

**Moab UMTRA EM Project(s)**  
**Baseline Summary**  
**July 2008**

**BACKGROUND**

The U.S. Department of Energy (DOE) Moab Uranium Mill Tailings Remedial Action (UMTRA) Project site is approximately three miles northwest of the city of Moab in Grand County, Utah, and includes the former Atlas uranium-ore processing facility. The site is situated on the west bank of the Colorado River at the confluence with Moab Wash. The site encompasses approximately 439 acres, of which approximately 130 acres are covered by the uranium mill-tailings pile. When processing operations ceased in 1984, approximately 16 million tons of uranium tailings and contaminated soil were left on the property.

In October 2000, Congress and the President approved the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001, Public Law 106-398 (the Act). The Act stipulated that the license issued by the U.S. Nuclear Regulatory Commission (NRC) for the materials at the Moab site be terminated and that title and responsibility for cleanup be transferred to the DOE. Title of the site was transferred to DOE on October 25, 2001. Specifically, the DOE Environmental Management (EM) office in Grand Junction, Colorado, now has primary responsibility for the Moab site.

The Act further designated that the Moab site undergo remediation in accordance with Title I of the Uranium Tailings Radiation Control Act (UMTRCA) of 1978 (Public Law 95-604). In order to comply with the Act, DOE will need to perform remediation in compliance with Environmental Protection Agency (EPA) Standards and Title 40 Code of Federal Regulations (CFR) Part 102 in the state of Utah.

The DOE EM office in Grand Junction, Colorado, issued the final Environmental Impact Statement (EIS) in July 2005. The final EIS included the preferred alternatives for remediation of the Moab Project site. The Record of Decision (ROD) was issued in September 2005. The ROD details the selected alternatives of active ground-water remediation at the Moab site and off-site disposal of the tailings pile and other contaminated materials at Crescent Junction, Utah. This off-site disposal will remove the contaminated mill tailings and relocate them to Crescent Junction, which is more than 30 miles from the Colorado River. Approval of Critical Decision – 1A (CD-1A), approval of the selected alternative identifying relocation of the Moab tailings and contaminated materials to the Crescent Junction site, was received on August 5, 2005.

CD-1B/3A was approved on May 15, 2006, and approved both the preliminary cost range and procurement of long-lead infrastructure activities. Remediation of the Moab UMTRA Project site now requires the approval of CD-2/3 in accordance with DOE Order 413.3A. Approval is scheduled for July 2008.

**SCOPE DESCRIPTION**

On June 20, 2007, the DOE Environmental Management Consolidated Business Center (EMCBC) awarded a task order to National Indefinite Delivery/Indefinite Quality contract to

EnergySolutions for the Remedial Action Contract (RAC) and the Technical Assistance Contract (TAC) to S&K Aerospace, Inc., for the Moab UMTRA Project. The DOE National Indefinite Delivery/Indefinite Quantity contract extends through September 2011. EnergySolutions (RAC) will finalize the design for relocation of the tailings to a permanent disposal site at Crescent Junction, Utah, develop the tailings-removal system, build the disposal cell, begin transport of the tailings, and handle day-to-day maintenance and operations. To perform this scope of work, EnergySolutions teamed with Jacobs Engineering Group, Inc., for engineering design; Envirocon, Inc., for construction activities associated with removal of the tailings pile; and Neilson Construction, Inc., for infrastructure construction support.

S&K Aerospace, Inc., (TAC) will provide technical and administrative support services to DOE, which includes information technology and telecommunications, public management, training, information technology, document support, project integration, interim ground-water remediation, vicinity property surveys, and oversight for RAC functions. S&K Aerospace, Inc., is a teaming partner on this contract with Pro2Serve, a technical and engineering services company.

The end state for the Moab Project will be achieved after contaminated soil, tailings, vicinity properties, and surface and ground water are remediated. DOE may place some restrictions on re-utilization of the site, depending on how a proposed land use could impact the selected ground-water remedy. The site will then be transferred to the Office of Legacy Management for monitoring and required stewardship. Based on the current funding profile and project technical approach, the current estimate of completion date is 2028.

## **PROJECT MANAGEMENT**

Based on the direction from EM Headquarters, the Moab UMTRA Project office developed the near-term baseline for the project. The project baseline has undergone an independent review to verify the reasonableness of the scope, cost, and schedule. The near-term baseline reflects the identified scope that can reasonably be accomplished for the identified cost in the identified time period if the near-term baseline is funded as profiled and contingency funds are provided as required during project execution. It also establishes the baseline as an acceptable point from which to track and control future change. The review and approval process accommodates the likely changes in the EM complex, site priorities and funding plans. These changes could affect both near-term (within the next five years) and lifecycle cost, schedule and scope. Such future changes may be required to comply with applicable environmental legal obligations while maintaining essential functions necessary to protect human health, the environment and national security; reflect funding different from the baseline assumptions; incorporate technological advances; realize specific programmatic risks; or implement programmatic business cases. Because the cleanup extends beyond the near-term, out-year planning estimates (ranges) have also been developed and independently reviewed.

