



*Update to NRC on
NFS' Safety Culture Improvement Plan
March 18, 2009*



Tim Lindstrom
Vice President, Operations

Bottom Line Up Front

- Plan on track; management of plan challenging
- Metrics show positive trend
- Assessment is positive
 - Clear improvement, but slower than plan in some areas
- 2011 goal is achievable
- Continuous improvement towards excellence



Constructive Dissatisfaction

- Challenge
 - Difficulty in coordinating safety culture and one-page planning efforts and communicating status
- Action
 - Two senior project managers assigned
 - Two communications positions budgeted
 - Manager hired—start date May 2009
- Desired benefits
 - Better coordination of metrics
 - Better internal and external communication
 - Progress at faster rate



Background & Summary

- Current safety program meets NRC Regulations
- Proactive steps to strengthen culture: Excellence beyond compliance
- Plan on track
 - 87 commitments completed as of 2/22/09 (43% complete)
 - 54 more commitments complete by EOY (70% complete)
 - No overdue actions
- Actions effective
 - Management/labor teamwork
 - A simple example...



NFS Corrective Action Program Entry

Problem ID: 17454

Program Type: Event

Problem Date: 2/23/2009 7:56:00 PM ← Recent Example

Entry Date: 2/23/2009 8:18:41 PM

Problem Status: Resolution In-Progress

Reported By: *REDACTED* ← Experienced Employee (4yrs w/NFS)

Involved Individuals: **REDACTED**

Individuals: **REDACTED**

Notes: While trash was being done on 2nd shift I observed operators putting wads of paper into drums for disposal. I asked them how come they was putting it in the drums without being put in a bag or sleeve and they stated that is what the supervisor told them to do. When I was trained on trash I was told you do not put anything in the drums unless it is in a bag or sleeve and it is scanned for holdup. I pointed this out to the supervisor and she stated that it was paper that was laid on the floor to protect the drums from getting contaminated again after they was cleaned for shipping. I was told that since it was in the scan room it was assumed it was clean and that everyone does this. If the floors are so clean then why do we put paper down to protect them from getting contaminated again. I told her [supervisor] I didnt think this was correct with what the procedure tells us to do but I got no time out as stated in our tools given to us to make sure it is correct way. The drum was sealed and finished without this matter further look into. I feel it should have been halted because I brought up a proper concern and was ignored.

1. Questioning Attitude
2. Identified Problem to Supervisor
3. Didn't Like Answer from Supervisor
4. Asked for "Time Out"
5. Didn't receive a "Time Out"
6. Entered problem in CAP

Making Positive Impact—More Work to Do

Management of Safety Culture Efforts

- Principle: Continuous pursuit of excellence
 - Not a one-time action
 - Need both mid-term and long-term actions
- Long-term Actions
 - Safety Culture Improvement Plan (4-yr outlook)
 - Accountability: Commitments in Corrective Action Program
 - Responsibility: Individual manager assigned
 - Visibility: Periodic tracking and reporting of progress
 - Safety culture project manager (new)
 - One-page planning process



Management of Safety Culture Efforts

- Mid-term Actions
 - One-Page Plans: focal point at one year
 - Web Based (dynamic, visible)
 - Strategies (long term)
 - Objectives including metrics with performance goals – over 130 safety culture related metrics
 - Action Plans with achievement dates and progress updates
 - Some overlap with short-term actions while “working through” process
 - Integrated with strategic business planning process for lasting improvement & management focus
 - One-page plan project manager (new)



One-Page Planning Process

- Annual plan development
 - Assessment of previous year
 - Workshop to develop overall business/safety culture plan
 - Flows down to management 3 to 4 levels (vertical alignment)
 - Participants: 46 (100% of strategic management)
 - Alignment workshop after individual development (horizontal and vertical)
- Monthly execution meetings - Accountability
 - Team review of objectives (metrics) and action plans
 - Focus on exceptions, issues and opportunities
- Fundamental way we manage the company



One-Page Plan Metrics

- Embedded within One Page Plans (over 130)
- Objectives contain specific goals or thresholds
- Three categories
 - Trailing: records past performance, not reliable indicator of future performance. Challenge: cause and effect linkages
 - Leading: indicator of cultural or behavioral change. Challenge: define indicators that are predictive
 - Progress-to-Plan: measures progress of safety culture plan. Challenge: will execution of plan produce desired safety culture change?



