

National Aeronautics and
Space Administration
George C. Marshall Space Flight Center
Marshall Space Flight Center, AL 35812



JAN 24 2002

Reply to Attn of:

QS30 (02-09)

TO: Distribution
FROM: QS30/Dennis S. Davis
SUBJECT: Minutes of the MSFC Safety, Health, and Environmental Central
Committee Meeting

The Safety, Health, and Environmental (SHE) Central Committee met at 8:30 a.m., on Monday, January 14, 2001, in Building 4200, Conference Room P110. The attendance list is on file in the Industrial Safety Department. The agenda for the meeting is attached as Enclosure 1.

OPENING REMARKS (ART STEPHENSON/DAO1)

Art opened the meeting with a word of encouragement to begin the new year with a new awareness of health, mind, body, and spirit. He also noted that this SHE meeting would be a little different than normal. Mr. Paul Esposito of STAR Consultants, Inc., will present an overview of their assessment of MSFC's readiness toward achieving Voluntary Protection Program (VPP) certification. Art added that according to preliminary data, we have a lot of work to do.

SPECIAL REPORTS

Fall on Stairs Lost Time Mishap (Ann McNair/FD40)

Ann reported on a lost time incident that occurred in Building 4610. An employee fell while carrying a box down the stairs, fracturing his ankle. He was taken to the Medical Center and later transported to a local hospital. The employee is expected to miss work for several weeks due to the injury. The incident was investigated, but no facility hazards were found that contributed to the fall. A group meeting was conducted and the importance of following proper procedures was discussed. It was stressed at the meeting to use the elevator when carrying large packages.

INDUSTRIAL SAFETY REPORTS (Dave Spacek/OS30)

Dave reviewed the safety metrics charts. Safety meeting's percentage showed a significant improvement while the number of safety concerns submitted was down. He noted that a team was being formed to review the overall process of the Safety Concerns Reporting System (SCRS) to recommend improvements as needed. Art commented that he is pleased to see that the percentage rate of reporting safety meetings and visits is showing improvements. The charts presented are attached as Enclosure 2.

OPEN ACTIONS (Dave Spacek/OS30)

Dave discussed the status of open actions. The chart presented is attached as Enclosure 3.

VPP Readiness Review (Paul Esposito/STAR Consultants, Inc.)

Paul presented the results of their recently completed review. The assessments included employee interviews, program documentation reviews, and MSFC facilities inspections. Mr. Esposito noted that STAR Consultants evaluate and identify program weaknesses/strengths in accordance to VPP criteria. Although MSFC has an excellent safety program, several areas of improvement are needed to meet their criteria. Details are presented in the charts attached as Enclosure 4, and can be viewed by going to *Inside Marshall, SHE Web Page*.

The next meeting of the Safety, Health, and Environmental Central Committee is scheduled for February 4, 2002, at 8:30 a.m., in Building 4200, Conference Room P110.



Dennis S. Davis
Industrial Safety Department

4 Enclosures

Distribution:
SHE Web Page

ENCLOSURE 1

**SAFETY, HEALTH, AND ENVIRONMENTAL CENTRAL COMMITTEE
MONDAY, JANUARY 14, 2002
BUILDING 4200, CONFERENCE ROOM P110, 8:30 A. M.**

MEETING AGENDA

- 1) **OPENING REMARKS (A. STEPHENSON/DA01)**
- 2) **SIGNIFICANT MISHAPS**
Fall on Stairs Lost Time (Ann McNair/FD40)
- 3) **INDUSTRIAL SAFETY REPORT (DAVE SPACEK/QS30)**
- 4) *** SPECIAL REPORT ***
VPP Readiness Review (Paul Esposito/Star Consultants)
- 5) **CALENDAR OF ACTIVITIES: NEXT MEETINGS**

**AREA COMMITTEE
January 30, 2002**

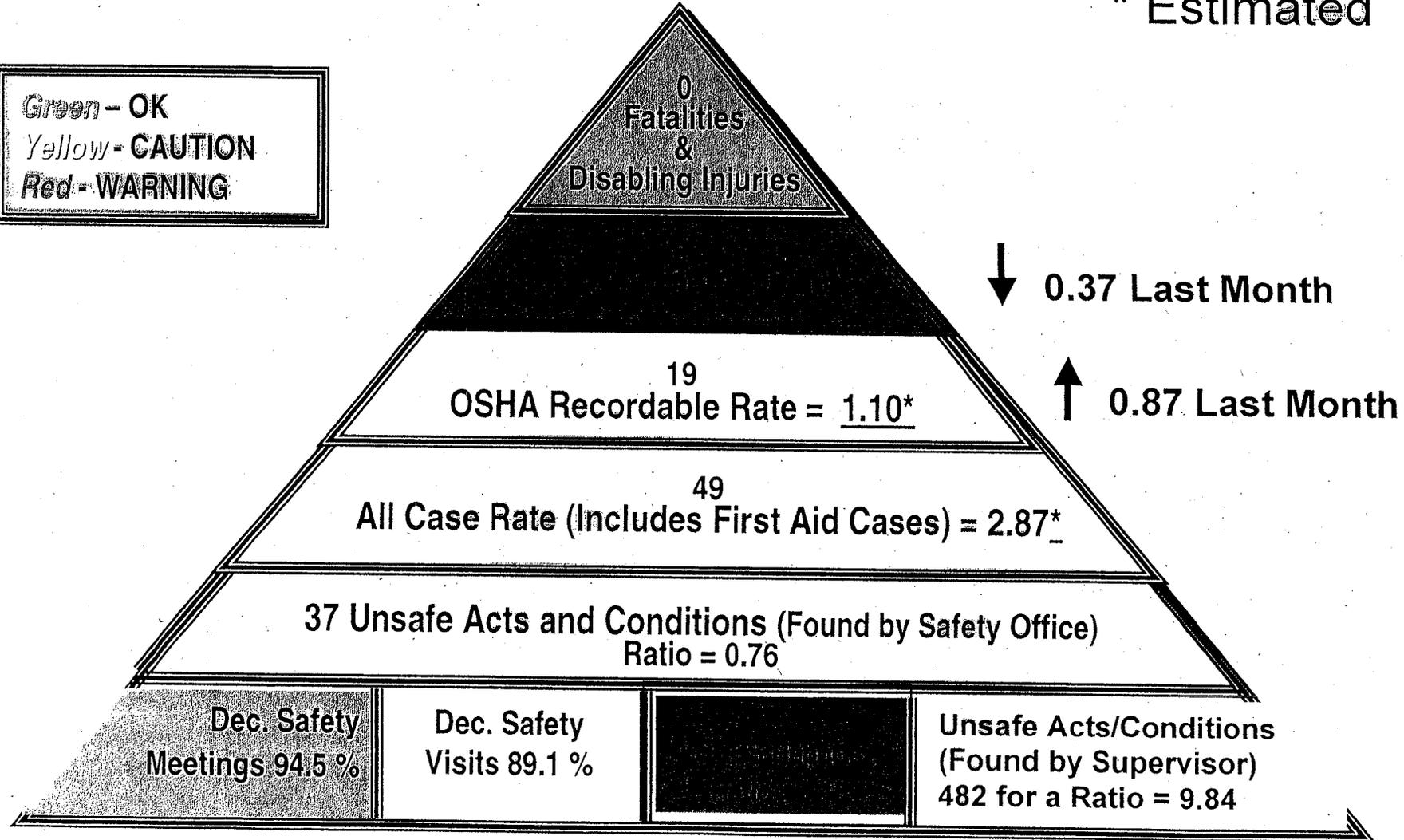
**CENTRAL COMMITTEE
February 4, 2002**

MSFC Team Metric - Personnel Safety

Data for FY02 (Oct 1, 2001 to Jan 11, 2002)

