

API / AOPL Damage Prevention January 22-23, 2008 Workshop Results

API Pipeline Conference Presentation

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Topics Addressed

- Field and Excavation Monitoring Practices
 - ROW Surveillance Practices
 - Permanent Markers / Signage
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Format

- Initial presentations / setting the framework
- Most of time dedicated to breakout sessions and report out
 - 3 breakout groups, all discussing the same topic at the same time
 - Report out after each breakout session
 - Different facilitators from the industry for each breakout group and topic (9 facilitators)
- Final group identification of path forward actions
- Final wrap up presentation / comments from PHMSA

Pre-work

- Distributed materials prior to the workshop to all participants so they could come prepared for the breakout discussions:
 - “Mind maps” of each issue
 - Summaries of existing guidance and regulations

Example Existing Practice Summary

CGA Best Practices

Summary of Practices for

- **Locating and Marking**
- **Excavation**

This document establishes numerous best practices related to excavation damage prevention for all types of stakeholders (excavators, utility owners, one call centers, etc.). These are all presented as “best practices”, and stakeholders are free to pick and choose which ones (if any) they want to adopt. The best practices related to Locating and Marking; and Excavation; are summarized below. These practices also contain additional explanatory material in the CGA Best Practices document.

Locating & Marking Practices

4-1: Locators utilize available facility records at all times.

Facility locators use available records at all times.

4-2: Awareness of Errors or Omissions

If a facility locator becomes aware of an error or omission, then the facility locator provides information for updating records that are in error or to add new facilities.

Mindmap

MANY ASPECTS ARE ADDRESSED BY CGA and API RP 1166

Field and Excavation Monitoring Practices

One Call processing

- Do you follow RP 1166?
- Do you trust GPS coordinates from an excavator?
- Do you trust address locations on electronic mapping software?
- positive response even when not affected by an excavation?
- What buffer zone / criteria do you use to determine if a field visit is required?
- What buffer zone / criteria do you use to determine if personal contact with the excavator is required?

First / Second Party Excavation

do you use the same damage prevention processes? If not, what do you change?

Operator enforcement activities

- do you sue to recover damages from excavators?
- do you file complaints for excavators not using one call?

Pre-construction activities

- do you provide alignment sheets to designers? construction personnel?
- do you impose a crossing agreement? what terms are in it?
- do you document the working agreement with the excavator prior to digging (who to contact, exclusion zones, etc.)?
- do you have the excavator sign an agreement or release before beginning excavation?

Excavation Criteria

- trenchers
- backhoes, etc.
- limitations on mechanical equipment near pipeline? how far?

Excavation monitoring

- initial
 - PL employee on-site until exposed?
- continuing
 - frequency of visits while exposed?
 - "must be present" excavation zones?
 - continuity of personnel involved - only one person? how is this person backfilled with out?
 - communications methods used? any specific ones required?
- backfilling
 - do you witness backfilling?
- Coordination with adjacent utility operators
- Practices for directional drills around your pipeline?
- Comply with API RP 1166?

locating practices

what records are available to the locator?

- how are they maintained and updated?
- do they include ILI data on taps and branch connection locations?
- are they GIS-based, or traditional survey maps?

Personnel management

- how are surges in activity accommodated?
- dedicated person in an area, or a shared responsibility? if shared, how coordinated?
- training practices for locators? frequency?
- documentation?
- supervision of locators - how do you know they are consistently doing a good job?

