verify that they are appropriate for the identified threats.

F.02.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

F.02.b. Statement of Issue *(Leave blank if no issue was identified.)*

F.02 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
Section 6.8	0	4/30/2014	Reassessment
Table 6-1	0	4/30/2014	Maximum Reassessment Interval
		2014	Baseline Plan

F.02 Inspection Notes
Reassessments started in 2009. Ameren has shortened some reassessment intervals to spread the assessments out to prevent high volume years.

F.03 Low Stress Reassessment

For pipelines operating at < 30% SMYS, the operator may choose to use a "low stress reassessment" method to address threats of external and internal corrosion. If this method is used, verify that the operator addresses the following requirements [§192.941]:

F.03.a. Verify that the operator completes a baseline assessment on the covered segment prior to implementing the "low stress reassessment" method. [§192.941(a)]

F.03.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

F.03.a. Statement of Issue *(Leave blank if no issue was identified.)*

F.03.b. If used to address external corrosion, verify that the operator has incorporated the following:

i. If the pipe is cathodically protected, electrical surveys (i.e., indirect examination tool/method) must be performed at least every 7 years. The operator must use the results of each survey as part of an overall evaluation of the cathodic protection and corrosion threat for covered segments. This evaluation must consider, at a minimum, the leak repair and inspection records, corrosion monitoring records, exposed pipe records, and the pipeline environment. [§192.941(b)(1)]

ii. If the pipe is unprotected or cathodically protected where electrical surveys are impractical, the operator must require (1) the conduct of leakage surveys as required by §192.706, at 4-month intervals; and (2) the identification and remediation of areas of active corrosion every 18 months by evaluating leak repair and inspection records, corrosion monitoring records, exposed pipe records, and the pipeline environment. [§192.941(b)(1)]

F.03.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

F.03.b. Statement of Issue *(Leave blank if no issue was identified.)*

F.03.c. If used to address internal corrosion, verify that the operator has incorporated all of the following:

i. Gas analysis for corrosive agents must be performed at least once each calendar year. [§192.941(c)(1)]
ii. Periodic testing of fluids removed from the segment must be conducted. At least once each calendar year the operator must test the fluids removed from each storage field that may affect a covered segment. [§192.941(c)(2)]
iii. At least every seven (7) years, the operator must integrate data from the analysis and testing required by c.i and c.ii above with applicable internal corrosion leak records, incident reports, and test records, and define and implement appropriate remediation actions. [§192.941(c)(3)]

F.03.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

F.03.c. Statement of Issue *(Leave blank if no issue was identified.)*

F.03 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 6.8.5	0	4/30/2014	Low Stress Reassessment

F.03 Inspection Notes
F.03 - Low Stress reassessment is not being utilized by Ameren since inception of the TIMP plan. There is a procedure in the plan if they decide to utilize in the future.

F.04 Reassessment Intervals

Verify that the requirements for establishing the reassessment intervals are consistent with section §192.939 and ASME B31.8S-2004. [§192.937(a), §192.939(a), §192.939(b), §192.913(c), and ASME B31.8S-2004, Section 5, Table 3]

F.04.a. Verify that the operator reassesses covered segments on which a baseline assessment was conducted during the baseline period specified in subpart 192.921(d) by no later than seven years after the baseline assessment of that covered segment unless the reassessment evaluation (refer to Protocol F.01) indicates an earlier reassessment. [§192.937(a)]

F.04.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

F.04.a. Statement of Issue *(Leave blank if no issue was identified.)*

F.04.b. For pipelines operating at or above 30% SMYS, verify that the operator meets the following requirements:

i. If the operator establishes a reassessment interval greater than seven (7) years, a confirmatory direct assessment (refer to Protocol G) must be performed at intervals not to exceed seven (7) years followed by a reassessment at the interval established by the operator (refer below). [§192.939(a)]
ii. Unless a deviation is permitted under §192.913(c), the maximum reassessment interval shall not exceed the values listed in the §192.939(b) table. [§192.937(a)]
iii. If the reassessment method is a pressure test, ILI, or other equivalent technology, the interval must be based on either: (1) the identified threat(s) for the covered segment (see §192.917) and on the analyses of the results from the last integrity assessment, and a review of data integration and risk assessment; or (2) using the intervals specified for different stress levels of pipeline listed in ASME B31.8S-2004, Section 5, Table 3. An operator must use the test pressures specified in ASME B31.8S-2004, Section 5, Table 3, to justify an extended reassessment interval in accordance with §192.939. [§192.939(a)(1)]
iv. If the reassessment method is external corrosion direct assessment, internal corrosion direct assessment, or SCC direct assessment refer to Protocol D for evaluating the operator's interval determination.

F.04.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

F.04.b. Statement of Issue *(Leave blank if no issue was identified.)*

F.04.c. For pipelines operating < 30% SMYS, verify that the operator selects one of the following reassessment approaches:

i. Reassessment by pressure test, internal inspection or other equivalent technology following the requirements in §192.939(a) (1) except that the stress level referenced in §192.939(a) (1) (ii) would be adjusted to reflect the lower operating stress level. However, if an established interval is more than seven (7) years, the operator must conduct at seven (7) year intervals either a confirmatory direct assessment in accordance with §192.931, or a low stress reassessment in accordance with §192.941. An operator must use the test pressures specified in ASME B31.8S-2004, Section 5, Table 3, to justify an extended reassessment interval in accordance with §192.939.[§192.939(b)(1)]

ii. Reassessment by external corrosion direct assessment, internal corrosion direct assessment, or SCC direct assessment. Refer to Protocol D for evaluating the operator's interval determination. [§192.939(b)(2), §192.939(b)(3) and §192.939(b)(4)]

iii. Reassessment by confirmatory direct assessment at seven year intervals in accordance with subpart 192.931, with reassessment by one of the methods listed in §192.939(b)(1) – §192.939(b)(3) by year 20 of the interval. [§192.939(b)(4)]

iv. Reassessment by the "low stress method" at 7-year intervals in accordance with §192.941 with reassessment by one of the methods listed in §192.939(b) (1) through §192.939(b) (3) by year 20 of the interval. [§192.939(b)(5)]

F.04.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

F.04.c. Statement of Issue *(Leave blank if no issue was identified.)*

F.04.d. Verify that a covered segment on which a prior assessment was credited as a baseline assessment under subpart §192.921(e) is required to be reassessed by no later than December 17, 2009. [§192.937(a)]

F.04.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

F.04.d. Statement of Issue *(Leave blank if no issue was identified.)*

F.04.e. Verify that reassessment intervals are appropriate and that adequate documentation and technical bases support the intervals selected.

