Honeywell Metropolis Works Licensee Performance Review

February 22, 2006

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Introduction

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Vice-President, Integrated Supply Chain

Honeywell Specialty Materials

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Improving Metropolis Performance

Key Objectives:

- Establishing Leadership
- Implementing Work Processes and Structure
- Driving Accountability
- Improving Infrastructure

Improving Performance Overview

Turner Plunkett

Director, Integrated Supply Chain

Fluorine Products, Honeywell Specialty Materials

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Establishing Leadership Team

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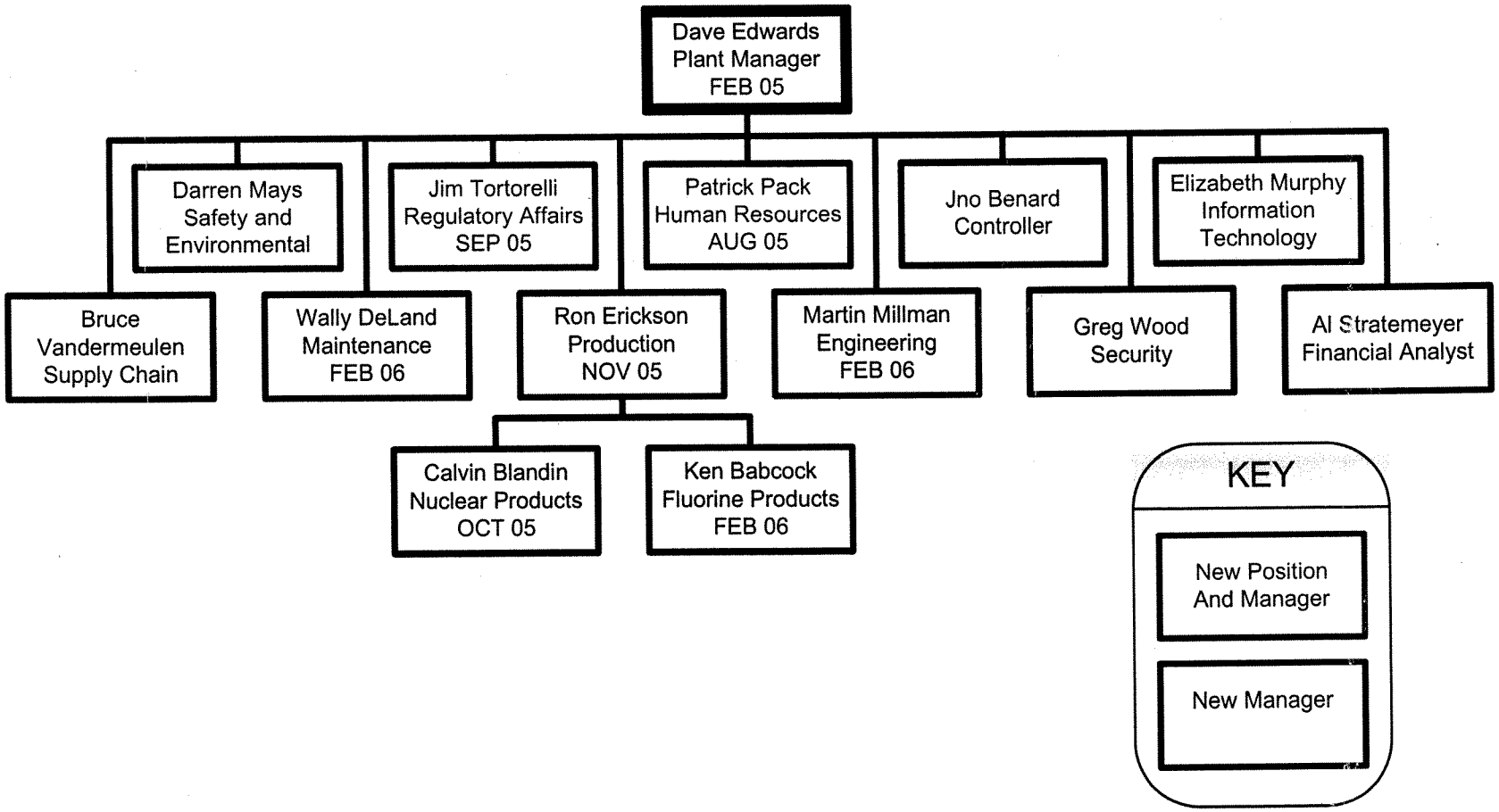

