

**Project Planning Integration and Controls Organization Approach Success at East Tennessee Technology Park (ETTP) Contract, Oak Ridge, TN – 14370**

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**ABSTRACT**

Lessons learned from Department of Energy (DOE) contracts in recent years were applied upon award of the contract at East Tennessee Technology Park (ETTP) to develop a new project planning approach. This approach puts Project Controls, Project Management, Strategic Planning and Contract Management within the same integrated organization called Project Planning, Integration and Controls (PPIC). Subcomponents include cost, schedule, risk, funds management, contract management, strategic planning, and project management.

Key consideration to this approach includes DOE's requirement to align Negotiated Contract Costs with the Contract Budget Base (CBB), where CBB is defined as the Performance Measurement Baseline (PMB) plus Management Reserve (MR). Also, the requirement for baseline approval and Earned Value Management Systems (EVMS) certification are key DOE requirements in the first year of the contract. With prevalent funding issues for government contracts, the integration of fund controls within the PPIC organization is also critical to navigating these difficult conditions while maintaining alignment of Fiscal Year Work Plans, PMB, and contract.

With a well integrated PPIC organization maintaining alignment of Contract, PMB and funding is much more seamless and efficient. This approach has allowed the ETTP contract to not only achieve record breaking results during the first year of the contract, but to continue to maintain customer's expectation of alignment while maintaining positive project performance throughout the contract period.

**INTRODUCTION**

The U.S. Department of Energy (DOE) Oak Ridge Reservation (ORR) was created in 1943 as part of the World War II Manhattan Project to support development of the world's first atomic weapon. The ORR is comprised of three sites: (1) Oak Ridge National Laboratory (ORNL); (2) Y-12 National Security Complex (Y-12 NSC); and (3) the East Tennessee Technology Park (ETTP). The Y-12 NSC was originally created to enrich uranium; ORNL was originally established to produce and separate plutonium; and ETTP was originally established to produce highly enriched uranium. Since that time, the missions of these sites have changed; ORNL is DOE's largest science, technology, and energy national laboratory; Y-12 manufactures, stores, and disassembles nuclear weapon components; and ETTP is being environmentally restored for conversion into a private sector industrial park.

The purpose of this Contract is to decontaminate and decommission (D&D) the major facilities at ETTP, which include buildings. K-25, K-27, and K-1037, and other facilities; remediate any associated environmental media; and continue DOE Environmental Management activities

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currently ongoing at ORNL and the Y-12 NSC. Figure 1 is a photograph of many of the facilities and grounds undergoing D&D and environmental remediation at ETTP.

The UCOR PPIC approach to project management at ETTP was laid out early in the proposal and implemented upon contract award.

Key elements of the PPIC approach consist of the following:

1. Establish the basis for the project.
  - a. PMB Development and Validation – Start with as-bid position; realign Work Breakdown Structure (WBS) with as-found conditions; price costs for items estimated or otherwise provided by the government for the first time. Both customer and contractor teams should understand the scope and proposal.
  - b. Identify Material Differences (MDs) and incorporate into the contract utilizing a “chunking” methodology. Chunking is grouping MDs into smaller groups to aid both in the development of the MDs in a logical grouping making contractor analysis more efficient as well preventing overloading the customer with a tremendous amount of data that needs to be analyzed. This approach allows streamlined reviews while adhering to the 180-day definitization requirement.
  - c. EVMS Certification – Customer and contractor must partner to establish the baseline and understand the methods of measurement. It is important to have an early and EVMS successful certification. Projects that delay certification or fail the certification are subject to fee reduction or delay.
  - d. True up/Reconciliation – Project controls and the contract team must be closely linked to achieve alignment between the contract and the baseline. Initial “true up” is achieved when all material differences at the beginning of the contract are resolved and incorporated into the contract and the PMB.

By following these key elements, both customer and contractor can emerge from the first year of the contract with all contract/project tools in place to manage the contract and project. This process ensures that customer and contractor goals are achieved with mission success.

2. Maintain alignment while achieving superior project performance.
  - a. Baseline and Contract Change Control are critical to keep alignment between the contract and the PMB.
  - b. With ever changing funding conditions, rapid alignment of contract, baseline, and Fiscal Year Work Plans to funding allows the project to execute with minimal impact from funding shortfalls.
  - c. With a PPIC organization managing alignment, the project execution team can focus on achieving positive CPI/SPI.

