

# Environmental Management System Management Review

Environmental Science Center

December 16, 2003



# Objective

- ISO14001 – Management Review
  - Is the EMS suitable, adequate and effective?
  - Do we need to make changes?

# Management Review



# ESC Environmental Policy

- Regulatory compliance
- Pollution Prevention
- Providing appropriate training and education
- Continual Improvement



# Objectives and Targets

- Created to fulfill ESC Environmental Policy
- EMS Targets Status Report
- Launch EMS Workgroups
- Implement Workgroup Recommendations

# Some Definitions

- ASPECT = “an element of the organization’s activities, products or services that can interact with the environment” (ISO 14001)
- Example: Waste Generation is an “aspect” of ESC analysis of chemical samples

# Some Definitions

- Environmental Management Program (EMP) = facility's procedures and tools used to control, measure and monitor the impacts of an aspect
- Example: EMP for Energy Consumption – includes procedures (e.g., OPM tracking electricity use) and tools (e.g., DDC)

# ESC Environmental Performance 2003

# Regulatory Compliance

- Targets call for 100% Regulatory Compliance (federal, state, local)
- U Achieved 100% regulatory compliance

# Pollution Prevention

- Targets call for meeting “Greening the Government” Executive Order goals
  - EO 13101
  - EO 13123
  - EO 13148
  - EO 13149

# Pollution Prevention

- EO 13101 – Waste Reduction, Recycling, EPP
  - Implemented Paper Workgroup recommendations
  - ESC Recycling Program Results
  - Photocopying reduced
  - Draft EPP Procedure in progress

# Pollution Prevention

- EMS Paper Workgroup and OPM Accomplishments
  - 100% recycled-content, chlorine-free copy paper
  - Boise paper consultation (**FREE!**)
  - Digital copiers research, purchase and training

# Pollution Prevention

- EMS Paper Workgroup and OPM Accomplishments
  - IT commitment to default double-sided printing, duplex printers
  - Recycling bins
  - Tip sheets

# Pollution Prevention

- ESC Recycling Program
  - Recycling **mixed** results
- Photocopying Trend is Downwards
  - Default to double-sided copying

# Paper Use

	FY 01	FY02	FY03
Copier copies	790,529	660,705	599,889
Recycled paper (bags)	188	214	197

# Pollution Prevention

- Draft EPP Procedure
  - Identifies all types of ESC purchases and purchasing methods
  - Worked with EPA HQ EPP Team
  - Parallels EPA HQ EO13101 Goals

