
**SONGS' SAFETY CONSCIOUS
WORK ENVIRONMENT AND
NUCLEAR SAFETY CULTURE**

UPDATE

Nuclear Regulatory Commission

May 2006

Presentation Outline

- **SONGS' Nuclear Safety Culture (NSC) and Safety Conscious Work Environment (SCWE)**
 - Establishing and Maintaining
 - Assessing, *Synergy® Survey Results*
 - Assessing, *Trends in Nuclear Safety Concerns and NRC Allegations*
 - Acting on the results of the assessments
 - Conclusions

- **SONGS General Culture and Work Environment (GCWE)**
 - Assessing, *Synergy and other surveys*
 - Changing the GCWE

ESTABLISHING AND MAINTAINING

SONGS' NSC & SCWE

Establishing and Maintaining SONGS' NSC & SCWE

- Senior management responsibility
- Policies established, communicated, and followed
- Training and reminders
- Zero threshold for issues
 - Multiple paths are provided
 - Effective corrective action program
 - Effective alternate path (NSC Program)
- HIRD claims investigated and actions taken when required

Nuclear Safety Concerns Program

- Independent and confidential or anonymous alternative for all **workers**
- Staff - 3 specialists, 1 manager, and clerical support
- Feedback solicited from submitters
- Effectiveness of program periodically assessed
- Assists Managers and Supervisors in maintaining an effective SCWE

ASSESSING THE NSC AND SCWE

2005 COMPREHENSIVE CULTURAL ASSESSMENT RESULTS

Synergy™ Scope & Methodology

- Similar to surveys in 1996, 1998, 2000, & 2003
- 156 questions, 2 write-ins

Nuclear Safety Culture Model

NS Values, Behaviors & Practices

Sub-dimensions: Operational Nuclear Safety Practices, Continuous Improvement of Nuclear Safety Performance, Identification of Potential Nuclear Safety Issues, Effective Resolution of Potential Nuclear Safety Issues, Nuclear Safety as Top Priority

Safety Conscious Work Environment

Sub-dimensions: Indicators & Precursors of a Chilled Work Environment, (Site / Location, Peers, Supervision, Management), Demonstrated Willingness to Take Appropriate Action

Nuclear Safety Concerns Program

Sub-dimensions: As an Acceptable Alternative Path, Confidence, Bases for Confidence, Overall Rating

– Special Topics of Interest

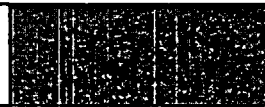
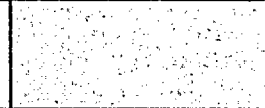
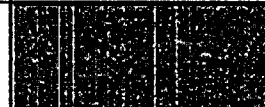

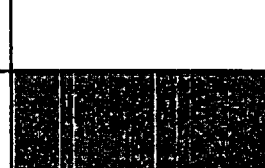
Industrial Safety and Health, Division Management Leadership, Senior Management Leadership, Responsiveness to the 2003 Survey

– Seven Questions Seek Current and “One Year Ago” Opinions

Administration of Survey

- September 2005, Results December 2005
- 1,721 responses - 62% response rate
- Overall results > 95% confidence, $\pm 5\%$ for whole site
- 80% confidence, $\pm 5\%$ for work groups

Response Scales, Metrics, and Assessment:

Scale:	Assessment of Metrics:	
5 Fully Agree or Excellent	> 4.50 Excellent; 4.21 to 4.50, Very Good to Excellent	
4 Strongly Agree or Very Good	3.91 to 4.20 Very Good; 3.71 to 3.90 Good to Very Good	
3 Generally Agree or Adequate	3.51 to 3.70 , Good; 3.31 to 3.50 Adequate to Good; 3.16 to 3.30 Adequate	
2 Disagree or Less-than-Adequate	3.00 to 3.15 Nominally Adequate; 2.85 to 2.99 Nominally Less-than-Adequate; 2.50 to 2.84, Less-than-Adequate	
1 Strongly Disagree or Inadequate	< 2.50, Significantly Less-than-Adequate	

