

Headquarters U.S. Air Force

Integrity - Service - Excellence

AF Environmental Restoration Transformation: Impact On Chemistry Program in 2004



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Mr. Ed Brown
Air Force Center for Environmental
Excellence (HQ AFCEE/ICM)
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Agenda

AF Environmental Restoration Transformation and Impact on Chemistry Program:

- **Introduction**
- **Performance Based Management (PBM)**
- **New AFCEE Organization**
- **New Chemistry Paradigm**



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Agenda

AF Environmental Restoration Transformation and Impact on Chemistry Program:

- ***Chemistry Group***
- ***AFCEE QAPP***
- ***Variances***
- ***Laboratory Audits***
- ***Proficiency Evaluation Program***
- ***Summary***
- ***Questions and Answers***



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Introduction

Factors Influencing Transformation

- ***President's Management Directive***
- ***Lengthy and Costly Clean-up***
- ***Project Team Mobility***



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Introduction

■ *Presidential Management Directive*

Government likes to begin things – to declare grand new programs and causes and national objectives. But good beginnings are not the measure of success. What matters in the end is completion. Performance. Results.

President George W. Bush



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Introduction

Lengthy and Costly Clean-up Projects

- **1987: DoD estimated \$14 billion and 13 years to close clean-up program**
- **Past 20 years: Actual Cost was \$30 billion and clean-up program is not closed**
- **2004: DoD estimates costs exceeding \$50 billion and clean-up program ending years beyond 2014**



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Introduction

Mobility of Clean-up Team Members

- ***Original plan was for Clean-up team to clean sites up in six years***
- ***Team usually consists of:***
 - ***AFCEE Project Manager***
 - ***Base Project Manager***
 - ***EPA Project Manager***
 - ***State Project Manager***
 - ***Contractor Project Manger***



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Introduction

Mobility of Clean-up Team Members

- **20 years experience has shown**
 - Team turn-over rate is apx 38% over 6 year period
 - Corporate knowledge lost
 - Steep learning and trust curve for new members



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Introduction

Results of These Factors:

- **Performance-Based Management (PMB)**
 - **Triad Approach by AFCEE**
 - **RPO by AFCEE**
 - **Exit Strategy**
 - **Performance-based Contracting (PBC)**