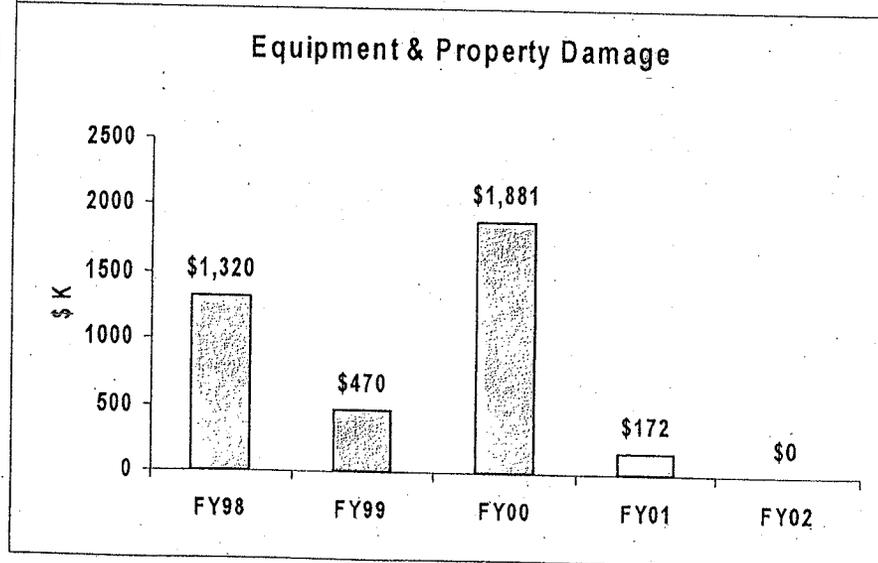
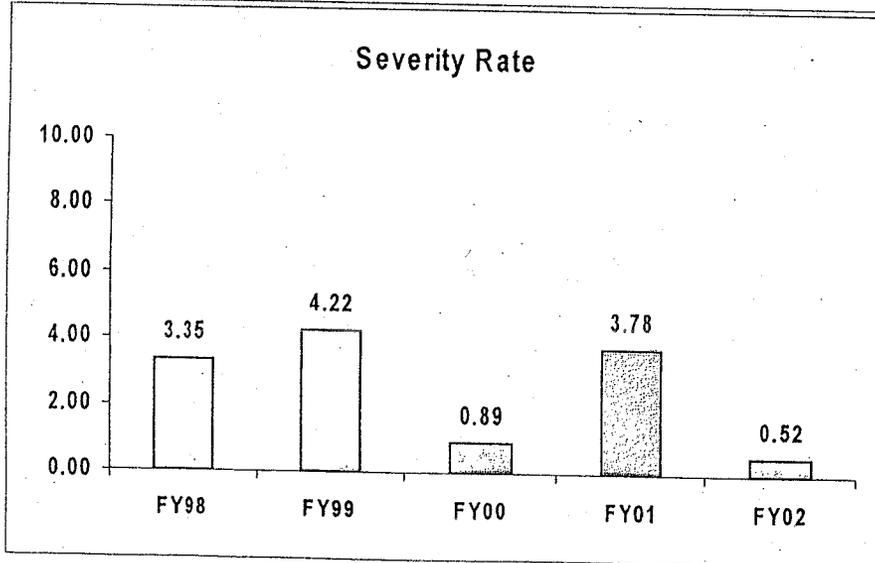
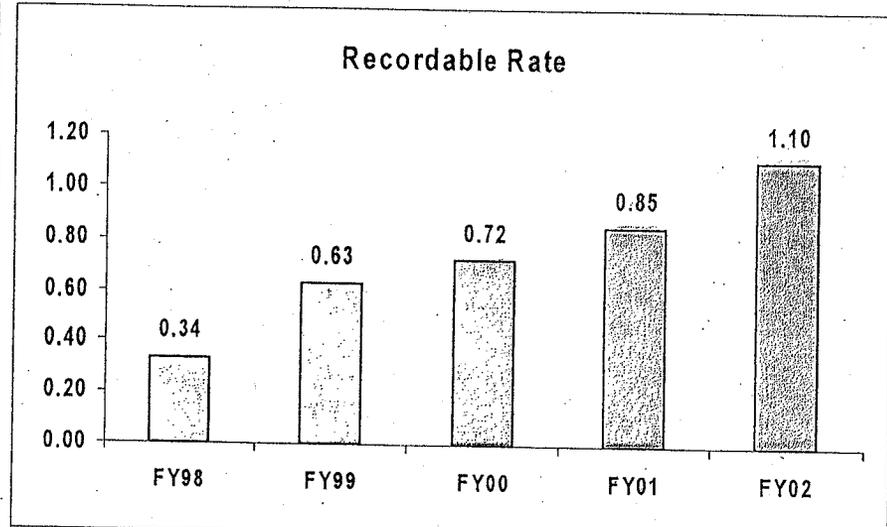
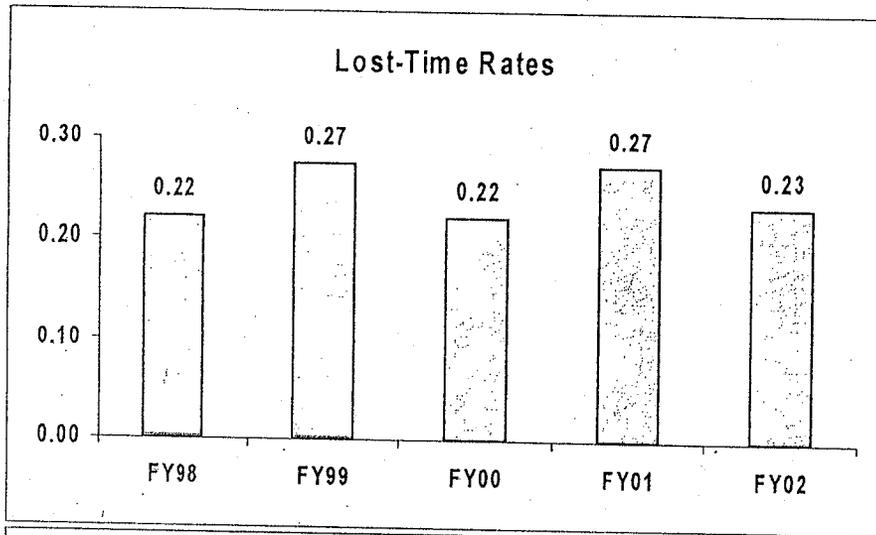
* Estimated

Green - OK
Yellow - CAUTION
Red - WARNING



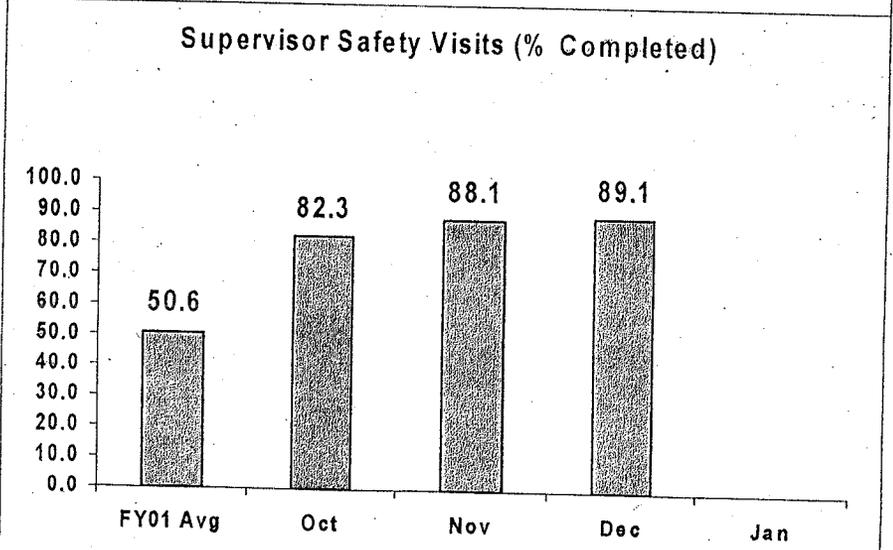
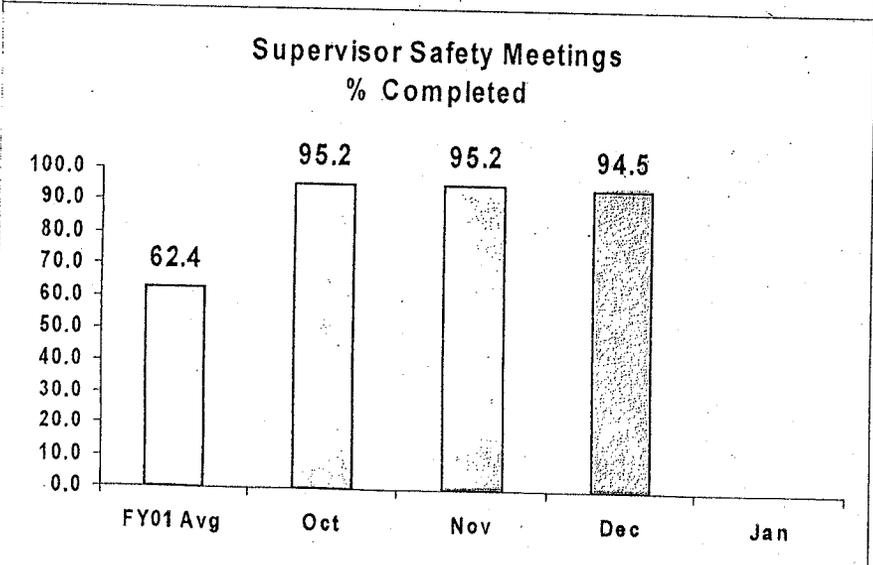
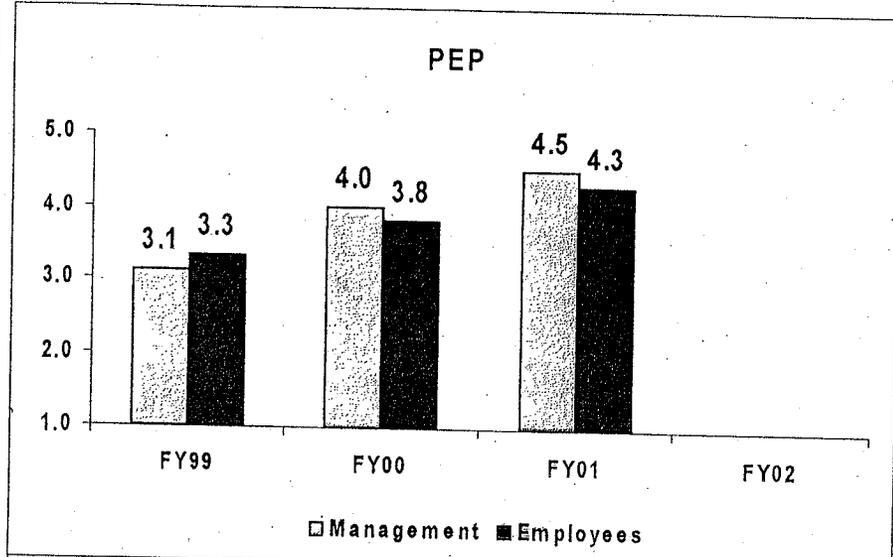
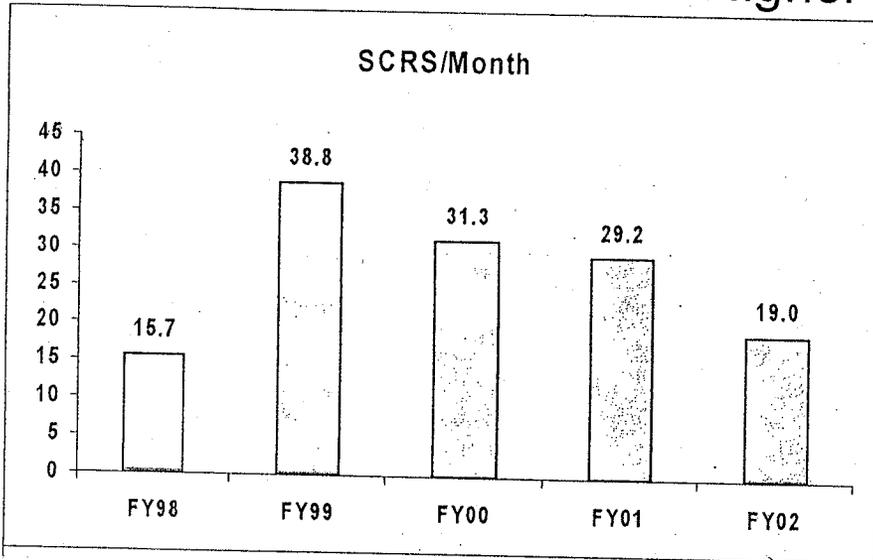
Team Metrics - Trailing Indicators (1-11-02)