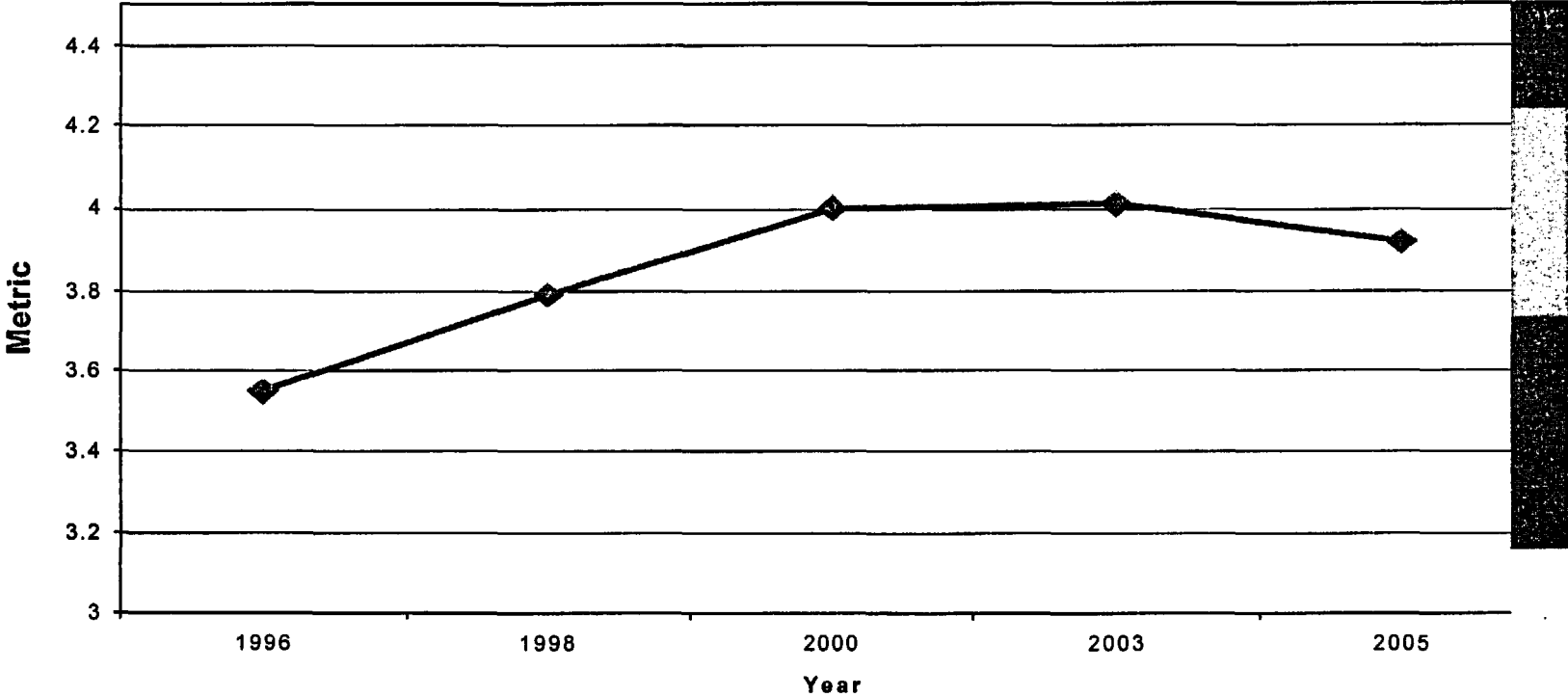
Structure of Results

- Scores on specific questions
- Metrics from weighted averages of specific questions
- Assessment of metrics
- Demographic analysis
- Written comments
- Comparison to other Synergy customers
- Recommendations