Establishing Leadership: Increasing Organizational Effectiveness

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- Dedicated Regulatory Affairs Manager (SEP 05)
  - Responsibilities include: Health Physics, Procedures, QA
- Production Manager for All Operations (NOV 05)
  - Nuclear Products & Fluorine Products
- Health Physics (HP) Positions (NOV 05)
  - Added one technician and two principal specialists
- Restructured Maintenance Department (JAN 06)
- Training Leader (JAN 06)
- Procedures Leader (FEB 06)
- Engineering Manager (FEB 06)
  - Responsibilities include: Technical Dept. & Process Safety Support

Implementing Work Processes/Structure

- Procedures Upgrade
- Corrective Action program
  - Root Cause Analysis
- Safety Committee and Oversight
- Procedure Controls
- Management Control and Reporting Systems

Management Control and Reporting System

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Area	Day	2/10	2/11	2/12	2/13	2/14	2/15	2/16
Safety	Plan	0	0	0	0	0	0	0
	Actual	0	0	0	0	1	0	
HP	Plan	0	0	0	0	0	0	0
	Actual	0	0	0	0	0	0	
Environmental	Plan	0	0	0	0	0	0	0
	Actual	0	0	0	0	0	0	
Xxxxxxx	Plan	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	Actual		yyy	yyy	yyy	yyy	yyy	yyy
Xxxxxxx	SIOP	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	Actual	yyy	yyy		yyy	yyy	yyy	
Xxxxxxx	SIOP	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	Actual	yyy	yyy	yyy			yyy	
Xxxxxxx	SIOP	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	Actual	yyy	yyy	yyy				yyy
Distillation	SIOP	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	Actual		yyy	yyy			yyy	
Xxxxxxx	SIOP	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	Actual	yyy	yyy		yyy	yyy	yyy	yyy
Xxxxxxx	SIOP	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	Actual				yyy	yyy	yyy	yyy
Xxxxxxx	SIOP	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	Actual		yyy	yyy	yyy	yyy	yyy	

Driving Accountability and Culture Change

- Plant Past
  - Nearly 50 years of Operating History/Culture
  - Chemical Plant with a Nuclear Product
- Establishing Expectations
  - NRC Licensee Culture
  - Safety Conscious Work Environmental ("SCWE")
  - Conduct of Operations
- Plant Future
  - Nuclear Facility with a Chemical Process

Incorporating External Knowledge

- Increased Involvement in Nuclear Industry
  - INPO (SPAC)
    - Technical Advisory Meeting
    - Human Performance Training
  - NRC
    - Registered for Regulatory Information Conference
  - Other Nuclear Resources
    - Nuclear Industry Training & Consultants
    - Independent Review Board Roll-out
    - Independent Causal Investigations
    - Nuclear Energy Institute

Incorporating External Knowledge

- Increased Morristown & Honeywell Specialty Materials Presence
  - Special Emphasis Teams (internal/external experts)
    - General Health & Safety Audits
    - Environmental Program Audits
    - HP Program Audits
    - Bioassay Program Review
    - IH Program Review
    - Site Radiation Survey
    - Fire Safety Audit

Improving Infrastructure

- Increasing Spending
  - Annual Operating Expenses
    - Ramped up from 2003
  - Capital Expenditure
    - Doubled since 2003
  - Maintenance Spending
    - Significant increases
- Pending License Renewal Application
  - Honeywell making long-term investment in the facility
  - Demonstrated commitment to improving operations

