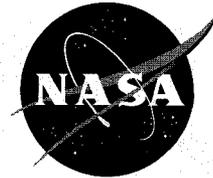


National Aeronautics and
Space Administration

George C. Marshall Space Flight Center
Marshall Space Flight Center, AL 35812



January 21, 2003

Reply to Attn of:

QS50 (03-03)

TO: Distribution

FROM: QS50/David J. Spacek

SUBJECT: Minutes of the MSFC Safety, Health, and Environmental Committee
Meeting – January 8, 2003

The Safety, Health, and Environmental (SHE) Committee met at 2:00 p.m. on Wednesday, January 8, 2003, in Building 4200, Conference Room P110. The attendance list is maintained on file in the Industrial Safety Department (4202/307). The agenda for the meeting is attached as Enclosure 1.

Opening Remarks (Nance Jo Ogozalek)

Nance Jo welcomed everyone back from the holidays, and expressed appreciation to all for attending.

Safety Moment (Dennis Davis)

Dennis talked about a 17-vehicle pile-up that occurred recently on I-65 due to heavy fog and ice. An 18-wheeler truck slid on ice and hit a bridge wall causing a domino effect with the other vehicles. It was determined that the driver of the truck was traveling too fast for the weather conditions. Dennis noted to always exercise extreme caution while driving, but especially when fog and freezing conditions are present.

Previous Meeting Minutes (Nance Jo Ogozalek)

Nance Jo asked the committee if they had any corrections or comments to previous minutes. No comments were voiced. It was noted that the "Open Actions" list has been moved to the top of the Agenda.

Open Actions (Dennis Davis)

Dennis reviewed the open actions. It was requested that the due dates for completion be extended for several of the actions. After discussion, it was noted that actions assigned at the last meeting had inadvertently been omitted from the list, and one item identified as an action at a previous meeting had not been added. That item is assigned below as SHE-03-002. Nance Jo requested that everyone review the list and advise Dennis of any other discrepancies. The open action list is attached as Enclosure 2.

Mission Success Starts with Safety

ACTION SHE-03-001: Revisit the "Open Action" list to ensure all actions are noted. (Dennis Davis/QS50; Due: 1/29/03)

ACTION SHE-03-002: Develop a proposed process for subcommittees and organizations to submit ideas to the Committee. (Tom Dollman/SD01; Due: 3/03)

Special Reports

Lifting Sheet Metal Lost-Time Mishap (Bobby Johnson/SD43)

Bobby reported that a contract employee injured his left arm while he and another employee were relocating several large pieces of sheet metal. Several pieces had been moved when one piece slipped while positioning. The employee's left arm absorbed the impact separating the bicep tendon at the elbow. As a result, outpatient surgery was required. The employee is expected to return to work soon on light duty. Several corrective actions have been identified including constructing a large concrete pad adjacent to the storage area that would provide sufficient area to store sheet stock horizontally. This would provide adequate space for handling to be accomplished primarily by forklift, eliminating most manual handling. It was noted that the job hazards were not reassessed prior to beginning the task. The chart presentation is attached as Enclosure 3.

Fragrance Sprays in Restrooms (Joyce Eagan/AD60)

Joyce reported that a number of employees are sensitive to aerosol fragrance sprays that are commonly used in restrooms. She noted that a *Notice to Users* sign has been developed and will be posted on the SHE Web Page. Any personnel who suffer allergic reactions from the chemical sprays can print the sign and post in the restroom that they frequently utilize. Notification of the sign would inform the custodians and other personnel not to use the spray in that particular area. A copy of the sign is attached as Enclosure 4.

SHE Organization Reports

Occupational Health Report (Joyce Eagan/AD60)

Joyce discussed the Medical Center's health data report for October and November 2002. She noted that the new occupational health contract would include a registered nurse who's duties would include medical case management. The chart presentation is attached as Enclosure 5.

Environmental Report (Sharon Scroggins/AD10)

Sharon presented a summary of pollution prevention measures that were implemented in 2002, as well as on-going projects for 2003. She noted that an Environmental Excellence Team (EXT), comprised of 30 civil service and contractor personnel, was established in 2002. The team supports various projects including energy conservation, environmental awareness, recycling/pollution prevention, etc. The chart presentation is attached as Enclosure 6.

The Committee agreed to not have a SHE Working Meeting in January. The next meeting of the SHE Committee is scheduled for Wednesday, January 29, 2003, at 2:00 p.m. in Building 4200, Conference Room P110.



David J. Spacek
Manager
Industrial Safety Department

8 Enclosures

Distribution:

SHE Committee Members
Safety Web Page

cc:

CD20/P. Schultz
CSC/P. Robbins
DE01/A. Roth
QS40/R. Mize
QS50/D. Davis/J. Milburn
UP10/K. Cornett

SHE COMMITTEE AGENDA
Building 4200, Conference Room P110
2:00 pm, Wednesday, January 8, 2003

Open Meeting (Nance Jo Ogozalek/ED33/Chairperson)

Safety Moment (Dennis Davis/QS50)

Previous Meeting Minutes (Nance Jo Ogozalek)

Open Actions (Dennis Davis)

Special Report(s)

- **Lifting Sheet Metal Lost-Time Mishap (Bobby Johnson/SD43)**
- **Fragrance Sprays in Restrooms (Joyce Eagan/AD60)**

SHE Organization Reports

- **Occupational Health Report (Joyce Eagan)**
- **Environmental Report (Allen Elliot/AD10)**
- **Industrial Safety Report (Dennis Davis)**
 - Metrics
 - Self-Assessment Report
 - SSWP Monthly Safety Topic Change

Organization Reports: [as time allows]

- **MSAT**
- **Communications**
- **Training**
- **CSF**
- **Others as needed**

New Business - Open Floor (Nance Jo Ogozalek)

- ✓ **Establish next meeting date**

Review New Open Actions (Recorder)

Plan Report to Marshall Team Meeting (Nance Jo Ogozalek)

SHE Committee Open Actions January 8, 2003

ACTION NO.	ISSUE/CONCERN	POINT OF CONTACT	ACTIONEE	FINAL PRODUCT	DATE OPEN
SHE-02-007	Dennis Davis showed a sharp increase in the number of late HAZTRAK actions.	Axel Roth/DE01	Organizations with Late HAZTRAK Actions	Either close actions or provide new completion date with reason current date could not be met.	08-28-02
SHE-02-013	A question was raised concerning availability of fire extinguisher training. The Fire Department and Cortez III are providing training but not sure if it being properly recorded.	Nance Jo Ogozalek/ED33	Training Sub-committee	Assure that fire extinguisher training attendance is being documented by the Training Department.	10-02-02
SHE-02-014	The Laboratory Operations Sub-committee proposed that a checklist be developed for supervisors to assure temporary employees receive adequate safety training.	Nance Jo Ogozalek/ED33	Training Sub-Committee	Review proposal for a supervisor's checklist for temporary and new employees and submit recommendation to the SHE Committee.	10-02-02
SHE-02-015	Joyce Eagan reported that no-shows for medical appointments is very high.	Jim Carter/AD01	Wellness Sub-Committee	Investigate and provide recommendations to encouraged employees to keep medical appointments.	10-02-02
SHE-02-019	Jamie Miernik/ERC proposed that the Center make May 2003 Transportation Safety Focus month with emphasis on bicycle riding.	Nance Jo Ogozalek/ED33	Dave Spacek/QS50	Review proposal to make May 2003 Transportation Safety Focus month with emphasis on bicycle safety.	10-30-02
SHE-02-020	Phil Robinson presented the SHE Program Improvements Action Plan	Nance Jo Ogozalek/ED33	Actionees as Identified in Plan	Review the SHE Program Improvement Plan and provide an ECD for each assigned action.	11-13-02
SHE-02-021	Paul Munafo commented that he had trouble understanding and explaining the ratio metrics.	Nance Jo Ogozalek/ED33	Industrial Safety Department	Revisit the ratio metrics for possible improvements.	11-13-02
SHE-02-022	T.D. Jackson reported a safety concern with the new Test Area gate arrangement. Judy Milburn noted there were already some plans to improve it.	Nance Jo Ogozalek/ED33	Security and TD70	Report to the committee on plans to improve gate arrangement.	11-13-02
SHE-02-023	Gaines Watts presented proposed restriction-guidelines for test area visitors. Some committee members felt this should be part of a Centerwide policy.	Nance Jo Ogozalek/ED33	Dave Spacek/QS50	Investigate the need for, and develop as required Centerwide guidelines for visitor access to hazardous areas.	11-26-02

INJURY REPORT

NAME: William Seymour

ORGANIZATION: Systems Test Group (SD43)

COMPANY: BD Systems (Team Mate of Teledyne Brown Engineering, SD40 Prime Contract)

DATE OF INJURY: October 24, 2002

TYPE OF INJURY: Left arm tendon separation at elbow

LOCATION: Building 4493

PROGNOSIS: Surgery - 11/13/02 (Dr. Fambrough)
Huntsville Hospital
Cast removed 12/23/02
Next Doctor appointment 1/14/03

HOW IT HAPPENED:

Bill, James Sloan (BD Systems) and Ron Cantrell (CS) were relocating several large sheets of raw material stock in preparation for moving the SD43 machine shop within Building 4493 (Room 151 to 160). Due to the confining storage area a significant amount of manual handling to retrieve the sheet raw material (Vertical position) and placing it on the forklift tines was required. Several pieces had been moved when the piece causing the injury kicked forward at the bottom on the forklift tines after being placed in a vertical position against the rack. (Tines were approximately twelve inches above grade.) The direction of movement was from Ron Cantrell on one side toward Bill Seymour on the opposite side. Bill's left arm absorbed the impact of the momentum thus separating the left arm Bicep tendon at the elbow. View 1 is the storage area; View 2 is the receiving area.