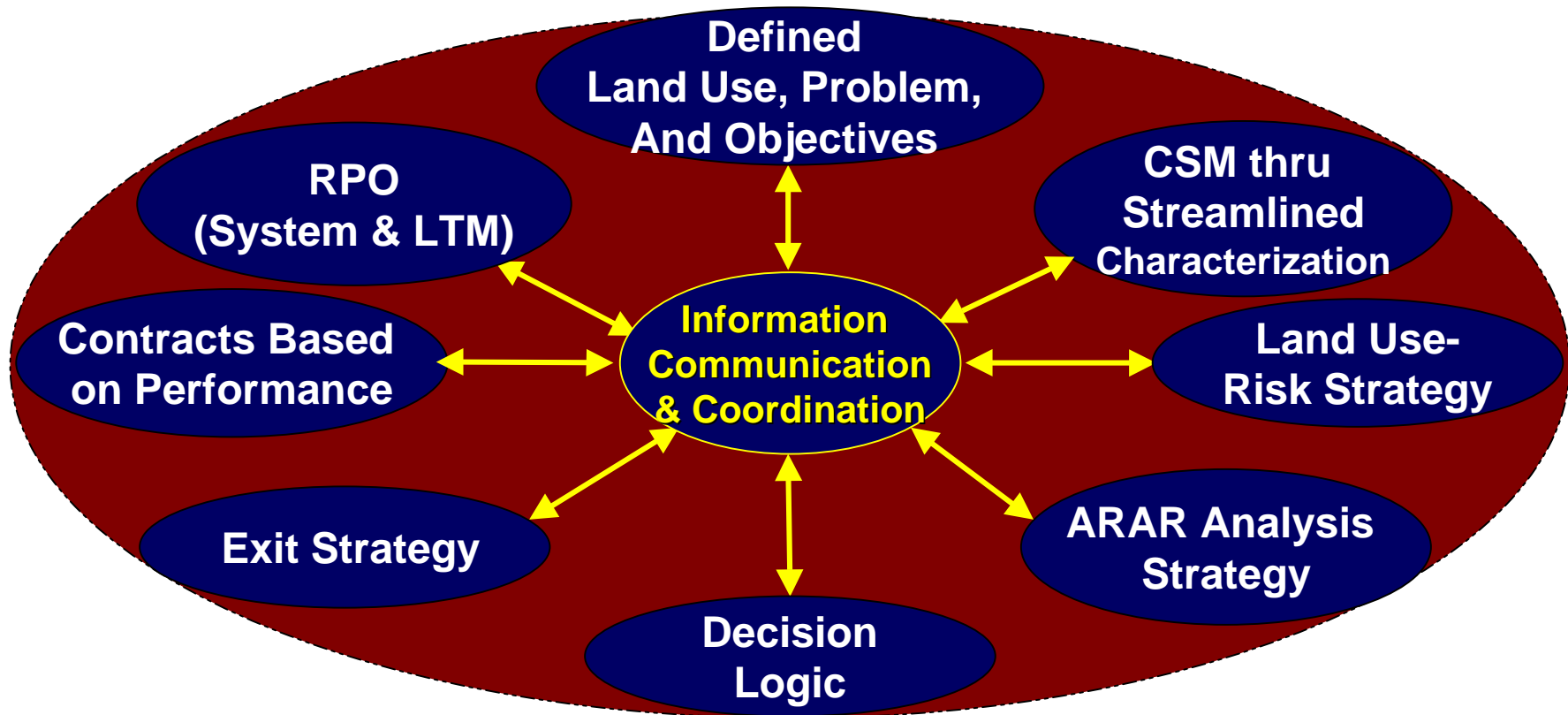
- **AFCEE Transformation**

- **New Chemistry Paradigm**



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PBM Provides Tools to Manage Uncertainties



ARAR - Applicable or relevant and appropriate requirements
CSM - Conceptual Site Model
LTM - Long-Term Monitoring
RPO - Remedial Process Optimization



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What Does PBM Do?

PBM Facilitates the Cleanup Process

- Obtain Performance Based Agreements
- Make Land-use Determinations – *current and future*
 - Reconcile with Base Development Plans (active)
 - Sensible Zoning
- Develop Systematic Plans
- Establish Dynamic Data Collection
- Develop Performance-based Decision Document
- Define Clear Exit Strategy



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Performance-Based Concepts

■ Performance-Based Contracting (PBC)

- PBC is a philosophy whereby contracted work is performed with minimal focus on government process and *maximum focus on results*
 - Describes objective and performance measures – not process
 - Used with a variety of contract types (e.g., FFP, CPIF)

