U.S. Department of
Transportation
Pipeline and Hazardous Materials Safety Administration

Voluntary Information-Sharing System Working Group Advisory Committee
Subcommittee: Process Sharing
Subcommittee Chair: Mark Hereth
Task Statement:

Task No.:

Date initially presented to VISWG Committee: February 28, 2017 (by in-person or electronic vote)

Primary Mandate Requirement(s) Addressed:

The Protecting our Infrastructure of Pipelines and Enhancing Safety (PIPES) Act of 2016 directed PHMSA to consider the development of a voluntary information- sharing system to encourage collaborative efforts to improve inspection information feedback and information sharing with the purpose of improving gas transmission and hazardous liquid pipeline facility integrity risk analysis.

Provide recommendations to the Secretary of Transportation.[i]

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     (1) the need for, and the identification of, a system to
ensure that dig verification data are shared with in-line
inspection operators to the extent consistent with the need to
maintain proprietary and security-sensitive data in a
confidential manner to improve pipeline safety and inspection
technology;
     (2) ways to encourage the exchange of pipeline inspection
information and the development of advanced pipeline inspection
technologies and enhanced risk analysis;
     (3) opportunities to share data, including dig verification
data between operators of pipeline facilities and in-line
inspector vendors to expand knowledge of the advantages and
disadvantages of the different types of in-line inspection
technology and methodologies;
     (4) options to create a secure system that protects
proprietary data while encouraging the exchange of pipeline
inspection information and the development of advanced pipeline
inspection technologies and enhanced risk analysis;
     (5) means and best practices for the protection of safety-
and security-sensitive information and proprietary information;
and
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SMS Alignment: SMS-11 (Management Review and Continuous Improvement)

Sub-Committee Purpose: To identify, evaluate and recommend methodologies that will best suit the requirements of the pipeline industry in order to meet the statutory mandate. This sub-committee will collect and evaluate information that can be used to clarify the

unique requirements of the pipeline industry in information and data sharing; the best organizational and governance model for control of access to and exchange of that information, and the recommended strategy for establishing an operational environment within which to exchange information. The sub-committee will identify critical capabilities and key milestones to achieve the best environment for information exchange that can maintain proprietary and security-sensitive data and facilitate the (easy) exchange of relevant pipeline inspection information for risk analysis purposes.

Background:
In order for pipeline safety to continuously improve, the pipeline community has adopted a Safety Management System (SMS) approach to help achieve the goal. An SMS consists of the four pillars: Safety Risk Management, Safety Assessment, Safety Policy and Safety Promotion. These can be translated into the familiar concept of *plan, do, check, act.*

All of the elements of the SMS require a significant amount of information. Therefore, one of the foremost functions of an SMS is to support information acquisition, including
- Identification and analysis of information to identify hazards or threats
- Assessment of the risk posed by hazards or threats
- Development and implementation of preventive or corrective actions.

This information can be shared informally, lacking a formal, structured process, issues such as risk liabilities, potential informational gaps, and delays in timely information flow can occur. A formal process would:
- Replace inadequate, informal communication with prompt and comprehensive exchanges of safety information
- Allow the pipeline community to coordinate and share the resources required to maximize the effectiveness of tool development and threat analysis
- Establishing a collaborative approach for identifying and mitigating system safety issues posing the highest risks.

A broader source of systemic information would provide benefits to every stakeholder. Joint tool development generates a common methodology for threat and hazard identification as well as a set of common definitions that can serve as the framework for prioritizing issues and communicating assessments and findings. Collaborating on identification and mitigation of system risks will resulted in much greater efficiency and accuracy in risk management, providing maximum efficiency and effectiveness. Finally, there are calculated benefits to collaborating on acquisition as well as the calculated savings in reducing the number of accidents.