ROOT CAUSE:

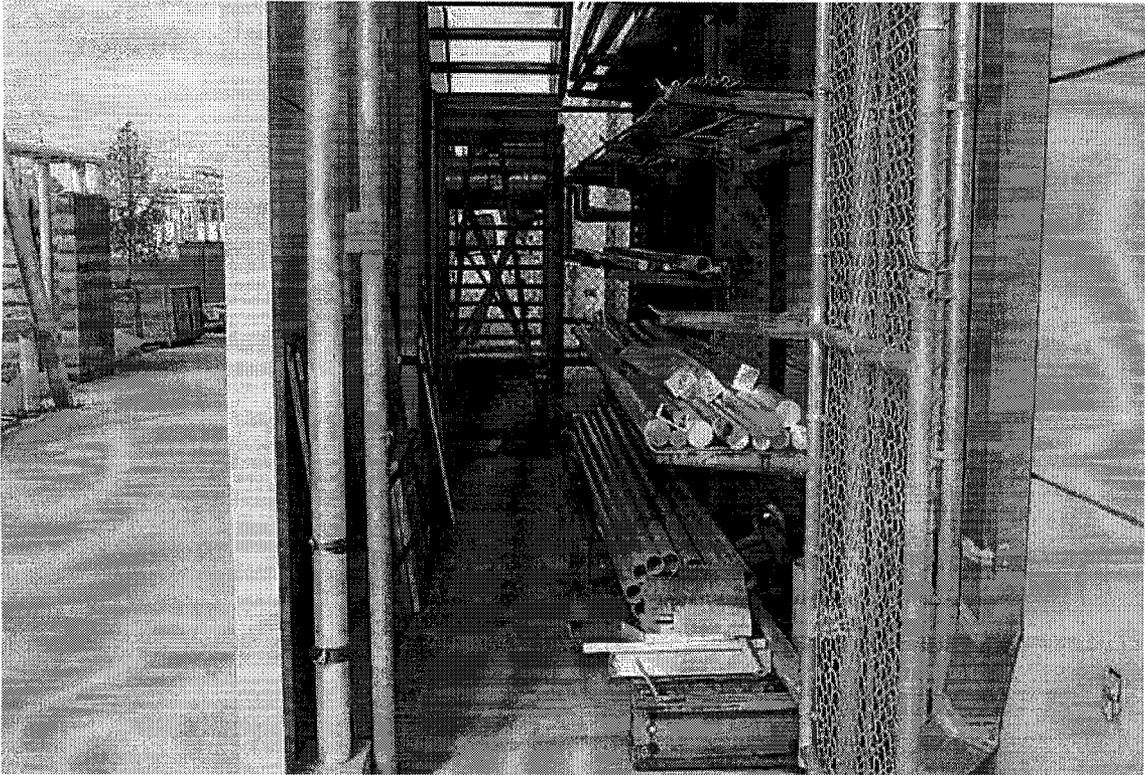
The first root cause of the events leading to the injury is an inadequate sized secure area for storing large raw material sheet stock. This necessitated storing sheet stock vertical as depicted in View #1.

The second root cause following retrieval from the storage area, was the real time decision to position the material vertically against the forklift rack and hold it manually (personnel on opposite side) during transport.

CORRECTIVE ACTION

- Design and construct a 15 X 20 concrete pad
- Design drawings have been approved
- Construction complete by 02/28/03
- Provide the flexibility to handle sheet stock almost completely by forklift

VIEW 1: Storage (Move From)



VIEW 2: Storage (Move to)

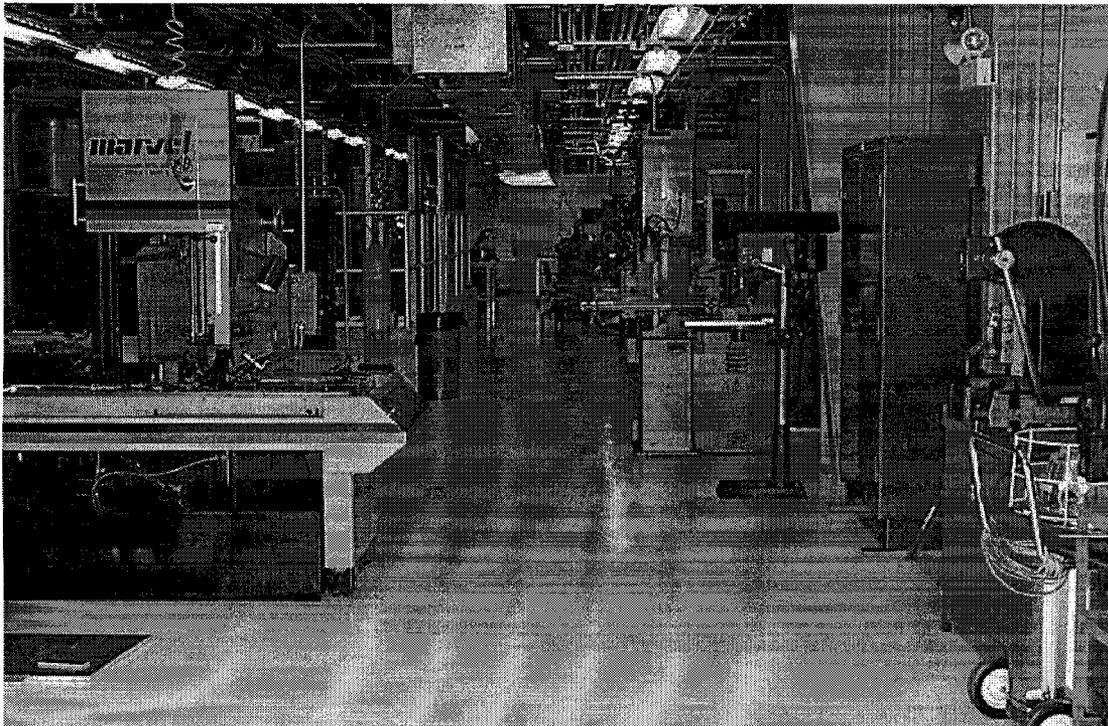


View #3 – NEW CONCRETE PAD AREA



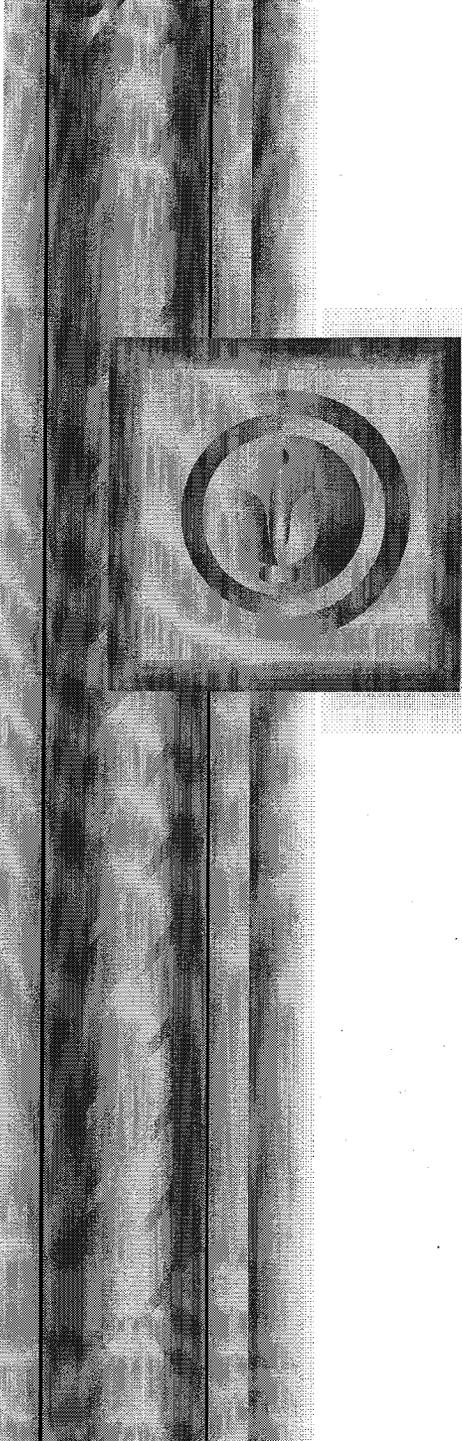
This will provide sufficient area to store sheet stock material horizontally. The size of the constructed concrete pad, forklift maneuvering area, roll up door leading to the new machine shop location, and machine placement near the door will assure sheet stock material handling to be accomplished almost completely by forklift, thus eliminating a majority of manual handling.

