TRAINING ASSISTANCE TEAM VISIT

FOR FEDERAL WORKERS SUPPORTING THE

DEPARTMENT OF ENERGY

OAK RIDGE Y-12 PLANT

AUGUST - SEPTEMBER 1995

Approved by:

Roy Schepens 9/14/95

Roy Schepens **Date**
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EXECUTIVE SUMMARY

A Training Assistance Team (Team) visited the Oak Ridge Y-12 Plant August 14-18, 1995, and the Headquarters Office of Site Operations (DP-24) September 6-7, 1995, to evaluate the technical competence of key Federal personnel supporting the Y-12 Plant. The Team visits were in accordance with the Department's Implementation Plan for Defense Nuclear Facilities Safety Board Recommendation 94-4, "Deficiencies in Criticality Safety at the Oak Ridge Y-12 Plant." The Team addressed four key areas: Organizational Infrastructure, Current Staffing, Conduct of Oversight, and Training Organization and Administration. EH has conducted a separate review of the EH Oversight personnel.

The Team found that the base level of key Federal personnel technical expertise and competency at the Y-12 Site has significantly increased since the September 1994 event. Needed technical expertise has been added to Oak Ridge Operations Office (ORO), Y-12 Site Office (YSO), and the Training and Development Division (TDD). Significant enhancements include the addition of Facility Representatives, improvements in technical support to the Facility Representatives, and improvements in communication of issues and concerns to the contractor. In order to achieve continued improvement in technical staff facility knowledge and expertise, the Team has identified the following recommendations:

1. Line management (DP-24, ORO, and YSO) ownership and commitment to training needs to be strengthened.

2. TDD needs to be aggressive in identifying and supporting line management needs.

3. YSO, with support from TDD, needs to expedite development of site-specific training for Facility Representatives and technical support personnel.

4. YSO needs to provide timely follow-up and closure of deficiencies and commitments from the contractor to ensure improvement is continually achieved.

5. YSO needs to define and implement Facility Representative roles and responsibilities during an emergency.

6. The YSO Restart Team including the Facility Representatives needs to be reconfigured into an Operations Branch reporting directly to the YSO Manager following resumption of operations.

INTRODUCTION

The purpose of this Training Assist Team (Team) visit was to evaluate the technical competence of key Department personnel involved with safety-related activities at the Y-12 Plant and share observations, recommendations, and lessons learned as necessary to ensure key Department personnel possess the proper training and experience and can perform their required tasks in a formal, deliberate fashion. The Team reviewed the experience, training, and performance of key personnel. The Team utilized specific performance objectives, review criteria, and approaches delineated in the Program Plan for the Team issued in June 1995. The Team visit was conducted at the Y-12 site on August 14 - 18, 1995, with a follow-up visit to the Headquarters Office of Site Operations (DP-24) Y-12 Team on September 6 - 7, 1995.

BACKGROUND

On September 27, 1994, the Defense Nuclear Facilities Safety Board (DNFSB) issued Recommendation 94-4 which involved criticality safety deficiencies observed at the Oak Ridge Y-12 plant. The Recommendation describes a September 22, 1994, event in which members of the DNFSB staff noted discrepancies between the criticality safety approval requirements and the configuration of storage arrays while observing the unloading and storage of a weapon component. In responding to this identified violation of nuclear criticality safety limits, the Department and contractor personnel failed to take appropriate corrective actions in accordance with site procedures. Following the event, the operating contractor, Martin Marietta Energy Systems, initially curtailed all nuclear operations at the Y-12 Plant.

DNFSB Recommendation 94-4 stated that reviews of adherence with nuclear criticality safety limits at the Y-12 Plant revealed a widespread level of noncompliance. The Recommendation also identified weaknesses in the criticality safety program relative to procedures, conduct of operations, and Department and contractor personnel experience, training, qualifications and performance. In February 1995, Defense Programs (DP) issued the Department of Energy Implementation Plan for DNFSB Recommendation 94-4, Deficiencies in Criticality Safety at the Oak Ridge Y-12 Plant. The Implementation Plan describes plans and schedules for the phased resumption of activities at the Y-12 Plant.

Technical Competence, the fifth of eight implementation plan tasks, requires assessment of Key Federal Personnel at the U.S. Department of Energy Oak Ridge Y-12 Plant. This report meets the deliverable required in Task 5 (Commitment 5.2) of the 94-4 Plan. This report provides recommendations for long-term programmatic improvements associated with technical competence of the Key Federal Personnel at the Oak Ridge Y-12 Plant. A response to this report (corrective action plan) is due by December 1995.

