The HSS Message
Office of Health, Safety and Security
September 2007

Welcome!

The Office of Health, Safety and Security (HSS) was created by the Secretary of Energy to bring the vital Headquarters functions of health, safety, environment, and security together under one office. To ensure effective coordination of these functions, HSS focuses on policy development, technical assistance, education and training, enforcement, and an independent oversight program. To provide consistency across the complex, HSS maintains a close working relationship with the National Nuclear Security Administration (NNSA), the Under Secretaries of Energy and Science, line managers, and the Department's field sites.

This issue of the "HSS Message" highlights some recent HSS accomplishments and ongoing activities.

Office of Nuclear Safety and Environment (HS-20)

Re-energizing the Department's Operational Readiness Review Program

DOE Order 425.1, *Startup and Restart of DOE Nuclear Facilities*, formally established the operational readiness review (ORR) program and summarized requirements for the safe startup or restart of nuclear facilities. Written by knowledgeable experts from diverse nuclear backgrounds, the order incorporated the latest in nuclear safety best practices and resulted in a marked improvement in the number of successful restart efforts.

Over the past few years, the ORR program has experienced a loss of corporate knowledge as individuals who were responsible for its initial success have retired. At the same time, program performance and the quality of readiness activities have declined, and startup schedules have slipped.

To reverse these trends, HSS sponsored a DOE ORR Working Group Workshop in January of this year that included representatives from all program and field offices, as well as members of the Defense Nuclear Facilities Safety Board and various Departmental contractor organizations. The

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Working Group's goals were to identify solutions to current issues; share information among sites; and encourage the retiring individuals in the ORR community to share their knowledge with the individuals who are inheriting ownership of the program.

The Working Group focused on establishing consensus regarding solutions to issues identified during the January workshop. Their recommendations will form the basis for the next revision of DOE Order 425.1, which will be entered into REVCOM following the upcoming ORR Workshop planned for September of this year. It is envisioned that the revised order will be issued in late 2007.

The activities of the ORR Working Group have already begun to have a positive impact on ORR performance. The community's willingness to share knowledge and embrace useful and effective practices of other organizations has improved the quality of startup notification reports, plans of action, and implementation plans. Additionally, some sites are now requesting peer reviews of ORR activities from sites with similar operations to ensure that lessons learned are applied. ■

Executive Order 13423, "Strengthening Federal Environmental, Energy, and Transportation Management"

On January 24, 2007, the President signed Executive Order 13423, "Strengthening Federal Environmental, Energy and Transportation Management," which establishes new and updated goals, sustainable practices, and reporting requirements for environmental, energy and transportation performance and accountability. The order requires that Federal agencies lead by example in advancing the nation's energy security and environmental performance, implement various sustainable practices, and meet specific goals in various areas (e.g., energy efficiency, water conservation, pollution and waste prevention, reduction/elimination of acquisition and use of toxic or hazardous chemicals). The order also requires agencies to implement environmental management systems (EMSs) at all appropriate organizational levels as the primary management approach for addressing the environmental aspects of agency operations and activities.

To help ensure effective implementation of EMS-related order requirements, HSS is revising DOE Order 450.1, *Environmental Protection Program,* to incorporate new EMS, compliance management, and other environmental requirements. It is also working with other Headquarters offices to help ensure that DOE Order 450.1 and other directives that may need to be revised to incorporate the requirements (e.g., DOE Order 430.2A, *Departmental Energy and Utilities Management*) are consistent, complete, and nonduplicative. HSS also will update existing guidance and, where appropriate, prepare new guidance to address the new and revised requirements. In addition, HSS, through the Environmental Management Systems Assistance Network (EMSAN), will provide technical assistance to DOE elements to facilitate implementation of EMS-related order requirements. EMSAN—composed of Headquarters and field elements—serves as DOE's cross-functional support team in the area of EMS. Among its services, EMSAN helps coordinate policy and guidance development, provides technical assistance and awareness training, shares best practices, and coordinates Office of Management and Budget scorecard reporting and improvement.