View #4 NEW MACHINE SHOP LOCATION



NOTICE TO USERS

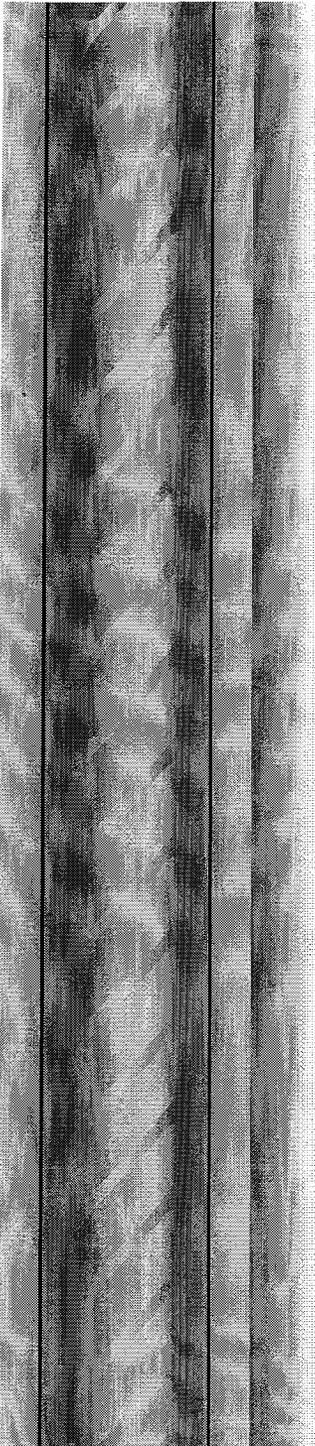
**THE USE OF AIR FRESHENERS/ SPRAYS
IS PROHIBITED IN THIS FACILITY
BECAUSE PERSONNEL WHO
FREQUENT THIS RESTROOM SUFFER
FROM ALLERGIC REACTIONS TO
THESE CHEMICALS. PLEASE
REFRAIN FROM SPRAYING
FRAGRANCES IN THIS RESTROOM.**



OCCUPATIONAL MEDICINE/ ENVIRONMENTAL HEALTH

HEALTH DATA FOR OCTOBER AND NOVEMBER 2002

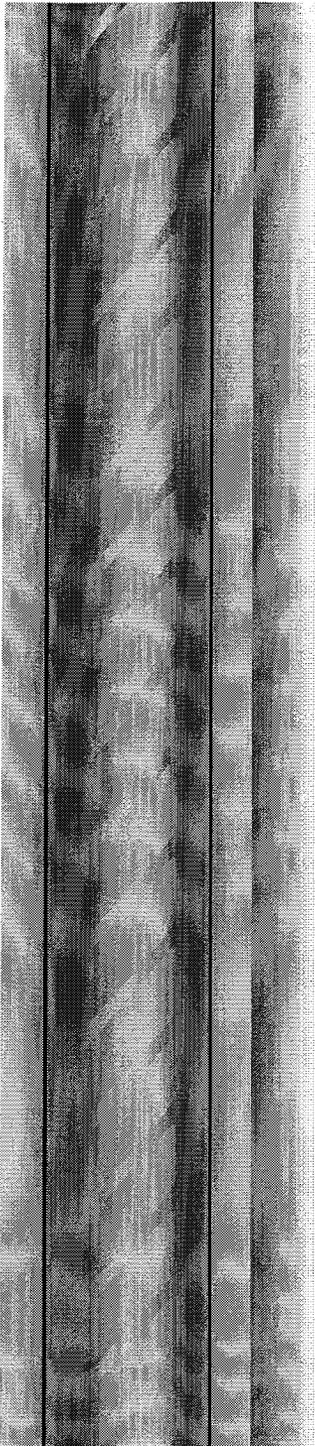
JOYCE EAGAN - SHE MEETING
ON 1/8/03



OCCUPATIONAL MEDICINE/ ENVIRONMENTAL HEALTH

- **Patients Seen – 1,934**
- **Total Clinic Visits - 185**
- **Ambulance Runs – 8**
- **Occupational Injury – 16**
- **Occupational Illness – 3**
- **Mammograms – 66**
- **PSA – 211**
- **Blood Pressure – 139**
- **X-rays – 25**
- **No Shows For Appointments - 218**

JOYCE EAGAN - SHE MEETING
ON 1/8/03



OCCUPATIONAL MEDICINE/ ENVIRONMENTAL HEALTH

● REASONS FOR CLINIC VISITS

- Burns – 1**
- Chest Pain – 2**
- Contusions/abrasions – 7**
- Ear/eye Problems – 18**
- Upset Stomach – 6**
- Urinary Tract Disorders – 2**
- Headaches – 3**
- Insect Bites – 6**
- Lacerations – 6**
- Musculoskeletal Problems – 18**
- Respiratory – 85**
- Skin Problems – 22**
- Miscellaneous - 19**

JOYCE EAGAN - SHE MEETING
ON 1/8/03

OCCUPATIONAL MEDICINE/ ENVIRONMENTAL HEALTH

- **Building Surveys – 42**
- **Ergonomic Surveys – 61**
- **Asbestos Air Sample Collection – 32**
- **Asbestos Bulk Sample Collection – 20**
- **Personnel Trained - 315**
- **Respirators Inspected – 425**
- **TLD Badges Exchanged – 193**
- **Cafeteria Inspections - 16**

JOYCE EAGAN - SHE MEETING
ON 1/8/03

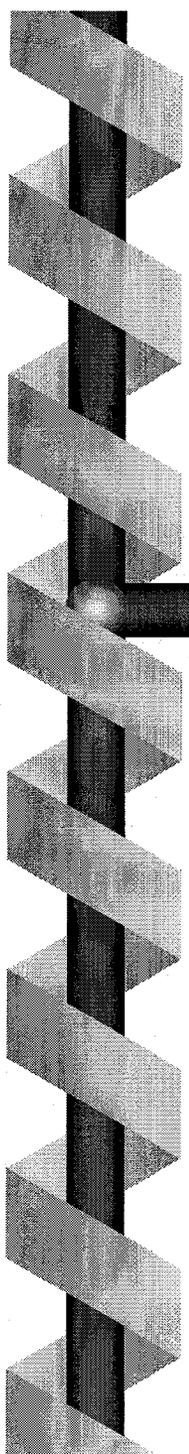
COMING EVENTS

- **With the recompetition of the Medical Services some changes will occur:**
 - **No more proctoscopic exams**
 - **Workman's Comp Case Manager**
 - **Bone Densitometer**
 - **Adding blood tests:**
 - **TSH/T4 (Thyroid function)**
 - **LDL-Lp(a) (Genetic indicator for cardiac)**
 - **High Sensitivity C – Reactive Protein (6-8 yr., predictive for stroke/cardiac – behavioral changes)**

JOYCE EAGAN - SHE MEETING
ON 1/8/03

The logo for Marshall Space Flight Center, featuring the text "MARSHALL SPACE FLIGHT CENTER" in a large, bold, sans-serif font, with "HUNTSVILLE, AL" in a smaller font below it. The text is set against a background of a stylized, textured image of a rocket launch or space scene.

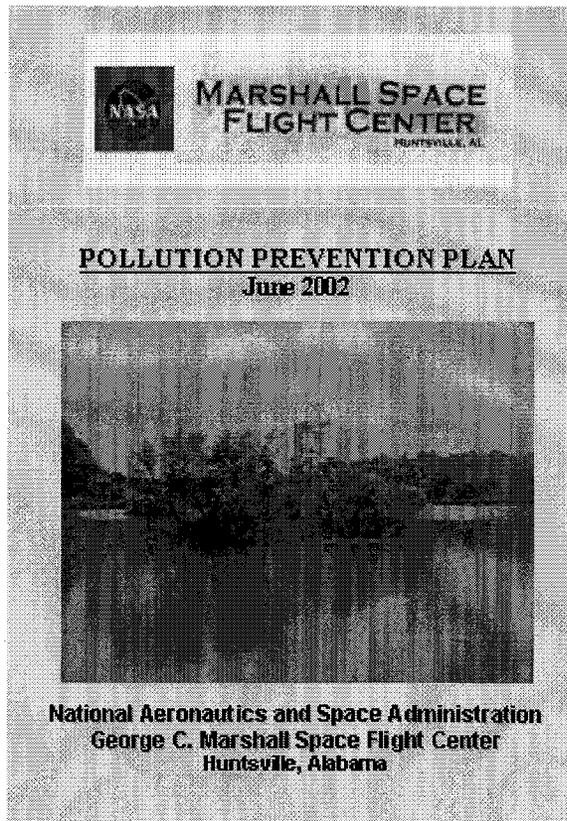
**MARSHALL SPACE
FLIGHT CENTER**
HUNTSVILLE, AL

A decorative vertical bar on the left side of the page, consisting of a dark central column with a series of light-colored, overlapping, rectangular segments that create a spiral or twisted effect.

