



Sunoco Logistics



Mid-Valley Pipeline Company

PHMSA Integrated Inspection Process 2009 Audit Experience

API
Pipeline Conference

April 20, 2010



PHMSA Integrated Inspection

- Mid-Valley Pipeline Company
- 1100 mile 20"/22" crude transmission pipeline system
- Transports crude from Longview TX
- Delivers to mid-west refineries in Ohio and Michigan



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- This presentation is a review of the I.I. process as experienced by MVPL.
- MVPL has not received any follow up correspondence to the inspection, so this discussion is limited to the inspection process.



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- Mid Valley Pipeline was selected in 2009 to be audited by a team of PHMSA Inspectors.
- PHMSA would conduct the inspection as a year two prototype of the new “Integrated Inspection” process.



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- MVPL was contacted to schedule the Integrated Inspection in January 2009.
- The inspector stated that this would be one of PHMSA's new Integrated Inspections as they continue to conduct "Test" audits during the development of the new process.



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- I.I. is intended to replace PHMSA's specialized audits such as O&M, OQ, IMP, Damage Prevention etc.
- The new process would take questions from the former audit protocols and recombine them into a series of protocols constructed on a topical basis.



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- This would result, for example, in an inspection protocol being created covering all corrosion codes.
- PHMSA combined questions from their various inspection forms to create a series of 11 topically based sets of inspection protocols



PHMSA Integrated Inspection

- Reports (RP) – in its entirety
- Facilities and Storage (FS)
- Design and Construction (DC)
- Maintenance and Operations (MO)
- Assessment and Repair (AR)
- Time Dependent Threats (TD)
- CRM, SCADA, and Leak Detection (CR)
- Risk Management (RM)
- Training and Qualification (TQ)
- Public Awareness and Damage Prevention (PD)
- Emergency Preparedness and Response (EP)



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- PHMSA's audit team conducts a review of data such as leak reports, safety related condition reports, enforcement history and other data to determine a set of screening questions
- Results of the screening audit are used to determine the choice of protocols and questions for the audit



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- The audit would involve inspectors from the Eastern Region, Central Region and the Southwest Region.
- There would be a three week headquarters review of programs and records.
- There would be a three week field review of records and facilities.



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- The following schedule was established:
 - January 29, 2009 Contacted for Audit
 - May 28, 2009 Received Screening Questions
 - June 22, 2009 Pre Inspection/Screening (TX)
 - July 9, 2009 Received Audit Protocols
 - July 20, 2009 Headquarters Inspection (TX)
 - July 27, 2009 Headquarters Inspection (PA)
 - August 2009 Field Inspections (3 weeks/MS-MI)



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- A few weeks after the initial contact a 17 page document of screening questions, selected from the 11 protocol topics, were received.
- The protocol questions were distributed to various subject matter experts (SME) within the company for evaluation and response.



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- **Reports (RP)** – in its entirety, DOT COMPLIANCE
- **Facilities and Storage (FS)**, TANK ENGINEER
- **Design and Construction (DC)** , OPERATIONS ENGINEERING
- **Maintenance and Operations (MO)**, DISTRICT OPERATIONS
- **Assessment and Repair (AR)**, INTEGRITY ENGINEERING
- **Time Dependent Threats (TD)**, CORROSION GROUP
- **CRM, SCADA, and Leak Detection (CR)**, PRODUCT MOVEMENTS, CONTROL ROOM and SCADA
- **Risk Management (RM)** , INTEGRITY ENGINEERING
- **Training and Qualification (TQ)** , OPERATOR QUALIFICATION
- **Public Awareness and Damage Prevention (PD)**, ROW, RELOCATION and ONE-CALL
- **Emergency Preparedness and Response (EP)**, EMERGENCY PLANNING/RESPONSE



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- The SME groups conducted periodic meetings to coordinate development of the responses and documents to support the audit.
- Many hours were expended in this preparation process.



