



*We do the right thing.*

# Integrating EM QA Performance Metrics with Performance Analysis Processes

August 26, 2009

Robert Hinds, Manager, Quality Assurance Engineering &  
Greg Peterson, Contractor Assurance

2009 DOE Integrated Safety Management Conference

SRR-ESH-2009-00008

UNCLASSIFIED  
DOES NOT CONTAIN  
UNCLASSIFIED CONTROLLED  
NUCLEAR INFORMATION

Reviewing Official: Susan H. Anderson/Ops. Tech. Training Specialist

(Name/Title)

Date July 29, 2009

- Manager, Quality Assurance Engineering and Enforcement Coordinator for Savannah River Remediation, the new Liquid Waste Operations contractor at SRS
- Thirty-five years' experience in Naval, Commercial, and DOE Nuclear Operations, Training, Engineering, Project Management, and various Nuclear Oversight functions
- Degrees in Quality Assurance Technology and Education

- Corporate QA Performance Metric System
- Contractor Organizational Considerations
  - Multiple Contractors, One Program
  - New Functional Area Managers (FAMs)
- Maximizing Utility, Minimizing Effort
  - Use of existing assessment programs
- Analyzing, Rating, & Documenting Results
- Validating Results
- Opportunities for Improvement (OFI)

- DOE EM Corporate QA Board Initiative 9/08
- Piloted at two DOE Sites 10/08
- Received revised direction 1/09
  - “The Contractor is expected to complete the metrics”
- Supports QA & Contractor Assurance Requirements
- Criteria from 10 CFR 830.120 and DOE O 414.C
- Required Element for Annual QA/ISM Validation

- New contract structure at SRS effective August 2008
- New Functional Area Managers for Liquid Waste Operations
  - What’s a FAM?
- Existing Performance Analysis Processes (12Q Manual)
  - Quarterly (PA-1) to support QA program & ORPS analysis
  - Monthly & Annually (PA-2) to support QA and other programs
- PA-2 Assessment Identified Opportunities for Improvement
  - Understanding of process
  - Thoroughness of analysis
  - Verifiable evidence of assessment
  - Solution: One-on-one tutorials & “operator aids”

- SRS 12Q Assessment Manual
  - Operational Readiness Reviews
  - Self-Assessment
  - Management Assessment
  - Independent Assessment: Facility Evaluation Board
  - Performance Analysis
- SRS 1Q Quality Assurance Manual
  - Audits, Surveillances, Supplier Surveillances
- Management Field Observations
- External Audits & Evaluations
- Corrective Action Program Data
  - Site Tracking, Analysis and Reporting (STAR) System

- SRS SCD-4: Assessment Performance Objectives and Criteria (POCs)
  - 23 Functional Areas of Program Management
  - Thousands of existing potential lines of inquiry (LOI)
  - DOE 425.1C Startup and Restart of Nuclear Facilities
  - Regulatory Requirements
  - Programmatic Requirements
  - Presidential Focus Areas
  - Used for multiple assessment programs

- Used all available internal & external assessment data
  - Audits, assessments, surveillances, and evaluations
  - Performance analyses including performance metrics
  - Corrective action system data
- Limited additional field activity required
  - Review STAR Database Issues & Actions
  - Provide verifiable evidence of assessment
- Mapped SCD-4 Functional Areas to CPMS LOI's
  - Used to “data mine” for assessment results

- FAMS reviewed Performance Analysis results against applicable CPMS criteria
  - Functional area specific (e.g., Design, Procurement)
  - Cross-functional areas (e.g. Training, Document Control)
- Results in each of 23 Functional Area PA-2 Reports
- Functional Area data rolled-up into QA CPMS Table
- Incorporated QA CPMS into the QA PA-2 report
- Incorporated QA PA-2 data into the Corporate Quarterly PA-1 report
- QA CPMS results = Contractor QA Performance

- Auditor Training Class Concurrent with CPMS
- Lead Auditor Oversight
- Five teams of Auditors-in-Training
  - Experienced FAMs and Subject Matter Experts
- Verified Evidence Offered by FAMs
  - 45 of 50 CPMS Lines of Inquiry Evaluated
- Audit Results consistent with FAM input
- Opportunities for Improvement Identified

- Included “the good news”
  - Assessment activity with no findings or OFIs
  - Validated conformance/compliance
- Applied selected LOIs to multiple functional areas
  - Training, Quality Improvement, Documents & Records, Work Processes,
- Determined thresholds for ratings
- Rated Performance Varies from M&O contractor
  - Scope of work/risk varies
  - Quality of performance may vary
  - Quality and/or volume of assessment evidence may vary

- Continue training for FAMs & SMEs
- Improve definition of FAM expectations
- Improve quality of “basis” for scoring
  - Better screening of relevance
  - “Quality vs. quota” for assessment activities
- Improve data quality for STAR system
- Define ongoing CPMS maintenance needs
- Integrate CPMS output with assessment plans
- Improve alignment of analysis with organizational structure
- Establish action plans to get from green to blue

- Tools were available to implement CPMS
  - Existing assessment & audit programs
  - Corrective action data
  - External evaluation data
- Required minimal additional field work
- Implementing QA CPMS added value
  - Improved line management engagement
  - Improved documentation of evidence for analysis of performance

| Score Color   | Number | Score guidance  |
|---|--------|---|
| Excellent<br>        | 4      | Process, plans or procedures established to address criteria. Assessment evidence demonstrates that system in place is programmatically compliant and has been effectively implemented. Previously identified issues have been corrected and incorporated into the program (feedback and continuous improvement).             |
| Good<br>             | 3      | Process, plans or procedures established to address criteria. Assessment evidence demonstrates that system in place is programmatically compliant; however, implementation concerns require attention. Concerns have been addressed in the corrective action program but have not yet been resolved.                          |
| Investigate<br>      | 2      | Process, plans or procedures established to address criteria; however, no assessment evidence is available to demonstrate compliance or process implementation, or evidence demonstrates a continuing legacy concern that has not been addressed.   |
| Define Actions<br> | 1      | Process, plans or procedures are not established to address criteria. Assessment evidence shows that the process, plans or procedures are programmatically inadequate or process, plans or procedures are established to address criteria; however, significant quality issues (e.g. PAAA) were identified during the period. |