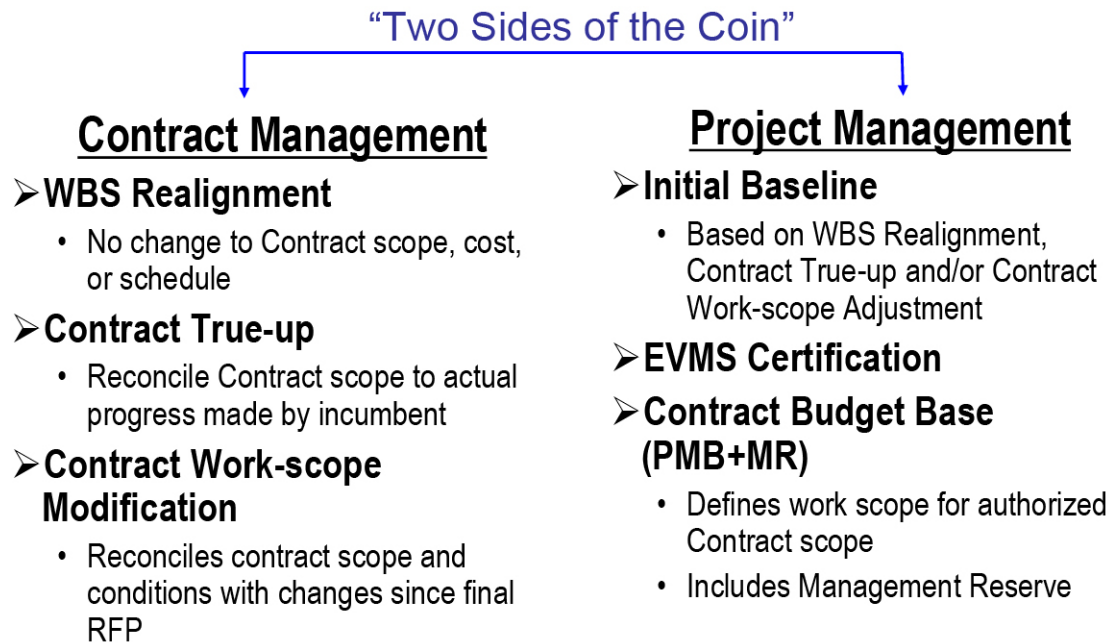


Figure 1. East Tennessee Technology Park

## METHODS

### Establishing the Basis for the Project

At East Tennessee Technology Park (ETTP), preparations for successful project management began early during proposal development. This approach was designed around DOE expectations for resolution of material differences, swift baseline and EVMS certification approvals and contract “true-up”, all expected within the first year of the contract. This approach incorporated recent lessons learned at other DOE sites where over two years into a new contract there were serious disconnects between baseline and contract and in turn “true-up” still had not yet been declared. In a FAR based contract in particular, it is imperative to ensure the alignment of the Negotiated Contract Costs (NCC) with the Contract Budget Base (CBB), where CBB is defined as the Performance Measurement Baseline (PMB) plus Management Reserve (MR). This alignment initially begins at “true-up” which is when both the contract and an approved PMB have all Material Differences negotiated and incorporated. Early in the transition period, DOE Headquarters (HQ) representatives travelled to Oak Ridge, TN to visit personally with the DOE Oak Ridge Environmental Management Office (OR-EM) and UCOR teams to mentor them on DOE HQ expectations. During this session, the expression “Two Sides of the Coin” was explained and was used as a roadmap for the first year of the contract. This concept is shown in Figure 2 below.



**Figure 2 - Contract/Project Management – Two sides of the same coin**

## **APPROACH**

### **Performance Measurement Baseline**

The UCOR approach at ETTP began with development of the interim Performance Measurement Baseline (iPMB) spanning 6 months which was required immediately following transition. The strategy was to follow close behind with the submittal of the PMB. It is important to DOE in today's environment to deliver what was sold in the proposal. It is an expectation and, therefore, imperative that a roadmap exists back to the proposal. UCOR started with the “as-bid” position, realigned Work Breakdown Structure (WBS) with as-found conditions, and priced costs for items estimated or otherwise provided by the government for the first time. Shortly after PMB submittal, there was a partnering with the customer to allow for quick provisional incorporation of the PMB for earned value reporting to help expedite the EVMS certification process while formal approval of the PMB was ongoing. It was important for Project Controls to work with Project Management to assure the baseline was in alignment with the project management documents including Project Management Plans and Project Execution Plans. The Strategic Planning organization helped assure there was alignment with funding guidance and alignment with the System Plan, Strategic Plan and the Integrated Priority List. Any changes required during the approval process were incorporated through the normal change control process. Contracts Management helped assure alignment with scope and identified material differences.

