

The



October 2011



Message

National Day of Remembrance: October 30, 2011

For the third consecutive year, the United States Senate has unanimously approved a resolution designating October 30 as the National Day of Remembrance for former nuclear weapons program workers, including uranium miners, millers, and haulers. This day, which was first celebrated on October 30, 2009, honors the hundreds of thousands of American workers who have served our nation in building its nuclear defense and contributing to its security from World War II through the Cold War.

In 2009, to mark the inaugural event, many Department of Energy (DOE) sites held public events involving local community service organizations; worker unions; Cold

War veteran organizations; and local, state, and national government dignitaries. This year, DOE has again facilitated events around the country to celebrate the day, and again the Office of Health, Safety and Security (HSS) staff members will be attending many of these events. We encourage the men and women of the United States to attend and participate in these events to show support for those individuals whose sacrifice helped the United States in the past, and for those who now serve our country by maintaining the national security and advancing our nation in the areas of science and technology.

As a tangible reminder of the history and accomplishments of

DOE's nuclear weapons workers, HSS will again be distributing commemorative pins for National Day of Remembrance ceremonies and events. The commemorative pins are a replica of a Manhattan Project atomic bomb pin that was originally given to workers at the end of World War II.

We believe this is a valuable opportunity to recognize our former workers, as well as the current DOE workforce. We are looking forward to attending and supporting the October 30th commemorative events, and we plan to follow up afterward with pictures and a recap on the HSS website. ■

New Principal Deputy Chief to Promote Nuclear Safety Culture

HSS is pleased to announce that Mr. Dae Chung has been selected as the HSS Principal Deputy Chief for Nuclear Safety and Technical Matters, joining Bill Eckroade, Principal Deputy Chief for Mission Support Operations, and Lesley Gasperow, Principal Deputy Chief for Corporate Functions.

Mr. Chung has nearly 30 years' experience in government and commercial nuclear industries and has been with the Department since 1989. Before joining HSS, he was the Principal Deputy Assistant Secretary of Environmental Management, responsible for policy direction in the Headquarters and field organizations and the management and execution

of all aspects of Environmental Management's large portfolio. His honors include the Presidential Rank Award and many achievement and special act awards.

In the newly created position of HSS Principal Deputy Chief for Nuclear Safety and Technical Matters, Mr. Chung will provide high-level

leadership, oversight, guidance, coordination, advice, and support in connection with the promotion of a strong nuclear safety culture in DOE. The position serves as the principal strategist for nuclear safety and quality assurance related issues and serves as an advocate to facilitate proper implementation of nuclear safety requirements across the DOE complex. He will be an integral part of the HSS leadership team but will also serve in a “dotted-line” relationship to the Deputy Secretary, providing

advice on matters relating to nuclear safety and nuclear operations, and serving as a broader resource in addressing the many difficult issues facing the Department. In addition, Mr. Chung will ensure integration with other organizations; mentor field sites on nuclear safety and quality assurance programs, requirements, and responsibilities; and coordinate, collaborate, and promote nuclear safety and quality assurance activities across the DOE complex. HSS will also rely on Mr. Chung to coordinate

with the HSS Principal Deputy Chief for Mission Support Operations on technical issues arising from accidents, independent oversight assessments, regulatory violations, or performance trends related to nuclear safety and quality assurance and provide expert, unbiased feedback to the Deputy Secretary and the Chief Health, Safety and Security Officer.

The current HSS organization chart is available on the HSS website [here](#). ■

Office of Nuclear Safety Actions in Response to Events at Fukushima Daiichi

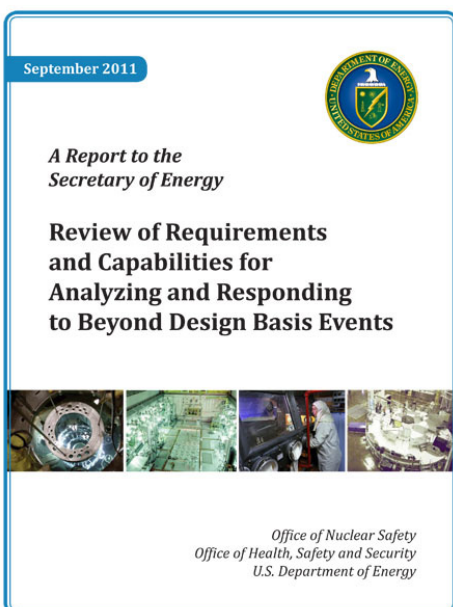
After the March 2011 earthquake and tsunami in Japan and the resulting accident at the Fukushima Daiichi nuclear power plant, the Office of Nuclear Safety, within HSS, led several DOE efforts aimed at assessing and improving the safety of DOE’s nuclear facilities. While the DOE nuclear facilities differ from commercial nuclear power reactors, this was a clear opportunity to identify opportunities for improvement that would better prepare DOE to manage beyond design basis events (i.e., events more severe than those considered