One-Page Plan Metrics

- Trailing metrics (15%)
 - Examples:
 - OSHA recordable injury rate
 - Allegations received
 - NRC identified violations
- Leading metrics (25%)
 - Examples:
 - Number of Employee Identified Safety Items
 - Mean time to implement corrective actions
 - Mean time to complete a Human Performance Event Evaluation



One-Page Plan Metrics

- Progress-to-plan metrics – meeting the plan (60%)
 - Examples:
 - Number of professional development activities
 - Number of self-assessments completed
 - Number of Human Performance event evaluation facilitators qualified



Plant Management Routine

- Daily production meeting
- Daily corrective action program meeting
- Weekly operations meeting
- Monthly staff/one-page planning meeting
- Annual assessment/update of plans



Overall Assessment

- Safety culture components are moving in positive direction
 - Trailing metrics positive (a few exceptions – OSHA recordable injuries)
 - Integration time
 - Most leading metrics positive
 - Short base-line
 - Progress on safety culture plan satisfactory
 - Some challenges encountered
 - 2009 will be most challenging due to acquisition



Project Update Details

NFS' Safety Culture Plan



Work Practices

- Accomplishments

- Site-wide implementation Roadmap

- Chartered Site Implementation Team (Dec 07)
 - Selected job-site, organizational & leadership tools
 - Established site-wide event clock criteria
 - Published Human Performance (HuP) Tool Handbook
 - Developed Tool training materials
 - Provided executive sponsors recommendations for pilot area
 - Developed HuPEE facilitation capability
 - Established communication plans
 - Plant-wide kickoff celebration (July 08)
 - Developed Observation card

- Full-time program manager (Sept 08)



Work Practices

- Area Implementation (First-line Perspective)
 - Area Steering Team Membership
 - Advocate provided from Site Implementation Team
 - HuP Fundamentals Training
 - Event Clock Determination
 - House Rules Determination
 - HuP Tool Training
 - Pre-job brief tool- Special gas change out for training practical
 - Critical steps workshop
 - Event Clock Tracking & HuPEE's
 - Identification and work on HuP gaps

Work Practices

- Realized Benefits in Pilot Area to date:
 - Increased interaction with Management—every week
 - House rules improve sense of ownership
 - Pre-job brief before inventory cleanout
 - Employee identified procedure changes for cleanout of overhead lines
 - Increased use of Corrective Action Program
 - Human Performance Event Evaluation (HuPEE) to improve work instructions
 - Partnered with Radiation Technician group to improve equipment distribution at start of each shift

Work Practices

- Assessment: positive trend, progress slower than planned
 - 5 of 35 groups with active steering committees
 - 31 of 35 groups with active steering committees by EOY
 - All employees with active steering committees by mid-2010
 - Security force included
 - Since July 2008, average days between HuP Clock resets increased 32%
 - 22 HuP event evaluations (HuPEEs) conducted
 - Supervisor Coaching/Positive Reinforcement (Observation) Program taking longer than planned
 - Improvement needed in timeliness of HuPEEs
 - Training additional facilitators



Work Practices

- Challenges:
 - Striking proper balance between rapid implementation and proper cultivating of cultural change
 - Resourcing HuPEE facilitation for timely completion of evaluations
 - Pull from employees for faster implementation
 - HuP is a journey.....
Victory is never declared !*



Decision-making

- Accomplishments
 - September 2008: Published formal policy on management expectations for conservative decision-making
 - Issued formal Operational Decision Making Instruction
 - 3 ODMIs evaluated
 - Began trending effectiveness of corrective actions
- July 2009—internal independent audit scheduled



Decision-making

- Assessment: positive trend, on-track
 - Effectiveness evaluation mid-2009
 - Anecdotal evidence positive
 - Dec 2007 shutdown: process ventilation drain lines
 - Feb 2009 enclosure drain capacity calculations
 - Since January 2009, 78% of corrective actions were evaluated by QA as effective
 - Since 1Q08, 16% increase in employee satisfaction with internal communications