ASSESSMENT OF FEDERAL WORKERS SUPPORTING THE OAK RIDGE Y-12 PLANT

Headquarters and Y-12 Site Organization and Infrastructure

The Team reviewed the current Headquarters DP-24 Y-12 Team, Y-12 Site Office (YSO) organization, and applicable portions of the Oak Ridge Operations Office (ORO) including changes instituted since the September 22, 1994, event. The Team reviewed organizational charts, roles and responsibilities, position descriptions, selection criteria, and matrix support responsibilities. DP-24 and ORO have identified the minimum required positions necessary for adequate technical expertise in the organization and has filled or made plans to fill these positions. The positions provide critical technical expertise for YSO in the following areas: Facility representatives, criticality safety, and radiation protection. In addition, the Training and Development Division (TDD) has added technical training specialist positions. The current YSO organizational structure consists of the Program Branch; Environment, Safety, and Health Branch; and a Restart Team. The Facility Representatives report directly to the YSO Manager. The Team interviewed DP-24, YSO, and ORO management at length and discussed roles and responsibilities as well as current and future organizational structure. The Restart Team has assumed a role similar to an operations branch. The YSO Manager plans to replace the Restart Team with an Operations Branch following full resumption of operations. This Operations Branch would include the Facility Representatives and assume operational responsibilities such as conduct of operations, conduct of maintenance, occurrence reporting, oversight of contractor training, and readiness assessment reviews. The Team determined that the current organization lends itself to effective direction and oversight of the contractor during the critical resumption activities, and the reorganization plan incorporating an Operations Branch would result in an efficient oversight organization for the continued operation of the Y-12 site.

As part of the interview process at the Y-12 Site, the Team analyzed the level of commitment and involvement by line management in the implementation of DNFSB Recommendation 93-3. The Team interviewed line management from first line supervisors in the Defense Programs and Environment, Safety, and Quality organizations up through the Assistant Managers for Defense Programs and Environment, Safety, and Quality. The Team also interviewed TDD management and training specialist personnel to gain insight into all aspects of the implementation process. Results of interviews and analysis indicate that, while upper line management considers the 93-3 implementation process to be proceeding smoothly, first line supervisors responsible for the identification and development of facility-specific training are not clear on the path forward for 93-3 implementation. The training support organization has proceeded with process development and is currently presenting the process to line management in a series of workshops. However, the process emphasizes the documentation necessary to process equivalencies rather than improvement of the technical staff's knowledge level through oral checkouts. This is indicative of a lack of line management ownership of training in that clear leadership and guidance has not been provided to first line supervisors and TDD to ensure the level of knowledge of the technical staff is increased by the process.

The Team also reviewed the level of implementation of DNFSB Recommendation 93-3 by the Headquarters Y-12 staff. The staff was not familiar with the Technical Qualification Program and its requirements. The appropriate qualification standards for staff members had not been assigned, the staff had not been briefed on the 93-3 technical qualification program, and there was no schedule (formal or informal) for implementing the 93-3 technical qualification program. The staff was vaguely familiar with the 93-3 implementation schedule but did not understand the process. The Team found no evidence that a process is in place to ensure the Headquarters Y-12 staff meets the December 31, 1995, commitment in the 93-3 implementation plan to have all functional area qualification programs in place. The DP-24 Y-12 team is far behind other efforts in the complex and could learn from the TDD at the Y-12 Site.

The Team observed that DP-24 management has not assigned a technical qualification standard to the applicable staff per 93-3. To date, management is considering using aspects of the Technical Manager Standard for the staff since they are considered to be generalists. However, the staff does conduct reviews of such documents as Safety Analysis Reports, Environmental Assessments, and other items requiring a specific expertise. The Team also noted that existing position descriptions call for expertise in these areas.

The Team recommends that management assign a staff member (possibly the technical assistant) as a driver for technical training execution. This staff member's responsibilities would include the determination and assignment of appropriate technical qualification standards for the DP-24 staff members. Assigning each applicable staff member a specific technical qualification standard ensures that they can fulfill the role of a technically competent generalist and maintain their subject matter expertise in their area of expertise. This would ensure that 93-3 is implemented in the manner the Department intended by using the technical qualification standards which the Department (including Defense Programs) has invested time and money to generate. Defense Programs is the Management Sponsor for two of the qualification standards and was instrumental in developing many of the other standards.

