

the **Y-12**  
times

70<sup>TH</sup> ANNIVERSARY

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## ‘Cook’ing at Y-12 for 70 years

At a Nov. 14 visit to Y-12, National Nuclear Security Administration’s Deputy Administrator for Defense Don Cook shared his outlook on the future and his thanks to employees for continuing their 70-year tradition of making America safer.

“There are three things to remember,” Cook told a meeting of NNSA Production Office and Y-12 employees. “We have an enduring mission. Y-12 plays a key role in it. And a nuclear deterrent remains the ultimate insurance policy for America.”

Cook also shared his thanks for preparing for the potential furlough in October because of the government shutdown and lack of appropriations. During what was the longest government shutdown to date, Cook said Y-12 and NNSA ensured a safe and secure shutdown. “You achieved the objective. You planned well. We did not have a major safety problem [complex-wide]. We did not have a major security problem,” he said. “I really appreciate what you’re doing here.”

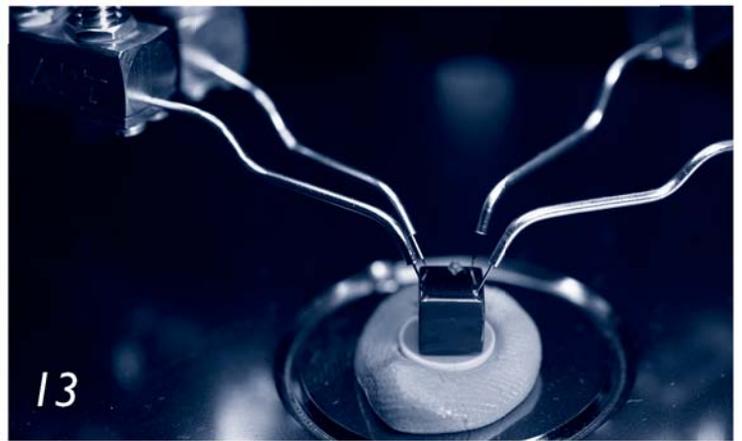
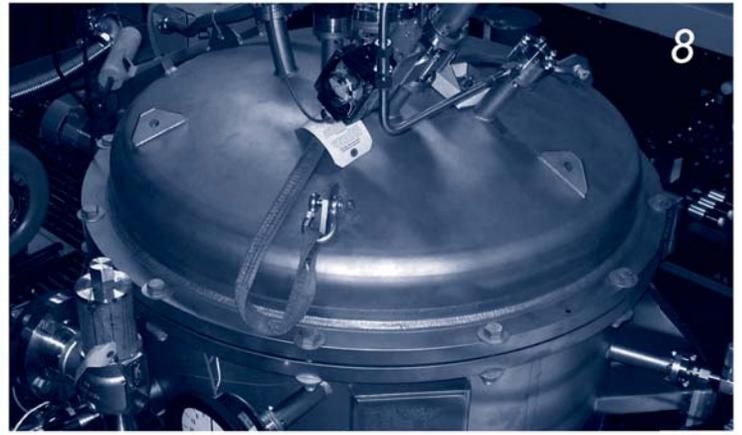
B&W Y-12 President and General Manager Chuck Spencer also shared his thanks. “Thank you for staying steadfast. It’s much appreciated, but to be expected, given the history of Y-12.”

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## Top 13 for FY 2013

Though faced with fiscal challenges, employees made 2013 a strong year for Y-12. Here are the year’s top accomplishments.

1. **Personnel Safety** — received the National Safety Council’s Occupational Excellence Achievement Award for the tenth straight year, maintained DOE Volunteer Protection Program Star status and reduced recordable injuries by 13 percent.
2. **Nuclear Safety Culture** — established Nuclear Safety Culture campaign fostering an open, trusting environment and encouraging technical inquisitiveness.
3. **Engineering and Nuclear Safety Programs** — improved criticality safety in Building 9212 through engineered controls. Y-12 expanded the system health monitoring from 5 to 20 systems and developed metrics to evaluate Vital Safety Systems, or VSSs, and key production equipment. We maintained more than 95 percent availability of VSSs.