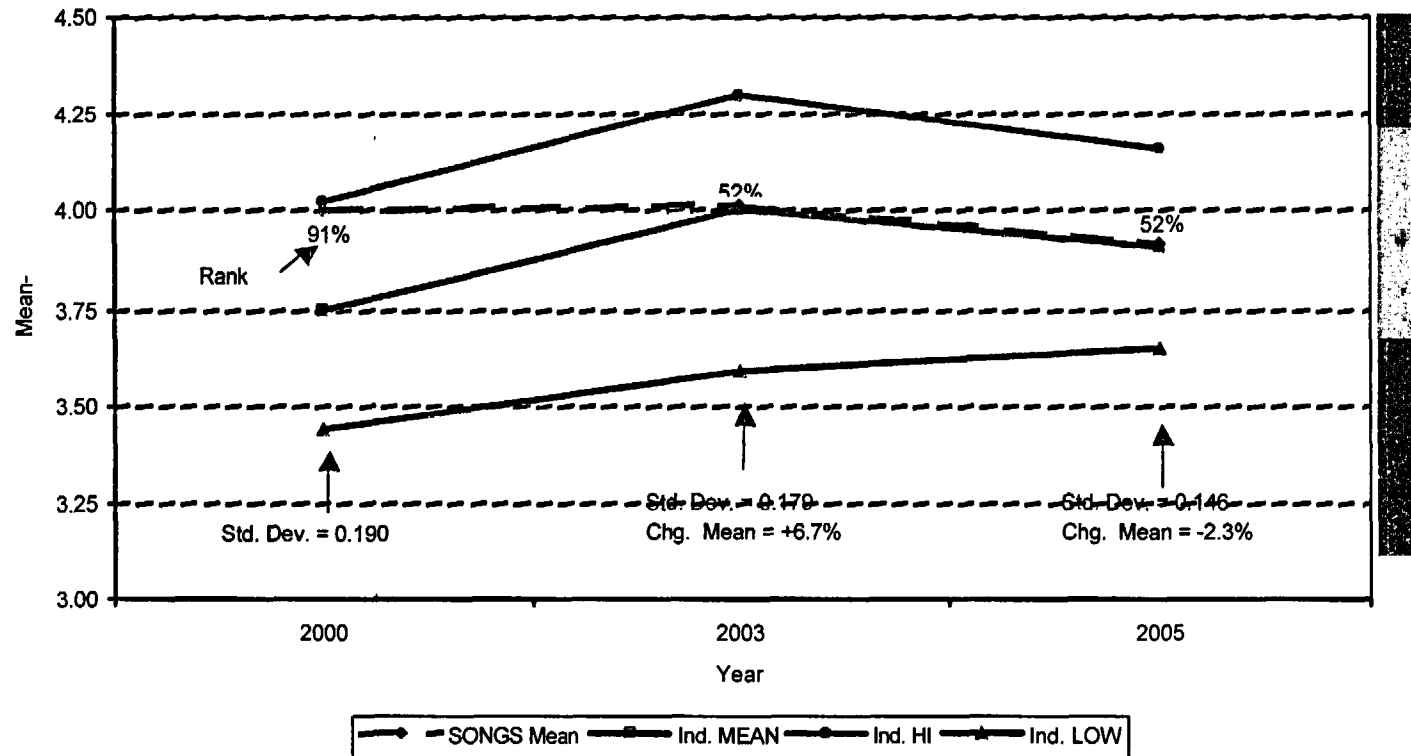
Summary:

- SONGS has maintained a healthy organizational culture
- Metrics have “edged” downward
 - **Nuclear Safety Culture Metric** “Very Good, Nominally Downward” (-2.4%)
 - **Nuclear Safety Values, Behaviors & Practices Metric**, “Good to Very Good, Nominally Downward” (-3.1%)
 - **Safety Conscious Work Environment Metric**, “Very Good to Excellent, Nominally Downward” (-0.9%)
 - **Nuclear Safety Concerns Program Metric**, “Very Good, Nominally Downward” (-0.8%)
- Little variation between business units
- Represented employees 6% less favorable

