# Managing Emerging Contaminants Risks in Acquisition

## A Practical and Proactive Approach

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**May 2007**

# Mutual Benefit of Cooperation

- **Why EC is important to AQ**
  - ◆ EC is a tool for identifying and managing unacceptable programmatic or enterprise risks from EC

- **Why AQ is important to EC**
  - ◆ Because the materials and process decisions made during the acquisition process
    - » Can create a legacy of environmental compliance costs, basing constraints, foreign military sales challenges, industrial base costs, and cleanup liability
    - » Drives ~80% of DoD hazardous materials use and hazardous waste generation
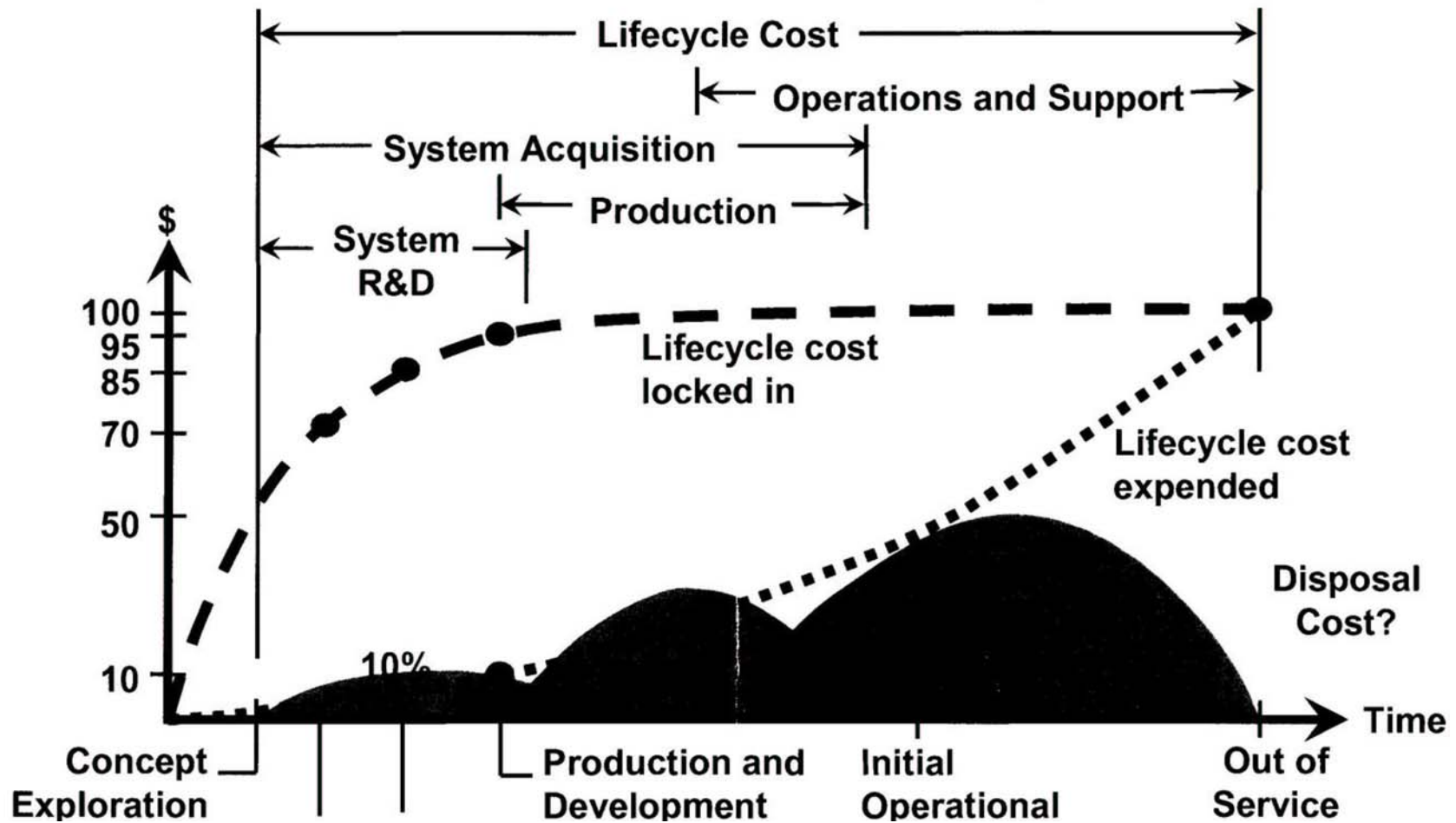
- **How EC can assist AQ**
  - ◆ Providing information to better manage programmatic and enterprise risk
  - ◆ Working with industries to understand significance and use of Action List and not over react to Watch List
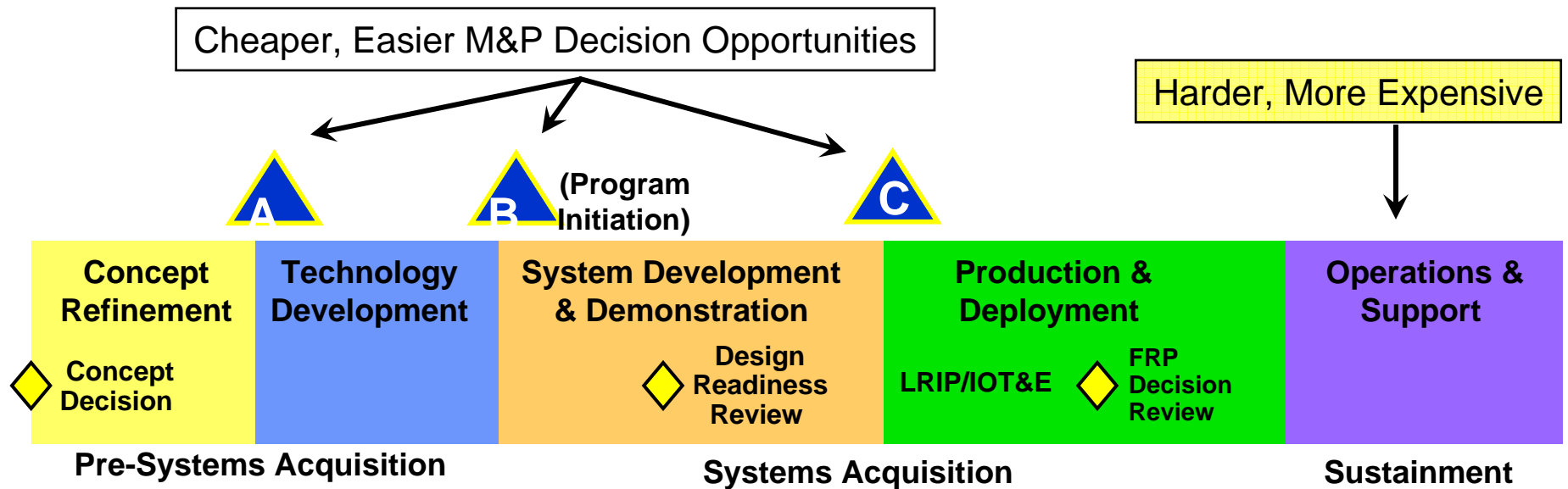
- **How AQ can assist EC**
  - ◆ Let us know what products and services would be most helpful to make M&P decisions to best manage risk

