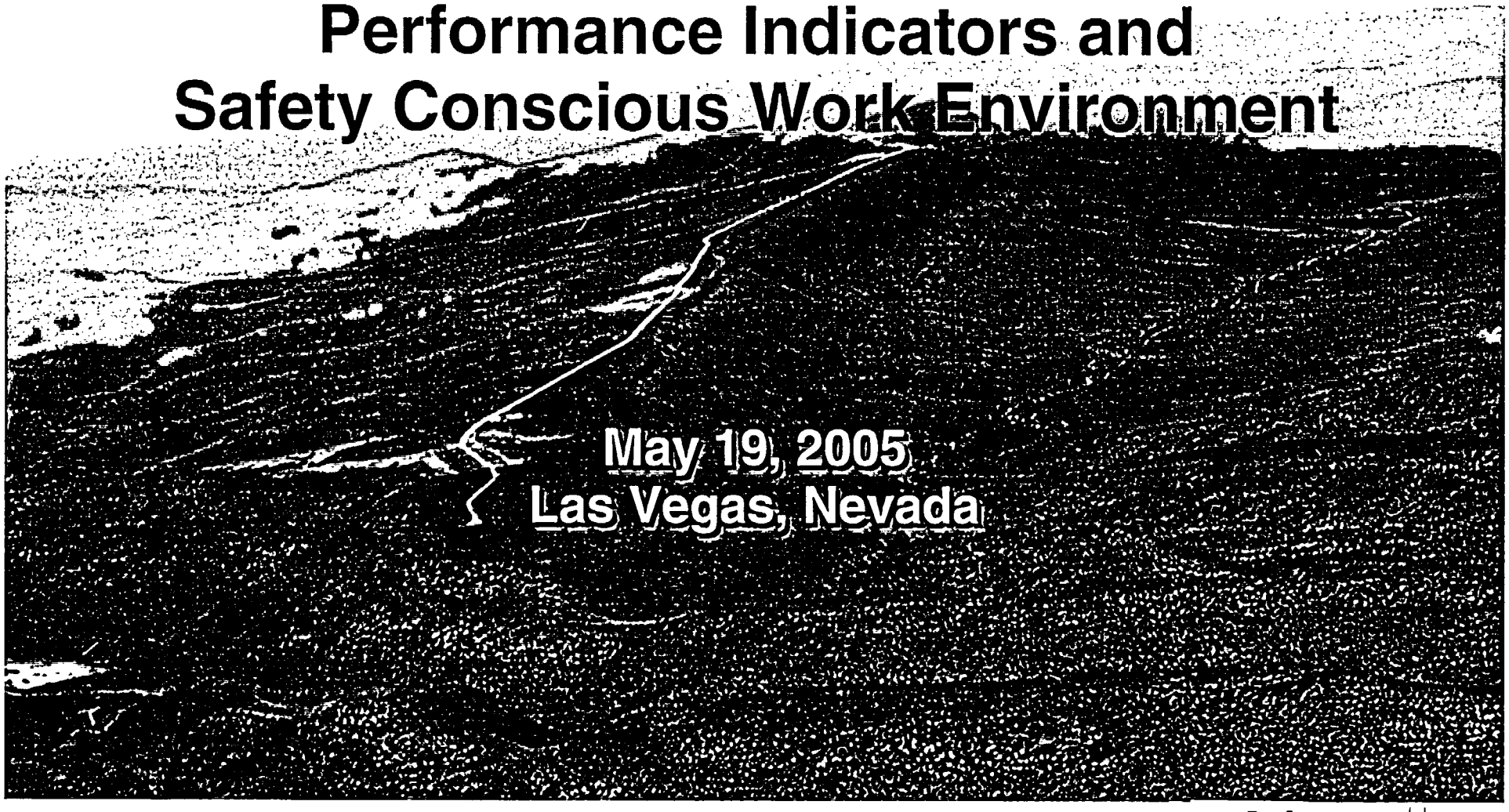
U.S. Department of Energy
Office of Civilian Radioactive Waste Management

www.ocrwm.doe.gov

# DOE/NRC Technical Exchange on Performance Indicators and Safety Conscious Work Environment



May 19, 2005
Las Vegas, Nevada

Enclosure 3

AGENDA

Technical Exchange on Safety Conscious Work Environment and Performance Indicators
Between the U.S. Nuclear Regulatory Commission (NRC) and
the U.S. Department of Energy (DOE)

May 19, 2005

9:00 A.M. – 1:00 P.M. (PT)
12:00 P.M. – 4:00 P.M. (ET)

Bechtel SAIC Company, LLC
Room 915, Building 9
9960 Covington Cross Drive
Las Vegas, Nevada

and via Videoconference to:

U.S. Nuclear Regulatory Commission
TWFN, Room 7-A1
11545 Rockville Pike
Rockville, MD

CNWRA
Building 189, Conference Room B101
6220 Culebra Road
San Antonio, TX

INTERESTED PARTIES MAY PARTICIPATE IN THE MEETING VIA TELECON BY CALLING
1-800-638-8081, Passcode 4956# or 301-231-5539, Passcode 4956#.

| | | |
|---|---|---|
| 9:00 AM | Introductions/Opening Remarks | NRC/DOE |
| 9:10 AM | Performance Indicators Update<br>(Example - Human Performance) | DOE |
| 10:40 A.M. | Break | |
| 10:50 A.M. | Organizational Climate and SCWE | DOE |
| 12:20 P.M. | Public Comments | ALL |
| 12:40 P.M. | Caucus | NRC/DOE |
| 1:00 P.M. | Closing Remarks/Adjourn | NRC/DOE |

U.S. Department of Energy
Office of Civilian Radioactive Waste Management

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# Performance Indicators

Presented to:
DOE/NRC Technical Exchange on Performance Indicators and Safety Conscious Work Environment

Presented by:
Dick Spence
Office of Repository Development
U.S. Department of Energy

Mitchell Brodsky
Office of Repository Development
U.S. Department of Energy

May 19, 2005
Las Vegas, NV

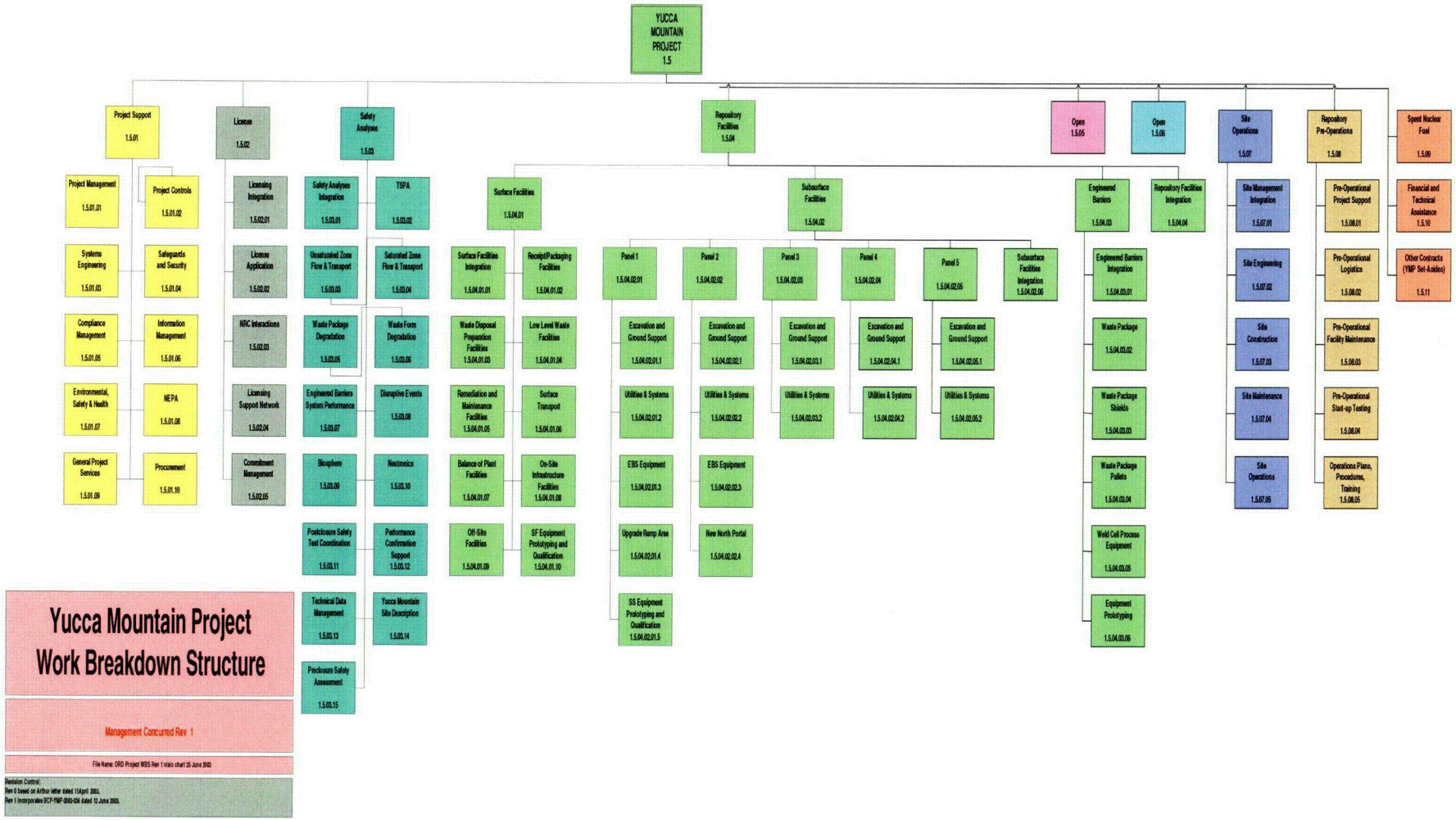
# Performance Indicators Purpose of Meeting

- Introduce the concept of the new panel
  - Jointly developed by Department of Energy (DOE) and Bechtel SAIC (BSC)
  - DOE is responsible for overall performance
  - Panel focuses on work execution, overall project performance, key processes
- Restructure the Performance Indicators (PI)s to reflect the changing phases of the Project
- Status PI Set