The Executive Order and Implementation Instructions are available on-line through the FedCenter at: www.fedcenter.gov/Documents/index.cfm?id=6523&pge_id=1606. The DOE Environmental Compliance Management Improvement Implementation Plan is available on-line through the HSS website at: www.hss.energy.gov/nuclearsafety/nsea/oepa/reports/. Steven Woodbury, Office of Nuclear Safety and Environmental Policy, HS-21 phone 202-586-4371, email steven.woodbury@hq.doe.gov can provide additional information on the sustainable practices and goals in the new Executive Order and Implementation Instructions. ■

The White House Closing the Circle (CTC) Awards

On June 12, 2007, the Energy Department received four prestigious White House CTC Awards. The Office of the Federal Environmental Executive annually recognizes outstanding achievement by Federal employees and their facilities in environmental stewardship through these awards.

HSS nominated the DOE Headquarters (HQ) Green Electronics Partners project in the newly established Electronics Stewardship category. This first-time award recognizes Federal facilities that promote sustainable environmental stewardship of their Federal electronic assets in all three lifecycle phases: acquisition and procurement, operation and maintenance, and end-of-life management practices. This HQ Green Team of four key offices—HSS, the Office of the Chief Information Officer, and the Office of Management (procurement assistance and property management) — initiated innovative polices and cross-cutting programs to address the life-cycle management of DOE's electronics assets. DOE purchased more than 10,000 "green computers" in the past two years, implemented Energy Star computer network efficiency procedures to save hundreds of thousands of kilowatt hours, and safely recycled more than 1.2 million pounds of end-of-life electronics over the past two years, including donating hundreds of surplus computer workstations to New Orleans area schools. During the past two years, DOE has won four national agency awards, and ten DOE sites have won twelve facility awards for electronic stewardship.

CTC awards are divided into military and civilian agency categories. Of the ten civilian agency categories for which DOE was eligible, DOE won four. The Department also won three of the 13 honorable mentions selected from nearly 200 nominations. Jane Powers, Office of Nuclear Safety and Environmental Policy, HS-21 phone 202-586-7201, email jane.powers@hq.doe.gov can provide additional information on the 2007 Closing the Circle competition. ■

Office of Enforcement (HS-40)

Enforcement of 10 CFR 850 and 10 CFR 851 Takes Effect

Beginning on May 25, 2007, the enforcement program was operational for 10 CFR 851, *Worker Safety and Health Program*, and 10 CFR 850, *Chronic Beryllium Disease Prevention Program*. The Office of Worker Safety and Health Enforcement (HS-41) is monitoring various sources of information to identify potential rule violations and evaluate their safety significance. In addition to the Noncompliance Tracking System, these sources include occurrence reports, Computerized Accident/Incident Reporting System data, Independent Oversight inspections, Office of Inspector General reports, Defense Nuclear Facilities Safety Board reports, and employee concerns. Consistent with the Office of Enforcement's history in enforcing the Energy Department's nuclear safety requirements, HS-41 will use a graded approach in applying the worker safety and health enforcement program. That is, HS-41 will apply its enforcement authority to those events or workplace conditions that have caused, or have the potential to cause, the greatest risk of harm to workers.

For more information on the enforcement program in general and the worker safety and health enforcement program in particular, you are encouraged to consult the newly published *Enforcement Process Overview* that is available on the HS-40 web site at http://www.hss.energy.gov/Enforce/handbks/EPO-June2007-final.pdf. This document not only consolidates all of the guidance that has been issued since the DOE nuclear safety enforcement program began in 1995, but also includes information on the intended enforcement approach for selected worker safety issues in Chapter VIII of the document. The *Overview* will continue to be augmented and updated as experience is gained in implementing and enforcing the requirements of 10 CFR 850 and 851. ■

National Training Center (HS-50)

Nuclear Executive Leadership Training Course

The National Training Center conducted the fourth Nuclear Executive Leadership Training Course on August 20-24 at the Hyatt Regency Hotel in Bethesda, Maryland. This course is designed to provide supplemental training to Energy Department and National Nuclear Security Administration senior personnel to improve their ability to fulfill safety and leadership responsibilities with the Department's defense nuclear complex. Successful completion satisfies the minimum requirements to support delegation of safety responsibilities as described in the Deputy Secretary of Energy's memorandum, Delegation of Safety Authorities, dated December 27, 2005. The 24 participants included managers and deputy managers from the site offices and senior managers from Headquarters who are qualified as Senior Technical Safety Managers or possess the equivalent competencies. Guest speakers included the Chief Health, Safety and Security Officer, Under Secretary for Nuclear Security, Deputy Assistant Secretary for Environmental Management and the Executive Director of the Nuclear Regulatory Commission.