Key Personnel Staffing

The Team interviewed key personnel and reviewed training, qualification, and experience records; Individual Development Plans (IDPs); and SF-171 forms or biographical summaries for key personnel to determine the background, education, training, and experience of the current staff. The Team also reviewed current staffing levels to determine the status of filling critical technical positions. The Team determined that, overall, the current organization is adequately staffed with individuals that are technically competent for the positions. One Industrial Hygiene matrix position has not yet been dedicated by the ORO Environment, Safety and Quality organization. This assignment is in progress and, when complete, will provide the remaining necessary matrix support personnel from the ORO Environment, Safety and Quality organization.

One health physicist has just reported to the Y-12 site (three days prior to the Team visit). He is technically competent in his specialty area but is lacking the facility-specific training necessary to fully execute his responsibilities. Interviews determined that the technical staff was motivated and technically competent to provide direction and oversight. Review of records of the ORO Environment, Safety and Quality organization revealed 36 of 53 personnel have advanced degrees. Only two did not have at least a bachelor's degree, and those individuals had at least 18 years of service in the DOE complex.

Interviews with technical staff revealed training support needs that were not being fulfilled by TDD. Technical training competency at YSO is insufficient to meet YSO technical staff training and development needs. Additionally, in the draft YSO procedure "Personnel Development, Qualification and Training" (YSO-2.1), no group was responsible for the identification and development of training needs (only coordination was addressed). A review of the ORO training plan identified a lack of line organization technical input to the requirements and deliverables. This lack of communication from YSO to TDD could be greatly assisted by the assignment of a proactive technical training expert to YSO. This expert could assist the technical manager in development of site-specific training materials, the identification of training requirements, and preparation of a detailed training plan that identifies required deliverables and needed resources for the technical staff as well as TDD.

The Team also reviewed the educational backgrounds, experience, training records, IDPs, and conducted interviews with the key personnel of the Headquarters DP-24 Y-12 Team. The staff was verified to have technical competency in the following key areas: criticality safety, safety documentation, radiation protection, and environmental. The DP-24 staff draws upon DP-31 technical staff as needed in areas where they do not have the required expertise in house. The Team determined that the Headquarters Y-12 staff has the required education and experience in the above noted technical competencies. The Team also reviewed DP-24 management for technical competency. The Y-12 Team leader and DP-24 manager do not have technical degrees. The DP-24 technical assistant has a technical degree and background which adequately compensates for this potential weakness.

During the review of the Headquarters staff IDPs, the Team noted that none of the ten IDPs reviewed were current, and many were three to four years old. The staff indicated that the IDPs are not used or incorporated with their performance reviews. The IDPs were not specific and were written in general terms that did not contribute to maintenance or growth of an individual's knowledge. The IDPs in their present condition do not comply with the requirements of the 93-3 Implementation Plan.

Key Personnel Oversight of the Contractor

The Team assessed the effectiveness of contractor oversight activities by reviewing records, conducting interviews, and direct observation of field activities. Records reviewed included IDPs, SF-171 government resumes, YSO procedures, ORO procedures, training records, monthly reports, and assessments/surveillances. Personnel interviewed from YSO included facility representatives, Environment, Safety, and Health branch personnel, program management branch personnel, restart team members, and the office of the YSO manager. Personnel from ORO providing matrix support and independent oversight were also interviewed. These included personnel from the Environment, Safety, and Quality organization and the Training and Development Division. All field activities observed were conducted at the Y-12 site.

Personnel interviewed were divided into three groups: Facility Representatives; YSO Environment, Safety, and Health personnel; and ORO matrix Environment, Safety, and Quality personnel. Six out of the seven Facility Representatives reported to the Y-12 site since February 1995, having been hired as a result of the September 1994 event. The new Facility Representatives have extensive and diverse nuclear backgrounds including nuclear navy, naval nuclear shipyard, a NRC resident inspector, and a previously qualified Facility Representative at the Savannah River Site. The educational backgrounds provide the necessary technical diversity for the operations conducted at Y-12 (mechanical, electrical, nuclear, metallurgical, and chemical engineering), and include one masters degree in engineering, two registered professional engineers, and an individual with an extensive nuclear weapons manufacturing experience.

A review of qualification programs for YSO and ORO personnel showed good progress for Facility Representatives but not for other technical staff. The Facility Representative interim qualification program is good and four of the seven Facility Representatives have completed it. Revision 1 to the Facility Representative qualification program manual was issued in August 1995, and revised core requirements to meet the recently issued DOE Generic Technical Base and Facility Representative qualification standards. Site/Facility specific training for Facility Representatives has not been issued for any Y-12 facilities.

