Ray Hardwick
**Associate Deputy Assistant Secretary
Office of Corporate Safety Assurance (EH-2)**

# Quality Assurance Program Status Update

# Background

- **DNFSB Tech Report 25 (01/00) and Tech Report 31 (03/01)**

- **DNFSB public meetings on QA (2000 and 2001)**

- **EM and NA QA Reviews (2001)**

- **Deputy Secretary tasks Ray Hardwick with leading an integrated QA improvement efforts (08/01)**

- **DNFSB issues letter to Deputy Secretary (02/02)**

- **EM and NA concur with Quality Assurance Improvement Plant (QAIP) (09/02)**

- **DNFSB issues Recommendation 2002-1 (09/02)**

# QA Improvement Team – Executive Members

- **Sandy Johnson (EM-5)**

- **Jim Mangeno (NA-3.6)**

- **Ray Hardwick (EH-2)**

- **Continued Discussions with: EE, FE, NE, SC, RW, DNFSB Staff, EFCOG, NLIC, DOE Field Offices and Contractors**

# QAIP Project Plan Structure

**Three Levels:**

- **Goals**

- **Actions**

- **Action Execution – implementation details, schedule, Program Office responsible lead**

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# Quality Assurance Improvement Plan Goals

- **Goal 1 – Correct the weaknesses in the quality assurance program that effect safe operation of items serving vital safety functions at the Department's defense nuclear facilities.**

- **Goal 2 – Establish a program to ensure that safety analysis, design and instrument and control (I&C) software will reliably and effectively support the safe operation of items serving vital safety functions at the Department's defense nuclear facilities.**

- **Goal 3 – Assure effectiveness of Quality Assurance Programs for items serving vital safety functions at the Department's defense nuclear facilities.**

# Recommendation 2002-1
## Quality Assurance for Safety-Related Software

- **Responsibility and Authority**

    1. **Define responsibility and authority…**

        - **Developing guidance**

        - **Conducting oversight**

        - **Directing research and development**

    2. **Assign responsibilities and authorities**

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## Recommendation 2002-1
## Quality Assurance for Safety-Related Software

- **Recommended Computer Codes for Safety Analysis and Design**

    3. **Identify software recommended in performing design and analysis of SSC's and analysis of expected consequences of potential accidents**

    4. **Identify an organization responsible for management of each software tool**

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# Recommendation 2002-1
## Quality Assurance for Safety-Related Software

- **Proposed Changes to Directives Systems**

    5. **Establish requirements and guidance in the DOE directives system for a rigorous SQA process**

- **Research and Development**

    6. **Identify evolving areas in software development in which additional research and development is needed**

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## Recommendation 2002-1
## Quality Assurance for Safety-Related Software

- **Executive Board**
  - **Ray Hardwick, EH-2 (Response Manager)**
  - **Xavier Ascanio, NA-12**
  - **Dae Chung, EM-5**
  - **Mike Glasman, Y-12 Plant**
  - **Roger Rollins, Savannah River Site**
  - **David Brown, River Protection**
  - **Robin Henderson, GC-52**
  - **TBD, NA Field Office**

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# Near-Term Path Forward

- Issue Quality Assurance Improvement Plan (QAIP)
- Coordinate and track implementation of QAIP actions
- Meet with Defense Board on Recommendation 2002-1
- Issue Secretarial Response Letter for Recommendation (November 22, 2002)
- Continue on-going "toolbox code" actions
- Develop Recommendation 2002-1 Implementation Plan
- Consolidate and coordinate activities of DOE QA groups (QAWG, QSMSIG, SASG, EFCOG, NLIC, NWC QAM, SQAS, SQIG, etc.)

# Quality Assurance Program

- **Status Updates:**

  - **http://www.hss.energy.gov/deprep/**

    > **"Software Quality Assurance" Button**

  - **Ray Hardwick  301-903-4244**

    > **Raymond.Hardwick@eh.doe.gov**

  - **Executive Board Members**

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