Financial Commitment to MTW:
Annual Operating Expenses Indexed to 2001

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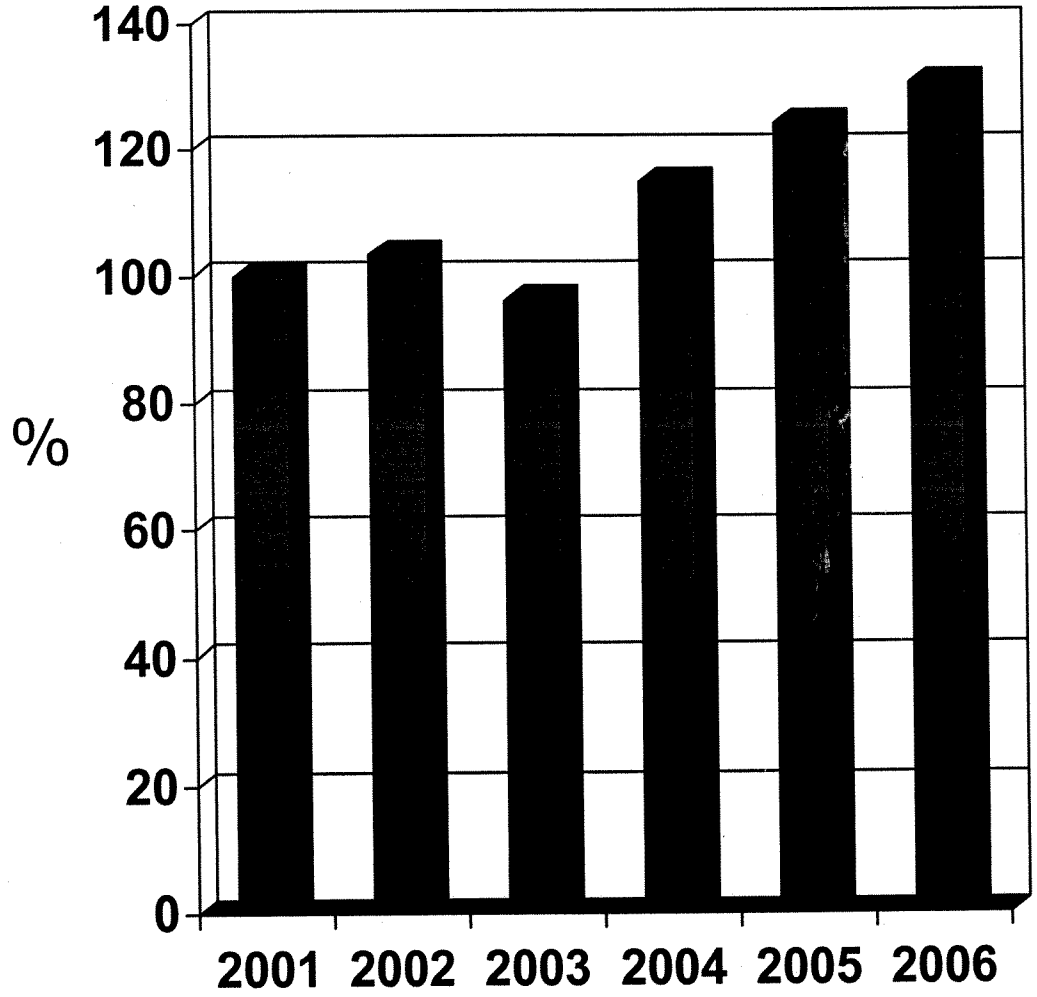

Capital Expenditures & Maintenance Spending Indexed to 2001

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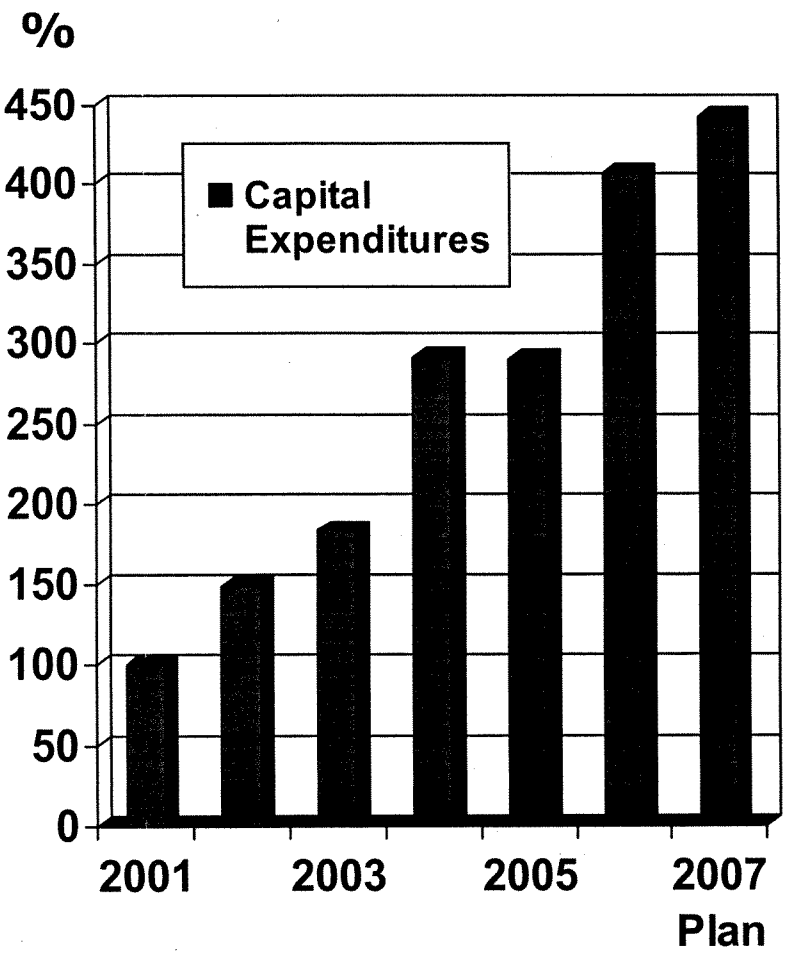