Review of ORO Environment, Safety, and Quality and YSO staff revealed that personnel have appropriate backgrounds and education. Several personnel have advanced degrees and are

professionally certified in their fields or are in the process of getting professionally certified. Training development for other technical staff is not yet defined and relies on IDPs, although the IDPs reviewed varied widely in quality and level of detail. ORO is currently in the process of developing Technical Qualification Records (TQRs) as part of the 93-3 process. Some TQRs have been issued in draft form for review. YSO has very recently filled a vacant Health Physicist position with an individual who has a proper health physics and radiation protection background, but who needs training specific to the Y-12 site.

Emergency management training for Facility Representatives is limited to tours of the Y-12 and ORO Emergency Operations Centers and reviews of the site emergency plans. Interviews with one interim qualified Facility Representative indicated he had no responsibility other than following site rules for immediate response to alarms. The lead Facility Representative stated that he was to report to the Emergency Operations Center, which is the action required by a memorandum from the YSO Manager. Roles and responsibilities need to be better defined for Facility Representatives in emergency response. Normally, Facility Representatives have a defined role as part of the Emergency Response Organization, either as a facility specialist or as part of the on-scene command group. Training also needs to be improved.

Contractor oversight by the YSO is accomplished through assessments and surveillances conducted in accordance with an annual assessment plan. The results of these assessments and surveillances are communicated to the contractor through immediate oral discussions at the time of the observation and documented in a monthly report issued by the YSO. The assessment plan and monthly report are new activities, and were the result of recommendations made by Roy Schepens during his April visit. Because only two monthly reports have been issued, it is too early to comment on the effectiveness of the monthly reports. These reports were issued on July 6, 1995 and July 28, 1995, and directed the contractor to respond within 30 days. As of August 18, 1995, the contractor has not responded to either report.

Review of the monthly reports and observation of oversight activities in the field revealed that YSO Facility Representatives and Environment, Safety, and Health branch personnel conduct themselves professionally in the field, engage in field oversight activities for a significant portion of their work weeks, and issue findings based on objective, supportable observations of contractor performance. Interviews and observations also revealed that there is excellent coordination between Facility Representatives and other YSO technical personnel. Facility Representatives provide direct and immediate feedback to the Senior Nuclear Engineer and the YSO Manager following field activities and reportable events. YSO personnel performing field activities were well prepared, knew what to observe and monitor, and were professional in their dealings with the contractor.

ORO Environment, Safety, and Health personnel conduct periodic (usually annual) reviews of program activities for which they are responsible, and respond to specific requests of the YSO and

other ORO organizations. The one field activity observed was performed in a technically competent and professional manner.

As part of the Headquarters oversight process, the Team reviewed the DP-24 involvement with issuance and implementation of the 94-4 Implementation Plan. The DP-24 Y-12 Team has been aggressive in issuing an acceptable Implementation Plan within the statutory time frame. In general, the 94-4 Implementation Plan and its subsequent deliverables were timely and acceptable. The proper level of management focus, staff time, and coordinated effort with those personnel at Oak Ridge dedicated to the successful implementation of the 94-4 Implementation Plan have made it a commendable effort to date.

Review of Training and Administration, Staff, and Programs

The Team interviewed the TDD Director, TDD technical training personnel and one employee development specialist; examined TDD staff position descriptions, performance standards and elements; the ORO Training Plan and semi-annual Training Report; and, in-house training resources. Additionally, the Team evaluated 30% of the YSO technical staff's training records, position descriptions and performance standards and interviewed the YSO Training Liaison.

The TDD has established a well organized methodology for maintaining training and qualification records. The system is adequate for maintaining qualification and technical training records. Two new highly qualified technical training specialists have been added to TDD greatly improving the ability of the organization to provide technical assistance to ORO facilities. The Training Surveillance program, developed by TDD to provide oversight of contractor training activities is an admirable program.

The current ORO Training Plan relates the annual activities and deliverables for TDD for training and employee development across ORO. While the ORO Training Plan articulates the responsibilities of TDD staff for technical training deliverables at certain ORO facilities, it makes clear that the TDD organization "provides support" to YSO rather than responsibility for implementation. The ORO Training Plan does not state the specific organizational responsibilities and/or training activities planned for YSO to meet 93-3 commitments and maintenance of technical competency.