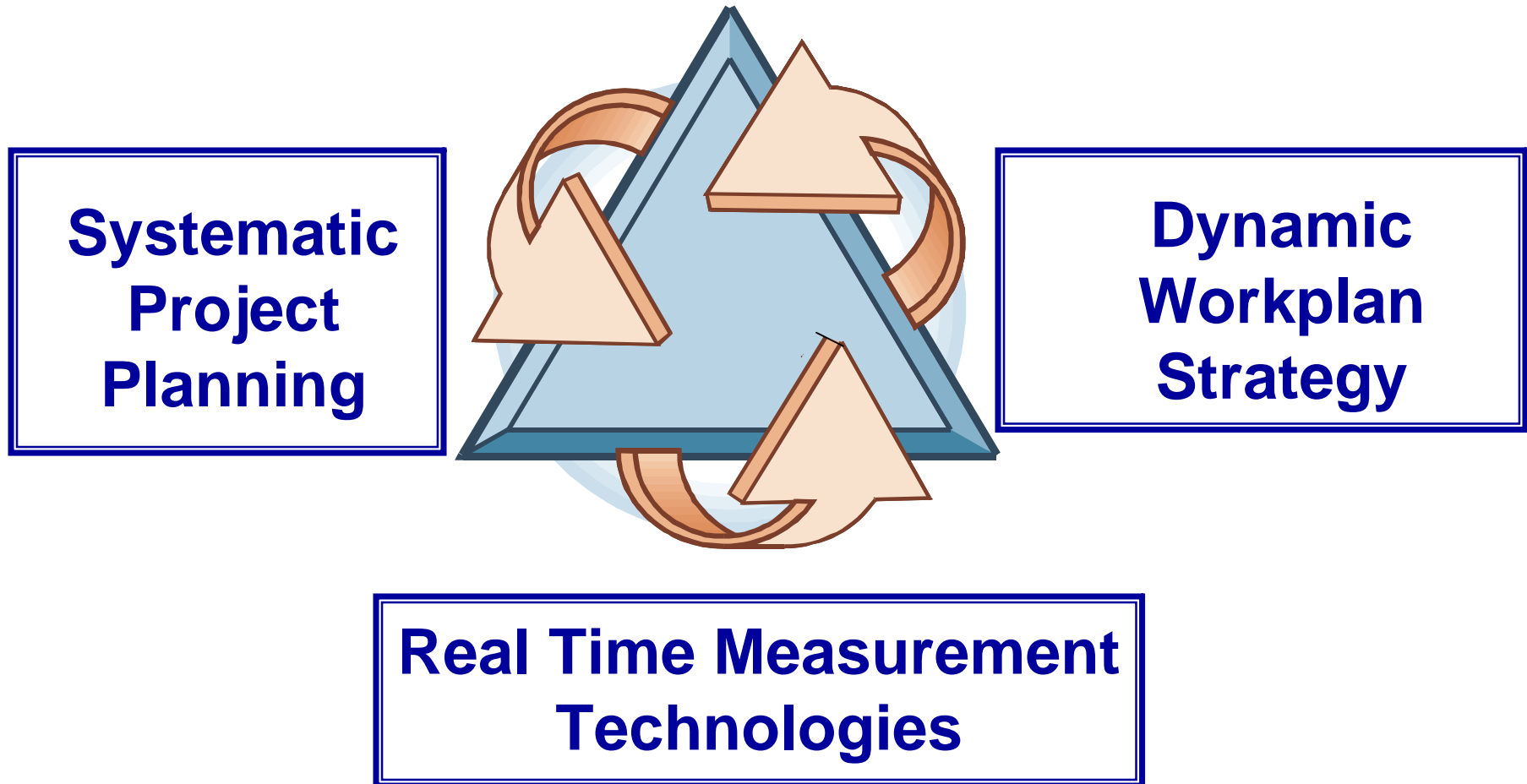
- PBC is a component of *performance-based management*
 - Renewed focus on sound management principles and performance metrics
 - Comprehensive up-front planning, risk management, and performance baselining