Lower is Better!



Team Metrics - Leading Indicators (1-11-02)

Higher is Better!



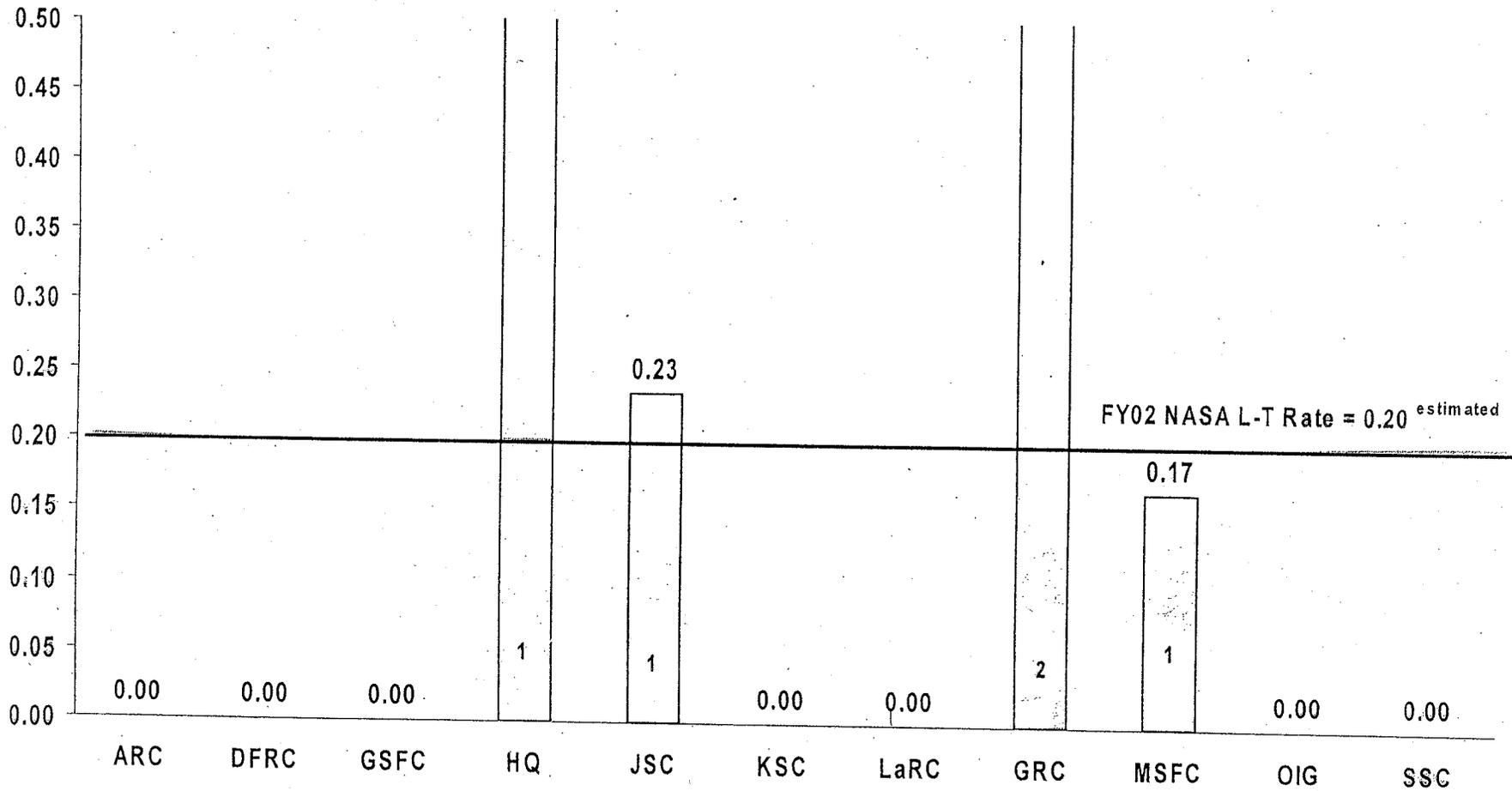
FY2002 NASA Reportable Lost-Time Mishaps

(1-11-02)

NOTE: Data is not current
for all NASA Centers

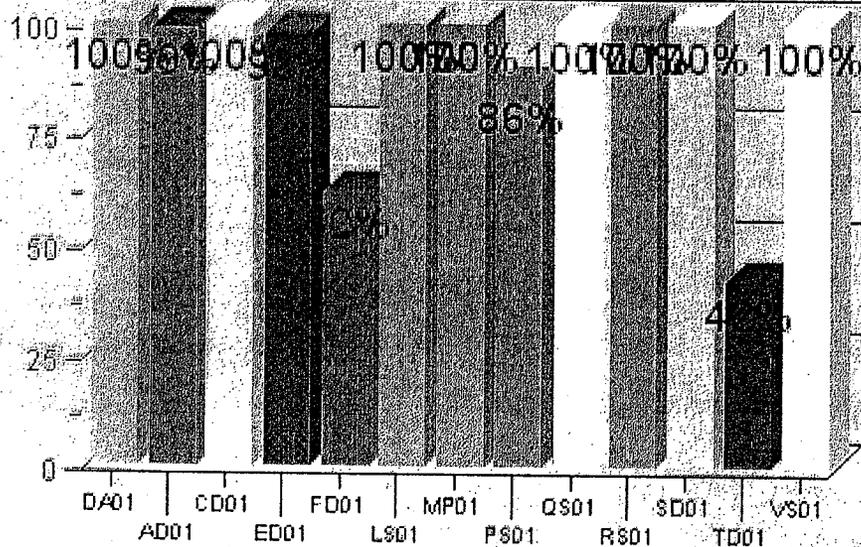
0.67

0.65



Required Safety Visits Completed December 2001

Percentage of Required Safety Visits for DA01 in December 2001

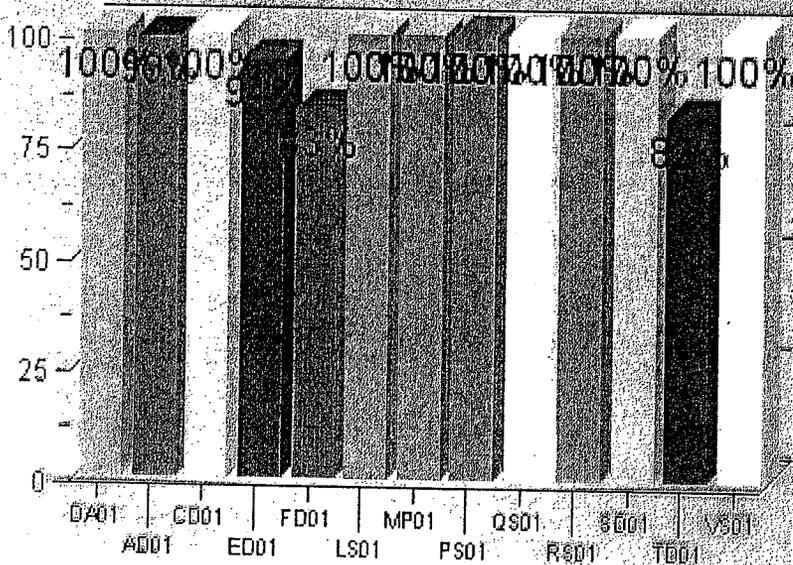


Click on a highlighted bar or an orgcode to drill down

Org	Percent	Req'd Visits	Req'd Visits Held
DA01	100.0%	1	1
AD01	98.8%	80	79
CD01	100.0%	14	14
ED01	97.6%	83	81
FD01	62.1%	29	18
LS01	100.0%	1	1
MP01	100.0%	7	7
PS01	85.7%	7	6
QS01	100.0%	17	17
RS01	100.0%	7	7
SD01	100.0%	30	30
TD01	42.4%	33	14
VS01	100.0%	2	2
Total	89.1%	311	277