during the design of DOE’s nuclear facilities, such as extremely unlikely earthquakes). The resulting Office of Nuclear Safety report, *Review of Requirements and Capabilities for Analyzing and Responding to Beyond Design Basis Events*, published in August 2011, summarizes the results of these efforts and recommends a number of short-term and long-term actions aimed at improving nuclear safety at DOE’s facilities. (A copy of the report can be found [here](#).)

The Office of Nuclear Safety’s efforts began shortly after a magnitude 9.0 earthquake and resulting tsunami damaged the Fukushima Daiichi nuclear power plant on March 11, 2011. The tsunami that impacted Fukushima Daiichi was more severe than the design basis for the facility and caused Fukushima Daiichi to suffer a complete loss of both offsite and onsite power systems due to the tsunami. This complete loss of power disabled the key cooling systems for the reactors and spent fuel pools, eventually leading to fuel damage, hydrogen generation, and high radiation levels inside the facility.

Safety Bulletin 2011-01, Events Beyond Design Safety Basis Analysis

As the initial details of the Fukushima Daiichi accident emerged, the Office of Nuclear Safety began preparing a Safety Bulletin to notify DOE managers of concerns related to the identification and mitigation of potential beyond design basis events. Less than two weeks after the events in Japan, the Secretary of Energy issued Safety Bulletin 2011-01, *Events Beyond Design Safety Basis Analysis*. This Safety Bulletin asked that DOE managers and contractors promptly review their nuclear facilities and provide a report describing the analyses for beyond design basis events and any controls that could minimize the impacts. In addition, the Safety Bulletin requested DOE managers and contractors to evaluate how a total loss of power would affect their facilities, whether important safety systems would still function, and whether emergency management plans adequately address response to beyond design basis events. (A copy of the Safety Bulletin can be found [here](#).)



The Office of Nuclear Safety began analyzing the Safety Bulletin-related reports from the DOE sites in mid-April for the 2 DOE sites with hazard category 1 nuclear facilities and in mid-May for the 19 DOE sites with hazard category 2 nuclear facilities. The reports described a number of positive steps DOE sites had taken to analyze and mitigate the impacts from a beyond design basis event; however, the reports also noted several areas where the analysis of and response to beyond design basis events could be improved. Through analysis of the reports, the Office of Nuclear Safety identified some common issues that warranted further review, such as limitations in the facilities' analyses of beyond design basis events, inconsistent analyses of the impact of a total loss of power, and limitations in emergency response capabilities.

Nuclear Safety Workshop, Working Together to Enhance Nuclear Safety

Concurrent with the analysis of the Safety Bulletin responses, the Office of Nuclear Safety started planning a first-of-its-kind workshop that would bring together the nuclear community to discuss the events at Fukushima Daiichi and the ongoing analysis of the Safety Bulletin reports, and started developing recommendations



Nuclear Safety Workshop participants listen to Dr. Kevin Coppersmith discuss natural phenomena hazards

that would further improve DOE nuclear safety. DOE held the first Nuclear Safety Workshop in early June in Washington, DC, with the theme of “Working Together to Enhance Nuclear Safety.” More than 200 participants attended, including representatives from DOE Headquarters, site offices, and contractor organizations; the Nuclear Regulatory Commission (NRC); the Environmental Protection Agency; the Department of Homeland Security; the Institute of Nuclear Power Operations; the Defense Nuclear Facilities Safety Board; the Chemical Safety Board; and the Blue Ribbon Commission on America’s Nuclear Future.

Among the high-ranking officials and technical experts who addressed the participants on the first day of the workshop were Deputy Secretary of Energy Daniel Poneman, Associate Deputy Secretary Rear Admiral Melvin Williams, NRC Commissioner William Ostendorff, Dr. Kevin Coppersmith (a renowned natural phenomena hazards expert), and Dr. Robert Budnitz (a renowned nuclear safety expert from Lawrence Berkeley National Laboratory). The second day of the workshop consisted of technical breakout sessions to discuss DOE’s evaluation of beyond design basis events, natural phenomena hazards, and emergency management. The workshop discussions confirmed the validity of the issues identified during the analysis of the Safety Bulletin reports and raised additional issues warranting review. Participants also

recommended several actions that DOE could take to further improve nuclear safety. (A copy of the HSS newsletter containing highlights from the Nuclear Safety Workshop can be found [here](#).)