# Why We Changed

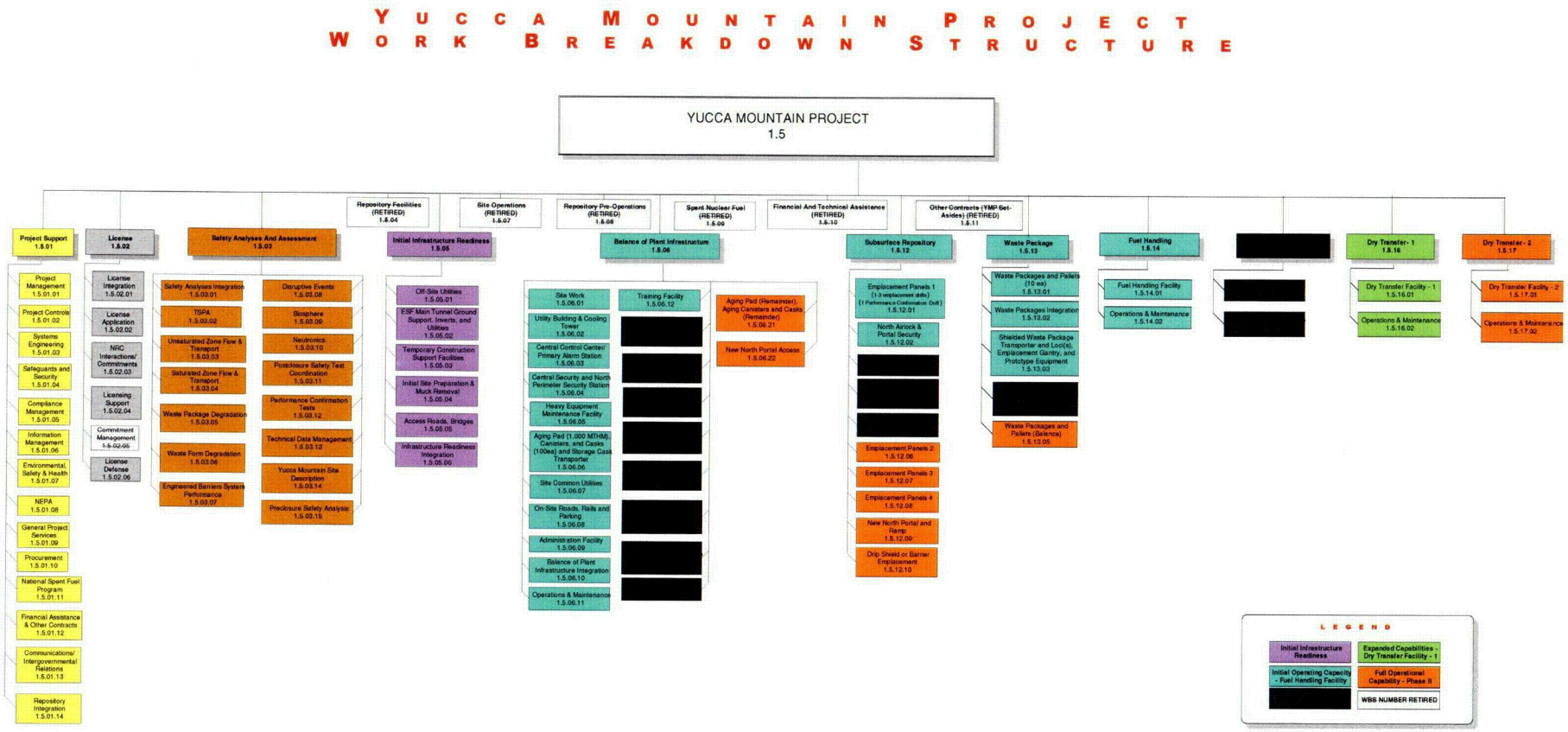
- The Work Breakdown Structure (WBS) changed to focus on assets during engineer, procure, construct phase
  - Fuel Handling Facility, Canister Handling Facility, etc.
- Realigned PI's accordingly
- Lessons Learned
  - PI Team drove changes
  - Foster communications between organizational elements; between responsible managers and process owners
  - Excessive numbers of metrics

# Work Breakdown Structure as of FY04



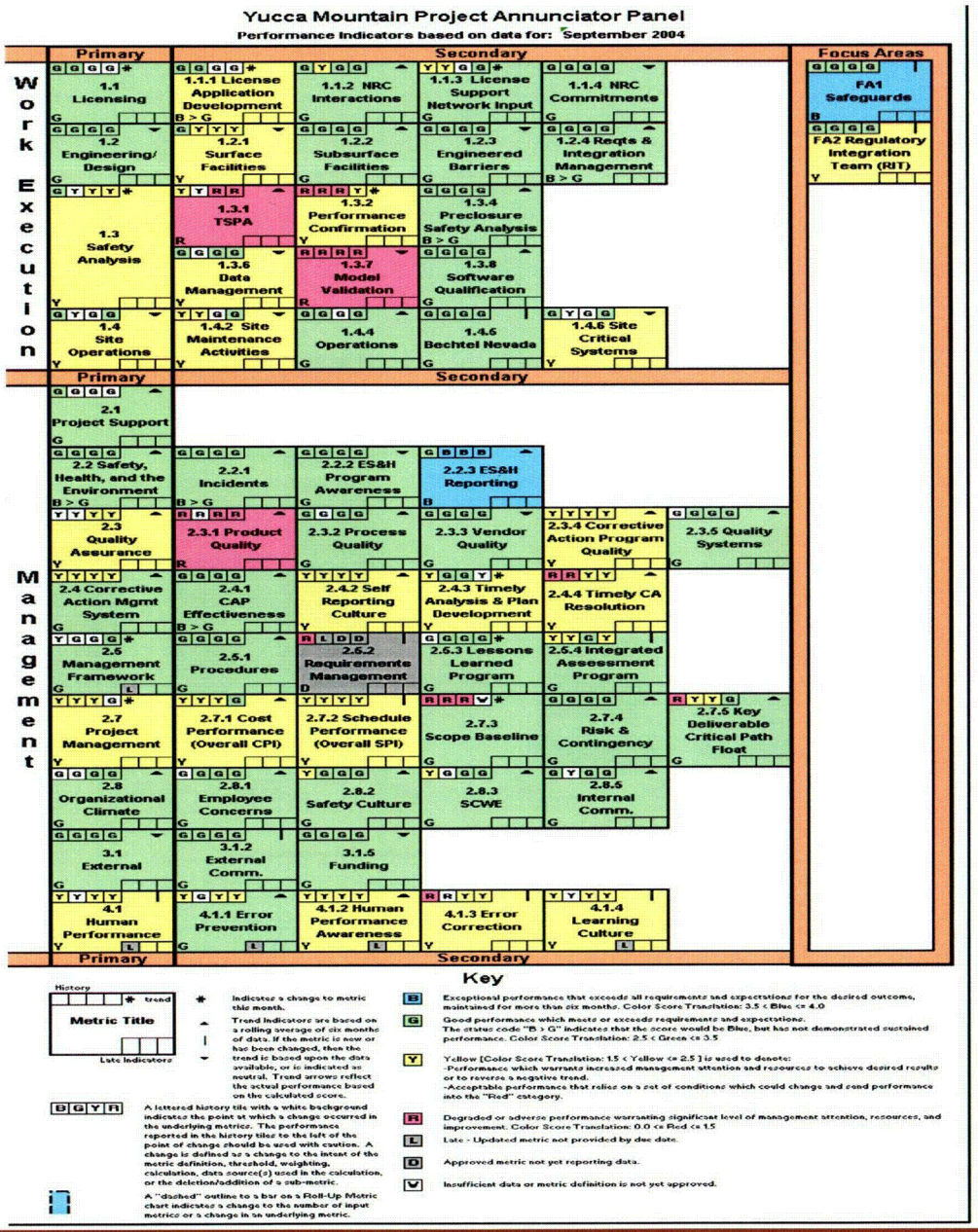

C01

# Work Breakdown Structure as of 2005



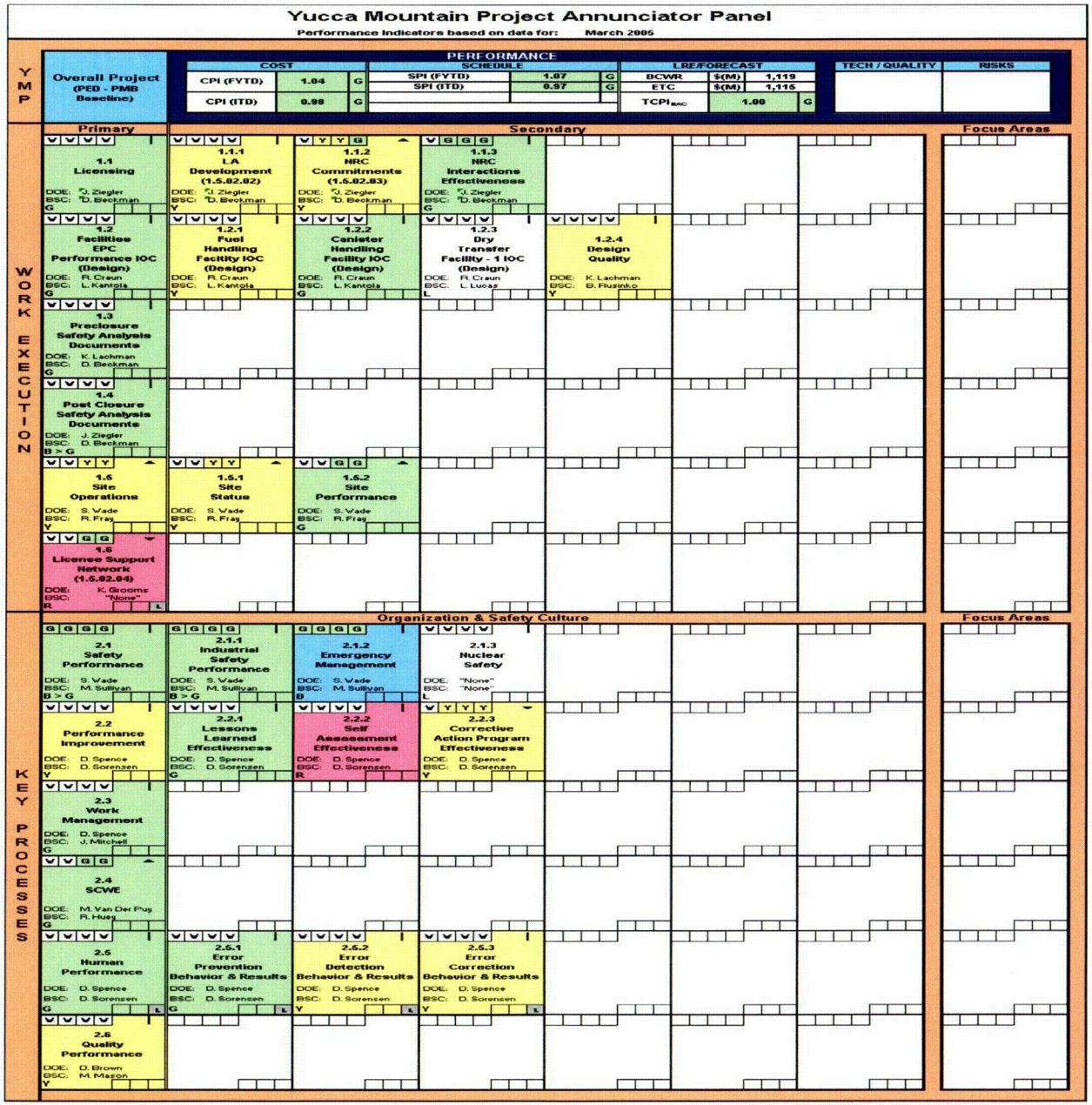

C02

# Old Annunciator Panel




C03

# New Annunciator Panel




C04

# Performance Indicators Reflects Changing Project Phases

- 4 initial projects / project managers
  - License Application, Licensing Support Network, Fuel Handling Facility, Cask Handling Facility
- Monthly meeting to support project management
- Change processes to accommodate project needs / focus
- PI's changes as project changes
- Increase communication transparency
- Targeted Audience-ORD
- Set stage for engineer, procure, construct
  - Project Management Contracting

# Performance Indicators
# Next Steps

- Commence major project meetings in support of Monthly Operating Report (MOR)
- April MOR presented March performance data
- Conduct BSC self-assessment 4th quarter
- Industry benchmarking

# In Summary

- PI Panel better focused On:
  - Performance
  - Accountability
  - Integrated Management
  - Human Performance

U.S. Department of Energy
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# Human Performance – Performance Indicators

Presented to:
**DOE/NRC Technical Exchange on Performance Indicators and Safety Conscious Work Environment**

Presented by:
Cindy Wagner
Human Performance Lead, BSC

May 19, 2005
Las Vegas, NV

# Human Performance Indicators

- Basic construct
  - Error prevention competency (34%)
    - Behaviors: Measures of workforce desire to learn, apply learning, and share learning
    - Results: Measures of workforce capability in preventing significant events
  - Error Detection competency (33%)
    - Behaviors: Measures of workforce willingness to detect errors
    - Results: Measures of workforce capability in detecting significant errors
  - Error Correction competency (33%)
    - Behaviors: Measures of workforce desire to effectively correct errors
    - Results: Measures of workforce capability to correct and prevent recurrences