The ORO TDD organization views itself as a service organization, providing training services as requested by line management. YSO requests for assistance have been verbal in nature, resulting in some confusion as to the specific responsibilities of the two organizations for training and qualification of YSO technical staff. Adequate communication and formal documentation of YSO training requests for assistance and support from TDD has not been established. Currently the YSO staff have limited access to TDD's on-line schedule of training classes and internal training resources.

Examination of the draft YSO procedure "Personnel Development, Qualification and Training" (YSO-2.1) revealed that the procedure clearly delineates the various administrative responsibilities of management, employees and TDD at the Y-12 site. It requires each branch chief or supervisor to develop a training plan for his/her organization.

Training support for YSO technical training is organizationally located within the Program Division. This results in less than adequate management attention to and responsibility for technical competency at YSO. YSO does not have adequate technical training competency in-house to meet the needs of such a diverse staff and assure implementation of the Technical Qualification Program.

The Team reviewed the training records and IDPs for the Headquarters DP-24 Y-12 Team and interviewed staff members. In almost every case, all training taken was a direct result of personal initiative. The IDPs did not require any specific technical training, and the Team could not identify where management had communicated specific recommendations or directed the staff to take a technical class or lesson either informally or through the IDP process. The Team did not find evidence of any recent or planned technical learning activities. Available training is made known to the staff and requests for outside courses are supported.

SUMMARY OF OBSERVATIONS - Oak Ridge Y-12 Site

1. Needed technical expertise has been added to YSO in areas such as Facility Representatives, criticality safety, and radiation protection. In addition, TDD has added technical training specialists.
2. YSO and ORO technical personnel education, experience, and level of knowledge for conducting oversight are good.
3. The Facility Representative interim qualification and revised core qualification processes are good.
4. Interface between the Facility Representatives and technical specialists is effective.
5. Communication of concerns from the YSO organization to the contractor is effective.
6. Technical line management ownership and commitment to training is weak.
7. Technical training specialist expertise is needed within the YSO organization.
8. The focus of 93-3 implementation is on documentation versus increasing level of knowledge.
9. A coordinated effort among technical line managers across ORO to ensure effective implementation of 93-3 does not exist.
10. Y-12 facility-specific training is does not exist.
11. The ORO Training Plan is less than adequate.
12. TDD is not aggressive in identifying and supporting the training needs of the line.
13. Facility Representative roles in emergency response and associated training are not well defined.
14. YSO followup and closure of identified contractor deficiencies is not effective.
15. Operations roles and responsibilities are split between the Restart Team and the Facility Representatives.

SUMMARY OF OBSERVATIONS - Headquarters DP-24 Y-12 Team

1. DP-24 response to the 94-4 Implementation Plan has been aggressive.
2. Y-12 staff education and experience are adequate, and the personnel are technically competent to perform their duties and responsibilities.
3. Response to the 93-3 Implementation Plan is inadequate and does not include a schedule for meeting 93-3 training milestones and commitments.
4. Management has not determined/assigned functional qualification standards.
5. Management has not identified nor communicated specific technical training requirements to the staff.
6. Training and development activities are a result of self-motivation.
7. IDPs are not specific and are not updated annually.

RECOMMENDATIONS - Oak Ridge Y-12 Site

1. Line management ownership and commitment to training needs to be strengthened:

   - TDD should report directly to the ORO Manager/Deputy Manager.

   - A proactive TDD technical training specialist should be matrixed to YSO and should report directly to the YSO Manager.

   - ORO should designate a lead senior technical manager and technical representatives from all ORO line organizations to work together and be responsible for providing direction and guidance to TDD and line staff for effective and efficient implementation of 93-3.

   - YSO line management should formally identify training needs and hold TDD accountable for specific deliverables. This is normally accomplished by a training plan developed by the technical line management with input from TDD.

2. TDD needs to be aggressive in identifying and supporting line management needs:

   - Provide a matrixed technical training specialist to report full time to the YSO Manager.

   - Develop technical training materials in support of line management needs for self-study and on-the-job training.

   - Develop and present formal performance-based training.

3. YSO, with support from TDD, needs to expedite development of site-specific training for Facility Representatives and technical support personnel.

4. YSO needs to provide timely follow-up and closure of deficiencies and commitments from the contractor to ensure improvement is continually achieved.

5. YSO needs to define and implement Facility Representative roles and responsibilities during an emergency.

6. The Restart Team including the Facility Representatives needs to be reconfigured into an Operations Branch reporting directly to the YSO Manager following resumption of operations.