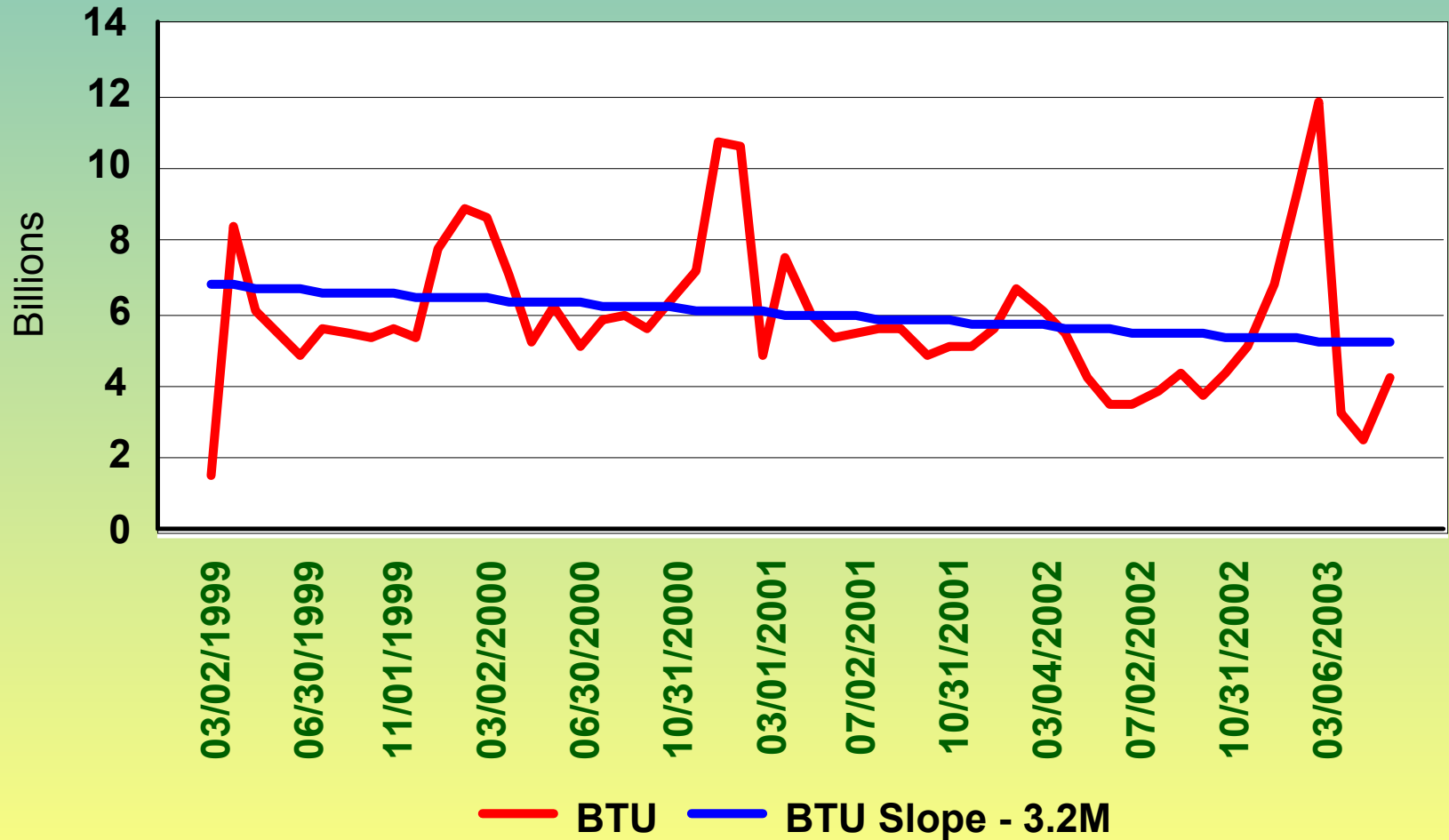
# Pollution Prevention

- EO 13123 – Energy and Water Efficiency
  - Energy Use Trend is Downward
  - Water Use Trend is Downward
  - Water Consumption Workgroup recommendations
  - Fuel/Water Consumption Workgroup recommendations

