Making old new again
Y-12 plans for the future with modernization plan

By Bill Wilburn — With aging facilities and the members of its highly skilled workforce moving steadily toward retirement, the Y-12 Plant must make plans for the future. A long-range plan that will allow Y-12 to not only continue but also improve upon its vital national security mission has become the center of a lot of attention in recent months. Y-12 modernization, or Y-SIM for the Y-12 Site Integrated Modernization, would create an advanced weapons component production facility that is smaller and tailored to meet current and future mission needs of maintaining the enduring nuclear stockpile while reducing costs and improving protection for the workers, the public and the environment.

Tom Smith, modernization program manager, says that the plant has embarked on a "long journey toward modernization." But just as "a journey of a thousand miles starts with a single step," Smith says that Y-12 will make the modernization journey in steps. "There is a lot of discussion and a lot of activity focused on modernization right now. Development of this modernization plan is part of Y-12's demonstrating its commitment to stockpile stewardship missions through its strategic plan objectives," Smith said.

A first step of the modernization journey is under way in a conceptual design report for a new highly enriched uranium materials facility just completed and issued to DOE headquarters with a request for inclusion as a line item project in the FY 2001 budget. Other facilities under study are a special materials facility and a new Enriched Uranium Operations factory, which would be at the core of a modernized Y-12's DP missions. These are, however, further on up the road. As Smith sees the plan, there would be six to eight major components to modernization, and they would focus on manufacturing capability and critical utility and infrastructure systems that support manufacturing and production capabilities.

A very important feature of modernization will be the use of advanced technology as facilities are rebuilt. Modernization will allow the use of today's state-of-the-art technologies that offer opportunities to improve quality, reduce process variability, gain operating efficiencies, reduce hazards and waste streams, and build in process flexibility. The challenges of a science-based stockpile stewardship program without underground testing will demand the best technologies available.

"The biggest driver for modernization to ensure production capability into the next century, perhaps for the next 50 years. In virtually any scenario involving the nation's nuclear weapons stockpile, Y-12 is going to have a mission. And, as nuclear arms reduction treaties are implemented, Y-12's work load increases," Smith said.

"Another big reason we are thinking about modernization is that maintenance costs are increasing, and operations are not as efficient as they could be in modern facilities designed for today's missions and constructed to today's standards. Due to our current processing layouts, we find ourselves moving parts many times in the west end, which is both inefficient and costly," he said.

Naturally, costs are a key question. While no concrete figures have been determined, a total price for a fully modernized plant has been estimated at over 1.5 billion over the next 12 to 15 years. The current budget request for support of modernization is $15 million for expense funding in FY 2000 and $18 million in initial capital funding in FY 2001.

Looking at the first three potential modernization projects, the cost of the HEU materials storage facility is estimated about $120 million; the special materials facility, which would process non-weapons and non-lithium materials, would cost another $150 to $200 million; and the Enriched Uranium Operations factory, which would be the key to Y-12's production mission, is estimated at $600 million and would take as much as seven years to build. At this point, Y-12 does not have funding in place for modernization. Laying the groundwork for funding in the FY 2000 and 2001 budgets, however, is a high priority within Y-12.

"We would like to have continuous funding for the integrated modernization program — funding that would be focused on a series of projects over that time period. We hope there would not be major gaps between projects so that we could continue construction and other activities associated with modernization without interruption, which, as you know, increases costs," Smith said.

He added that a commitment to modernizing Y-12 is a crucial step in ensuring the plant's ability to perform its stockpile stewardship mission well into the 21st Century.

If I had a hammer...

Ralph Lockhart of Facilities Management hammers away at the raised garden beds the volunteer group made for the Keystone Elder Day Center members. They also spackled and painted interior rooms at the center.

The group's outing was the inaugural event for the new Volunteer Program at Energy Systems. More events will be planned in the future. See page 2 for the story.
Volunteer country

Energy Systems employees take time out to help those in need

The Energy Systems team raised nearly $10,000 for the Anderson County chapter of the American Cancer Society during the Relay for Life Friday night, May 7, through Saturday morning, May 8, at the Oak Ridge Civic Center. Energy Systems won the "Number 1 Fundraising Team" award for 1999. Overall, the relay doubled its $28,000 goal by raising a total of $56,000. The Energy Systems team's total of $9,958, and the average of $750 raises per team member was first among all teams.