Pollution Prevention Summary

January 8, 2003

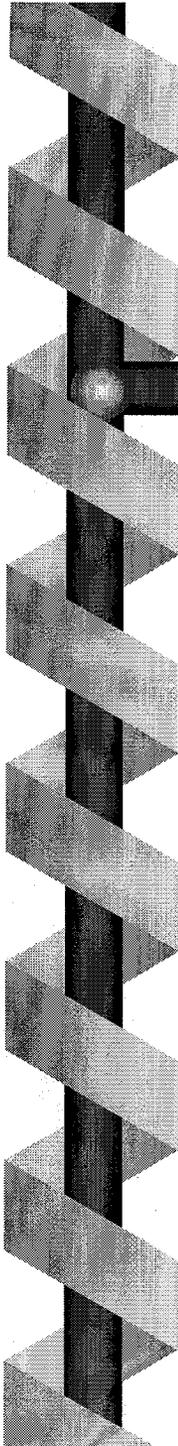
New P2 Plan Published in June 2002



Established new P2 goals

*Emphasis placed on meeting
Executive Order (EO)
requirements*

*Assessed MSFC current
activities and P2
opportunities*

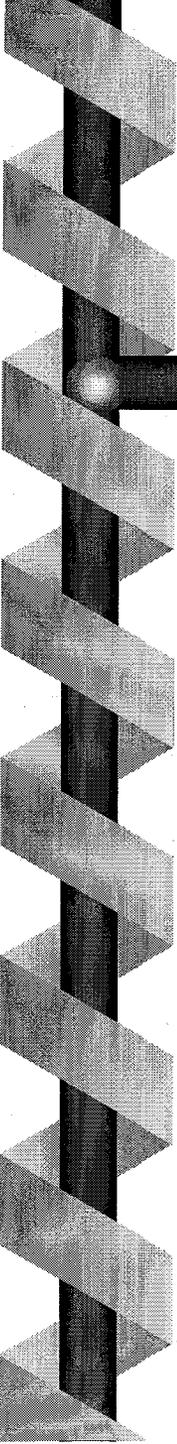


Environmental Excellence Team (EXT)

*Established in 2002 and comprised of NASA
and Contractor employees*

Team will support:

- *Energy Conservation*
- *Environmental Awareness*
- *Recycling/Pollution Prevention*
- *Educational Programs*
- *Incentives and Award Programs*



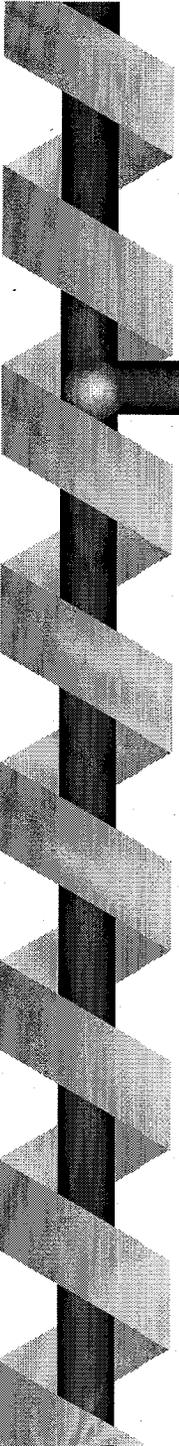
On-Going P2 Projects

Phase-out of Class 1 Ozone-Depleting Substances (ODS)

Just-In-Time (JIT) procurements of chemicals

Review & approval of chemical procurements prior to purchase

Use Reduction of Aerosol Spray Containers



Major P2 Projects Implemented in 2002

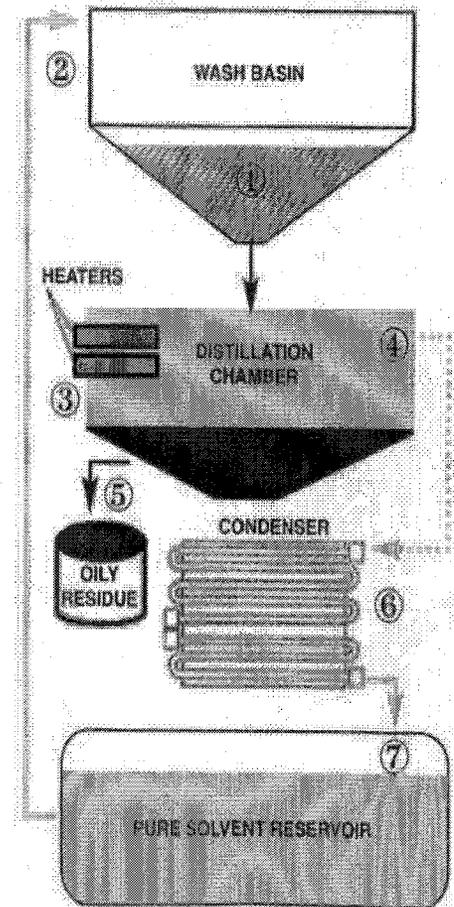
- ✓ *Recycling Part Cleaners*
- ✓ *Reverse Osmosis System
(D. I. Water Production)*
- ✓ *Outsourcing and Chemical
Substitution (Plating Shop)*

Recycling Parts Cleaners

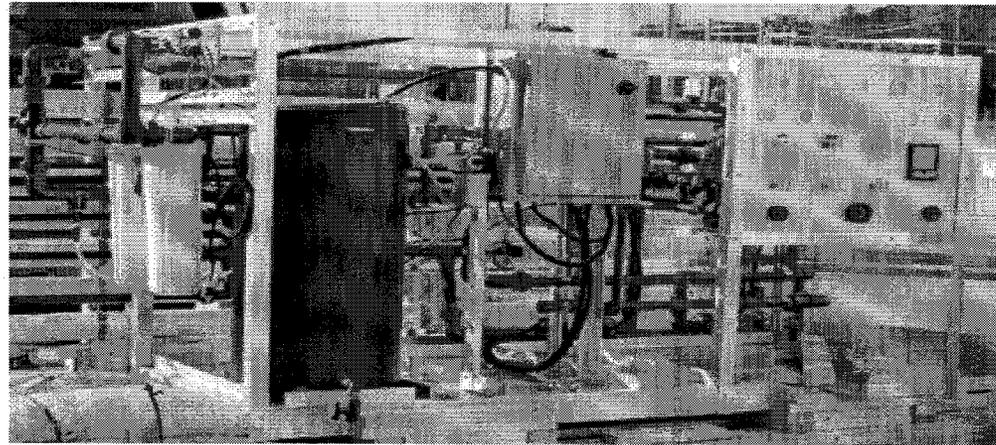
Replaced 5 part cleaners at Vehicle Maintenance Shop with 3 recycling systems

Eliminated 4,500 pounds of waste generated annually

Users saved \$300 annually on service fees



Reverse Osmosis System



✓ *Eliminated 6,000 gallons annual usage of Sulfuric Acid 98% and Sodium Hydroxide 50% (3,000 gal. each)*

✓ *Reduced costly spill response activities and stormwater compliance issues*

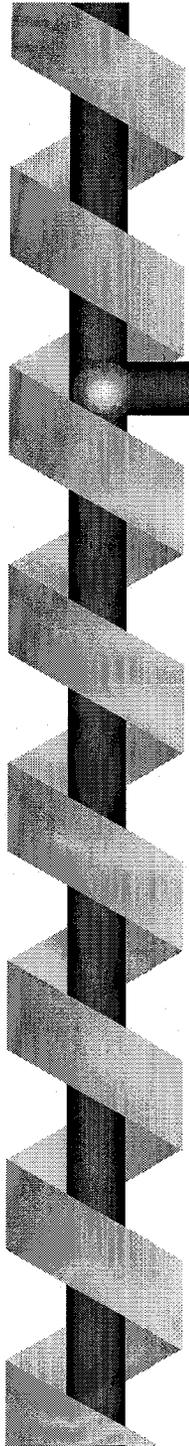
Outsourcing At Plating Shop

Eliminated chromium processes through outsourcing and/or process change. Resulted in reductions of 7,852 pounds of chromium (raw) usage and 9,920 pounds of waste generation.

CHROMIUM PROCESS ELIMINATED THROUGH PROCESS CHANGE OR OUTSOURCING

PROCESS NAME	PROCESS GALLONS	CHROMIUM MAKEUP (pounds)
Electro-polish	250	85
Iridite 8P	11,000	840
Unichrome Plating	200	450
Turco Smut Go 1 Deoxidizer	220	16
Stainless Steel Passivation	21,600	6,008
Dichromate Seal	200	92
Anodize, Type I	400	32
Deoxidizer	500	329
TOTAL ELIMINATED	34,370	7,852

** WASTE GENERATED IN 2001 FROM ABOVE PROCESSES 9,920 pounds.

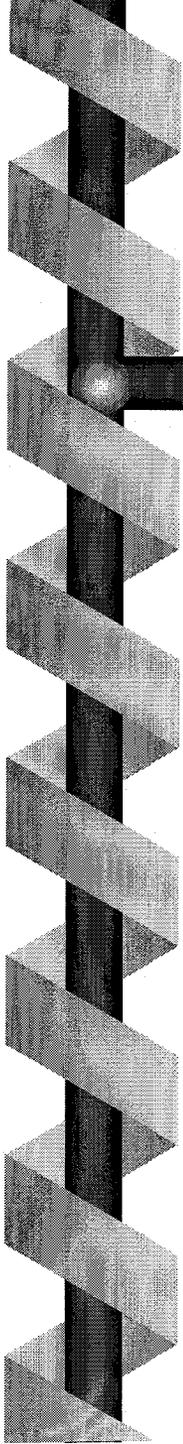


Chemical Substitutions At MSFC Plating Shop

Eliminated 6,500 pounds of Perchloroethylene (PCE) usage and deactivated vapor degreasers. Brulin product was substituted for PCE.