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4. **Security** — integrated more than 500 protective force subcontract personnel into the Y-12 prime contract in 28 days, strengthening reporting structure and communication. We improved the security infrastructure and Central Alarm Station — driving down false alarm rates, Critical Security Element repair times and compensatory measures.
5. **Defense Programs Production** — completed 102 percent of the Life Extension Program baseline plan, 146 percent of the surveillance baseline plan, 105 percent of the dismantlements baseline plan and 110 percent of the packaging baseline plan.
6. **Nonproliferation and Global Security** — processed and delivered more than 1.2 metric tons of low enriched uranium feedstock for foreign research reactors and downblended 1.1 metric tons of LEU to replenish the inventory for future demand. Y-12 secured vulnerable highly enriched uranium from France, Italy and Canada.
7. **Naval Reactors** — completed production of Naval Reactor feedstock material ahead of schedule and under budget, helping keep the nation's nuclear fleet at the ready.
8. **Uranium Processing Facility** — validated production microwave as the baseline casting technology and completed two site readiness projects under budget and ahead of schedule.
9. **Budget Response** — addressed a significant sequester-driven funding reduction and avoided furloughing employees by limiting procurements, travel and hiring. These efforts minimized near-term impact of reductions to missions and employees, while operating at the highest levels of safety and security.
10. **Productivity** — validated \$57 million in productivity efficiencies, cost avoidances and hard savings.
11. **Operational Improvements** — implemented a new lock out/tag out procedure and reduced reported occurrences by nearly 80 percent, making ours one of the strongest LO/TO programs in the Enterprise. Y-12 completed significant legacy facility risk-reduction work in Buildings 9206, 9201-5 and 9201-4. We markedly improved conduct of operations performance, completed reviews of key systems and a site-wide improvement plan, and closed a two-year-old Defense Nuclear Facilities Safety Board concern.
12. **Contractor Assurance System** — improved the effectiveness of Contractor Assurance System through development and use of key metrics/tools, direct involvement of senior leadership and refocusing of goals and communication.
13. **Technology Development** — won a 2013 R&D 100 Award for the high-efficiency, thermal neutron detector. Y-12 was the only National Nuclear Security Administration production facility to receive an R&D Award in 2013. We fabricated materials for the next generation of nuclear research and power reactors, and successfully demonstrated the viability of five critical technologies for deployment in the Uranium Processing Facility.

# The heartbeat of Y-12

Meet three of Y-12's unsung heroes: Susan Logan, Nancy Oliver and Irene Williams. They are the occupational nurses who bring almost 70 years of experience to the Y-12 work force, and there will be a time in your career you'll see one of them. They see patients who are having a routine physical to those completing their return to work evaluation.

"We deal with workers who are injured on the job or have work-related illnesses, as well as non-occupational uncomplicated primary

care (getting splinters out of big toes) to complicated emergencies," Williams said.

The main difference, Oliver said, is "we see a 'set' population of patients here."

One thing they agree on is the clinic's most hectic day. "On Monday mornings, it feels like we see a hundred patients," Williams laughed. Logan agreed and said, "I'd say a good average for visits to the clinic is around 75 to 100."

Those hectic days have their rewards though. "We have a great group of people that works in Occupational Health Services. Everyone cares about the people we serve," Oliver said.

Williams said, "The people at Y-12 are the greatest; they are the salt of the earth and are always willing to help each other." Logan agreed the greatest reward is helping you, the Y-12 employees.

Whether they call Y-12 home or hang their nurse's cap in a hospital emergency room, it all comes down to one thing.

"Basically nursing care is the same no matter who it is you take care of or where it is performed; it's all about caring for people," Oliver said.



Susan Logan, Irene Williams and Nancy Oliver are three of Y-12's unsung heroes.

## Y-12 helps up-and-coming businesses grow

Small businesses have a friend in Y-12 — both through the award of procurement dollars and through mentoring. "We provide guidance that small businesses sometimes need to succeed within DOE [U.S. Department of Energy] and the competitive market," said Lisa Copeland, manager of Socioeconomic Programs.

Y-12 strives to award 45 percent of total procurement spending to small businesses (a management and operating contract goal), and the site also offers support through the Mentor-Protégé Program.

That program, which Copeland also administers, came into its own in 2005, when agreements were signed with 11 companies. To date, 24 businesses have passed through the program, and Y-12 is currently working with 7 protégé companies.

The first selection criterion is that the supplier or vendor have the need, desire and commitment for organizational growth and the ability to contribute to Y-12's core mission.