# Human Performance Indicators

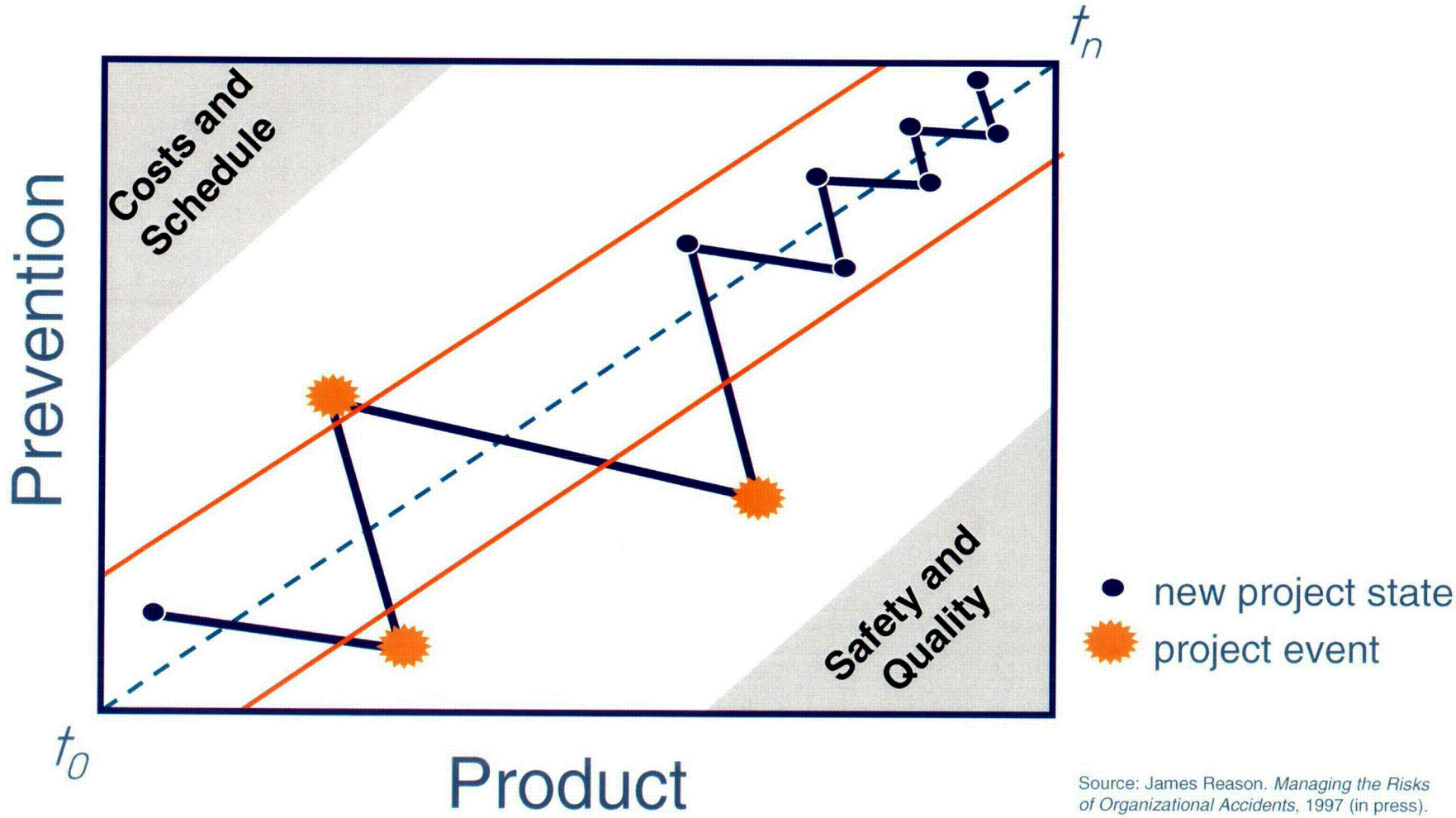
- March indicators
  - Behavior
    - Strong desire to question and improve
    - Opportunities exist to improve application of new information and knowledge
  - Results
    - Strong safety record
    - Timely and effective correction
    - Opportunities exist to improve trending of issues that identify larger or more significant issues

# Human Performance

- Human performance interventions
  - Change Management of culture and processes
    - Training on Human Performance principles and fundamentals
    - Proactive Mental Framework
    - Communications
    - Error-prevention toolkits
    - Observation & Coaching
    - Integration of process management techniques

# Human Performance

- **Positioning for the future**




Source: James Reason. *Managing the Risks of Organizational Accidents*, 1997 (in press).

C05

U.S. Department of Energy
Office of Civilian Radioactive Waste Management

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# YMP 2004 Organizational Climate and Safety Conscious Work Environment Survey Results Presentation

Presented to:
DOE/NRC Technical Exchange on Performance Indicators and Safety Conscious Work Environment

Presented by:
Gary Berger
Executive Director, ISR

Jennifer Kaufman
Project Director, ISR

May 19, 2005
Las Vegas, Nevada

# YMP 2004 Organizational Climate & Safety Conscious Work Environment Survey

## *Administration: September 27 – October 15, 2004*

| Year: | Outgoing #: | Return #: | Return Rate: | **Precision: |
|---|---|---|---|---|
| 2004 | 2,560 | 1,650 | 65% | 1.4% |
| +2004 | 735 | 521 | 71% | 2.3% |
| 2003 | 2,287 | 1,492 | 65% | 1.5% |

**The degree of precision defines an acceptable range for sample estimates. A precision estimate less than 5% allows us to be confident that the sample represents the true population.

+Pulse Sample Survey

# Agenda

- Overview of Survey Design
- Organizational Climate
  - 2004 survey results compared with U.S. Government Research & Technology Norm and U.S. National Norm
  - 2004 survey results compared with YMP historical results (2003 census and 2004 pulse)
  - Results variation by sub-groups (e.g., organization, tenure, job level)
  - Summary of Organizational Climate
- Safety Conscious Work Environment (SCWE)
  - 2004 results organized by 4 Pillars and compared with YMP historical results and norms (where available)
- Overall Strengths and Opportunities
- SCWE Index and Key Driver Analysis

# Survey Design

- Statistical review of last year's survey content was conducted to ensure the very best questions were retained for 2004
  - Factor analysis
  - Reliability analysis
  - Questions with high "?" response
  - Discussion of key priorities for 2004
- Ensured the survey represented a balance of all areas critical for a SCWE
  - Improved focus of questions
  - Retained ability to make historical comparisons
  - Ensured questions were inclusive of ECP and OCP
  - Included all industry-standard questions
  - Added additional questions from Pillar 4
  - Eliminated Information Technology (IT) specific questions because it was determined that IT is not a high priority action area

# Four Pillars of a Safety Conscious Work Environment

# Agenda

- Overview of Survey Design
- **Organizational Climate**
  - **2004 survey results compared with U.S. Government Research & Technology Norm and U.S. National Norm**
  - **2004 survey results compared with YMP historical results (2003 census and 2004 pulse)**
  - Results variation by sub-groups (e.g., organization, tenure, job level)
  - Summary of Organizational Climate
- Safety Conscious Work Environment (SCWE)
  - 2004 results organized by 4 Pillars and compared with YMP historical results and norms (where available)
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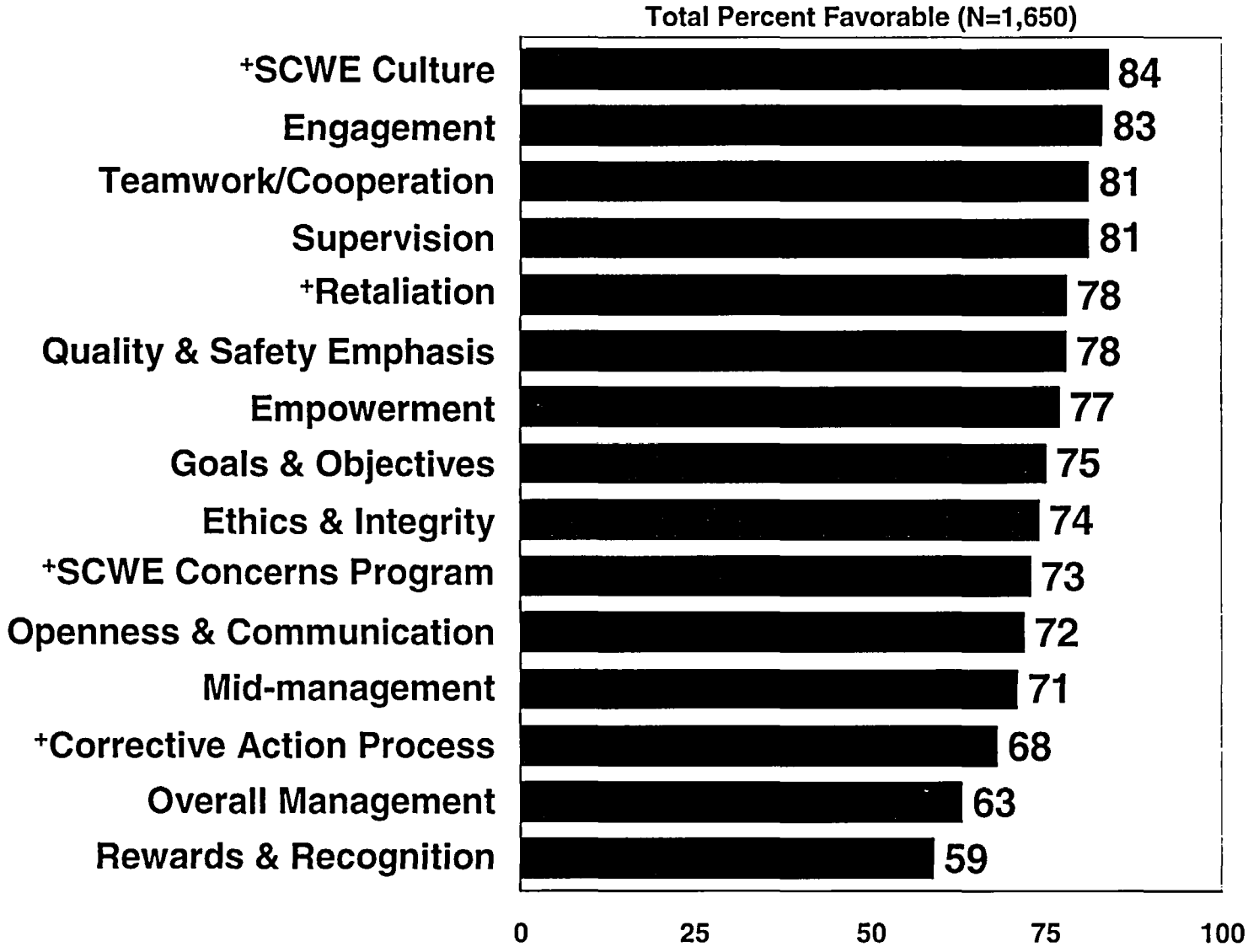
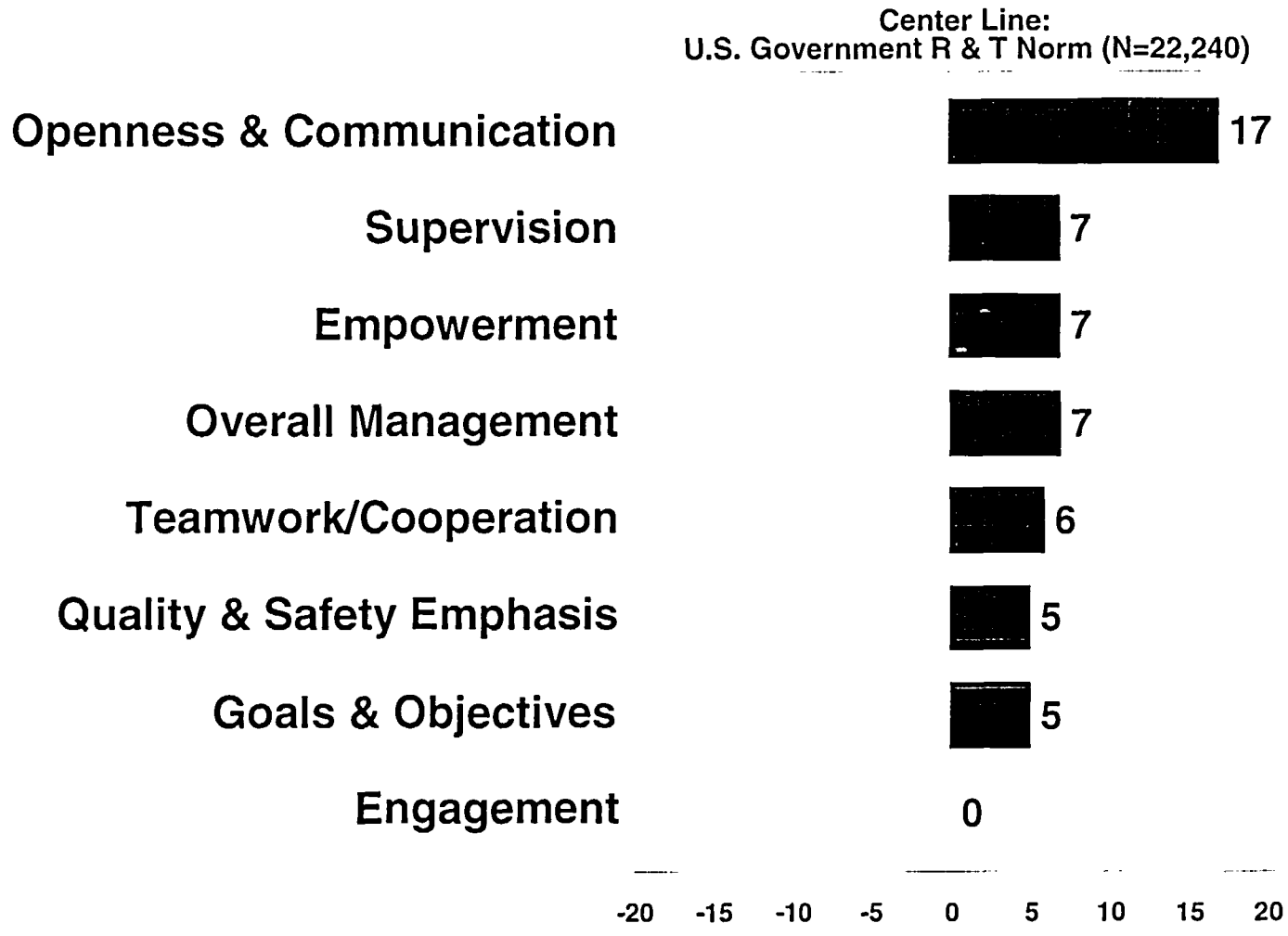
# YMP 2004 Overall Category Scores