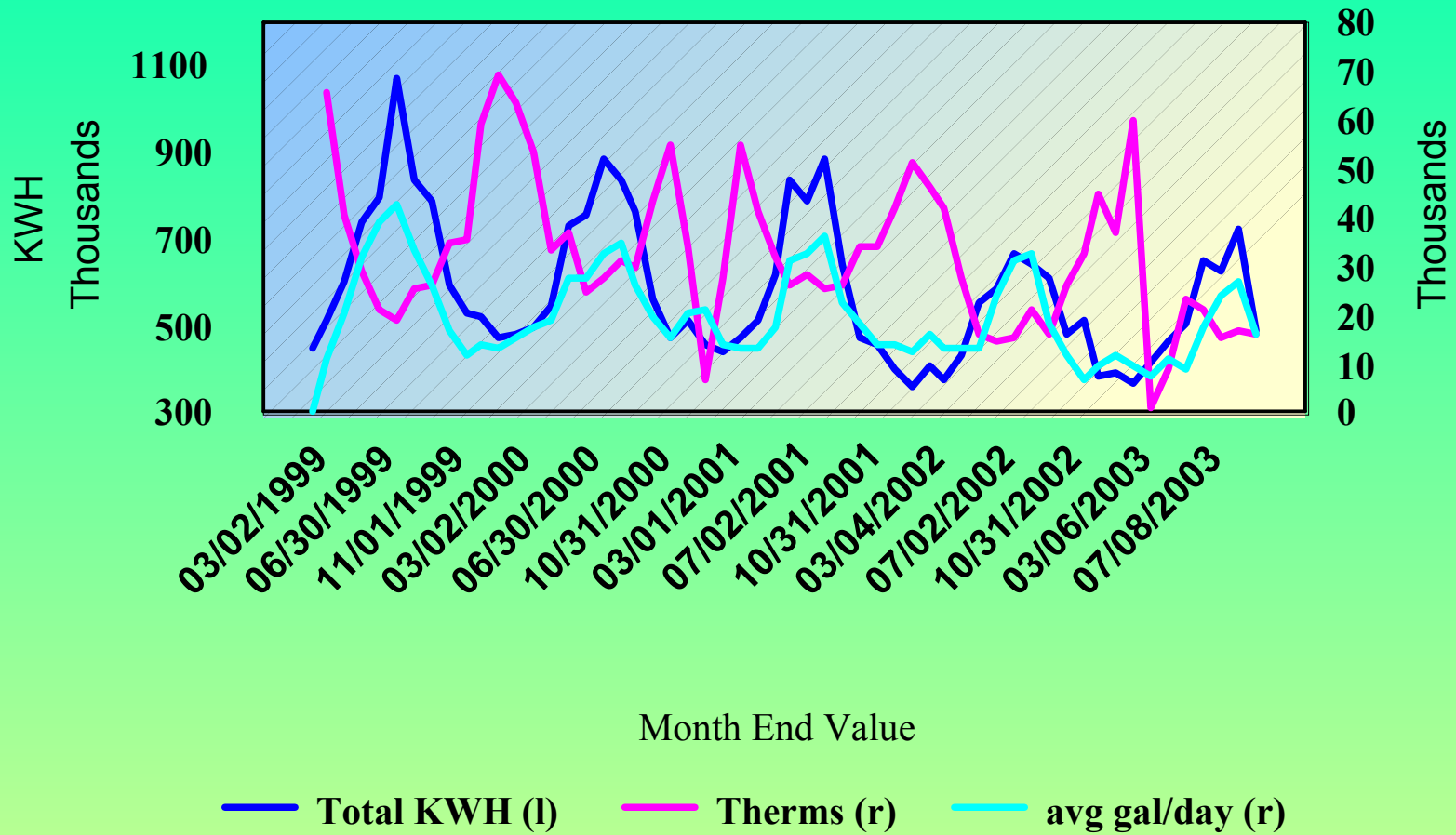
# Example Data

	FY 01	FY02	FY03
Electricity Consumed (KWH)	7,236,487	5,990,250	6,032,250
Water (gallons)	7,881,400	6,699,000	4,957,000

