



February 27th, 2015

RE: ANSI Approval for Raptor Mobile Fall Protection Carts

TO: Whom it may concern:

Please find the following information in this letter to clarify the questions in regards to the AES Raptor Mobile Fall Carts and approval by ANSI.

1. ***BACKGROUND***

When AES Raptor was in the initial development stages of the R1000 we went to ANSI and CSA to have our units reviewed and tested. As a new product that gave a completely new approach to a fall protection anchor these entities did not have a specific regulation or specification in which this product would fall under and be tested. The idea of combining a passive and active fall protection anchor by means of ballast and mechanical attachment had not been introduced therefore leaving us with no specific regulations other than the ones adopted by OSHA and the Ministry of Labor.

Because of this no other testing facilities in the United States had a way of properly testing our units to ensure that they met the requirements of the OSHA and CCHOS. That is when AES Raptor created its own testing methodology and an in-house testing facility at our headquarters in North Kansas City, MO United States. This testing facility allowed us to run rigorous testing in real world applications to determine the surface and substrates that would be approved for the Mobile Carts use. These tests were done under supervision of a certified independent third party testing organization. Our engineering studies were also sent to a certified independent third party testing organizations in the United States and Canada.

2. ***CSA and ANSI Regulations and Certification***

A representative of the Product Group, Mechanical Engineering Department of CSA International verbally informed AES on May 24, 2007, that CSA did not have any standards or requirements which include the AES Raptor R1000 Mobile Fall Protection System. CSA reached this conclusion after several telephone conversations and completion of their review of the AES Raptor website, www.raptorsafety.com.

The same rings true for ANSI, However they have been more proactive and are taking steps to create a new standard that will encompass specifications and regulations for products such as the Mobile Fall Carts. One of our in house engineers has had the privilege of being part of the brainstorming process with ANSI and has been involved with several conference calls in regards to ANSI creating a new standard. As of this date there has not been anything released by ANSI.

3. OCCUPATIONAL SAFETY AND HEALTH REGULATIONS

Because of the aforementioned situation, AES Raptor used the regulations set forth by OSHA and the Ministry of Labour as guidelines to have our product meet or exceed.

In OSHA Standard 1925.502 it states the Following:

1926.502(d)(15)

Anchorage used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 pounds (22.2 kN) per employee attached, or shall be designed, installed, and used as follows:

1926.502(d)(15)(i)

as part of a complete personal fall arrest system which maintains a safety factor of at least two; and

1926.502(d)(15)(ii)

under the supervision of a qualified person.

1926.502(d)(16)

Personal fall arrest systems, when stopping a fall, shall:

1926.502(d)(16)(i)

limit maximum arresting force on an employee to 900 pounds (4 kN) when used with a body belt;

1926.502(d)(16)(ii)

limit maximum arresting force on an employee to 1,800 pounds (8 kN) when used with a body harness;

1926.502(d)(16)(iii)

be rigged such that an employee can neither free fall more than 6 feet (1.8 m), nor contact any lower level;

1926.502(d)(16)(iv)

bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet (1.07 m); and,

1926.502(d)(16)(v)

have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 6 feet (1.8 m), or the free fall distance permitted by the system, whichever is less.

And in the Final Complete OHS Regs of 2006 it states the following:

Maximum arrest force, fallfactor, clearance, anchorage strength

37.16(1) *An employer must ensure that an anchorage to which a rope access system is attached has an ultimate load capacity of at least 16 kilonewtons per worker attached, in the direction in which the load may be applied*

(2) despite subsection (1), if it is not practicable for the anchorage to have the specified ultimate load capacity, an anchorage may be used that has an ultimate load capacity per attached worker of two times the estimated maximum arresting force created by a fall in the direction of the rope pull, unless doing so exposes the worker to other great hazards.

In reference to these regulations all Components of the Raptor Mobile Fall Cart Safety Engagement Device have been designed, tested, and engineered to meet or exceed the 5,000lb (22.24 kilonewtons) requirement. As stated in the above regulations when the Raptor Mobile Fall Carts are used as part of a “complete personal fall arrest system” it needs to be designed to have a safety factor of at least two. Raptor has tested per these regulations on numerous substrates and scenarios and have approved these surfaces.

The following regulations were used as reference for testing and certification:

Y United States OSHA:

- Part Number: 1926
- Part Title: Safety and Health Regulations for Construction
- Subpart: M
- Subpart Title: Fall Protection
- Standard Number: 1926.502
- Title: Fall protection systems criteria and practices

Y Canada Occupational Health and Safety Regulations

- (SOR/86-304): Fall protection systems 12.10 – Section (3)(4)

Y British Columbia Regulation 296/97 – Occupational Health and Safety Regulation

- Part 11 – Fall Protection – Anchors

Y Ontario Regulation 213-91

- Part II: General Construction – Section 26.7(2)

Y Alberta Occupational Health and Safety Code 2006

- Part 9 Fall Protection
 - Travel Restraint Anchors – Temporary 152 (1)(2)
 - Fall Arrest Anchors (1)(2)(3)(4)(5)(6)

Y Manitoba Workplace Safety and Health Regulation 217/2006

- Part 14 Fall Protection – Section 14.14(2)

- Y New Brunswick Regulation 91-191
 - o Section 49 Fall-Arresting System

- Y Prince Edward Island – Occupational Health and Safety Act R.S. P.E.I. 1988
 - o Fall Protection Regulations – Fall Arrest Systems 3.1 a.ii.A

- Y Saskatchewan Occupational Health and Safety Regulations, 1996
 - o Part VII, Section 101 Lifelines (f)
 - o Part IX, Section 116 Protection Against Falling

- Y Nova Scotia – Section 82 of the Occupational Health and Safety Act S.N.S. 1996, C. 7 O.I.C. 96-14 (January 3, 1996), N.S. 2/96
 - o Part II: Fall Protection

- Y Consolidated Newfoundland and Labrador Regulation 1165/96
 - o Section 60 – Safety Belts and Lifelines

4. Conclusion

Leading Edge Safety/AES raptor has done everything in its power to test and ensure that every product offered is of top quality and has undergone rigorous testing to ensure that every time our product is used there is the assurance that it has been tested and proven to all standards and regulations it may fall under. Attached with this letter is third party testing, engineering and drop test reports for your review.

Respectfully and safely,

Brent E. Smith



President