Nuke room mimics real thing

Associated Press

BAY CITY — Building models might be considered kid stuff, but work on a certain full-scale model at the South Texas Project Training Facility is far from child's play.

Owners of the $5.5 billion nuclear plant have spent about $8 million to construct a simulated control room which mirrors the real thing — right down to the paint job.

A nuclear plant control room, where technicians monitor the intricate details of generating electricity, is the nerve center of operations. The opening scenes from the movie "The China Syndrome" took place in a setting that is eerily similar.

Dennis J. Cody, manager of nuclear training for Houston Lighting & Power Co., says that even the noises that will be heard in the actual control room during operation have been duplicated for this costly mockup.

But unlike the Jane Fonda film, this control room not only looks and sounds real but acts like the genuine article as well.

Technicians have already hooked up thousands of wires from the control panel to a computer, which will respond to control commands and will be programmed to pose problems for trainees to solve.

Cody explains that prospective plant operators need experience before they enter the real thing, and the replica is the most valuable learning tool available.

"We can set up problems where he can work himself out of a scenario," Cody says. "This truly is a place where we can give people experience."

David Hooper, STP information coordinator for Central Power & Light, defends the cost of the replica for this reason.

"In one month, they (trainees) could see more go wrong than they would during their whole career," he claims.

Hooper says that properly trained personnel will help offset the costs involved in training them.

"This is not only for plant safety but for economic reasons as well," he says. "The more time can can keep STP on line, the more it can save consumers."

The 40,000-square-foot training center which houses the control room also houses classrooms, business offices and a 5,000-square-foot Emergency Operations Facility.

The EOF is required by law and would be used if a plant emergency should occur.

Cody says it is self-contained and that personnel could live there for an indefinite period of time without leaving the premises.

"The facilities are a lot like a motel," he says. "And personnel will feel quite at home there."

The EOF is designed to be used in all conditions, he says, pointing to the 12-inch thick walls.

"We have a recirculation system, bathrooms and showers," he says.

Training will be ongoing even after the plant begins operating, Cody says.

Although the plant's first unit is not scheduled to start producing electricity for another two years, personnel training has been taking place at the plant since 1983.

Hooper says tours of the simulated control room probably will be given starting in January, when it is completely finished.

SHOE by Jeff MacNelly

SIDS: Mother mourns child, doctors search for answers

By SALLY TAYLOR
Reporter

Carolyn Goddard of College Station knows a killer well.

Her 2-month-old son died of Sudden Infant Death Syndrome in 1981.

"One morning James woke up about 3," Goddard recalls. "I usually took him to our den to feed him so as not to disturb the rest of the family.

"Sometimes I would fall asleep with him on the sofa, but I was so tired that night I thought I might push him off. We kept a cradle in the den, and I laid him down.

"The next morning, my husband was leaving for work," she continues. "I heard him in the kitchen and I got up and it was kind of late for James to sleep. I immediately knew something was wrong.

"I turned him over and he was dead."

SIDS, also known as crib death, is the leading cause of death in infants one to six months old, says Dr. Kenneth E. Matthews of the University Pediatric Association in Bryan.

One infant in the Bryan-College Station area dies of SIDS each year.

Carol Morris, a counselor at the National SIDS Foundation in Baltimore, says 7,000 to 8,000 babies are victims of the syndrome each year.

She says SIDS is an unexpected and sudden killer.

James' death was completely unexpected, Goddard says.

"He was an apparently very healthy little boy," she says. "He progressed like he was supposed to. He was a very good eater, just no problem."

When Goddard discovered her son was dead, she says her reaction was just to "lose it completely."

"I grabbed him up and I ran outside and caught my husband in the driveway and I was screaming that James was dead.

"I came back in the house — it's very hard to remember much of it," she says. "I remember I was on my hands and knees holding him in one arm and I was screaming that I had killed him because I couldn't imagine why he was dead."

SIDS has been recognized as a cause of death for the past 20 years, but the condition itself is not new, Morris says.

When mothers slept with their babies it was thought that SIDS victims had accidentally been suffocated by their sleeping mothers. Later, SIDS deaths were attributed to choking or suffocation caused by an infant's blanket.

Only recently has SIDS been identified as a distinct syndrome and the reason for the unexplained deaths of its victims.

But, so little is known about SIDS that parents often feel that it offers no explanation for the death of a child.

"For months, even after I had the counseling and had gone to Houston to speak with the SIDS researcher and had spoken with the pediatricains here and the physician who did the autopsy, I was still demanding an answer and there still wasn't one," Goddard says.

Many studies are being performed to find the cause of the syndrome.

The most widely accepted theory is the Sleep Apnea Hypothesis, proposed by Dr. Alfred Steinschneider, director of the National SIDS Institute in Atlanta.

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Steinschneider conducted a study of sleep apnea, a condition in which an infant stops breathing for prolonged periods during sleep, and later learned that some of the infants in his study had died of SIDS.

He theorized that the babies died during periods of sleep apnea; they stopped breathing and never started again.

Steinschneider and his staff are working on a five-year study to develop a screening tool to predict the syndrome in newborns.

B. J. Moore, nurse coordinator at NSIDSI, says, "Hopefully from this five-year research study will come a screening tool so that all newborn infants will be screened in the hospital, especially siblings of SIDS babies."

Moore says that, although the precise cause of the syndrome is unknown, the Atlanta team believes some abnormality occurs while the baby is in the womb.

"We're certainly looking at it from the prenatal view, from the fact that something happens when the baby is in the uterus," she says. "Exactly what happens, we're not certain of. We know it's not something that happens at the time of delivery, like a problem with the delivery itself.

"We know SIDS is not a genetic factor although there are familial tendencies, but it's not genetic in nature."

Matthews says, "The only abnormalities detected in autopsies on SIDS babies seem to be small hemorrhages, called petechiae, on the surface of the lungs and on the surface of the diaphragm."

These hemorrhages are not the cause of death and researchers cannot explain why they occur in the victims.

Although no precise cause of the syndrome has been determined, researchers say high-risk groups have been identified.

"There is no typical SIDS victim but certain groups of babies have a slightly higher risk than others," Morris says. "The SIDS victim is more likely to be part of a multiple birth or premature, weighing less that five pounds.

"The victim is slightly more likely to be male and the second or third born child. A higher percentage of SIDS deaths occur in the winter, peaking in January. Other babies considered to have a high risk are brothers and sisters of a SIDS victim."

Matthews says babies two to four months old with teenage mothers who did not seek prenatal care and who are in a low socio-economic group seem to have a high risk.

"And we have to really look at the families who have a history of infant death," he says. "That is one group we can say is a definite high-risk group. If you had an infant that had documented SIDS, those children that are subsequently born to that family should have a sleep study done."

During a sleep study, Matthews says, the baby's heartbeat and respiration rate are monitored for 12 hours, followed by a complete physical and neurological examination.

Afterward, the child's breathing is measured. Specialists interpret the results and, if they find a problem, treat the child with medication, a breathing monitor or by another method.

Breathing monitors are being used by three or four families in the area, Matthews says. The monitor can be used to detect abnormal breathing patterns and possibly prevent SIDS.

The monitor is a thin belt placed over the baby's abdomen whenever the child is not being observed. The belt is connected to a machine that measures heartbeat and respiration rate and sounds an alarm if the heartbeat drops or if the baby stops breathing for longer than 20 seconds.

This allows the parents, who must attend a training session, to help the baby.

Goddard monitored the two daughters she had after her son died. One, Stephanie, had three apnea episodes in two days when she was about four months old. The monitor's alarm sounded each time and Stephanie resumed breathing after Goddard shook her.