API-AOPL PIPELINE SMS INDUSTRY TEAM



Pipeline SMS

SPEAKERS

- Bill Byrd: RCP Inc.
- Aaron Duke: American Petroleum Institute (API)
- Ann-Marie Kayser: Marathon Petroleum
- Dave Murk: American Petroleum Institute (API)

AGENDA

- Greeting and API Antitrust statement
- Preface
- Maturity Model Updates
- Review Tools
 - Planning Tool
 - Implementation Tool
 - Conformance Checklist
 - Evaluation Tool
- Upcoming Pipeline SMS items
- Group discussion

PREFACE

- Tools are voluntary and are meant to help operators improve pipeline safety performance.
- All operators will fill out the tools for their own company and not all answers will look the same and that is OK.
- An opportunity to track and benchmark your maturity level
- The objective is improved performance (is your PSMS helping?)
 not how many binders you have on the shelf or tools you have
 completed.





Pipeline SMS Maturity Model and Tools

www.pipelinesms.org

LEVEL 1

PLANNING

Are you starting?

- Organization is developing an understanding of the management system
- Implementation action plan developed
- Implementation action plan approved

LEVEL 2

DEVELOPING

Are you developing it?

- Processes are being developed
- Implementation is about 50% complete

LEVEL 3

IMPLEMENTED

Did you develop it?

- Processes are developed
- Processes
 are documented
- Processes are in use

LEVEL 4

SUSTAINING

Do you do It?

- There is evidence of processes being used consistently
- Performance is being assessed

LEVEL 5

IMPROVING

is it helping?

- There is evidence of continual improvement
- Processes are resulting in measurable performance improvements



CONFORMANCE

EFFECTIVENESS -

PLANNING TOOL

IMPLEMENTATION TOOL

EVALUATION TOOL

API RP 1173 PEER-TO-PEER SHARING

See back page for a simple explanation of tools

MATURITY MODEL

Pipeline SMS Tool Roadmap



GETTING STARTED

- · Study API RP 1173
- · Attend workshops
- · Consider the benefits
- Talk with peers

- Obtain management committment to API RP 1173 implementation
 - · Liquid operators: Commitment Letter
 - · AGA members: Commitment to Enhancing Safety
 - INGAA members: Commitment to Pipeline Safety

PLANNING TOOL

- Summary of API RP 1173 requirements (71 questions)
- A gap analysis tool to compare an operator's existing system to the requirements of API RP 1173
- Documents action plans and responsibilities to close gaps
- Helps operators achieve Level 1 maturity (develop a plan, and begin work)

IMPLEMENTATION TOOL

- Summary of API RP 1173 requirements (71 questions)
- Evaluates and summarizes the operator's implementation status by question, element and overall
- Helps operators track development of programs to implement the RP up to Level 3 or 4 maturity

EVALUATION TOOL

- Comprehensive set of questions with ratings for all aspects of API RP 1173
- Helps operators evaluate the effectiveness of their programs in achieving the objectives of the RP (Is it helping?)
- Appropriate at Level 3 maturity or beyond
- Determines Effectiveness score



CONFORMANCE CHECKLIST (all API RP 1173 "shall" statements)

PEER-TO-PEER SHARING APPROPRIATE AT ALL MATURITY LEVELS



VOLUNTARY API THIRD-PARTY AUDIT PROGRAM

- API-administered audit program for conformance to API RP 1173
- Yields an objective evaluation and score to measure continuous improvement and/or benchmarking
- · Appropriate at Level 3 maturity or beyond

PLANNING TOOL

- Summary of API RP 1173 requirements (71 questions)
- A gap analysis tool to compare an operator's existing systems to the requirements of API RP 1173
- Documents action plans and responsibilities to close gaps
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| API RP 1173 Sub-element | | Actual Evidence (list the relevant documents / procedures) | Gap (Y/N | Description of Gap or Gaps Use additional rows for each Potential | Description of Potential Action(s) to Close Gaps. Use additional rows for each Potential | Require d (R), | Priority (H,M,L) | Due Date |
|----------------------------|--|---|-------------|--|---|-------------------|---------------------|-------------|
| | goals. List of measureable objectives for the PSMS. Corporate communications. | EXAMPLE Annual letter to employees from the organization's president restating the HSE goals of no accidents; injuries or releases to the environment. Sustainability Report contained specific safety initiatives. | N | | | | | |