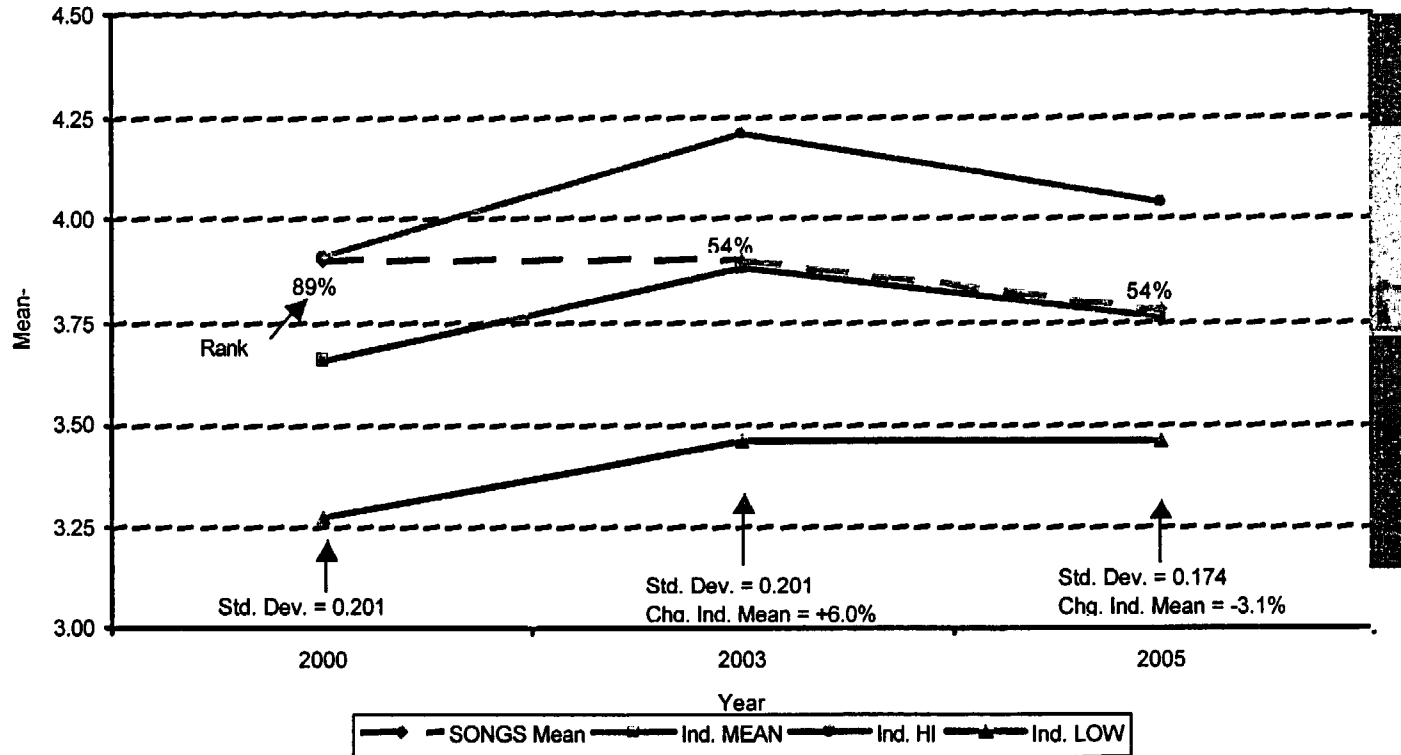
SONGS Nuclear Safety Metric Trends



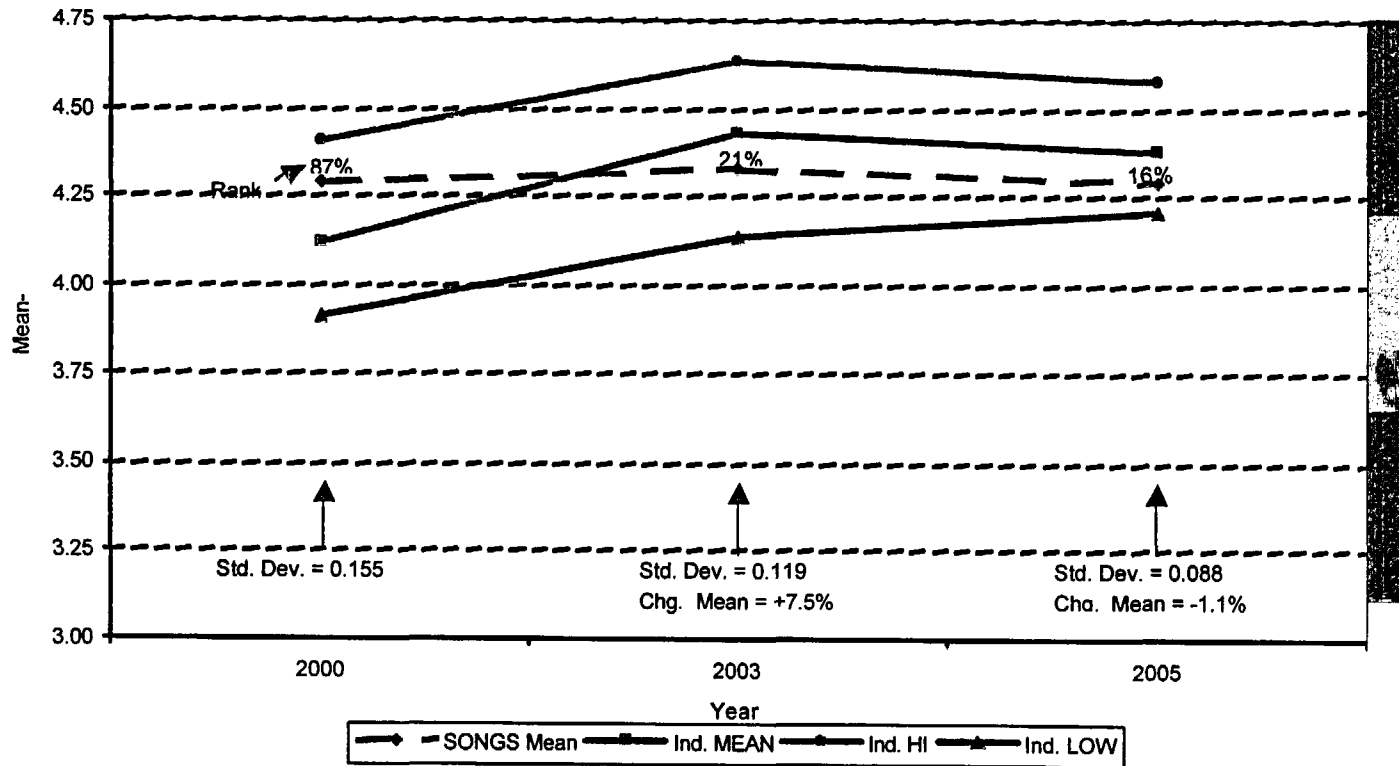
SONGS NSC Metric 2000 - 2005



SONGS Nuclear Safety Values, Behaviors & Practices Metric 2000 - 2005



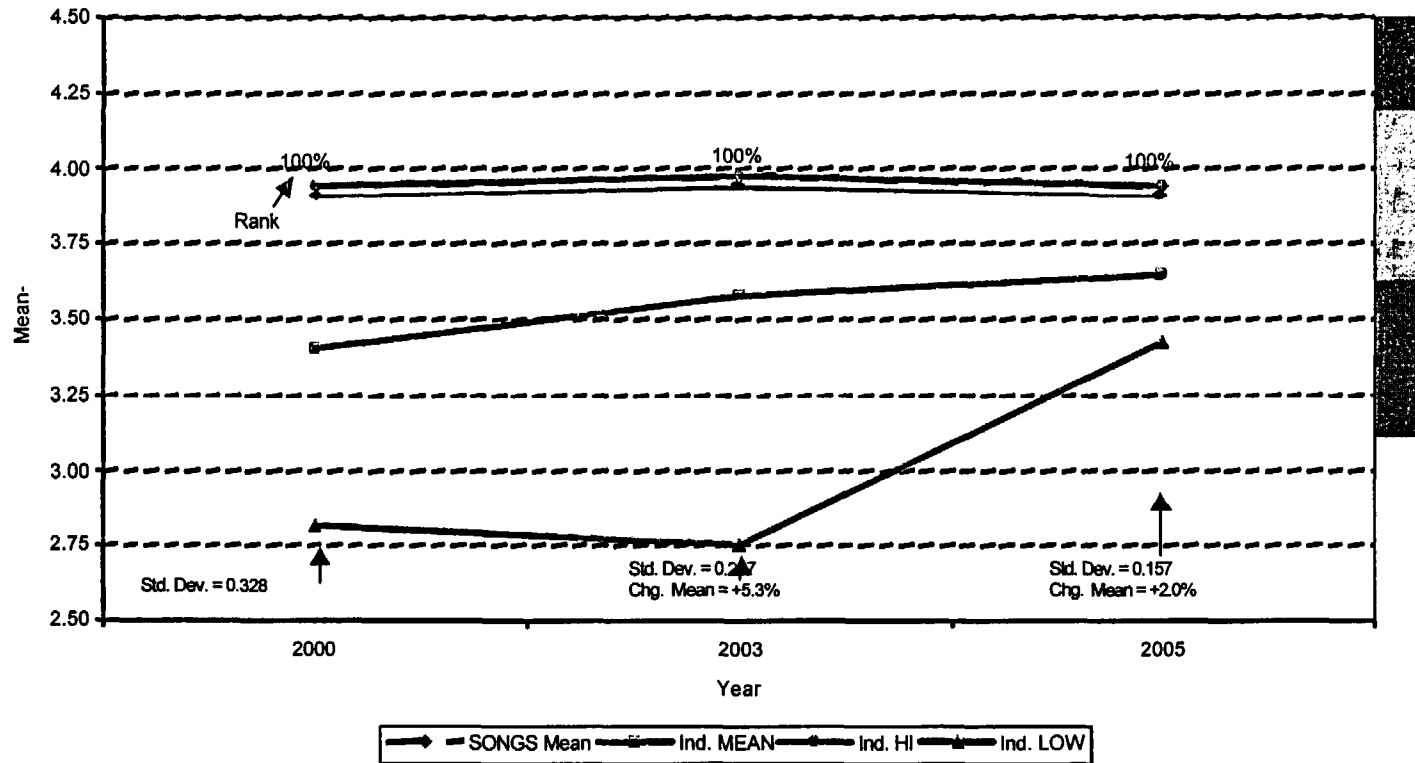
SONGS SCWE Metric 2000 - 2005



SAN ONOFRE NUCLEAR GENERATING STATION



SONGS ECP Metric 2000 - 2005



Nuclear Safety Culture Areas of Relative Strength

- Safety Conscious Work Environment
- Nuclear Safety as the Overriding Priority
- Conduct of Nuclear Safety Related Activities ... in accordance with licensing and design basis, adherence with procedures, rigorously maintained equipment, anticipation of operational risks, through safety analysis and design basis
- Self-critical & questioning attitude
- NSC Program is a culturally accepted as an alternate ways to raise issues

Nuclear Safety Culture Areas of Relative Weakness

- Confidence in the AR system's effectiveness
- Confidence in the allocation of resources and continuing re-enforcement of safety standards and expectations
- Relatively negative responses to some SCWE questions in some work groups

Some Maintenance Groups, Security, Others

Pocket Analysis Methodology

- Looks for skewing of data towards negative responses
- Inputs:
 - Metrics and individual question responses
 - Absolute score, trends, percent negative, and changes since last survey
- Outputs
 - Groups and Priority

2005 Groups

– Priority 1 & 2 (NSC)

- I&C - Radmonitoring
- Security
- Mechanical Maintenance
- B&C -Welding
- Unit 1 HP
- Work Control
- Other Business Admin & Workforce Planning

Management's Assessment of Results, NSC

- SONGS NSC and SCWE continue to be strong
- But, given:
 - Lack of improvement in the overall safety culture
 - Failure to improve in some of the subject matter areas
 - Failure to improve in some of the previously targeted work groups

Management concludes that the results are unsatisfactory and improvement is needed