Required Safety Meetings Completed December 2001

Required Meetings Completed for DA01 in December 2001



Click on a highlighted bar or an orgcode to drill down

Org	Percent	Req'd Meetings	Req'd Meetings Held
DA01	100.0%	1	1
AD01	98.8%	80	79
CD01	100.0%	14	14
ED01	94.0%	83	78
FD01	82.8%	29	24
LS01	100.0%	1	1
MP01	100.0%	7	7
PS01	100.0%	7	7
QS01	100.0%	17	17
RS01	100.0%	7	7
SD01	100.0%	30	30
TD01	81.8%	33	27
VS01	100.0%	2	2
Total	94.5%	311	294

December Safety Meetings and Visits (1-011-02)

HONOR ROLL (100% both Meetings & Visits)

- DA01
- CD01
- LS01
- MP01
- QS01
- RS01
- SD01
- VS01

HONORABLE MENTION (>90% both Meetings & Visits)

- AD01
- ED01
- SD01

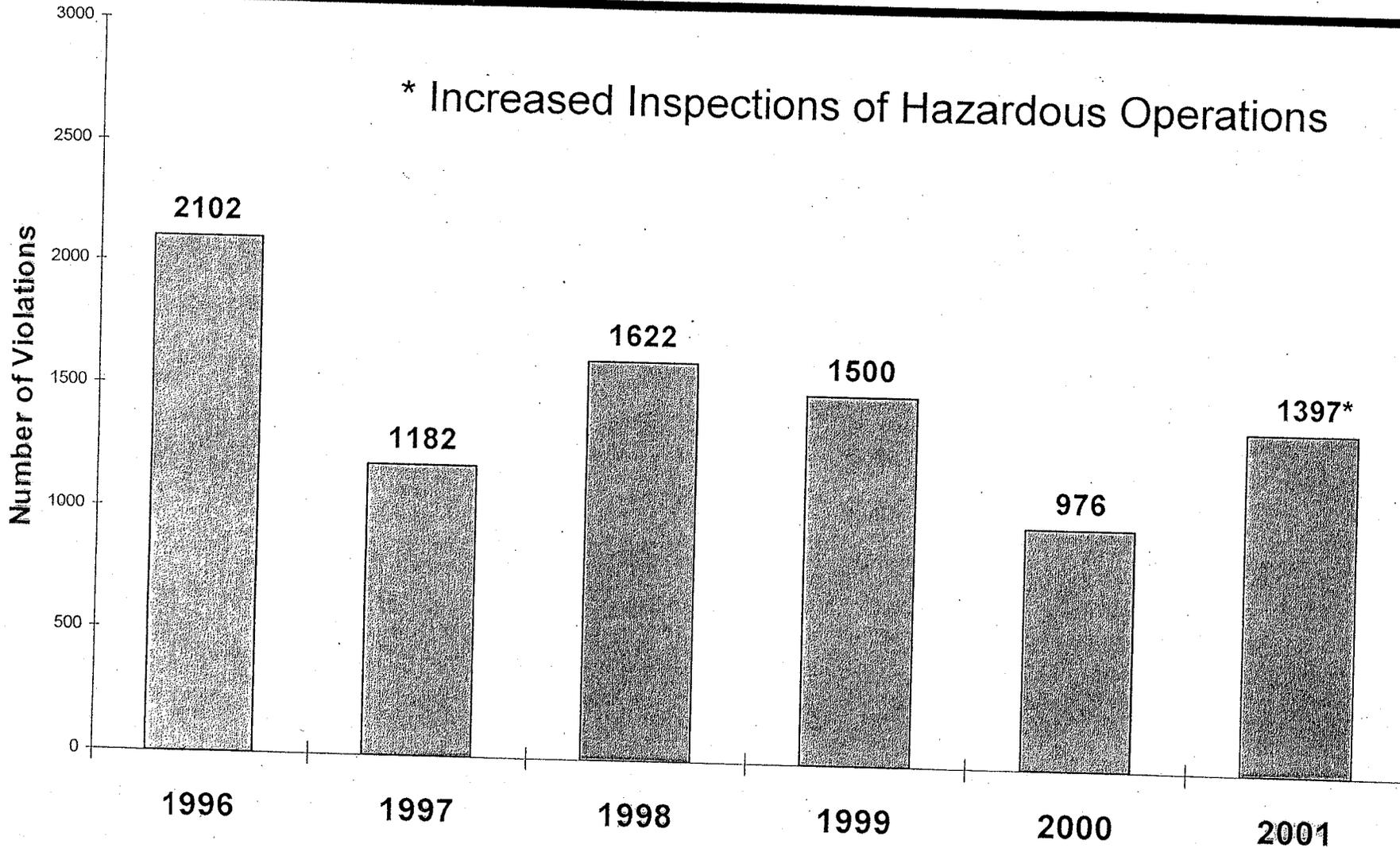
MSFC Team Metric Key

Metric	Green	Yellow
Type A & B	0 Cases	N/A
Type C (Lost-Time)	0 to .10	.101 to .20
OSHA Recordables	< 1.0	1.01 to 1.50
All (Recordables + First Aids)	< 2.0	2.01 to 3.00
Safety Office Finding (HAZTRAK + Safety Audits)	>4	3-4
Safety Meetings	> 90%	80 to 90%
Safety Visits	> 90%	80 to 90%
SCRS	>3.0	1.5-3.0
Supervisor Findings	>10	5-10

Safety Inspection Trends

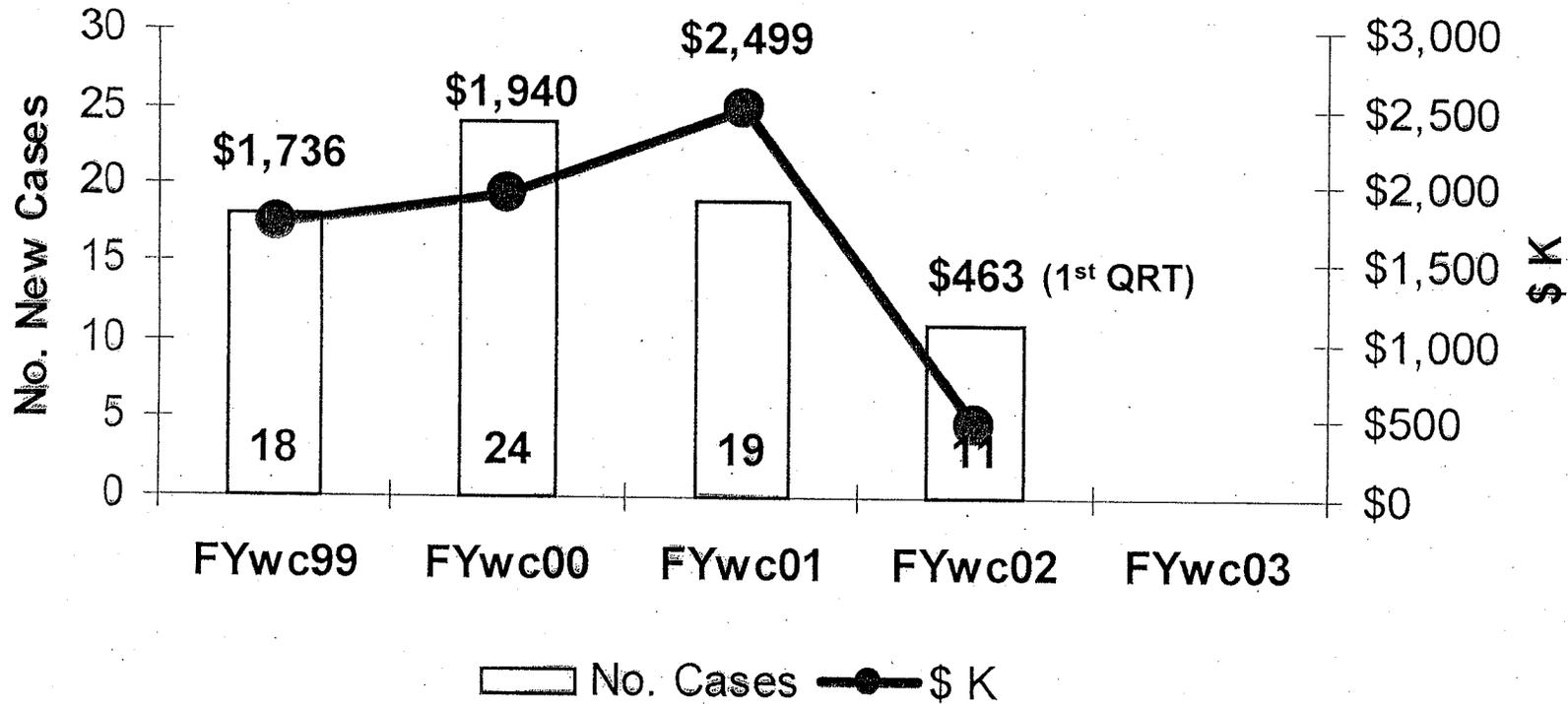
(1-08-02)

* Increased Inspections of Hazardous Operations



Workers Compensation Trends (1-11-02)

MSFC Workers' Comp



Workers Comp Data is for MSFC Civil Service only.
 (Contractors keep their own data.)

