

June 8, 2007

The Honorable Peter J. Visclosky  
Chairman, Subcommittee on Energy  
and Water Development  
Committee on Appropriations  
United States House of Representatives  
Washington, D.C. 20515

Dear Mr. Chairman:

I would like to invite you and the Members of the Subcommittee to join me for a tour of Calvert Cliffs Nuclear Plant on Friday, July 27, 2007, from 10 a.m. - 12 noon. Since some of the Members have not had an opportunity to tour a power plant, I thought it might be helpful to the Subcommittee if I arranged a group tour. Calvert Cliffs is nearby in Lusby, Maryland, about a one-hour drive from Capitol Hill. I am enclosing background information on the Calvert Cliffs Nuclear Power Plant. A proposed agenda is as follows:

- 8:30 a.m. Subcommittee Members picked up in front of the Rayburn House Office Building
- 8:35 a.m. Depart Capitol Hill for Lusby, Maryland  
(I will provide a brief overview on the bus ride to Calvert Cliffs)
- 10:00 a.m. Arrival - Calvert Cliffs Nuclear Plant
- 10:05 a.m. Introductions and Tour
- 12:00 noon Conclusion of Tour
- 12:05 p.m. Depart Lusby, Maryland  
(Lunch provided en route to Capitol Hill)
- 1:00 p.m. Return to Capitol Hill

If you have any questions, please contact Rebecca Schmidt, Director, Office of Congressional Affairs, on 301-415-1776. To ensure timely completion of arrangements for this tour, I would like to hear from you and your other Subcommittee Members no later than July 16, 2007. If you and your other Subcommittee Members are unavailable, I would welcome Energy and Water Development Subcommittee Associate Staff members from the House Appropriations Committee. I look forward to the opportunity to tour the facility with you and the other Members of the Committee.

Sincerely,

*/RA/*

Dale E. Klein

Enclosures:

1. Calvert Cliffs: Safe and Secure by Design
2. Our Neighbor, Calvert Cliffs
3. Generating Reliable, Efficient Energy at Calvert Cliffs Nuclear Power Plant
4. Calvert Cliffs Nuclear Power Plant Earns a Place in History

cc w/enclosures: See next page

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Representative David L. Hobson  
Representative Chet Edwards  
Representative Ed Pastor  
Representative Marion Berry  
Representative Chaka Fattah  
Representative Steve Israel  
Representative Timothy J. Ryan  
Representative José E. Serrano  
Representative John W. Olver  
Representative Dave Obey  
Representative Zach Wamp  
Representative Jo Ann Emerson  
Representative John T. Doolittle  
Representative Mike Simpson  
Representative Kay Granger  
Representative Jerry Lewis



## Calvert Cliffs: Safe and Secure by Design

*Almost 30 years ago, Constellation Energy – then Baltimore Gas & Electric – began a tradition of excellence at Calvert Cliffs Nuclear Power Plant. Year after year, Constellation Energy has continued that tradition, earning national recognition by the Institute for Nuclear Power Operations for maintaining operational excellence at Calvert Cliffs. In doing so, Constellation Energy continues to prove that high levels of safety, reliability and efficiency go hand in hand.*

Other national organizations hold Constellation Energy in high regard for the commitment to safe, secure operations demonstrated at Calvert Cliffs. The National Safety Council has honored Calvert Cliffs with the organization's Industry Leader Award for safety performance and the Green Cross for Safety Excellence. The company also earned the Nuclear Energy Institute's Top Industry Practice Award for developing at Calvert Cliffs an integrated risk management program that increases plant safety and plant production. In 2007, Calvert Cliffs' became the first plant in the Constellation fleet to apply for OSHA's Voluntary Protection Programs (VPP) "STAR" level of performance. OSHA's VPP STAR designation is reserved for work places that have implemented a comprehensive safety and health management system and demonstrated safety performance above industry average.

### **Operating safely begins with a safe design**

Being honored among industrial and nuclear facilities comes from Calvert Cliffs' design and Constellation Energy's commitment to operating securely and safely. The team continually maintains and improves the plant's redundant safety systems based on the best practices in the energy industry.