Analysis of Additional Beyond Design Basis Events Information

In mid-July, the NRC published their systematic review of the accident at the Fukushima Daiichi nuclear power plant. The report, *Recommendations for Enhancing Reactor Safety in the 21st Century – the Near-Term Task Force Review of Insights from the Fukushima Daiichi Accident*, contained 12 recommendations, including 8 that are similar to the actions identified by DOE during the Safety Bulletin report analyses and Nuclear Safety Workshop. (A copy of the NRC report can be found [here](#).) In addition to reviewing the NRC report to gain insights into potential safety improvements for DOE nuclear facilities, the Office of Nuclear Safety reviewed the European Union’s actions taken in response to the events at Fukushima Daiichi. Finally, the Office of Nuclear Safety reviewed the current DOE and commercial nuclear power requirements and guidance for safety analysis, facility design, and emergency management for beyond design basis events.

Recommended Actions

The Office of Nuclear Safety examined the various analyses and the results of the Nuclear Safety Workshop to determine how DOE could improve nuclear safety at DOE facilities. While the responses to the Safety Bulletin confirmed that DOE has sound provisions in place to address beyond design basis events, the examination identified six short-term and three long-term actions that

would improve the requirements and guidance for analyzing and mitigating these events. These actions would also provide greater assurance that DOE can protect the public in case of an extremely unlikely and severe event at a DOE nuclear facility.

Short-Term Actions

1. Distribute the August 2011 Office of Nuclear Safety report on *Review of Requirements and Capabilities for Analyzing and Responding to Beyond Design Basis Events* to the DOE community to share the identified lessons learned and disseminate information about planned improvement efforts.
2. Update the DOE safety analysis guide and standards to address analysis of beyond design basis events.
3. Update the DOE emergency management order and guide to address emergency planning for beyond design basis events.
4. Update the DOE natural

phenomena hazards order and standard to reflect improvements in analysis and design practices.

5. Enhance the safety system walkdown process to better identify potential susceptibilities to beyond design basis events.
6. Conduct emergency drills and/or exercises that focus on the response to a beyond design basis event.

Long-Term Actions

1. Issue the orders, guides, and standards identified in the short-term actions and develop an implementation strategy.
2. Evaluate the need to provide additional corporate emergency response resources to support mitigation of beyond design basis events.
3. Conduct a second Nuclear Safety Workshop.

The Path Forward

Deputy Secretary Poneman issued a memo in mid-September that dis-

tributed the *Review of Requirements and Capabilities for Analyzing and Responding to Beyond Design Basis Events* report and endorsed the short-term and long-term actions recommended in the report. He also stated his expectation that the short-term and long-term actions be completed by March 31, 2012, and December 31, 2012, respectively. (A copy of this memo can be found [here](#).)

The Office of Nuclear Safety is working with the DOE and National Nuclear Security Administration program and field offices and DOE's Nuclear Safety and Security Coordinating Council to develop a strategy for accomplishing the report's recommended actions. In addition, the Office of Nuclear Safety will continue to follow the NRC analyses of the events at Fukushima Daiichi and gather further lessons learned and opportunities for improvement.

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Annual Meeting of DOE Voluntary Protection Program Participants Brings Out the Stars

The last weekend in August 2011 will be remembered by many for Hurricane Irene. But for a select few, it will be remembered for the 27th Annual Voluntary Protection Program Participants Association (VPPPA) National Conference. This year the conference was held at the Ernest N. Morial Convention Center in New Orleans, Louisiana. New Orleans provided a wonderful backdrop for what was certainly a very active and informative conference.