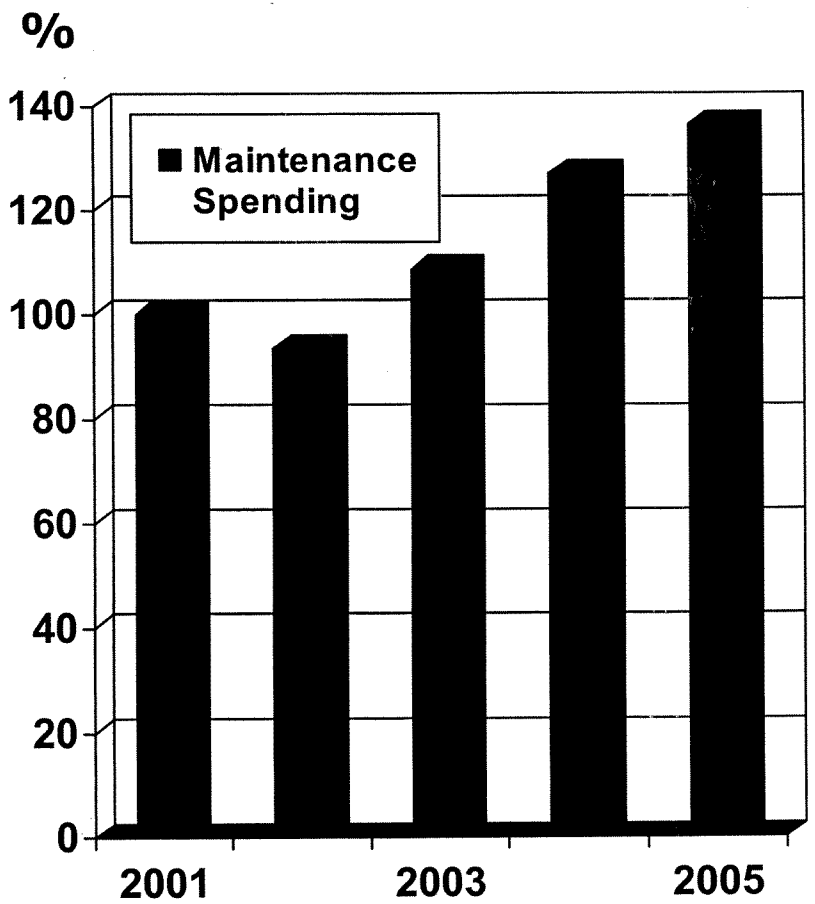

Licensee Performance Review

Dave Edwards, Plant Manager

Metropolis Works Facility

Honeywell Specialty Materials

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Program Areas Needing Improvement: 2004 and 2005 LPR

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Areas	2004 LPR	2005 LPR
Safety Operations	Procedural Adherence Procedure Quality Control Room Operations	Procedural Adherence
Radiological Controls	Radiological Protection Implementation	None
Facility Support	Emergency Response Corrective Action Program License Requirement Implementation	Corrective Action Program Procedure Management
Special Topics	None	None

Performance Area 1 of 3

Procedural Adherence

Procedural Compliance Issues

Actions to Improve Compliance

Efforts Yielding Results

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Procedural Compliance Issues

- 2005 Violations Were All Procedural Issues
  - Taking More Time Than Expected for Recent Procedural and Cultural Changes to Produce the Anticipated Results
- Reasons for Compliance Issues
  - Inconsistent Procedure Quality
    - Highly-Detailed v. Less Formal
    - Insufficient Operator And Engineer Input Into Procedures
    - Shortage of MTW Dedicated Staff for Procedure Development
  - Incomplete Implementation of Management Expectations
    - Resistance to Increased Formality of Procedures
    - Ineffective Management Oversight
    - Personnel Changes and Vacancies

Actions to Improve Compliance

- Complete Procedures Upgrade
  - Full-time Procedure Development Staff
    - Facilitate User Input
    - Procedure Revision Process
  - Consistent Procedure Format and Style Site-Wide
- Focus on Compliance/Management of Change
  - Formal Shift Turnover Process
  - Internal Audits
  - Management Walk-Arounds
  - Training
- Develop Long-Range Compliance Strategy