F.04.e. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

F.04.e. Statement of Issue *(Leave blank if no issue was identified.)*

F.04 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 6.8	0	4/30/2014	Reassessment
Section 5.4	0	4/30/2014	Use of Prior Assessments to 12/17,2002
Table 6-1			Maximum Reassessment Interval
Section 10.2	0	4/30/2014	Objectives

F.04 Inspection Notes

F.04.d - Ameren did not utilize prior assessments completed before 12/2002. Defined in 10.2 of the TIMP Plan.

Review of the Baseline Assessment Plan indicates reassessments have been completed within 7 years from their baselines.

F.05 Deviation from Reassessment Requirements

If the operator elects to deviate from certain requirements listed in §192.913(c), verify that the operator uses a performance based approach that satisfies the requirements for exceptional performance as follows: [§192.913 and ASME B31.8S-2004]

F.05.a. Verify that the operator has a performance based integrity management program that meets or exceeds the performance-based requirements of ASME B31.8S-2004 and includes, at a minimum, the following elements: [§192.913(a)]

i. A comprehensive process for risk analysis;
ii. All risk factor data used to support the program;
iii. A comprehensive data integration process;
iv. A procedure for applying lessons learned from assessment of covered pipeline segments to pipeline segments not covered by this subpart;
v. A procedure for evaluating every incident, including its cause, within the operator's sector of the pipeline industry for implications both to the operator's pipeline system and to the operator's integrity management program;
vi. A performance matrix that demonstrates the program has been effective in ensuring the integrity of the covered segments by controlling the identified threats to the covered segments (Refer to Protocol I);
vii. Semi-annual performance measures beyond those required in §192.943 that are part of the operator's performance plan. [See §192.911(i)] Refer to Protocol I.
viii. An analysis that supports the desired integrity reassessment interval and the remediation methods to be used for all covered segments.

F.05.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

F.05.a. Statement of Issue *(Leave blank if no issue was identified.)*

F.05.b. Verify that the operator has completed at least two integrity assessments on each covered pipeline segment the operator is including under the performance-based approach and is able to demonstrate that each assessment effectively addressed the identified threats on the covered segments. [§192.913(b) (2) (i)]

F.05.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

F.05.b. Statement of Issue *(Leave blank if no issue was identified.)*

F.05.c. Verify the operator has remediated anomalies identified in the more recent assessment per the requirements of §192.933. [§192.913(b) (2) (ii)]

F.05.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

F.05.c. Statement of Issue *(Leave blank if no issue was identified.)*

F.05.d. Verify the operator has incorporated the results and lessons learned from the more recent assessment into the operator's data integration and risk assessment. [§192.913(b) (2) (ii)]

F.05.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

F.05.d. Statement of Issue *(Leave blank if no issue was identified.)*

F.05.e. Verify that deviations are allowed only for the timeframe for reassessment as provided in §192.939 except that reassessment by some method allowed by Subpart O (e.g., confirmatory direct assessment) must be completed at intervals not to exceed seven (7) years. [§192.913(c) (1)]

F.05.e. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

F.05.e. Statement of Issue *(Leave blank if no issue was identified.)*

F.05 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
Section 1.6	0	4/30/2014	TIMP Documentation

F.05 Inspection Notes
F.05.a-e - Ameren has not deviated from any reassessment inspections and is not utilizing a performance based approach.

F.06 Waiver from Reassessment Interval

Verify that the operator's program requires that it apply for a waiver, should it become necessary, from the required reassessment interval. The waiver request must demonstrate that the waiver is justified as specified in the rule. Such a waiver request may only be made in the following limited situations: [§192.943]

F.06.a. Lack of internal inspection tools. [§192.943(a) (1)]

F.06.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

F.06.a. Statement of Issue *(Leave blank if no issue was identified.)*

F.06.b. Cannot maintain local product supply. [§192.943(a) (2)]

F.06.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

F.06.b. Statement of Issue *(Leave blank if no issue was identified.)*

F.06.c. Application must be made at least 180 days before the end of the required reassessment interval. (Exception: If local product supply issues make the 180 day submittal impractical, an operator must apply for the waiver as soon as the need for waiver becomes known). [§192.943(b)]

F.06.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

F.06.c. Statement of Issue *(Leave blank if no issue was identified.)*

F.06 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
Section 6.8.7	0	4/30/2014	Waiver Request to extend Reassessment Intervals

F.06 Inspection Notes

Protocol Area G. Confirmatory DA

- G.01 Confirmatory Direct Assessment, CDA
- Table of Contents

G.01 Confirmatory Direct Assessment, CDA

If using confirmatory direct assessment (CDA) as allowed in §192.937, verify that the operator's integrity management plan meets the requirements of §192.931, §192.925 (ECDA) and §192.927 (ICDA). [§192.931]

G.01.a. Verify that the operator's CDA plan for external corrosion complies with all of the requirements contained in §192.925 (See Protocol D.01 ~ Protocol D.05) with the following exceptions, [§192.931(b) and §192.925]

i. The procedures for indirect examination may allow use of only one indirect examination tool suitable for the application
ii. The procedures for direct examination and remediation must provide that all immediate action indications and at least one scheduled action indication are excavated for each ECDA region.

G.01.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

G.01.a. Statement of Issue *(Leave blank if no issue was identified.)*

G.01.b. Verify that the operator's CDA plan for internal corrosion complies with all of the requirements contained in §192.927 (See Protocols D.6 ~ D.9) except that procedures for identifying locations for excavation may require excavation of only one high risk location in each ICDA region.[§192.931(c) and §192.925]

G.01.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

G.01.b. Statement of Issue *(Leave blank if no issue was identified.)*

G.01.c. When using CDA carried out under §192.931(b) or (c), if an operator discovers any defect requiring remediation prior to the next scheduled assessment, verify that the operator evaluates the need to accelerate the schedule for the next assessment. If the schedule is accelerated, verify that the new assessment scheduled is determined using the methodology documented in NACE SP0502-2008, Section 6.2 and NACE SP0502-2008, Section 6.3. [§192.931(d)]

i. If the defect requires immediate remediation, verify the operator reduces pressure consistent with §192.933 (See Protocol E) until the operator has completed reassessment using one of the assessment techniques allowed in §192.937 (See Protocol F). [§192.931(d)]

G.01.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

G.01.c. Statement of Issue *(Leave blank if no issue was identified.)*

G.01 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 6.8.4	0	4/30/2014	Confirmatory Direct Assessment

G.01 Inspection Notes
G.01 – Confirmatory Direct Assessment has not been utilized by Ameren. There is a procedure in the plan if it should ever be utilized.