The plant's redundant safety systems protect nuclear fuel. While in use, nuclear fuel is protected by a ceramic case, called a pellet. Pellets sit in fuel rods and are contained in a building with thick concrete walls. Once spent, fuel is stored under cool water within a concrete structure for a decade. Radioactivity drops significantly during this decade. Then the spent fuel moves to a secure concrete structure on site awaiting a national spent-fuel storage site to open at Yucca Mountain, Nevada. At Yucca, the spent fuel will remain secure as it loses the remaining radioactivity.

After terrorist attacks on the United States in 2001, experts studied nuclear power plant security with added scrutiny. In 2002, the Center for Strategic and International Studies found that nuclear power plants were the best defended among possible terrorism targets. Later in 2002, the Nuclear Energy Institute and the U.S. Department of Energy partnered with international experts from the Electric Power Research Institute to study nuclear power plant security. This scientific study found that containment buildings at U.S. nuclear power plants would protect against a radiation release if struck by a large commercial jetliner loaded with jet fuel. More information on these studies can be found at [www.nei.org](http://www.nei.org).



*In 2006, the Department of Homeland Security announced the nuclear portion of its National Infrastructure Protection Plan (NIPP) at Calvert Cliffs. The site served as a pilot plant for this program and provided the foundation for the ongoing development of the nuclear sector's portion of the NIPP.*



*The Institute of Nuclear Power Operations accredits training programs.*

### **Training bolsters a safety-conscious culture**

Constellation Energy's Calvert Cliffs team has been recognized as an industry leader in training. For every employee, training begins on the first day at work and never ends.

Everyone participates in annual training on safe work practices. Additional training is required for employees who have access to plant areas where nuclear systems are located. The operations staff works on a rotating shift, so that every fifth week is a training week, spent requalifying on fundamental and advanced job skills and studying the latest technology and techniques for safe, reliable, efficient operations.

Training ranges from computer-based, self-study courses to a formal, 18-month classroom program approved by the National Academy of Nuclear Training, with additional testing by the Nuclear Regulatory Commission. All training programs are formally evaluated and accredited by the National Nuclear Accrediting Board on a set frequency.

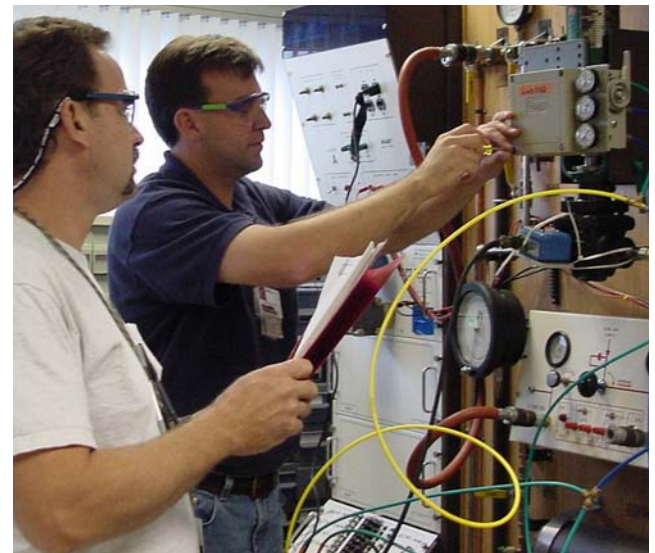
### **Federal oversight reinforces safe operations**

In addition to testing nuclear plant operators, the U.S. Nuclear Regulatory Commission (NRC) regulates and oversees all operations at Calvert Cliffs and all other nuclear power plants. NRC inspectors work on site daily. Additional inspectors review operations on a regular basis, totaling thousands of hours of federal oversight a year.

Although an emergency at Calvert Cliffs is unlikely, the plant must have a federally approved emergency plan, which the NRC and the Federal Emergency Management Agency test each year. The Calvert Cliffs team works constantly with federal, state and local emergency management agencies as part of this plan.

Every year these partners conduct intense emergency management training drills. Every two years the NRC grades these exercises, and every six years the graded drill includes agencies within a 50-mile radius of Calvert Cliffs.

At Calvert Cliffs, redundant safety systems, a safe design, and well-trained personnel reflect Constellation Energy's commitment to generating reliable, efficient energy safely in today's environment. Safety is our top priority.