FY02 Lost-Time Mishaps (1-11-02)

- 10/3/01 Employee was riding a John Deer Gator and injured back. Lost 2 days
- 11/04/01 Employee bent over to pick up a 3-foot piece of cable and felt pain in back. Lost 5 days, 10 restricted days
- 11/20/01 Employee caught shoe in crack between floor tiles, slipped and fell, landing on right leg. Lost 1 day

New Lost-time Cases Since the Last SHE Meeting

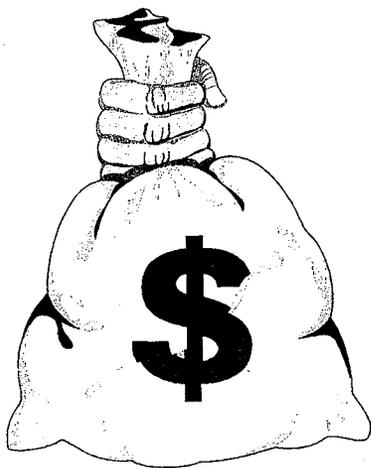
- 12/6/01 Employee lost footing and fell down last two steps, injuring right ankle – Lost time continues.

■ Slips/Trips/Falls (2) ■ Back Injury (2) ■ Other (0)

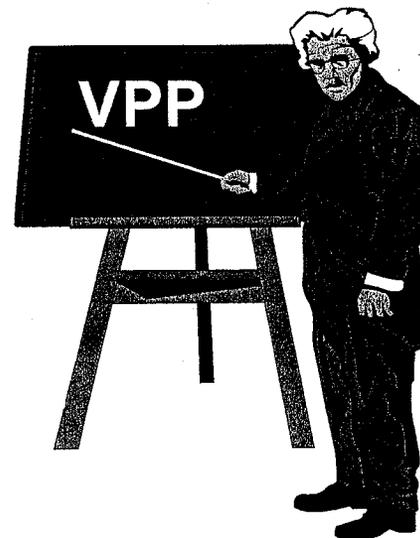
SH&E "CENTRAL" COMMITTEE
OPEN ACTIONS & ACTIONS CLOSED SINCE LAST MEETING
 January 7, 2002
 14

ACTION NO.	ISSUE/CONCERN	POINT OF CONTACT	ACTIONEE	FINAL PRODUCT	DATE OPEN	ECD	STATUS
C-0089	A close call incident involving the release of mercury cadmium telluride at Building 4481 was review.	A. Goodson/ QS01	F. Szofran/ SD47	Provide a final safety review to a senior manager board, to include S&MA Director, prior to restarting this operation.	11/06/00	Prior to restart	Design is complete and construction is in work with ECD of 2/1/02. Board review will be scheduled as soon after that as possible.
C-0115	Dave Spacek presented results of a seatbelt and handrail usage survey. Seatbelt usage in service vehicles and handrail usage in certain areas was very low.	Art Stephenson/ DA01	Dave Spacek/ QS30	Conduct another seatbelt and handrail survey in several months to check if organizations have made improvement.	12/03/01	06/30/02	

VOLUNTARY PROTECTION PROGRAMS: An Industry Success Story



DOLLARS



SENSE

Presented by:

STAR Consultants, Inc.
580 Bellerive Dr. Suite 5-B
Annapolis, MD 21401
(410) 349-9713 (410) 757-0524 FAX

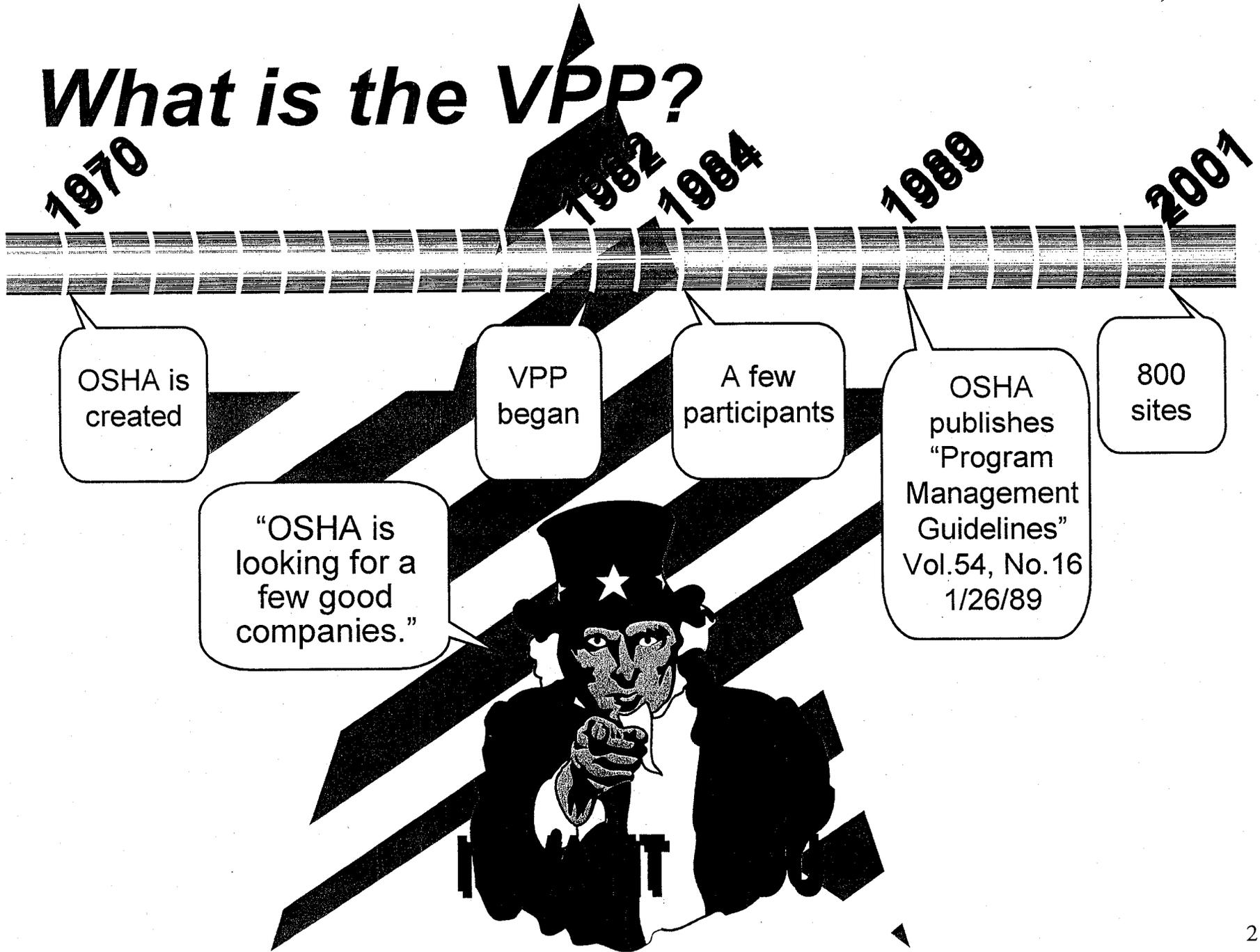
www.starconsultants.net

Presented at:

NASA/Marshall

Dec 2001

What is the VPP?