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Task Description(s): The Process Sharing sub-committee will

In the spirit of improving pipeline safety and technology development, this subcommittee will produce a recommendation to the VIS working group for identification and improvement in the types of information and data shared among key stakeholders. Examples of stakeholders may include; congress, state and federal regulators, industry associations and service providers, hazardous liquids and gas transmission operators, gas distribution operators, public representatives and the general public. This will be accomplished through subcommittee deliberation, coordination with other subcommittees, consultations with outside experts, and synthesis of information collected during the subcommittee deliberation period. This includes (but is not limited to) Root Cause Analysis, "Good catches", Close calls, safety management systems, mitigative measures and pipeline assessment data and processes.

1. **Types of Information Data Shared and Purpose**
     i. **Proprietary**
     ii. **Aggregate (public)**
   b. **De-identified Data and Information Sharing**
     i. **How is it facilitated and governed?**
     ii. **What requirements for security and access restrictions must be addressed?**
   c. **Data Sharing Stakeholders (government, industry, vendors, public)**
2. **Data Sources**
   a. **Data collection, analysis and reporting administration (who houses)**
   b. **Data Collection**
   c. **Data Quality Process**
     i. **Verification and Validation**
     ii. **Inconsistent Data feeds**
3. **Input to Data Analysis Recommendations**
   a. **Tool design**
   b. **Tool implementation and Validation**

4. Input to Data Integration (Fusion) Recommendations
   a. Common Taxonomy
   b. Common Data Exchange Protocols

Deliverables: Subcommittee recommendation(s)/proposal(s) to the parent committee, report Summary of recommendation(s) to parent committee for approval:

1. **Preferred Information Sharing Design**, as described in Appendix A: Deliverables Table
2. **System Integration Recommendations Roadmap** as described in Appendix A: Deliverables Table
3. **Identification of audiences for particular sets of data or information** as described in Appendix A: Deliverables Table
4. List of acronyms and common terminology and definitions
5. Sources and references

Refer to/establish following working group: Process Sharing

Target Milestones & Dates: Report initial recommendations and ongoing work plan to the Committee by no later than one year from the kick-off meeting date.

1. Establish contact and line of communication with Aviation Safety Information Analysis and Sharing (ASIAS) organizational lead at FAA.
2. Report out commonalities in system milestones and design between the FAA system and pipeline system recommendations.
3. Conduct three in-person committee meetings (NLT June 2018) to gather information on the five major elements in the final report
   a. Types of Data and Data Sources
   b. Data Analysis and Data Integration
   c. Identification of audiences for particular sets of data or information.
4. Joint participation with other subcommittees for the purposes of data gathering, synthesis and recommendation development. In particular the sub-committee would work with
   a. The technology subcommittee on topics of data architecture and data management
   b. The governance subcommittee on development of the governance structure
5. Draft recommendations for input to the final report based upon the topics in the deliverables table and the report outline (NLT September 2018).

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Disposition: **Accepted Date:**
Approved by Subcommittee Members   February 27, 2018

Appendix A: Deliverables Table

Deliverable name	Purpose	Description
Preferred Information Sharing Design	Provide clear input to PHMSA on the process sharing objectives of any Voluntary Information Sharing (VIS) System	Short document describing the preferred attributes of a Voluntary Information Sharing System based upon the information collection and analysis conducted by the committee.
Identification of Users and Audiences for Data	Help to identify how the user community will interface with the VIS	Input into the final report on users and information sources for the industry and broader user community
System Integration Recommendations Roadmap	Clarify roles and responsibilities and decision-making processes for planning and oversight of initiatives	Process model, description of roles and responsibilities, and description of deliverables needed for,oversight and governance, along with implementation ROI and plans
Support the development of with another Subcommittee Recommendations for Governance Model*	Assist and provide input into the design of the future processes / systems / information needed by strategic intent.*	Sub-committee joint participation, discussion and written input as required.*

*Contribution to another subcommittee's deliverables

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[i] PL 114-183 2016 Protecting our Infrastructure of Pipelines and Enhancing Safety Act of 2016 SEC. 10. <<NOTE: 49 USC 60108