Protocol Area H. Preventive and Mitigative Measures

- H.01 General Requirements (Identification of Additional Measures)
- H.02 Third Party Damage
- H.03 Pipelines Operating Below 30% SMYS
- H.04 Plastic Transmission Pipeline
- H.05 Outside Force Damage
- H.06 Corrosion
- H.07 Automatic Shut-Off Valves or Remote Control Valves
- H.08 General Requirements (Implementation of Additional Measures)
- Table of Contents

H.01 General Requirements (Identification of Additional Measures)

Verify that a process is in place to identify additional measures to prevent a pipeline failure and to mitigate the consequences of a pipeline failure in a high consequence area. [§192.935(a)]

H.01.a. Verify that the process for identifying additional measures is based on identified threats to each pipeline segment and the risk analysis required by §192.917. [Note: Protocol H.08 addresses the implementation decision process for additional preventive and mitigative measures.] [§192.935(a)]

H.01.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

H.01.a. Statement of Issue *(Leave blank if no issue was identified.)*

H.01.b. Verify that additional measures evaluated by the operator cover a spectrum of alternatives such as, but not limited to, installing Automatic Shut-off Valves or Remote Control Valves, installing computerized monitoring and leak detection systems, replacing pipe segments with pipe of heavier wall thickness, providing additional training to personnel on response procedures, conducting drills with local emergency responders and implementing additional inspection and maintenance programs. [§192.935(a)]

H.01.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

H.01.b. Statement of Issue *(Leave blank if no issue was identified.)*

H.01 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
Section 8.1	0	4/30/2014	Prevention and Mitigation Objective
Table 8-1			Additional Preventative and Mitigative Measures

H.01 Inspection Notes

H.02 Third Party Damage

Verify that the following preventive and mitigative requirements regarding threats due to third party damage have been addressed: [§192.935(b) (1) and §192.935(e)]

H.02.a. Verify implementation of enhancements to the §192.614-required Damage Prevention Program with respect to covered segments to prevent and minimize the consequences of a release, and that the enhanced measures include, at a minimum: [Note: As noted in Protocol H.03 and Protocol H.04, a subset of these enhancements are required for pipelines operating below 30% SMYS and for plastic transmission pipelines.] [§192.935(b) (1)]

i. Using qualified personnel (see Protocol L.02 - §192.915(c)) for work an operator is conducting that could adversely affect the integrity of a covered segment, such as marking, locating, and direct supervision of known excavation work. [§192.935(b)(1)(i)]
ii. Collecting, in a central database, location-specific information on excavation damage that occurs in covered and non covered segments in the transmission system and the root cause analysis to support identification of targeted additional preventative and mitigative measures in the high consequence areas. This information must include recognized damage that is not required to be reported as an incident under Part 191. [§192.935(b)(1)(ii)]
iii. Participating in one-call systems in locations where covered segments are present. [§192.935(b)(1)(iii)]
iv. Monitoring of excavations conducted on covered pipeline segments by pipeline personnel. [§192.935(b)(1)(iv)]
    1. When there is physical evidence of encroachment involving excavation that the operator did not monitor near a covered segment, verify that the area near the encroachment must be excavated or that an above ground survey using methods defined in NACE SP0502-2008 must be conducted. [§192.935(b)(1)(iv)]
        A. If an above ground survey is conducted, verify that any indication of coating holidays or discontinuities warranting direct examination must be excavated and remediated in accordance with ASME B31.8S-2004, Section 7.5 and §192.933. [§192.935(b)(1)(iv)]

H.02.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

H.02.a. Statement of Issue *(Leave blank if no issue was identified.)*

H.02.b. If the threat of third party damage is identified by results of the §192.917(b) (Protocol C.02) and ASME B31.8S-2004, Appendix A7 data integration processes, verify that comprehensive additional preventive measures are implemented. [§192.917(e) (1)]

H.02.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

H.02.b. Statement of Issue *(Leave blank if no issue was identified.)*

H.02 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
Section 8.6.1	0	4/30/2014	Third Party Damage

H.02 Inspection Notes
Ameren has enhanced their watch and protect program for transmission facilities and key facilities. Personnel have been added to conduct these inspections.

H.03 Pipelines Operating Below 30% SMYS

Verify that the following preventive and mitigative requirements for pipelines operating below 30% SMYS have been addressed: [§192.935(d)]

H.03.a. For pipelines operating below 30% SMYS located in a high consequence area:

i. Verify that the operator's processes for damage prevention program enhancements include requirements for the use of qualified personnel (see Protocol L.02 - §192.915(c)) for work an operator is conducting that could adversely affect the integrity of a covered segment, such as marking, locating, and direct supervision of known excavation work. [§192.935(d) and §192.935(d)(1)] [Note: This requirement is also contained in Protocol H.02.a.i for pipelines operating above 30% SMYS.]

ii. Verify that the operator's processes for damage prevention program enhancements include participating in one-call systems in locations where covered segments are present. [§192.935(d) and §192.935(d)(1)] [Note: This requirement is also contained in Protocol H.02.a.iii for pipelines operating above 30% SMYS.]

iii. Verify that excavations near the pipeline are monitored, or patrols are conducted of the pipeline at bi-monthly intervals as required by §192.705. [§192.935(d) and §192.935(d)(2)]

   1. If indications of unreported construction activity are found, verify that required follow up investigations are conducted to determine if mechanical damage has occurred. [§192.935(d)(2)]

