



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
61 FORSYTH STREET SW SUITE 23T85  
ATLANTA, GEORGIA 30303-8931

October 17, 2003

Mr. J. Morris Brown  
Vice President - Operations  
United States Enrichment Corporation  
6903 Rockledge Drive  
Bethesda, MD 20817-1818

SUBJECT: SAFETY CONSCIOUS WORK ENVIRONMENT AT THE GASEOUS  
DIFFUSION PLANTS

Dear Mr. Brown:

A publicly noticed meeting between the United States Enrichment Corporation (USEC) and the U. S. Nuclear Regulatory Commission (NRC) was held at the NRC Region II office in Atlanta, Georgia, on October 14, 2003. The purpose of this meeting was to discuss your efforts to ensure a safety conscious work environment at the gaseous diffusion plants. We appreciate the information you provided during the meeting, and we will continue to monitor the effectiveness of your ongoing efforts.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Please contact Mr. Jay Henson, Chief, Fuel Facility Inspection Branch 2, at (404) 562-4731 if you or your staff have any questions. We appreciate your cooperation in this matter.

Sincerely,

/RA/

Jay Henson, Chief  
Fuel Facility Inspection  
Branch 2

Docket Nos. 070-7001  
070-7002

License Nos. GDP -1 and GDP-2

Enclosures: 1. Attendance List  
2. Licensee Presentation

cc: (See page 2)

cc w/encls: R. B. Starkey, Paducah General Manager  
 S. R. Cowne, Paducah Regulatory Affairs Manager  
 P. D. Musser, Portsmouth General Manager  
 S. A. Toelle, Director, Nuclear Regulatory Affairs, USEC  
 Paducah Resident Inspector Office  
 R. M. DeVault, Regulatory Oversight Manager, DOE  
 W. D. Seaborg, Paducah Site Manager, DOE  
 Janice H. Jasper, State Liaison Officer  
 T. A. Brooks, Manager, Nuclear Regulatory Affairs  
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 C. O'Claire, State Liaison Officer

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NAME	D. Hartland				
DATE	10/15/2003	10/ /2003	10/ /2003	10/ /2003	
E-MAIL COPY?	YES	NO	YES	NO	YES NO
PUBLIC DOCUMENT	YES	NO			

ATTENDANCE AT THE OCTOBER 14, 2003, MEETING BETWEEN THE NRC  
AND UNITED STATES ENRICHMENT CORPORATION

United States Enrichment Corporation Attendees

J. Brown, Vice-president, Operations  
P. Musser, General Manager, Portsmouth Gaseous Diffusion Plant  
R. Starkey, General Manager, Paducah Gaseous Diffusion Plant  
S. Toelle, Director, Nuclear Regulatory Affairs, USEC  
S. Penrod, Paducah Plant Manager  
S. Cowne, Paducah Regulatory Affairs Director  
T. Brooks, Portsmouth Regulatory Affairs Director  
B. Reep, Portsmouth Employee Concerns Program Manager  
R. Wetherell, Paducah Employee Concerns Program Manager  
M. Smith, Licensing Manager, USEC

NRC Attendees

L. Reyes, Regional Administrator, RII  
D. Collins, Director, Division of Fuel Facility Inspection, RII  
C. Evans, Regional Counsel/Enforcement Officer, RII  
J. Henson, Chief, Fuel Facility Inspection Branch 2, RII  
D. Ayres, Chief, Fuel Facility Inspection Branch 1, RII  
K. O'Brien, Chief, Materials Inspection Branch, RIII  
D. Martin, Project Manager, NMSS  
B. Bartlett, Senior Resident Inspector, Paducah Site  
D. Hartland, Senior Fuel Facility Inspector, RII



**Safety Conscious Work Environment**

**At the Gaseous Diffusion Plants**

October 14, 2003

# Agenda

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- Introduction  
Morris Brown  
Vice President, Operations
- PGDP Safety Conscious  
Work Environment  
Russ Starkey  
PGDP General Manager
- PORTS Safety Conscious  
Work Environment  
Pat Musser  
PORTS General Manager

# Background

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- In December 1997, the **NRC** requested that USEC investigate whether a “chilling effect” had developed or was developing at the GDPs
- In 1998, and again in 2000, USEC engaged SYNERGY Consulting Services to independently assess the nuclear safety culture at the GDPs
  - The nuclear safety culture was rated as “good
  - The SCWE was rated as “very good
  - Several specific areas for improvement were identified