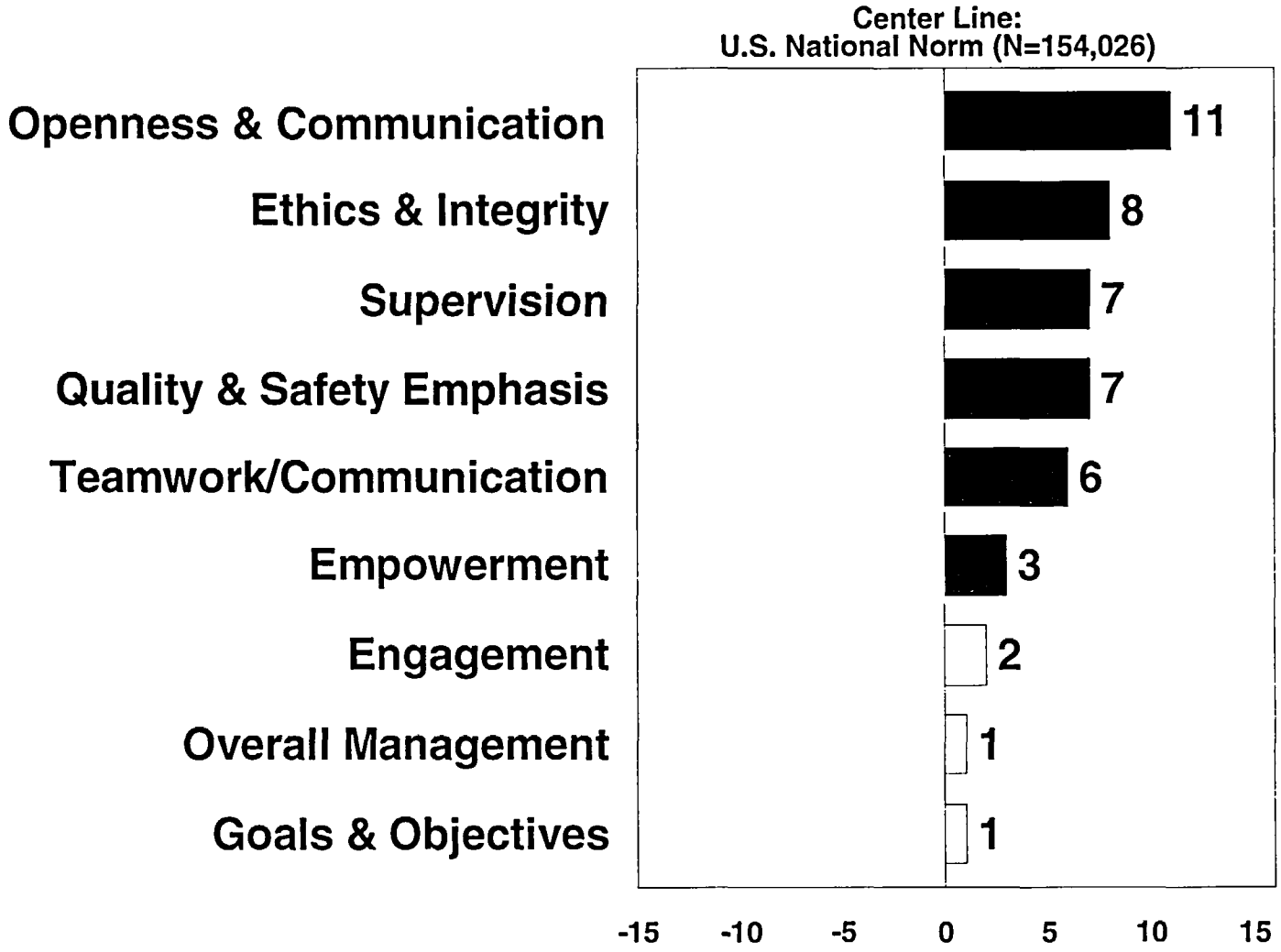

*+Indicates a new category for 2004*

# YMP 2004 Compared with U.S. Government Research & Technology Norm



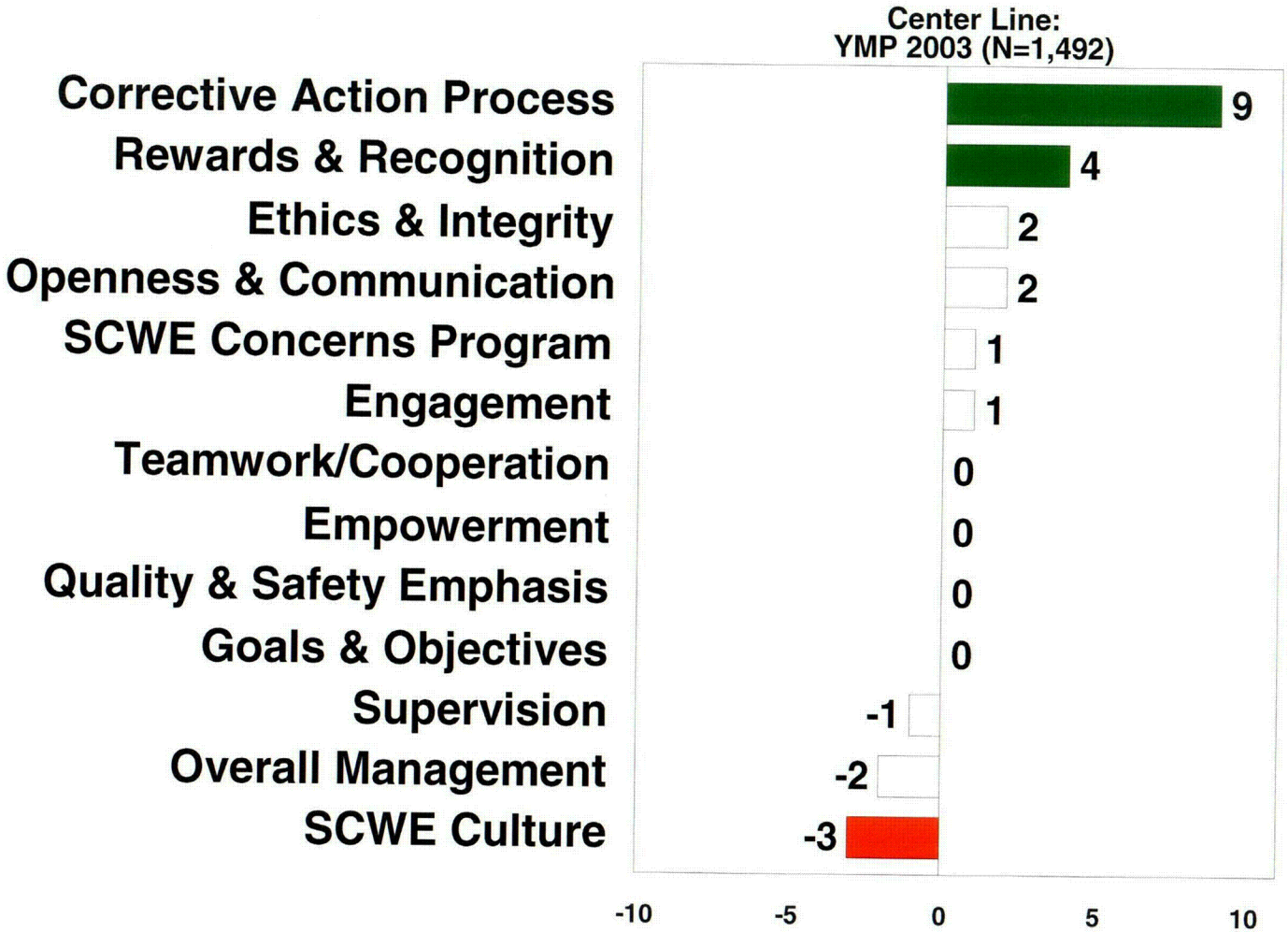

*Normative data not available for all categories.*
*Colored bars indicate a statistically significant difference.*

# YMP 2004 Compared with U.S. National Norm




*Normative data not available for all categories.*
*Colored bars indicate a statistically significant difference.*

# YMP 2004 Compared with YMP 2003




*Historical data not available for all categories.*
*Colored bars indicate a statistically significant difference.*
*SCWE Culture is comprised of 10 questions, four of which are historical questions.*

# YMP Overall Questions with the *Most Favorable* Results Compared with U.S. Government R & T Norm

| Category | No. | Question | YMP 2004 % Fav. | △ U.S. Gov R & T Norm |
|---|---|---|---|---|
| *Openness & Communication* | 67a. | My organization has established a climate where: People can challenge our traditional ways of doing things | 70 | 22* |
| *Openness & Communication* | 67b. | My organization has established a climate where: Innovative ideas can fail without penalty to the originating person or group | 61 | 21* |
| *Openness & Communication* | 30. | Most of the time it is safe to speak up in my organization. | 80 | 20* |
| *Empowerment* | 33. | Based on my most recent experiences, my organization's management trusts the judgment of people at my level in the organization. | 69 | 16* |
| *Goals & Objectives* | 17c. | I have a clear understanding of the goals and objectives of: My organization | 81 | 16* |
| *Overall Management* | 1. | Employees are treated with respect here, regardless of their job. | 77 | 13* |
| *Openness & Communication* | 42. | My organization does an excellent job of keeping employees informed about matters affecting us. | 72 | 12* |
| *Goals & Objectives* | 17b. | I have a clear understanding of the goals and objectives of: My office/department | 86 | 11* |
| *Overall Management* | 84a. | In your judgment, with all things considered, how good a job is top management of your division doing in handling the following aspects of the business: Stating objectives clearly | 55 | 11* |
| *Openness & Communication* | 61. | I am sufficiently informed about the status of my organization's performance relative to mission, goals and objectives. | 69 | 10* |