H.03.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

H.03.a. Statement of Issue *(Leave blank if no issue was identified.)*

H.03.b. For pipelines operating below 30% SMYS located in a class 3 or 4 area but not in a high consequence area:

i. Verify that the operator's processes for damage prevention program enhancements include requirements for the use of qualified personnel (see Protocol L.02 - §192.915(c)) for work an operator is conducting that could adversely affect the integrity of a covered segment, such as marking, locating, and direct supervision of known excavation work. [§192.935(d), §192.935(d)(1) and §192 Table E.II.1] [Note: This requirement is also contained in Protocol H.02.a.i for pipelines operating above 30% SMYS.]

ii. Verify that the operator's processes for damage prevention program enhancements include participating in one-call systems in locations where covered segments are present. [§192.935(d), §192.935(d)(1) and §192 Table E.II.1] [Note: This requirement is also contained in Protocol H.02.a.iii for pipelines operating above 30% SMYS.]

iii. Verify that excavations near the pipeline are monitored, or patrols are conducted of the pipeline at bi-monthly intervals as required by §192.705. [§192.935(d), §192.935(d)(2) and §192 Table E.II.1]

1. If indications of unreported construction activity are found, verify that required follow up investigations are conducted to determine if mechanical damage has occurred. [§192.935(d)(2) and §192 Table E.II.1]

iv. Verify that the operator performs semi-annual leak surveys (quarterly for unprotected pipelines or cathodically protected pipe where electrical surveys are impractical). [§192.935(d)(3)and §192 Table E.II.1]

H.03.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

H.03.b. Statement of Issue *(Leave blank if no issue was identified.)*

H.03 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 8.6.1	0	4/30/2014	Third Party Damage
Table 8-1			Additional Preventative and Mitigative Measures
Section LEAK1 in O&M			4. Transmission Leak Surveys

H.03 Inspection Notes

H.04 Plastic Transmission Pipeline

For plastic transmission pipelines, verify that applicable third party damage requirements have been applied to covered segments of the pipeline. [§192.935(e)]

H.04.a. Verify that the operator's processes for damage prevention program enhancements include requirements for the use of qualified personnel (see Protocol L.02 - §192.915(c)) for work an operator is conducting that could adversely affect the integrity of a covered segment, such as marking, locating, and direct supervision of known excavation work. [§192.935(e)] [Note: This requirement is also contained in previous Protocol H.02.a.i for non-plastic pipelines operating above 30% SMYS.]

H.04.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

H.04.a. Statement of Issue *(Leave blank if no issue was identified.)*

H.04.b. Verify that the operator's processes for damage prevention program enhancements include participating in one-call systems in locations where covered segments are present. [§192.935(e)] [Note: This requirement is also contained in Protocol H.02.a.iii for non-plastic pipelines operating above 30% SMYS.]

H.04.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

H.04.b. Statement of Issue *(Leave blank if no issue was identified.)*

H.04.c. Verify that the excavations on covered segments are monitored by pipeline personnel. [§192.935(e)] [Note: This requirement is also contained in Protocol H.02.a.iv for non-plastic pipelines operating above 30% SMYS.]

i. When there is physical evidence of encroachment involving excavation that the operator did not monitor near a covered segment, verify that the area near the encroachment must be excavated or that an above ground survey using methods defined in NACE SP0502-2008 must be conducted. [§192.935(e)] [Note: This requirement is also contained in Protocol H.02.a.iv for non-plastic pipelines operating above 30% SMYS.]
   1. If an above ground survey is conducted, verify that any indication of coating holidays or discontinuities warranting direct examination must be excavated and remediated in accordance with ASME B31.8S-2004, Section 7.5 and §192.933.

[§192.935(e)] [Note: This requirement is also contained in Protocol H.02.a.iv for non-plastic pipelines operating above 30% SMYS.]

H.04.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

H.04.c. Statement of Issue *(Leave blank if no issue was identified.)*

H.04 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 1.1	0	4/30/2014	Company Overview

H.04 Inspection Notes
H.04 Ameren has no plastic transmission piping.

H.05 outside Force Damage

Verify that the operator adequately addresses threats due to outside force (e.g., earth movement, floods, unstable suspension bridge). [§192.935(b) (2)]

H.05.a. If the operator makes a determination that outside force (e.g., earth movement, floods, unstable suspension bridge) is a threat to the integrity of a covered segment (e.g., via Protocol C.01 activities), verify that measures have been taken to minimize the consequences to the covered segment. These measures include, but are not limited to, increasing the frequency of aerial, foot or other methods of patrols, adding external protection, reducing external stress, and relocating the line. [§192.935(b) (2)]

H.05.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

H.05.a. Statement of Issue *(Leave blank if no issue was identified.)*

H.05 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
Section 8.6.2	0	4/30/2014	Weather and Outside Force Damage

H.05 Inspection Notes

H.06 Corrosion

Verify that the operator takes required actions to address corrosion threats. [§192.917(e) (5)]

H.06.a. Verify that the operator makes a determination of whether or not corrosion exists on a covered pipeline segment that could adversely affect the integrity of the line (conditions specified in §192.933). [§192.917(e) (5)]

i. If such corrosion is identified, then verify that:
   1. The corrosion is evaluated and remediated, as necessary, for all pipeline segments (both covered and noncovered) with similar material coating and environmental characteristics. [§192.917(e)(5)]
   2. A schedule is established for evaluating and remediating, as necessary, the similar segments consistent with the operator's established operating and maintenance procedures under Part 192 for testing and repair. [§192.917(e)(5)]

H.06.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

H.06.a. Statement of Issue *(Leave blank if no issue was identified.)*

H.06 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 8.4	0	4/30/2014	Corrosion

H.06 Inspection Notes
There have been no instances where Root Cause Reviews have been required due to corrosion identified during inspections.

H.07 Automatic Shut-Off Valves or Remote Control Valves

Verify that the operator has a process to decide if automatic shut-off valves or remote control valves represent an efficient means of adding protection to potentially affected high consequence areas. [§192.935(c)]

H.07.a. Verify that an adequate risk analysis-based process is used to determine if an automatic shut-off valve or remote control valve should be added. [§192.935(c)]

i. Verify that, as a minimum, the following factors were considered: [§192.935(c)]
   1. swiftness of leak detection and pipe shutdown capabilities
   2. the type of gas being transported
   3. operating pressure
   4. the rate of potential release
   5. pipeline profile
   6. the potential for ignition
   7. location of nearest response personnel

H.07.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

H.07.a. Statement of Issue *(Leave blank if no issue was identified.)*

H.07 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
Form A-5	0	4/30/2014	P&M 1 Preventative & Mitigative Measures Evaluation
Table 8-1	0	4/30/2014	

H.07 Inspection Notes
Ameren has not identified any locations where auto shutoff valves have been required to eliminate threats.