Other essentials are being in business at least two years and having a business plan. "They need the basic resources, and we help strengthen their technical and professional capabilities to perform federal and commercial contracts, all of which should help their financial strength," Copeland said.

She points out that, while many graduates of the program go on to sign procurement contracts with Y-12 and other DOE/National Nuclear Security Administration sites, there is no guarantee of future work.

Because of business opportunities expected from construction of the Uranium Processing Facility, interest in the program is high. "I'm amazed and excited about the number of companies wanting to do business with us," Copeland stated. "The program is good for Y-12, our protégé companies and the small business community."

Two of Y-12's current protégés — BES Technologies, Inc., and Omega Consultants — have formed their own partnership, a brand-new limited liability corporation. The business provides radiological and nonradiological laundry and respirator support services to a number of federal sites.

Capabilities of these and other Y-12 protégés can be found at: <http://www.y12.doe.gov/suppliers/socioeconomic-programs/mentor-protége-program>.

# 2012 Defense Programs award winners

Congratulations to the almost 90 employees who were presented a 2012 Defense Programs Award of Excellence by Chuck Spencer, B&W Y-12 president and general manager; Steve Erhart, manager of the National Nuclear Security Administration Production Office; and Brigadier General James C. Dawkins Jr., NNSA principal assistant deputy administrator for Military Application.

Over the past seven decades, the people at Y-12 have done some extraordinary work. Those receiving awards at the Sept. 26 ceremony continue a long Y-12 tradition of believing that the most difficult tasks can be accomplished by giving 110 percent, day after day, to make it happen.

The recognized teams displayed an identifiable and significant achievement in providing increased quality, productivity, cost savings or creativity or enhanced weapon safety, security or use control.

Dawkins said the award recipients “are just as important to national security as anyone in uniform.”

The award program was established by NNSA in 1982 to recognize significant accomplishments across the nuclear weapons enterprise.

The five teams that received awards for 2012 were:

- Direct Material Manufacturing
- Lithium Chemistry Improvement
- Dismantlement Modernization and Productivity Improvement
- W76-I Surveillance
- Vericut™ Machining Simulation

## Red light, green light

After the National Nuclear Security Administration signaled Y-12 to begin resuming full operations after a potential furlough, Production Vice President Bill Tindal said Production had two objectives: refocus production employees on safety, security and quality, and ensure preparedness for normal operations.

“It’s tempting to jump right back in when you get the green light,” Tindal said. “We were in an abnormal state that really shook people. Focusing on people came first.”

Production began with return-to-work briefings. “During the briefings, we asked employees what they were concerned about, what was causing them stress,” Tindal said. “Another concept from the briefing was the theme ‘we do things on purpose’ – meaning we think everything through.”

In addition to making sure employees were prepared for normal operations, assessment of equipment and systems, command and control, and conduct of operations were completed. All proved to be in good shape. Those preparations also facilitated planning for the ramp up with the activities performed during the ramp down serving as the basis.

Although plans were in place and workers were eager to return to normal operations, Tindal said, “We deliberately slowed down the process of getting back into operations to get employees’ minds back on performing work for normal operations. They were working out in



Machinists refer to the checklist as they check the calibration on the heat-treating oven before they resume using it.

the field, performing system alignment checks and doing other basic tasks to regain focus.”

Either Tindal or Production Deputy Manager Dan Mack met several times a day with operations and production managers to go over briefings, feedback and oversight results and to adjust the ramp-up plan as necessary.

“Our operations have returned to where they were at the beginning of the ramp down,” Tindal said. “I continue to be amazed at our work force. Even in the face of a furlough, we were thorough, professional and kept an eye on safety and security.”



Pictured is the B&W Y-12 team for the Leukemia and Lymphoma Society's Light the Night walk held Oct. 24 at the University of Tennessee. The team raised almost \$22,500.

## Answering the call

In March 2013 Janell Allison got the call to save someone's life. She was a cell match for a 67-year-old woman living outside the U.S. who was battling leukemia.

Allison, who signed up to be a marrow donor about 15 years ago, donated blood-forming cells collected from her bloodstream. "I'm glad I could help," said Allison, who doesn't know the recipient's identity. "The way I look at it, God wouldn't have placed me in this position if I wasn't meant to donate."