For many years, DOE and its contractors have had a very visible presence in the VPPPA conference, and this year was no different. Fifteen different sessions were presented by DOE Voluntary Protection Program (DOE-VPP) participants, including personnel from Hanford, Idaho, Los Alamos, Savannah River, and Oak Ridge. Topics included management leadership and commitment, fostering employee involvement, and lessons learned in management and labor relations. In addition, many

presentations were given by experts, industry leaders, workers, and managers from VPP participant sites across the nation. With over 3,000 participants this year, the interactions between DOE and general industry were numerous and beneficial to all. One highlight of the annual conference for the DOE-VPP participants was the pre-conference session, held on Sunday, August 28. These pre-conference sessions, led by the Office of Worker Safety and Health Assistance (HS-12), serve

as the annual meeting of DOE-VPP participants. This year's topics focused on changes in the DOE-VPP since the formation of HSS in October 2006. Approximately 140 participants were briefed on coming changes to the DOE-VPP program documents, given an opportunity to ask questions about program implementation, and encouraged to suggest clarifications.

The morning session also included a collaborative presentation showing how the "Safety Force" can have a "light side" and a "dark side." Presentations and skits from the Idaho Cleanup Project, the Idaho National Laboratory, Los Alamos National Laboratory, and the Savannah River Site coordinated with a "Star Wars" theme to both entertain and educate. Lessons included the value of employee participation and leadership, management support, and active caring, and the session illustrated how well-intentioned people can sometimes take actions that have unintended consequences.

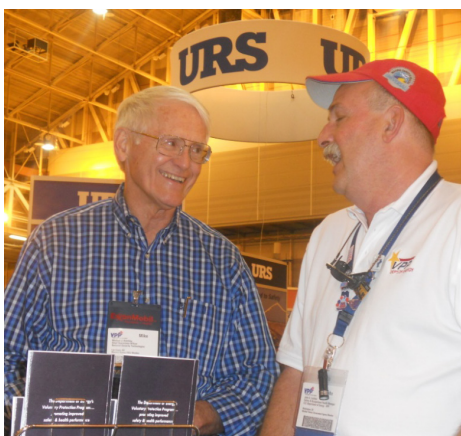
The afternoon concluded with presentation of our annual awards. DOE-VPP participants can qualify for additional recognition under the DOE-VPP by demonstrating excellence

in accident and injury statistics combined with excellent outreach, mentoring, community support, and assistance with furthering the DOE-VPP. The *Superior Star* is awarded to participants that had accident and injury rates approaching 50 percent of their comparison industry rates for the previous calendar year. The *Star of Excellence* is awarded to sites that have rates approaching 75 percent of their comparison industry rates. Sites that demonstrate long-term excellence by repeatedly earning the *Star of Excellence* can receive a *Legacy of Stars* in lieu of a fourth *Star of Excellence*. This year, 19 participant companies received the *Star of Excellence*, and 5 participant companies received a *Superior Star*. The participants were particularly pleased to see the HSS Principal Deputy Chief for Mission Support Operations, William A. (Bill) Eckroade, present the awards. Before the award presentation, Bill spoke to the participants about the importance of safety culture in the DOE complex and the methodology we all need to follow to achieve it through organizational performance and constant improvements in human performance throughout the workforce.



William A. Eckroade addressed the participants at the Annual DOE-VPP Participants meeting

In addition to corporate recognition, four individuals were recognized for their support and furtherance of the DOE-VPP as *Contractor Champions*: Barbara Guenver, Savannah River Nuclear Solutions; Ron Gough, Honeywell Federal Manufacturing and Technology, Kansas City Plant; Steve Maki, Fluor Federal Services; and Don King, Washington Closure Hanford. All four have been integral to the continued success and growth



John Locklair speaks with Mike Butchko from National Security Technologies, at the Nevada National Security Site



The cast and crew of the Collaborative Presentation

of DOE-VPP at their sites by reaching out and mentoring other sites and providing community support. We thank them for their personal leadership and commitment.

Finally, HS-12 staff members spent a large part of their time manning a booth on the exhibitor floor. This booth presents HSS with an outstanding opportunity to interface directly with conference

participants, answer questions, and provide support. Many of the DOE-VPP attendees took advantage of the opportunity, sharing their stories and bringing up questions directly to HS-12, and also receiving ideas and strategies to take back to their sites.

Overall, the conference was a huge success for all the participants and of great value for DOE and HSS. ■



Don King (center) receives his Contractor Champion Award with Bill Eckroade (left) and Brad Davy, HS-12 (right)



Brad Davy speaks with two workers from Bechtel National Inc. Waste Treatment Plant construction project

Solicitation of Comments, Questions, and Suggestions

HSS welcomes your thoughts about our newsletter. Please send or phone comments, questions, or suggestions to:

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This newsletter can be found on the HSS website at <http://www.hss.doe.gov>