H.08 General Requirements (Implementation of Additional Measures)

Verify that the operator has identified and implemented (or scheduled) additional measures beyond those already required by Part 192 to prevent a pipeline failure and to mitigate the consequences of a pipeline failure in a high consequence area: [§192.935(a)]

H.08.a. Verify that a systematic, documented decision-making process is in place to decide which measures are to be implemented, involving input from relevant parts of the organization such as operations, maintenance, engineering, and corrosion control. [§192.935(a)]

H.08.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

H.08.a. Statement of Issue *(Leave blank if no issue was identified.)*

H.08.b. Verify that the decision-making process considers both the likelihood and consequences of pipeline failures. [§192.935(a)]

H.08.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

H.08.b. Statement of Issue *(Leave blank if no issue was identified.)*

H.08.c. Verify that additional measures are identified and documented and have actually been implemented, or scheduled for implementation. [§192.935(a)]

H.08.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

H.08.c. Statement of Issue *(Leave blank if no issue was identified.)*

H.08 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
Section 8.1	0	4/30/2014	Prevention and Mitigation Objective
Form A-5			P&M 1 Preventative & Mitigative Measures Evaluation

H.08 Inspection Notes

Protocol Area I. Performance Measures

- I.01 General Performance Measures
- I.02 Performance Measures Records Verification
- I.03 Exceptional Performance Measurements
- Table of Contents

I.01 General Performance Measures

Inspect the operator's program to verify that provisions exist for measuring integrity management program effectiveness and that the operator is tracking the four elements of ASME B31.8S-2004, Section 9.4 and each identified threat in ASME B31.8S-2004, Appendix A. [§192.945(a) and ASME B31.8S-2004, Section 12(b)(5)]

I.01.a. Verify the process for measuring IM program effectiveness includes the elements necessary to conduct a meaningful evaluation.

An adequate process for measuring IM program effectiveness should have the following characteristics:

- Includes the use of periodic self-assessments, internal and/or external integrity management program audits, management reviews, or other self-critical evaluations to measure program effectiveness.
- Includes a clear description of the scope, objectives, and frequency of these program evaluation methods.
- Includes bench-marking performance metrics using data from inside or outside the company.
- Clearly defines the use of performance metrics in evaluating program performance.
- Provides for feedback to corrective action programs, preventive and mitigative measures decisions, and the threat and risk analysis processes? Does this feedback include communicating lessons learned and noteworthy practices to the appropriate individuals/organizational units.
- Assures management awareness and commitment, including the resources required to address integrity program improvements identified through performance measurement.
- Includes provisions for the review and follow-up of program effectiveness evaluation results, findings, and recommendations, etc., with appropriate company managers.
- Includes provisions for the assignment of responsibility, by organization, group, or title, for implementation of required actions.
- Requires evaluation of the effectiveness of programs to address specific threats in accordance with ASME B31.8S-2004 Appendix A.

I.01.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

•

I.01.a. Statement of Issue *(Leave blank if no issue was identified.)*

I.01.b. Verify the process to evaluate IM program effectiveness includes an adequate set of performance metrics to provide meaningful insight into IM program performance.

A process for identifying an adequate set of performance measures should have the following characteristics:

- Includes a description of the performance metrics to be used and the frequency for data collection.
- Defines metrics that:
    - Provide an overall measure of program effectiveness such as number of leaks or ruptures, etc.,
    - Reflect the accomplishment of the program's objectives such as number of miles of pipeline assessed; number of anomalies found requiring repair or mitigation; number of right-of-way encroachments, and
    - Provide threat-specific insight in accordance with ASME B31.8S – 2004, Appendix A. Examples include: the number of leaks caused by each threat (e.g., internal/external corrosion, third party damage, etc.); number of repair actions taken for each threat, etc.
- Includes performance metrics developed in accordance with ASME B 31.8S-2004 Section 9 including:
    - Process/Activity Metrics that monitor the surveillance and preventive activities that are in place to control risk. These metrics indicate how well an operator is implementing the elements of its integrity management program.
    - Operational Measures that monitor operational and maintenance trends to indicate if the program is effective or ineffective, or the desired outcome is being achieved or not, despite the risk control activities in place.
    - Direct Integrity Metrics that reflect whether the program is effective in achieving the objective of improving integrity. These are typically lagging indicators that measure the number of leaks, ruptures, injuries, fatalities, etc.
- Includes trending of metrics over time and an analysis of these trends? The process for trending should include:
    - A method to establish the magnitude of trends that represent normal fluctuations versus significant deviations (e.g., significant enough to warrant corrective action).
    - The trending of equipment or material failures (e.g., valve gaskets or pump seals) as a means to evaluate pipeline deterioration (an indicator of the end of useful life of materials and components).
    - The trending of leading indicators such as inadvertent over-pressurization, right-of-way encroachments without one-call notification, SCADA outages, operation of overpressure or other safety devices, or other abnormal operating conditions such as those listed in 192.605(c). (Leading indicators measure the effectiveness of proactive activities to control risk. These indicators can uncover weaknesses before they develop into full-fledged problems.)
- Provides for the periodic review and revision (if needed) of performance metrics to assure they are providing useful information about the effectiveness of IM Program activities.
- Includes procedures to ensure the completeness and accuracy of performance measure data – both for metrics reported to PHMSA and the metrics used internally.
- Defines performance goals, including segment-specific issues related to the operator's unique operating environment such as a decrease in the number, and depth, of corrosion related anomalies, a decrease in the threat of mechanical damage due to a decrease in one-calls, a decrease in the number of crack anomalies, etc.
- Provides for the periodic review of performance goals and their revision (if needed) based on the results of program evaluations.
- Includes comparing leak, failure, and incident metrics to risk model results, and uses these comparisons to modify the risk model if necessary.