# Current State of the GDP SCWE

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- The SCWE at USEC's GDPs has improved over a several year period of significant changes in our business
- USEC has implemented a SCWE enhancement strategy that includes improvement to:
  - Employee Concerns Program
  - Training
  - Policy/guidance
- Plant and corporate management are cognizant of the current state of the SCWE at the plants
- USEC is continuing to take actions to manage or eliminate the barriers to a SCWE so that employees continue to feel free to identify problems without fear of retribution

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**Paducah Gaseous Diffusion Plant  
Safety Conscious Work Environment**

**Russ Starkey, General Manager**



## PGDP: SCWE Update

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- Review of SCWE background information from last meeting
- Current SCWE trends
- Analysis of referred allegations received since last meeting
- SCWE initiatives taken and planned with corresponding results

## PGDP: SCWE Background

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- SYNERGY Surveys
  - Overall 2000 SCWE rating: “Very good” with “Notable”( 8%) Improvement from 1998
    - 98% reported willingness to report concerns to management or write ATR; 91% would go up management chain if unsatisfied
    - 94% received positive reaction from supervisor when raising concerns

## PGDP : SCWE Background (cont'd)

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- Independent Industry Assessment (February 2001)
  - Environment does not have barriers that discourage individuals from raising concerns
  - Strong/encouraging management message
  - Improving supervisor/employee relations
  - Industry recognized training
- NRC RI Inspection (IR 07007001/2001-007)
  - “Individuals onsite would raise a perceived safety issue by utilizing the established plant processes or NRC process for reporting safety concerns.”

## PGDP: SCWE Background (cont'd)

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- SCWE Barrier Analysis
  - Why do some individuals continue to bring their concerns to the NRC?

## PGDP: SCWE Background (cont'd)

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### Potential Generic Barriers to a SCWE

- Management Behaviors
- Fear of Retaliation
- Cultural/Self-Serving Reasons
- Weaknesses in Internal Processes

## PGDP: SCWE Trends

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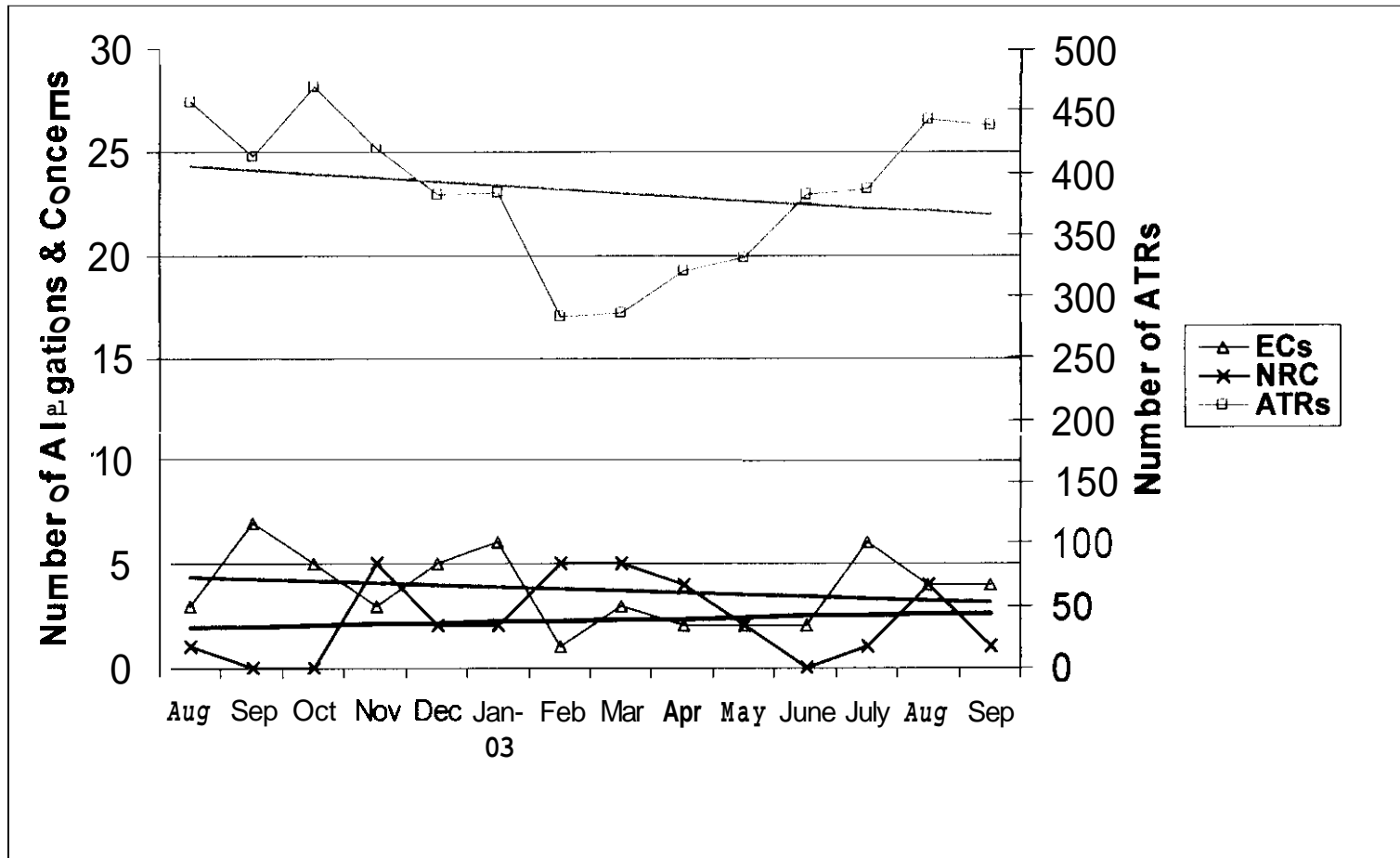
- The long term trend shows the number of NRC allegations has been declining
  - 53 in 2000
  - 35 in 2001
  - 19 in 2002
  - 24 through September 2003
- 2003 numbers reflect effects of strike and security ICM implementation