*First-line supervisors take ownership of training, helping employees enhance skills.*





## Our Neighbor, Calvert Cliffs

*For 30 years, Constellation Energy's Calvert Cliffs Nuclear Power Plant has taken pride in operating safely, reliably and efficiently. As a member of the Southern Maryland community, the Constellation Energy team renews that commitment every day at Calvert Cliffs, earning industry-wide recognition for maintaining operational excellence.*

### **As a community member**

Constellation Energy serves as one of the largest private employers in the county, providing about 1,000 jobs at Calvert Cliffs. The staff is dedicated to the community. Employees donated more than \$270,000 for the United Way in Southern Maryland in 2006 through Constellation Energy's matching contribution campaign.

Each year, employees conduct at-work blood drives, collect recycling materials and provide countless hours of service to community organizations. Employees donate their lunch hours to local schools, mentoring children with unique needs, teaching students about nuclear energy and electricity, and assisting teachers. Each December the staff also sponsors needy families with gifts through the community's Tree of Angels Program.

As a business, Constellation Energy, through Calvert Cliffs, supports the county economy, paying about \$15.5 million in county taxes and \$3.4 million in Maryland income taxes in 2005. The company also supports local organizations with monetary donations and volunteer time.

### **As an environmental steward**

In addition to caring for the community, the Constellation Energy team at Calvert Cliffs takes pride in caring for the environment, holding a 30-year record of environmental responsibility. Constellation Energy manages more than 2,000 acres of pristine forest and shoreline at Calvert Cliffs, with only 380 acres used for facilities.



*Each year, Calvert Cliffs' employees work with the Calvert County Department of Social Services to provide gifts for needy children through the Tree of Angels program.*



*Calvert Cliffs is home to 90 percent of the world's total population of threatened world's Puritan and Northeastern Beach tiger beetles, protected by Constellation Energy and monitored by The Nature Conservancy.*

Constellation Energy's environmental staff partners with government agencies and environmental organizations, ensuring that Calvert Cliffs operates within the letter and the spirit of the law. The Maryland Department of the Environment regularly inspects Calvert Cliffs to ensure compliance with state and federal environmental regulations for air and water quality.

At Calvert Cliffs, Constellation Energy works continually with The Nature Conservancy to study and protect 90 percent of the world's total population of threatened Puritan and Northeastern Beach tiger beetles. The staff also works with the Academy of Natural Sciences Estuarine Research Center to monitor the Chesapeake Bay oyster population near Calvert Cliffs. The Academy's oyster study along Calvert Cliffs' shoreline stands as one of the Bay's longest studies and shows no impact from the plant, proving that business and nature can and do work and live in harmony.

The wildlife habitat enhancement team encourages employee involvement in environmental activities. Employee projects have included installing and monitoring bluebird and kestrel nesting boxes; planting a wildflower garden for butterflies, hummingbirds and songbirds; monitoring more than 700 deer; dozens of other animal and plant species; and helping the Academy of Natural

Sciences plant disease-resistant oysters to help the Chesapeake Bay oyster population. Constellation Energy's environmental program at Calvert Cliffs attracts national attention. The Wildlife Habitat Council began recognizing Calvert Cliffs as a certified site in 1993, and in 2002, honored the plant with a fifth biannual certification. In 2001, Calvert Cliffs also received state-wide recognition with the Maryland Community Forest Council's PLANT award for tree planting and maintenance initiatives. In 2004, Calvert Cliffs was certified as a Maryland Tree Farm for the site's excellent forestry management practices.



*Constellation Energy monitors more than 700 deer that make their home at Calvert Cliffs.*





## Generating Reliable, Efficient Energy at Calvert Cliffs Nuclear Power Plant

*Constellation Energy's Calvert Cliffs Nuclear Power Plant is one of more than 100 nuclear power plants in the United States, which together, generate a fifth of all the electricity used in the United States. Calvert Cliffs produces enough energy to power about a third of Maryland's homes and business. Using few natural resources, nuclear power plants generate electricity efficiently at a low cost to electricity customers.*

All nuclear power plants rely on uranium fuel to make electricity. Uranium fuel pellets produce heat through a process called fission – the splitting of atoms in a chain reaction – inside a nuclear reactor. The fission process produces enough heat energy to make steam, turn turbine fan blades and create electricity.

Nuclear fuel is an extremely efficient energy source, and the nation's largest source of pollution-free electricity. One uranium pellet about half an inch long provides energy equivalent to 1,780 pounds of coal, 149 gallons of oil or 17,000 cubic feet of natural gas.