OSHA's Program Management Guidelines - VPP Criteria

MANAGEMENT

Leadership

- Protection
 - S & H Policy
 - Goals
 - Objectives
- Commitment to VPP
- Planning
- Written Programs
- Visible Management Leadership
 - Responsibility
 - Resources
 - Accountability
- Contract Worker
- *Annual Program Evaluation*

Employee Involvement

- (Committees)
- Involvement
- Encouragement

WORKSITE ANALYSIS

- Pre-Use Analysis
- Baseline Surveys
 - Comprehensive
 - Industrial Hygiene
- Hazard Analysis
- Inspections
- Employee Concerns
- Incident Investigation
- Trend Analysis

HAZARD PREVENTION & CONTROL

- Control Systems
 - S&H Rules and Discipline
 - Written Procedures
 - Hierarchy
 - Engineering
 - Admin
 - Work Practice
 - PPE
- Correction Tracking
- Maintenance
- Occupational Health Care
- Emergency Preparation

TRAINING

- Employee
- Supervisor
- Manager
- Committees
- Training Process

26 Elements - 7/24/2000

VPP Baseline Assessment

In order to help a site focus their VPP efforts, a third party review is often performed to help qualify program strengths and weaknesses. We look at:

- ★ Site Survey
- ★ Company Documents (Pre-Audit Questionnaire)
and perform
- ★ Program and Personnel Interviews (Sample Schedule)

The goal is to be able to verify that efforts are consistent and fully integrated and communicated among all personnel levels.

Response Language

Before we begin an assessment, we categorize and weight the Responses that will be used to answer each evaluation criteria...

Description	Available Points	Goal	Description
Does Not Meet	0		Not effective or evident
Under Development	1		Not consistently in place. Elements exist, but not developed.
Partially Meets	2		Occasionally in place or parts in place. Not clearly defined.
Meets	3	X	No findings
Not Applicable	null		

Response Scoring/Weights

	Response	Points received	Points available
Evaluation Criteria			
1.1.1	Meets	3	3
1.1.2	DNM	0	3
1.1.3	PM	2	3
1.1.4	N/A	-	-
1.1.5	UD	1	3
	Raw Score	6	12
	Score	50%	

*Points Achieved/Points Available

Employee Interviews

Employee Interview Table

Employee #	1	2	3	Ma	Mir	Avg -	al	Std Dev -	% 4 & 5
B. Orientation and Training									67.00%
1. Did you receive safety and health training when you began to work here? (If so, please describe). How soon after you begin to work did you receive training? How long did it last?	2	4	5	5	2	3.67		1.25	
2. If you did not get training when you were first hired (or transferred to a new job), have you received any basic safety and health training since that time? If so, please describe.	3	4	5	5	3	4.00		0.82	
Maximum	3	4	5						
Minimum	2	4	5						
Average	###	###	###						
Standard Deviation	0.5	0	0						

1- Weakness Strength- 5

One Year VPP Requirements

These elements must be in place at least one year prior to submitting a VPP application

★ Management Commitment

- ★ Goals & Objectives
- ★ Performance Appraisals
- ★ Annual Evaluation & Narrative Report

★ Employee Involvement

- ☞ S&H Steering Committee

★ Worksite Analysis

- ★ Written IH Program
- ★ Inspections
- ★ JSA Process
- ★ Accident Investigations

★ Tracking Systems

The Science of Safety – Not just Common Sense
Incorporate Safety into Existing Management Processes
Facilitate Employee Involvement – Plan for Continuous Improvement

Programs of Excellence!!!

- ☆ Progress towards Automated Systems (S&MA)
- ☆ Consistent Application of Procedures among NASA Contractors
- ☆ Workforce Committed to the Mission
- ☆ Emergency Procedures and Drills
- ☆ Medical Response and Employee Care Relations
- ☆ PPE Availability
- ☆ Employee Knowledge of Safety Goals
- ☆ Contractor Safety Forum
- ☆ MSAT Awareness Activities (Safety Bowl)
- ☆ Monthly Meetings

What We Heard

“All they talk about is safety”

“JHAs have been an exercise in paperwork”

“Safety concerns get thought about”

“Everyone keeps an eye out”

“No one tries to get hurt”

Employee Interviews

Management strengths may be considered by the % of 4's and 5's for each category (46 Formal).

★ Orientation and Training	83
★ Management Involvement	83
★ Top Management Involvement	83
★ Hazard Correction	81
★ Reports of Problems	65
★ Health Program	87
★ PPE	99
★ Safety Committee	87
★ General	84

1	weakness	-----	-----	-----	strength	5
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Management Commitment

S&H Plan (Policy, Goals and Objectives)

Commitment to VPP

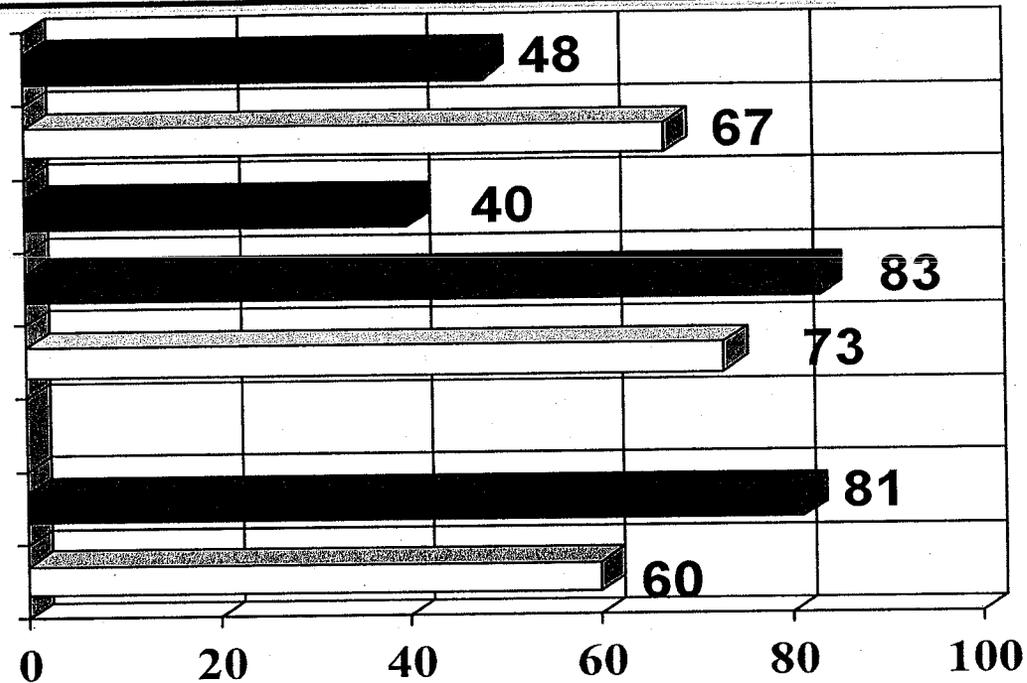
Planning

Written Programs

Mgmt. Leadership (Communication, Behavior, Leadership, Responsibility, Authority, Resources, Accountability)

Contract Select. & Over.

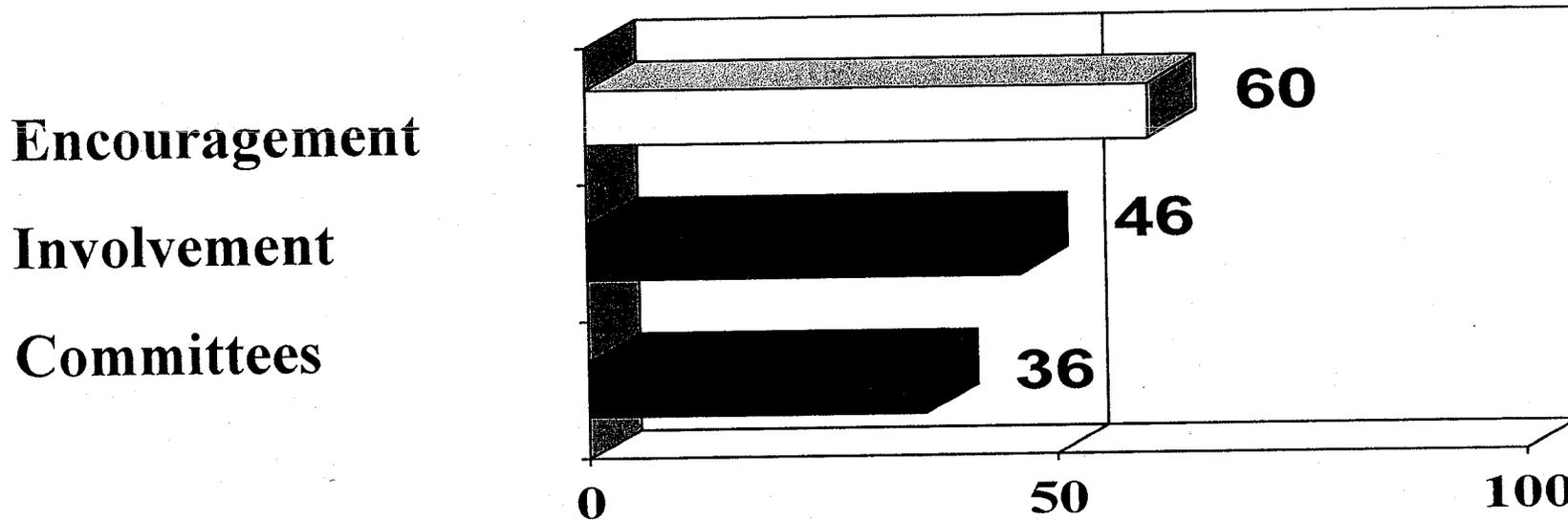
Program Evaluation



Major Opportunities – Safety through collaboration!