**A statistically significant difference.*

# YMP Overall Questions with the *Most Favorable* Results Compared with U.S. Government R & T Norm (continued)

| Category | No. | Question | YMP 2004 % Fav. | Δ U.S. Nat'l Norm |
|---|---|---|---|---|
| *Openness & Communication* | 30. | Most of the time it is safe to speak up in my organization. | 80 | 20* |
| *Openness & Communication* | 19. | If I were dissatisfied with my supervisor's decision on an important matter, I would feel free to go to someone higher in authority. | 72 | 16* |
| *Openness & Communication* | 67a. | My organization has established a climate where: People can challenge our traditional ways of doing things | 70 | 15* |
| ***Ethics and Integrity*** | 18a. | My organization operates with integrity in its: Internal dealings [i.e., with employees] | 81 | 14* |
| ***Teamwork/ Cooperation*** | 44b. | In my organization, teamwork is: Given recognition | 71 | 13* |
| ***Supervision*** | 31. | My supervisor does a good job of building teamwork. | 76 | 12* |
| *Openness & Communication* | 67b. | My organization has established a climate where: Innovative ideas can fail without penalty to the originating person or group | 61 | 12* |
| ***Quality & Safety Emphasis*** | 68. | My organization too often sacrifices the quality of our products/services in order to meet schedules/deadlines. (N) | 51 | 10* |
| *Openness & Communication* | 4. | Differing opinions are openly discussed in reaching decisions in my work group. | 79 | 10* |
| ***Engagement*** | 35. | I am personally committed to achieving the goals of our organization. | 97 | 10* |

**A statistically significant difference.(N) Disagreeing is the favorable response.*

# YMP Overall Questions with the *Most Favorable* Results Compared with U.S. Government R & T Norm (continued)

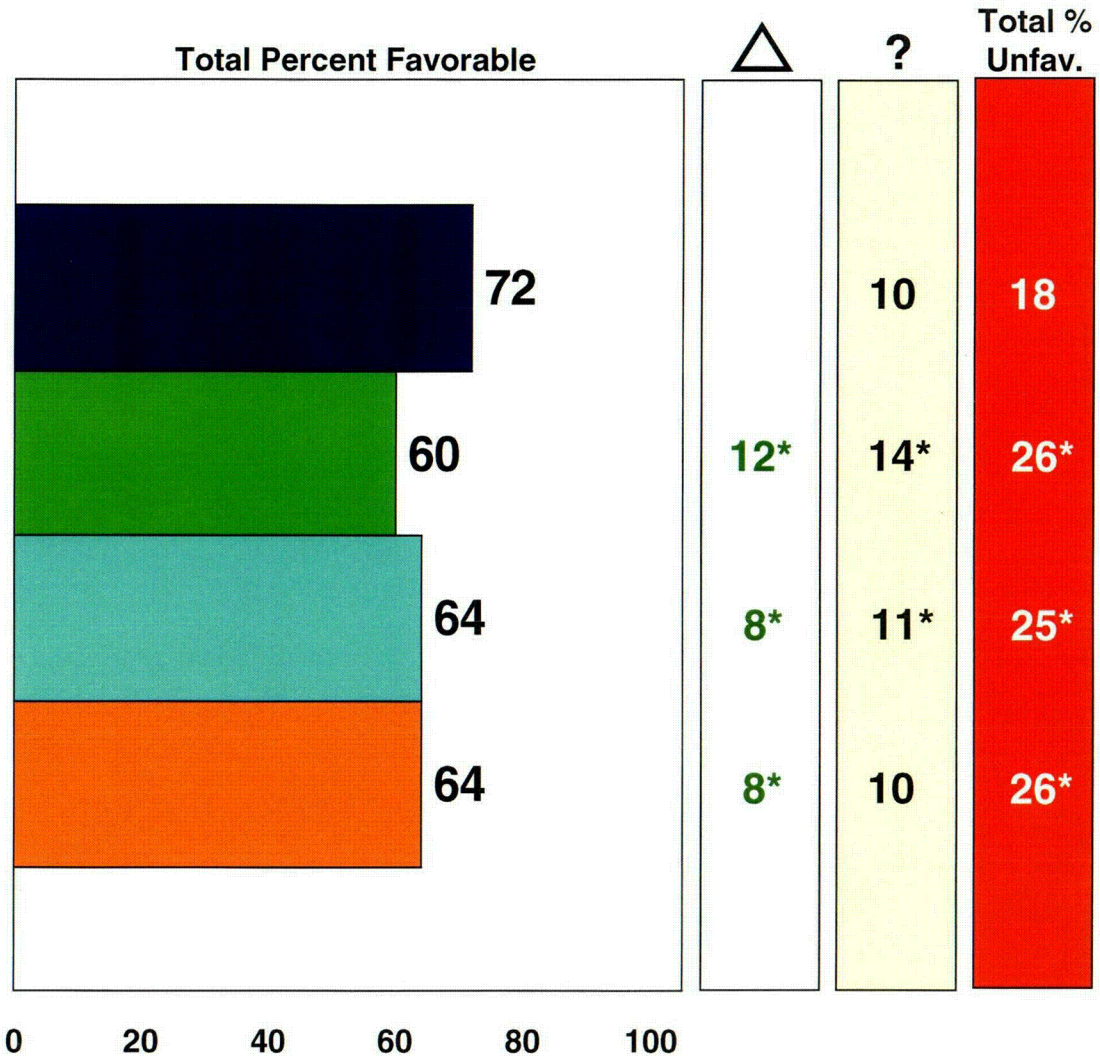
| Category | No. | Question | YMP 2004 % Fav. | △ YMP 2003 |
|---|---|---|---|---|
| *Corrective Action Process* | 65. | The CAP is used effectively to resolve conditions adverse to quality in a timely manner. | 61 | 20* |
| *Openness & Communication* | 42. | My organization does an excellent job of keeping employees informed about matters affecting us. | 72 | 8* |
| *Corrective Action Process* | 28a. | The corrective actions within my office/department are: Timely | 68 | 8* |
| *Corrective Action Process* | 28b. | The corrective actions within my office/department are: Effective | 65 | 7* |
| *Corrective Action Process* | 28c. | The corrective actions within my office/department are: Well communicated | 63 | 7* |
| *Quality & Safety Emphasis* | 63b. | In my experience, most employees believe that the following are the responsibility of everyone: Safety | 96 | 7* |
| *Overall Management* | 82. | I believe my organization's management decisions are consistent with my organization's core values. | 71 | 6* |
| *SCWE Concerns Programs* | 41b. | I am confident that issues reported through the ECP are: Appropriately resolved | 58 | 6* |
| *Rewards & Recognition* | 83. | How good a job do you feel your organization rewards those who demonstrate good SCWE practices? | 43 | 6* |
| *Overall Management* | 16. | There is sufficient contact between management above my supervisor and employees in my organization. | 59 | 4* |

**A statistically significant difference.*

# Overall Question Greatest Strength as Compared to Other Benchmarks

## Openness & Communication

42. My organization does an excellent job of keeping employees informed about matters affecting us




**LEGEND**

- YMP Overall N=(1,650)
- U.S. Government R&T Norm (N=22,240)
- U.S. National Norm (N=154,026)
- YMP Overall 2003 (N=1,492)

**A statistically significant difference.*

C07

# YMP Overall Questions with the *Least Favorable* Results Compared with U.S. National Norm and U.S. Government Research & Technology Norm

| Category | No. | Question | YMP 2004 % Fav. | Δ U.S. Nat'l Norm |
|---|---|---|---|---|
| *Goals & Objectives* | 2. | Priorities or work objectives are changed so frequently I have trouble getting my work done. (N) | 40 | -17* |
| *Engagement* | 10. | I would recommend my organization as a good place to work. | 72 | -5* |
| *Overall Management* | 84c. | In your judgment, with all things considered, how good a job is top management of your division doing in handling the following aspects of the business: Making decisions promptly | 39 | -5* |
| *Overall Management* | 16. | There is sufficient contact between management above my supervisor and employees in my organization. | 59 | -5* |
| *Empowerment* | 8. | I have sufficient authority to do my job well. | 77 | -4* |
| *Overall Management* | 84b. | In your judgment, with all things considered, how good a job is top management of your division doing in handling the following aspects of the business: Establishing priorities | 48 | -3* |
| *Overall Management* | 77. | I believe my organization's core values are clear. | 78 | -3* |
| *Openness and Communication* | 61. | I am sufficiently informed about the status of my organization's performance relative to mission, goals and objectives. | 69 | -2* |

=Questions 2 and 10 are also both statistically below the U.S. Government Research & Technology Norm at -13* and -3* respectively.

**A statistically significant difference. (N) Disagreeing is the favorable response.*

# Overall Greatest Opportunity Questions Compared with Other Benchmarks

| | Total Percent Favorable | △ | ? | Total % Unfav. |
|---|---|---|---|---|
| **Goals & Objectives** | | | | |
| 2. Priorities or work objectives are changed so frequently I have trouble getting my work done (N) | 40 | | 8 | 52 |
| | 53 | -13* | 12* | 35* |
| | 56 | -17* | 10* | 33* |
| | 44 | -5* | 8 | 48* |
| **Engagement** | | | | |
| 10. I would recommend my organization as a good place to work | 72 | | 11 | 17 |
| | 75 | -3* | 11 | 14* |
| | 77 | -5* | 11 | 12* |
| | 70 | 2 | 10 | 19* |

LEGEND
- YMP Overall N=(1,650)
- U.S. Government R&T Norm (N=22,240)
- U.S. National Norm (N=154,026)
- YMP Overall 2003 (N=1,492)

*A statistically significant difference. (N) Disagreeing is the favorable response.

# YMP Overall Questions with the *Least Favorable* Results Compared with YMP Overall 2003

| Category | No. | Question | YMP 2004 % Fav. | △ YMP 2003 |
|---|---|---|---|---|
| *Overall Management* | 84c. | In your judgment, with all things considered, how good a job is top management of your division doing in handling the following aspects of the business: Making decisions promptly | 39 | -10* |
| *Overall Management* | 84d. | In your judgment, with all things considered, how good a job is top management of your division doing in handling the following aspects of the business: Providing leadership | 48 | -7* |
| *Overall Management* | 84e. | In your judgment, with all things considered, how good a job is top management of your division doing in handling the following aspects of the business: Communicating with people | 47 | -6* |
| *Overall Management* | 84b. | In your judgment, with all things considered, how good a job is top management of your division doing in handling the following aspects of the business: Establishing priorities | 48 | -6* |
| *Quality & Safety Emphasis* | 68. | My organization too often sacrifices the quality of our products/services in order to meet schedules/deadlines. (N) | 51 | -6* |
| *SCWE Concerns Programs* | 74a. | I feel free to use the following programs without fear of retaliation: OCP | 74 | -6* |
| *Goals & Objectives* | 2. | Priorities or work objectives are changed so frequently I have trouble getting my work done. (N) | 40 | -5* |
| *Mid-management* | 15b. | I feel free to approach the following levels of management regarding any concern: My organization's mid-management | 76 | -5* |
| *SCWE Culture* | 12c. | Developing a SCWE is considered an important priority by: My mid-management | 84 | -4* |
| *Empowerment* | 45. | My supervisor involves me in solving problems related to our office/department work. | 78 | -4* |

=Overall Management has four of the lowest scoring questions for 2004 compared to historical. SCWE Culture is the only category to show a statistically significant decrease from 2003.

**A statistically significant difference. (N) Disagreeing is the favorable response.*

# Summary of Overall Management Category

- Although the Overall Management category is significantly better than the U.S. Government Research and Technology Norm and in line with the U.S. National Norm...
  - Overall Management is the second lowest scoring category in 2004.
  - Of the 10 questions with the greatest decline in 2004 compared to the 2003 Census Survey, four of the ten questions are found in the Overall Management category.
  - Results in this category overall have declined, although not significantly, from 2003.

