

Market Segment: Healthcare

POWER PROFILE

Fred Hutchinson Cancer Research Center

POWER NEED

As a world leader in biomedical research, the Fred Hutchinson Cancer Research Center in Seattle, Washington is dedicated to understanding, treating and preventing cancer, HIV/AIDS and other life-threatening diseases. The Center was a pioneer in bone-marrow transplants as a treatment for leukemia and other blood diseases. With over 3,000 employees, the Center has made some of the world's most important medical research advances during the last three decades.

As one of 39 National Cancer Institute-designated comprehensive cancer research centers nationwide, and one of the largest in the world, the Hutchinson Center is home to many sensitive biological samples and experiments. Hundreds of simultaneous research projects must be maintained within stringent environmental conditions. Any changes in temperature and humidity could influence the accuracy of long-running experiments, resulting in the loss of years of data, at costs running into millions of dollars. In addition, potentially lifesaving advances in treatment could be delayed.

Three cooling systems serve the Center's central freezer farm. On Saturday, July 1, 2006, one of the hottest days of the year in Seattle, one system failed. The freezer farm has more than one hundred freezers at -80 degrees Centigrade, containing extremely valuable research. Maintaining -80 degrees Centigrade is a complex operation and, if the ambient temperature rises too high, the freezers become overstressed. With one cooling system

down and the outside temperature reaching up to 80 degrees Fahrenheit, there was cause for concern.

As the facility staff went into action, the ambient temperature in the freezer farm began to creep upward, threatening millions of dollars of ongoing research. The A/C manufacturer reported that it would take about a week to get the needed parts. Something needed to be done immediately.

SOLUTION

Robert Cowan, director of facilities engineering at the Hutchinson Center, had previously implemented a contingency plan for the freezer farm. As part of that plan, he called NC Power Systems, the Cat® rental dealer in Seattle. NC Power had worked at the campus before and knew its systems. The Center had purchased and rented standby electrical generators from NC Power, which also maintains the Center's generators and had developed contingency planning for events like Y2K. NC Power had provided a 525-ton rotary screw backup cooling system earlier that same summer when the center's 600-ton backup chiller failed.

"Even though it was their standby chiller, the data and research at this institution is so valuable that they had to have redundant chilling capability," said Dan Thomson, marketing manager for NC Power. This, however, was the first time Cowan and Thompson had worked together for air handling. Thomson explained how this project demonstrated the total support customers get from their Cat dealer.



The Fred Hutchinson Cancer Research Center is one of the largest in the world and has developed major breakthroughs in the treatment of cancer and other diseases. The Center requires careful temperature control and called upon NC Power Systems when a critical cooling system failed on one of the hottest days of the year.

CUSTOMER

Fred Hutchinson Cancer Research Center

LOCATION

Seattle, Washington

CUSTOMER BUSINESS ISSUE

Emergency cooling for cancer research laboratories

SOLUTION

- Cat® 30-ton, 10,000 cubic feet per minute (cfm) air conditioner heat exchangers
- Cat 100 kW XQ100 sound-attenuated generator
- Complete system design, delivery, set-up, installation, operation and maintenance

CAT DEALER

NC Power Systems, Seattle, Washington, USA

On the day the cooling system failed, the Fred Hutchinson Cancer Research Center contacted NC Power rental salesman Charlie Tomsett. It was clear the Center faced a critical situation. Tomsett immediately made calls to arrange for delivery of a Cat 30-ton, 10,000 cfm chiller from the NC Power inventory. As part of the contingency plan, the rental team knew that the equipment would have to be set up on the engineering department's loading dock. Tomsett also arranged for a Cat 100 kW XQ100 sound attenuated generator to power the temporary chiller. The NC Power team quickly packaged, delivered and set up the equipment. Then they connected it to the building's HVAC system with portable 20-inch ducting.

Just four hours after the cooling unit failed, NC Power had the emergency cooling system online. As soon as the turnkey system was started, the temperature inside the building began to fall, cooling the building and protecting its valuable inventory of scientific knowledge.

RESULTS

The rental system ran without trouble for a week while the building's A/C unit was repaired. While technical help from NC Power was readily available,

the Center did not need any work or maintenance on the temporary system during its operation. Thomson, for one, was pleased that everything worked out well. "You're never going to duplicate that research," he stated. For his part, Cowan was extremely satisfied with the outcome. "I can't say enough about the support we got from NC Power," he said. "Less than four hours after the call went out, they were here and had their equipment operational."

While the Hutchinson Center had a contingency plan and the staff of NC Power was familiar with their needs, Thomson noted that other companies could also benefit by contacting Cat Rental Temperature Control planning experts ahead of time. Then they'll know what their company would need in case of an emergency cooling situation. Thomson added that dealers like NC Power have the engineers and staff to design, install, operate and maintain equipment. "The rental department is quite robust in depth and knowledge, with a network of go-to people within the industry," he declared.

*[For more information, please visit
www.cat.com/rentalpower.](http://www.cat.com/rentalpower)*

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Fred Hutchinson
Cancer Research
Center



A Cat® 30-ton, 10,000 cfm chiller from NC Power was connected to a 100 kW XQ100 sound-attenuated generator on the loading dock of the Fred Hutchinson Cancer Research Center. It took NC Power just four hours to gather the equipment, transport it, set it up and get the system running when the Center's cooling system failed.