



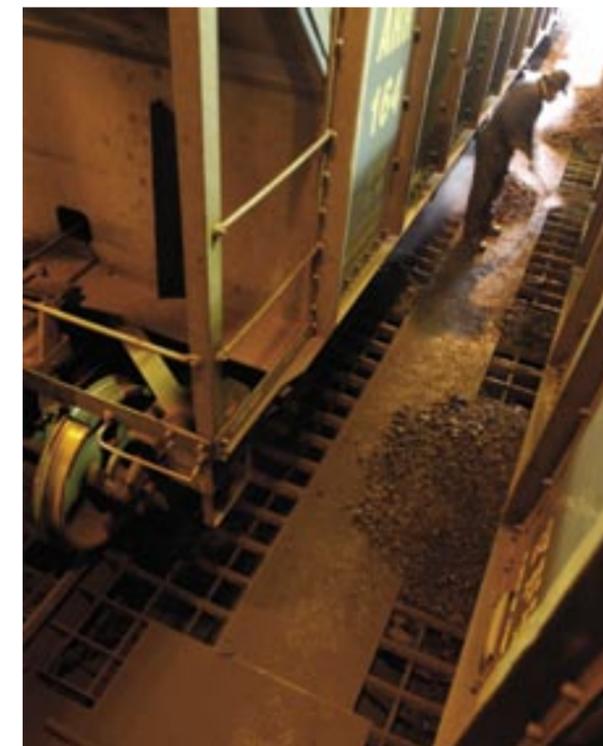
*Easy to overlook, but critical to mission success, the Central Heat and Power Plant at Eielson Air Force Base, Alaska, produces not only vital heat and electricity to thwart sub-zero temperatures, but is also a source for innovative ideas such as converting trash into energy. Built in 1952, its 52 employees generate round-the-clock heat and electricity that's distributed to the base via 150 miles of electrical lines and 30 miles of steam lines.*

# POWER PLANT PLUS



**Easing back the throttle and sounding the horn on a 3,000-horsepower locomotive,** coal rail operations work leader Jerry Rice keeps a watchful eye on an upcoming crossroad that he rates as the most dangerous intersection on Eielson. "People think they can just beat the train across the tracks," said Mr. Rice, who remembers one such collision that resulted in a destroyed pickup truck and minor injuries to the driver that included the loss of his front teeth. "The first thing the driver said was, 'Can you call my supervisor to let him know I'll be late for work?' I told him he had bigger things to be worrying about." With 10 miles of railroad track, Eielson boasts the second-largest railroad in the state. During the winter months, the Central Heat and Power Plant can consume up to 800 tons of coal daily.

**After thawing a frozen rail car inside a cavernous heated warehouse** known as the thaw shed, Joe Slocum uses a shovel to encourage the efficient transfer of 91 tons of coal into a gravity-fed pit that supplies six different steam boilers at the Eielson plant. The byproduct of the burned coal is ash that's used to build roadways, ranges and berms on base.



## RAW POWER WITH A CREATIVE AND ARTISTIC TOUCH

photos by Master Sgt. Scott Wagers

**W**hen you live 120 miles south of the Arctic Circle, staying warm is deadly serious. At Eielson Air Force Base, Alaska, that vital function is the responsibility of the 354th Civil Engineer Squadron team at the Central Heat and Power Plant.

During the course of a year, it burns enough coal to fill a train 21 miles long while producing more than 2 billion pounds of steam to generate vital heat and electricity for 1,201 buildings and 8,400 people. But at the same time, the industrial behemoth is a source of innovative ideas geared toward preserving a pristine Alaskan frontier.

**"In winter, I'm the main focal point at the base,"** power plant superintendent Bill Havard (below) said matter-of-factly about the importance of producing heat and electricity for base residents. "Most people can't believe we're 120 miles south of the Arctic Circle and doing things like this," he said of innovative projects such as recycling used oil and trash into energy, and replacing chlorine with barley to purify water. Thirty-eight-year federal service employee Marvin Acy Wells said the reason he began painting scenic landscapes around the power plant (far right) is because a supervisor asked that walls be



Painted to prepare for a VIP tour. "I love to paint, but not with a roller," Mr. Wells said. "I looked at that first 20-by-24 wall and thought it could use some clouds." VIPs loved it. There are now eight scenes painted throughout the plant.



Several tons of paper, cardboard, untreated wood and plastic are compacted into more than 2,100 tons of pellets each year and burned alongside the coal. Doing so saves the cost of landfill fees, offsets the cost of coal and reduces the amount of trash dumped into landfills. Similar use is derived from used motor oil. About 16,000 gallons are burned and converted into energy each year.

And thanks to an attentive George Pousche watching an episode on the "Discovery Channel" dealing with water treatment, the power plant now uses barley to combat algae buildup in the 24-acre cooling pond, reducing chlorine usage by 95 percent.

Fellow employee Marvin Wells makes things greener in a different light. Amid the loud and drab interior of the plant, his artist's brush brings the outdoors inside through scenic murals adorning nondescript machinery.

"It's one of the unique experiences you can have in the Air Force," Master Sgt. Terry Martin said in summing up his work at the plant as the maintenance superintendent. "It's not a normal government operation." ☺

— Master Sgt. Chuck Roberts



**Paper, wood, cardboard and plastic** are collected in a warehouse and fed by forklift into a shredder (right) before continuing their journey into another machine that compresses the assemblage into a new life form (above). These muted, gray plugs are then mixed with coal and burned as a source of recyclable fuel at the plant. The plugs take on a more festive appearance in late December when Christmas wrapping paper is added to the mix. "They'd make great tree ornaments," a recycling plant employee added.

