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**SUNRISE MOUNTAIN: A UNIQUE AND AWE-INSPIRING
BACKDROP FOR A POWERFUL “TRIBUTE TO THE TROOPS”
AT NELLIS AIR FORCE BASE IN LAS VEGAS**

**Dynamic Red, White and Blue Display – the Largest in History –
Featured the Output of 60 OSRAM XBO® XENON LAMPS**

The Situation:

Nellis Air Force Base (Nellis AFB, Nellis) is called the "Home of the Fighter Pilot" and for good reason. The base is a member of the United States Air Force's Air Combat Command and the home of the Air Warfare Center, the largest and most demanding advanced air combat training mission in the world.

An integral part of the United States Air Force's Air Combat Command (ACC), Nellis is the Mecca of advanced air combat aviation training. The base's all-encompassing mission is accomplished through an array of aircraft, including the A-10, F- 15C, F- 15E, F16, RQ-1A Predator UAV, and HH-60 helicopters. Approximately 10,000 military and civilian personnel work on the base, making it one of the largest single employers in southern Nevada.

Located approximately 8 miles northeast of downtown Las Vegas and covering more than 11,000 acres, Nellis is situated at the foot of the majestic Sunrise Mountain. It is over this peak, in the Frenchman Mountains, that the sun greets the residents of the Las Vegas Valley each morning. This formidable, 3364-foot peak also provided the fitting backdrop for a spectacular light show -- a “Tribute to the Troops” – commissioned by Light America and featuring OSRAM XBO® XENON lighting donated by OSRAM SYLVANIA.

According to Don Rushforth, cinema film projection key market manager for global lighting leader, OSRAM (www.sylvania.com), “The challenge was to not only light up an entire half-mile section of the peak, but to do so at a distance of

2,500 feet, with evening temperatures exceeding 90° F. Because of the very uneven terrain and tremendous heat and dust, Sunrise was a very difficult 'canvas' in which to illuminate a palette of light upon."

Don Ziemski, executive sales representative for OSRAM SYLVANIA, and a participant in the initiative, agreed. "With negligible humidity levels in Las Vegas, the evening atmosphere provides little assistance to enhance the focal power any light show, let alone one set on the craggy face of the desert peak. In addition, the intense heat offered no comfort to the extensive array of technical lighting products and technology required for the show."

The Solution:

Benny Shapiro, the Las Vegas-based lighting designer who has collaborated with Light America (www.lightamerica.net) on a number of major international projects, including the 2002 Winter Olympics, provided the lighting plan and overall management for the "tribute" that ran over the three-day Fourth of July weekend. For that, Shapiro used 60 OSRAM XBO® XENON lamps set in Space Cannon IREOS PRO in an 840-foot line.

Rushforth noted that Xenon discharge arc lamps are ideal in this type of application for several reasons. First, the Xenon light sources are the closest approximation to natural sunlight and the color temperature does not shift or degrade over the life of the lamp. In addition, the Xenon sources are direct current, so an extremely intense point source of light -- normally less than 1mm in diameter -- permits the majority of the light to be collected in a relative small reflector system. In this case, the Space Cannon 7kW reflectors were approx 14" in diameter and projected out to cover the area at a distance. Lastly, the Xenon lamp's true daylight color temperature allowed the optics to filter the light and break out the main colors of the spectrum, enabling the spectacular play of color to occur.

"The tribute used one of the largest assemblages of Xenon lamps in one display and required more than 400,000 watts of power to create the necessary focused light," added Rushforth. "It was equivalent to having every man, woman and child on this planet holding ten lit candles simultaneously -- just an amazing concept to fathom. Without question, Xenon lamps are ideal for spotlight applications such as these, due to their high brilliance and daylight quality. Even staged from nearly half a mile from the mountain base, the show was best viewed several miles away. In fact, one of the best views was from the Las Vegas Speedway, a few miles from the base."

Lt. Col. Nathan R. Hines, a spokesperson for Nellis AFB, noted, "We appreciate the Light America and OSRAM SYLVANIA efforts to light Sunrise Mountain in patriotic red, white and blue. This was a fitting tribute to the men and women at

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Nellis AFB - to say thanks for all they do to protect our freedom. What better day, than the day America celebrates its freedom, to light the mountain.”

Lt. Col. Hines added that the lights could be viewed throughout the base, and that it was truly amazing that virtually the entire mountain could be lit.

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