Resources

- Accomplishments

- Increased staffing levels for hourly, salary, and safety professionals by 13% and for security by 14%
 - all specific SCuBA recommendations addressed
- Security overtime reduced; tracking workforce overtime
- Security attrition significantly reduced
- Top 10 list: Employee participation in priorities
- Facilities: Structural, roofing, paving, HVAC, ventilation
- Reduced maintenance backlog & time to repair
- Significantly increased capital spending
- Developed long range facilities plan
- Developed long range critical infrastructure plan



Resources

- Assessment: positive trend, on-track
 - Maintenance backlog reduced 51% while maintenance work increased 46%
 - Production area (300 Complex) maintenance requests:
 - 94% repaired within 7 days (average)
 - 76% repaired in 1 day (average)
 - Employee participation in identifying “Top Ten” positive
 - Hourly & Salary manning at ~95% of budget
 - 50% of open salary positions are growth
 - Security overtime reduced 25% last year; staffing all-time high
 - Mean time to complete corrective actions reduced 39%
 - Doubled capital spending every year from 2006–2008

Work Control

- Accomplishments

- Improved LO/TO and Safety Work permit procedures
- Moving from reactive (fix it when it breaks) to preventative (scheduled area overhauls) maintenance
- Benchmarking performed (INPO, B&W, Westinghouse)
- INPO assist visit
- Work management system (WMS) identified, purchased, & installed. Initial system software training completed. Using industry best practice INPO AP-928 as guidance
- Stronger maintenance supervision & planning groups
 - Backshift/weekend support
- For 2009: hire staff, develop procedures, train all users

Work Control

- Assessment: stable, delayed
 - Partial WMS launch (software) in October 2009
 - Meets Computerized Maintenance Management System (CMMS) commitment date
 - Full implementation of capability planned for 3Q10



Corrective Action Program (CAP)

- Accomplishments
 - Additional resources hired
 - Improvement in time to complete most CAs
 - Daily screening by senior management of problems
 - Anonymous reporting enabled
 - Added employee feedback for corrective actions
 - Expanded & increased Tap Root ® training
 - Implemented Human Performance Event Evaluations
 - Launched Corrective Action Review Board
 - Integrated security into plant-wide CAP
 - Increased number of problems reported while decreasing the severity of reported problems

Corrective Action Program (CAP)

- For 2009:
 - Effectiveness of corrective actions
 - Develop common cause analysis procedures
 - Develop track/trend procedures
 - Develop departmental coordinators

