

ROV Standards

Presented to
U.S. CPSC Chairman Elliot Kaye
U.S. CPSC Commissioner Joe Mohorovic
September 30, 2014

Agenda



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- 1. ANSI ROHVA 1-2014 – Approved on September 24, 2014**
- 2. History, Evolution and Status of ROV Standards Development in Collaboration with CPSC staff**
- 3. Preliminary Issues**
- 4. Next Steps**

ANSI/ROHVA 1-2014

(Approved by ANSI on 9/24/14)



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New Dynamic Stability and Handling Test/Requirement

- **30 MPH dropped throttle J-Turn with 110 degree steering input**
- **Pass = no TWL**
 - **4 of 10 vehicles in CPSC/SEA legacy test fleet do not pass new test**
- **More demanding for oversteer vehicles**

New Alternative Seat Belt Reminder Requirements

- **FMVSS 208-style audible + lighted alerts**
 - **Proposed by CPSC staff in Feb 2011**
- **Driver speed-limiting (15 MPH) seat belt interlock**
 - **Over 60% of projected MY15 volume will include interlock**

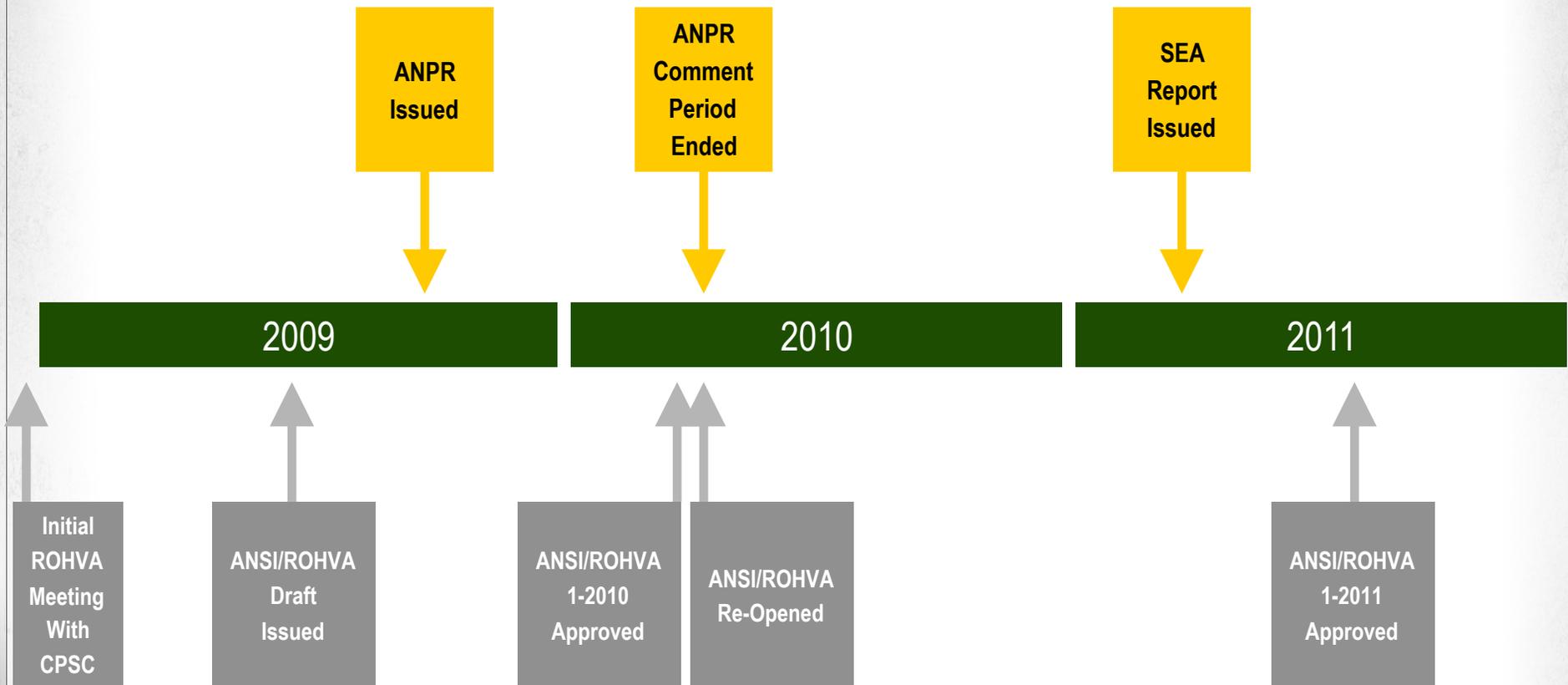
Updates in Response to 8/29/13 CPSC Staff Letter –

