

Rocky Flats Operational Experience

“A Field Manager’s Perspective”

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EM *Environmental Management*

safety ❖ performance ❖ cleanup ❖ closure

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Project Snapshot

- **Project Scope:** Decontamination, demolition, removal and remediation of 800+ facility, 6200-acre former nuclear weapons facility under Superfund.
- **Key Dates:**
 - Start of project: June 1995
 - End of project: November 2006
- **Life-Cycle Cost:** \$6.7 B
- **Performance:**
 - Schedule: Ahead, SPI = 1.11
 - Cost: Under, CPI = 1.08
 - Safety: DART = 0.37; TRC = 1.35;
no fatalities or crippling injuries
- **Status:** Finishing post CD-4 administrative and regulatory tasks



Safety

Manager's Perspective

- **Context**
 - Nuclear site with facilities / systems in “emergency” operational stoppage
 - 45-year old site with poor as-builts and configuration control
 - Production workers converted to D&D / remediation workers
- **Major lessons learned**
 - Anticipate the hazards; understand the changing risks
 - Emphasize quick, practical solutions with worker buy-in
 - Closely control AB documentation as the environment changes
- **The smartest things we did in terms of safety were...**
 - Focus on safety as total project requirement
 - Engage workforce at all levels and increase Union involvement
- **Things we would do better in terms of safety are ...**
 - Increase direct field oversight by all levels of DOE management



Acquisition Strategy

Manager's Perspective

- **Context**
 - Desire to attract “new blood”, the best in industry
 - DOE would share the technical and business risks
- **Major lessons learned**
 - Analyze thoroughly; align contract approach with mission
 - Detailed performance expectations in RFP to discriminate offers
 - Detailed direct discussions and visit to former / on-going projects
- **The smartest things we did during the acquisition phase were ...**
 - Select a Contractor with strong environmental remediation focus
- **Things we would do differently during the acquisition phase are ...**
 - Include focus on final contract verification and acceptance processes



Contract Management

Manager's Perspective

- **Context**
 - Rigorous baseline development and validation
 - CPIF closure contract with 70/30 share ratio (FAR-based)
- **Major lessons learned**
 - “Managing the contract, not the Contractor” is difficult, but essential
 - Use standard, objective project management tools linked to baseline
 - Contractors absolutely respond to incentives; need good measures
- **The smartest things we did in contract management were ...**
 - Be willing to adjust performance measure and demand top performance
 - Establish GFS&I commitments for DOE and demand they be fulfilled
- **Things that we could do better in contract management are ...**
 - Fully develop REA process at the start of the contract



Regulatory Compliance

Manager's Perspective

- **Context**
 - Hostile regulators and poor compliance record (FBI raid)
 - Regulations push for paper/process over physical cleanup
- **Major lessons learned**
 - Strong and committed regulators are necessary for overall success
 - Regulations can / should be tailored to meet the project need
- **The smartest things we did to meet regulatory requirements were ...**
 - Develop a common vision and get commitment at the highest levels
 - Develop an agreement that specifically fit the project and mission
 - Use early and continuous consultation with regulators
- **Things that we would do better in regulatory compliance are ...**
 - Gain earlier clarity on end state and cleanup levels



Technology

Manager's Perspective

- **Context**
 - First complete cleanup of nuclear weapons site in the world
 - Technology Development (TD) system not built for closure project
 - Sub-optimizing technical solutions
- **Major lessons learned**
 - View D&D as the front-end packaging for waste disposition
 - Instacote packaging of oversize items
 - Optimize between hydrolasing and shaving for concrete decontamination
- **The smartest things we did in technology were ...**
 - Focus on technology to improve safety; efficiency always followed
 - Put TD focus in the hands of the managers responsible for execution
- **Things that we would do better in the technical area are ...**
 - Design the TD process to be more evolutionary vs. revolutionary



Engineering Design & Construction

Manager's Perspective

- **Context**
 - Competition between program vs. facility focus
 - Difficult integration of safety, security, criticality, regulatory, etc.
- **Major lessons learned**
 - Develop a credible design/plan, then start and improve; perfect vs. good enough
 - Pilot projects and mockups were invaluable
- **The smartest things we did in design & construction were ...**
 - Using larger hydraulic D&D equipment to separate workers from hazards
 - Using larger waste containers and bulk transportation modes
- **Things that we would do better in design & construction are ...**
 - Estimate waste volumes and configurations
 - Develop better techniques to address beryllium contamination



Funding & Resources

Manager's Perspective

- **Context**
 - Uncertain annual funding with “fixed” project (scope and schedule)
 - Difficult coordination of resources to support GFS&I
- **Major lessons learned**
 - Budget, regulatory agreement, contract, project baseline must be aligned
 - Objectively and continually report performance against budget
- **The smartest things we did in obtaining funding & resources were ...**
 - Gain senior DOE executive support for contract GFS&I commitments
 - Advocate for level, fixed funding from Congress
- **Things that we could do better in terms of funding & resources are ...**
 - Increase transparency of baseline review and validation processes



Communications

Manager's Perspective

- **Context**
 - Poor communications record
 - Inexperienced / unskilled managers and staff for communications
- **Major lessons learned**
 - Develop clear and simple messages; over-communicate
 - First-line management is useful in getting messages out
 - Cultivate relationships with media; recurring editorial boards
 - Always get your story out first; more important if bad news
 - Seek communication outside typical meetings
 - Be open and honest about job loss and worker transition
- **The smartest things we did in communications were ...**
 - Increase dialogue with Congressional offices and local governments
 - Focus dialogue on future site use and community values
- **Things that we would do better in communications are ...**
 - Expand dialogue to post-closure and stewardship issues and roles



Other Resources

- **The Rocky Flats Closure Legacy – a Lessons Learned Report**
 - Link from www.rfets.gov
 - Full text report with reference list and electronic links
- **Rocky Flats – A Proud Legacy, A New Beginning**
 - Link from link above = Weapons to Wildlife brochure
 - 18-page total project history summary with photos



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