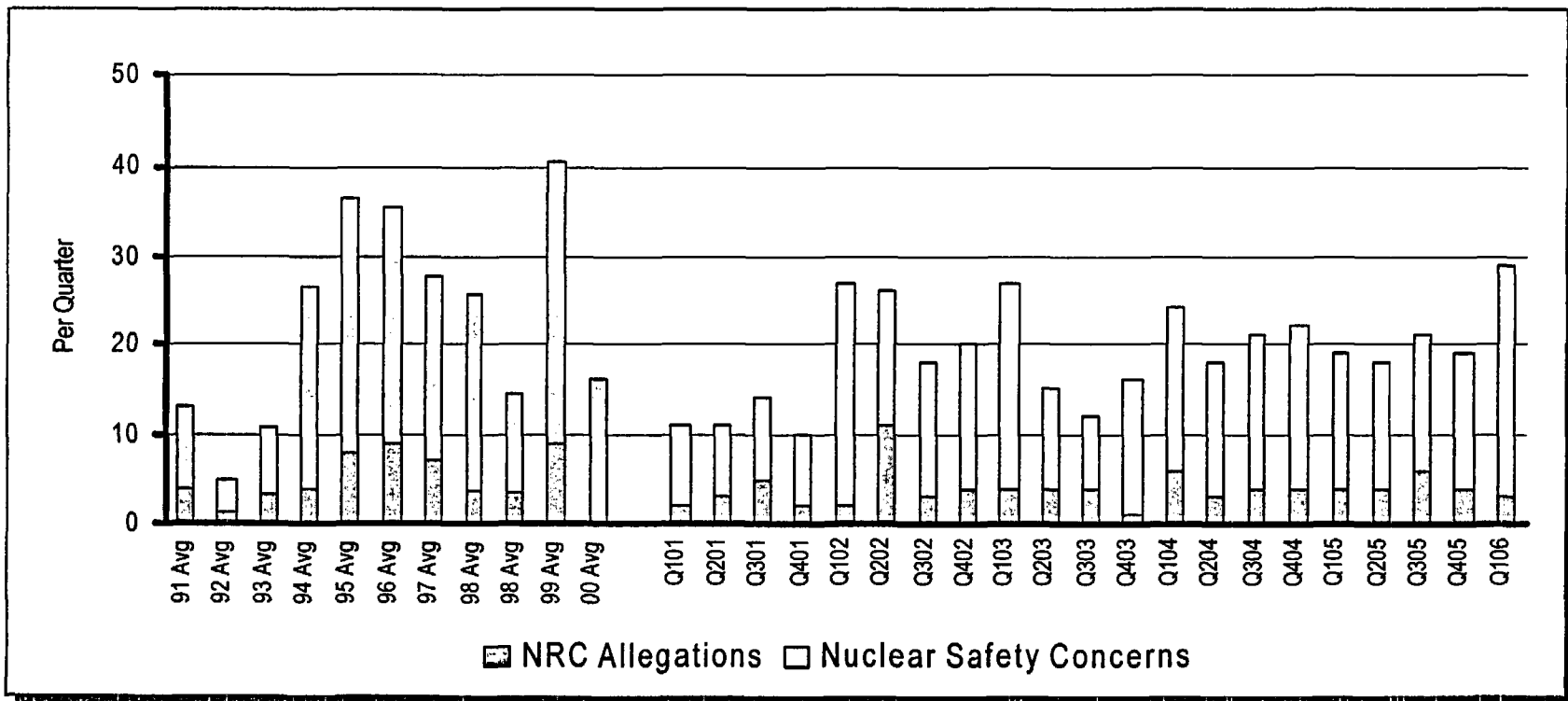
ASSESSING THE SCWE

ANALYSIS OF NUCLEAR SAFETY CONCERNS AND NRC ALLEGATIONS

Analysis Based on

- Concerns and allegations and trends
- Other processes available to workers and trends
- Culture Survey Results
- Interviews of specific individuals and work groups about the SCWE

Trends in Nuclear Safety Concerns and NRC Allegations



2005 Results of Analysis of Nuclear Safety Concerns and NRC Allegations

NSCs - Decreased Slightly, 67 to 57

- Consistent with past years with few outage days

NRC Allegations - Decreased slightly (19 to 18).

- Allegations of discrimination decreased (3 to 2)
- From site workers and from anonymous sources decreased (12 to 10)
- 14 referred allegations

Trends in NSCs and NRC Allegations

– Security

Trend

Several issues in 2005, decreasing in 2006
Major change in work groups size and demographics
Meeting new DBT requirements

Action

Major change to the supervisory structure
NSC and SCWE Training

– Maintenance Machinists

Trend

Several issues in last few years
No H&I claims substantiated
Group identified in survey results
Previous measures have not been effective
Related to inter-personnel conflicts

Action

Modified SCWE training, May 2006
Inter-personnel skills training being selected

– I&C Maintenance and South Yard HP

Trend

A few issues in 2005 and 2006 to date

Action

SCWE training

**ACTING ON THE RESULTS
OF THE ASSESSMENT:**

**IMPROVING THE NUCLEAR SAFETY
CULTURE**

Improving the Nuclear Safety Culture

- Leader - Station Manager
- Accountable for improvement
- 2007/8 survey to evaluate progress

Key Areas for Improvement, NSC:

- SCWE aspects in certain work groups
- AR system effectiveness
- Resource allocation and nuclear safety expectations and standards
- Identified groups
- New workers
- Wider recognition of SONGS Nuclear Safety Culture principals and priorities

Communication

- Executives and management
- Union leadership
- Individual organization and program managers
- Staff and hands meetings
- *As the Turbine Turns*
- Survey results and actions in CAP
- NRC

Conclusions

- SONGS has an effective SCWE and a strong Nuclear Safety Culture
- The NSC & SCWE is established, maintained, and supported by management and workers
- The NSC & SCWE is periodically assessed
- NSC Program provides an effective alternative
- Analysis ECP and NRC allegation trends continues
- Areas for Improvement identified