Not Evaluated in Briefing Package

Timeline: 2008-2011



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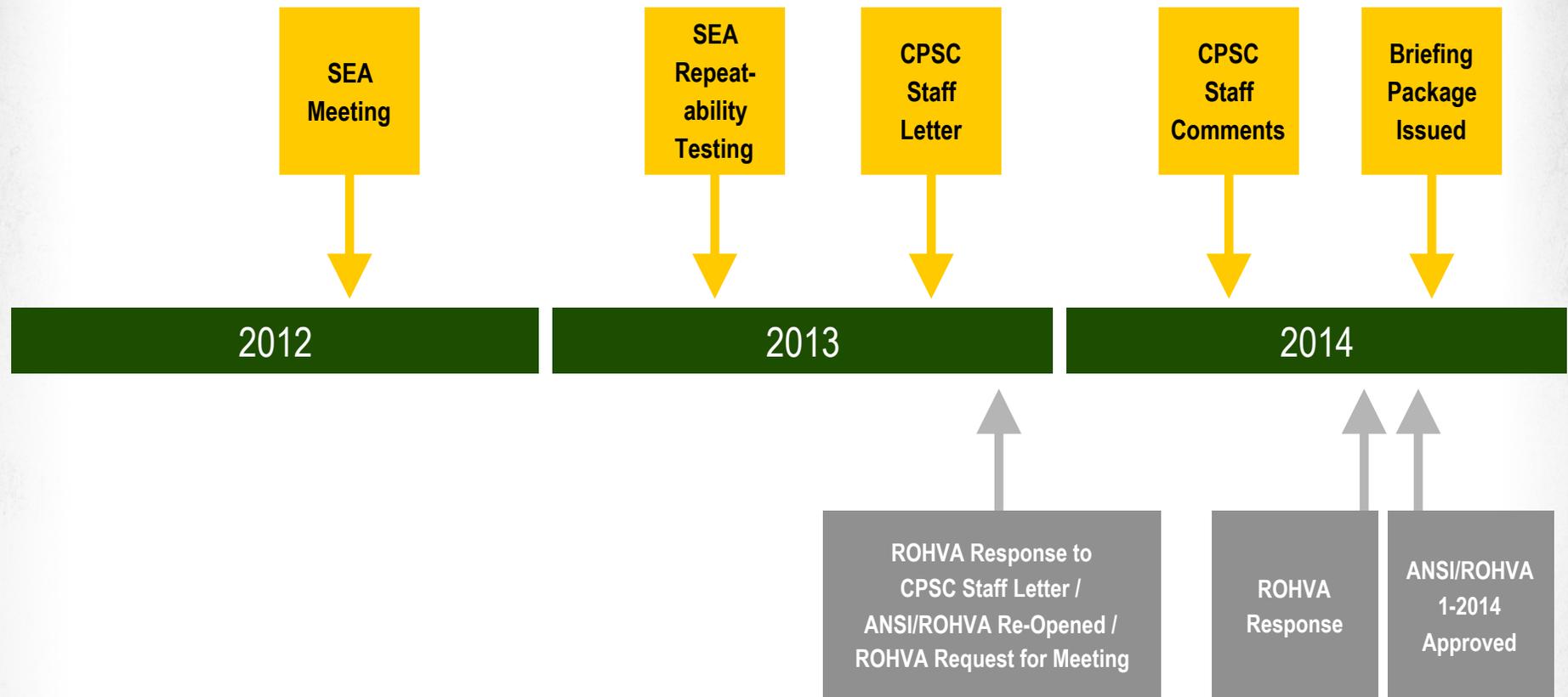


ROHVA Developed Two Iterations of Standards in Consultation with CPSC

Timeline: 2012-2014



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CPSC Staff Provided Specific Proposals; ROHVA Made Significant Changes in Third Iteration of Standards