To minimize Allison's time away from work, Occupational Health Services helped out with the pre-transplant treatment. Nurse Nancy Oliver administered Allison's doctor-prescribed filgrastim injections, which helped move blood stem cells out of her marrow and into her bloodstream. "Nancy was superb," Allison said. "She was so helpful."

Karen Ryan, a member of B&W Y-12's Light the Night team that raised funds for the Leukemia and Lymphoma Society, said, "I applaud people like Janell who are so caring and reach out to help save the life of a complete stranger. Not enough good words can be said about her." Ryan and about 60 other team members (some pictured above) raised almost \$22,500 for the 2013 LTN Walk that was held Oct. 24.

Since 1987, the National Marrow Donor Program has facilitated more than 43,000 transplants for people with blood cancers who did not have a suitable donor in their family.

For more information on how to become a donor, visit the National Marrow Donor Program website. To learn more about how OHS can help with pre-transplant treatment, contact Susan Logan (574-1582).

## Forensics Y-12 style

Amanda Loveless thought she wanted to work for the International Atomic Energy Agency. But after spending the summer interning at Y-12, she might have found a new career goal.

Loveless, a junior at Purdue University, was at Y-12 thanks to the Nuclear Forensics Undergraduate Scholarship Program, sponsored by the Department of Homeland Security. She worked with Development's Greg Schaaff to establish a method for determining the age of unknown uranium metal samples.

"I've been doing computer modeling and gathering data from those models to prove that this work can be done, that we can establish possible time indicators within the uranium crystals," Loveless said.

When radioactive decay occurs in a crystal structure, like that of purified uranium metal, particles shoot in opposite directions, dislodging the uniform atoms in the crystal's lattice structure. "This occurs every time there's decay, so we can actually count those,"

Schaaff said. The number of dislocations, when combined with established data on isotopic half-lives, can be used to calculate the time since the metal component was initially formed.

That information could prove helpful to the forensics and nonproliferation community tasked with monitoring nuclear activities of foreign states. "Verification activities require as much information as possible," Schaaff said. "With this method, we may be able to verify that state activities are consistent with Nuclear Nonproliferation Treaty declarations."

It's those applications that initially drew Loveless' attention to nuclear engineering. "I like the nonproliferation and forensics side of nuclear engineering. I feel like I'm doing something beneficial," she said. "I would love to work at Y-12 someday doing nuclear forensics research."

## Around Y-12 ...

- A differing professional opinion, or DPO, is an opinion involving a technical issue that: (1) differs from previous management decisions, positions or established policies or practices; (2) in the opinion of the employee, has not been adequately considered and (3) if not addressed, has a reasonable probability of having significant negative impact with respect to the environment, safety or health. **Employees and subcontractors are reminded of your right to report environment, safety and health technical concerns not resolved through routine work processes.** Y11-617, *Employee Concerns Program*, identifies various avenues for raising a DPO at Y-12. Visit <http://www.hss.doe.gov/nuclearsafety/qa/dpo.html> for more information. If you have any questions, please contact Jim Nobles (574-4199, [noblesjcr@y12.doe.gov](mailto:noblesjcr@y12.doe.gov)).
- **Congratulations to Edwena Crowe, director of Document and Property Management. She recently was named a recipient of the prestigious Women In NAACP Bridge of Honor award.** Awards are presented to women who are making pioneering or significant contributions to their communities through their professional careers or volunteerism and advocacy work.
- **B&W Y-12 recently donated \$10,000 to the Children's Museum in Oak Ridge.** The funds will support the museum's programs, including its planned Healthy Living exhibit. "B&W Y-12's support has been invaluable to the museum," said Mary Ann Damos, the museum's executive director. "The financial donations have helped us provide more and better services to the area's children, but the hands-on donations of manpower also have been helpful."
- **Babcock & Wilcox recently announced the 2013 B&W Scholarship recipients.** Congratulations to Bearden High School graduate Sheri Cunningham, the daughter of B&W Y-12 engineer Penny Cunningham. "Filling out the application and writing the essay helped reinforce that I want to study international business and finance. It was a rewarding process," said Cunningham, who is attending the University of South Carolina.
- **Retraction:** In the memoriam section of the August/September issue of *The Y-12 Times*, Gam Ferguson was incorrectly identified as a male. We regret this error.

Y-12 Historian Ray Smith (left) and Manhattan Project and Oak Ridge historian Bill Wilcox share a smile and memories of times gone by.