## PGDP: SCWE Trends (cont'd)

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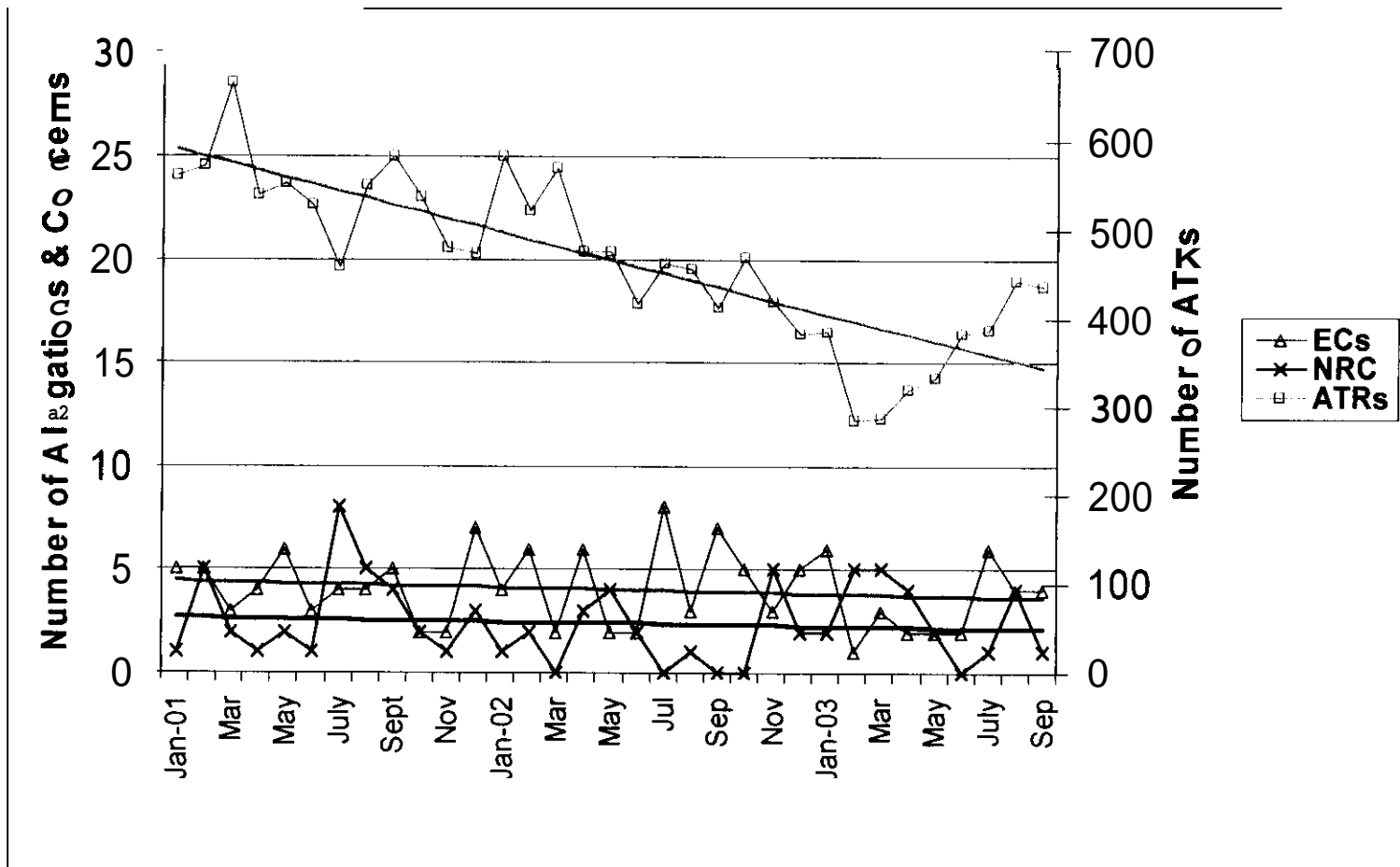
- The number of NRC discrimination allegations has been declining
  - 16 in 2000
  - 9 in 2001
  - 5 in 2002
  - 3 through August 2003