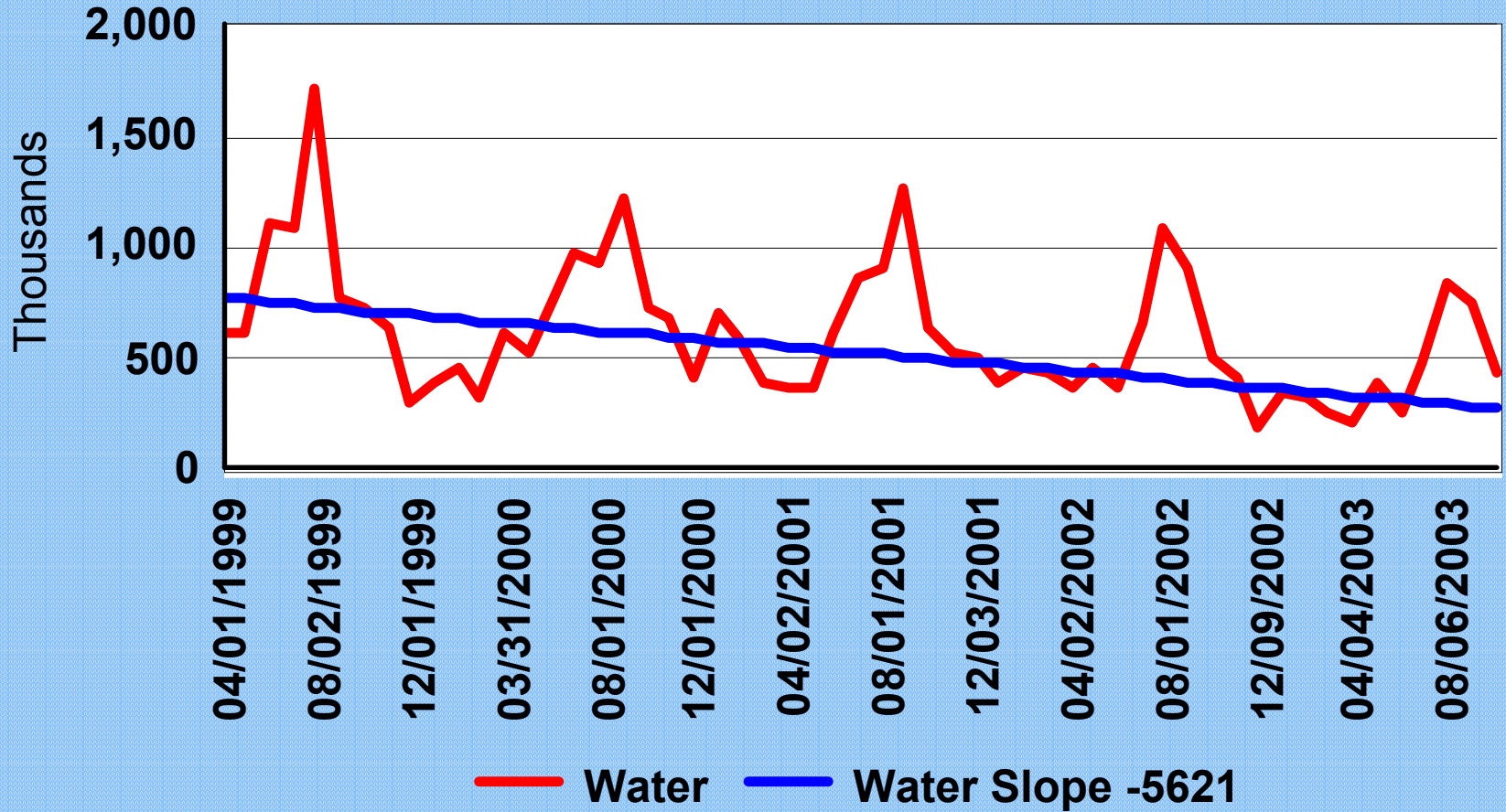
# BTU consumption trend from start



# Water, Electric & Gas Consumption



# Total Water Consumption Trend



# Pollution Prevention

- EO 13148 – Reduction in Chemical Use and Releases, Green Landscaping
  - Workgroups Launched: Chemical Resources and Waste Generation
  - Reduction in Hazardous Waste Shipments
  - Green Landscaping
  - Reduction in ESC Fleet Use

# Pollution Prevention

- EO 13148 – Transferring ESC EMS Knowledge to Other Federal Facilities
  - White House “Closing the Circle” Award
  - EPA Region III and EPA Agency-Wide EMS Policy based on ESC EMS Policy
  - Official Visit from White House CEQ and OFEE

# Pollution Prevention

- EO 13148 – Transferring ESC EMS Knowledge to Other Federal Facilities
  - Visit from Interagency Workgroup on EO 13148 Implementation
  - EMS Video Training Tools
  - Public Speaking on Lessons Learned
  - Phone and E-mail Assistance

# Pollution Prevention

- EO 13149 – Fleet Fuel Efficiency, Alternative Fuel Vehicles
  - Use alternative fuel vehicles in the ESC fleet
  - Plan to add a **HYBRID** vehicle this spring

# Staff Training

- Targets call for environmental and safety training
  - ChIM
  - Laboratory safety
  - Evacuation drills
  - Waste/spill management refreshers
  - OEP Team
  - OEP Fire Warden
  - Mock spill response exercise

# Raising Employee Awareness

- Targets call for raising employee awareness:
  - EMS Team e-mails
  - Tip sheets
  - Recycling bin display
  - Golden Groundhog awards
  - EMS Newsletter
  - OPM Annual Facility Report



# ISO14001 – Continual Improvement

- Process of enhancing the EMS to achieve improvements in overall environmental performance in line with organization's environmental policy
- The process need not take place in all areas of activity simultaneously

# Continual Improvement

- Improvements to EMS procedures and tools for ESC environmental management
  - EMP for Materials Consumption
  - Project Evaluation Form (in review)
  - Draft EPP procedure

# Continual Improvement

- Internal EMS Audit included Region III RO staff person
- Corrective Action Results – new procedures established to ensure consistent use of ChIM
- Ideas and Suggestions Form
- Revised CHP, SPCC and OEP

# Continual Improvement

- Development and Recognition of the ESC EMS
  - ISO 14001 Registration
  - Ceremony to Recognize ESC's ISO 14001 Registration
  - EPA *Silver Medal* Award
  - New EMS Team Formed





# EMS Improvements for 2004

# Regulatory Compliance:

- No compliance improvements needed at this time
- If compliance issues ever arise, forms that describe our EMPs and corrective action system can be used to resolve issues

# Pollution Prevention:

To make further progress, we will need to:

- 1) Launch phase II workgroups for P2 opportunities
  - Chemical Resources
  - Waste Generation

# Pollution Prevention:

## 2) Finalize and Implement New EPP Procedure

- Train ESC purchasers
- Set up database for monitoring purchasing activities (contractor!)
- Review effectiveness of procedure

# Training and Awareness:

- Raise awareness of ESC staff and contractors regarding:
  - Recycling
  - Paper use reduction (e.g. use of digital copiers)
  - Corrective Action system
  - Operational controls

# Continual Improvement:

- Audit Results
  - ISO14001 Surveillance Audit
    - U ESC EMS in conformance with ISO 14001
  - Internal EMS Audit
    - Some improvements needed