## **LIST OF PROJECTS**

The Moab UMTRA EM Project only consists of one project. The Near-Term Baseline (NTB) is from FY 2008 to FY 2012 and the Out Year Planning Estimate Range (OPER) is from FY 2013 to FY 2028. Approval is scheduled for June 2008.

## PROJECT SCOPE

The Moab UMTRA Project Remedial Action Contractor scope of work includes:

- Completion of the Final Remedial Action Plan (RAP) and obtaining NRC approval.
- Determining the method or design, constructing and/or installing, and operating the waste-management and waste handling system for removing and shipping RRM and other waste for disposal at Crescent Junction.
- Excavating 16 million tons of residual-radioactive material (RRM) from designated areas at the Moab site and shipping the RRM as required by the ROD to Crescent Junction.
- Excavating a disposal cell at Crescent Junction in accordance with the NRC-approved RAP.
- Installing the disposal-cell cover, as approved by the NRC, in a manner that minimizes the amount of RRM exposed.

The Moab UMTRA Project Technical Assistance Contractor scope of work includes:

- Supporting DOE in project safety and health, quality assurance, and security.
- Providing the project IT/Telecommunications infrastructure.
- Records management.
- All project training (except for certain activities covered in the RAC contract).
- Supporting DOE in interfacing with the public.
- Maintaining a real and personal property-management program.
- Documentation production support.
- Project planning and financial integration.
- Change-control administration.
- Performing vicinity property inclusion surveys.
- Operating and maintaining the interim ground-water action.
- Maintaining re-vegetation within the Moab site boundary outside of the contaminated areas.

## PROJECT COST

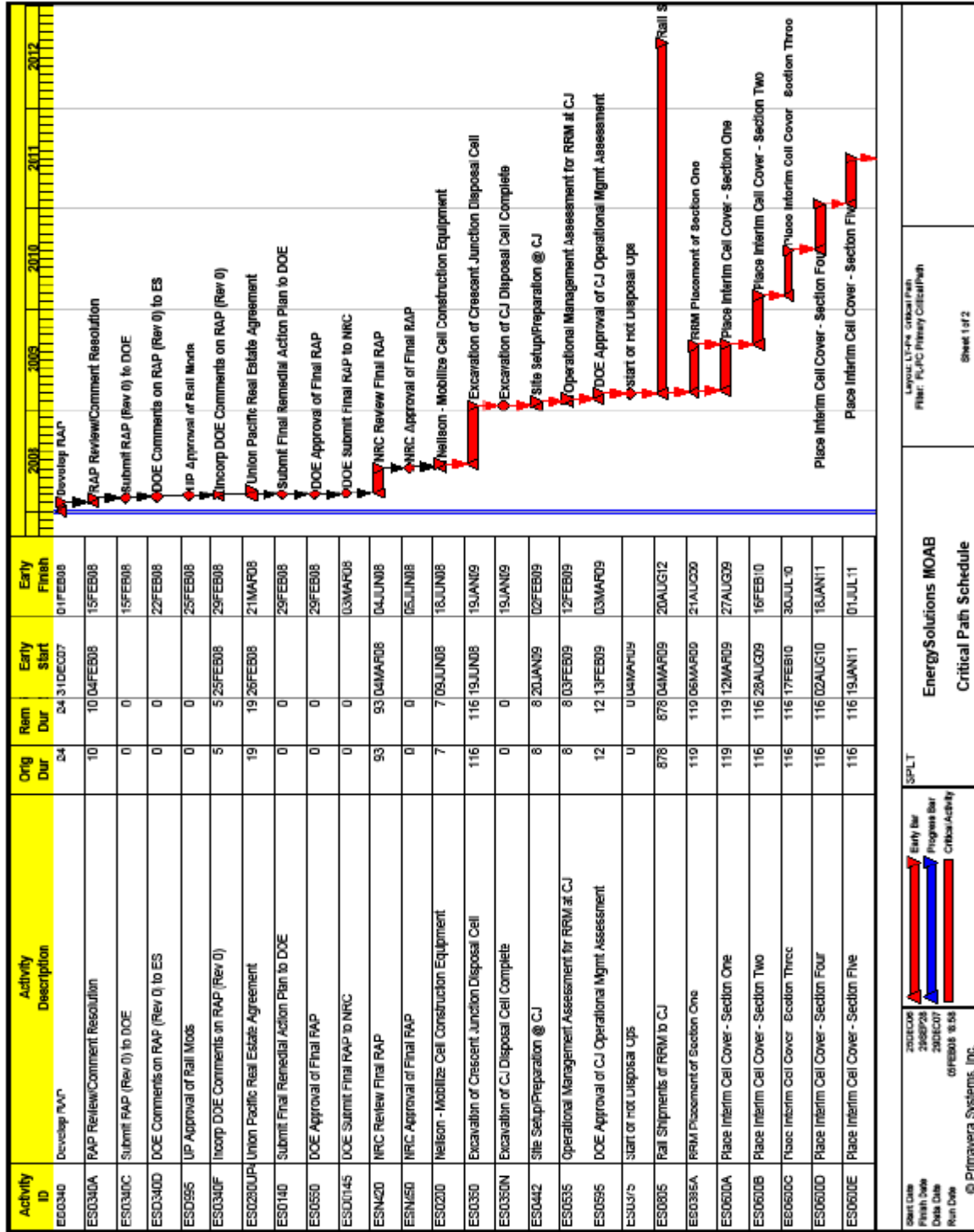
Moab has one project baseline summary (PBS), CBC-MOAB-0031. The numbers are in current dollars.