# Summary of SCWE Culture Category

- The SCWE Culture category is the highest scoring category in 2004 with 84% favorable response. Nevertheless....
  - SCWE Culture is the only area (based on the four historical questions from the 2003 Census Survey) to show a statistically significant decrease.
  - The historical benchmark is the only benchmark. Due to the number of tailored questions, there is no normative information available for this category.

# Agenda

- Overview of Survey Design
- Organizational Climate
  - 2004 survey results compared with U.S. Government Research & Technology Norm and U.S. National Norm
  - 2004 survey results compared with YMP historical results (2003 census and 2004 pulse)
  - Results variation by sub-groups (e.g., organization, tenure, job level)
  - Summary of Organizational Climate
- Safety Conscious Work Environment (SCWE)
  - 2004 results organized by 4 Pillars and compared with YMP historical results and norms (where available)
- Overall Strengths and Opportunities
- SCWE Index and Key Driver Analysis

# Organization Comparison

A. Overall Management
B. Mid-management
C. Goals & Objectives
D. Ethics & Integrity
E. Openness & Communication
F. Rewards & Recognition
G. Supervision
H. Teamwork/Cooperation
I. Empowerment
J. Quality & Safety Emphasis
K. Engagement
L. SCWE Culture
M. SCWE Concerns Programs
N. Retaliation
O. Corrective Action Process

| Group | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YMP Overall (N=1,650) | 63 | 71 | 75 | 74 | 72 | 59 | 81 | 81 | 77 | 78 | 83 | 84 | 73 | 78 | 68 |
| DOE/ORD (N=94) | 11* | 7 | 5 | 2 | 4 | 5 | 4 | 2 | 3 | 2 | 2 | 1 | 2 | 0 | 3 |
| DOE/ORD Contractors (N=136) | 3 | 3 | 5 | -2 | -2 | -10* | -1 | 1 | 6 | 2 | 3 | -5 | -3 | -2 | -6 |
| Bechtel SAIC Company [BSC] (N=1,106) | 1 | 0 | 0 | 1 | 1 | 4 | 0 | 0 | 0 | 1 | 0 | 2 | 3 | 2 | 3 |
| Bechtel Subcontractors (N=123) | -5 | -8 | -3 | -3 | -1 | -8 | 2 | -2 | -2 | -5 | -3 | -5 | -5 | -3 | -5 |
| USGS/Laboratories (N=159) | -8* | 0 | -6 | 1 | -2 | -11* | -1 | -2 | -1 | -4 | -1 | -6* | -12* | -6 | -11* |

** A statistically significant difference.*

C09

# Job Function Comparison

A. Overall Management
B. Mid-management
C. Goals & Objectives
D. Ethics & Integrity
E. Openness & Communication
F. Rewards & Recognition
G. Supervision
H. Teamwork/Cooperation
I. Empowerment
J. Quality & Safety Emphasis
K. Engagement
L. SCWE Culture
M. SCWE Concerns Programs
N. Retaliation
O. Corrective Action Process

| Group | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YMP Overall (N=1,650) | 63 | 71 | 75 | 74 | 72 | 59 | 81 | 81 | 77 | 78 | 83 | 84 | 73 | 78 | 68 |
| Administrative (N=283) | 6 | 2 | 6* | -1 | 0 | 7* | 1 | 2 | 4 | 3 | 4 | 2 | 0 | 1 | 3 |
| Craft (N=76) | -1 | -2 | -4 | -7 | 1 | 2 | -1 | 5 | -3 | 3 | 5 | 3 | 4 | 0 | -1 |
| Program Management (N=199) | 6 | 5 | 1 | 4 | 5 | 2 | 0 | 0 | 3 | 2 | 1 | 1 | 5 | 2 | 5 |
| Support (N=262) | 3 | 2 | 5 | 2 | 0 | 3 | -2 | 1 | 4 | 4 | 0 | 4 | 4 | 3 | 5 |
| Technical (N=800) | -5* | -3 | -4* | -1 | -1 | -4 | 0 | -1 | -3 | -3 | -2 | -2 | -3 | -2 | -4 |

** A statistically significant difference.*

C10

# Job Level Comparison

A. Overall Management
B. Mid-management
C. Goals & Objectives
D. Ethics & Integrity
E. Openness & Communication
F. Rewards & Recognition
G. Supervision
H. Teamwork/Cooperation
I. Empowerment
J. Quality & Safety Emphasis
K. Engagement
L. SCWE Culture
M. SCWE Concerns Programs
N. Retaliation
O. Corrective Action Process

| Group | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YMP Overall (N=1,650) | 63 | 71 | 75 | 74 | 72 | 59 | 81 | 81 | 77 | 78 | 83 | 84 | 73 | 78 | 68 |
| Non-supervisory staff/Craft (N=1,183) | -1 | -2 | 1 | -2 | -2 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 |
| First-level supervisor (N=258) | -2 | 3 | -2 | 2 | 1 | -1 | 4 | 2 | 2 | -1 | 0 | 0 | 1 | 1 | 0 |
| Mid-manager (N=152) | 3 | 7 | -5 | 6 | 5 | 3 | 0 | 2 | 1 | 2 | -1 | 2 | 4 | 3 | 3 |
| Senior manager (N=41) | 22* | 18* | 11 | 15* | 19* | 17* | 10 | 13* | 13 | 11 | 10 | 8 | 19* | 13* | 17* |

** A statistically significant difference.*

# Nuclear Industry Experience Comparison

A. Overall Management
B. Mid-management
C. Goals & Objectives
D. Ethics & Integrity
E. Openness & Communication
F. Rewards & Recognition
G. Supervision
H. Teamwork/Cooperation
I. Empowerment
J. Quality & Safety Emphasis
K. Engagement
L. SCWE Culture
M. SCWE Concerns Programs
N. Retaliation
O. Corrective Action Process

| Group | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YMP Overall (N=1,650) | 63 | 71 | 75 | 74 | 72 | 59 | 81 | 81 | 77 | 78 | 83 | 84 | 73 | 78 | 68 |
| Less Than 10 Years Nuclear Industry Experience (N=769) | 3 | 2 | 2 | 0 | 1 | 3 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 1 |
| 10 Years but Less Than 20 Years Nuclear Industry Experience (N=433) | -2 | -1 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | -1 |
| 20 Years Nuclear Industry Experience or More (N=430) | -3 | -2 | -2 | 1 | 0 | -4 | -1 | 1 | 0 | -2 | 0 | -2 | 0 | 0 | 0 |

# Years of Service Comparison

A. Overall Management
B. Mid-management
C. Goals & Objectives
D. Ethics & Integrity
E. Openness & Communication
F. Rewards & Recognition
G. Supervision
H. Teamwork/Cooperation
I. Empowerment
J. Quality & Safety Emphasis
K. Engagement
L. SCWE Culture
M. SCWE Concerns Programs
N. Retaliation
O. Corrective Action Process

| Group | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YMP Overall (N=1,650) | 63 | 71 | 75 | 74 | 72 | 59 | 81 | 81 | 77 | 78 | 83 | 84 | 73 | 78 | 68 |
| Less Than 10 Years of Service (N=1,234) | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| 10 Years of Service or More (N=404) | -4 | -2 | -1 | -4 | -4 | -3 | -1 | 0 | 0 | -2 | 0 | -2 | -3 | -2 | -2 |

# Summary of Organizational Climate

## Historical

### Strengths to Maintain

- Management emphasis on Corrective Action Programs
- Strong personal commitment to safety and quality
- Communication to workforce about matters that affect them

### Opportunities for Improvement

- Respondents were less favorable regarding top management of their division on making decisions promptly, providing leadership, communicating with people and establishing priorities
- Priorities or work objectives change so frequently employees have trouble getting their work done

## Norms

### Strengths to Maintain*

- Respondents feel it is safe to speak up
- People feel the climate allows them to challenge the traditional ways of doing things

### Opportunities for Improvement

- Priorities or work objectives change so frequently employees have trouble getting their work done*
- Recommendation as a place to work*
- Timely decision making (U.S. National Norm)

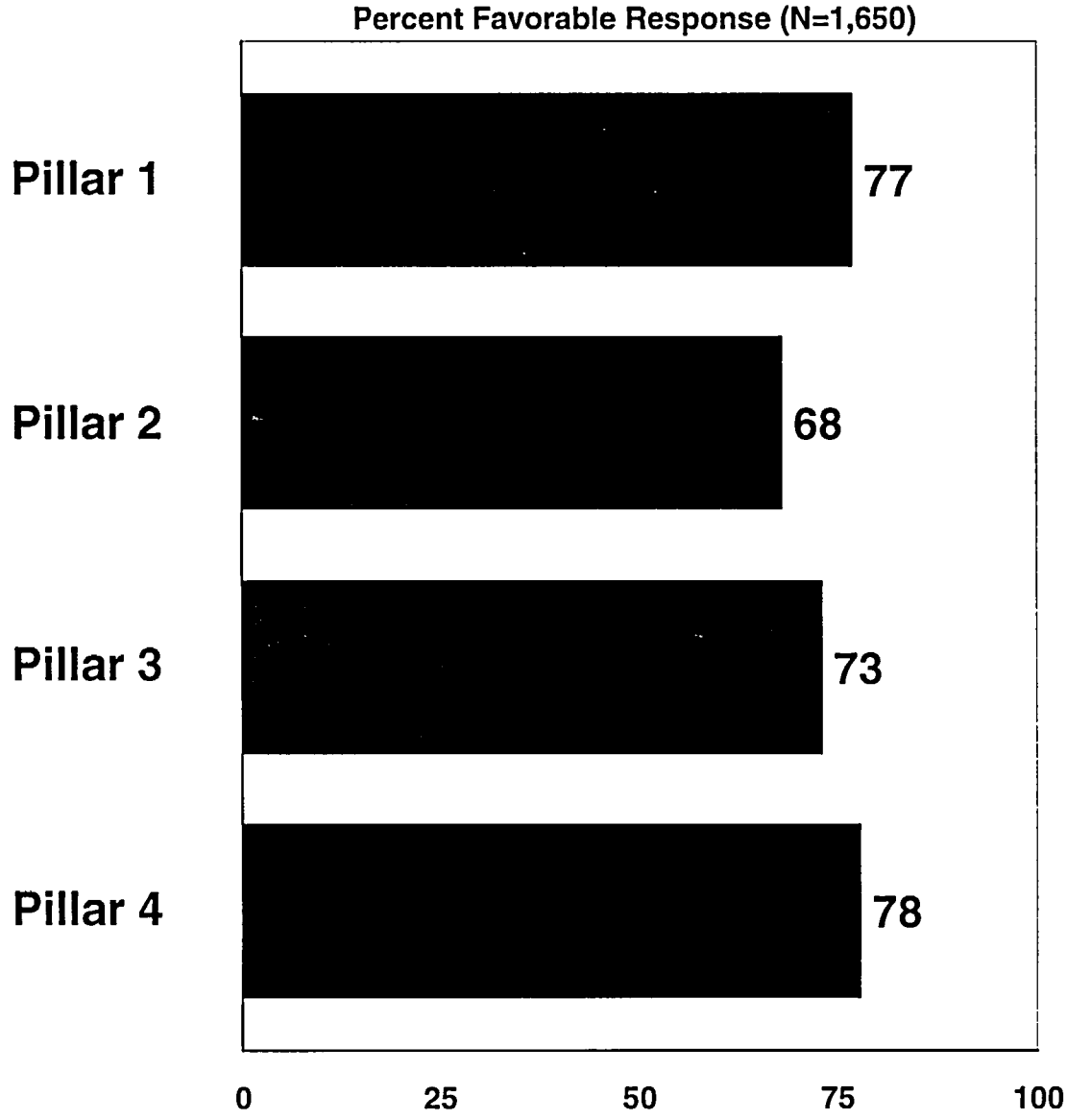
** A statistically significant difference compared with U.S. Government R &T and U.S. National norms*