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- Once the screening/preinspection audit arrived, the overall group conducted an opening meeting with the auditors to give them an overview of MVPL and introduce the auditors to the various personnel who would be providing response to the auditors



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Day 1	Assessment and Repairs (AR)	AR.IL	Confirm
		AR.PTI	Detail
		AR.OT	Detail
	Time-Dependent Threats (TD)	TD.ICP	Detail
	Integrity Management (IM)	IM.RA	Detail
		IM.PM	Detail
		IM.QA	Confirm
		IM.CA	Confirm
Day 2	Training and Qualification (TQ)	TQ.OQ	Detail
	CRM, SCADA and Leak Detection (CR)	CR.CRM	Confirm
		CR.SCADA	Confirm
		CR.LD	Confirm
Day 3	Public Awareness and Damage Prevention (PD)	PD.RW	Detail
???	Emergency Preparedness and Response (EP)	EP.ERL	Detail
		EP.ETR	Detail



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AR	Identification and remediation of cracks on pipeline systems	Has the Operator identified and remediated any cracks or crack-like features on any of their pipeline system in the last 3 years?
AR	Identification of specific threats on a pipeline systems that require specific ILI tools	Has the Operator identified specific threats that require specific ILI tools other than MFL and deformation/dent tools to be used on any of their pipeline system in the last 3 years? Specific tools (e.g. transverse MFL, Ultrasonic compressive wave, and ultrasonic shear wave tools can be used for specific integrity threats (e.g.; SCC; hard spots; axial corrosion; hook cracks; etc.)
AR	Application of Industry Standards	Has the operator implemented the recommended practices in API-RP-1163 into the IMP?
AR	Pressure reductions taken in response to remediation of conditions	Has the Operator taken a pressure reduction or shutdown a pipeline in the last 3 years in response to remediating a condition identified from an integrity assessment?
AR	Identification and remediation of cracks on pipeline systems	Has the Operator identified and remediated any cracks or crack-like features on any of their pipeline system in the last 3 years?
AR	Implementation Standards	Has the operator implemented the required practices in B31.8S into the IMP?
AR	Process or procedure changes since last IMP inspection	Describe the most significant changes to the IMP processes and procedures since the last IMP or II IM Module inspection.
AR	Integrity assessments that were not performed as scheduled or within required timeframes	Has the operator delayed the performance of any integrity assessments such that a schedule or required timeframes was exceeded?
AR	Use of ILI as an integrity assessment method	Does the operator utilize ILI tools to assess the integrity of any of their pipeline systems?
AR	Identification of specific threats on a pipeline systems that require specific ILI tools	Has the Operator identified specific threats that require specific ILI tools to be used on any of their pipeline system in the last 3 years? Specific tools (e.g. transverse MFL, Ultrasonic compressive wave, and ultrasonic shear wave tools can be used for specific integrity threats (e.g.; SCC; hard spots; axial corrosion; hook cracks; etc.)



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- Approximately two weeks elapsed following the screening weeks' completion and the receipt of the actual protocols for the inspection.
- Again these protocols were distributed to the SME groups for review and response preparation.
- During the screening week it was determined that the EP Protocols as well as a review of our one call center would be best accomplished in Pennsylvania.



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- **Module AR.IL (Liquid): In-Line Inspection (Smart Pigs)**
- *Generated: 06/18/2009 01:36:20 PM for MidV2009*
- **Sub-Module**
- **AR.IL: In-Line Inspection (Smart Pigs)**
- **Question ID Scope Title Question**
- **AR.IL.01 (P)** DETAIL Qualification of Operator Personnel Who Evaluate ILI Results Does the process specify qualification requirements for operator personnel who review and evaluate ILI assessment results?
- **AR.IL.02 (R)** DETAIL Records Review - Review of Operator Personnel Qualification Records Does the process demonstrate that operator personnel who review assessment results are qualified for review of integrity assessment results and information



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- Once headquarters inspections were completed, a closing conference was conducted regarding any outstanding issues/questions
- Field inspections were started in our Mississippi district office the week following the close out of the headquarters office.



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- Three inspectors spent a full week conducting field review of records maintained in the district office as well as facilities in Mississippi and Tennessee
- Two protocol 9's were conducted.
- This occupied a large portion of our personnel's time as well as long days.



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- Week two of the field inspection involved one inspector spending a week in Ohio and Michigan.
- Two days were spent monitoring a line replacement project
- The remainder of the week involved inspection of the pipeline through Michigan and most of Ohio.



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- The third week of field inspection involved all four inspectors conducting district office record reviews and field inspection of pipeline facilities in southern Ohio and Kentucky. Two more Protocol 9's were conducted.
- Supporting four inspectors in one district is a stretch on personnel resources in the field.



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- This audit went well for several reasons
- Adequate company personnel were committed to the audit preparation which allowed the audit to proceed without delays
- Flexibility on both the inspectors part as well as company personnel to adapt.



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- Questions?