RECOMMENDATIONS - Headquarters DP-24 Y-12 Team

1. DP-24 line management ownership and commitment to training needs to be strengthened.

   - Designate a DP-24 training driver to aggressively implement the Technical Qualification Program.

   - Assign DP-24 Y-12 Team staff to a technical functional area (vs. technical manager) to provide a technically stronger team and simplify the overall process.

   - Ensure managers include specific goals and training requirements of the staff in the employee IDPs.

APPENDIX A - PERSONNEL INTERVIEW LIST

Y-12 Site Visit

Bob Spence	YSO Manager
Dave Howard	Quality and Reliability Division Director
Terry Olberding	Facility and Systems Safety Branch Chief
David Wall	Y-12 Senior Site Nuclear Engineer
Mark Livesay	Y-12 Program Management Branch Chief
Jim Vosburg	TDD Director
Dale Christienson	Y-12 Site Operations Engineer
John Rothrock	Safety and Health Division Director
Robert Poe	Assistant Manager for Environment, Safety, and Quality
Rod Nelson	Assistant Manager for Defense Programs
Dan Hoag	YSO Environment, Safety, and Health Branch Chief
Tom Tison	Y-12 Restart Manager
Patty Dockery	Employment Development Specialist
Judy DiGregorio	Technical Training Specialist
Allen Clemmons	Technical Training Specialist
Rick Collier	Technical Training Specialist
Andy Stevens	Facility Maintenance Management
Mike Boyd	Nuclear Safety Systems
Susan Morris	Environmental Compliance
Phil Carpenter	Program Management
David Queen	Facility Maintenance Management
Peggy Jackson	Technical Training
Mike Parker	Nuclear Safety Specialist
Louise Buker	Radiation Protection
Ken Ivey	Facility Representative
Mike Miller	Facility Representative
Lawrence Sparks	Environmental Engineer
Jerry Robertson	Occupational Safety
Doug Paul	Occupational Safety
Morris Lemmings	Industrial Hygiene
Mark Sundie	Conduct of Operations Specialist
Bud Stout	Emergency Management
Gypsy Tweed	Y-12 Site Nuclear Safety Engineer
Robert McBroom	Criticality Safety Engineer

Headquarters Office of Site Operations, DP-24 Visit

Dan Rhoades	Office Director
Mike Mitchell	Senior Technical Advisor
Randy Lynch	Y-12 Team Leader
Dale Dunsworth	General Engineer
Rebecca Hassel	Physical Scientist
Francisco Cheng	Nuclear Engineer
Melvin Leifer	Environmental Engineer
Richard Stern	General Engineer
Ken Ferlic	Acting DP Training Coordinator
Charles Beers, Jr.	DP-20, Deputy Assistant Secretary of Military Applications and Stockpile Support
Pat Jamgochian	DP-20 Training Coordinator

APPENDIX B - ASSESSMENT TEAM MEMBER RESUMES

Roy Schepens, DOE, Team Leader
Donald Brunell, DOE
Mark Holzmer, DOE
Helen Horn, DOE
Wayne Rickman, Sonalysts, Incorporated
Edward Stafford, Stone & Webster Engineering Corporation
Richard Wolfe, TFE Incorporated

ROY J. SCHEPENS, DOE, TEAM LEADER

Roy J. Schepens is the Deputy Assistant Manager for High Level Waste at the DOE Savannah River Operations Office (SR). He has been with SR for six years and has had direct experience with the hands-on, oversight of contractor nuclear activities. He has 20 years experience in the nuclear field.

Mr. Schepens served initially at the SR site as Senior EH Representative, responsible for identifying and evaluating safety issues and concerns, diagnosing root causes and recommending both short-term compensatory measures and ultimate solutions. Subsequently, he was promoted to Director, Safety Oversight Division and was responsible for the independent safety oversight of restart activities at K-, L-, and P-Reactors. Additional recent assignments included Director, Reactor Operations Division and Director, High Level Waste Operations Division followed by his current assignment.

Previously, Mr. Schepens served four years with the NRC as resident inspector at the Vogtle Electric Generation Plant during the construction, pre-operational testing, licensing startup testing, low power testing, and full power operation of Unit No. 1. Earlier he worked in the nuclear field at Ingalls Nuclear Shipbuilding and General Electric where he managed various construction, startup, and maintenance/refueling projects for commercial nuclear and fossil plants.

Mr. Schepens has a BS degree in Marine Engineering from the marine Maritime Academy.