(dollars in millions)

Cost Element	Project Number
	CBC-MOAB-0031
1. Prior Year Costs (FY 2002 – FY 2006)	\$38.2
2. Total Near-Term Baseline (50% Confidence Level)	\$188.6
3. Unfunded Contingency	\$7.1
4. Performance Baseline (80% Confidence Level)	\$195.7
5. Out Year Planning Estimate Range	\$773 - \$809
<b>6. Total Life Cycle Cost</b>	<b>\$1,043</b>

## **SUMMARY LIFECYCLE BASELINE SCHEDULE**

The critical path schedule shown in is planned in detail for the FY07 to FY12 time frame. A summary schedule for the completion of the project in FY28 is also included.



Start Date: 28DEC06  
 Finish Date: 28SEP08  
 Data Date: 28DEC07  
 Run Date: 08FEB08 8:58  
 © Primavera Systems, Inc.

Legend:  
 Early Bar  
 Progress Bar  
 Critical/Activity

SPLIT  
 EnergySolutions MOAB  
 Critical Path Schedule

Legend:  
 L: Local Path  
 P: Primary Critical Path  
 Sheet 1 of 2

Table 2. Moab Critical Path Schedule (continued on next page)

Activity ID	Activity Description	Orig Dur	Rem Dur	Early Start	Early Finish	2008	2009	2010	2011	2012
ES0600F	Place Interim Cell Cover - Section Six	116	116	06JUL11	18DEC11					
ES0600G	Place Interim Cell Cover - Section Seven	116	116	19DEC11	31MAY12					
ES0600H	Place Interim Cell Cover - Section Eight	62	62	01JUN12	27AUG12					
ES0870	Continuation Transition	24	24	28AUG12	28SEP12					
ES0290	MOAB PROJECT COMPLETION ( PHASE I )	0	0		28SEP12					

Start Date 20120906	Early Bar 20120906	Early Bar 20120906	Progress Bar 20120906	Critical Activity 20120906	SPLT	Layout: L1-F4 Critical Path Filter: L1-F4 Primary Critical Path
Finish Date 20120906	Early Bar 20120906	Early Bar 20120906	Progress Bar 20120906	Critical Activity 20120906	EnergySolutions MOAB Critical Path Schedule	Sheet 2 of 2

Table 2. Moab Critical Path Schedule (continued from previous page)

Activity ID	Activity Description	Orig Dur	Cal ID	Early Start	Early Finish
<b>2. Moab UMTRA Project - Outyears</b>					
P204000	Phase 2 Start	0	7	01OCT12	
P204999	Phase 2 Complete	0	7		29SEP28
<b>2.1.1.2 Mobilization - Outyear</b>					
P20100	Phase 2 Project Mobilization	31	7	01OCT12	31OCT12
<b>2.1.1.3 Demobilization - Outyear</b>					
P200000	Phase 2 Project Demobilization	180	7	31DEC27	27JUN28
<b>2.2.1 ER &amp; WM Support Activities - Outyears</b>					
P20210	Phase 2 ER & WM Support	3,113	8	01NOV12	30SEP27
<b>2.2.2 Waste Management &amp; Handling Systems - - Outyear</b>					
P20220	Phase 2 WM & Handling Systems (12.3 years)	3,113	8	01NOV12	30SEP27
<b>2.2.4 Disposal Cells - Crescent Junction - Outyears</b>					
P20240	Phase 2 Disposal Cell - CJ (13.1 years)	3,165	8	01NOV12	30DEC27
<b>2.2.5 Remedial Action Report/Project Closeout-Outyear</b>					
P20250	Phase 2 Remedial Action Report/Project Closeout	274	7	31DEC27	29SEP28
<b>2.3 Project Support - Outyears</b>					
P20300	Phase 2 Project Support	3,286	8	01NOV12	31JUL28

Start Date: 2012DEC08  
 Finish Date: 2028SEP28  
 Date Date: 2012DEC07  
 Run Date: 08/28/2013 11:00  
 © Primavera Systems, Inc.

EnergySolutions MOAB  
 Out Year Baseline Schedule

LT-10 Out Year Baseline  
 Sheet 1 of 1

Table 3. Out-Year Schedule (2013-2028)