I.01.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

•

I.01.b. Statement of Issue *(Leave blank if no issue was identified.)*

I.01.c. Verify that performance is measured annually (completed through December 31st of each year) for each of the following: [ASME B31.8S-2004, Section 9.4]

- Number of miles of pipeline inspected versus program requirements
- Number of immediate repairs completed as a result of the integrity management inspection program
- Number of scheduled repairs completed as a result of the integrity management program
- Number of leaks, failures and incidents (classified by cause).

I.01.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

I.01.c. Statement of Issue *(Leave blank if no issue was identified.)*

I.01.d. Verify that performance is measured annually in accordance with the threat-specific metrics of ASME B31.8S-2004, Appendix A (See ASME B31.8S-2004, Table 9 for a summary listing).

I.01.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

I.01.d. Statement of Issue *(Leave blank if no issue was identified.)*

I.01 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**

I.01 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
Section 10.5.1	0	4/30/2014	Overall Program Measures
Table 10-1	0	4/30/2014	Required Performance Measures

I.01 Inspection Notes

I.02 Performance Measures Records Verification

Inspect operator records to verify: [§192.945(a)]

I.02.a. The methods to measure program effectiveness provide effective evaluation of IM program performance and result in program improvements where necessary.

The records to demonstrate IM program effectiveness should have the following characteristics:

- The records show that periodic self-assessments, internal and/or external audits, management reviews, or other self-critical program evaluations have been performed at the established frequency.
- The records indicate that the process has been implemented consistent with its scope and objectives, and at the established frequency.
- The records show that these program evaluations provided a comprehensive and in-depth examination of performance, and effectively used the established performance metrics in this process.
- The records show bench-marking performance using data from inside or outside the company.
- The records show evidence of feedback to corrective action programs, preventive and mitigative measures decisions, and the threat and risk analysis processes.
- The records show that lessons learned and best practices have been communicated to the appropriate individuals and organizational units.
- The records show evidence of management awareness and commitment, including providing resources to address improvements identified by the program evaluation.
- The records include the review and follow-up of program evaluation results, findings, and recommendations, etc., by appropriate company managers.
- The records include the assignment of responsibility, by organization, group, or title, for implementing required actions.
- The records show that deficiencies identified in program evaluations and recommended improvements have been implemented in a timely manner.

I.02.a Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

•

I.02.a Statement of Issue *(Leave blank if no issue was identified.)*

I.02.b. That performance metrics are providing meaningful insight into integrity management program effectiveness.

Records to demonstrate that performance metrics are providing meaningful insights into IM program effectiveness should have the following characteristics:

- The records show the performance measure data is being collected and at the frequency established in the program evaluation process.
- The records show that overall metrics have been defined and data collected for:

  - Overall measures of program effectiveness such as number of leaks, or ruptures, etc.,
  - Metrics that reflect the accomplishment of the program's objectives, and
  - Threat specific metrics as established in ASME B31.8S-2004, Appendix A.
- The records show that the performance metrics developed in accordance with ASME B 31.8S-2004 Section 9 were implemented. Specifically,
  - Process/Activity Metrics that monitor the surveillance and preventive activities that are in place to control risk. These metrics indicate how well an operator is implementing the elements of its integrity management program.
  - Operational Measures that monitor operational and maintenance trends to indicate if the program is effective or ineffective, or the desired outcome is being achieved or not, despite the risk control activities in place.
  - Direct Integrity Metrics that reflect whether the program is effective in achieving the objective of improving integrity. These are typically lagging indicators that measure the number of leaks, ruptures, injuries, fatalities, etc.
- The records show the trending of metrics over time and an analysis of these trends. Specifically,
  - Do records show the trending analysis includes method(s) to establish the magnitude of trends that represent normal fluctuations versus significant deviations (e.g., significant enough to warrant corrective action).
  - Do records show trending of equipment or material failures as a means to evaluate pipeline equipment deterioration.
  - Do records show trending of leading indicators such as inadvertent over-pressurization, ROW encroachments without one-call notification, SCADA outages, operation of overpressure or other safety devices, or other abnormal operating conditions such as those listed in 192.605(c). (Leading indicators measure the effectiveness of proactive activities to control risk. These indicators can uncover weaknesses before they develop into full-fledged problems.)
- The records show that the performance metrics have been reviewed and updated if needed to assure they are providing useful information about the effectiveness of IM Program activities.
- The records show that the operator has implemented its program to assure the completeness and accuracy of the data used to measure performance.
- The records show that the IM performance measures reported to PHMSA are complete and accurate.
- The records show any data quality concerns that might exist.
- The records show that the operator has established specific performance goals, including segment specific issues related to the operator's unique operating environment such as the number, and depth, of corrosion related anomalies, the threat of mechanical damage due to one calls, the number of crack anomalies, etc..
- The records show that the performance goals have been reviewed and revised based on the results of program evaluations.
- The records show the leak, failure, and incident metrics have been compared to the risk model, and that changes to the risk model have been made when the data indicates such changes are necessary.

I.02.b Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

•

I.02.b Statement of Issue *(Leave blank if no issue was identified.)*

I.02.c. The four overall performance measures of ASME B31.8S-2004, Section 9.4 have been submitted to PHMSA annually in accordance with §192.951.

I.02.c, Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

I.02.c. Statement of Issue *(Leave blank if no issue was identified.)*

I.02 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 10.5	0	4/30/2014	Documentation
Table 10-5	0	4/30/2014	Required Performance Metrics

I.02 Inspection Notes

I.03 Exceptional Performance Measurements

For operators that choose to demonstrate exceptional performance in order to deviate from certain requirements of the rule, verify the following.

I.03.a. Additional performance measures beyond those required in §192.945 (see Protocol I.01) are part of the operator's performance plan. [§192.913(b) (vii)]

I.03.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

I.03.a. Statement of Issue *(Leave blank if no issue was identified.)*

I.03.b. All performance measures (all measures required by §192.945 and the additional performance measures) are submitted to PHMSA on a semi-annual frequency in accordance with §192.951. [§192.913(b) (vii)]

I.03.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

I.03.b. Statement of Issue *(Leave blank if no issue was identified.)*

I.03 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title

I.03 Inspection Notes
I.03 Exceptional Performance is not and has not been utilized by Ameren.