By Carol Grumichauer—We are, for the third year in a row, proven that we are not only good neighbors but also champions of endangered species protection. Through financial support our company is taking care to protect some of Tennessee's smallest yet rarest inhabitants, our aquatic species. Through continued support of the Nature Conservancy of Tennessee's Southern Appalachian Rivers Initiative, Lockheed Martin is helping protect inhabitants of the biologically significant rivers of eastern Tennessee, beginning with the Cloch River in Hancock County and the Conasauga River near Chattanooga. The two watersheds are critical habitats for many of Tennessee's most imperiled species, among them freshwater mussels, fish, and other aquatic invertebrates.

Bob Van Hook, president of Energy Systems, and David Reichle, vice president for ORNL Life Sciences and Environmental Technologies, recently presented a check to Andrew Walker, state director of the Nature Conservancy of Tennessee and Beth Boood, director of Development and Marketing also of the Tennessee Chapter of the Conservancy. "The key to successful river projects is involving the community in the process through realization that their own backyard is valuable and worth protecting," said Leslie Colley, director of the Southern Appalachian Rivers Initiative. "Lockheed Martin's ongoing support of our efforts is to protect Tennessee's aquatic diversity illustrates the vision and commitment they bring to the community." Lockheed Martin's commitment to the Southern Appalachian Rivers Initiative exemplifies the benefit of partnerships between business and conservation. "We in Oak Ridge, with our heritage of the land that makes up the Department of Energy's Oak Ridge Reservation, are keenly aware of the importance of protecting our land and our waterways in order to preserve biodiversity. When these resources are damaged, we have lost something that can never be regained," Van Hook said. "Lockheed Martin's support to the Nature Conservancy is one way that we can demonstrate our commitment to preserving Tennessee's threatened animal and plant habitats." For more information about the Nature Conservancy of Tennessee, contact the office at 615-253-8033 in Nashville.

Lockheed Martin helps fund group to save Tennessee rivers

Lockheed Martin contributed $2,000 in corporate funds in support of this fundraiser. Andy Fields was the top fundraiser of the entire event with a personal total of more than $1,200. Not only did the Energy Systems team lead all the fundraisers, it also finished high in the rankings in the "Sweet Toof" dessert contest thanks to Lynn Gustavson. Team leader Bob Hawthorne congratulated everyone, on the success of the event and added a note of thanks to Bill Capshaw for conducting the auction.

Team members were Hawthorne, Nancy Owens, Anne Travis, April Fields, Barbara Owens, Debbie Hunter, Eva Irwin, Mike Ralidger, Carl Scarborough, Ralph Lockhart, Ray Smith, Janie McCaslin, Gus Gustavson, Bill Wilburn and Steve Wiley.

Some 100 walkers enjoyed a stroll along Knoxville's Riverfront Park during the Juvenile Diabetes Foundation Walk to Cure Diabetes Saturday, May 15. Lockheed Martin walkers raised more than $7,000 as part of the $452,000 raised by the event. Corporate kicked in another $10,000 in contributions. Energy Systems team captains were Harvey Gray, Sheila Riepe, Mary Ann Merrell, Jarret Sexton, Dana Jennings, Kirth Kinke, Janie Williams, Dave Medovich, Scott Sanders, Rich Crabtree, David Leffew and Gus Gustavson.

The Energy Systems Volunteer Program held its inaugural project May 21 at the Keystone Elder Day Center in Oak Ridge. The center, which rents space at First United Methodist Church, provides a day-care program for senior adults with functional impairments so that participants may remain in their homes as long as possible and avoid premature institutionalization.

The center provided a 'wish list' of tasks to be completed, which included spackling and painting; constructing a small, portable handicapped-accessible ramp; and creating a

Ray Smith of Facilities Management and Marcella Willis of Property and Materials Management build raised gardens during the Day of Caring at the Keystone Elder Day Center.

The center provided a 'wish list' of tasks to be completed, which included spackling and painting; constructing a small, portable handicapped-accessible ramp; and creating a raised-bed garden area that is wheelchair-accessible.

Volunteer projects are open to any Energy Systems employee, their spouses and their children above the age of 16. If you are interested in participating in a project or have questions about the project, contact Dave Medovich (576-5553, dmv).

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Roundup
by Virginia Donahoe, Retirees' Association president, 576-1786

Let's go West
Have you ever been to Branson, Missouri? Here's a chance to go and stop on the way at Mississippi casinos, travel through the Ozarks, attend popular shows and dine at Lambert's where they toss the "thrown rolls" so fast it's hard to catch them. This trip has been enjoyed by all who have taken it, and most have taken it more than once.

The trip departs September 8 and returns September 12; five days for $449. If you haven't been, don't miss it. If you have been, it's time to go again. Call U.S. Travels to ask questions or make reservations at (423) 982-8532 or 1-800-282-4631.