# Agenda

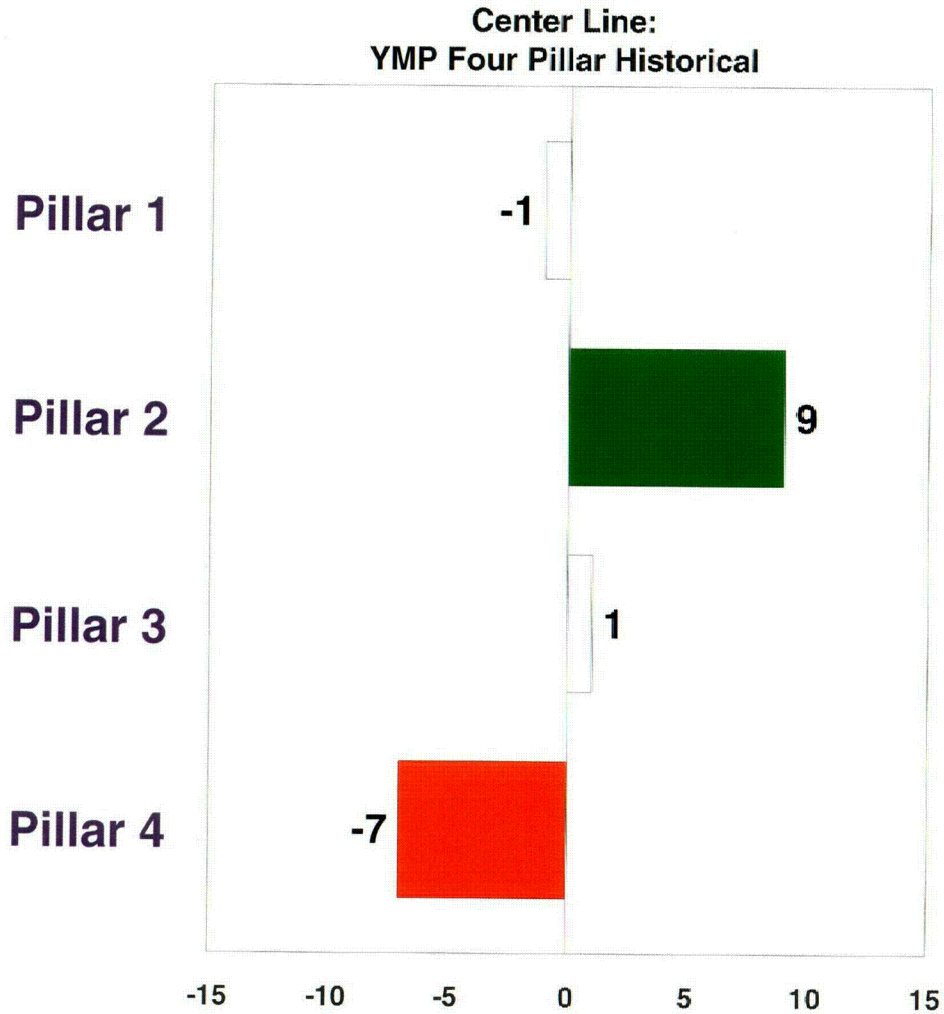
- Overview of Survey Design
- Organizational Climate
  - 2004 survey results compared with U.S. Government Research & Technology Norm and U.S. National Norm
  - 2004 survey results compared with YMP historical results (2003 census and 2004 pulse)
  - Results variation by sub-groups (e.g., organization, tenure, job level)
  - Summary of Organizational Climate
- Safety Conscious Work Environment (SCWE)
  - 2004 results organized by 4 Pillars and compared with YMP historical results and norms (where available)
- Overall Strengths and Opportunities
- SCWE Index and Key Driver Analysis

# Four Pillars of a Safety Conscious Work Environment

# YMP 2004 Four Pillars



# YMP 2004 Compared with +Four Pillar Historical




*Colored bars indicate a statistically significant difference.*

*+Data comprised of 2003 Census for Pillars 1, 2 and 3 and 2004 Pulse for Pillar 4*



C12

# Greatest Improvements from YMP 2003 are Found in Pillar 2

| No. | Question | YMP 2004 % Fav. | △ YMP 2003 |
|---|---|---|---|
| 65. | The CAP is used effectively to resolve conditions adverse to quality in a timely manner. | 61 | 20* |
| 28a. | The corrective actions within my office/department are: Timely | 68 | 8* |
| 28b. | The corrective actions within my office/department are: Effective | 65 | 7* |
| 28c. | The corrective actions within my office/department are: Well communicated | 63 | 7* |
| 76. | I feel free to raise nuclear safety, industrial safety, radiological safety or quality concerns through the CAP without fear of retaliation. | 81 | 4* |

*A statistically significant difference.

# Greatest Decreases from YMP 2004 Pulse are Found in Pillar 4

| No. | Question | YMP 2004 % Fav. | Δ YMP Pulse |
|---|---|---|---|
| 27. | Within the last 6 months, I believe the SCWE has improved at YMP. | 56 | -15* |
| 88. | Within the last 6 months, no one I know has experienced retaliation from management for raising concerns at YMP. | 82 | -10* |
| 89. | Within the last 6 months, no one I know has experienced retaliation from a peer for raising concerns at YMP. | 85 | -10* |
| 13. | I believe that YMP Personnel are committed to maintaining a workplace with zero tolerance for retaliation against individuals who raise concerns. | 74 | -7* |
| 86. | Within the last 6 months, I have not experienced retaliation from management for raising concerns at YMP. | 90 | -5* |
| 87. | Within the last 6 months, I have not experienced retaliation from a peer for raising concerns at YMP. | 92 | -3* |

*A statistically significant difference.

# Overall Strengths and Opportunities

## Strengths

- All categories where norms exist are above, or in line with, both the U.S. Government Research & Technology Norm and the U.S. National Norm
- Most categories show a statistical improvement, or are in line with, with YMP 2003 results
- Significant improvement is found for Pillar 2

## Opportunities for Improvement

- The category SCWE Culture has significantly decreased from YMP 2003 historical results (based on the four historical questions from the 2003 Census Survey)
- Pillar 4 results have decreased from historical YMP 2004 Pulse results

# Agenda

- Overview of Survey Design
- Organizational Climate
  - 2004 survey results compared with U.S. Government Research & Technology Norm and U.S. National Norm
  - 2004 survey results compared with YMP historical results (2003 census and 2004 pulse)
  - Results variation by sub-groups (e.g., organization, tenure, job level)
  - Summary of Organizational Climate
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# SCWE Index

- SCWE Index is a targeted set of questions designed to measure core concepts related to SCWE
- The SCWE Index is comprised of 19 questions that measure outcomes associated with a SCWE
- The SCWE Index was developed based on integrating statistical and subject matter expert information to identify the questions that best represent outcomes associated with a SCWE

# 2004 SCWE Index Questions

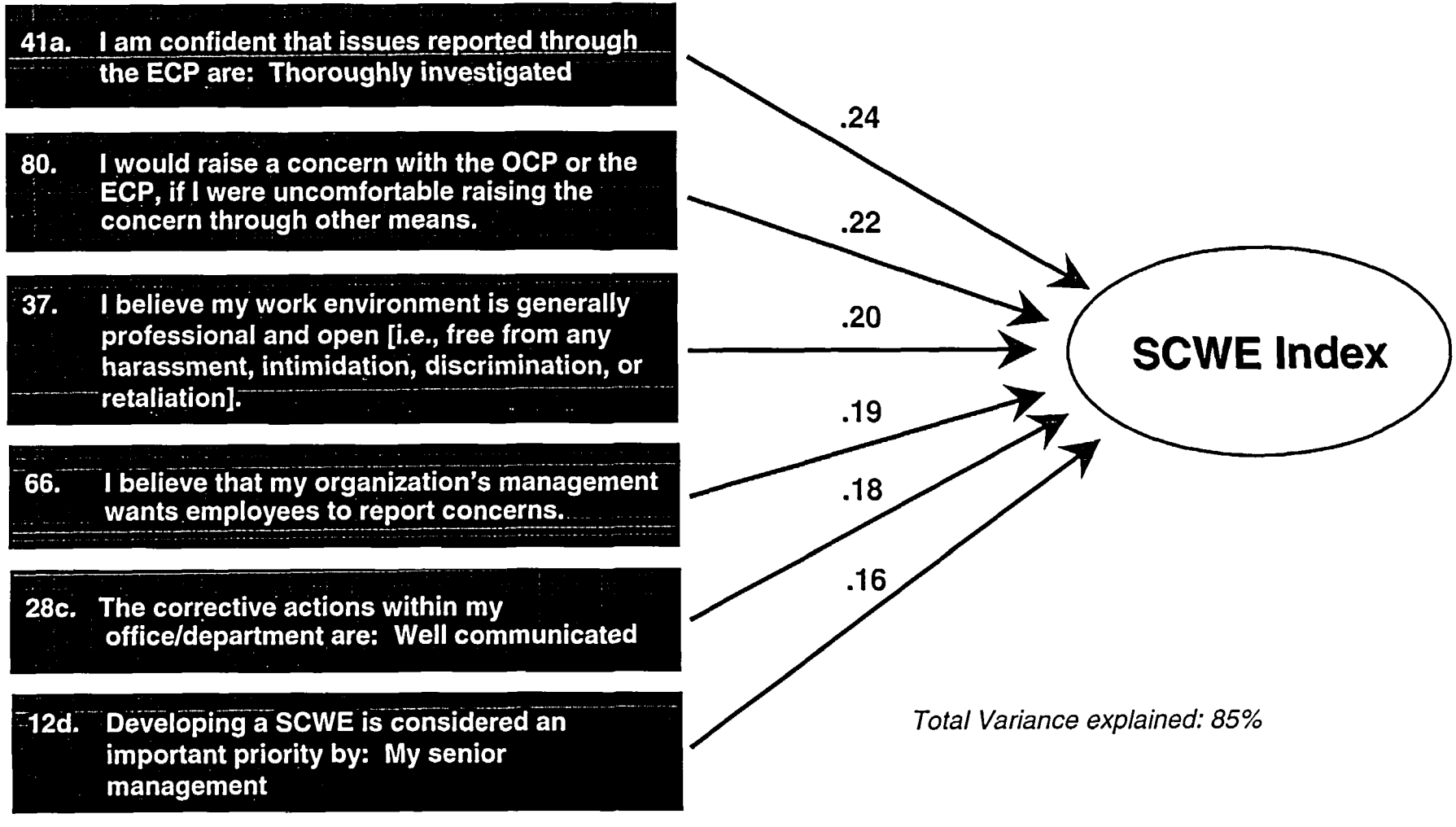
| No. | Question |
|---|---|
| 83. | How good a job do you feel your organization rewards those who demonstrate good SCWE practices? |
| 15c. | I feel free to approach the following levels of management regarding any concern: My supervisor |
| 12b. | Developing a SCWE is considered an important priority by: My supervisor |
| 27. | Within the last 6 months, I believe the SCWE has improved at YMP. |
| 74a. | I feel free to use the following programs without fear of retaliation: OCP |
| 74b. | I feel free to use the following programs without fear of retaliation: ECP |
| 51. | I believe I can raise any concern without fear of retaliation. |
| 28b. | The corrective actions within my office/department are: Effective |
| 14. | My organization's management takes corrective actions on employee concerns brought to their attention. |
| 65. | The CAP is used effectively to resolve conditions adverse to quality in a timely manner. |
| 64. | I am aware of the YMP SCWE Policy. |

# 2004 SCWE Index Questions

(continued)

| No. | Question |
|---|---|
| 26. | As a YMP worker, I am responsible for identifying safety problems and adverse conditions. |
| 70. | I understand my responsibility to report any instances of retaliation against YMP personnel for raising concerns. |
| 25. | I know how to submit a concern, or who to contact, for my organization's Employee Concerns Program (OCP or ECP). |
| 36b. | I am confident that issues reported through the OCP are: Appropriately resolved |
| 41b. | I am confident that issues reported through the ECP are: Appropriately resolved |
| 88. | Within the last 6 months, no one I know has experienced retaliation from management for raising concerns at YMP. |
| 89. | Within the last 6 months, no one I know has experienced retaliation from a peer for raising concerns at YMP. |
| 13. | I believe that YMP personnel are committed to maintaining a workplace with zero tolerance for retaliation against individuals who raise concerns. |

# 2004 Key Drivers of SCWE Index




*Total Variance explained: 85%*

# Summary of 2004 Key Drivers of SCWE Index

| No. | Item | YMP 2004 % Fav. | △ YMP 2003 |
|---|---|---|---|
| 41a. | I am confident that issues reported through the ECP are: Thoroughly investigated | 64 | 4* |
| 80. | I would raise a concern with the OCP or the ECP, if I were uncomfortable raising the concern through other means. | 81 | NA |
| 37. | I believe my work environment is generally professional and open [i.e., free from any harassment, intimidation, discrimination, or retaliation]. | 81 | NA |
| 66. | I believe that my organization's management wants employees to report concerns. | 82 | 0 |
| 28c. | The corrective actions within my office/department are: Well communicated | 63 | 7* |
| 12d. | Developing a SCWE is considered an important priority by: My senior management | 83 | NA |

*A statistically significant difference.