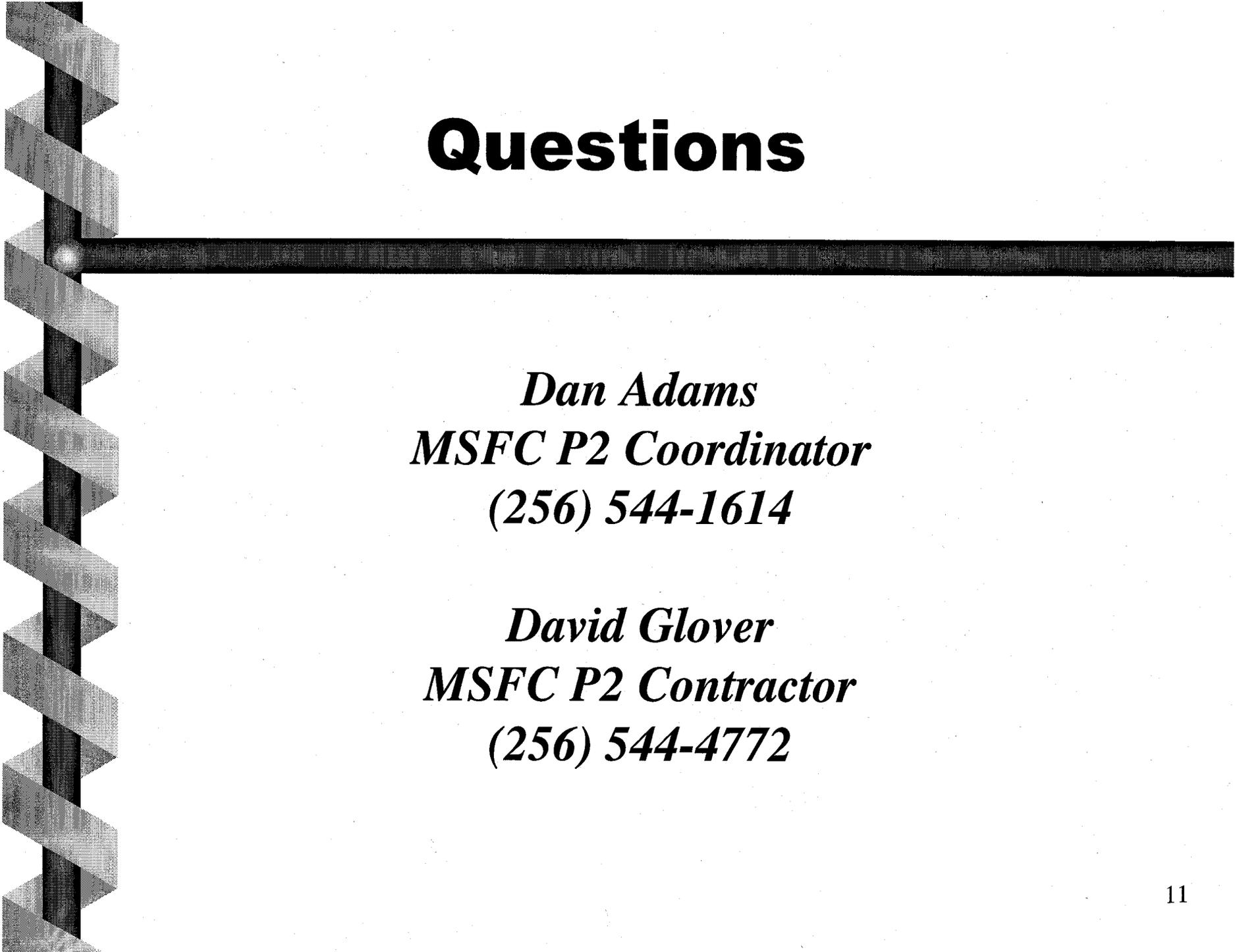
PERCHLOROETHYLENE PROCESS ELIMINATED THROUGH PRODUCT SUBSTITUTION

PROCESS NAME	PROCESS GALLONS	PCE USAGE (pounds)
Vapor Degreasing (Perchloroethylene)	550	6,500



Critical Issues

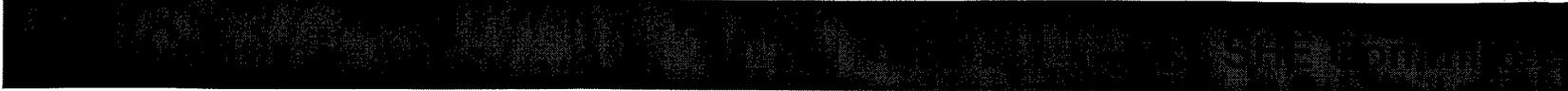
- 1. Recycling duties only recently given to MSFC Environmental; trying to make it profitable*
- 2. Solid Waste Management Plan; currently being written*
- 3. Gaining top management support for an EMS*



Questions

Dan Adams
MSFC P2 Coordinator
(256) 544-1614

David Glover
MSFC P2 Contractor
(256) 544-4772



MSFC Safety Data for FY03

(Current as of December 31, 2002)

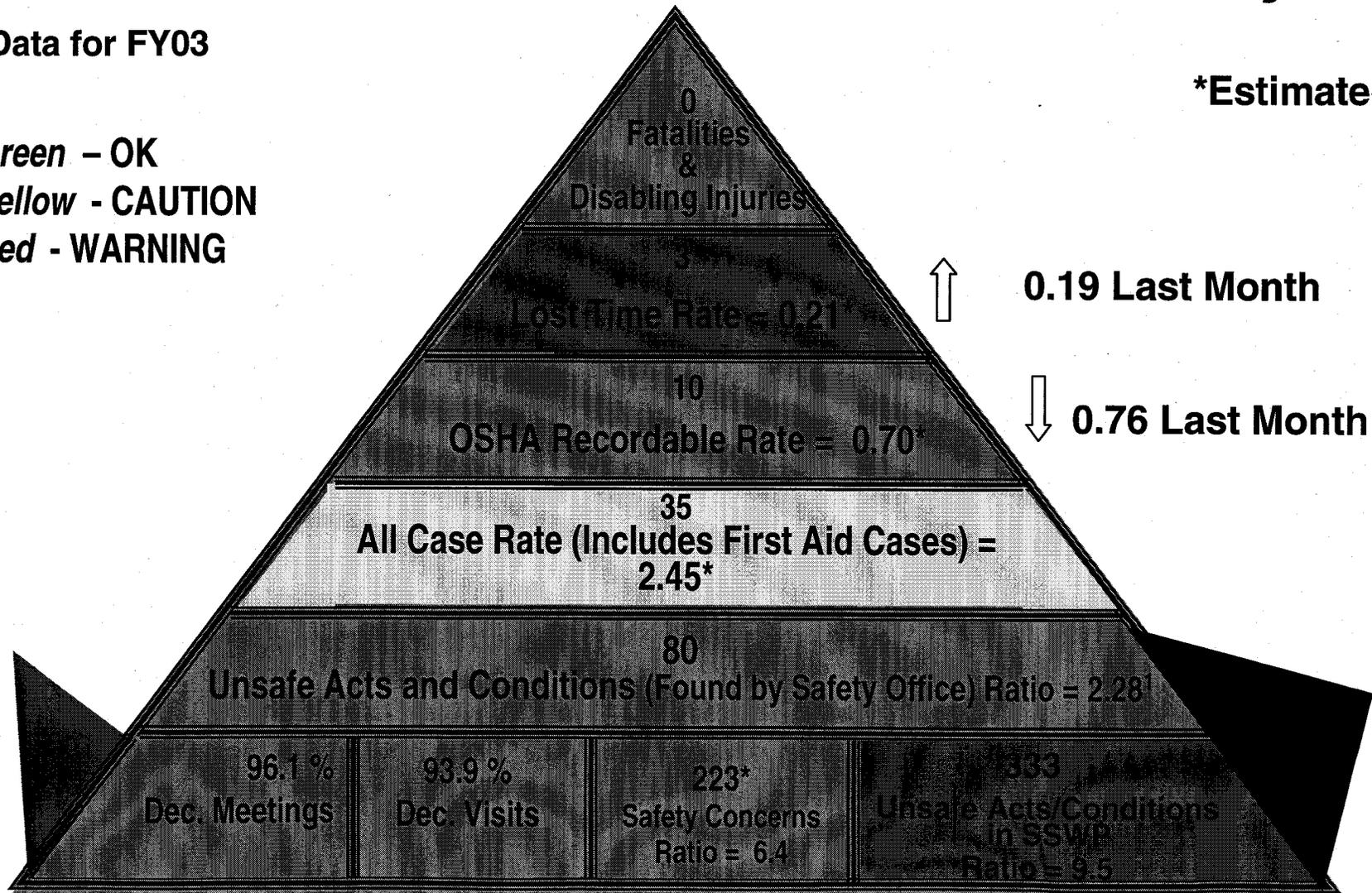
- 
- **Personnel Safety Pyramid**
 - **Leading Indicators**
 - **December Safety Meetings/Visits**
 - **Trailing Indicators**
 - **FY03 Lost-Time Mishaps**
- 