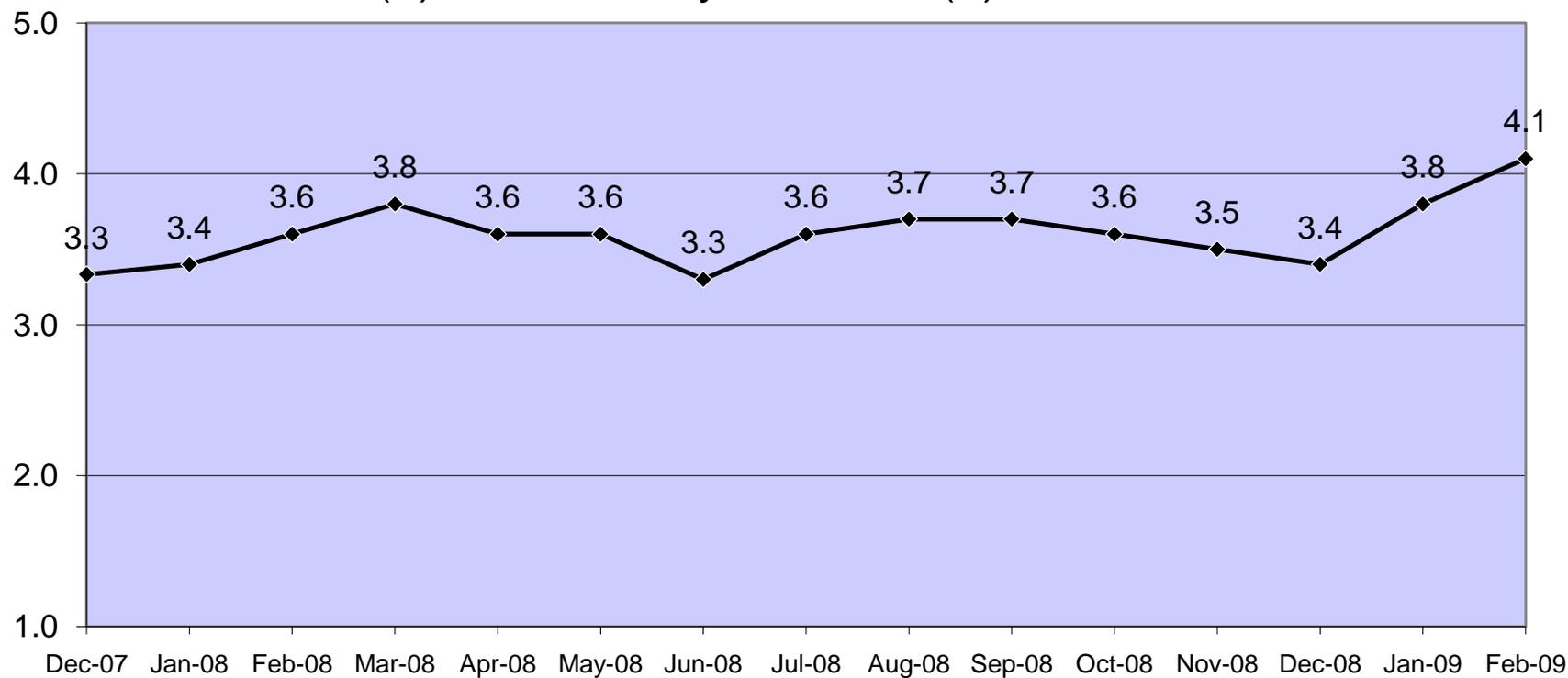


Corrective Action Program (CAP)

- Assessment: positive trend, on-track
 - Increased CAP entries by 13% in 2008; 132% since 2007 while decreasing the severity of problems reported
 - High Severity: “5” in 2006 to “0” in 2008
 - Moderate Severity: 5.2% in 2006 to 4.9% in 2008
 - Increased the number of employee identified safety items by 152% since March 2008
 - Time to complete CAs – mixed results. Since 2006:
 - 39% improvement in low & medium priorities; 205% increase in CAs
 - 15% slower in high and very high priorities; 4% increase in CAs
 - In 2007, hired CAP Manager and analyst
 - In 2009, hired additional CAP analyst