- ☆ Plan:
 - ⊛ Goals and Objectives = Define Objectives (Action Plans) to reach goals. Tied to each VPP element. Assign measurable objectives for each: site, Directive, Contractor and committee. Based on Trend Analysis and this evaluation. Publish, and measure monthly. Coordinate with Implementation Plan
- ☆ Commitment to VPP: Communicate when ready to move forward
- ☆ Planning: Safety up front, before operations begin.
- ☆ Written Programs: Change Analysis and Hazard Assessment for Industrial Hygiene.
- ☆ Mgmt Leadership
 - ⊛ Communication: closure rates and objectives (more so than goals)
 - ⊛ Accountability: = Provide more prospective metric driven salaried objectives and appraisals. Use the performance evaluation system to track and measure individual performance. EHS Scorecard.
- ☆ Contractor Selection and Oversight: Collect all hours and injuries (over 1000 hours/Qtr). Review of hazards.
- ☆ Program Evaluation: PEP needs to develop measurable action plans. Evaluate accomplishments annually. Scrutinize Employee Involvement scores.

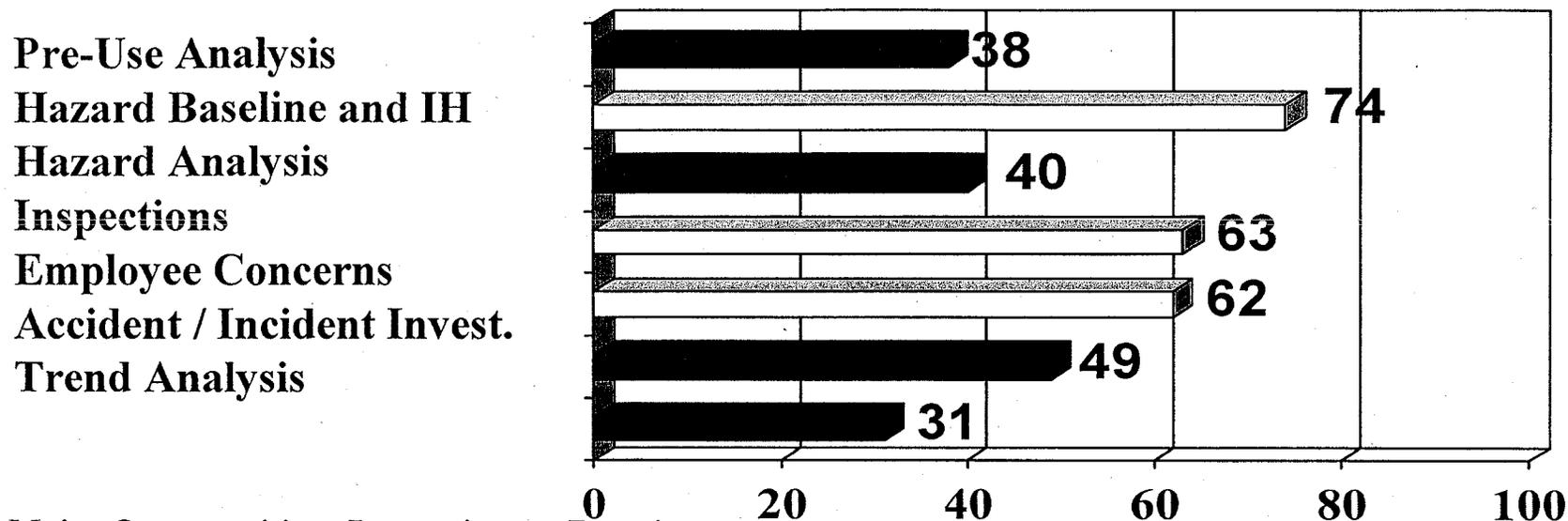
Employee Involvement Elements



Major Opportunities: Create Ownership!!!!

- ☆ Encouragement: Be creative. Develop a culture of requiring worker input.
- ☆ Involvement: At least three of these elements (e.g., job safety analysis, tracking and verification of corrective actions, training, inspections, awareness)
- ☆ Safety Committee: Re-define SHE Committee. Shrink to under 20, at least 50% workers. Develop objectives. Have a plan. Each member as a Champion. Analyze safety trends, implement global solutions. Hierarchical subcommittee report relationships. Use MSAT as a guide for involvement mix.

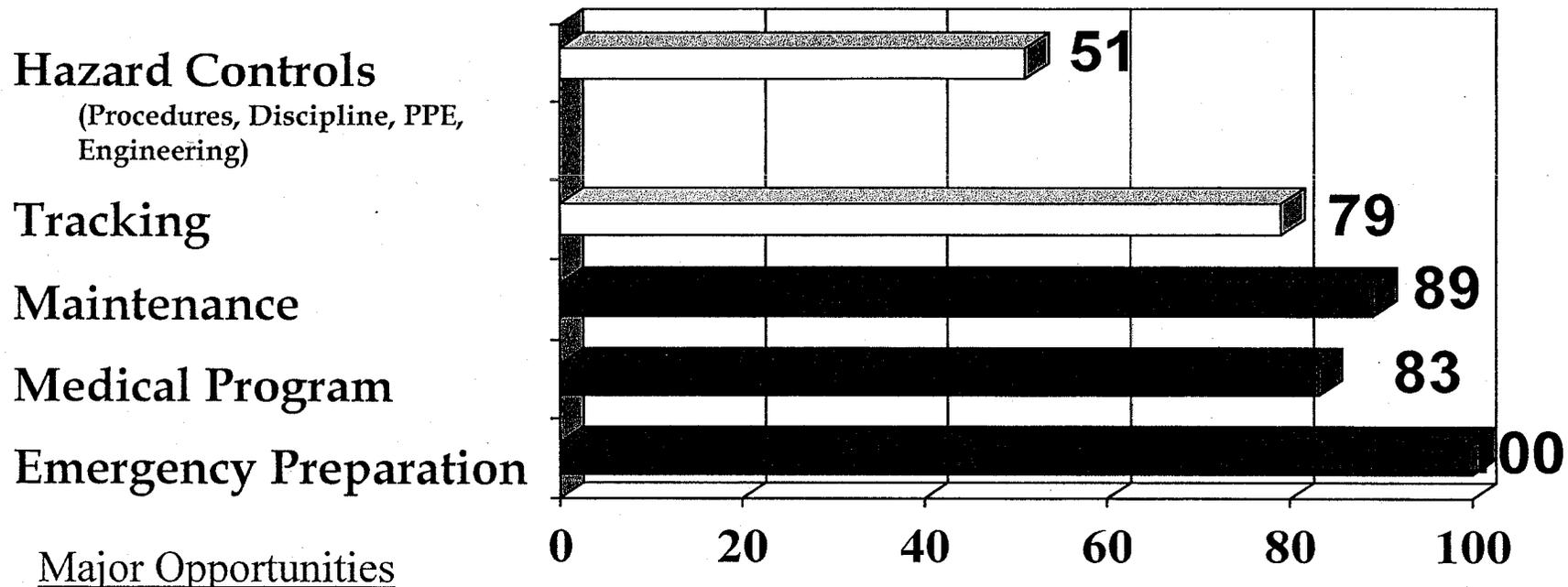
Worksite Analysis Elements



Major Opportunities: Prevention vs. Reaction.

- ☆ Pre-Use Analysis: Emphasize hazard analysis. Implement, formally document. Review boards for high hazards? Insist on prevention up front.
- ☆ Hazard ID:
 - ⊛ Baseline: LOTO audits of documentation and procedures.
 - ⊛ Industrial Hygiene: Qualitative Analysis: ID and inventory hazardous exposures. CHO/LSO duties/training.
- ☆ Hazard Analysis
 - ⊛ JHAs: Develop. Use active language. Implement. Incorporate JHA results into formal task-specific training. Do observations to procedures. Eventually count, trend and reward procedure implementation.
 - ⊛ Hazard Analysis: EH RFI. Implement IHOPS.
- ☆ Inspections: Use and improve Checklists.
- ☆ Employee Concerns: Need to record and track suggestions.
- ☆ Accident Investigation: Insist on root cause determination (do not stop at careless/retrain). Use a safety scientific causal factor analysis. Look at system failures first, before blaming employees.
- ☆ Trend Analysis: Continue to for trending, inspection findings, hazard reports, maintenance and work orders, incident investigation causal factors, etc. Record and take actions.

Hazard Prevention Elements



☆ Hazard Controls

⊛ Procedures: Not formally defined. Use clear, active language. Add industrial hygiene hazards and controls and JHA identified controls.

⊛ PPE for non-routine (add to Job JHA.)

☆ Maintenance: Analyze Safety Work order statistics.

☆ Medical: Verify medical surveillance by job description. Work with HR groups to ensure participation. Add chemical exposure certification. Document feedback to organizations.