DONALD C. BRUNELL, DOE

Donald C. Brunell is the Assistant Area Manager for Facilities at the DOE Amarillo Area Office. He is responsible for managing the Area Office Facility Representative and Safety and Health Programs which provide oversight of contractor operations.

Mr. Brunell has over 15 years of diverse nuclear experience involving the design, operation, and maintenance of nuclear facilities, and nuclear weapons assembly and disassembly facilities and weapons testing facilities. Mr. Brunell has served 12 years as a federal employee. At Savannah River Site, Mr Brunell was Branch Chief for Reactor operations and was the Senior Facility Representative for K-Reactor. At Los Alamos National Laboratory, he was a Nuclear Safety Representative for the DOE Office of Nuclear Safety. At the Pearl Harbor Naval Shipyard, Mr. Brunell served as Shift Test Engineer for S6G nuclear submarine plants, Shift Test Supervisor, and Assistant Chief Test Engineer. In addition, he was selected and served as Chief Test Engineer for the overhaul of the USS Birmingham SSN-695.

Mr. Brunell has a BS degree in Mechanical Engineering from Arizona State University.

MARK M. HOLZMER, DOE

Mark Holzmer graduated with a Bachelor of Science from the United States Naval Academy in 1974, majoring in mathematics. He successfully completed Naval Nuclear Operator training and served as an operations supervisor of a naval nuclear submarine reactor and propulsion plant. After passing the Navy's Nuclear Engineering Officer examination in 1978, Mr. Holzmer was assigned to the Naval Submarine School as an instructor where he developed and taught a course in Operational Reactor Water Chemistry and Radiological Controls and managed the Prospective Nuclear Engineering Officer School.

Mr. Holzmer served from 1980 to 1989 with the Region III office of the Nuclear Regulatory Commission as a reactor inspector and a Senior Resident Inspector. As a reactor inspector, he was responsible for reviewing licensed operator qualification and requalification programs and non-licensed personnel training programs.

From 1989 to 1991, Mr. Holzmer served with the Department of Energy as the first EH Site Representative at the Idaho National Engineering Laboratory. In 1991, he joined the Idaho Operations Office as the Lead Facility Representative at the Advanced Test Reactor and now serves as the Operations Support Matrix Group Manager and as the Facility Representative Program Manager. Mr. Holzmer has been involved in the development of Facility Representative training programs at Idaho, the development of the DOE FR Qualification Standard, and has personally participated in the mentoring, training, and qualification of nearly all of the DOE-ID Facility Representatives.

HELEN S. HORN, DOE

Helen S. Horn is a Program Analyst for the Assistant Manager for Environmental Management (AMEM) at the DOE Chicago Operations Office (CH). She is responsible for management of the technical excellence program for AMEM which includes job/task analysis, studies of qualifications, vendor selection, needs assessment data, and the development and design of training materials. Ms. Horn's job responsibilities also include conduct of studies regarding the bench-marking of various aspects of the environmental program at CH. She is also the federal advisor to the TRADE Environmental Special Interest Group.

Prior to this current position, Ms. Horn held positions at the Chicago Operations Office and Headquarters where she was responsible for oversight of contractor training programs, development of environmental restoration project Technical Training Programs, and coordination of the Department's interagency agreement with the National Institute of Environmental Health Sciences Hazardous Materials Handling Training Program.

Ms. Horn has a BS degree in Behavioral Science from the University of Maryland and a MAS degree in Business Administration from John Hopkins University.

WAYNE RICKMAN, SONALYSTS, INCORPORATED

Wayne Rickman is presently employed as a Principle Analyst and Senior Vice President of Nuclear Operations for Sonalysts, Inc. He has had more than 30 years of operational experience in the Naval Nuclear Propulsion (submarine) Program, achieving the rank of Rear Admiral. Mr. Rickman, in his current assignment, has supported the DOE in the areas of training and qualification and Operational Readiness Reviews (ORRs). He recently served as a Senior Advisor to a select DOE training and qualification survey team in support of the implementation plan for DNFSB Recommendations 92-7 and 93-3. Mr Rickman has served as a senior safety advisor for ORRs for Building 707 at Rocky Flats, and the Replacement Tritium Facility, F-Canyon, FB-Line, and the In-Tank Precipitation Facility at the Savannah River Site (SRS). Additionally, he served as senior safety advisor as well as the training and qualification technical expert for HB-Line at SRS. During the ORO for Building 559 at Rocky Flats, Mr. Rickman participated as the training and management systems group leader. He was involved in the internal briefings within DOE and to the DNFSB and participated in the many public hearings concerning ORRs for those facilities. Additionally, Mr. Rickman was the technical director for the DOE certification program for K-Reactor operators as part of the K-Reactor Restart Program at SRS.