Office of Independent Oversight (HS-60)

Independent Oversight's Use of Performance Testing During Inspections

Since performance is considered to be the most accurate indicator of a program's effectiveness, the Office of Independent Oversight (HS-60) conducts performance tests tied to program requirements whenever possible to assess the adequacy of a program or program element. The performance tests used by each of the offices within Independent Oversight vary in scope, complexity, and level of resources required from the inspection team and the site, but each is planned and conducted to determine whether personnel within the safeguards and security, cyber security, emergency management, and environment, safety, and health communities have the skills and abilities to perform their duties; whether procedures work; and whether systems and equipment are functional and appropriate.

To promote safety and realism in performance testing, Independent Oversight has established formal, office-specific protocols for planning and conducting performance tests. These protocols help ensure that the safety of personnel and the functionality of the underlying site programs, systems, and equipment are not compromised during the tests. All performance tests involve test planning by selected site personnel to varying degrees. These individuals, referred to as trusted agents, are representatives of the organization being evaluated. They assist in planning a test, procuring the necessary facilities or personnel, and verifying, on behalf of their organization, the plausibility and fairness of the test.

The Office of Security Evaluations (HS-61) uses a broad assortment of tests of protective systems and the protective force to evaluate the effectiveness of safeguards and security programs. These tests range from relatively simple awareness tests for site protective force personnel (e.g., use of photographs to evaluate recognition of critical assets), basic tests of firearms proficiency, and assessments of facility entry and exit control processes to more advanced tests that evaluate the effectiveness of vehicle and personnel search processes and the sensitivity and operability of intruder detection systems. The most complex tests involve full-scale or limited-scope "force-on-force" exercises, using Multiple Integrated Laser Engagement System (MILES)-equipped protective force and adversary personnel. These tests evaluate individual and team protective force tactics, command and control, and communications to determine whether the protective force is effective in containing or denying access by an adversary force and entering and clearing a facility.

The Office of Cyber Security Evaluations (HS-62) conducts announced and unannounced vulnerability scanning and penetration testing of classified and unclassified computer networks to evaluate their protection posture and ability to withstand external and internal attacks. Vulnerability scans, and related tests, may be initiated from HS-62's cyber security test network, via the Internet, or from onsite locations, depending on the purpose of the test. Testing is conducted on all potential pathways into unclassified networks, including Internet, modem, and wireless access points, and looks for exploitable vulnerabilities, such as poor password control and weak inter-system security verifications. If a user account can be compromised, HS-62 will attempt to obtain system access. As part of remote testing or unannounced penetration testing, HS-62 may evaluate user awareness and security by delivering malicious computer code (i.e., a "Trojan Horse" program) by email or other means so that the user inadvertently executes that code. As part of internal testing, which is used to counter the insider threat, HS-62 works closely with site personnel to conduct vulnerability scanning and security testing of site classified and unclassified networks and applies a variety of techniques to determine whether user and system information is exploitable.

The Office of Emergency Management Oversight (HS-63) uses limited-scope performance tests, site emergency response exercises, and composite performance tests to evaluate the effectiveness of key emergency response decision-makers and their support staff in responding to postulated events. These tests indicate whether emergency responders can implement response actions quickly and accurately and use established site response procedures, job aids, and equipment. Limited-scope performance tests are typically administered to multiple groups of qualified responders, normally using the same or similar scenarios to ensure that any conclusions regarding responder readiness and proficiency are valid. Emergency response organization functional groups, such as the consequence assessment team, may also be evaluated to assess their effectiveness in responding to postulated events and providing the information that critical decision-makers need. Most recently, HS-63 is working with HS-61 to conduct an expanded series of joint emergency and security performance tests (i.e., "composite performance tests") designed to evaluate response capabilities following events caused by malevolent acts.