MSFC Team Metric - Personnel Safety

Data for FY03

*Estimated

Green - OK
 Yellow - CAUTION
 Red - WARNING



¹ Color maintained green - Inspections start in January

Corrective Actions for Red/Yellow Pyramid Metrics

- **Lost Time Rate**

- Slips/Trips/Falls Campaign completed in November, “Back Injury” and “Safety Concerns Reporting” Campaigns being planned for early this Year.
- Continuing Implementation of SHE Program Action Items identified in Last Year’s Assessments
- Star Consultants will update Assessment and provide Consultation on Program Direction

- **All Case Rate**

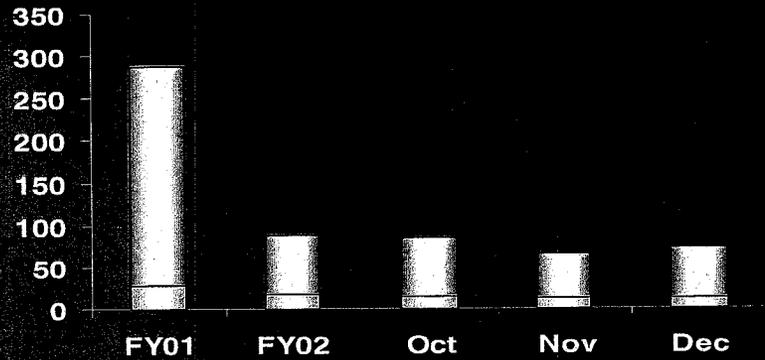
- Same as for Lost Time Rate

- **Ratio of Findings by Supervisors**

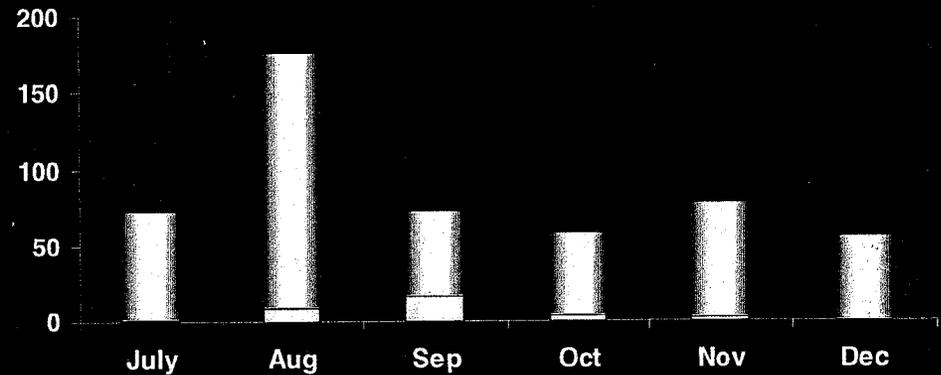
- Same as for Lost Time Rate
- Promote Identification of Unsafe Acts

Team Metrics - Leading Indicators (12-31-02)

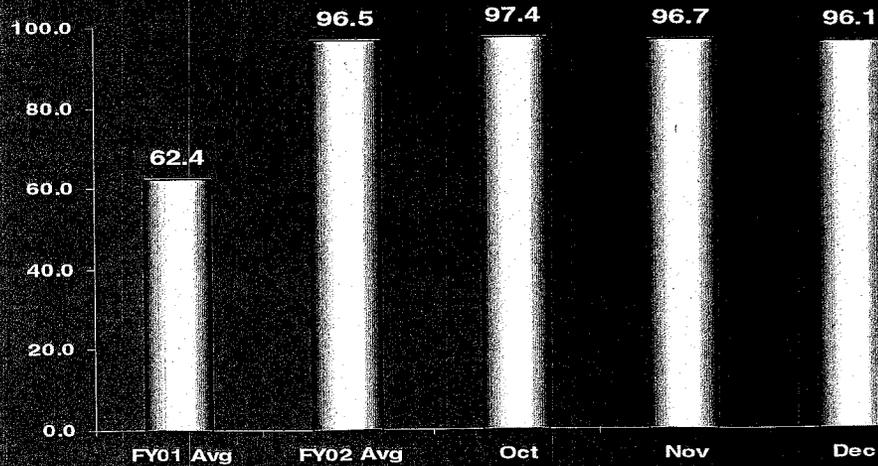
Employee Identified



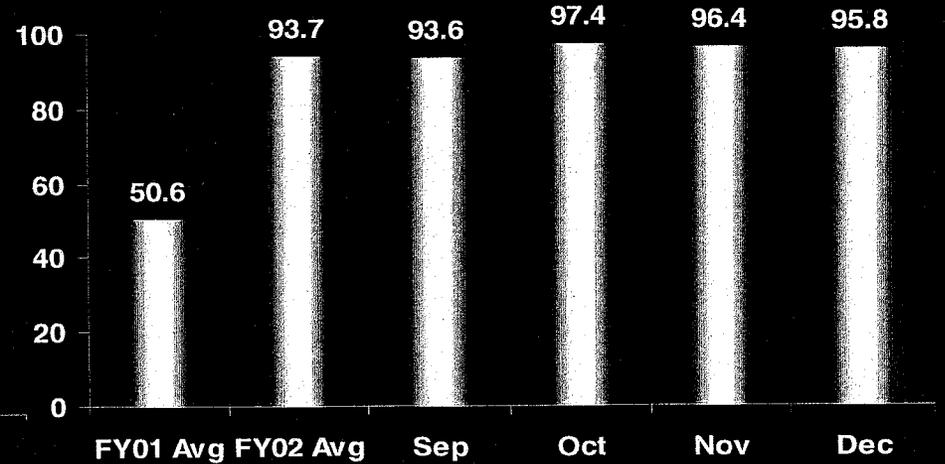
Late Corrective Actions



Supv. Safety Meetings - % Compl.



Supv. Safety Visits - % Compl.





December Safety Meetings and Visits (12-31-02)

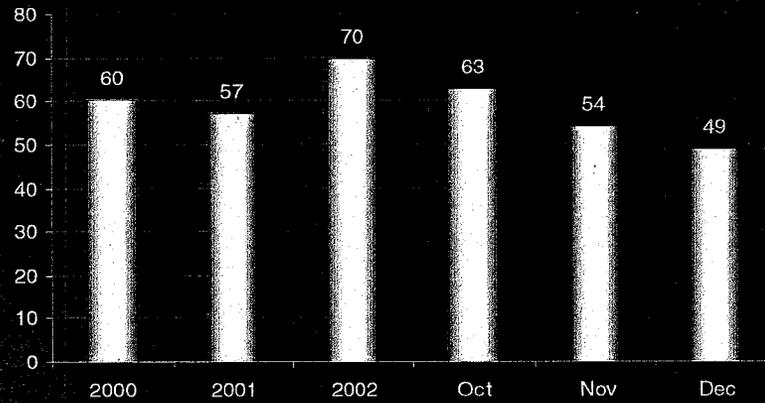
HONOR ROLL - 100% both Meetings & Visits

DA (13)	OS (12)
CD (9)	PS (1)
ED (4)	QS (13)
FD (1)	SD (13)
LS (13)	TD (4)
MP (13)	VS (12)

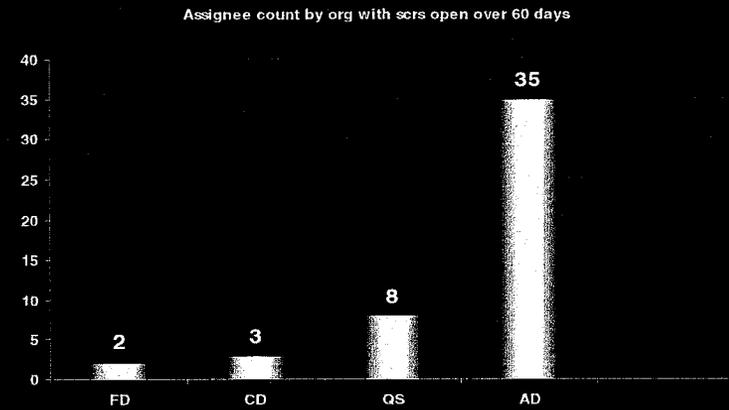
(Consecutive Months on Honor Roll)