### **Material Differences**

As always during transition, a key activity is to identify Material Differences (MDs) between the contract scope and the “as found” conditions. UCOR's approach was to incorporate the MDs into the contract utilizing a “chunking” methodology. Chunking allows smaller groups of work to be submitted to the customer over time so as not to overload evaluators making it easier to

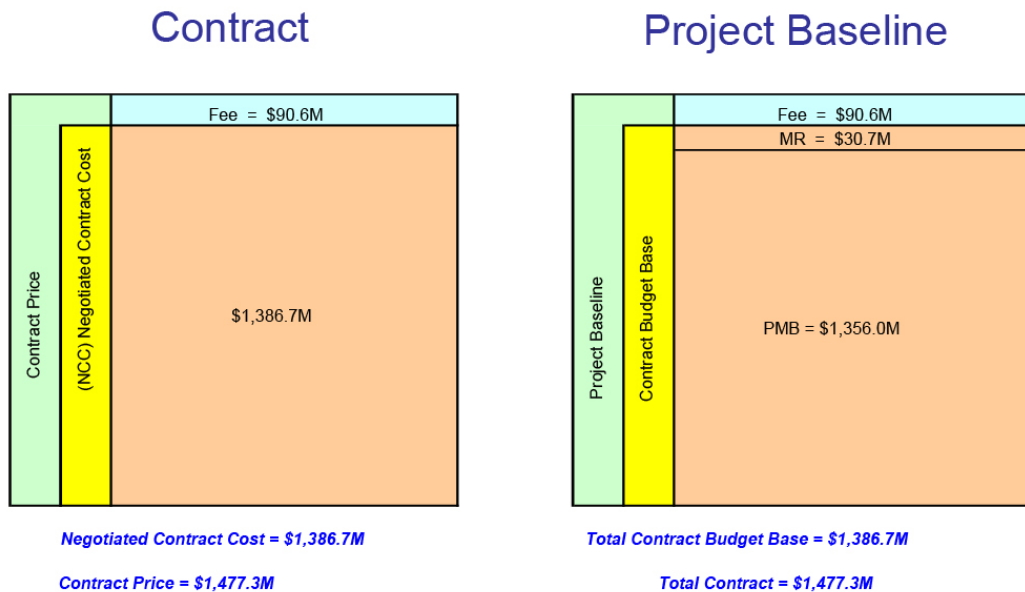
meet the DOE 180-day change definitization requirement. These MDs are also incorporated into the baseline through the change control process. Close integration between Project Controls and Project Contract Management helped ensure alignment through this process. With Project Estimating being part of Project Controls, it was also important to have integration with Project Contract Management organization for Contract Change Proposal (CCP) preparation which required certificated cost estimates as part of the change package.

**EVMS Certification**

Early in transition, UCOR met with the customer with a strategy for successful EVMS certification. This strategy included meeting with DOE Office of Acquisition and Project Management (OAPM) to make sure we were aligned in areas that might be difficult due to contract requirements, which is often a problem. Part of this mapping required swift provisional approval of the PMB to allow for earned value reporting “run-time” which is required prior to certification. These simple items, along with normal procedure development and Control Account Manager (CAM) training, allowed for swift EVMS Certification approval. Alignment between Project Controls and Project Management and Strategic Planning and Integration are important for successful outcome.

**True up/Reconciliation**

Project Controls and the Project Contract Management teams must be closely linked to achieve alignment between the contract and the baseline. As stated earlier, initial “true up” is achieved when all material differences at the beginning of the contract are resolved and incorporated into the contract and the PMB. At this point, the contract and baseline are considered “aligned”. At ETTP, this was achieved ten months into the contract. Figure 3 shows alignment at the time of “true-up” for the ETTP Contract and PMB.