Completed SCWE & CON OPS Training

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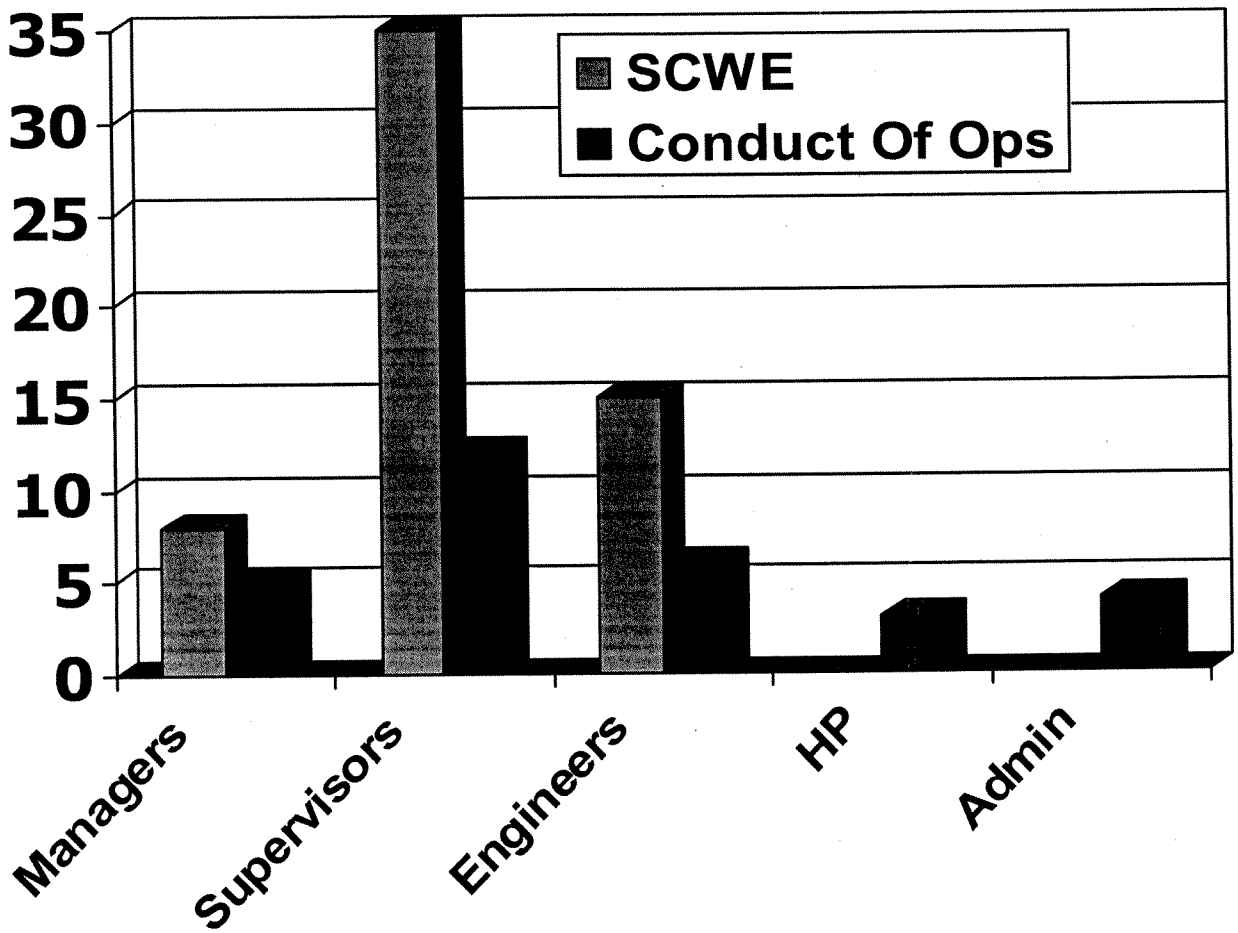

More Classes Scheduled, Hourly SCWE Rollout in March

Efforts are Yielding Results: Four Examples

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- Operator Shutdown Production
  - Recognized Inadequate Emergency Response Staff
  - Halted Production
- Operator Rescheduled Work Until Procedure Approved
  - Planning charge of G-114 refrig when discovered procedure missing.
  - Delayed work until temporary procedure issued; issued permanent procedure.
- Supervisor Delayed Scheduled Work Pending Procedure Approval
  - Temporary procedure for Nash Pump Shutdown had expired.
  - Delayed work until correctly reissued; issued permanent procedure.
- Improved Control Room Formality
  - Response to Inattentiveness Issues
  - Positive Third-Party Comments on Improved Formality

Employees are recognizing compliance issues, internalizing compliance philosophy, and taking appropriate actions.