While in the Navy, RADM Rickman was involved in the training and qualification of personnel in the Naval Nuclear Propulsion and the Naval Nuclear Weapons Programs, He served as commanding officer of two submarines, including a Trident submarine with the Navy's largest and newest submerged power reactor and the Trident C-4 weapons system. In addition, Mr. Rickman served as a Deputy Commander for training for a submarine squadron, where he directed, monitored, and evaluated the training and qualification of submarine crews in operations of nuclear reactors and nuclear weapons. He also served as special assistant to the Director, Naval Nuclear Propulsion Program, where he was responsible for the selection, qualification, training, and assignment of personnel who supervise, operate, and maintain naval nuclear propulsion plants. Mr. Rickman's last assignment as a Rear Admiral was the Flag Officer responsible for training in the Atlantic fleet. He was responsible for 14 diverse training organizations with 2,000 instructors in more than 650 courses and a throughput of 175,000 students per year.

EDWARD A. STAFFORD, STONE & WEBSTER ENGINEERING CORPORATION

Edward A. Stafford is a Senior Principal Engineer with Stone & Webster Engineering Corporation. Mr. Stafford has over 15 years of nuclear experience, including 11 years of supervisory, operational, and training experience in the commercial nuclear industry. His current assignment involves providing operations, technical, and training support to the DOE SR High Level Waste organization. Current job responsibilities include reviews of safety basis documentation submitted for DOE approval, review of operational performance and conduct of operations, development of assessment plans and procedures, development and presentation of Facility Representative training, and development of start-up validation and action plans for HLW facilities.

Prior to his current assignment, Mr. Stafford provided technical support to the Director of the Reactors and Spent Fuel Division of DOE-SR under defined management assistance tasks. Job responsibilities included direct interface with the Defense Nuclear Facilities Safety Board staff in support of the Director, reviews of safety basis documentation submitted to the division for DOE approval, review of operational performance and conduct of operations, development and presentation of Facility Representative training, and development of assessment plans and procedures. During his assignments at DOE-SR, Mr. Stafford has participated in the K-Reactor Restart Task Force, Type B Investigations at the Defense Waste Process Facility and H-Canyon, two Conduct of Operations reviews of the Amarillo Area Office, the Savannah River Facility Representative Program Committee, and development of the "DOE Guidelines for Interface with the Defense Nuclear Facilities Safety Board."

Mr. Stafford's prior commercial nuclear experience includes a Reactor Operator license and operating experience at a General Electric Boiling Water Reactor and a Senior Reactor Operator License as well as construction, start-up, operating, and licensed operator classroom and simulator training experience at a Westinghouse Pressurized Water Reactor. During his assignments in licensed operator training, Mr. Stafford completed basic and advanced simulator instructor training courses presented by the Institute for Nuclear Power Operations.

Mr. Stafford has a BA degree in Chemistry from the University of North Carolina.

RICHARD WOLFE, TFE INCORPORATED

Mr. Wolfe is a Senior Consulting Engineer with TFE Inc. He is presently supporting the Office of the Technical Personnel Program Coordinator in the development and implementation of the Department's Implementation Plan for DNFSB Recommendation 93-3. Mr. Wolfe has been working with the 93-3 Plan and associated initiatives since the Department established an ad hoc group to respond to the recommendation. He has also participated in the development of Departmental Plans for Recommendations 92-4, 93-1, 93-6, and 94-4; and supported the development of guidelines and Annual Reports for the Departmental Representative to the DNFSB. Mr. Wolfe has more than 17 years of combined nuclear experience in commercial and defense nuclear facilities.

Prior to his current assignment, Mr. Wolfe supported Westinghouse Savannah River Company in the start up of the In-Tank Precipitation facility and the restart of K-Reactor since the site transition in 1989. Mr. Wolfe previously supported the start up and restart of commercial nuclear facilities. He supported the licensing activities involved with the start up of Farley Unit 2, Waterford 3 SES, Palo Verde Unit 1; and also supported the restart of Fort St. Vraine, Davis Besse and Rancho Seco.

Mr. Wolfe received a B.S. in Mechanical Engineering from Duke University and a Masters in Mechanical Engineering from North Carolina State University. He is also a registered Professional Engineer in Mechanical Engineering