SONGS' General Culture & Work Environment

**Nuclear Regulatory Commission
May 2006**

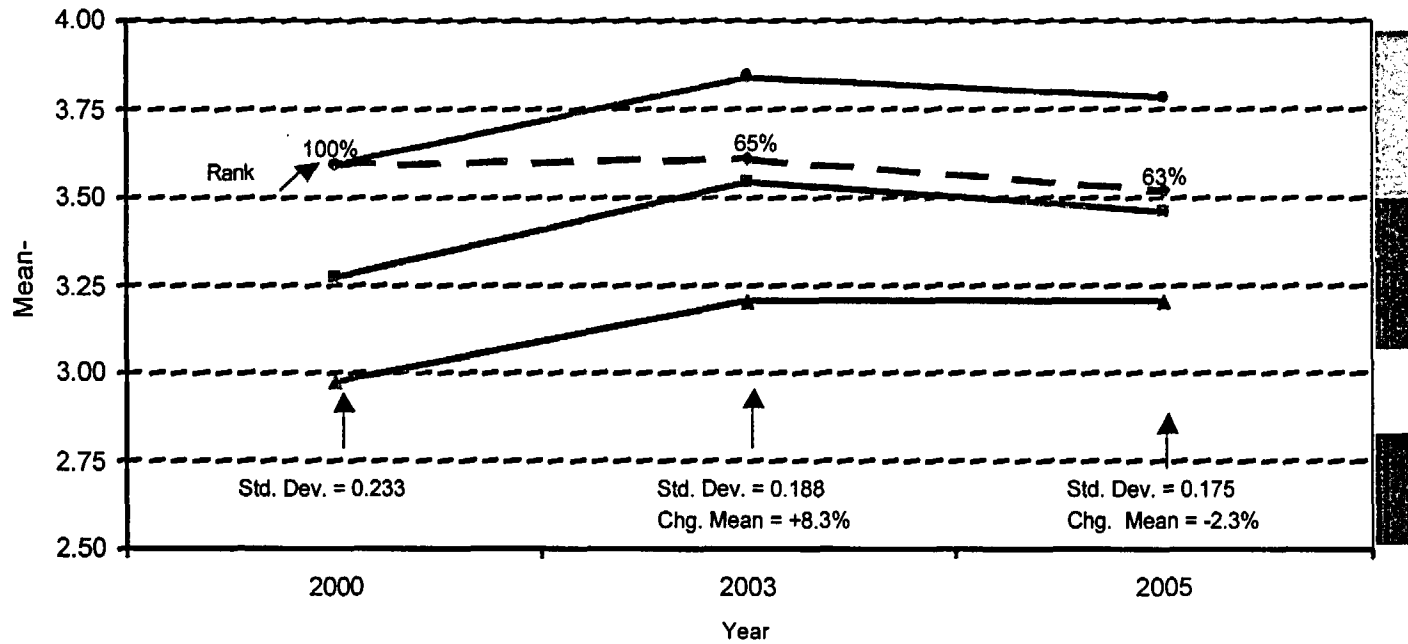
General Culture & Work Environment:

- General Culture & Work Environment Composite “Good, Nominal Decline” (-2.7 %) (Synergy)
- Synergy GCWE results closely aligned with results of Organizational Culture Inventory survey at USA plants (Tosan®)

SAN ONOFRE NUCLEAR GENERATING STATION



SONGS GCWE Metric 2000 - 2005



GCWE Areas of Relative Strength

- Relationship with Supervision
- High Standards
- Strong Focus on Organizational Performance

GCWE Areas of Relative Weakness

- Employee performance management
- Work management process effectiveness
- Management of change
- Communication of priorities

Management's Assessment of Results, GCWE

- SONGS General Culture and Work Environment continues to be strong and effective
- But given:
 - Results of OCI survey
 - Lack of improvement in the GCWE
 - Failure to improve the general culture in some of the subject matter areas and in some of the previously identified work groups

Management considers the results unsatisfactory and believes change is needed

**ACTING ON THE RESULTS
OF THE ASSESSMENT:
CHANGING THE WORK CULTURE**

Basis for Change in the General Culture:

- Feedback from employees
- Workforce planning analysis
- GCWE survey results
- Organizational Culture Inventory (OCI) and Life Style Inventory (LSI) results
(Compare to sustained, high-performance plants)
- INPO
- Corporate Work Environment Survey (in progress)

Changing the General Culture

- Recent changes in senior leadership provide a unique opportunity

Changing the General Culture, Key Action Areas

- Move toward a more constructive style (Encourage achievement, self-actualizing, humanistic-encouraging, and affiliative style elements)
- Retain substantial perfectionistic and oppositional style elements
- Use a *Balanced Scorecard* approach to business planning (Balance - Processes, Financial Performance, External Relationships, and Culture)
- Provide culture change training
- Implement change by example, behavior, and coaching
- Evaluate progress