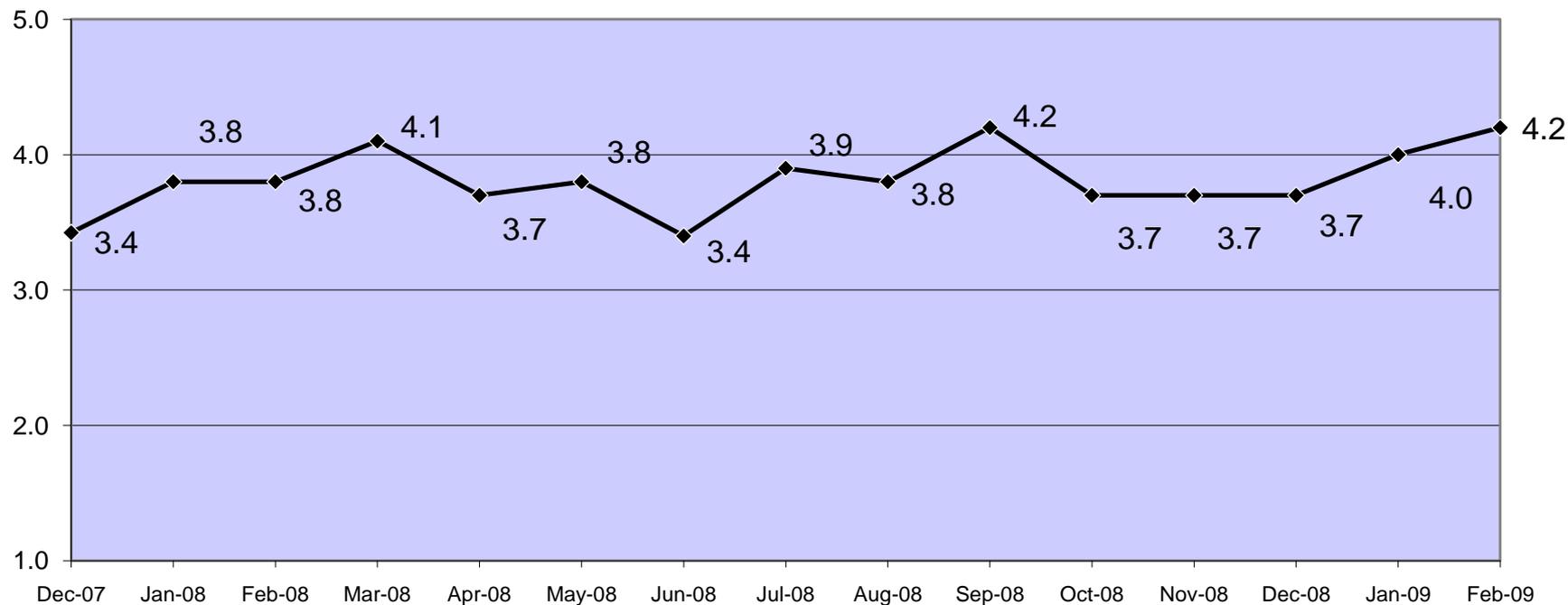
How satisfied are you with the overall process from initial identification of the problem through problem closure? Not Satisfied (1) to Extremely Satisfied (5)



How satisfied are you with your supervisor's (or manager's as applicable) response to your identification of this problem? Not Satisfied (1) to Extremely Satisfied (5)

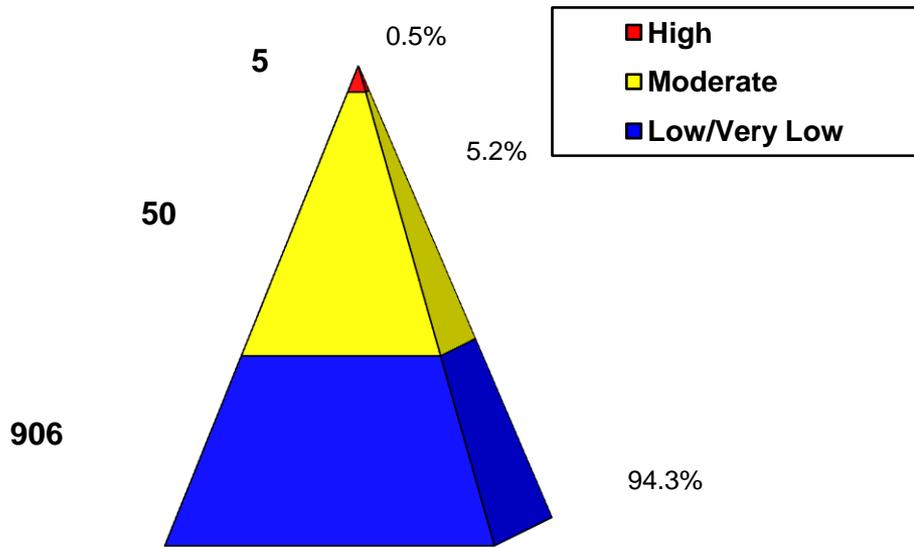


How satisfied are you with the electronic communications (e-mails and notifications) from PIRCS you received associated with this problem? Not Satisfied (1) to Extremely Satisfied (5)