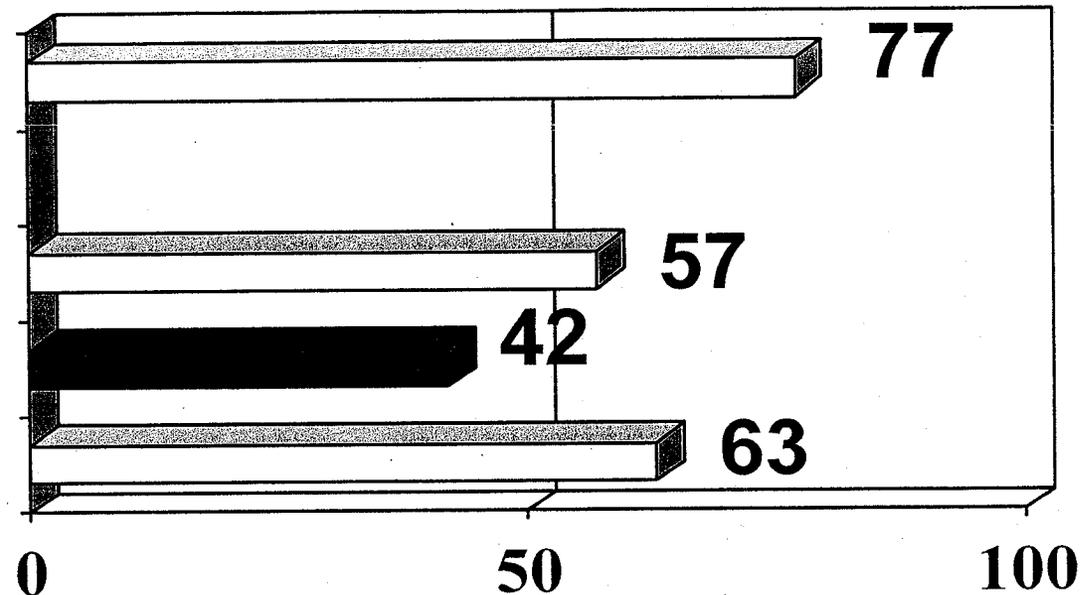
Training Elements

**Worker/Contractor/
Committees**

Supervisors

Managers

Training Process



Major Opportunities

- ☆ Workers/Contractors: Train employees to task-specific hazards (JHA) and controls. Verify contractor training.
 - ⊛ Committees: Technical responsibility and understanding VPP requirements training. More focus on data analysis.
- ☆ Supervisor: Training in regard to roles and responsibilities. (Incident investigation, JHA process, overall responsibilities). Curriculum.
- ☆ Managers: Learn VPP elements and leading safety metrics.
- ☆ Training Process: Update changes based on feedback. Document this.

Pockets of Excellence

- ☆ TD70/LBB Relationship: **TPS/LOTO**
- ☆ SD: **Accident Investigation Team**
- ☆ TD70: **Orientation for Pass Access**
- ☆ ED26/34/Thiokol. **JHA specificity. Pre-use analysis.**
- ☆ **Employee Involvement:** Thiokol
- ☆ **Behavior Observations:** Boeing STOP, Thiokol JSO
- ☆ **Individual Worker Safety Presentations:** Thiokol
- ☆ **CSC: Mishap and Close Call Investigations**

Major Gaps/Solutions

☆ Objectives and Metrics

- ✦ Detailed Implementation Plan. Assignments. Reports. Tracking.

☆ Ownership at the Directorate Level

- ✦ Directorate level metrics – drill down, action on poor trends
- ✦ Specific Action Plans to support goals
- ✦ In-house Champions (management and worker level)
- ✦ PEP action plans (measurable, assigned, implemented)
- ✦ Employee Involvement Plan

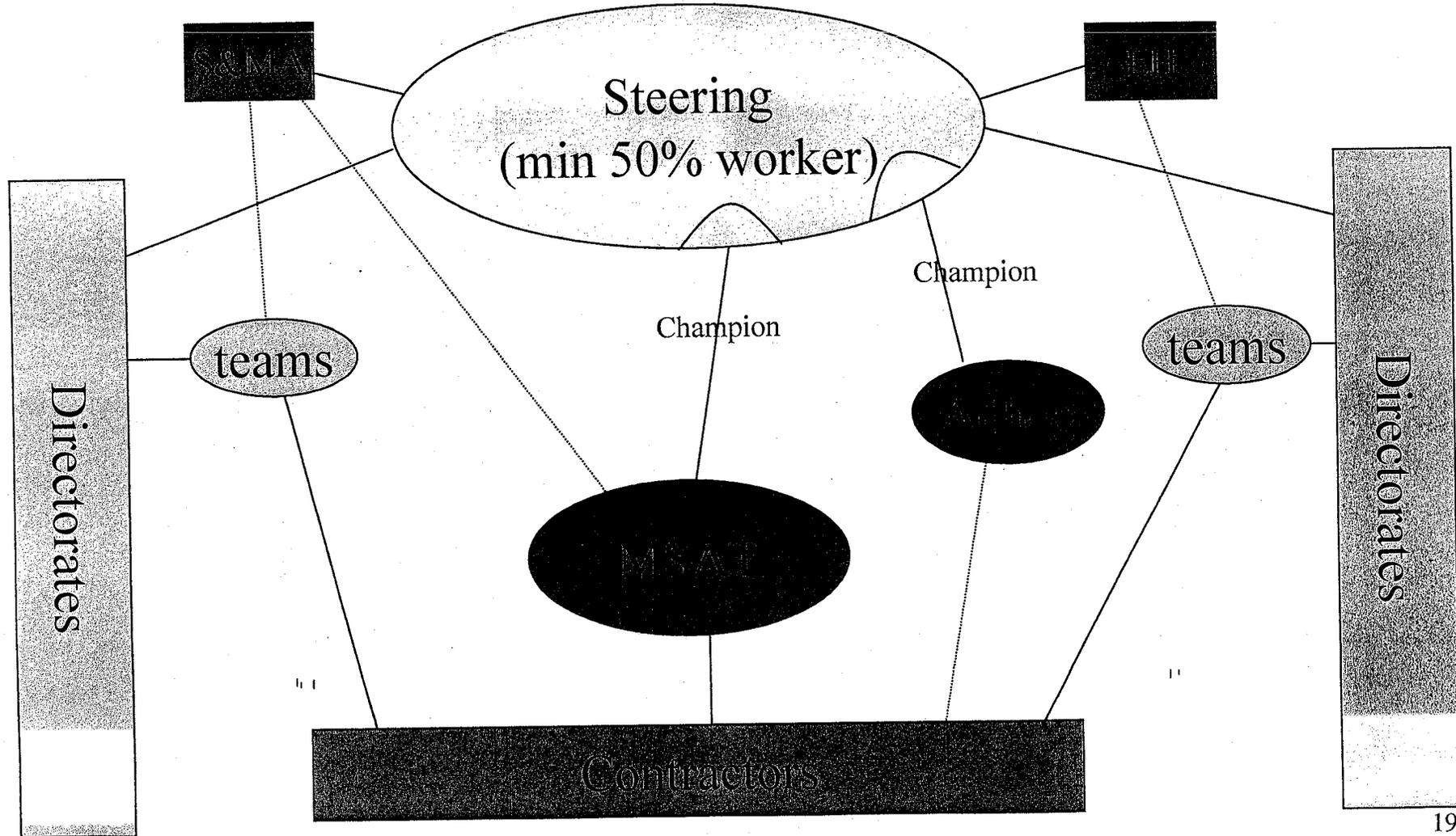
☆ Employee Involvement: Worker as peer.

- ✦ SHE Committee = restructure, membership, hierarchy
- ✦ Fixed Price Contractors
- ✦ PEP Evaluations – Critique Employee Involvement Scores
- ✦ Integrate workers into decisions, procedure development, etc.

☆ Integration of S&MA and EH.

- | | |
|---|------------|
| ✦ Tools for Supervisors | ✦ Metrics |
| ✦ Hazard Analysis | ✦ Database |
| ✦ More Facilitation to each Directorate | ✦ PEP QC |

Committee Structure



PRELIMINARY SAFETY COMMITTEE CHARTER

GUIDELINES

Mission Statement: State the purpose of the committee

Goals and Objectives: State the goals of the committee. Detail and assign objectives.

Meeting Schedule: Safety committee meetings hold be held at least once a month.

Quorum Rules: Minimum of 50% attendance of the core team to hold a meeting.

Membership Guidelines: Each committee must determine how the membership will be obtained: i.e. appointed, volunteer basis, nominated by a given percentage of the core team, or on an as needed basis.

Membership Terms: Committee should determine the term for all members i.e. will an individual be participating for the duration of the program or will they be only be part of the team, or on an as needed basis.

Chair Selection: Determine who is the committee chairperson and document how they were selected, i.e. predetermined, nominated, or volunteer.

Attendance Requirements: Committee should determine what is required of the committee members in regard to attendance.

Salaried Participation: Typically at least one salaried individual participating on each committee.

Data Review/Analysis: Safety data to include reports of open action items, trend analysis (accidents, employee concerns report, ergonomic, inspection findings, etc.) and other loss data should be reported and reviewed.

Meeting Minutes

Members in attendance

Recording individual

Minutes distribution

List of action items

Status of action items (due date, open, closed, delayed, in progress, etc.)

Name of individual who originated the action item.

Name of individual who is responsible for completing each action item

Document the agenda.