## From one historian to another

If you don't know his name, you likely know him from his smile and bowtie – Bill Wilcox. The beloved Oak Ridger who had a fondness for Y-12 passed away Sept. 2, but he left many stories for Y-12 employees.

Y-12 Historian Ray Smith said, "Bill was never far from Y-12 in his efforts to preserve history and to promote the inclusion of Oak Ridge in the Manhattan Project National Historical Park. Bill served as the Oak Ridge City Historian, but in recent years, he was the most knowledgeable person on the technical aspects of the three Oak Ridge sites during the Manhattan Project and the Cold War."

His first job was as a chemist in Building 9202 where he purified the uranium 235 being separated in the calutrons. Smith explained, "Although he knew the uranium came from some process, he never actually saw a calutron during the war. You see, even the chemists (who knew the material being processed) were restricted as to where they could go. He could go to his laboratory but not to the process buildings where the calutrons were operating."

Smith said, "In February 1944, the first shipment of uranium 235 was taken from Y-12 to Los Alamos by two Army lieutenants dressed as salesmen on a passenger train with the precious material inside gold-lined coffee-cup-sized containers in a briefcase. Bill Wilcox was the chemist who prepared that uranium for shipment."

Throughout the years, Y-12 remained a focus for Wilcox. Smith said, "I was blessed to have Bill to go to with questions about Y-12's history and enjoyed the relationship we developed over the past several years. I will miss Bill, as will others. He truly was a giant in Oak Ridge history."





## October

**53 years**  
Production: **Marvin L. Sheffler**

**48 years**  
Engineering: **Jackie G. Gooch**

**47 years**  
Quality Assurance: **Gordon D. Robbins**

**45 years**  
Engineering: **Willie L. Duke**  
Production: **Ray P. Ivey**

**44 years**  
Facilities, Infrastructure and Services: **Kenneth J. Cunningham** and **Fay J. Claiborne**  
Quality Assurance: **Robert W. Buchanan**

**43 years**  
Facilities, Infrastructure and Services: **Charles Slay**

**42 years**  
Facilities, Infrastructure and Services: **Michael J. Moore**

**41 years**  
Engineering: **Ronald T. Jones**

**40 years**  
Safeguards, Security and Emergency Services: **Melinda W. Bryan**

**35 years**  
Business Services and Performance Assurance: **Janice B. Atwater** and **Donald T. Dice II**  
Engineering: **Charlene B. Ratcliffe**  
Environment, Safety and Health: **Russell H. Harden III**  
Facilities, Infrastructure and Services: **Guy T. Hamrick** and **Mitchell Owens**

**30 years**  
Business Services and Performance Assurance: **Elizabeth B. Nickle** and **Constance J. Collins**  
Engineering: **William K. McElmurray**  
Human Resources: **Karen H. Tipton**  
Quality Assurance: **Vicki F. Belt**  
Safeguards, Security and Emergency Services: **James T. Crippen** and **Charles E. Mitchell**

**25 years**  
Business Services and Performance Assurance: **William J. Cooper** and **Gary L. Cottrell**  
Engineering: **Bruce D. Warnick**  
Environment, Safety and Health: **Michael L. Souleyrette**  
Facilities, Infrastructure and Services: **Arnold G. Graves**  
Production: **Nathan D. Langley, Tanya M. Sidwell** and **Richard K. Weatherly**

Program Management: **Daniel J. Linehan** and **Deborah B. Newberry**  
Safeguards, Security and Emergency Services: **Timothy R. Brummett, Danny W. Gunter** and **Michael W. Harvey**

**20 years**  
Quality Assurance: **Dale E. Haste**  
Safeguards, Security and Emergency Services: **E. Faye Ashe** and **Mark E. Hendrick**

## November

**45 years**  
Engineering: **Glenn R. Bridges**

**44 years**  
Production: **Timothy R. Hill Sr.**

**43 years**  
Engineering: **Larry W. Johnson**

**42 years**  
Engineering: **William E. Barkman**

**41 years**  
Facilities, Infrastructure and Services: **Charles L. Austin**

**35 years**  
Business Services and Performance Assurance: **Kenneth S. Davis**  
Engineering: **Charles A. Levin** and **Evelyn E. Zang**  
Facilities, Infrastructure and Services: **Walter D. Lavender**  
Human Resources: **Cindy R. Cavender**  
Production: **Michael L. Brown**  
Projects: **Christopher J. Hammonds**  
Safeguards, Security and Emergency Services: **Billy C. Brown** and **Scott F. Sanders**