Locating Methods

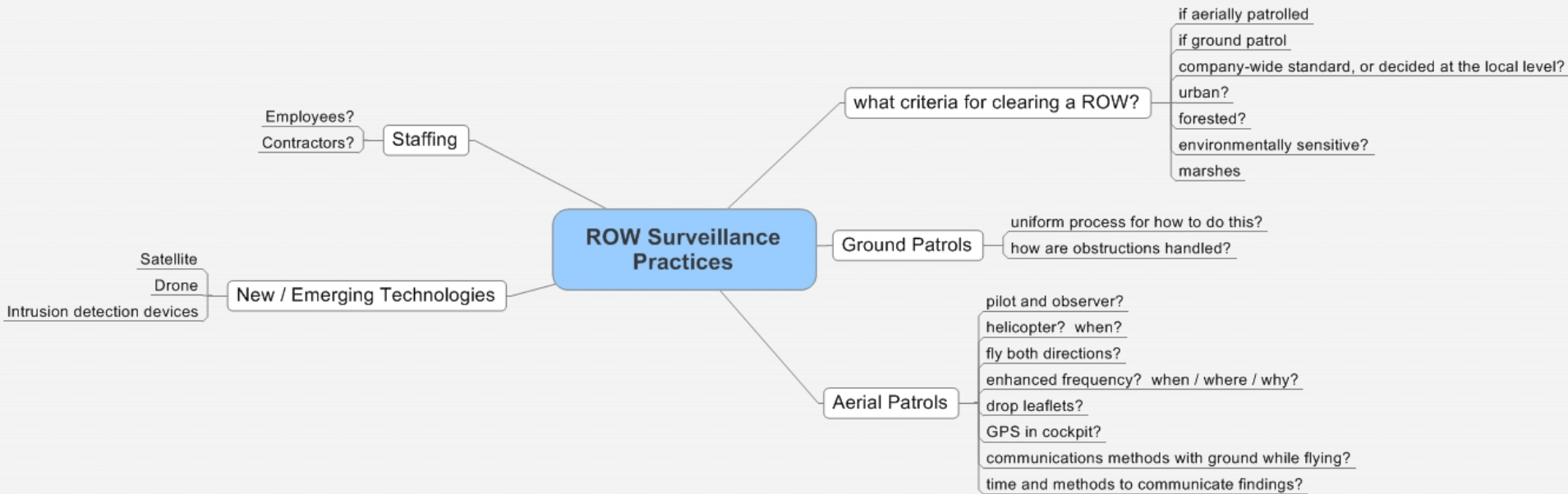
- electronic instruments?
 - Direct Connect required?
 - standards for quality of signal required?
- radar?
- bell holes
- probe bars
- require confirmation of indirect methods? what criteria?

temporary marking practices

- timing
 - Mark immediately?
 - wait until day of excavation
- type and spacing of marks for various circumstances and conditions
 - underwater?
 - parallel construction
 - multiple facilities in same ROW
 - do you mark a "monitoring" or "call" zone?
 - Do you use "whiskers" for marking?
 - What tolerance have you established vs/ centerline of the pipe?
- do you document the markings with sketches or photos?
- what policies do you have for marking re-verification and renewal during construction?

