

**LOG OF MEETING
DIRECTORATE FOR ENGINEERING SCIENCES**

SUBJECT: Recreational Off-Highway Vehicles (ROVs) – Meeting requested by the Outdoor Power Equipment Institute (OPEI) B71.9 committee to discuss OPEI's comments to the ROV NPR.

DATE OF MEETING: July 8, 2015

PLACE OF MEETING: National Product Testing and Evaluation Center (NPTEC), 5 Research Place, Rockville, MD 20850.

LOG ENTRY SOURCE: Caroleene Paul, ESME

COMMISSION ATTENDEES: See attached attendance list

NON-COMMISSION ATTENDEES: See attached attendance list

SUMMARY OF MEETING:

OPEI representatives summarized the comments to 16 CFR 1422, Safety Standard for Recreational Off-Highway Vehicles (ROVs), submitted via <http://regulations.gov>. The meeting agenda followed the comment letter from OPEI to CPSC staff dated June 19, 2015.

The following topics were discussed:

- Epidemiologic Incident Reports (EIRs)
 - OPEI reviewed points made in the comment letter regarding EIR analysis conducted by OPEI.
 - OPEI's analysis found 70 percent of the incidents were confirmed "tripped" rollovers and 35 percent were "unknown."
 - OPEI's analysis does not support rulemaking for ROVs.
- OPEI round robin testing
 - OPEI tested 3 vehicles at 3 different test sites with 3 different test entities and found the reproducibility of Ay to be 4 to 9 percent.
 - Dr. Gary Heydinger presented his analysis of the round robin testing results and showed that normalizing for center of gravity height brought the Ay variability range closer to 2 to 5 percent.
 - There was general agreement that better results can be expected with better controlling of the center of gravity height of the instrumented vehicle. However, some manufacturers believe this is not easy to achieve.
- OPEI's analysis of peak Ay
 - OPEI's analysis found that two-wheel lift in a J-turn does not coincide instantaneously with peak lateral acceleration.
 - Dr. Gary Heydinger explained that lateral Ay generates the roll angle that produces two-wheel lift at threshold, and presented plots of the J-turn tests (conducted by SEA) that show how peak roll angles follow peak Ay during these threshold tests.

- CPSC staff will respond fully to OPEI's analysis in a response to comments section of a briefing package once all comments are reviewed.
 - There was general agreement among engineers that visual verification of two-wheel lift is the most accurate means of identifying two-wheel lift during the J-turn test. Past efforts (by NHTSA and other test entities) to use sensors or other digital means proved impractical.
- CPSC's repeatability study effort
 - CPSC staff is still conducting tests and analyses of the J-turn tests; and will publish the data when tests and analyses are completed.

MEETING ATTENDANCE RECORD
OPEI and CPSC staff – July 8, 2015

COMMISSION ATTENDEES:

NAME	ORGANIZATION
Caroleene Paul	CPSC
Mark Kumagai	CPSC
Anthony Teems	CPSC
Perry Sharpless	CPSC
Hope Nesteruk	CPSC
Sarah Newens	CPSC
Barbara Little	CPSC
Robert Franklin	CPSC
Margaret Meadows	CPSC
Jason Goldsmith	CPSC
Dottie Lee	CPSC
Johnathon Midget	CPSC
Joel Recht	CPSC
Justin Jirgl	CPSC
Jeff Jauschneg	CPSC
Gib Mullan	CPSC
Ryan Radford	CPSC

NON-COMMISSION ATTENDEES:

NAME	ORGANIZATION
Gary Heydinger	SEA Limited
Greg Knott	OPEI
Carol Gardner	E-Z GO Textron
Mark Austrian	Kelly Drye & Warren LLP
Erik Pritchard	ROHVA
Brad Franklin	Yamaha Motor Corp.
David Murray	Yamaha Motor Corp.
Kyosuke Tanaka	Yamaha Motor Corp.
Mike Wiegard	Eckert Seamans/Kawasaki
Tyler Furman	Kawasaki Motors
Robert Loehr	John Deere
Mark Holland	MTD Products
Paul Vitrano	Polaris Industries, Inc.
Louis Brady	Polaris Industries, Inc.
Adam Bechtold	Kubota
Erika Jones	Mayer Brown LLP
Annamarie Daley	Barnes & Thornburg, LLP