



**Department of Energy**  
Washington, DC 20585

March 24, 2004

The Honorable John T. Conway  
Chairman  
Defense Nuclear Facilities Safety Board  
625 Indiana Avenue, NW, Suite 700  
Washington, D.C. 20004

Dear Mr. Chairman:

In your letter of December 8, 2003, to the Secretary of Energy, you requested information on the technical qualifications and experience of the personnel involved with the effort to draft a Department of Energy (DOE) technical standard on the development, implementation, and maintenance of administrative controls. This DOE technical standard is being developed as part of DOE's Implementation Plan for the Defense Nuclear Facilities Safety Board Recommendation 2002-3. The information you requested is enclosed.

Please contact me at (202) 586-6151 if you have questions.

Sincerely,

A handwritten signature in cursive script that reads "Beverly A. Cook".

Beverly A. Cook  
Assistant Secretary  
Environment, Safety and Health

Enclosure

cc:  
M. Whitaker, DR-1







## Department of Energy

Washington, DC 20585

March 24, 2004

MEMORANDUM TO: BEVERLY A. COOK  
ASSISTANT SECRETARY  
ENVIRONMENT, SAFETY AND HEALTH

THROUGH: RAYMOND J. HARDWICK, JR.   
DEPUTY ASSISTANT SECRETARY  
OFFICE OF FACILITY SAFETY

FROM: RICHARD L. BLACK   
DIRECTOR  
OFFICE OF NUCLEAR AND FACILITY  
SAFETY POLICY

SUBJECT: Defense Nuclear Facilities Safety Board Deliverable  
Providing Technical Qualifications and Experience of  
Personnel, Recommendation 2002-3

By this letter to the Defense Nuclear Facilities Safety Board (DNFSB) Chairman, you are providing the technical qualifications and experience of the personnel involved with the effort to develop a Department of Energy (DOE) technical standard concerning the administrative controls, as requested by a DNFSB letter dated December 8, 2003. The DOE technical standard is a deliverable under DOE's Recommendation 2002-3.

If you have any questions, please call me at 301-903-0078.

Attachment



## TECHNICAL QUALIFICATIONS AND EXPERIENCE

**Nolan Bailey**, National Nuclear Security Administration (NNSA)/Nevada Site Office (NSO), has over 30 years of experience in the nuclear industry with emphasis on operational health physics, facility safety analysis, emergency preparedness and facility design review. He has a Masters of Science Degree in Nuclear Physics and Health Physics and is a Health Physicist by background. Mr. Bailey has been a team leader or team member for numerous readiness reviews for both nuclear and non-nuclear facilities at Department of Energy (DOE) and Department of Defense (DOD) sites. He has been in the oversight, review, and approval process for facility safety basis documentation and hazards facility startup and restart for many years with the DOE. This has involved, in some limited case, working directly with the Laboratories and contractors in the development of a Safety Analysis Report (SAR), Basis for Interim Operation Documents (BIOs) or Justification for Continued Operation (JCO). In the last 4 years, he was the DOE Operational Readiness Review (ORR) team leader for the new Gamma Irradiation Facility at Sandia National Laboratory (SNL), the DOE ORR team leader for Headquarters Office of Nuclear Energy on the startup of the Annular Core Research Reactor at SNL, the DOE Readiness Assessment (RA) team leader for the new Dual Axis Radiographic Hydrodynamic Test Facility at Los Alamos National Laboratory (LANL), and DOE RA Team Leader for startup of the W78 D&I at the Pantex Plant. He has been the Senior Advisor for Safety Basis Reviews of nuclear facility Documented Safety Analysis (DSA)/Technical Safety Requirements (TSR) in meeting the requirements of 10 CFR 830 Subpart B for the NNSA/NSO.

Mr. Bailey conducted numerous health physics and emergency preparedness appraisals of DOE and DOD sites. This has included the development of radiological and emergency preparedness programs and safety standards criteria. He supervised technical personnel and assured effective oversight of operational health physics, emergency preparedness, facility safety analysis and facility design programs. Mr. Bailey has considerable operational knowledge of DOE Albuquerque Operations Office sites (i.e. LANL, SNL, and Rocky Flats, Pantex, Mound, and Kansas City Plants) and the Nevada Test Site (NTS). He is currently the NNSA/NSO, Director of the Performance Assurance Division tasked with the responsibility for oversight of the Nuclear Facility Safety Management process being implemented by the NTS Laboratories and contractors. Mr. Bailey retired in November 1996 as a Lt. Col. in the United States Air Force (USAF) Reserve. His last assignment was with the USAF Inspector Generals Office, Air Force Safety Agency, Nuclear Power and Sources Division, Kirtland Air Force Base, New Mexico.