Protocol Area J. Record Keeping

- J.01 Records to be Maintained by the Operator
- Table of Contents

J.01 Records to be Maintained by the Operator

Verify that the following records, as a minimum, are maintained for the useful life of the pipeline: [§192.947, ASME B31.8S-2004, Section 12.1 and ASME B31.8S-2004, Section 12.2(b) (1)]

J.01.a.
i. A written integrity management program [§192.947(a)]
ii. Threat identification and risk assessment documentation per §192.917 [§192.947(b)]
iii. A written baseline assessment plan per §192.919 [§192.947(c)]
iv. Documents to support any decision, analysis, and process developed and used to implement and evaluate each element of the baseline assessment plan and integrity management program. Documents include those developed and used in support of any identification, calculation, amendment, modification, justification, deviation and determination made, and any action taken to implement and evaluate any of the program elements [§192.947(d)]
v. Training program documentation and training records per §192.915 [§192.947(e)]
vi. Remediation schedule and technical basis documentation per §192.933 [§192.947(f)]
vii. Direct assessment plan documentation per §192.923 through §192.929 [§192.947(g)]
viii. Confirmatory assessment documentation per §192.931 [§192.947(h)]
ix. Documentation of Notifications to PHMSA or State/Local Regulatory Agencies. [§192.947(i)]

J.01.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

J.01.a. Statement of Issue *(Leave blank if no issue was identified.)*

J.01 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
		2014	Baseline Assessment Plan
		2014	TIMP plan
		2009-2015	Training Records

J.01 Inspection Notes
J.01.a IX. There have been no notifications required to be sent to PHMSA.

Protocol Area K. Management of Change (MOC)

- K.01 Documentation and Notification of Changes to the Integrity Management Program
- K.02 Attributes of the Change Process
- Table of Contents

K.01 Documentation and Notification of Changes to the Integrity Management Program

Verify that changes to the integrity management program have been handled in accordance with §192.909 of the rule.

K.01.a. Verify that the reasons for program changes have been documented prior to implementation of the change(s). [§192.909(a)]

K.01.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

K.01.a. Statement of Issue *(Leave blank if no issue was identified.)*

K.01.b. Verify, that for significant changes to the program, program implementation, or schedules, PHMSA or the State or local pipeline safety authority, if applicable, has been notified within 30 days after the operator has adopted the change. [§192.909(b)]

K.01.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

K.01.b. Statement of Issue *(Leave blank if no issue was identified.)*

K.01 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Change Log / Revision Control Sheet			Located in the front of the plan

K.01 Inspection Notes
K.01.b - There have been no changes to the plan or schedules that required notification to PHMSA. Ameren did contact the Manager of Pipeline Safety at the ICC to inform him that three casings were going to exceed their inspection dates due to issues of receiving permits form the railroad and IDOT. These were inspected as soon as the permits were received.

K.02 Attributes of the Change Process

Verify that the integrity management program meets the requirements of ASME B31.8S-2004, Section 11 for a management of change process. [§192.911(k)]

K.02.a. Verify the existence of procedures that consider impacts of changes to pipeline systems and their integrity. [ASME B31.8S-2004, Section 11(a)]

K.02.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

K.02.a. Statement of Issue *(Leave blank if no issue was identified.)*

K.02.b. Verify change procedures address technical, physical, procedural, and organizational changes. [ASME B31.8S-2004, Section 11(a)]

K.02.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

K.02.b. Statement of Issue *(Leave blank if no issue was identified.)*

K.02.c. Verify the following are provided for by the change procedures: [ASME B31.8S-2004, Section 11(a)]

i. Reason for change
ii. Authority for approving changes
iii. Analysis of implications
iv. Acquisition of required work permits
v. Documentation
vi. Communication of the change to affected parties
vii. Time limitations
viii. Qualification of staff

K.02.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

K.02.c. Statement of Issue *(Leave blank if no issue was identified.)*

K.02.d. Verify that integrity management system changes are properly reflected in the pipeline system and that pipeline system changes are properly reflected in the integrity management program. [ASME B31.8S-2004, Section 11(b)]

K.02.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

K.02.d. Statement of Issue *(Leave blank if no issue was identified.)*

K.02.e. Verify that equipment or system changes have been identified and reviewed before implementation. [ASME B31.8S-2004, Section 11(d)]

K.02.e. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

K.02.e. Statement of Issue *(Leave blank if no issue was identified.)*

K.02 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 11.1	0	4/30/2014	Management of Change
Section 11.2	0	4/30/2014	Objectives
Section 11.3.1	0	4/30/2014	Risk Analysis Reviews and Changes
Section 11.3.2	0	4/30/2014	Technical Changes
Section 11.3.3	0	4/30/2014	Physical System Changes
Section 11.3.4	0	4/30/2014	Organizational Changes
Section 11.3.5	0	4/30/2014	Other Changes
			Baseline Assessment Plan

K.02 Inspection Notes

Protocol Area L. Quality Assurance

- L.01 Program Requirements for the Quality Assurance Process
- L.02 Personnel Qualification and Training Requirements
- L.03 Invoking Non-Mandatory Statements in Standards
- Table of Contents

L.01 Program Requirements for the Quality Assurance Process

Verify that a quality assurance process exists that meets the requirements of ASME B31.8S-2004, Section 12. [§192.911(l)]

L.01.a. Verify that responsibilities and authorities for the integrity management program have been formally defined. [ASME B31.8S-2004, Section 12.2(b) (2)]

L.01.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

L.01.a. Statement of Issue *(Leave blank if no issue was identified.)*

L.01.b. Verify that reviews of the integrity management program and the quality assurance program have been specified to be performed on regular intervals, making recommendations for improvement. [ASME B31.8S-2004, Section 12.2(b) (3)]

L.01.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

L.01.b. Statement of Issue *(Leave blank if no issue was identified.)*

L.01.c. Verify that corrective actions to improve the integrity management program and the quality assurance process have been documented and are monitored for effectiveness. [ASME B31.8S-2004, Section 12.2(b) (7)]

L.01.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

L.01.c. Statement of Issue *(Leave blank if no issue was identified.)*

L.01.d. Verify that when an operator chooses to use outside resources to conduct any process that affects the quality of the integrity management program, the operator ensures the quality of such processes and documents them within the quality program. [ASME B31.8S-2004, Section 12.2©]

L.01.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

L.01.d. Statement of Issue *(Leave blank if no issue was identified.)*

L.01 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 9.1	0	4/30/2014	Responsibilities
Section 9.2	0	4/30/2014	
Table 9-1	0	4/30/2014	Processes Subject to the Quality Control Plan Requirements
Appendix E	0	4/30/2014	Audit Checklists
Section 9.3 (j)	0	4/30/2014	Quality Control Plan Scope - Monitoring Control of Third Party Contractors

L.01 Inspection Notes
Ameren has qualified personnel on site when third party contractors are utilized for TIMP inspections and testing.

