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**Photo available at: <http://www.rasirc.com/news/downloads/photos/roguevalley.jpg>**

**RASIRC's Intaeger UHP Systems Purchased by Rogue Valley Microdevices  
for Wet Oxide Growth**  
*System Improved Oxide Growth Rate 10%*

**San Diego, Calif. – August 2, 2006** – RASIRC™, the steam purification company, announces that Rogue Valley Microdevices has purchased four RASIRC Intaeger® UHP systems to install in its facility in Medford, Oregon. The systems will be used to generate the ultra high purity water vapor used for wet oxide growth. The Intaeger UHP is the first commercial technology that can purify steam from de-ionized water.

Rogue Valley Microdevices is a wafer foundry that grows oxide and nitride films on silicon wafers. The fastest way to grow oxide under atmospheric conditions is through a wet thermal oxidation process. There are three ways to generate the water vapor needed for wet thermal oxide growth: pyrolytic from the combustion of hydrogen and oxygen, bubbling a carrier gas through hot water, and the direct injection of water vapor. Pyrolytic processes are dangerous and expensive and require ultra-pure hydrogen and oxygen for source gases. The later two, which use de-ionized water, are susceptible to contaminants in the water.

Prior to purchasing the Intaeger UHP System, Rogue Valley Microdevices was using a heated water bubbler with an oxygen carrier gas. The Intaeger UHP system delivers more water vapor to the process than the bubbler and eliminates the need for a carrier gas. Therefore, by switching to the Intaeger UHP system and eliminating the carrier gas and increasing the amount of water vapor Rogue Valley Microdevices significantly reduced process time. Oxide growth rate improved by 10% to reach the maximum possible theoretical limit. Because some processes run up to 10 days, they were able to save an entire day of processing time. Fully saturating the chamber with water vapor improved wafer to wafer uniformity along the furnace tube. In

addition, volatile gases and organic contaminants were completely removed from the water vapor, improving overall oxide quality.

“We originally purchased three systems, but upon further evaluation, and, considering the growth of our business, are looking into the purchase of a fourth system,” said Jessica Gomez, Rogue Valley Microdevices president. “We require a safe and easy to use system, but one that provides ultra high purity for the highest quality oxide growth. We installed the first Intaeger system in April and have already found that the system has enabled us to simplify the process, improve quality and throughput, increase safety, and reduce costs while at the same time giving us a more reliable water vapor delivery system.”

“We really enjoyed working with Rogue Valley Microdevices,” said RASIRC president Jeffrey Spiegelman. “They are very aggressive and innovative when it comes to new processes and equipment. It is easy to see why they are one of the fastest growing wafer foundries.”

### **About Rogue Valley Microdevices**

Founded in 2003, Rogue Valley Microdevices, Inc. is the first company to establish a microelectronics manufacturing facility in the Rogue Valley Area of Southern Oregon. The facility includes a 1000 sq. ft. class 100 cleanroom where high quality manufacturing services are provided to its customers. The company currently specializes in offering Thin Films such as Silicon Dioxide ( $\text{SiO}_2$ ) and Silicon Nitride ( $\text{Si}_3\text{N}_4$ ). The newly constructed manufacturing facility is specifically designed with separate MOS Clean and non-MOS Clean production areas. Rogue Valley Microdevices' processing equipment is capable of volume manufacturing yet flexible enough to accommodate wafer sizes from 50mm to 200mm. For more information visit [www.roguevalleymicro.com](http://www.roguevalleymicro.com).

### **About RASIRC**

RASIRC develops products that purify and deliver ultra pure liquids and gases, with a primary focus on water vapor. While steam is used extensively in the semiconductor industry, RASIRC technology is the first to purify live steam to generate ultra high purity (UHP) steam. Starting with de-ionized water and using specialized membranes to reduce total metals to less than 10

parts per trillion, this technology reduces cost, improves yield, and dramatically improves safety. The UHP steam generated by RASIRC products is of critical importance for many applications in the semiconductor, pharmaceutical, medical, biological, fuel cell, and power industries. For more information, contact Jeffrey Spiegelman at +1 858-259-1220, e-mail [info@rasirc.com](mailto:info@rasirc.com), or visit the website at [www.rasirc.com](http://www.rasirc.com).

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