**\$1,186.3M** (contract cost at award) + **\$200.4M** (AUW/MDs) = **\$1,386.7M** (negotiated contract cost)

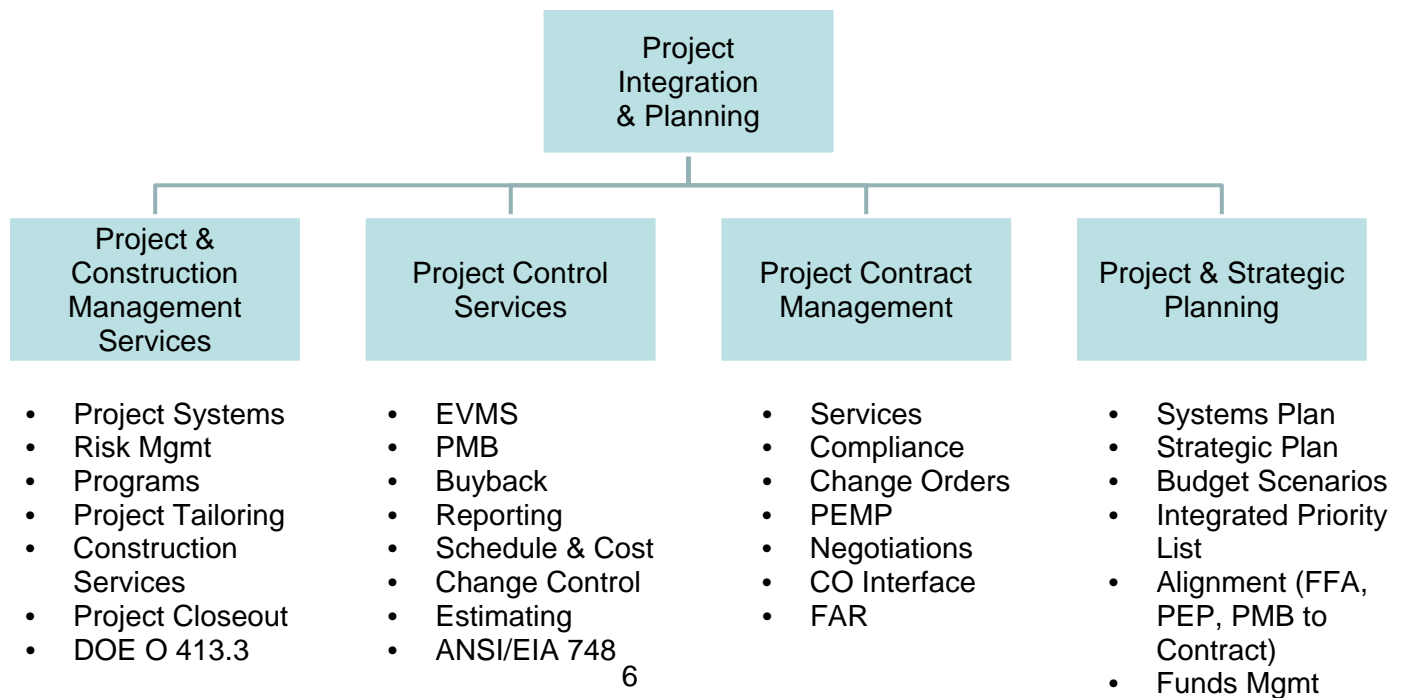
**Figure 3 - ETTP NCC and CBB Alignment**

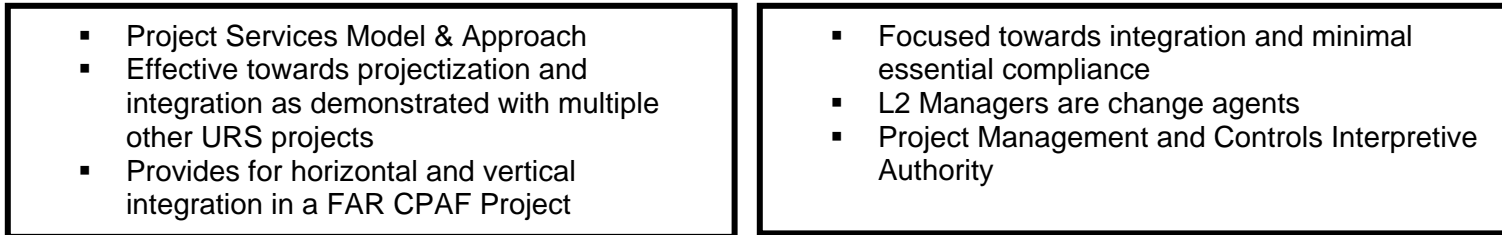
**DISCUSSION**

**Organization**

Figure 4 shows how the PPIC organization was fashioned to combine key organizations to better integrate functions that require tight interface to achieve DOE expectations. Key responsibilities include:

- Provide integrated and consistent project programs, practices, and performance for the overall ETPP project services relative to Project Management, Project Controls, Strategic Planning, Risk Management, Construction Management, Commissioning and Readiness, and Interface Management.
- Meet the requirements of DOE O 413.3B and ANSI/EIA-748-C.
- Support the budget formulation activities.
- Meet the data requirements of the DOE Integrated Planning, Accountability and Budgeting System.
- Ensure transparency in project performance and efficiency in ETPP project execution.
- Support audits, evaluations, and external technical reviews.
- Support other DOE-ORO performance assessments and information needs.





**Figure 4 Project Planning, Integration and Control Organization**

## **CONCLUSION**

With a well integrated PPIC organization, the delivery of required Key Milestones in the first year of the contract is completed much more quickly and efficiently. In looking at the tasks shown on the organization chart in Figure 4, it is easy to see how many tasks in one function are reliant on the support of the other functions. After the first year, PPIC contract milestones are complete, and maintaining alignment of Projects, Contract, PMB, funding and other related items is much more seamless and efficient using this approach.

This approach has allowed the ETTP contract to not only achieve record breaking results during the first year of the contract, but to continue to maintain the customer's expectation of alignment while maintaining positive project performance throughout the contract period.

## **REFERENCES**

1. U.S. Department of Energy Oak Ridge Office, 2011, Contract DE-SC-0004645, "East Tennessee Technology Park" Contract
2. Department of Energy Order 413.3B, Program and Project Management for the Acquisition of Capital Assets
3. ANSI/EIA-748-C, Earned Value Management Systems