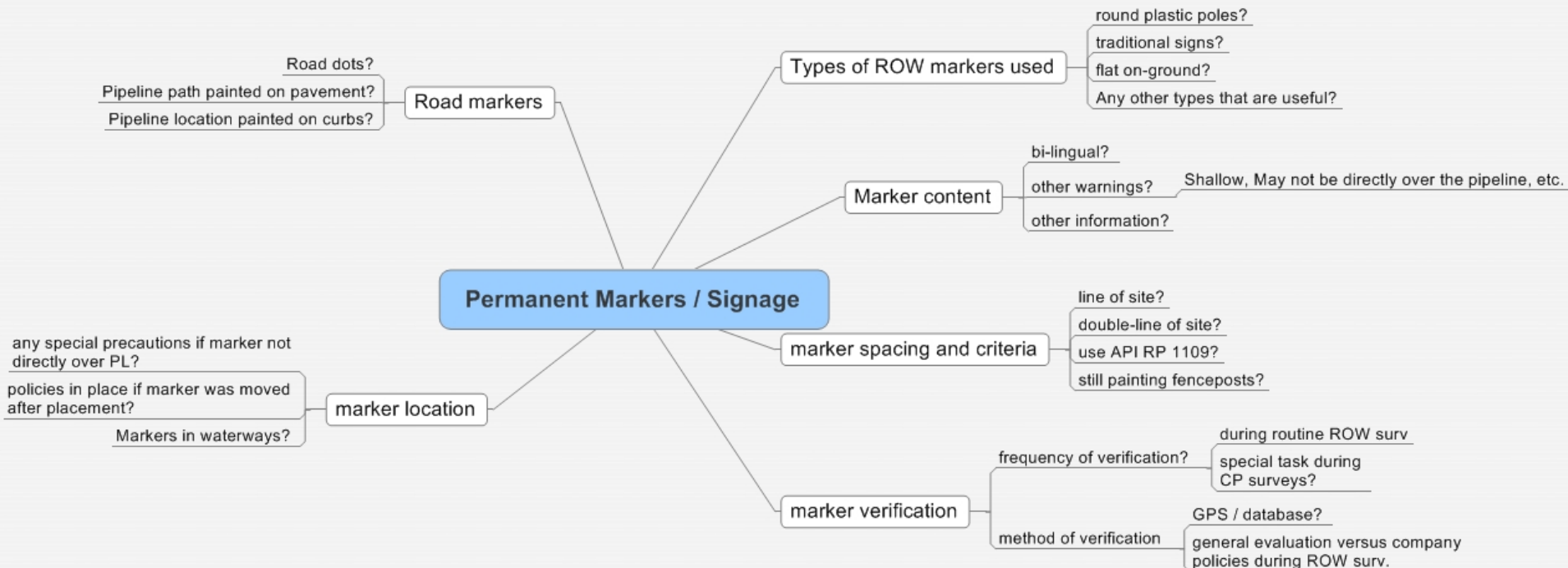
Mindmap

NOT ADDRESSED BY CGA
BEST PRACTICES OR ANY
OTHER STANDARD



Mindmap

ADDRESSED BY API RP 1109
NOT ADDRESSED BY CGA BEST PRACTICES



During the Breakouts

- Identified significant gaps between issues and existing guidance for each topic
- Ranked and selected issues for future work
- Suggested how the selected issues should be addressed
- Prepared for each group's recommendations to be discussed in the report-out session

Breakout Session Issue Template

PET Damage Prevention Workshop

Issue	Priority	Recommendation
<i>Describe the issue</i>	<i>See below.</i>	<i>Provide the group's recommendation for how this issue should be addressed (not the answer itself, but the recommended actions to GET the answer).</i>

Priority Codes:

- A – This should be addressed as soon as practicable (2008 if possible)
- B – This should be addressed soon, but shouldn't detract from addressing A's
- C – This could be addressed, but doesn't merit a special effort at this time (may work these while doing an A or a B).

Example Breakout Result

Breakout Session Issue Template PET Damage Prevention Workshop

Issue	Priority	Recommendation
<i>Describe the issue</i>	<i>See below.</i>	<i>Provide the group's recommendation for how this issue should be addressed (not the answer itself, but the recommended actions to GET the answer).</i>
Marker Location <ul style="list-style-type: none"> • Waterway x-ings • Residential locations, removal by landowners 	A	<ul style="list-style-type: none"> • RP 1109 Committee should consider addressing making CGA ad RP 1109 consistent • Should address recommendations for problems with residential properties • Consider involving landowner stakeholders in discussion
Road Markers No issues	C	
Types of ROW Markers Used No issues	C	
Marker Content <ul style="list-style-type: none"> • Marker not over pipeline/offset; • Entity vs. Operator vs. Owner; • Shallow pipeline criteria; • Call 811 before you dig; • Cathodic protection facility markers; 	B	API RP 1109 committee should review and/or address <ul style="list-style-type: none"> • Believe should address that Marker is not over pipeline; however, concern that "offset" means specific distance • Definition can be confusing; but regulatory defined (Own/Operate and should covered by RP • Shallow not defined

Final Plenary Session

- Multi-voting on most important issues / recommendations for each topic
- Development and confirmation of final consolidated list of issues / recommendations

Summary and Ranking of Breakout Group Recommendations by Topic

Permanent Markers/Signage				
	Recommendation	Leader	P	Votes
1	RP 1109 Committee should consider addressing making CGA and RP 1109 consistent concerning marker locations	Fant-A		0
2	RP 1109 Committee should address recommendations for problems with residential properties (removal of markers, beautification ordinances, etc.)	Fant-A		7
3	RP 1109 Committee should address marker content / messages (or not – just include in PA program communications...)	Fant-A		2
4	Modify RP 1109 Section 2.1.2 to eliminate ROW and property markers	Fant-A		11
5	CGA develop guidance on marking of abandoned pipelines.	Fant-A		15
6	Modify RP 1109 to include explanation of “line of sight”	Saenz-A		16
7	Develop best practices for marker verification: Procedures, tools requirements / GPS, qualifications, documentation API OTC should undertake drafting guidelines to address marker verification	Saenz-A ¶ Jones-B		7
8	Develop guidance on what the intent of the sign is, and symbol usage (to address multi-lingual needs)	Saenz-B		4
9	API or PRCI conduct research concerning the effectiveness of various types of signs, messages, symbols, and marker locations / frequencies in various environments and modify API 1109 and CGA best practices accordingly	Jones-A		14
10	PHMSA should send out letter to landowners concerning sign removal	Jones-A		0