SCRS Metrics

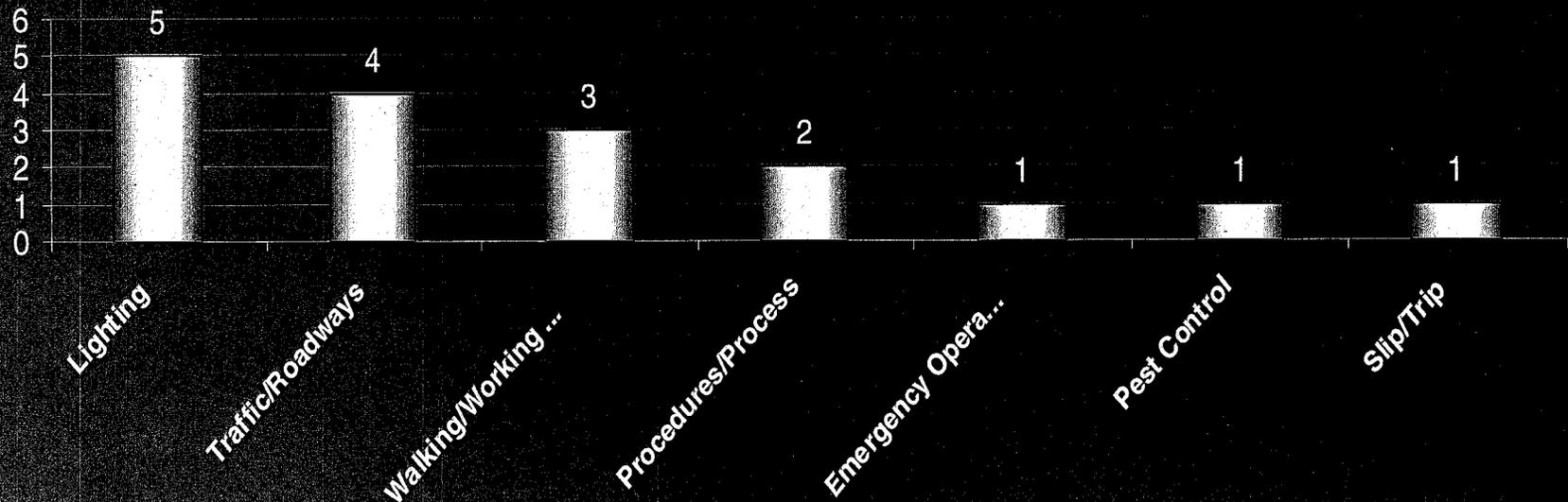
SCRS Open Over 60 Days



SCRS Open Over 60 Days by Organization



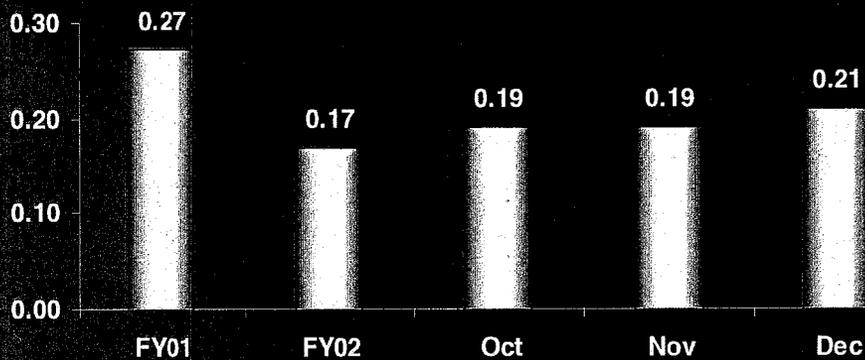
SCRS Submitted in December by Classification



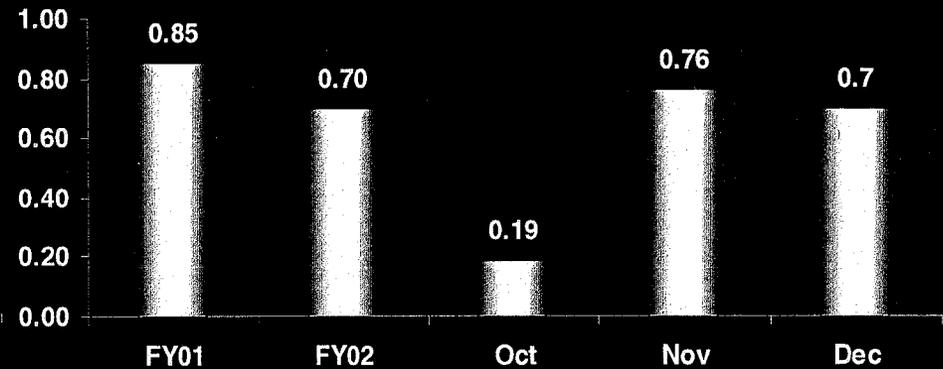
Team Metrics - Trailing Indicators (12-31-02)

Lower is Better!

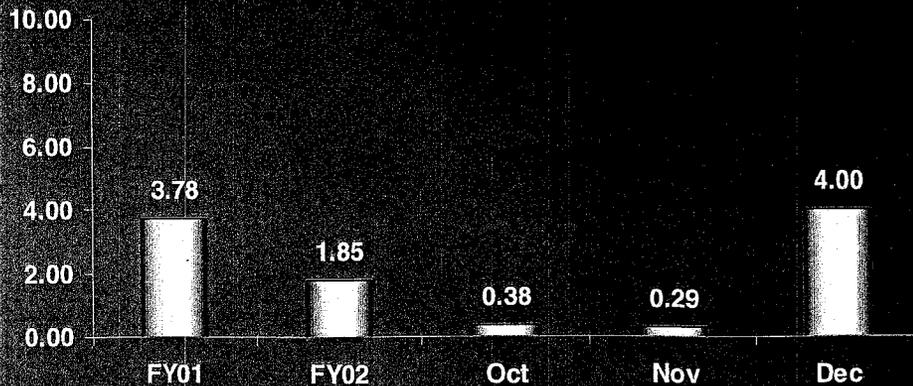
Lost-Time Rates



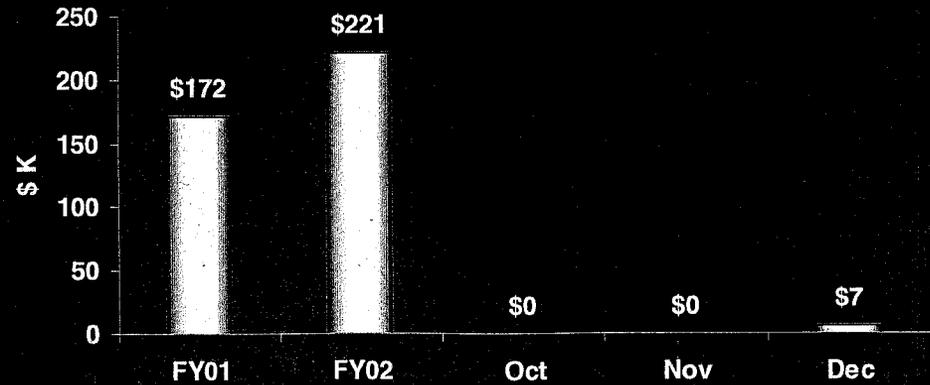
Recordable Rate



Severity Rate

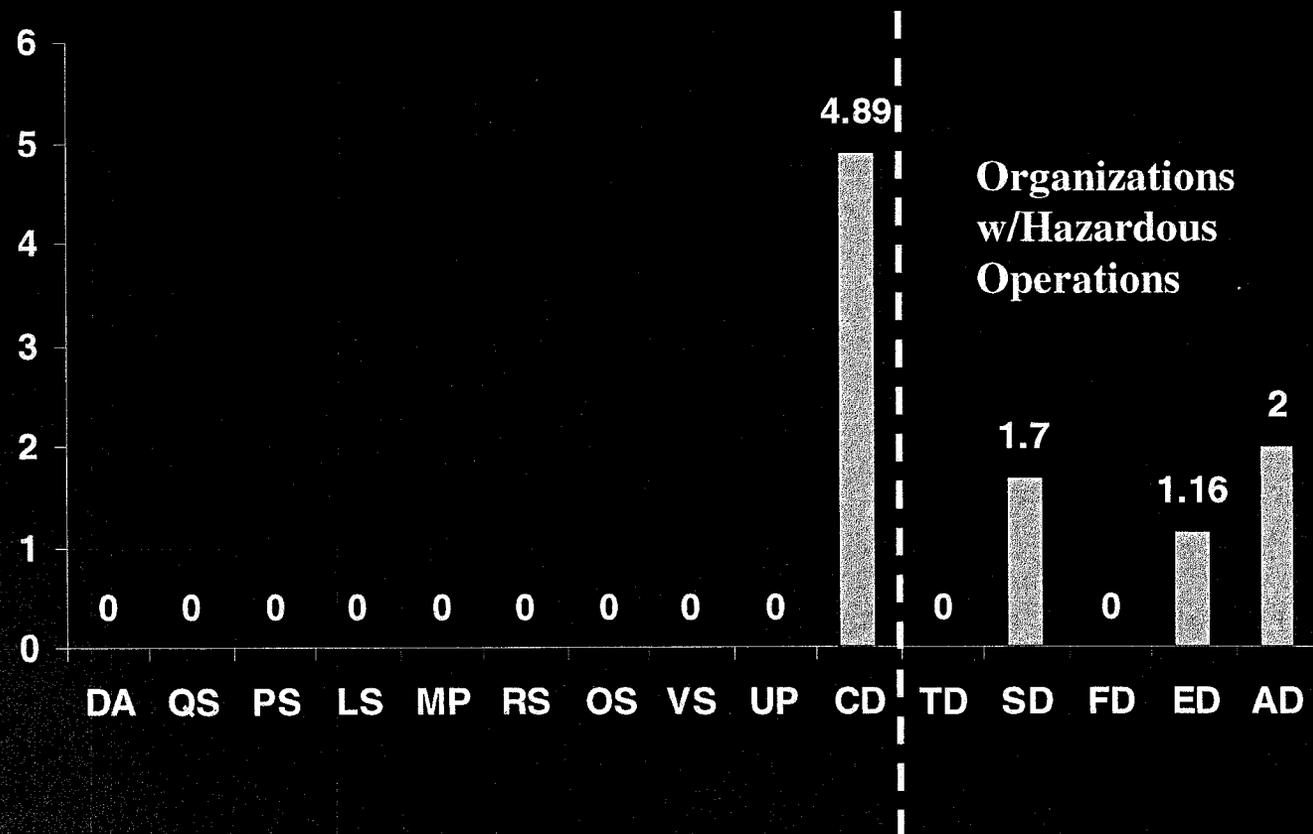


Equipment & Property Damage



Current OSHA Recordable Rates by Organization (Includes Contractors)