**Patrick Casey**, MAS Consultants, Inc., has over 29 years of operations, operations oversight, and training experience in reactor and non-reactor nuclear facilities, including over 25 years of technical management experience. As a senior consultant to DOE, he assisted the Office of River Protection to improve the efficiency of DOE operations and programs. He also served as senior technical consultant to the Chairperson of the Federal Technical Capability Panel and assisted DOE in the revision of the Federal Technical Capability Program Manual, DOE M 426.1-1. He assisted in the development and revision of technical qualification program functional area qualification standards for Senior Technical Safety Manager, Safety Software Quality Assurance, Facility Representative, Environmental Compliance, Environmental Restoration, Decontamination and Decommissioning, and Transportation. He served as the Subject Matter Expert (SME) for Training and Qualifications on various ORRs, audits, and assessments at the Savannah River Site (SRS).

Mr. Casey's experience in the commercial nuclear industry includes operating experience in the construction and startup of a 900 MWe Pressurized Water Reactor. He also developed and implemented classroom, On-the-Job Training, and simulator training programs supporting Reactor and Senior Reactor Operator License Training Programs. Additional experience in this area includes auditing commercial Reactor and Senior Reactor Operator license training programs to ensure compliance with Title 10 of the Code of Federal Regulations.

**Timothy Glenn Cox**, LANL, has over 23 years of combined experience in the Commercial Nuclear Power Industry and the DOE Nuclear Complex. This includes an extensive background in operations, project management, compliance assessments, operator training/qualification, and operations procedure development.

Mr. Cox's operations experience includes 10 years of service with Duke Power Co. where he was an Nuclear Regulatory Commission (NRC) licensed Reactor Operator at Catawba Nuclear Station. In this role he was directly responsible for daily control room operations and continuous compliance with Technical Specifications. Additionally he performed construction turnover acceptance testing, cold hydrostatic testing, and hot functional testing of Catawba units 1 and 2, as well as hot functional testing and initial fuel load at McGuire Nuclear Station unit 2. He was a qualified fuel-handling Reactor Operator and performed initial fuel load and subsequent refueling of both Catawba units. He was a subject matter expert for the Catawba Operations Procedures Group, and performed validation of all emergency procedures, including 10 CFR 50 Appendix R emergency procedures for remote reactor shutdown capability. He also rotated through service on the unit coordinator's group, planning, integrating, and scheduling daily facility operations activities.

Mr. Cox transferred his commercial operating experience to the DOE arena where he managed projects supporting various nuclear operating programs ranging from the High Level Waste Operations Training and Procedures Project at SRS (*Training & Procedures Program Manager, Savannah River Site, High Level Waste 1994-1997*) to the Configuration Control Authority (CCA) and Plutonium Packaging and Stabilization (PUSPS) Training & Qualification programs at Rocky Flats Environmental Test Site (RFETS). Additionally, Mr. Cox personally developed and implemented Authorization Basis Training programs for the majority of RFETS Nuclear facilities including Buildings 371, 771, 776/777, 779 and the Site SAR Project. (*Professional Services Program Manager, RFETS 1997 2002*) He also participated in the initial development of Documented Safety Analysis (DSA) training for Oak Ridge National Lab (ORNL) in 2002. (*Technical and Field Engineering Inc. Technical Advisor, 2002*) Mr. Cox is also a qualified auditor, and has participated in multiple regulatory-based site and facility specific assessments involving Safety Basis, Safety Management Program, Conduct of Operations (ConOps), and Training/Qualification program compliance at SRS, RFETS, and LANL.

Mr. Cox is currently supporting LANL as an Advisor for the Performance Surety Division (PS-2, Operational Support Group) where he applies operational and programmatic expertise to assist various LANL Facilities in efforts to improve formality of operations, regulatory compliance, safety, and efficiency. (*PS-2 Tech Assist Team Lead, Current*) He previously served at LANL as an advisor/mentor to the Chemistry and Metallurgy Research (CMR) Facility, where he implemented an "Operational Excellence" program to improve 5480.19 compliance (*CMR ConOps/Procedures Upgrade Advisor 2001-2002*).