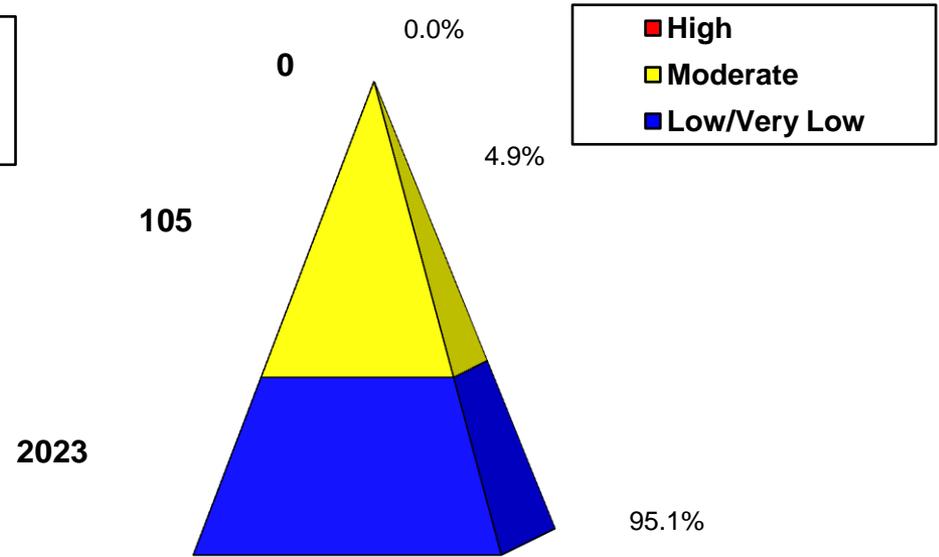


Problem Identification Safety Risk

Erwin Plant



PIRCS Risk Type Breakdown for all Events and EISIs identified between 01/01/06 and 12/31/06



PIRCS Risk Type Breakdown for all Events and EISIs identified between 01/01/08 and 12/31/08

Operating Experience (OE)

- Accomplishments
 - Monthly review of industry-wide safety occurrences
 - Human performance event evaluation reports
 - Human performance event plant-wide clock reset reports
 - Formal Evaluation of NRC Communications
 - Tritium containing exit signs
 - NRC IN & RIS discussed at Safety Council Meetings
 - Distribution of INPO communications
 - Dissemination of industry safety information
 - HF and chemical exposure standards at fuel cycle facilities
 - Bi-weekly call with Industry & NEI
 - Monthly call with B&W (Ops, Safety, Environmental)

Operating Experience (OE)

- For 2009:
 - Assign OE project lead
 - Establish Implementation Team
 - Benchmark OE
- Assessment: Stable, on-track
 - Over 44 NRC communications formally discussed & documented in Safety Council meetings since 2007
 - Most current OE actions less structured but being performed
 - Interim measures adequate

Self- and Independent-Assessments

- Accomplishments
 - Communicated management expectations for continuous improvement
 - Established departmental assessment program; quarterly oversight with senior management
 - Established oversight department independent of Ops
 - Organizational Excellence Policy
 - Multi-year assessment schedule that includes benchmarking, INPO assist visits, internal/external/self-assessments
 - Completed McDermott corporate audit of ES&H
 - Security conducting robust & numerous self-assessments
 - Tracking internal safety metrics

Self- and Independent-Assessments

- Assessment: Stable, major initiatives planned 2009
 - For 2008, 1,103 observations conducted, which includes 70 observations conducted by security
 - Since 2006, the number of internal independent assessments has increased by 53%
 - Hired 2 quality engineers in Nuclear Oversight Department
 - 6-months between security staff OSHA recordable events



Safety Conscious Work Environment

- Accomplishments

- Employee Concerns Program: Effective: April 6, 2009.