## PGDP: SCWE Trends (cont'd)





## PGDP: SCWE Trends (cont'd)



## PGDP: SCWE Trends (cont'd)

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- ECP Anonymous Concerns Continue to Decline
  - 13 in 1999
  - 8 in 2000
  - 4 in 2001
  - 5 in 2002
  - 0 through September 2003

## PGDP: Analysis of Referred Allegations

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- USEC received 14 NRC referred allegations since August 2002
  - 13 of these were received in 2003
- Allegations were reviewed for potential trends relating to:
  - Area of concern
  - Internal vs. external reporting
  - Chilling effect, if any

## PGDP: Analysis of Referred Allegations (cont'd)

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### Area of Concern

- 6 allegations were related to the labor union strike
- 6 allegations were related to new security requirements resulting from 9/11 attack
- 1 allegation related to an instance where individuals were reported for not following procedures
- 1 allegation related to an individual who was observed not following company policy

## PGDP: Analysis of Referred Allegations (cont'd)

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### Internal vs. External Reporting

- None of the concerns related to the strike were reported internally
- 4 of 6 concerns related to ICM implementation were not reported internally
- The 2 concerns related to other areas were reported internally

## PGDP: Analysis of Referred Allegations (cont'd)

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### Chilling Effect

- One concern associated with a failure to follow procedures alleged a chilling effect
  - Reported internally
  - Investigation determined no chilling effect

# PGDP: SCWE Actions

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## Actions Taken Since August 2002

- Site-wide
- Organization specific
- Strike related

## PGDP: SCWE Actions (cont'd)

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### Site-Wide Actions

- SCWE issues added as a safety meeting topic
- Case studies were provided to senior managers to reinforce SCWE principles
- Senior managers to conduct case study with subordinate managers



## PGDP: SCWE Actions (cont'd)

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### Site-Wide Actions (continued)

- Senior managers review SCWE trends each month
- Managers ensure performance plans promote a SCWE
- Group level managers prepared SCWE articles for PGDP newsletter

## PGDP: SCWE Actions (cont'd)

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### Organization Specific Actions

- One group previously discussed as not showing desired improvement
  - Plant manager met with group to determine actions needed to increase use of internal processes for raising concerns

## PGDP: SCWE Actions (cont'd)

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### Organization Specific Actions (continued)

- Implemented plan to address organization issues identified at group meetings
  - Removed layer of management and changed some managers
  - Restructured the group areas with more clearly defined job responsibilities

## PGDP: SCWE Actions (cont'd)

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### Organization Specific Actions (continued)

- Revised compensation policies to correct perceived inequities
- Redefined job descriptions to ensure equitable distribution of work load
- Positive results noted to date
- Continuing to monitor results

## PGDP: SCWE Actions (cont'd)

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Organization Specific Actions (continued)