IMPLEMENTATION TOOL

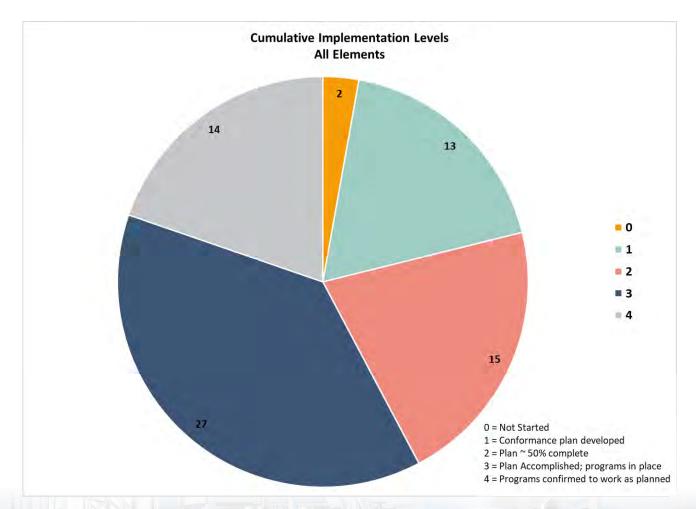
- Summary of API RP 1173 requirements (71 questions)
- Evaluates and summarizes the operator's implementation status by question, element and overall
- Helps operators track development of programs to implement the RP

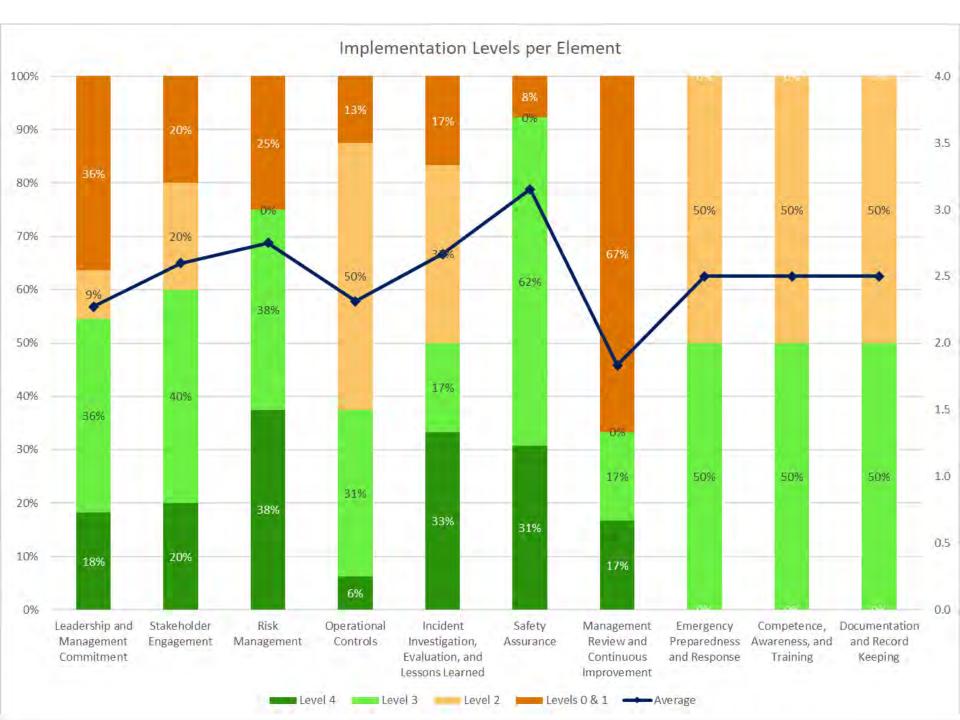
| API RP 1173 Sub- element | API RP 1173 Requirement | Level 0 (Learning) | Level 1 (Planning) | Level 2 (Developing) | Level 3 (Implemented) |
|--------------------------------|--|-----------------------|-----------------------|-------------------------|---|
| 5.2 | Has top management established and documented the goals and objectives for the PSMS? | | | l | Top management has identified and documented its goals and objectives for the PSMS. |

| Level 4 (Sustaining) | Level Assignment (0 - 4) | | |
|--|--------------------------------|--|--|
| The PSMS objectives are measureable and consistent with overall safety policies and objectives. There is evidence that top management is measuring the performance of the | 3 | | |
| organization against the PSMS goals and objectives. Interviews with employees demonstrate that the PSMS goals and objectives are known/understood or the employees know how to find them. | | | |