- Air Force PBC goal: 20% of restoration projects



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The Triad Approach

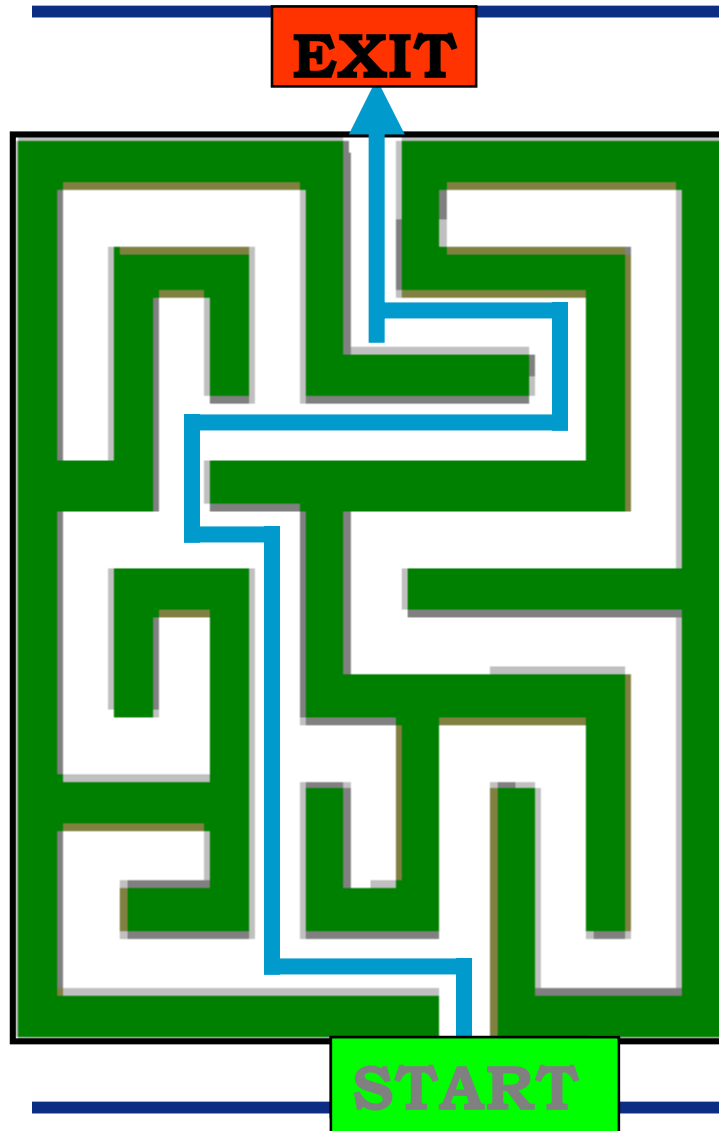


Synthesizes practitioner experience, successes, and lessons-learned into an institutional framework



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Systematic Planning



- Stakeholders involved
- Multidisciplinary Team
- Exit strategy clearly defined
 - Identify project decisions
 - Identify desired certainty
- Project-specific Conceptual Site Model (CSM)
 - Identifies data/information gaps
 - Data collection supports evolution of CSM as data/information gaps filled
- Identify most resource-effective means to fill data/information gaps



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Dynamic Work Plans

- **Real-time, decision-making in the field**
- **Real-time analysis made possible, field analytics made economical**
- **Experienced, senior technical personnel (scientists & engineers) in the field**
- **Regulator-approved decision trees**
 - **Flexible work plans**
 - **Alternate contracting options**
 - **Regulator, senior staff involvement**
 - **Adaptive sampling and analysis plans**
 - **Evolve the CSM to maturity**
- **Seamless flow of site activities → fewer mobilizations**



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Real-Time Analytical and Sampling Technologies

- **Field analytical, rapid sampling, mobile labs, quick turnaround off-site all allow real-time or near real time analysis**
- **Rapid turnaround results support dynamic decisionmaking**
- **Lower costs of field methods support increased density (address sampling uncertainty)**
- **Field results guide confirmation (address analytical uncertainty)**
- **Decision support software can help organize and process data, plan field activities**



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Themes

- **Bottom line: Improve environmental decisionmaking by providing data to support protective, effective environmental decisions (“Better”)**
- **Reduce program and compliance timeframes and costs (“Faster” and “Cheaper”)**
- **Focus on site-specific decision needs and utilize best mix of sampling, analytical, and decision tools and strategies to meet those needs (“Smarter”)**

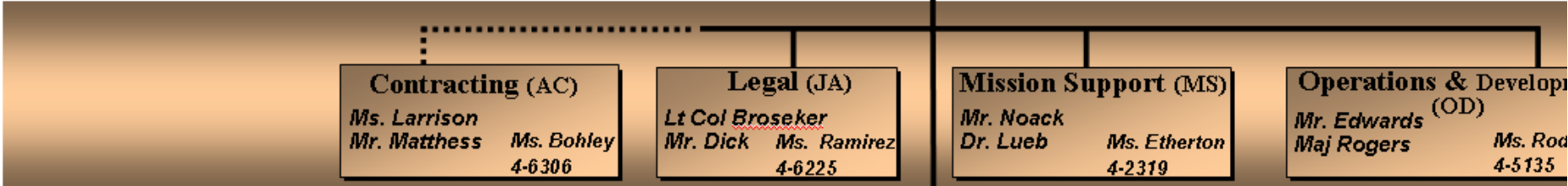


Air Force Center for Environmental Excellence

CC/CD

Mr. Parker
Col Fryer

Capt Gilliam, 4-2152
Ms. Lindsey, 4-2162
Ms. Vasquez, 4-4700



Regional Environmental Offices (REO's)

