



RACER 2008

for

**2007 Installation Restoration Program/Military
Munitions Response Program (IRP/MMRP)
Workshop**

3-6 Dec 2007



RACER

The Spirit of Teamwork



RACER 2008

RACER Steering Committee

USACE CX

USAEC

AFCEA



Outline

- DOD IG Review / Recommendations
- Steering Committee Actions to meet Recommendations
 - RACER 2004 Validation
 - Redefinition & Repricing of Assemblies
 - Cost Models
 - Re-engineering of Existing Models
 - Development of New Models
 - Re-engineering of Analytical Templates
 - Re-engineering of Markup Methodology
- Impact of Changes
 - Software Validation
 - Sensitivity Analysis
 - Training



Background

DOD IG Report (D-2004-080)

Financial Management – Environmental
Liabilities Required to be reported on
Annual Financial Statements



DOD IG Review

- RACER Review was performed on prima facie basis
- Requirement DODI 5000.61 and AF instructions were not followed
- Unsupported “low risk” determination
- Complete and separate report not issued
- Defense Modeling and Simulation office was not updated.



DOD IG Recommendations

- Issue guidance requiring that future EL electronic cost estimating system verification, validation, and accreditation efforts comply with the following:
 - DERP Guidance
 - AF Instruction 16-1001
 - DOD Instruction 5000.61



Actions Taken

- Validation of RACER 2004
- Air Force Issued Verification, Validation, and Accreditation (VV&A) Guidance March 2006
- RACER Steering Committee plans to use guidance to VV&A RACER 2008



Define Verify, Validate, and Accredit

- Verify
- Validate
- Accredit



Validation of RACER 2004

- Comprehensive Effort to collect Historical Data
- Data Collection Completed 2005
- Issues Identified by Validation
 - Assembly Database
 - Models
 - Analytical Templates
 - Mark-Up Template



Changes Assembly Database

- New and Re-defined Assemblies
 - Assemblies defined ,documented in MII, and can be viewed in RACER
 - Source Data Readily Available
- Re-engineered and New Models
 - Algorithms, logic and default values based on historical projects
 - Basis and design for re-engineered cost models documented per Tri-Service Parametric Modeling Standard



Changes Cost Models

- Capping
- Excavation
- UST Removal / Closure
- Monitoring
- Residual Waste Management
- Off-Site Waste Transportation & Disposal
- Operations & Maintenance
- Remedial Investigation
- Feasibility Study
- In-Situ Biodegradation
- D&D, Contaminated Building Materials
- D&D, Surface Decontamination
- Professional Labor Management



Changes New Cost Models

- Well Abandonment
- Drum Recovery



Changes Elimination of Obsolete Models

- Technologies Rarely (if ever) used for Site Remediation:
 - Air Sparged Hydroclone
 - In-Situ Vitrification
 - Solvent Extraction



Changes Analytical Templates

- Many of the analytical templates in RACER are out-dated i.e. include the wrong testing procedures or do not include the most current procedures
- Approximately 40 analytical templates are based on current practices in RACER 2008.



Changes Mark-ups

- Provide defensible, documented basis for markup methodology & percentages:
 - Research cost estimating literature
 - Benchmark against other cost estimating systems used by the Government
 - Re-engineer methodology and percentages per research



Verification, Validation, and Accreditation of RACER 2008

- AF Guidance will be used in the VV&A Process
- Verification Ongoing
- Validation begins in 2008



Impacts of Changes

- Software Validation
- Sensitivity Analysis
 - Area cost factors
 - Assembly Database
 - Mark Ups
 - Re-engineering



Impact of Changes

- Training Requirements
 - Users must be educated on the many changes that occurred in RACER 2008 and understand the basis of the changes.
 - Users must understand how changes in RACER will affect estimates previously developed.
- Training will
 - Educate Each user about the changes to RACER
 - Provide understand on how these changes will affect their existing estimates.
 - Inform the users on how to implement the changes.



Future

- RACER pass validation
- Minimal changes to next Release.