Summary and Ranking of Breakout Group Recommendations by Topic

ROW Surveillance Practices				
	Recommendation	Leader	P	Votes
1	Develop best practice for risk-based patrolling frequency (or not...)	Leger-B		0
2	Develop RP or best practice for what should be recorded in a ground patrol (or not...)	Leger-B		2
3	API should conduct a forum to facilitate sharing on all aspects of aerial patrol and proven technologies.	Leger-A		20
4	Request that PIPA address ROW clearing issues (or not...)	Leger-A		IP - PIPA
5	Develop guidance on consistent message to communicate with landowners re ROW clearing	Leger-A		IP - PIPA
6	Get PHMSA to clarify requirements for ROW clearing	Leger-A		DHYB
7	Continue to pursue advanced technology for ROW Surveillance.	Leger-B Fant-C		16
8	Add new section to Pipeline 101 and develop aerial patrol, ROW clearing publication for landowners re ROW clearing	Will'by-B		12
9	Conduct Risk-based study for effectiveness of various frequencies of patrols in various environments (or not...)	Will'by-A		7

Summary and Ranking of Breakout Group Recommendations by Topic

Field and Excavation Monitoring Practices				
Rank	Recommendation	Leader	Points	Votes
1	Add more specifics under Task E in 1166 so inexperienced employees will know how to apply the criteria	Pearson-C	0	0
2	Develop standard criteria for boring and directional drilling/crossings (Consider the DOT advisory)	Pearson-C	0	21
3	Recommend operators place one call for excavations within their own facilities even though law may not require it	Pearson-C	0	2
4	Develop guidance on what pipeline companies are required to provide to school systems (for example) when they conduct risk assessment/feasibility studies/project planning	Pearson-B	0	5
5	Work with State agencies to promote enforcement of One-Call requirements	Pearson-B	0	26
6	Develop more robust training for the hands-on usage of locating tools. Consider adding the training requirement to RP 1166. API training guidelines should be drafted with performance indicators. API OQ task group should review and consider this issue	Boden-hamer-A Walker-B	0	8
7	CGA develop a best practice for using a standard ticket format, to drive consistency across state one call centers	Boden-hamer-B	0	7
8	CGA develop a best practice on how photos can be used to properly document locates	Boden-hamer-B	0	0
9	WHO? take actions to improve the accuracy of the information taken by the One-Call Centers - Accuracy of the data getting placed on the tickets	Boden-hamer-A	0	5
10	Develop additional guidance on directional drill/boring, pre-drill exposure protection/processes. Backfilling and directional drilling needs to be addressed by API 1166 and/or CGA Best practices	Boden-hamer-A Walker-B	0	xx
11	PET conduct a forum to share best practice for One-Call Processing	Boden-hamer-?	0	3
12	API should explore possibility of creating a standard for GPS coordinates / datum for one call purposes (use V.A. Pilot technical criteria?) and how reported by aerial patrol pilots	Walker-B	0	21
13	API should create guidelines on excavation notifications that includes positive response requirements or API 1166 needs to be modified to include	Walker-B	0	0
14	CGA should consider creating a best practice for non-compliance excavators within the DIRT tool	Walker-A	0	5
15	Develop advisory bulletin based on DIRT and other data reviews. Recommend that RP 1166 should be used by operators for 1st/2nd party excavations with limited exceptions	Walker-A	0	3

Final Ranking of Workshop Recommendations

SUMMARY RANKINGS¶

1□	Work with State agencies to promote enforcement of One Call requirements.□	Pearson-B□	A□	26□
2□	API should explore possibility of creating a standard for GPS coordinates / datum for one call purposes (use VA Pilot technical criteria?) and how reported by aerial patrol pilots□	Walker-B□	A□	21□
3□	Develop standard criteria for boring and directional drilling/crossings (Consider the DOT advisory).¶ Develop additional guidance on directional drill/boring, pre-drill exposure protection/processes.¶ Backfilling and directional drilling needs to be addressed by API 1166 and / or CGA Best practices□	Pearson-C¶ <u>Bodenhamer-A¶</u> Walker-B□	A□	21□
4□	API should conduct a forum to facilitate sharing on all aspects of aerial patrol and proven technologies. . .□	Leger-A□	A□	20□
5□	Modify RP 1109 to include explanation of “line of sight”□	Saenz-A□	B□	16□
6□	CGA develop guidance on marking of abandoned pipelines. □	<u>Fant</u> -A□	B□	15□
7□	API or PRCI conduct research concerning the effectiveness of various types of signs, messages, symbols, and marker locations / frequencies in various environments and modify API 1109 and CGA best practices accordingly□	Jones-A□	B□	14□
8□	Modify RP 1109 Section 2.1.2 to eliminate ROW and property markers□	<u>Fant</u> -A□	B□	11□