Evolution of ROV Standards



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Issue	ANPR / CPSC Staff Comments	ANSI/ROHVA 1-2010	ANSI/ROHVA 1-2011	8/13 CPSC Staff Letter	ANSI/ROHVA 1-2014	NPR
<u>Stability & Handling</u>						
Static Stability	Loaded SSF 1.03-1.44	Unloaded Kst 1.00	Unloaded Kst 1.00	N/A	Unloaded Kst 1.00	N/A
Dynamic Stability	Unspecified J-Turn - Ay at TWL (Feb 2011)	N/A	RRR	30 mph J-Turn – push to limit; pass if TWL at 0.70+g	30 mph J-Turn – fixed input of 110 deg.; pass if no TWL 	30 mph J-Turn – push to limit; pass if TWL at 0.70+g
Vehicle Handling	Understeer Mandate	N/A	N/A	Understeer Mandate	Oversteer subsumed in ROHVA J-Turn 	Understeer Mandate

Evolution of ROV Standards



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Issue	ANPR / CPSC Staff Comments	ANSI/ROHVA 1-2010	ANSI/ROHVA 1-2011	8/13 CPSC Staff Letter	ANSI/ROHVA 1-2014	NPR
<u>Side Retention</u>						
	Unspecified Performance Reqs. and Other Features	N/A	Zone 1 (Constr.)	N/A	Zone 1 (Construction) 	N/A
			Zone 2 (Perf. & Constr.)	Zone 2 – modify Constr.; delete Perf.	Zone 2 – modify Constr.; delete Perf. 	Zone 2 – modify Constr.; delete Perf.
			Zone 3 (Perf. & Constr.)	Zone 3 – modify Constr.; delete Perf.	Zone 3 – modify Constr.; maintain Perf. 	N/A
			Zone 4 (Helmet + ROPS)	N/A	Zone 4 (Helmet + ROPS) 	N/A

Evolution of ROV Standards



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Issue	ANPR / CPSC Staff Comments	ANSI/ROHVA 1-2010	ANSI/ROHVA 1-2011	8/13 CPSC Staff Letter	ANSI/ROHVA 1-2014	NPR
<u>Seat Belt Reminder</u>						
	Mandatory Lighted Restraint Warning (Dec 2009)	Optional Lighted Restraint Warning	Mandatory Lighted Restraint Warning	N/A	Alt. FMVSS 208-style Audible + Lighted Alerts 	N/A
	FMVSS 208-style Audible Alert (Mar 2011)	N/A	N/A	N/A	Alt. FMVSS 208-style Audible + Lighted Alerts 	N/A.
<u>Seat Belt Technology</u>						
	N/A	N/A	N/A	Driver/Front Passenger Speed-Limiting Interlock	Alt. Driver Speed-Limiting Interlock 	Driver/Front Passenger Speed-Limiting Interlock

NPR Briefing Package



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- **Addresses ANSI/ROHVA 1-2011 standard**
- **Does not address ANSI/ROHVA 1-2014 voluntary standard, approved on September 24, 2014**
- **15 USC § 2058(b)(2) and (c)(3) (“For purposes of this section, a voluntary standard shall be considered to be in existence when it is finally approved by the organization or other person which developed such standard, irrespective of the effective date of the standard [(b)(2)].”)**

Preliminary Issues



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DYNAMIC STABILITY AND HANDLING

- “Although the Commission *believes* that the dynamic lateral stability and vehicle handling requirements will reduce the number of deaths and injuries involving ROVs, it is ***not possible to quantify this benefit*** because *we do not have sufficient data to estimate the injury rates of models that already meet the requirements and models that do not meet the requirements.*”
- “***Thus, we cannot estimate the potential effectiveness of the dynamic lateral stability and vehicle handling requirements in preventing injuries.***” NPR at 131 (emphasis added).*

*Rhino comparison based on only two incidents which CPSC staff concedes are *not* representative.

Briefing Package n.16.

Preliminary Issues (cont.)



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- Does not account for J-turn Test in ANSI ROHVA 1-2014
 - NPR J Turn Test*: Vehicles A, B**, D, F, I, J do not pass
 - ANSI ROHVA 1-2014 J Turn Test: Vehicles A, D, F, J do not pass (based on SEA data)

*The NPR and briefing materials contain numerous references to NHTSA and NHTSA-related test methods and testing that are taken out of context, incomplete, and also disregard NHTSA's traditional practice of providing several years of lead time for vehicle redesigns.