Performance Area 2 of 3

Corrective Action Program

Corrective Action Program Issues
Improvements in Corrective Actions
Monitoring Corrective Actions

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Corrective Action Program Issues

- Electronic Corrective Action Tracking System (eCATS)
  - Over-population of eCATS
  - Action Tracking Tool, Not Assessment Tool
  - Difficult to Track and Trend Inputs to eCATS
  - Difficult to Use and Sometimes Provides Insufficient Information for Tracking Purposes
- Timing of Implementation of Corrective Actions
  - Some Items Have Taken Longer Than Expected to Complete
- Commitment Tracking
  - Weakness in Identifying, Tracking, Prioritizing, and Sustaining Commitments

Corrective Action Item Progression

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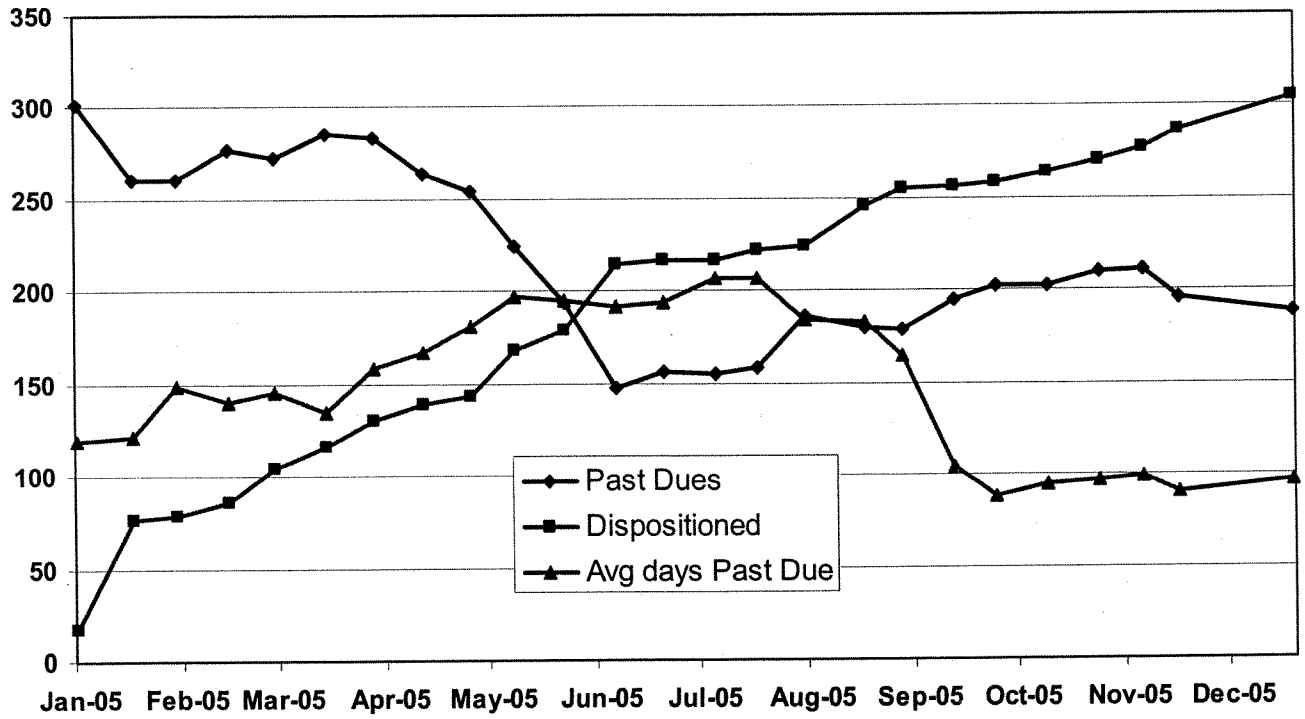

Despite Weaknesses in Corrective Action Program, We Are Making Progress (e.g., Avg. Days Past Due Halved in Last Six Months)