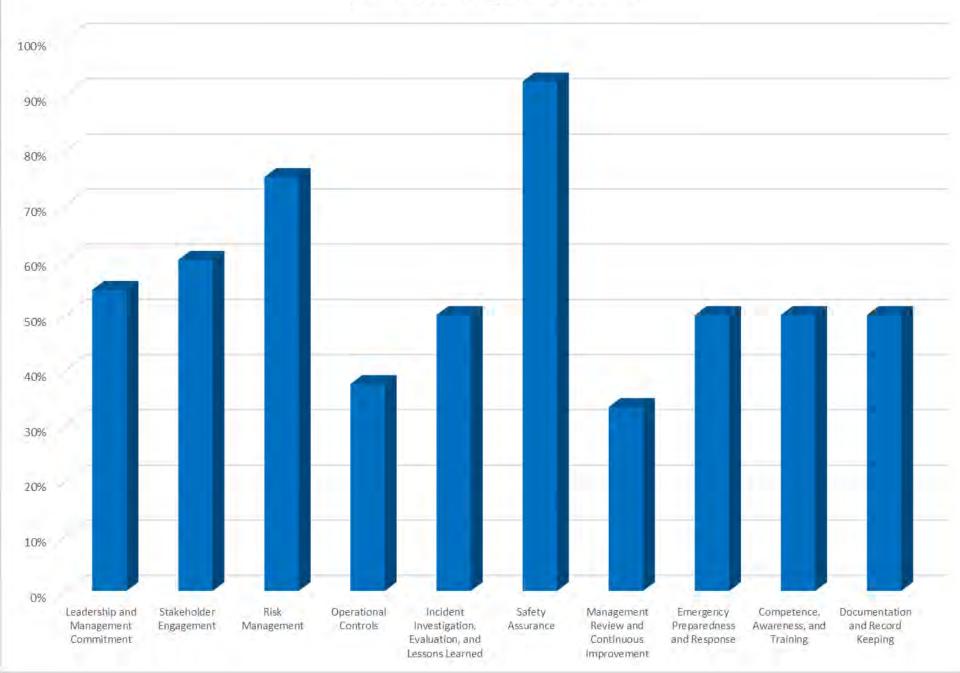
Pipeline SMS

IMPLEMENTATION TOOL: COMPANY SUMMARY





Implementation Progress - Levels 3 & 4



CONFORMANCE CHECKLIST

- A bite-sized version of API RP 1173, with a row dedicated to each "Shall Statement" found in the RP (234 in all)
- Intended as a reference document when completing the other Tools
- Includes additional guidance about achieving Level 3 or 4 maturity for each question
- No summaries of answers. No scoring.

EVALUATION TOOL

- One audit tool for evaluating conformity and effectiveness
 - 2 parts: Audit Matrix + Effectiveness Evaluation
 - Audit Matrix: Questions by element addressing RP requirements
 - Effectiveness Evaluation: Evaluation of KPI performance
- Tool can be self administered or assessed by a third party
 - Basis of the voluntary API Third Party Audit program

Each Pipeline SMS Element audited at least once every three years

EVALUATION TOOL

Objective evaluation yielding quantitative results

Benchmarking opportunities along maturity model

Results key input to Check stage of PDCA cycle

Tool is being developed and is in testing



Each Pipeline SMS Element audited at least once every three years

IN SUMMARY

- When can I get the tools?
 - February 23 Now on the website: Implementation Tool / Guidance
 - O Post Webinar: Conformance Checklist / Guidance
 - June 21, 2018 [tentative]: Evaluation Tool / Guidance
- Where can I get the tools
 - www.pipelinesms.org
 - Click on "Tools"
 - Click on the phrase "Pipeline SMS Tools"
 - Scroll to the bottom of the page and you will find

UPCOMING PIPELINE SMS ITEMS

- Support both liquids and gas industries
- Webinar series
 - [3 of 3] API voluntary third-party audit (April 19, 2018)
- 2017 Annual Report
 - Available by April 24, 2018
- Workshop
 - Tools how-to session (June 2018 Houston, TX)
- Volunteers to pilot tools Contact pipelinesms@api.org

QUESTIONS AND ANSWERS

THANK YOU