# Continual Improvement:

- Improvements needed (Internal Audit Results):
  - EPP procedure needs to be finalized
  - More use of the Corrective Action system by ESC staff
  - Timely response to internal audits

# Continual Improvement:

- Improvements needed (Internal Audit Results):
  - Improve document control
  - Maintain & Update ESC EMS Web site

# Resource Estimate for 2004



# EMS Staffing:



- Additional volunteers to complete current EMS team
- Additional volunteers for **NEW** workgroups
- Plan for transition for new **blood** on team
- Continue funding EMS support contractor

# EMS Staffing:

- Transitions in EMS Team in the Past Year
  - Originally had 9 participants
  - Lost founder and EMS lead
  - Lost SHEM representation
  - Lost 1 other member
  - Loss of HQ funding for support contractor

# EMS Staffing:

- Current EMS Team:
  - OPP reps (3) – includes EMS Co-coordinator
  - ASQAB rep (1)
  - OPM rep (1)
- Open slots
  - EMS Team members (3)
  - Support contractor (1)

# Staffing:

- Need to further train EMS Coordinators
- Difficult to get volunteers for EMS Workgroups
  - Workgroups should not include current EMS Team members
- Plan for adding and training new EMS Team members

# Without Sufficient Staffing

- Inability to maintain timeline of EMS commitments
- Delay in launching EMS workgroups
- Potential failure of EMS workgroups to achieve success
- Increased burden on fewer staff members to carry load (hours per person goes up)

# Without EMS Support Contractor

- Administrative support lost
- Research, analysis and writing support lost
- Contractor focuses solely on EMS while at ESC
- Further increase in time required for each remaining EMS Team member
- Inability to maintain timeline of EMS commitments
- Documentation minimized (lose efficiency of recording EMS proceedings and work status)

# 2003 EMS Budget:

- In 2003 approximately:
  - EMS Team: 550 hrs
  - EMS Coordinator: 500 hrs
  - Support Contractor: 500 hrs
  - EMS Workgroups: 100 hrs
  - Internal Auditors: 75 hrs
- Total ~ **1,725** hrs

# 2004 EMS Budget: Estimate

- For 2004, need approximately:
  - EMS Team: 625- 700 hrs
  - EMS Coordinator: 500 hrs
  - Support Contractor: 500 hrs
  - EMS Workgroups: 100-150 hrs
  - Internal Auditors: 75 hrs
- Total for 2004: **1,800 – 1,925** hrs  
(for minimum required work)

# Minimum EMS Work in 2004:

- Respond to internal audit report
- Activity/Aspect analysis
- Update EMS web site
- Conduct new employee briefings on EMS
- Conduct EMS awareness activities

# Minimum EMS Work in 2004:

- Review EMP regulatory requirements
- Update EMS manual
- Update EMS procedures
- Update EMP forms
- EPP Implementation

# Minimum EMS Work in 2004:

- ISO 14001 Surveillance Audit
- Internal Audit (AGAIN!)
- Management Review (Ditto!)
- Review OPM and SHEM reports (Good reading!)

# Minimum EMS Work in 2004:

- Focused dedicated EMS team leader
- EMS team participation
- Meet EMP targets
- Launch vital workgroups
- Complete new EMP for materials consumption

# Minimum EMS Work in 2004:

- Respond to Corrective Actions
- Respond to Ideas and Suggestions forms
- Implement workgroup recommendations

# Additional Work Possible in 2004:

(not in estimated budget)

- Share EMS Lessons Learned with Other Organizations
- Performance Track (maybe?)

# Without Sufficient Resources

- Failure to meet ESC environmental policy
  - Pollution Prevention
  - Employee Awareness & EMS training
  - Continual Improvement
- Failure to retain ISO 14001 status
- Delay in EMS workgroups
- Failure of EMS Workgroups to achieve success



# Current EMS Team 2



- COORDINATOR:  
Lynda Podhorniak
- Robin Costas
- Terry Cole
- Mick Yanchulis
- Rick Dreisch
- Jason Dubow (ERG)

Out: Greg Allen, Skip Weisberg and George Walker

# Objectives **Met?**

- ISO14001 – Management Review
  - Is the EMS suitable, adequate and effective?
  - Do we need to make changes?

# Next Steps?



# The End

- Thanks to all who helped get this together:
    - Rebecca Schultheiss for insightful comments and recommendations
    - Jason Dubow for putting the presentation together
    - Terry Cole and Robin Costas
- AND our LEADER **LYNDA PODHORNIAK!**