Progress on Completing Commitments

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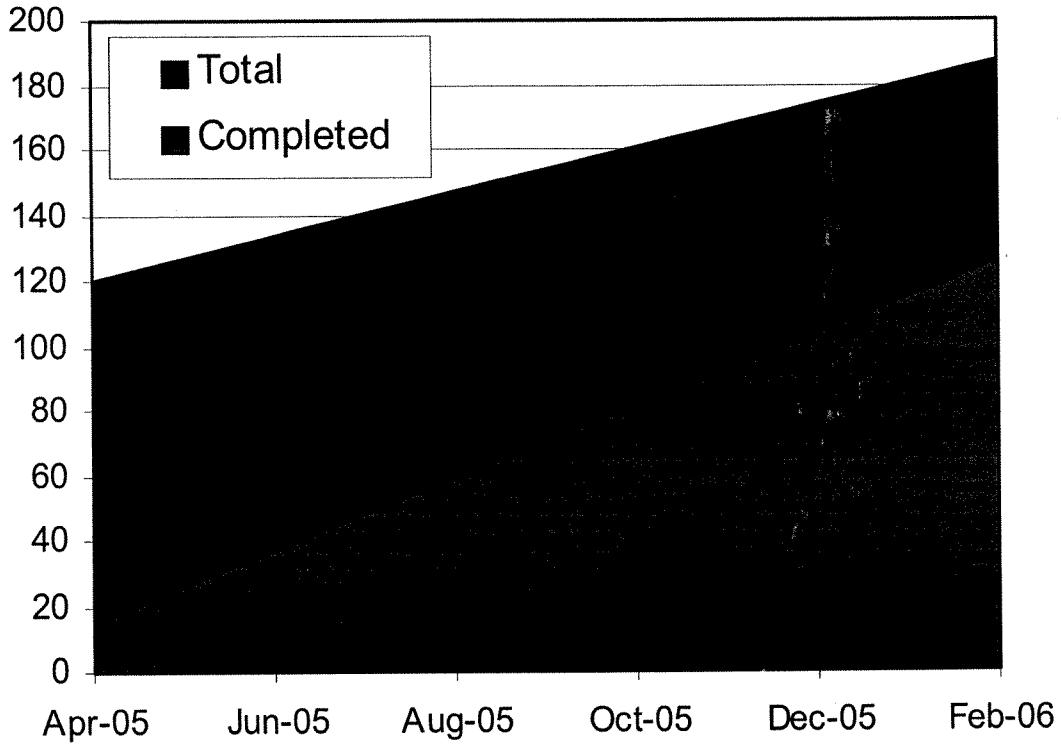
NRC Commitments



Develop Long-Range Compliance Strategy with NRC: Transition From Making New Commitments to Improving Compliance

Improvements to Corrective Action Program

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- Anticipated Software Replacement for eCATS
  - OMNIware Program in Honeywell Specialty Materials
  - Allows assigning of responsibilities, initiation of investigations, trend analysis, & prioritization
  - Improved system response time and access
- Capture of Corrective Actions
  - Corrective Actions Captured and Assigned in MTW 2006 Plan
  - Training for Managers and Supervisors
- Corrective Actions Management
  - Assess Resources for MTW 2006 Plan to Implement.
  - Dedicated Resource to Monitor Corrective Action Program

Improvements to Corrective Actions (continued)

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- Causal Analysis Ability
  - Apollo Root Cause Analysis
    - Trained 26 Employees to Lead Root Cause Analyses
  - Five Why Root Cause Analysis
  - Independent Consultant Causal Analysis
  - Triangle of Prevention ("TOP")

Apollo Root Cause Analysis (FMEA Format)

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INCIDENT REPORT
Purpose: To prevent recurrence, not place blame.

Report Date: 3/8/2005
Date Investigation Started: 3/2/2005
Report Number: 317

I. PROBLEM DEFINITION

WHAT: OS
WHEN: 03
WHERE: South Gaseous Fluorine Plant
SIGNIFICANCE: Recordable injury
Safety: Medical treatment and restricted duty
Environmental: No impact
Revenue: No impact
Cost: Medical bills/workers' compensation
Frequency: 2nd OSHA of 2005

II. CAUSE & EFFECT SUMMARY

On 03/02/05, part in the SGF2 washout wearing PPE mandated by procedure. About 1330 felt pain in his left middle finger. He took Tylenol for this and continued work. At the end of the shift he removed the PPE and placed it in the recycle (safety) barrel. He went to the locker room to clean up and then left the plant. He called shortly after this and told her about the throbbing sensation he had in his finger and face. She told him to return to the plant where she treated, and then gave him medication and instructions on how to use it. He was told to call her if the pain persisted. He did not. On 3/3/05 he reported for work and his injury had gotten worse. He reported to the dispensary and the affected area was given a calcium gluconate bath. It was deemed necessary to give injections to his finger and be placed on light duty. stated that he did not leak test his gloves before starting the job. This leads to an unanswered question: Were the gloves faulty before use or become so during use. The exact time of HF exposure cannot be determined.