The primary "test" of performance used by the Office of Environment, Safety and Health Evaluations (HS-64) is the observation of actual work to determine the site's ability to perform work safely within the context of the principles of integrated safety management. In many ways, the results of HS-64 performance tests are most representative of program effectiveness and have the least impact on site operations since the inspection team is actually observing normal work activities. HS-64 evaluates a broad range of work, including construction, facility operations and maintenance, decontamination and decommissioning, research and development, manufacturing, and other work that could expose the workers, the public, or the environment to hazards. For example, HS-64 has observed personnel processing hazardous waste in a glovebox, operating a crane during a critical lift, conducting radiological surveys, and isolating and locking out a high-energy system, thereby gaining valid data on whether the jobs are appropriately planned, hazards are appropriately considered, established procedures are followed, and the equipment is properly operated. Work observations also provide an opportunity to evaluate the extent to which site managers and workers use work control processes to identify ways to improve work practices. ■

Highlights of Work Within the Office of Security Technology and Assistance (HS-80)

One focus of HS-80 is helping to integrate new security technologies into DOE protection strategies. With many sites implementing new weapons, vehicles, and technologies, the Performance Testing Working Group (PTWG) is working on ways to simulate these new technologies in performance testing. Accordingly, the PTWG co-chairs Dr. James H. McGee (HS-80) and Mr. Robert F. Brese (NA-74) hosted the next PTWG meeting August 13-17, 2007, at the Lawrence Livermore National Laboratory. The meeting focused on simulation techniques, a vendor demonstration of simulation technologies, and the working group members' presentations of their own site "best practices." The PWTG includes performance test representatives from the DOE Headquarters and all field sites.

The Office of Security Assistance (HS-81) is working closely with the NNSA Office of Defense Nuclear Security (NA-70) to enhance and more closely align the Department's design basis threat and vulnerability analysis (VA) process. HSS initially validated the results of this initiative during the INL Super Site Assistance Visit conducted in July 2006. Validation and enhancements that continued through August 2007 were part of the HSS / NNSA Peer-Review Process for VA scenario development, which has led to a draft VA methodology that more closely reflects a representative risk assessment metric approach. HSS, in coordination with the program offices, plans to incorporate the revised draft VA methodology into DOE Manual 470.4-1, Safeguards and Security Program Planning and Management.

HS-81 also is participating on two subgroups of the Radiation Source Protection and Security Task Force, which was directed by the Energy Policy Act of 2005 to evaluate and provide recommendations to Congress. These subgroups—the Cesium Chloride Working Group and the Public Education Working Group—met in July. For the first of those groups, HS-80 is working with the Office of Environmental Management and the Office of Nuclear Energy to prepare a historical description regarding the U. S. "phase-out" of cesium chloride capsules, currently located at the Hanford Waste Encapsulation and Storage Facility. The second group focuses on public education programs to reduce public fears associated with the potential for use of radioactive materials in a "dirty bomb."

In addition to its field activities, the Office of Technology (HS-82) has recently completed a major collaborative effort with other DOE programs at Headquarters: the installation and startup of the Stairwell Safe Haven in selected areas of the Forrestal Building. In the "safe haven" concept, HSS has deployed chemical protection technologies to protect response forces at DOE and NNSA facilities in case of an intentional or accidental release of toxic chemicals. This concept incorporates a pressurization system and filters to remove toxic chemicals, creating a safe area that is easily accessible by building occupants. This safe haven technology is an innovative and cost effective protection strategy that enhances both worker safety and security for Headquarters staff and visitors.

HS-82 is developing a dedicated resource center to meet DOE and NNSA field sites' information needs related to the implementation of security technologies. This center is intended to serve as a single source that field sites can access to leverage implementation and performance data learned by other sites that have installed security technologies. Performance data, examples of safety authorization basis documentation, concepts of operation, and training information are examples of information that is expected to be available in the resource center. Several HSS office directors, field safeguards and security directors, and other field security professionals will be interviewed to understand what the resource center should contain and how it should work to best serve their needs. Discussions have been initiated with the Department of Defense's Office of Nuclear Matters and the Physical Security Equipment Action Group Chairman to determine how their lessons learned

and reports can be included in the resource center. While the resource center is under development, field sites are encouraged to contact any HS-82 staff member directly if they need security technology information.