# Percentage of Cost Locked In by Phase

# Life Phase M&P Changes

Cheaper, Easier M&P Decision Opportunities

Harder, More Expensive

**A**

**B** (Program Initiation)

**C**

| Concept Refinement | Technology Development | System Development & Demonstration | Production & Deployment | Operations & Support |
|---|---|---|---|---|
| Concept Decision | | Design Readiness Review | LRIP/IOT&E FRP Decision Review | |

**Pre-Systems Acquisition**

**Systems Acquisition**

**Sustainment**

- **Early identification of potentially problematic materials and processes reduces life cycle costs, expands operational options**

- **$2B annually being spent to cleanup materials that were all once emerging contaminants chosen pre milestone C**

# M&P Activities over Program Life

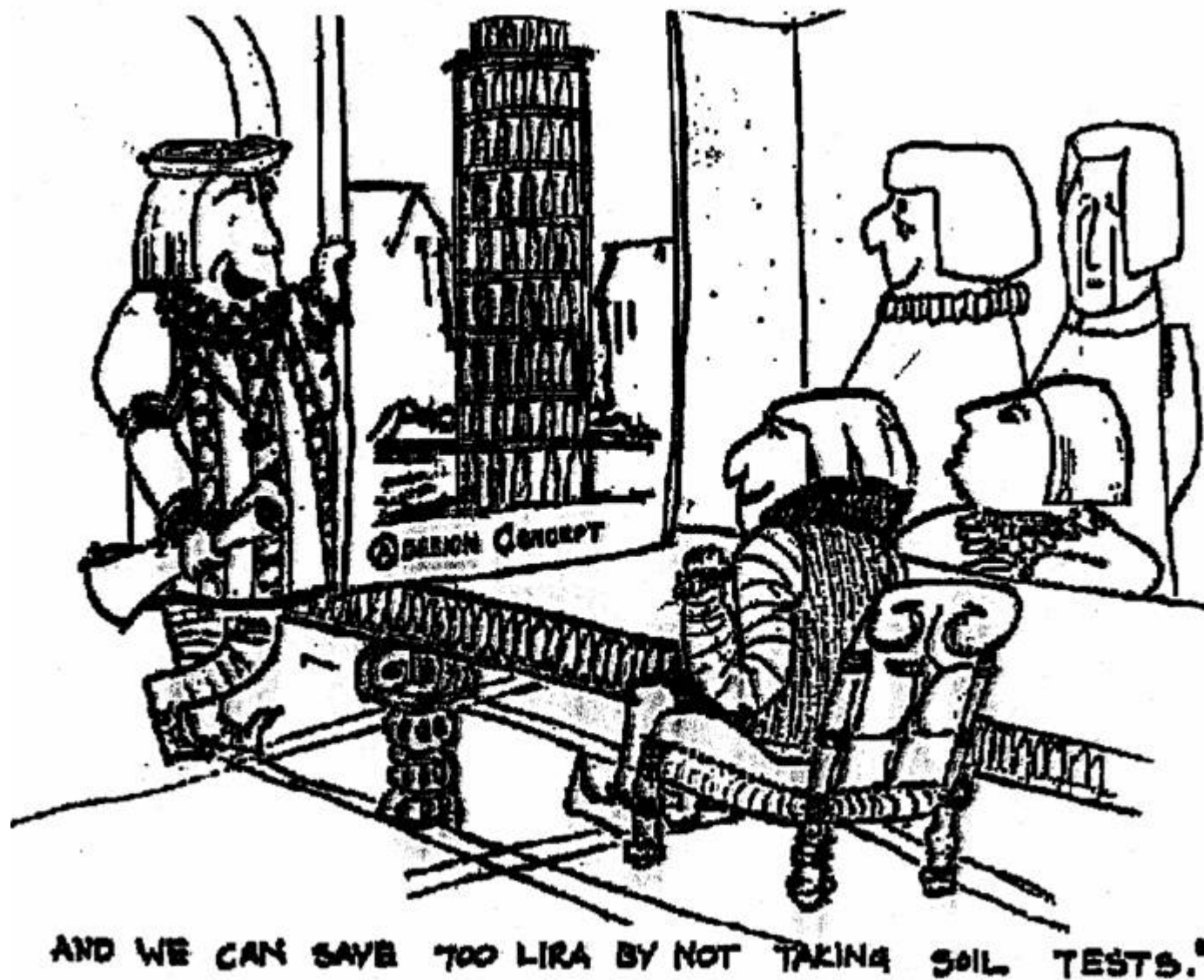| M&P Activities by Program Phases | | | | |
|---|---|---|---|---|
| Concept Refinement | Technology Development | System Development and Demonstration | Production and Deployment | Operations and Support |
| Initiate M&P Program | Implement M&P Control Program | Provide M&P Design Support and Materials and Processes Development | Provide M&P Support to Hardware Mfg, Assembly & Test | Resolve M&P Problems |
| **MERIT products provide risk information to support acquisition M&P decisions – need input to help us better tailor products to meet needs at MS decision points** | | | | |
| • Identify Program Materials and Processes Require-ments <br><br> • Develop Subcontract or M&P Require-ments <br><br> • Identify Contamina-tion Control Req'ts | • Prepare M&P Control Plan <br><br> • Revise M&P Selection List <br><br> • Support M&P Requirements and Trades <br><br> • Implement M&P Internal and Subcontract Control Programs <br><br> • Review Sub-contractor Contamination Plans, Implementation | • Support Product Teams <br>   - Analyze M&P Needs <br>   - Recommend M&P <br>   - Review Drawings <br>   - Develop M&P (as required) <br> • Prepare CDRL's <br>   - Material Usage Agreement <br>   - Non-Conventional Material Data <br>   - Inorganic Material List <br>   - Polymeric Material List <br>   - Lubricant List <br>   - Material Processes List <br>   - PWB Test/Inspection Procedures <br> • Provide Subcontract Technical Support <br> • Prepare As-Built Materials List <br> • Provide Contamination Control Technical Support | • Support Product Teams <br>   - Review Designs, Drawings <br>   - Support Hardware Fab. <br> • Support Integration & Assembly <br> • Update CDRL's (Final) <br> • Support Failure Review Boards <br> • Provide Subcontract Technical Support <br> • Prepare As-Built Materials List (Final) <br> • Support Contamination Control Implementation | • Support Product Teams <br><br> • Provide operations and industrial contamin-ation Support <br><br> • Provide contamin-ation analysis support |

