

# LINKING QUALITY MANAGEMENT AND INTEGRATED SAFETY MANAGMENT

2009 DEPARTMENT OF ENERGY  
ISM CONFERENCE  
KNOXVILLE, TENNESSEE  
AUGUST 26, 2009

Cecil Gibb  
Manager-Operations  
C Gibb Consultants



## Biographical Data

Cecil H. Gibb

Cecil has over thirty years of experience including quality and safety program development, implementation and management. His career has covered multiple assignments including Quality Manager, Director of Quality and Safety, Regional Director of Quality and Program Manager. His experience includes a diverse number of discipline areas and his employers and clients have included; contractors to the Department of Defense, the National Aeronautics and Space Administration, Department of Energy and EPA. He currently is Operations Manager for C Gibb Consultants, a Knoxville based company providing quality/safety, risk management, process improvement and project support services.

He has presented seminars and presentations at numerous technical and civic club meetings, professional society conferences. Cecil is a Senior Member of the American Society for Quality (ASQ), a member of the National Management Association (NMA) and belongs to the International Council on Systems Engineering, (INCOSE).

# LINKING QUALITY MANAGEMENT AND INTEGRATED SAFETY MANAGEMENT

From DOE G 450.4 ISM SYSTEM GUIDE

- ▶ “In general, the development and implementation of an ISMS requires an organization to integrate safety into all aspects of work planning and execution ...”
- ▶ “develop and effectively integrate their safety management systems with the business and operational systems throughout their organizations.”
- ▶ Guide references multiple DOE QA Documents along with ISO 9001, Quality Management Systems—Requirements

# Taking ISM to the Next Level

- ▶ Quality Management System (QMS) must be a major contributor.
- ▶ QMS and ISM have common objective:
  - Prevention
- ▶ Objective is achieved with effective:
  - Risk Management

# QMS and ISMS Interoperability Needed

- ▶ Rationale for why ISMS and QMS need to complement and supplement each other is apparent:
  - Failure to have adequate quality controls can result in a safety incident.
  - Inversely if in the course of a safety analysis a critical item or process is identified, shouldn't that be a focus or emphasis area for application of the quality management system?

# Graded Approach, or “Prioritization”

- ▶ Safety is number one.
- ▶ Selecting types and levels of control commensurate with the impact of a failure or nonconformance, is important to effective QMS as well as ISM.
- ▶ QMS application following a graded approach is particularly important in R&D.
- ▶ Understanding and implementing this approach is very important to integrating the QMS with ISM to achieve effective risk management.

# Things to help us get to next level

- ▶ Greater probability of risks being addressed earlier when safety, environment and quality processes are worked together.
- ▶ Identification and mitigation of risk can be more cost-effective when a team approach is used.
- ▶ Major standards and regulations have similar requirements. (Many QMS requirements focus on business and operations, i.e. procedures, training, design reviews, etc).

# Integrated Management Assurance

- Uses cross functional teams
- Improves ability to identify and prioritize critical components, systems, and processes
- Minimizes duplication of effort
- Helps identify needed resources early
- Cost-effective
- Leaves more time to focus on improvement

# Link Provides an Integrated Approach to Risk Management

NQA-1

NONMANDATORY APPENDIX 2A-2

## Guidance on Quality Assurance Programs

“To ensure effective risk management, a set of risk evaluation criteria should be established during project design, and carried forward and updated as needed during the life of the project. Risk is a concern that extends beyond ES&H factors; it must be considered in all aspects of work, including business objectives.”

# Summary of QMS Link to ISMS

Effective application of Quality Management System requirements provide many tools to assist taking ISMS to the next level.

## A few examples:

- ✓ Identification and Control of Critical Processes & Components
- ✓ Procedures/Training
- ✓ Design Reviews
- ✓ Control of Suppliers
- ✓ Control of M & TE
- ✓ Nonconformance Reporting and Corrective Action  
(Trending & Lessons Learned)

**Thank you and remember**

**“No one of us is as smart as all of us”**

The Heart of a Leader

Blanchard and Carew