Atlanta: Mr. Sims; Mr. Ficquette, Ms. Rodriguez
Dallas: Mr. Gill; Mr. Manning, Ms. Howard
San Francisco: Ms. Mendelsohn; Mr. Chin,

Technical Directorate (TD)
Lt Col M. Smith

Ms. Medellin
4-3907

Design Criteria (TDD)
Mr. Campbell
Ms. Phillips
4-3547

Environmental Science (TDE)
Mr. Gonzales
Ms. Ortega
4-5244

Geo Integration (TDG)
Ms. Locklair **4-3516**

Installation Planning (TDI)
Mr. Bakunas
Mr. Whipple
4-4222

MAJCOM & Installation Support Blue Team (IW)
Mr. Russell
Lt Col Grumbach
Ms. Schwarm
4-3383

PACAF (IWP)
Mr. Parker
Ms. Saunders
4-5231

USAFE (IWE)
Maj Williams
Ms. Braziel
4-5223

MAJCOM & Installation Support Silver Team (IS)
Mr. Leighton
Lt Col Patterson
Ms. Geurin
4-3306

AETC (ISE)
Mr. DeRamus **4-3553**

AFMCA & AFSOC (ISM)
Maj Fox (Temp)
Ms. Cirlos
4-5206

MAJCOM & Installation Support Gold Team (IC)
Col Bartholomew
Mr. Bourland
Ms. Castro
4-3343

ACC (ICC)
Mr. Clark
Mr. Napoles
4-3384

AMC & 11th WG (ICM)
Mr. Gallogy **4-5246**

Base Conversion (BC)
Lt Col Welch
Maj Gooden
Ms. Lira
4-5255

East (BCE)
Mr. Lundquist **4-5224**
Ms. Adams
4-4668

West (BCW)
Mr. Gauger
Mr. Melander

Housing Directorate (HD)
Col Macon
Mr. Faile
Ms. ...
4-33...

MILCON (HI)
Mr. Silva
Ms. Sa
4-3382

Privatization (P)
Mr. Smith
Ms. H



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New Chemistry Program

- ***Chemistry Group***
 - *Corporate Chemist in Technical Directorate (TDE)*
 - *Two chemists in “I” Directorates as Project Managers*
- ***Tools available for data quality:***
 - *AFCEE QAPP - One of many*
 - *EPA guidance http://www.epa.gov/quality/qa_docs.html*
 - *Intergovernmental Data Quality Task Force*
 - *Quality Systems Manual*
 - *SW-846 methods*
 - *CLP methods*
- *Laboratory Variances – Go through Project Manager, will be reviewed by chemists on an “as needed basis.”*



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New Chemistry Program

- ***Laboratory Audits***
 - ***Few done by AFCEE chemists on an “as needed basis.”***
 - ***Prime Contractor will be responsible but AFCEE may participate if Project Manager desires.***
- ***Proficiency Evaluation Samples – Increase Usage, currently on a case by case basis.***
 - ***Future to still be decided***
- ***Chemistry Program – Still Evolving to a PBM mentality***



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SUMMARY OF IMPACT ON AFCEE CHEMISTRY PROGRAM

- **Bottom line: Improve environmental decision making by providing data to support protective, effective environmental decisions (“Better”)**
- **Reduce program and compliance timeframes and costs (“Faster” and “Cheaper”)**
- **Focus on site-specific decision needs and utilize best mix of sampling, analytical, and decision tools and strategies to meet those needs (“Smarter”)**



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AFCEE CHEMISTRY PROGRAM

QUESTIONS AND ANSWERS