Finally, HS-82 is implementing an innovative concept for installation and initial integration of multiple technologies at the Technology Deployment Integration Center (TDIC), located at the Nevada Test Site. The TDIC provides a controlled setting for integrating several of the security technologies deployed through the HSS Technology Deployment Program, before those technologies are place in long-term operation in secure facilities. This deployment approach minimizes the need to access sensitive site areas and avoids increased security costs during installation activities. ■

Office of Classification (HS-90)

Work Performed by the Office of Classification

Beyond its well-known activities related to identifying and protecting classified information the Office of Classification, HS-90, is also responsible for declassification policy, training, and guidance and performs a large amount of declassification work for both information and documents. Information declassification efforts address both Restricted Data (RD) and National Security Information (NSI). The category of Restricted Data (nuclear weapons-related classified information) was established by the Atomic Energy Act of 1954, which recognized that over time, some RD information will no longer cause "undue risk to the common defense and security" could therefore be declassified. Similarly, Executive Order 12958 (issued in 1995) governs declassification of DOE's National Security Information (NSI), which relates primarily to the military, security, foreign relations, and intelligence.

To meet these declassification requirements, HS-90 periodically seeks proposals from the Department and other agencies recommending specific information that can be declassified. These proposals are evaluated by the Technical Evaluation Panel, a special review group composed of senior technical experts who determine whether declassifying the proposed information would present a risk to national security. If there is judged to be little or no risk, the program office that owns the information reviews, and usually approves, the proposed declassification. After approval, RD is formally declassified by the Deputy Chief for Operations, HSS, and NSI is formally declassified by the Director, Office of Classification. Each decision to declassify information is codified in classification guidance and distributed to Derivative Classifiers throughout the complex so formally-declassified information is not marked as classified in future documents.

Declassifying documents is quite different. Document declassification is the process of examining a classified document against the most current classification guidance to determine whether it contains classified information. Within DOE, a document slated for declassification is reviewed by two trained individuals—a Derivative Classifier and a Derivative Declassifier—to ensure that it no longer contains classified information, as defined by current guidance. Derivative Declassifiers, who have the authority to make the final determination that a document can be declassified, receive more comprehensive and detailed training than do Derivative Classifiers.

Many different types of requirements and requests can initiate a declassification effort. For example, Executive Order 12958 and Public Law 105-261 require HS-90 to complete, by the year 2009, the review and redaction of several million pages of documents referred by other agencies. HS-90 has committed a large number of Derivative Declassifiers to work at the National Archives to accomplish this mission. In addition, dozens of Derivative Classifiers and Derivative Declassifiers within the Office of Document Reviews (HS-93) routinely examine millions of pages every year to determine whether they can be

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declassified. HS-93 also conducts the final declassification review for documents requested under the Freedom of Information Act (FOIA). For FOIA documents, Derivative Declassifiers must identify line-by-line where the classified information exists in a document so that a redacted version of the document can be provided to the citizen, public interest group, or other entity that requested it. This is a very time-consuming process, but HS-93 has greatly reduced its FOIA backlog over the past year and is committed to reducing it even more in the future.

Finally, the Office of Classification promotes public access to declassified documents through its OpenNet web site https://www.osti.gov/opennet/, where the public can search for bibliographic references and locations of declassified documents. Through the work of the Office of Scientific and Technical Information over the past year, the OpenNet web site has been redesigned, and many thousands of full-text documents of interest to the public have been made accessible. ■

Upcoming Activities

- Type A Accident Investigation of the River Protection Tank Farm Waste Spill (HS-64)
- Signing Project Annex III agreement for the Palomares, Spain, Research Program (HS-1)
- Pandemic Influenza Training (HS-13)
- Idaho National Laboratory (INL) Safeguards and Security Inspection and Force on Force Performance Testing (HS-61)
- Nevada Test Site (NTS) Safeguards and Security and Cyber Security Inspection and Force-on-Force Performance Testing (HS-61 and 62)
- Brookhaven National Laboratory (BNL) Environment, Safety and Health Inspection (HS-64)
- Los Alamos National Laboratory (LANL) Environment, Safety and Health Inspection (HS-64)
- Los Alamos National Laboratory (LANL) Cyber Security, Classified Matter Protection and Control, and Personnel Security Follow-up Inspection (HS-61 and 62)
- Y-12 Emergency Management Inspection (HS-63)
- The Fifth Annual DOE Consolidated Audit Program (DOECAP) Meeting (HS-30)
- Working Group Review of Lessons Learned from the BP (British Petroleum) U.S. Refineries Independent Safety Review Panel (HS-30)
- Leadership Development Institute (LDI) Training Course (HS-50)
- Restricted Data (RD)/Formerly Restricted Data (FRD) Training (HS-90)

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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