Because nothing is burned in the atomic reaction, no greenhouse gases are produced, making the energy produced at Calvert Cliffs and at all nuclear plants clean-air energy.

The nuclear fuel used at Calvert Cliffs and at all nuclear power plants differs significantly from uranium used in nuclear weapons. Nuclear energy fuel uses only about four percent fissionable uranium, whereas a nuclear weapon uses 100 percent fissionable uranium. Because of this difference, nuclear power plants cannot explode.



*Staff at Calvert Cliffs created wetlands to support the health of the Chesapeake Bay.*

## Working with the Chesapeake Bay

Like all U.S. nuclear power plants, Calvert Cliffs is designed with multiple barriers and safety systems to isolate radioactive materials effectively from the environment, plant personnel and the public. Calvert Cliffs was built to work in harmony with the Chesapeake Bay.

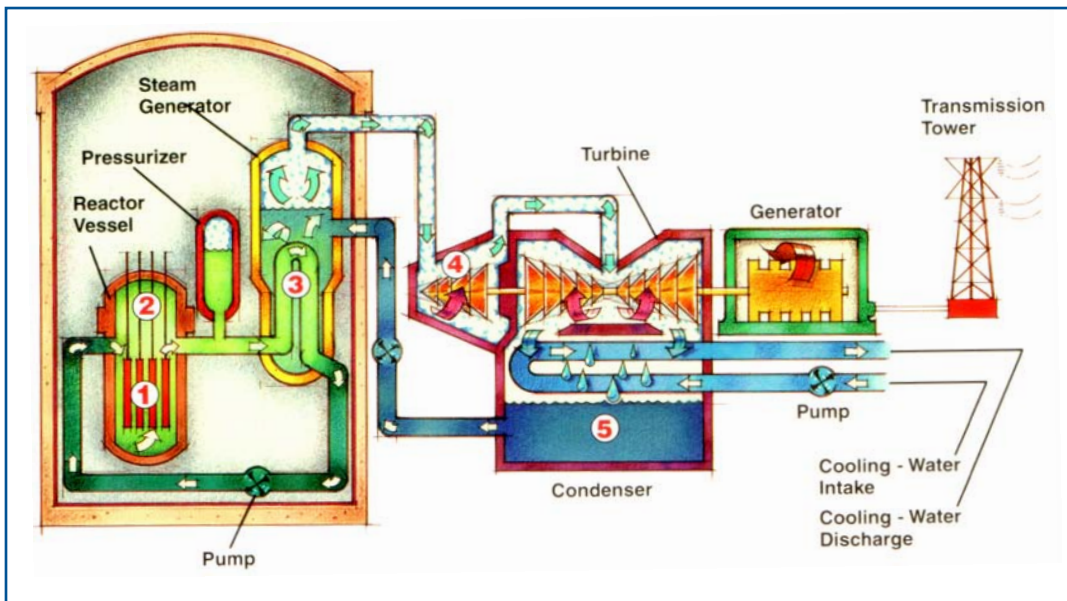
Water from the Chesapeake Bay cools Calvert Cliffs' non-radioactive steam system. Separate system loops ensure that water inside the reactor does not come in contact with water in the steam system or the cooling system. Animals and marine debris are kept out of the cooling system with screens and water sprays. Employees continually monitor the system, watching for marine life.

Water returns to the Bay with only one difference: the water is about 10 degrees warmer than it was at the bottom of the Chesapeake. Because water on the surface also tends to be about 10 degrees warmer than water at the Bay floor, the water cycling through Calvert Cliffs' cooling system is returned to the Bay's surface.

## Monitoring, controlling a reliable energy source

From nuclear energy to nuclear medicine, radiation is used to benefit society in many ways. Radiation, like that created in nuclear medicine and nuclear energy, is also common in nature, from the sun, soil and the earth itself. Man-made radiation sources are continually monitored and constantly controlled through strict standards set by the U.S. Environmental Protection Agency and enforced by the U.S. Nuclear Regulatory Commission. Constellation Energy monitors radiation with standards even stricter than any government agency.

Constellation Energy meets not only the letter but also the spirit of the law and works continually with federal regulators to keep radioactive material contained and secure at Calvert Cliffs. The team uses multiple, redundant safety systems so that the plant continues to generate electricity safely, reliably and efficiently for Constellation Energy customers in Maryland and across the country.



*Simplified schematic shows only one steam generator.*

### Media

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