# Review

- Overview of Survey Design
- Organizational Climate
  - 2004 survey results compared with U.S. Government Research & Technology Norm and U.S. National Norm
  - 2004 survey results compared with YMP historical results (2003 census and 2004 pulse)
  - Results variation by sub-groups (e.g., organization, tenure, job level)
  - Summary of Organizational Climate
- Safety Conscious Work Environment (SCWE)
  - 2004 results organized by 4 Pillars and compared with YMP historical results and norms (where available)
- Overall Strengths and Opportunities
- SCWE Index and Key Driver Analysis

U.S. Department of Energy
Office of Civilian Radioactive Waste Management

www.ocrwm.doe.gov

# Safety Conscious Work Environment Update

Presented to:

**DOE/NRC Technical Exchange on Performance Indicators and Safety Conscious Work Environment**


Presented by:

**Mark VanDerPuy**
**SCWE Advisor**
**U.S. Department of Energy**

**Randy Huey**
**SCWE Program Manager**
**Bechtel SAIC Company, LLC**


**May 19, 2005**
**Las Vegas, Nevada**

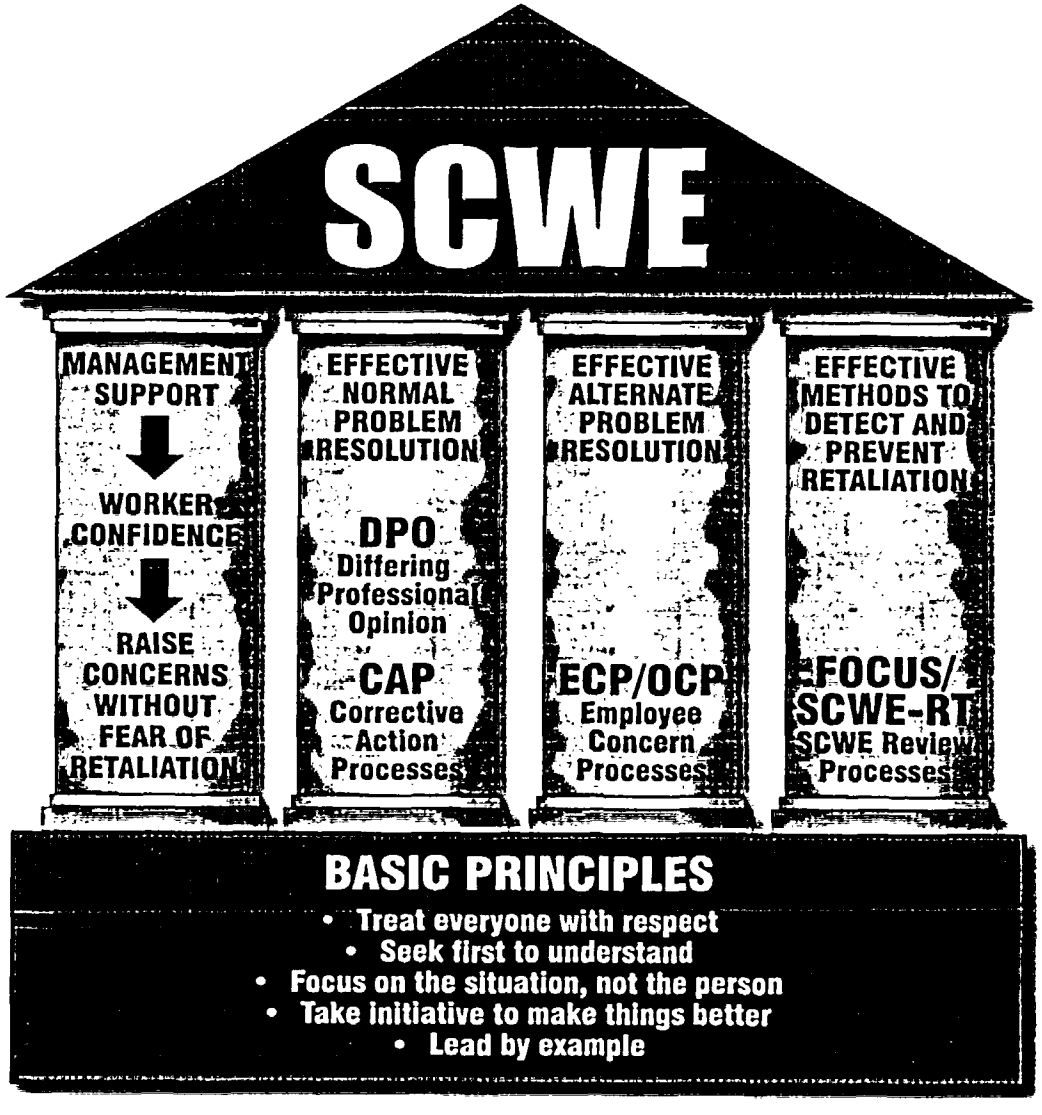
# Presentation Topics

- Approach
- Status
- Focusing Improvement Efforts

# Approach

- Based on "Four Pillars" of a Safety Conscious Work Environment (SCWE)
  - Simple way to organize and communicate efforts
  - Consistent with draft NRC Guidelines
- Initial activities focused on awareness and infrastructure
  - SCWE policy statement
  - SCWE communications strategy
  - SCWE training
  - Sustained attention on Corrective Action Program
  - Differing professional opinion process
  - Expanded Employee Concerns Program
  - SCWE Review Team(s)
  - Performance Indicators
- Opportunities for improvement enabled by monitoring and feedback loops, analyzing emerging issues, applying lessons learned, and program assessments

# Four Pillars of a Safety Conscious Work Environment



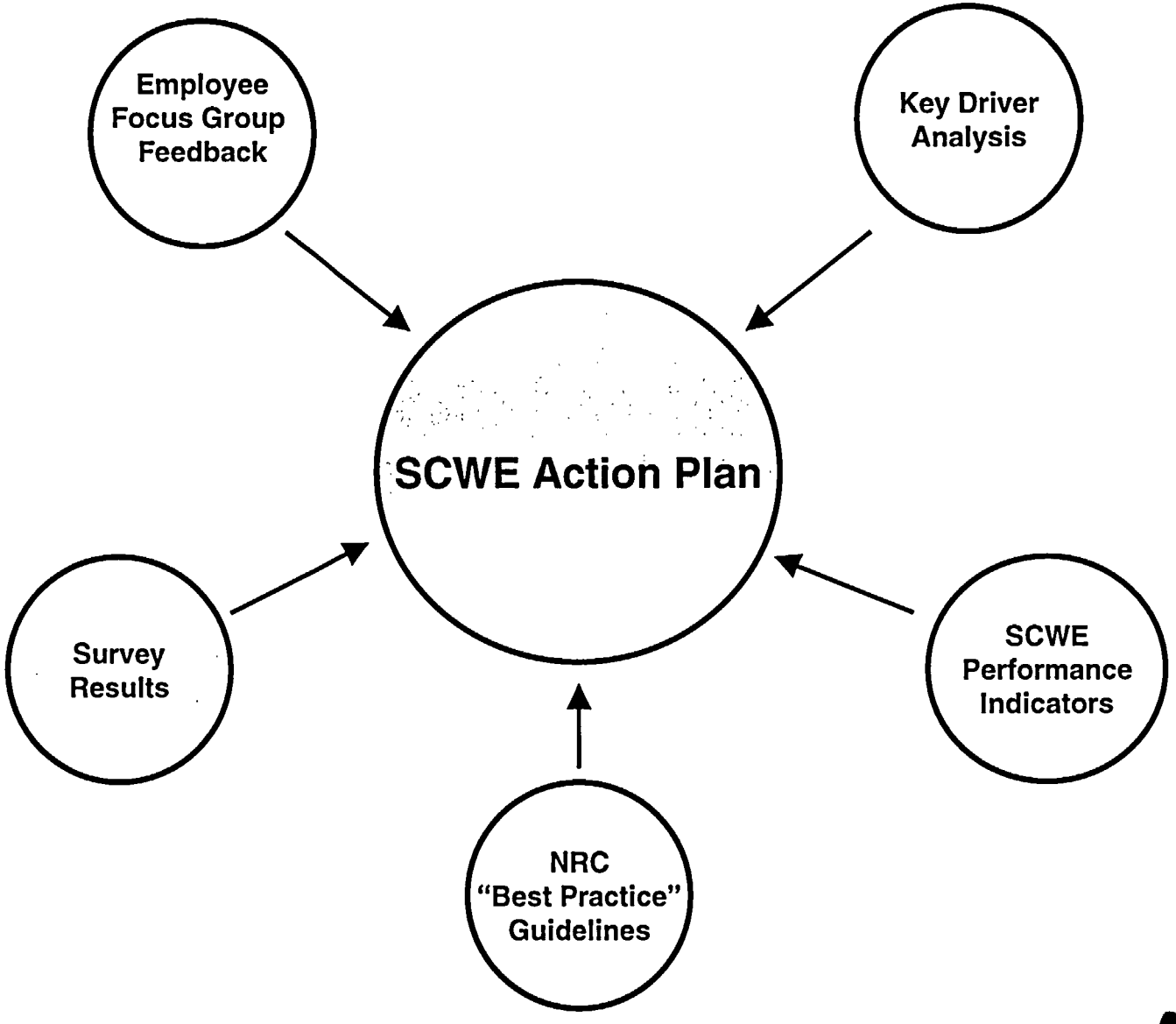
# Status

- 2004 Survey Results indicate:
  - YMP is at or above U.S. National and U.S. Government Research and Technology Norms where comparison can be drawn (does not include specific comparisons for nuclear industry)
  - Greatest SCWE gains in perception of Corrective Action Program effectiveness – where management attention was focused and successes well communicated
  - Relatively good employee perceptions related to retaliation, but declines warrant attention
- Survey Results also identified individual organizations requiring assistance
- Improvements in all four pillars needed to meet management expectations and employee needs

# Focusing Improvement Efforts

- Survey results reveal employee perceptions, not why employees had those perceptions or what caused those perceptions
- Survey responses may have been influenced by uncertainties at the time survey was conducted
- Employee focus groups used to help understand responses
- Convergent validation used to identify actions needed to yield the greatest improvements

# Convergent Validation Inputs



# Focus of Improvement Efforts

1. Improve SCWE behaviors through Human Performance training, observation and coaching
2. Improve the ease-of-use and employee confidence in the Corrective Action Program
3. Improve employee willingness to use the Concerns Programs, with confidence that concerns will be thoroughly investigated
4. Improve confidence in commitment to quality
5. Develop and implement organization-specific action plans as warranted
6. Improve the survey instrument
7. Complete alignment with NRC best practices

# Next Steps

- Finalize action plans
- Joint Leadership Council Endorsement
- Enter plans into Corrective Action Program
- Communicate conclusions of analysis and action plans to workforce
- Monitor results and adjust efforts as necessary