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FOR IMMEDIATE RELEASE

MAYOR MICHAEL NUTTER UNVEILS SOLAR WATER HEATING SYSTEM FOR RIVERSIDE CORRECTIONAL FACILITY

First large urban jail in the country to install roof-based solar water heating system



Philadelphia, December 4 – Mayor Michael A. Nutter unveiled today a roof-based solar water heating system at the Philadelphia Prison System’s Riverside Correctional Facility (RCF), the first large urban jail in the country to install such a system. The project will provide energy savings of 20-25% annually over the anticipated 25-year life of the system, saving an estimated \$1.1 million and one million pounds of carbon emissions.

“This is an investment in our future, reducing our energy usage and saving us money,” said Mayor Nutter. “Philadelphia is actually one of the sunniest cities in the world at our latitude and solar power represents a huge opportunity for us. With this project, we are leading by example to demonstrate to our citizens and businesses the benefits of tapping the sun’s energy.”

“We had recurring failures with our water heaters at RCF,” said Prisons Commissioner Louis Giorla. “US Facilities came to us with a long-term solution that will save us money, and put us in the forefront of solar applications. We are very pleased that they took the initiative on this innovative approach, led us through the development stages, and, with the other project partners, helped bring it to completion.”

US Facilities, Inc., the contracted facilities management provider for RCF, performed on-site project management. Other partners included the Mayor’s Office of Sustainability, the Capital Program Office, Philadelphia’s Herman Goldner Company, as the installing contractor, J. Lorber Company, and Buderus who have cooperated to bring this from concept to anticipated start-up before Christmas.

Page 2

Some of the challenges of this project include the transition from oil and gas fired water heaters to solar heat without any interruption of water service to RCF’s staff or its 800 inmates, who need access to hot water for personal hygiene, laundry, cooking and cleaning. While the roof-top arrays of 45 solar panels provide the key visual for this project, the installation of the water storage tanks and heat transfer pumps into the limited existing boiler-room space was the primary engineering challenge.

The system replaces 5 year-old conventionally-fired boilers with 15 insulated water storage tanks that are heated by an indirect circulation system. Food grade propylene glycol – heated by 45 roof-top solar panels – is pumped in a closed coil through the storage tanks. “Overheat protection” is set at 265° - an indication of how effectively the solar radiation is absorbed and transferred.

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The Riverside Correctional Facility was completed in 2004 at a cost of \$38 million and was dedicated in July of that year. It serves as the central intake facility for all women who are incarcerated in Philadelphia, providing housing, admissions and diagnostic services, classification, treatment and case management to an average daily population of 800 inmates. Funding for the project comes from the Prison System's budget (\$400,000 spread over 3 years), with supplemental funding from the Mayor's Office of Sustainability (\$265,000).

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