Org.	Hours
DA	4,065
QS	58,676
PS	38,376
LS	3,836
MP	53,224
RS	43,294
OS	1,589
VS	7,931
UP	45,923
CD	81,767
TD	162,585
SD	117,729
FD	378,254
ED	344,016
AD	599,864



HAZTRAK Finding Status (12-31-02)

AREA	2003	Open Findings	Abatement Plans	Late Last Month	Late
AD01	0	0	0	0	0
AD10	0	0	0	0	0
AD20	3	7	1	0	4
AD30	0	1	0	0	1
AD40	1	6	6	1	0
AD50	1	0	0	0	0
CD	0	3	0	1	3
ED	12	36	4	11	18
FD	4	12	0	18	7
MP	0	0	0	0	0
NSSTC	0	2	2	1	0
RS	0	0	0	1	0
SD	4	24	2	37	19
TD	10	8	2	6	4
Total	80*	99	17	76	56

Terminology

Open Findings - Findings that have not been Closed.

Abatement Plans – Approved interim hazard controls in place until finding can be corrected

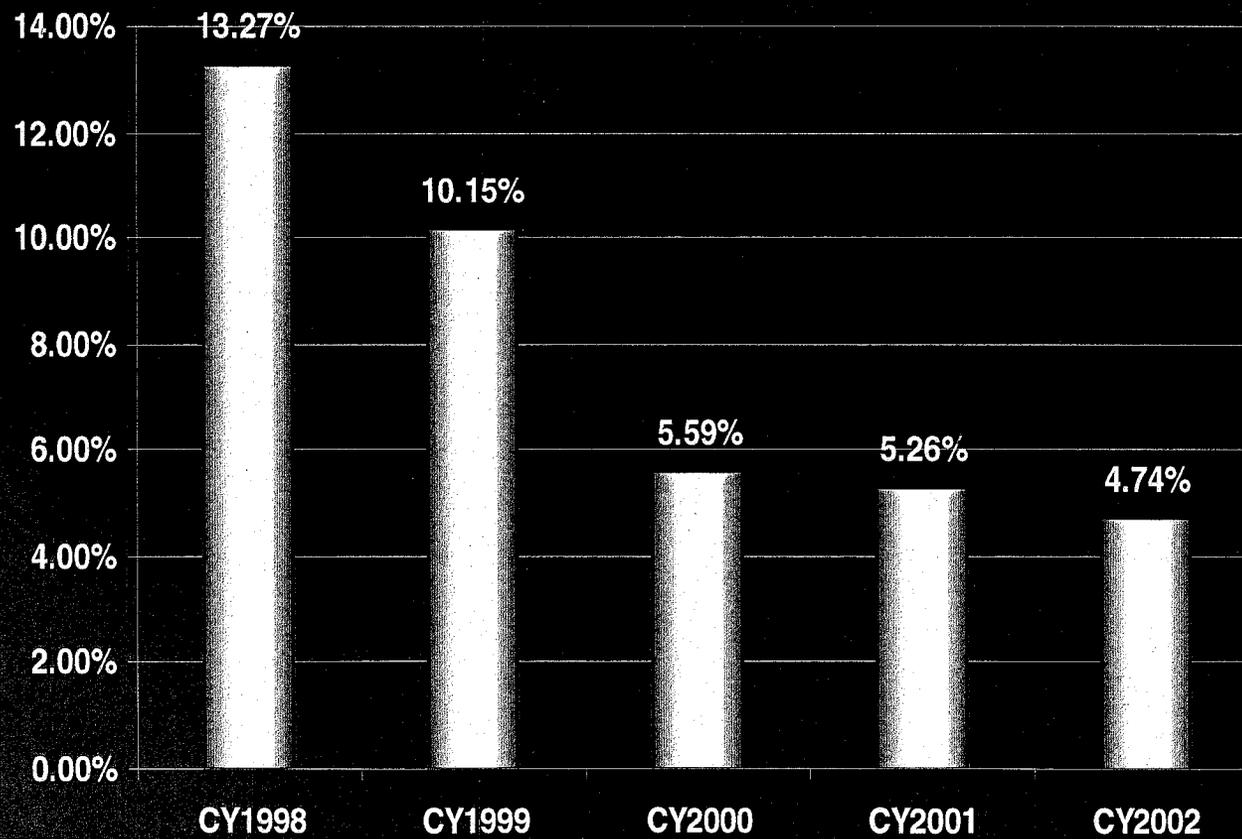
Late – Findings open > 45 days with no Abatement Plan submitted, or Abatement Plan ECD has passed.

*Includes 45 Reopened Findings

NOTE: Greater than 20% late goes Red

SCRS

Percentage Reopened



Mishaps - Corrective Action Closure (12-31-02)

Responsible Organization	Open Mishap Cases		Corrective Actions			
	Total	New	Total	New	Late last month	Late this month
AD01	11	3	5+	1+	0+	0
CD01					2	
ED01	3	0	8	0	0	0
FD01						
LS01						
MP01						
OS01						
PS01						
QS01	1	0	1	0	0	0
RS01	0	0	0	0	0	0
SD01	2	0	1	0	0	0
TD01	2	1	4	2	0	0
VS01						
UP01	0	0	0	0	0	0
Totals:	19	4	19+	3+	2+	0

NOTE: Greater than 20% late goes Red

FY03 Lost-Time Mishaps (12-31-02)

- 10/24/02 – Employee tore tendon while lifting sheet metal, required Surgery – Lost 55 Days +**
- 10/28/02 – Employee slipped and fell off sidewalk, injuring right foot – Lost 2 days**
- 11/01/02 – Employee strained lower back while lifting a box – Lost 1 day + 3 restricted days**

New Lost-Time Cases Since Last Meeting

NONE

Slips/Trips/Falls

Back Injury

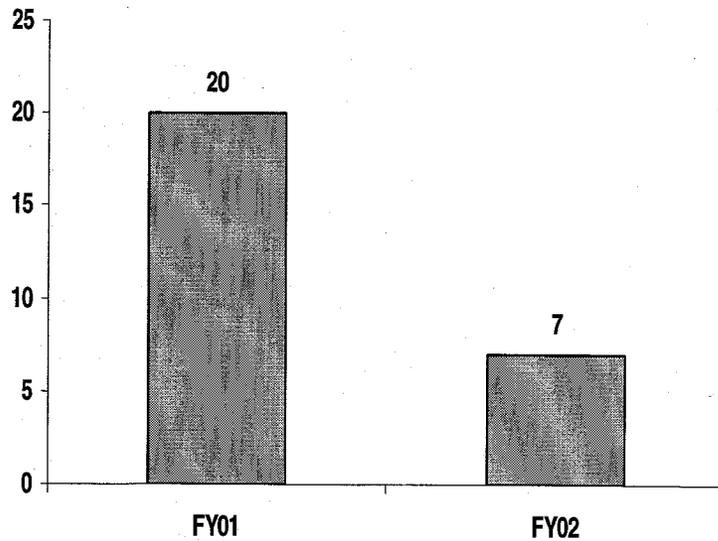
Other

Self-Assessment Completion Status

Org	Required	She Program	Percentage	Office	Percentage	IHOPS	Percentage
DA	1	1	100.00%	1	100.00%	1	100.00%
AD	77	68	88.31%	61	79.22%	38	49.35%
CD	13	12	92.31%	12	92.31%	11	84.62%
ED	82	69	84.15%	65	79.27%	43	52.44%
FD	72	67	93.06%	56	77.78%	55	76.39%
LS	1	1	100.00%	0	0.00%	0	0.00%
MP	10	10	100.00%	10	100.00%	7	70.00%
OS	1	1	100.00%	0	0.00%	1	100.00%
PS	8	7	87.50%	6	75.00%	7	87.50%
QS	16	16	100.00%	16	100.00%	14	87.50%
RS	8	7	87.50%	6	75.00%	6	75.00%
SD	31	23	74.19%	22	70.97%	16	51.61%
TD	31	31	100.00%	31	100.00%	19	61.29%
UP	10	6	60.00%	6	60.00%	5	50.00%
VS	2	2	100.00%	2	100.00%	2	100.00%
Totals	363	321	88.43%	294	80.99%	225	61.98%

Preliminary Self-Assessment Results Compared to Last Year

Number of questions on SHE Program Checklist with 18 or more "NO" answers



Number of questions on Non-Hazardous Area Checklist with 18 or more "NO" answers