**30 years**  
Chief Financial Officer Division: **Darrell N. Sexton**  
Facilities, Infrastructure and Services: **Samuel R. Lyle**  
Production: **Russell L. Chambers** and **Alicia R. Hill**  
Quality Assurance: **Jeanette W. Hayes**  
UPF Integration: **John H. Gertsen**

**25 years**  
Environment, Safety and Health: **Peter D. Calkin** and **Kerry S. Templin**  
Production: **Robert L. Claiborne**  
Program Management: **Monty G. Fritts**  
Safeguards, Security and Emergency Services: **Lonnie E. Henegar, William K. McCoy** and **Terry D. Wagner**

**20 years**  
Ethics and Internal Audit: **Tracy A. Nelson**  
Facilities, Infrastructure and Services: **Gloria L. Taylor**  
Production: **Craig E. Richesin**  
Program Management: **Lynn K. Johnston**  
Quality Assurance: **Alex S. Delcarmen Jr.**

**December**

**46 years**  
Engineering: **Clark E. Hamilton**

**45 years**  
Engineering: **Robert R. Bigelow**  
Quality Assurance: **Thomas T. Adams**

**42 years**  
Facilities, Infrastructure and Services: **Clifton D. Guider**

**41 years**  
Human Resources: **Vicki S. Wilson**

**40 years**  
Facilities, Infrastructure and Services: **Donald G. Muldrew**  
Safeguards, Security and Emergency Services: **John P. Fry**

**35 years**  
Business Services and Performance Assurance: **Paul S. Smith**  
Chief Financial Officer Division: **Carol C. Langley**  
Engineering: **Michael L. Elmore**  
Environment, Safety and Health: **James D. Cunningham**  
Facilities, Infrastructure and Services: **Dennis L. Watkins**  
Production: **Debra A. Avery**  
Quality Assurance: **Peter L. Petrowski**

**30 years**  
Engineering: **Ronald T. Barnett**  
Facilities, Infrastructure and Services: **Gregory I. Griffin**  
Quality Assurance: **Denise L. Huffine** and **Carl E. Lowry**  
Safeguards, Security and Emergency Services: **Garland L. Basler, David L. Grider** and **Danny R. Vickery**

**25 years**  
Safeguards, Security and Emergency Services: **Andrew J. Jackson**

**20 years**  
Chief Financial Officer Division: **Dale C. Hensley**  
Engineering: **Marty Briley**  
Quality Assurance: **Steven B. Stinnett**  
Safeguards, Security and Emergency Services: **Patricia L. Toney**

## In memoriam

**J**ames T. Lowery of Production passed away Oct. 5. He had 34 years of company service.

He is listed as a member of the organization in which he last worked. Y-12 offers condolences to his friends and family.

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Y-12 psychologist Bill Conklin said, "After meeting with the Y-12 team, the decision to come on board was an easy one."

## Welcome, Bill Conklin

Have you seen Dr. Bill Conklin, the new psychologist at Occupational Health Services, around site? If not, you'll want to stop by OHS and welcome him.

Conklin comes to Y-12 after 22 years in direct clinical practice. He said, "It seemed a good time for a new venture." He's putting his past consulting and employee assistance experience to use. "I have worked with BASF, Howmet/Alcoa and TRW. When I learned of the availability of the position at Y-12, I was intrigued."

Although he's new to Y-12, he understands the stress surrounding the site – contract bid, sequestration and typical life happenings. He offered this advice: "Much of how we feel has to do with the thoughts we think. What do you say to yourself in your head? Everybody talks to themselves. (Those who aren't comfortable admitting this call it thinking)," he smiled.

"If you'll take a minute and consider the things you say to yourself in your head, you might discover that you engage in some habits of negative thinking," he said. "For example, have you ever used the phrase 'it figures'? On the surface it seems innocent enough, but take a second to consider the implications of the phrase and you'll find that it masks negativity.

"Think about it. Have you ever heard anyone say it figures when something good happens? Another raise? It figures," Conklin said.

So as you go about your day and talk – or think – to yourself, be positive. "Intentionally choosing a positive point of view can make a huge difference in the way you feel," he said.