L.02 Personnel Qualification and Training Requirements

Verify that personnel involved in the integrity management program are qualified for their assigned responsibilities. [§192.911(l), §192.915 and ASME B31.8S-2004, Section 12(b) (4)]

L.02.a. Verify that the Integrity Management Program requires supervisory personnel to have the appropriate training or experience for their assigned responsibilities. [§192.915(a)]

L.02.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

L.02.a. Statement of Issue *(Leave blank if no issue was identified.)*

L.02.b. Verify the qualification of personnel that carry out assessments and who evaluate assessment results. [§192.915(b)]

L.02.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

L.02.b. Statement of Issue *(Leave blank if no issue was identified.)*

L.02.c. Verify the qualification of personnel who participate in implementing preventive and mitigative measures including: [§192.915(c)]

i. Personnel who mark and locate buried structures.
ii. Personnel who directly supervise excavation work.
iii. Other personnel who participate in implementing preventive and mitigative measures as appropriate. [ASME B31.8S-2004, Section 12.2(b)(4)]

L.02.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

L.02.c. Statement of Issue *(Leave blank if no issue was identified.)*

L.02.d. Verify that the personnel who execute the activities within the integrity management program are competent and properly trained in accordance with the quality control plan. [ASME B31.8S-2004, Section 11(a) (8) and ASME B31.8S-2004, Section 12.2(b) (4)]

L.02.d. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

L.02.d. Statement of Issue *(Leave blank if no issue was identified.)*

L.02 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 9.5	0	4/30/2014	Training
Section 1.4	0	4/30/2014	Personnel Qualifications
Table 1-1	0	4/30/2014	Personnel Qualifications Requirements for TIMP Role

L.02 Inspection Notes
Staff reviewed the qualifications for the TIMP personnel. Contract Locators are utilized by Ameren and are must be qualified which are reviewed during our damage prevention audits. Ameren retains the qualifications of third party personnel such as Guided Wave operators and contractors performing DCVG, ACVG or PCM surveys.

L.03 Invoking Non-Mandatory Statements in Standards

Verify that non-mandatory requirements (e.g., "should" statements) from industry standards or other documents invoked by Subpart O (e.g., ASME B31.8S-2004 and NACE SP0502-2008) are addressed by one of the following approaches: [§192.7(a)]

L.03.a. Incorporated into the operator's plan and implemented as recommended in the standard; or

L.03.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

L.03.a. Statement of Issue *(Leave blank if no issue was identified.)*

L.03.b. An equivalent alternative method for accomplishing the same objective is justified and implemented; or

L.03.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

L.03.b. Statement of Issue *(Leave blank if no issue was identified.)*

L.03.c. A documented justification is included in the plan that demonstrates the technical basis for not implementing recommendations from standards or other documents invoked by Subpart O.

L.03.c. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
	No Issues Identified
	Potential Issues Identified *(explain in summary)*
X	Not Applicable *(explain in summary)*

L.03.c. Statement of Issue *(Leave blank if no issue was identified.)*

L.03 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
Section 1.5	0	4/30/2014	How to use This Manual

L.03 Inspection Notes
L.03.b-c - Ameren has not implemented equivalent alternative method for accomplishing the same objective is justified and implemented regarding should Shall. Ameren looks at “Should” as being a “Shall”.

Protocol Area M. Communications Plan

- M.01 External and Internal Communication Requirements
- M.02 Addressing Safety Concerns
- Table of Contents

M.01 External and Internal Communication Requirements

Verify that an integrity management communication plan exists that meets the requirements of ASME B31.8S-2004, Section 10. [§192.911(m)]

M.01.a. Verify that the operator has submitted its API-1162 external communications plan to the PHMSA clearinghouse for approval.

M.01.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

M.01.a. Statement of Issue *(Leave blank if no issue was identified.)*

M.01.b. Verify provisions for operator internal organizational communication exist to establish understanding of and support for the integrity management program. [ASME B31.8S-2004, Section 10.3]

M.01.b. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

M.01.b. Statement of Issue *(Leave blank if no issue was identified.)*

M.01 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 12.3	0	4/30/2014	Communications Plan
Section 12.3.1	0	4/30/2014	Company Internal Communications
			Public Awareness Program

M.01 Inspection Notes
Ameren submitted their PA plan to PHMSA as required.

M.02 Addressing Safety Concerns

Verify that provisions exist to address safety concerns raised by:

M.02.a. PHMSA and State or local pipeline safety authorities (when a covered segment is located in a State where PHMSA has an interstate agreement). [§192.911(m) (1) and §192.911(m) (2)].

M.02.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

M.02.a. Statement of Issue *(Leave blank if no issue was identified.)*

M.02 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*			
Document Number	**Rev**	**Date**	**Document Title**
Section 11.4	0	4/30/2014	Threat Information Analysis Process

M.02 Inspection Notes

Protocol Area N. Submittal of Program Documents

- N.01 Integrity Management Program Document Submittal
- Table of Contents

N.01 Integrity Management Program Document Submittal

Verify that the operator includes provisions in its program to submit, upon request, the operator's risk analysis or integrity management program to: [§192.911(n)]

N.01.a. PHMSA and State or local pipeline safety authorities, as applicable. [§192.911(n)]

N.01.a. Inspection Results *(Type an X in the applicable box below. Select only one.)*	
X	No Issues Identified
	Potential Issues Identified *(explain in summary)*
	Not Applicable *(explain in summary)*

N.01.a. Statement of Issue *(Leave blank if no issue was identified.)*

N.01 Documents Reviewed *(Tab from bottom-right cell to add additional rows.)*

Document Number	Rev	Date	Document Title
Section 12.3.2	0	4/30/2014	Company External Communication

N.01 Inspection Notes
Ameren provides their TIMP plans to the Commission when requested by the inspectors or prior to an inspection to ensure the inspector has a current plan.

Additional Notes