**Doug Dearolph**, NNSA/YSO, is a senior safety basis engineer with the DOE NNSA. He holds a Bachelor of Science in Mathematics from the University of South Carolina and a Masters in Business Administration from the Georgia State University. He has 25 years experience in the nuclear and chemical-nuclear fields. His first 11 years were spent in the Naval Nuclear Propulsion program where Mr. Dearolph completed both division officer and department head tours aboard nuclear submarines while supervising pressurized water reactor operations. In addition to at-sea operations, his assigned submarines completed several maintenance outages and one major overhaul that included start-up testing, and sea trials. Mr. Dearolph completed certification as a Chief Nuclear Engineer by the Naval Reactors Branch of the DOE. Mr. Dearolph separated from the Navy in 1989 and spent 3 years with the Westinghouse Savannah River Company (WSRC) and 10 years with the DOE.

Mr. Dearolph has held various positions at the SRS including certification as Reactor Supervisor and Operations Shift Manager at K-Production Reactor, DOE Technical Support engineer and Facility Representative for the Savannah River Special Project Office, and Lead DOE Facility Representative for the F-Area Chemical-Nuclear Separations facilities. As both a DOE and WSRC employee, he participated in team inspections and had direct responsibility in several different areas of plant operations. These areas included technical specifications, safety evaluations, configuration management, startup/restart, normal operations and conduct of maintenance.

Mr. Dearolph was involved in the K-Reactor Restart Program from development of the improvement programs through implementation and the successful completion of the Power Ascension Test Program. Mr. Dearolph's team participation include: DOE-Savannah River validation for the restart of both F-Canyon Phase I and FB-line ORR, Integrated Safety Management Systems (ISMS) Phase I review at the SRS and Phase II Review at the FB-Line facility, H-Canyon Phase II RA, Y-12 Metal Reduction RA, Phase A1 and A2 ORRs for the restart of Enriched Uranium Operations (EUO) at the Y-12 Plant, and the ORR for the SRS Replacement High Level Waste Evaporator. Additionally, Mr. Dearolph was the DOE restart manager for the restart of F-Canyon Phase II and resumption of fissile material handling operations in the Y-12 EUO facility.

Prior to joining the NNSA/Y-12 Site Office (YSO) in September 2000 and for a period of 2 years, Mr. Dearolph exercised DOE programmatic responsibility for the Nuclear Safety, Criticality Safety and Nuclear Startup programs at the SRS. He is currently assigned as the YSO senior principal for safety basis programs and leads the technical oversight of the operating contractor's safety analyses programs for non-reactor nuclear and chemically hazardous non-nuclear NNSA-Defense Program facilities located within the Y-12 National Nuclear Security Complex.

**Richard W. Englehart**, DOE/EH, has 20 years technical and management direction experience for nuclear safety and environmental analyses for nuclear power, uranium fuel cycle, Pu-238 radioisotope thermoelectric generator (RTG) NASA missions, and DOE non-reactor nuclear facilities. He also has 11 years experience in nuclear safety policy and standards development and implementation advice.

Dr. Englehart joined DOE in 1990 in the New Production Reactors Program. He was on the staff of the Chief Engineer as a senior advisor and also was Director, Office of Environment for the Program. In 1992 he joined the Office of Nuclear Safety Policy and Standards (now the Office of Nuclear and Facility Safety Policy), where he has responsibilities relating to the Safety Basis requirements of 10 CFR 830 (Safety Analysis Reports, Technical Safety Requirements, Unreviewed Safety Question), and the Nuclear Safety Design Criteria requirements of

DOE O 420.1. Prior to DOE, Dr. Englehart was employed by NUS Corporation for 18 years, providing services to the nuclear power industry and to DOE as a principle investigator, project manager, department manager (radiological programs), and assistant division manager. He was an assistant professor of Nuclear Engineering at the University of Florida and was director of the University research reactor for 4 years. He holds a BS in Mechanical Engineering from Carnegie Mellon University and an MS and Ph.D. in Nuclear Engineering from the Pennsylvania State University.

**Lee Knoell**, LANL, Qualified Safety Analyst under the DOE's Technical Qualification Program, Qualified DOE Accident Investigator for operational incidents for 7 years, 10 years as a Health Physics Supervisor for numerous operating nuclear facilities at the LANL, 2 years experience at LANL writing field health physics procedures and training Radiological Control Technicians to the procedures, 9 years experience in the U.S. Navy Nuclear Powered Submarine Force where qualifications included Radiological Control Shift Supervisor, Reactor Operator, Electrical Operator, Steam Plant Operator, Engine Room Supervisor, Engineering Watch Supervisor, and Engineering Laboratory Technician.

**James Low**, NNSA/NSO, has over 24 years of experience in the nuclear industry with emphasis on nuclear reactor/facility design and analysis, health physics, facility safety analysis, and nuclear materials management. He has a Bachelor of Science Degree in Nuclear Engineering and a Masters in Public Administration and is an engineer by background. Mr. Low has been a team leader or team member for numerous readiness reviews and safety basis reviews for both nuclear and non-nuclear facilities in the DOE Weapons Complex and DOE Nuclear Reactor Sites. He conducted numerous health physics and safety analysis reviews of the former DOE Albuquerque Operations Office (DOE/AL) Laboratories and Plant sites.