- Other organizations

## PGDP: SCWE Actions (cont'd)

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### Strike Related Actions

- Business Continuity Plan
  - Established management expectations for receiving returning workers
  - Established mentoring program to assist managers in handling returning worker issues
  - Maintained off-shift management oversight

## PGDP: Safety Culture Initiative

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- Established team of senior personnel to assess PGDP's overall safety culture with respect to:
  - Davis-Besse lessons learned
  - IAEA safety culture framework
- Team recommendations expected by November 2003
  - Evaluating actions already completed at Portsmouth

# PGDP Summary

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## SCWE at PGDP

- Increased awareness of principles/expectations
- No fundamental reluctance to raise concerns internally, or fear of retaliation for doing so
- Recent allegation trends affected by extraordinary events



## PGDP Summary (cont'd)

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### SCWE at PGDP (continued)

- Planned site-wide SCWE actions adequate for most organizations
  - Organization specific actions initiated where warranted
- Overall progress is being made, trends are in the right direction
- Continue to monitor internal reporting trends

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# **Portsmouth Gaseous Diffusion Plant Safety Conscious Work Environment**

**Pat Musser, General Manager**

# PORTS: SCWE Update

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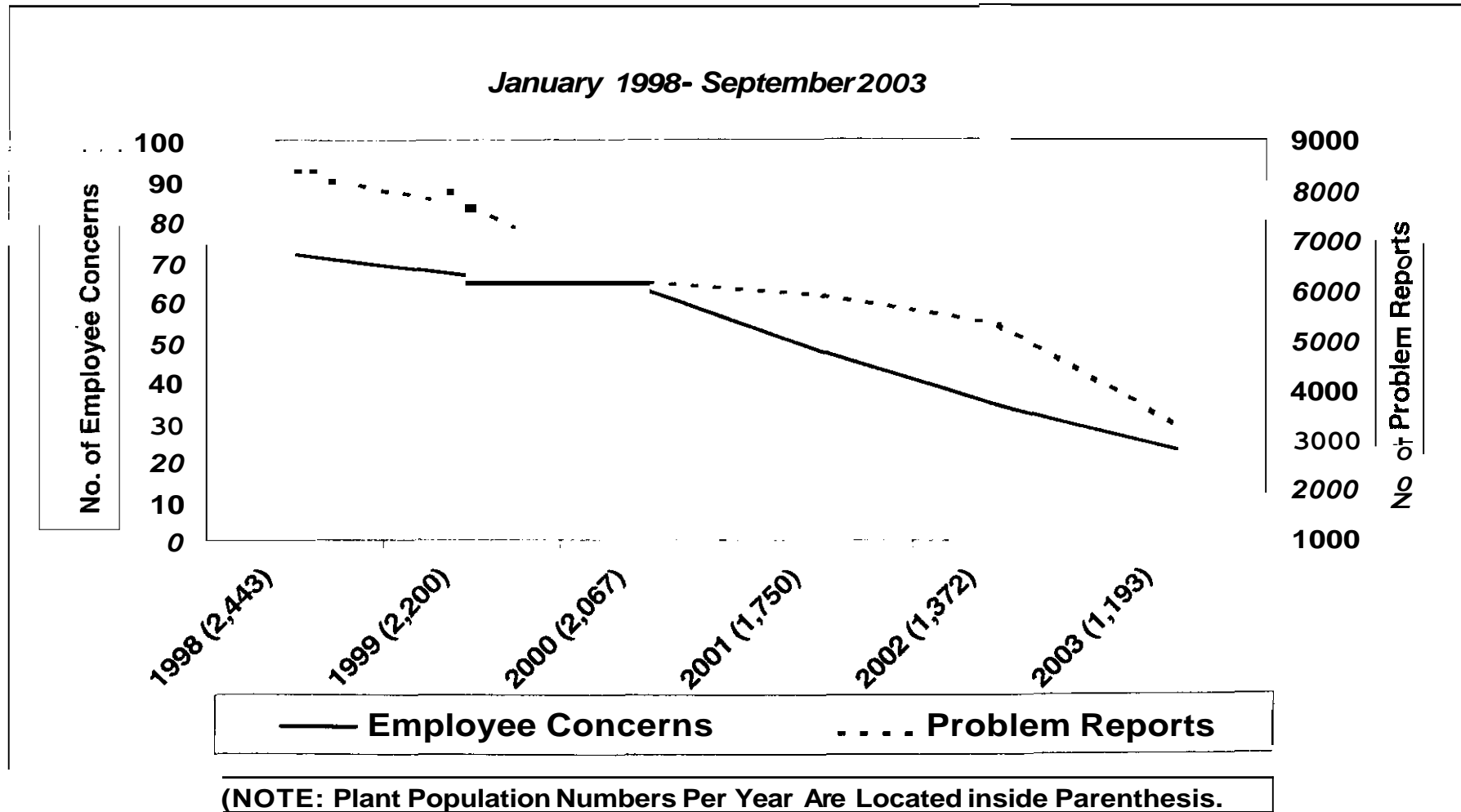
- SCWE History
- SCWE Trends
- Analysis of Referred Allegations Since August 2002
- SCWE Improvement Initiatives
- Summary