# Successful Industry / Government Partnership

## Single Process Initiative

- Historically successful
  - » Example of change for paint process
    - Needed to change 6000 drawings at an estimated cost of $1500/drawing = $9M
    - Utilized first "block change" to significantly reduce the cost to implement
- Current state?
  - » No DoD infrastructure to support SPI
  - » Management Councils no longer existent
- Industry still desires to use the vehicle
  - » Making little progress

**Many successful models have been used**

# Importance of Caution in M&P Choices

# EC Activities to Assist Acquisition and Industrial Base Issues

- Newsletter / Website / Phase I Assessments

- Cleaner, Safer Industrial Materials and Processes (CSIMP) Workshop

- Work with L&MR to harmonize date collection and reporting requirements for hazardous materials privatization contracts

- Work with DLA to collect data on materials purchases

- Senior M&P managers from Gov't and Industry working common problems

- Co-sponsored with ESTCP/SERDP the Hexavalent Chromium workshop

- Participation in the ACQ ESOH IPT to ensure EC issues considered in their products and deliberations.

**Requires horizontal integration across DoD and partnership with private sector industrial base partners**

# DoD-Industrial Base Working Group on ECs

## Task

- Collect and synthesize comprehensive information about material uses and alternatives to support informed decision making

## Potential Membership

- DoD industrial policy
- Service acquisition commands (Systems Engineering & ESOH)
- DoD industrial facilities
- Defense Logistics Agency
- DoD material database resources
- Cognizant military authorities
- OEMs
- Providers of material management services

**Need participation by M&P practitioners across all Services, Programs, applications and industrial base**