- Contractors included

- Independent of line-management

- Periodic visits with contractor management

- Preventing, Detecting, and Mitigating Perceptions of Retaliation

- Employees and contractors trained

- Contractor policies updated

- Language drafted for inclusion in future contracts

- SCWE policy formally provided to contractors



Safety Conscious Work Environment

- Assessment: positive trend, on-track
 - Increase in employee and contractor identified safety issues
 - Anonymous problem reporting enabled
 - Reduced Allegations
 - 2004–2006: 17
 - 2007–2008: 6



Accountability

- Accomplishments

- Daily senior event report screening
 - Daily accountability (positive and negative)
 - Individual responsibility and ownership
- Behavioral management training (Aubrey Daniels)
- 2009: Performance Evaluation Program (PEP)
- 2009: Establish Business Program Management
- 2010: Upgrade to PEP
 - Graded attributes for reflecting safety as overriding priority
 - Part of B&W Integration



Accountability

- Assessment: Positive trend, on-track
 - Rewarding Behaviors that Reflect “Safety Strong”
 - 103 Good Catch Awards
 - ~50% given to hourly workers
 - ~10% given to contractor employees
 - Two contractors removed from site while completing remedial actions

DLK-09-018
February 27, 2009

Officer Marvin J. Ratliff
NFS Security Operations Supervisor

Officer Ratliff:

I was made aware on February 25, 2009 of the construction safety situation in which you intervened to stop an unsafe act being performed by a contractor working on our site. By stepping outside of your normal role and the activity you were conducting to immediately rectify the safety condition you exemplified the exact behaviors that we all need to have. We will never know how the situation would have ended had you not intervened, but your action assured that the individual was able to go home uninjured. Thank you. The company, taking actions initiated by your report and other current efforts to strengthen construction safety, will do everything we can to ensure that the situation will not be repeated on our plant site.

Sincerely,



Dave Kudsin
President



Continuous Learning Environment

- Accomplishments

- Extensive Benchmarking

- HuP, ECP, ODM, QA, Work Management, DOE-ISMS, OE

- Memberships in and Interaction with Professional Societies

- INPO, ANS, EFCOG

- American Society for Industrial Security (ASIS)

- Professional Presentations to ANS/INPO on March 6th Event

- Professional Development metrics tracked

- Professional Development Goals implemented in 2008

- DOE ISMS annual conference participation

- INPO Professional Development Courses



Continuous Learning Environment

- Assessment: Positive trend, on-track
 - Doubled professional development budget for 2009 over historical values
 - >70% of professional development goals met in 2008



Organizational Change Management

- Accomplishments
 - Engineering change process (tollgate)
 - Internal Authorized Change process; Security included
 - March 2009: Formal ODM process roll-out
 - Configuration Management (Security included)
 - On-track to meet all NRC commitments
 - Established configuration management department
 - On-line system in place: business process change
 - April 2009: External independent assessment by INPO



Organizational Change Management

- Assessment: Positive trend, on-track
 - Violation all pre-date OCM changes
 - CM data input status:
 - Downblending and LEU loading station complete
 - FMF: ~2 weeks ahead—ECD: June 30, 2009
 - CDL: ~2 weeks ahead—ECD: April 6, 2009



Safety Policies

- Accomplishments
 - New Policies/Workforce Trained
 - Safety & Compliance Culture Policy
 - Safety & Compliance Conscious Work Environment Policy
 - Organizational Excellence Policy
 - Core Values Policy
 - B&W Safety Statement Signing
 - Security Attentiveness Policy
 - Ethics Training
 - All employees trained
 - 2009: Contractor Qualification, Fall Protection, Ergonomics Program Enhancements
- Assessment: Stable, on-track

Addressing Safety Culture Components

NRC Safety Culture Component	NFS Safety Culture Plan	Effectiveness Grade
Work Practices	Slower than plan	Positive Trend
Decision-making	On-track	Positive Trend
Resources	On-track	Positive Trend
Work Control	Delayed	Stable
Corrective Action Program	On-track	Positive Trend
Operating Experience	On-track	Stable
Self- and Independent-Assessments	On-track	Stable
Environment for Raising Concerns	On-track	Positive Trend
Preventing, Detecting, and Mitigating Perceptions of Retaliation	On-track	Positive Trend
Accountability	On-track	Positive Trend

Addressing Safety Culture Components

NRC Safety Culture Component	NFS Safety Culture Plan	Effectiveness Grade
Continuous Learning Environment	On-track	Positive Trend
Organization Change Management	On-track	Positive Trend
Safety Policies	On-track	Stable