# PORTS: SCWE History

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- SYNERGY Surveys
  - Overall 2000 SCWE rating: “Very good” with 4% Improvement from 1998
    - ▶ 97% reported willingness to report concerns to management or write PR; 90% would go up management chain if unsatisfied
    - ▶ 92% received positive reaction from supervisor when raising concerns
- “Independent Industry Assessment (February 2001)”
  - Environment does not have barriers that discourage individuals from raising concerns
  - Strong/encouraging management message
  - Improving supervisor/employee relations
  - Industry recognized training
- NRC RIII Inspection (IR 07007002/2001-007)
  - “Based on random samples of employees interviewed by the inspectors, the plant staff was not reluctant to identify perceived safety issues by using the established plant processes.”

# PORTS: SCWE Trends



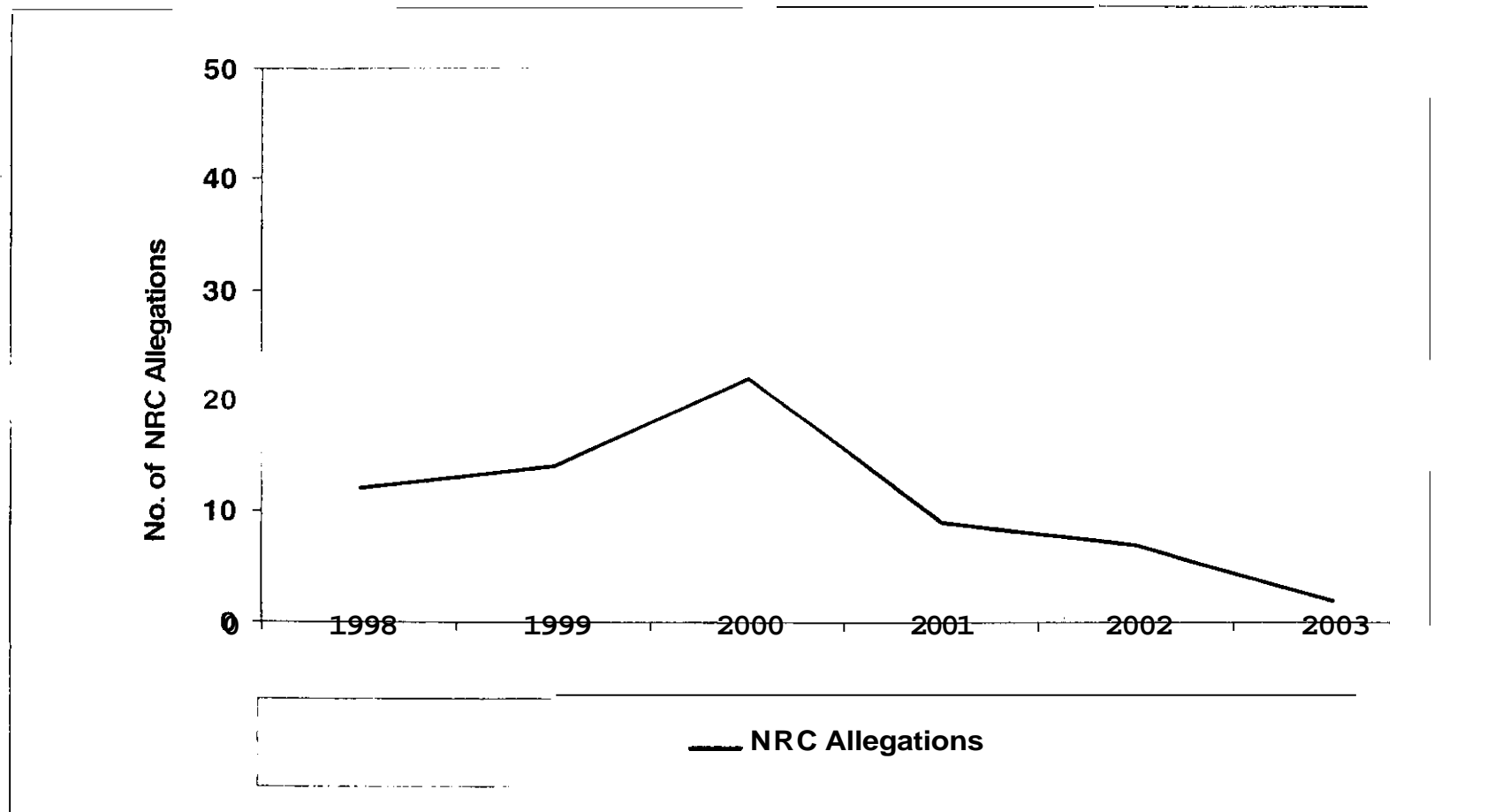
## PORTS: SCWE Trends (Cont'd)