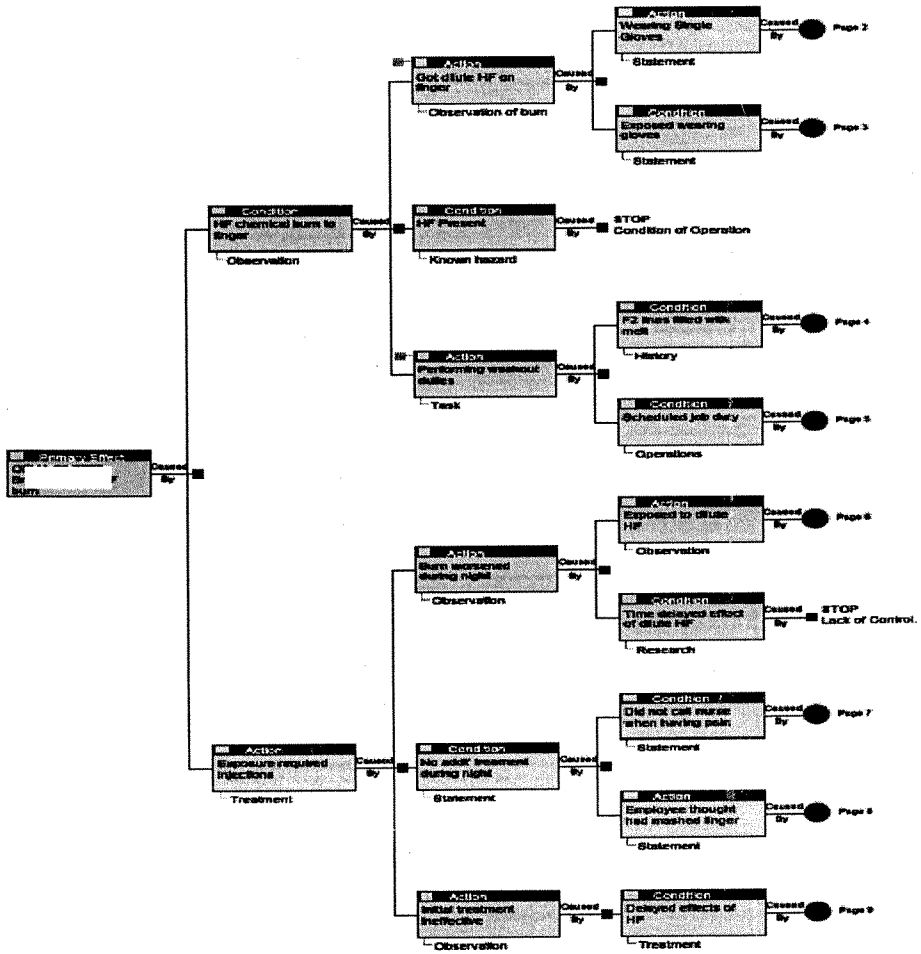
III. SOLUTIONS

CAUSES Deleted for brevity	CORRECTIVE ACTIONS	NAME	DUE DATE

IV. INVESTIGATION TEAM MEMBERS:

Notes:
1. Chart has been checked for rules compliance.
2. Some causes have been purposefully left off the chart.
3. Some cause phrases contain conjunctions and may not be clear, feel free to question them.

References:



Monitoring Corrective Action Program

- Verification and Validation of Corrective Actions
  - Metrics Monitored at Plant Manager's Weekly Staff Meeting (e.g., Overdue Corrective Actions)
  - OMNIware Trending, Tracking, & Analysis
  - Internal Follow-up Audits for Effectiveness

Performance Area 3 of 3

Procedure Controls

Procedure Controls Issues
Actions to Improve Controls

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Procedure Control Issues

- Weaknesses In This Area Similar To Procedural Adherence Issues
- Inconsistent Focus on Managing and Controlling Procedure Changes
  - Shortage of MTW Dedicated Staff for Procedure Control
- Incomplete Implementation of Management Expectations
  - Personnel Changes and Vacancies
  - Ineffective Management Oversight

Improvements in Procedure Control

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- Dedicated Procedure & Document Control Staff
  - Subject Matter Experts for Procedure Control Process
  - Focus on Procedure Management
  - New Document Control System
    - Documentum - Software & Training
    - Help With Procedure Tracking/Review Cycles
- Focus on Compliance with Management of Change Procedures
  - Internal Audits
  - Training Leader

Looking Back, Moving Forward

- Accomplishments in 2005:
  - Successfully Addressed the Following Areas:
    - Emergency Planning
    - Radiation Protection
    - Control Room Operations
    - License Requirement Implementation
  - Analysis, Planning, & Initial Actions Lay Foundation For:
    - Procedural Compliance
    - Corrective Action Program
- Goals for 2006:
  - Complete Procedural Compliance
  - Effective Corrective Action Program
  - Sound Procedure Controls

Concluding Remarks

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- Made Substantial Progress in Many Areas
  - Establishing Leadership
  - Implementing Work Processes and Structure
  - Driving Accountability
  - Improving Infrastructure
- Investments in People and Procedures Are Percolating Through Organization
- Redouble Efforts to Improve Procedural Adherence and Controls
- Continue Efforts to Develop and Implement Effective Corrective Action Program

Creating a Culture That Will Deliver Safe and Reliable Operation

End of Presentation

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