**Kst 1.0 static stability requirement in ANSI ROHVA 1-2014 not met (see App. A, Table 3)

Preliminary Issues (cont.)



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- Even aside from our concerns about the (a) lack of repeatability/reproducibility* and (b) use of limit condition as pass/fail criteria in NPR J Turn test, there is *no data* demonstrating that .70g is threshold for “unreasonable risk” – only theoretical benefits.**

*Among other things, CPSC’s contractor disregarded multiple test runs in which two wheel lift did not occur at the specified steering input; only tested one vehicle per model on a single day at a single location on a single surface; did not account for variations in ambient temperatures; etc.

This includes the difference between the .70 threshold and the .68 measurement for **Vehicle I, which is the only vehicle that passes ANSI ROHVA 1-2014 but fails the NPR threshold.

Preliminary Issues (cont.)



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- **Proposed Hang Tag**
 - **NHTSA NCAP – correlated extensive accident rate data to rollover risk for SSF rating purposes only (not pass/fail)**
 - **No ROV specific accident data/correlation for CPSC proposed rule**
 - **No data for .70g being a “minimally acceptable” criterion for “rollover resistance” – staff lacks “sufficient data to estimate the injury rates” of models that do/do not meet this criterion (NPR at 131)**
 - **No data demonstrating .80 is “comparatively safer” than .70 for “consumer information” purposes – especially for off-highway vehicles (15 USC 2051(b)(2))**

Preliminary Issues (cont.)



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- **Occupant Protection (seatbelt)**
 - ANSI ROHVA 1-2014 mandates seat belt reminder system to include either an FMVSS 208-style audible alert or a speed-limiting interlock for the driver
 - *FMVSS 208-style alert was suggested by CPSC in development of ANSI ROHVA 1-2011 (CPSC Staff Letter, Mar. 10, 2011)*
 - Federal law prohibits NHTSA from mandating interlocks, but ROHVA has included it as an option in response to CPSC's suggestion



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Preliminary Issues (cont.)

- Majority of new unit sales (2015 MY) includes driver-side interlocks – industry generated benefit without regulatory mandate (but disregarded in NPR).
- ROV manufacturers deploying driver-side interlocks have made reasonable determinations not to include passenger-side interlocks based on current technologies, vehicle uses, off-highway environment, and other factors – including “Captain of Ship” principle reflected in CPSC’s own data:

“[T]here is some evidence that the use of seat belts by passengers is correlated with the seat belt use of the driver. In the incidents examined by the Commission, of the 121 right front passengers with known seat belt usage, *the driver and right passenger had the same seat belt use status most of the time (about 82 percent).*” NPR at 152 (emphasis added).

Preliminary Issues (cont.)



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- **Appropriate to permit industry to continue to innovate in this area. It is unnecessary and premature for regulatory mandate.**
- **NPR indicates that CPSC itself is conducting additional “necessary” testing on consumer acceptance on interlock that will not be completed until December 2015. (Briefing Package at 301)**
- **No data indicating consumer acceptance of passenger side interlocks.**

Preliminary Issues (cont.)



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- **Occupant Protection (shoulder probe test/Zone 2)**
 - **CPSC Staff (Aug. 29, 2013)** – recommended passive barrier/structure *or* single-hand, single-operation barrier/structure – no deflection > than 1 inch
 - **ROHVA TAP** – adopted CPSC Staff recommendation on single-hand, single-operation barrier/structure; reduced deflection from no > than 3” to no > than 2”
 - **CPSC Staff (May 23, 2014)** – *no further staff comment* on proposed revisions to ANSI ROHVA Zone 2 requirements

Preliminary Issues (cont.)



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- **ANSI ROHVA 1-2014** – includes passive barrier/structure or single-hand, single-operation barrier/structure no $>$ 2 inches deflection outside vehicle
- **NPR** – passive barrier/structure only – 1 inch deflection

Next Steps



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- **ROHVA remains open to collaboration on robust voluntary standards, as our history demonstrates**
- **CPSC should not issue NPR because the briefing package does not evaluate new ANSI ROHVA 1-2014 standard**
- **CPSC should focus on initiatives that will have a demonstrable, direct safety impact based on objective data**
- **CPSC and ROHVA should work collaboratively within the context of the voluntary standards and avoid protracted and costly disputes**