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- Internal reporting system trends indicate employees continue to use Problem Reporting System and Employee Concerns Program
- ECP Anonymous concerns continue to decline
  - 8 in 1998
  - 5 in 1999
  - 4 in 2000
  - 2 in 2001
  - 2 in 2002
  - 1 through September 2003

## PORTS: SCWE Trends (Cont'd)

- Decrease in allegations to the NRC in 2003 over previous years



# PORTS: Analysis of Referred Allegations

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- Four allegations referred from NRC since August 2002
  - One of the four allegations consisted of four concerns
  - Examples were reviewed to determine how they relate to the effectiveness of USEC initiatives to improve SCWE at PORTS

## Grouped Concerns By Functional Organization

- The seven PORTS concerns were found to be in two functional organizations
  - Group A - six concerns
  - Group B - one concern



# PORTS: Analysis of Group A Concerns

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Group A - Use of internal processes to raise the issue

Occurred in four of the six Group A concerns

- 2 of 6 - Concerns in Problem Report System
- 2 of 6 - Operational issues in Problem Report System discussed in allegation
- 2 of 6 - No reference in internal system

Group A Trends

- Six concerns were from the same organization
  - Four of the operational concerns were reported through the problem reporting system and were addressed by USEC management
  - USEC's investigation did not substantiate any of the concerns

Group A Observations

- Concerns handled properly
- Prior to receiving allegations, initiatives taken to improve Facility Management

## PORTS: Analysis of Group B Concerns

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Group B - Use of internal processes to raise the issue - None

Although alleged, inappropriate behavior did not occur in this concern

- Independent investigation determined that employees in the affected group felt free to raise concerns and issues and would continue to do so
- Those interviewed felt that communication within the work group was very good

Group B Trends

- There were no trends identified, as this involved only one example
- Several supervisory and non-managerial employees were interviewed regarding the concern and no trends were identified.

Group B Observations

- Employees completed SCWE training prior to this alleged incident
- Those interviewed did not believe that SCWE issues exist in their areas
- Supervision was described as responsive to raised concerns and very safety conscious
- There was no evidence of a chilled environment found

## PORTS: SCWE Initiatives

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Initiative - Continue to Improve SCWE

**Goal:** Reduce the number of NRC Allegations

**Actions:**

- Refresher training for employees on SCWE included as a safety meeting topic
- Case study review performed with organizational, group and section managers to reinforce SCWE principles
- Briefing sessions conducted for managers on handling concerns raised by employees
- ECP manager met with selected organizations to identify work environment issues affecting SCWE
- Evaluate options for future SCWE training for managers

## PORTS: SCWE Initiatives (Cont'd)

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Initiative - Improve Human Performance

**Goal:** Decrease human error rates and procedure noncompliances

**Actions:**

- Conducted several actions involving mentoring, trending, training and evaluating effectiveness of corrective actions
- Conducted a course for managers on maintaining a healthy Nuclear Safety Culture
- Provided abbreviated version for employees through monthly safety meetings
- Nuclear Safety Culture training planned for managers in 2004

## PORTS: Summary

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- SCWE Initiatives taken in the past and planned for the future are having positive effects
- Number of allegations going to the NRC continues to decline
- Based on SCWE training and recent actions taken in regard to these examples, USEC believes the SCWE program is effective