Mr. Low has considerable facility and operational knowledge of former DOE/AL sites (i.e., LANL, SNL, Pantex Plant, Mound Plant, Waste Isolation Pilot Plant and uranium mill tailing projects) and non-DOE/AL sites (i.e. NTS, Idaho National Engineering Laboratory, Hanford Nuclear Reservation and U.S. Air Force Astronautics Laboratory). He authored numerous reports and papers on nuclear facility design, nuclear systems analysis, nuclear materials - waste management and health physics. He is currently team leader and functional manager for safety basis and readiness reviews for the NNSA/Nevada Site Office.

**Ken Perkins**, Brookhaven National Laboratory (BNL), is a Senior Nuclear Engineer and head of the Nuclear Systems Group in the DOE Sciences and Technology at BNL. He has 30 years of nuclear safety experience at Idaho National Engineering Laboratory (INEL) and BNL since earning a Ph.D. in Mechanical Engineering at the University of Arizona.

Dr. Perkins supported the DOE Office of Nuclear and Facility Safety Policy in the development of implementation guides and training for the DOE Nuclear Safety Management Rule, 10 CFR Part 830. He helped develop the ISMS Guide, DOE G 450.4-1 and participated in ISMS reviews at SR, RFETS, ORNL, and the NTS. He also supports the NRC Office of International Programs in strengthening regulatory oversight in Armenia, Kazakhstan, and Russia. He also served on the DOE review team for the Natural Phenomena Hazards Mitigation Order and associated standards.

Dr. Perkins' previous experience at BNL and INEL encompassed design development and licensing support for research, commercial and advanced concept nuclear reactors with emphasis on safety design, accident analysis and verification of licensing calculations.

**David W. Sheffey**, BWXT Y-12, is responsible for ensuring effective Safety Analysis and Safety Basis Oversight Programs are established and implemented throughout Y-12. Accountable areas include: Authorization Agreements, SARs, BIOs, Technical Safety Requirements (TSRs), Operational Safety Requirements (OSRs), Unreviewed Safety Question Determinations (USQDs), and Hazards Analysis for Occupational Safety and Health Administration (OSHA) 29 CFR 1910.119 and EPA 40 CFR 68. Mr. Sheffey chairs the Safety Basis Information Forum, a committee comprised of key individuals involved in various aspects of authorization basis document preparation, review, maintenance, and execution, chartered to exchange information and develop solutions to common problems. He is a member of the Key Issues and Assumptions Panel, a formally chartered, independent safety basis review group. He oversees implementation of the Issues Management process associated with facility safety and safety basis implementation, including Safety Evaluation Report (SER) compliance. He maintains cognizance of new requirements and changes to existing regulations having potential to affect facility safety programs. His responsibilities include interfacing with the DNFSB and responding directly with DOE on emerging issues and actions. He represents BWXT Y-12 on site-wide DOE and other consensus committees and serves as a single point of contact for facility safety matters.

Mr. Sheffey had similar responsibilities with predecessor companies at Y-12 and other sites under the cognizance of the DOE site office over the period 1987 to the present. Prior to that he was a Facility Safety Engineer for the DOE Oak Ridge Office for 10 years. He also has 3 years experience in the nuclear electric power field as a test engineer and in licensing.

Mr. Sheffey has a B.S. in Engineering Physics and an M.S. in Nuclear Engineering from the University of Tennessee, and an M.A. in Business Administration from the University of Nebraska.

**Chris Steele**, Los Alamos Site Office (LASO), has 2 years as a Qualified Reactor Engineer on an operating industrial boiling water reactor (BWR) plant, 2 years experience as a subject matter expert with the LASO Facility Operations Branch (FOB), 1 year as a Qualified Facility Representative with LASO's FOB, 1 year as an engineering technician, 7 years as a Qualified Safety Analyst under the DOE's Technical Qualification Program, 6 years as Qualified Senior Authorization Basis Manager, 6 years as Qualified Senior Technical Safety Manager, and 1.5 years as Safety Analyst at Pantex.

**Richard Tom**, Qualified Safety Analyst under the DOE's Technical Qualification Program, qualified Shift Refueling Engineer at Mare Island Naval Shipyard for 6 years, qualified DOE Facility Representative for 7 years at Argonne National Laboratory West, and Senior Project Engineer for Special Isotope Separation Project.