Membership
We want to thank all of you who responded to our recent membership application form (in the April 29 issue of the newsletter), which brought us a number of new members and many renewals. For those of you who checked "Volunteer Work" as one of your interests, we would like to hear about your projects. Please write and mail us for the retirees' column. Also, if you have in mind a job, such as the support of Habitat for Humanity, Oak Ridge Methodist Medical Center or the Children's Museum, do let us know. A number of volunteers will be needed as we approach the Christmas season.

Y-12 Development Division
The next gathering of the Y-12 Development Division retirees will be held at noon Thursday, June 10, at Lady's Caterers. Spouses are invited as well as people who worked closely with the division before they retired. Call Don Scott, 483-6555, by June 7 if you plan to attend.

In ESN eleven years ago
In a 1998 retirees' column, we wrote about plans of the Lost Chords band, and included a note about "the band's latest and greatest news." Paul Riedl had just bought a new accordion that could be programmed to play any song by pushing a button that makes it sound like a piano or organ or two instruments at the same time! That is no longer the accordion he plays today, and he has never told us what happened to it.

What would you do?
We received a story from an Energy Systems employee that involved an ethical and value-oriented situation. After discussing many points of view about the story, we decided to let readers decide what they would do in this situation.

While your feedback always is appreciated, it is not necessary to respond to the story, we decided to let readers decide what they would do in this situation.

What would you do if you'd been the one to hit the car?
What would you do if you'd been the one to hit the car? Would you have felt bad if the car had been a company car? Would you have felt bad if the car had been a company car?

Find your way at Safety Day
A map of events for the June 4 celebration

May 27, 1999
In character

FMO's Robbie Underwood helps drama students build not only sets but confidence as well

By Ellen Barish—Some people just don't know when to quit. In Robbie Underwood's case, he doesn't want to. Four years ago the Oliver Springs resident volunteered his time and talents to help his daughter's Coalfield High School drama class produce a play. Since then, Robbie has continued to write scripts and music, construct sets (including a 20-foot submarine he says is still hanging around his house), devise special effects, and coordinate the productions.

"I had been involved in plays when I was in school, and I didn't want to do something that looked mediocre and cheap," he said. "We go for an big, grand and dramatic as we can—a full-blown production. This year, we put together a 70-foot wide set that included special effects and lighting." Robbie's play, "Once Upon a Ghost Story," written for the class this year, is set in Louisiana swamp country in the late 1960s. Part of the play includes a video introduction that was filmed by Robbie at an old mansion in Oliver Springs and features a "ghost" who appears and disappears in the attic. The students went out and found costumes appropriate for the era.

"The kids really enjoy doing the plays. The year after I helped my daughter's class, the number of students signing up for drama more than doubled," Robbie said. "I think they see my enthusiasm for the project, and it becomes contagious. I try to give them the best I have, and dare them to rise to the challenge."

And rise they do. The plays are performed not only for the student body for the other students at the K-12 school, but also the paying public. Members of the community prepare a meal and sell tickets to the "dinner theatre" held in the school cafeteria. Robbie says the plays have become a popular annual event, and there always is a packed house.

But the folks in Coalfield aren't the only ones who think the plays are great. Mona Justice, who teaches drama, invites a long-time friend and former University of Tennessee Theatre Department professor to critique the actors and hand out awards for best performances. "Dr. Shaw mentioned to me that he'd never seen this level of participation in a high school theatre production," Robbie said. "He said he's seen a number of productions in Knox County schools where his wife taught, but ours rivaled any of them. I really was proud of that compliment because we've all worked hard, and it's good to know it shows."

Another interested party who attended this year's production is Bill Landry, who brought a film crew and interviewed Robbie, the students and others for his "Heartland Series" that airs on WBIR-TV. Robbie says the segment will air sometime soon. Robbie estimates that each year's production takes about six months to create. Being a musician, he likes to incorporate as much music into the plays as possible and begins composing songs in his home studio in the fall. By the time the class begins in January, Robbie and the kids begin to construct sets using donated materials from a local company, often working until late in the evening to finish them. "I'll bet I've spent at least $1,000 on pizza in the last four years," he said.

There will be no breaks for Robbie this year, however. He's already researching and laying the groundwork for next year's play, a musical based on historical events in and around Coalfield and Oliver Springs.

Justice and the school are grateful for all of Robbie's contributions. "He's heaven-sent," said Justice. "I don't know what we'd do without him. He's so creative and the kids just love working with him." The feeling is mutual too. "It's a mixed blessing," he said. "I don't get as many chances to write as I used to, but working with the kids is great and gives me a feeling of satisfaction that I wouldn't trade for anything."